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FLORICULTURAL CABINET



FLORIST'S MAGAZINE

1849.

*C. Chabot, Prop.*



THE  
FLORICULTURAL CABINET,

AND

FLORISTS' MAGAZINE.

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## P R E F A C E.

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.





*Nemophila maculata*



NEMOPHILA MACULATA—SPOTTED-FLOWERED.

*Hydrophyllacea. 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 *Leaenothus*, 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' ASCLEPIDEÆ.

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.

*Apocynææ. 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 BRENCILEYENSIS.**

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. Diadelphæ 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 Epacris 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 foliated *Pinus*, about three inches long. The flowers are a deep yellow. It is singularly pretty.

*BOSSIA 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 Store.*

*BEGONIA FUCHSIODES*.—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 Orchidææ 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 Orchidææ. 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; *Picotee*, 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 *Picotee*, 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

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.

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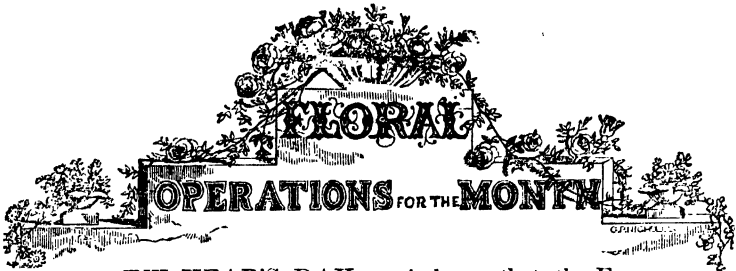
## ON THE CULTURE OF THE IXIA.

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.



**FLORAL**  
**OPERATIONS FOR THE MONTH**

**N**EW 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 let 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 *Jacobææ* 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*, *Lilium*, &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, Azalcas, *Acacia armata*, *Nerium*, *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 *Hyacinthus*, *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.]





3



POTENTILLA INSIGNIS, P. BRILLIANT, P. PLANTII.

**T**HE 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 Chaddle, 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; *Thomasii*, 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.)

### CHÆTOGASTRA 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.

#### DIETEROTRICHUM 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 stopp'd, 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 UNDULÆFOLIA.—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 *Epacris* 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.

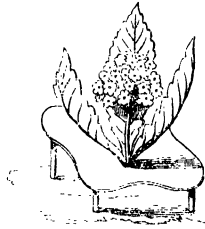
*SERICOGRAPHIA GHIESBREGHTIANA*.—A plant was exhibited by Messrs. Hendersons, but it was a sickly specimen, the foliage being pale, when naturally it is of a deep green; the red tube-shaped flowers were not so bright in colour either, for when properly grown they are of the brightest scarlet. When this *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-aspected 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 fuchsoides* 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.

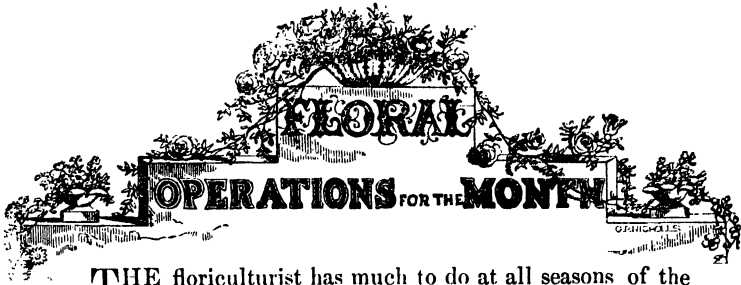
4. The average heat of the greenhouse is from 45° to 55°. Is the temperature high enough to flower the following *Passiflora*—*Kermesina princeps*, *racemosa*, *cœrulea*, and *edulis*,—and will they all bear fruit?

[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. Polyantheses 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, Cockcomb, &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. *Alstrœmerias*, *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. *Verbena Junius*



BROWALLIA JAMESONII—MR. JAMESON'S  
BROWALLIA.

**M**OST 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.

*Orchidacea. 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 corymbose 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

### 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.

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### 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  
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 aerial 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 subsacendant 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 *Buginvillea 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 *Orchidæ*, *Bromeliaceæ*, *Ferns*, *Peperoniæ*, &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 *Bignoniaceæ*, *Compositæ*, *Apocynææ*, 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.]

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### 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.

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### 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. Colour.	2. Complimentary Colour.	3. Contrast.	4.
Scarlet.	White.		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.
Orange.	Blue.		
Yellow.	Purple.		
Red.	Green.		
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.			

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.



### IN THE FLOWER GARDEN.

ANY 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:"

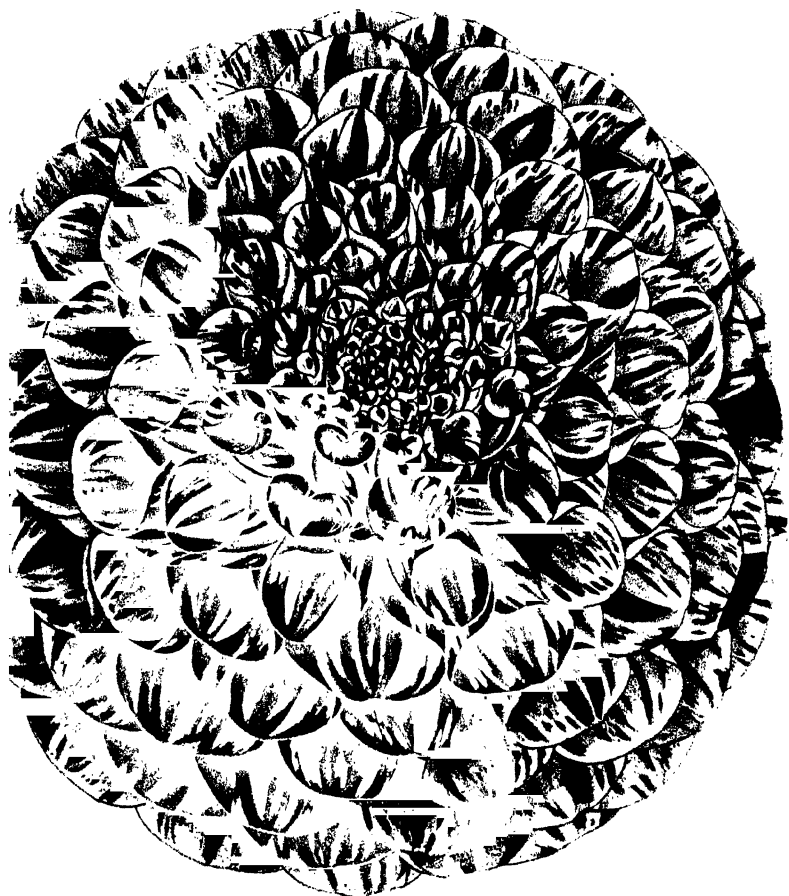
While he plays the rover, and flirts in far bowers,  
 His lovers come courting me—bees, flies, and flowers;  
 These rivals I laugh; and if modest and meek  
 Bees, allow one to salute my soft cheek.

On the bright day; and now dew-bringing eve,  
 A deep cloud of gold which the day-splendours leave,  
 In purple fringe, spreading far in the West,  
 On the dim mountain top seem to rest.

When my meek lids comes the glow-worm nigh,  
 He sets his love-lamp with a gleam from mine eye;  
 My crimson-leaved sister, the Ev'ning Primrose,  
 Comes 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?





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### VAN GEERT'S ŒILLET DE BOHEMIA DAHLIA.

**T**HIS 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 with 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 membranous 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 *Ipomœa 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 *Pac. 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 *Pac. 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.

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*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.

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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 NONPAREIL.**—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 Convulvus, 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 tonguing 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 *Grafte 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 repot 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*, *Leptosiphous*, &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.



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



**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 PICOTEEES.**—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, Kranthemum, 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 CORYMBIFLORA ALBA.

**T**HIS 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 TRIPHYLLOIDES*.

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 orchideæ, 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.

*Compositæ. Syngenesia Perdiceæ.*

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.

H. 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. PREMORSA*.—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.

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#### 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 *Pansy*, 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 *Pansy*, *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 scolloped and laced, is the better in proportion to the bluntness of the scollops, 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 Picotee, 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 ocyroides*, *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 desirous 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, Gypsophilla, Geum, Hepatica, Helianthemum, Hieracium, Iberis, Iris, Jasionne, 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.

*Damash*—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'Ilebe, William Jesse.

#### 2. AUTUMN ROSES, flowering from July to October.

*Damash, perpetual*—Mogador.

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

*Bourbon*—Armosa, Coup d'Ilebe, 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*, *pseuda coccinea*, 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 *Nerium* 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 Clegg'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, Ivery 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.



## FLORAL

### OPERATIONS FOR THE MONTH

**M**AY—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 numerously 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. *Curnations* 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.*’

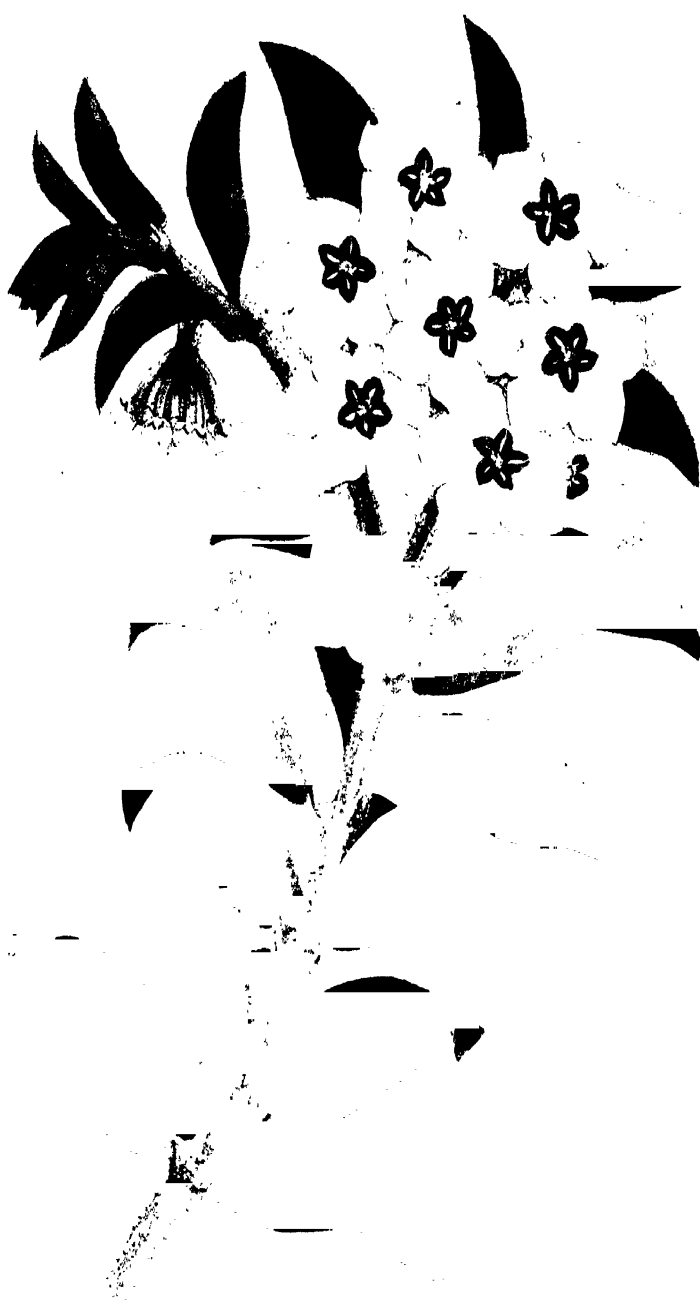
O welcome sisters, once again we hail the bright’ning sky;  
 Each heart is lightly leaping—joy lives in every eye—  
 And ev’ry bud, and ev’ry flow’r, and ev’ry bird and bee,  
 Are blossoming in gladness now; are singing merrily.

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.







### HOYA BELLA—THE BEAUTIFUL HOYA.

**T**HE old well-known *Hoya carnosa*, 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. carnosa*; 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 MELANOCALAN—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 dullness 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 re-planted 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 Chorozeamas have become shabby plants with bare stems, flowering just at the extremity of the shoot. The same with the following plants:—*Pultæna stricta*, and *subumbellata*; *Eutaxia myrtifolia*; *Dillwynia*

rudis, and ericoides; *Lalage thymifolia*; *Mirbelia dilitata*; *Bossæa stricta*; *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 proceeded 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*.

	Mylsm.	Smith.	Williams.
<i>Erica propendens</i> . . . . .	*2ft. by 1½	*4ft. by 3½	*3ft. by 3
<i>vasiflora</i> . . . . .	3 2½	*1½ 1½	*2 1½
<i>mirabilis</i> . . . . .	*2 1½	—	—
<i>depressa</i> . . . . .	*2½ 1½	—	2 2
<i>metulæflora</i> . . . . .	*2 1½	—	—
<i>perspicua nana</i> . . . . .	*3 2½	*4½ 3½	*1½ 1½
<i>mutabilis</i> . . . . .	*2½ 2	*1½ 1½	—
<i>intermedia</i> . . . . .	3½ 2½	—	—
<i>denticulata moschata</i> . . . . .	*2½ 2½	—	—
<i>Humeana</i> . . . . .	3½ 3½	—	—
<i>ventricosa coccinea minor</i> . . . . .	*2½ 2½	—	—
<i>tortulæflora</i> . . . . .	*1½ 1½	—	—
<i>Cavendishiana</i> . . . . .	*3½ 3	*3½ 3½	*3½ 3½
<i>elegans stricta</i> . . . . .	*3 2½	—	—
<i>ventricosa alba</i> . . . . .	*3 3	—	—
<i>nitida</i> . . . . .	—	*4 4½	—
<i>elegans</i> . . . . .	—	*3 3	—
<i>delecta</i> . . . . .	—	2½ 2½	*1½
<i>fastigiata lutescens</i> . . . . .	—	*2½ 2½	—
<i>Westphalingia hyd</i> . . . . .	—	*4½ 3½	*4 4
<i>vestita var. alba</i> . . . . .	—	*2½ 2	*3½ 3
<i>Beaumontia</i> . . . . .	—	*3½ 2½	2½ 1½
<i>ventricosa hirsuta alba</i> . . . . .	—	—	*3 3½
<i>Blandfordiana</i> . . . . .	—	—	3 2½
<i>flavoides elegans</i> . . . . .	—	—	*4½ 2½
<i>vestita rosea</i> . . . . .	—	—	2½ 1½
<i>mundula</i> . . . . .	—	—	3½ 2½
<i>halicacaba</i> . . . . .	—	—	*3 2
<i>ventricosa breviflora</i> . . . . .	—	—	*3½ 3½

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> . . . . .	*2½ by 2	2½ by 1½
<i>suaveolens</i> . . . . .	3 3	—
<i>ventricosa superba</i> . . . . .	2½ 1½	—
<i>coccinea</i> . . . . .	*2½ 2½	—
<i>minor</i> . . . . .	*2½ 2½	2 2
<i>Cavendishiana</i> . . . . .	*3½ 2½	*2½ 1½
<i>Beaumontia</i> . . . . .	—	*2½ 2
<i>perspicua nana</i> . . . . .	—	2 2
<i>prinuloides</i> . . . . .	—	*2½ 1½
<i>fastigiata lutescens</i> . . . . .	—	2 1½
<i>mirabilis</i> . . . . .	—	*2½ 2
<i>vestita alba</i> . . . . .	—	*3½ 3
<i>delecta</i> . . . . .	—	2 1½

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).

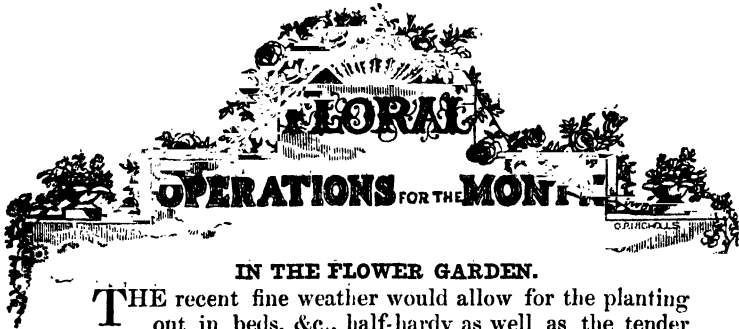
	May.	Green.	Fraser.
	Feet.	Feet.	Feet.
<i>Azalea indica Rawsonii</i> . . .	3 by 3	—	—
lateritia . . .	3 3	—	*3 by 4
Lawrenceana . . .	*2½ 2½	—	*3½ 3½
exquisita . . .	*3 2½	—	—
præstantissima . . .	3½ 3	*3 by 2½	—
sinensis . . .	*3½ 3	*3 1½	—
magniflora . . .	*3 2	—	—
variegata . . .	*3 3	—	*4 3
coronata . . .	*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, Cotherston, 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, Zan-zummun, 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—Aubernon, 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, Aubernon, 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, Aubernon, 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, Aubernon, Souvenir de Mal Maison, Eugene Hardy, Mrs. Elliott.



### IN THE FLOWER GARDEN.

**T**HE 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. Pansy 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, often 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.

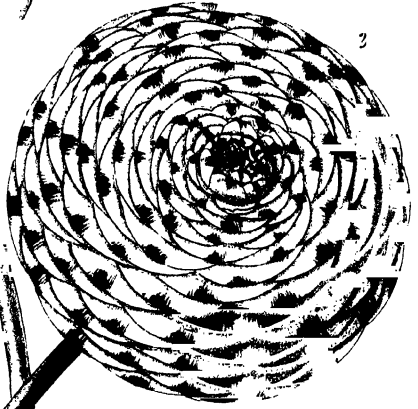
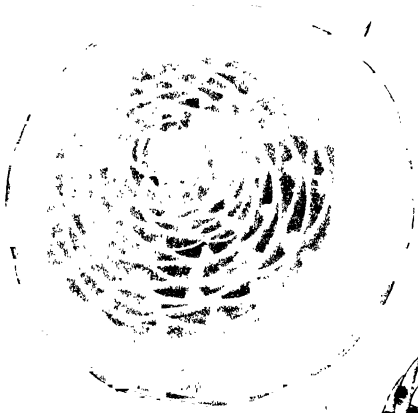
Still I love those green bow'rs which spring decks in her pride,  
And my rich-robed co-mates, though my garb they deride;  
And I'm cheerful and gay, be it sunshine or storm—  
When their soft hearts are cold, my brown bosom is warm.

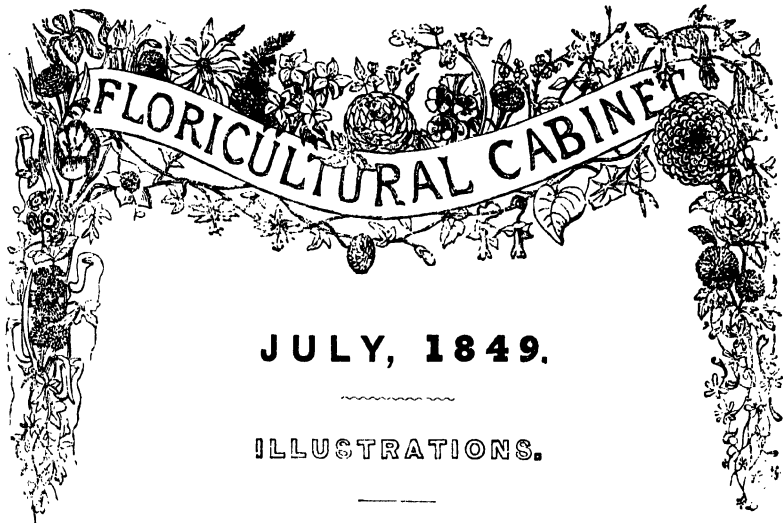
Young Rose woos the day; the proud Tulip men's eyes;  
Daffodil and Anemone fair ladies' sighs;  
And the Cowslip delights in the daisy-starred lea;  
Ah! the mouldering tow'r or grey ruin for me.

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.









**RANUNCULUSES — TYSO'S FLAMINIUS, AND KILGOUR'S  
PRINCESS ROYAL.**

**A**T 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.**

*Orchidæa—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.**

*Smilacæa. 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.**

*Orchidæa. 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 Angiosperma.*

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,

**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

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 dullness 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. Tameless 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 shrubbery 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 the 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 orchideæ. [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 Nile of snow-clad mountains among which the orient

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  $50^{\circ}$  to  $60^{\circ}$ .

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  $4^{\circ}$  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  $6^{\circ}$ ; the spring months of March and April, a difference of  $11^{\circ}$  and  $10^{\circ}$  respectively; and in autumn, too, as shown in October, the difference is  $9^{\circ}$ . “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  $3^{\circ}$  or  $4^{\circ}$ , the springs and autumns show a difference of  $10^{\circ}$  and  $12^{\circ}$ . 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

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 sub-tropical, 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

“ 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 Dalhousiæ* (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 roseate, 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 Campbellii* (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.



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 oleagnoides* (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, unpotted, very handsome, and only second in size to *R. Dalhousiae*. 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.  
*Porphyrocome lanceolata*, purple.  
*Begonia coccinea*, scarlet.  
*Clerodendron hastatum*, pink.

*May.*

*Mussaëdra frondosa*, yellow.  
*Gesnera Douglasii*, purple spotted.  
*Isotoma longiflorum*, white.  
*Achimenes longiflora*, violet.  
 ————— *grandiflora*, rose.  
*Tabernaemontana coronaria*, white.

*June.*

*Gesnera Suttoni*, scarlet.  
*Gloxinia maxima*, blue.  
*Clerodendron infortunatum*, scarlet.  
*Allamanda cathartica*, yellow.  
*Portlandia grandiflora*, white.  
*Erythrina Crista-galli*, scarlet.

VOL. XVII. No. 31.—N.S.

*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.  
*Columnnea 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.

F

### 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 *Parton'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 dwarfiest 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*, *Villarsia 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. Seemann 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. Loudon, 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*, *Pinelia 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 Reginae. *Red*, Van Speyke, L'Eclair, Appelius, 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; Aubernon, 2½ feet high and 4 feet wide; Mrs. Elliott, 1½ feet high and 4 feet wide; William Jesse, 1½ feet high and 3 feet wide. *Bourbon*.—Armosa, 3 feet high and 3½ feet wide; Ceres, 1½ feet high and 2 feet wide; Mrs. Bosanquet, 2½ 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, 2½ feet high and 3 feet wide; Safrano, 3 feet high and 2 feet wide; Comte de Paris, 1½ 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*.—Armosa, 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*.—Aubernon, La Reine, Baronne Prevost, Duchess of Sutherland. *Bourbon*.—Souvenir de la Malmaison, Armosa, 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, Armosa, 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>Aphelexis 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 Kämpferii</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.	
<i>Eriostemon buxifolium</i> . . .	—	—	—	—	*4	2½
<i>cuspidatum</i> . . .	5	2½	—	—	—	—
<i>myoporoides</i> . . .	2½	2	—	—	—	—
<i>neriifolium</i> . . .	2½	2	—	—	—	—
<i>Euphorbia splendens</i> . . .	—	—	—	—	5	2
<i>Franciscea augusta</i> . . .	*4½	2½	—	—	—	—
<i>Gompholobium polymorphum</i> . . .	*2	1	*2½	2½	—	—
<i>barbigerum</i> . . .	2½	2	—	—	—	—
<i>Genista racemosa</i> . . .	—	—	—	—	5	3
<i>Hovea Celsii</i> . . .	*3	1½	—	—	—	—
<i>Ixora coccinea</i> . . .	—	—	*4½	2½	—	—
<i>crocata</i> . . .	—	—	*3	2½	—	—
<i>Leschenaultia formosa</i> . . .	2½	2	—	—	—	—
<i>Baxteri major</i> . . .	2	2	—	—	—	—
<i>Pimelea spectabilis</i> . . .	*3½	3½	*3	4	—	—
<i>lanata</i> . . .	—	—	—	—	*3½	2½
<i>decussata</i> . . .	—	—	3	2	2½	2½
<i>Hendersonii</i> . . .	—	—	—	—	1	1
<i>diosmæfolia</i> . . .	3½	3½	—	—	—	—
<i>linifolia</i> . . .	—	—	2	2	—	—
<i>Polygala oppositifolia</i> . . .	—	—	3	2	3½	2½
<i>dalmaisiana</i> . . .	3	2½	—	—	—	—
<i>acuminata</i> . . .	*4½	4½	—	—	—	—
<i>Stephanotis floribunda</i> (trellis) . . .	—	—	—	—	4	1½
<i>Tetratheca verticillata</i> . . .	—	—	*3½	2½	—	—
<i>Tremandra verticillata</i> . . .	—	—	—	—	2½	2
<i>Vinca rosea</i> . . .	—	—	—	—	2½	2½
<i>Zichya villosa</i> (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 Wharnccliffe, &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; Fl. denotes flamed flowers, and F. feathered.

Aglaia, B.; Bacchus No. 1, Fl.; Catalani, Fl.; Countess of Wilton (Groom's), Fl.; Duchess of Sutherland (Groom's), B.; Duchess of St. Albans, F.; Julia, F.; King of Saxony, Fl.; Lady Crewe, F.; Lady Douro, F.; Lady Peel (Groom's), Fl.; 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. Catafulque (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 Sout, 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 mouths 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.*

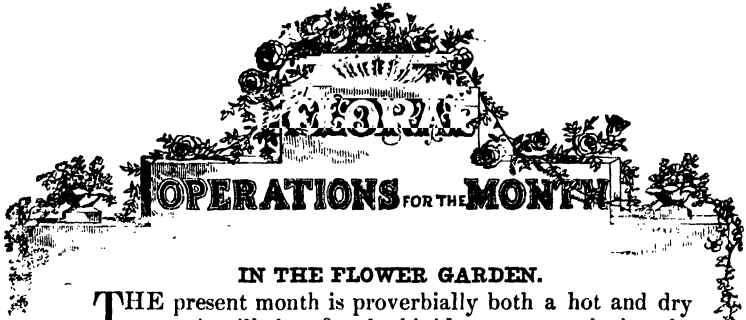
TORENIA ASIATICA.—In full bloom forms one of our prettiest stove plants when trained to a globular trellis. I have grown several plants in this way to admirable perfection. The compost I use is sharp sandy peat, with a little mellow loam, and a portion of leaf mould. Having

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.]



## OPERATIONS FOR THE MONTH

### IN THE FLOWER GARDEN.

**T**HE 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 veil of moss the angel throws.  
And robed in nature's simplest weed  
Can there a flower the rose exceed ?





*Eucharizonium Fosteri Gipsy Bride*



### FOSTER'S GIPSY BRIDE PELARGONIUM.

**I**N 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, peduncles, 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 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 conserue made of the flowers of the Cloue Gilliflower and sugar, is exceedingly cordiall, and wonderfully 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 seene 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-placc, 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, Thurlleston, near Derby; Mr. Thomas Amson, Coughton; Mr. John Cato, Wakefield; Messrs. William Chadwick, J. Bramma, J. Hopwood, J. Mallinson, Scholefield, and J. Smith, of Leeds; Mr. J. Gill, Wakefield; Mr. William Astle, Melbourn, 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 Chellston 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. Bramma.
- \*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. Shakespeare, 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. Amba. 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. Brama.
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, Mulek 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 Harriet 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 Jaue, 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.



**FLORIST'S**  
**OPERATIONS FOR THE MONTH OF**  
**JUNE**

GARDENERS

**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 desirable 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 Goëthe’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.”

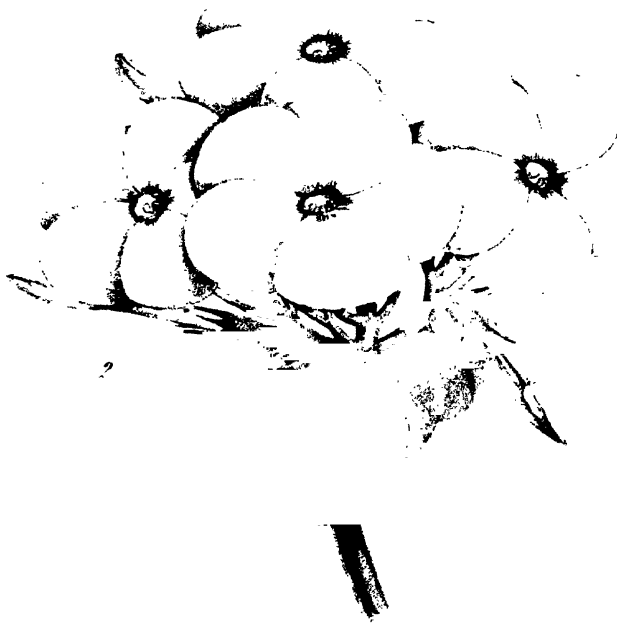
This flower has been figured as a device on the seals of lovers, and had its praises sung in their verses :—

“ 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.





*1. General Dummer 2. Madame Hobel*





1. Doctor Shanning  
2. Kochardus



PHILOX VARIETIES—1. GENERAL DUVIVIER.

2. MADAME FROBEL.

RANUNCULUS VARIETIES—1. DR. CHANNING.

2. ENCHANTER.

**T**HE 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  
Vol. xvii. No. 33.—N.S.



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. Diadelphia Hæzandra. (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,  $\Delta\iota\omicron\varsigma$  and  $\alpha\rho\theta\omicron\varsigma$ , 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 *Cillet* 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

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\* 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 Bastile, 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 unmistakable 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'Nabiana*, 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 Chorozema 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'Ershaw, 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 byblœmen, 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 PICOTEEES 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, Omium, 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 *Diplolana 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 dyeing 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

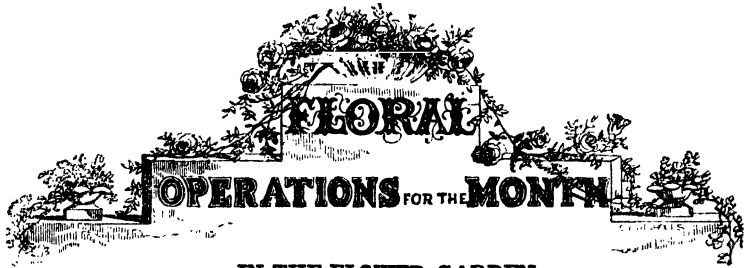
plants, for it is absolutely necessary to health that the process of transpiration should proceed freely under all circumstances. In a confined atmosphere like that in which Orchids grow, it might be found beneficial to the health of the plants if a small quantity of ammonia or carbonic acid were set 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 imitated 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  $60^{\circ}$ , and about  $5^{\circ}$  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  $75^{\circ}$  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.

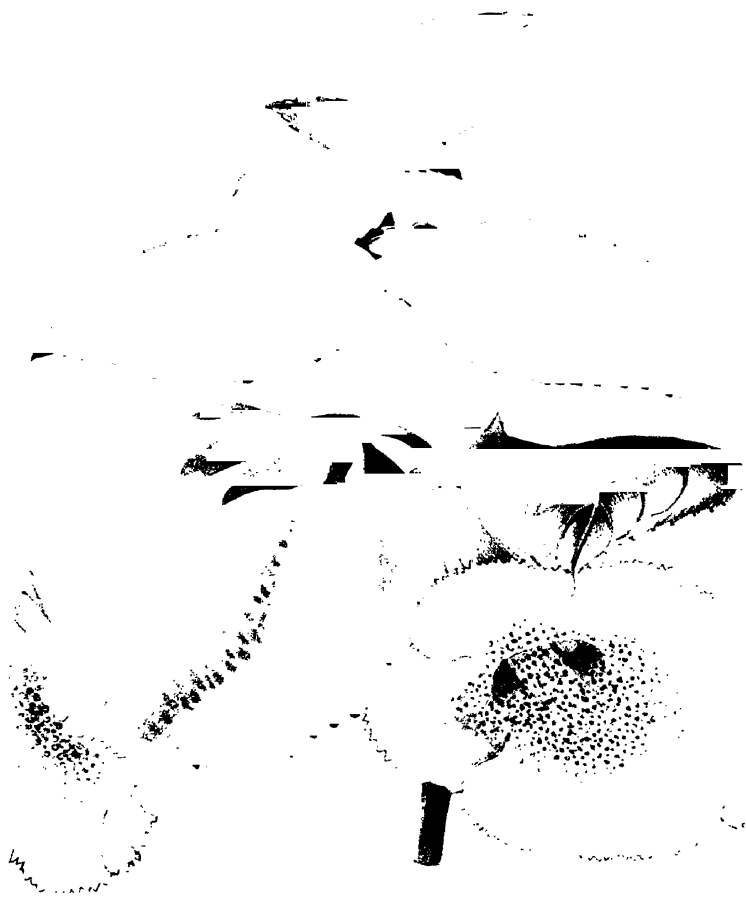
### THE CULTIVATION OF ROSES.

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*.







*Glaxinia fimbriata.*



### GLOXINIA FIMBRIATA—THE FRINGED-FLOWERED.

**T**HIS 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 *Pac. 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 SERRATIFOLIA.**—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 GLUTIONOSUS.**—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.

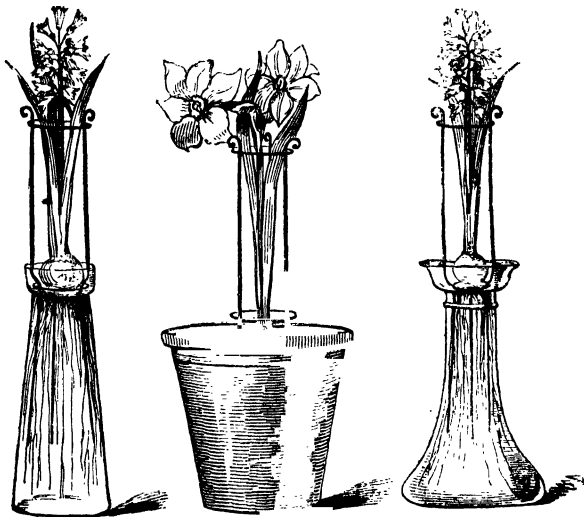
**ACACIA TRITERNATA.**—A fine bush, is in full bloom, the flowers are globular, a pretty yellow colour, and blooming throughout autumn renders it valuable; they generally bloom from January to May.

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, ore 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, Chcapside, 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 *Amaryllidæ* 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 diosmaceous 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 *Epacridææ*, 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. jasminiflora 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.

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, Thoresbyana (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 Brighouse, 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.

PICOTEEES.—II. 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 PICOTEEES.—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 PICOTEEES 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 (Miellez).**—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 (Chauviere).**—Shaded crimson with a small dark red eye, pretty.

**BELLE ANZINOISE (Defosse).**—Blue with a small black eye, a free bloomer.

**CÆLESTIAL (Chauviere).**—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 CAVAINAC** (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 grown 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 Aileana, 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,

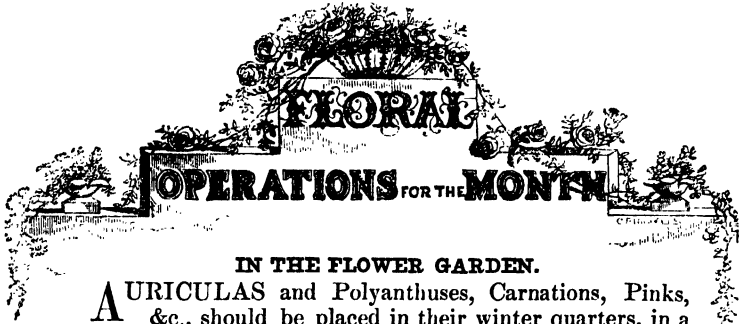
form very handsome objects; *Plumbago Larpentæ*, blue; this is a splendid object when in bloom (*see last Month's Plate*).

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 Vandycken, Count de Vergennes. *Bizarres*.—Royal Sovereign, Magnum Bonam, Captain White, Polyphemus, Pilot, Earl St. Vincent, Surpass Catafalque, Lord Milton. *Byblemens*.—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; Marquise 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.

**A**URICULAS 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, Mezerium, 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



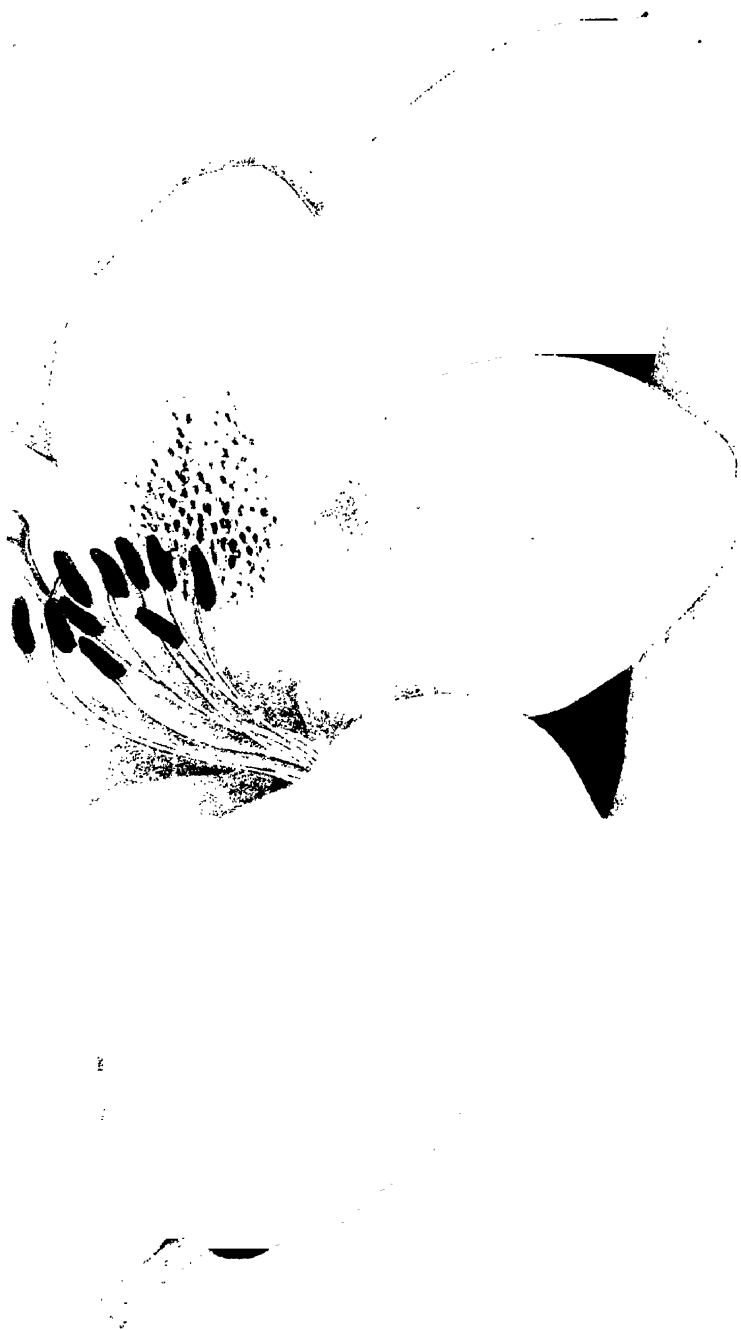
must be taken so that one plant may receive something like its proper treatment without interfering materially with the well-being of its neighbours; and whilst the tender ones must be placed in the best part for protection from cold wind, &c., as Polygalas, Pimeleas, Leschenaultias, Aphelexis, Baroneas, 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 re-potted 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 Duvrier*, 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.







NOVEMBER, 1849.

ILLUSTRATIONS.

RHODODENDRON DALHOUSIÆ.  
(LADY DALHOUSIE'S RHODODENDRON.)



**I**n 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

Vol. xvii. No. 35.—N.S.

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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 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.

#### *Orchidæa. 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 asclepiadaceous 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.

## IPOMŒA.

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.)

## NYMPHŒA 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 DEBOCIA, 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.

**CÆLOGYNE ASPERATA.** (Received in flower from T. Twisden Hodges, Esq., May 30, 1849.)—This orchid is much the finest of all the *Cælogyne*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.

**PÆONIA 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.

**PÆONIA MOUTAN**: *ATROSANGUINEA*. (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 beautiful specimens, amply repaying for the attention I had given.

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

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

*Hæmantha*, 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.

*Orata*, 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.

*Errebaaultii*, 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 Ἀλκη, 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 BARNESLEY.

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 *Epacris* 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 starring 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 Luss*.—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."



**FLORAL**  
**OPERATIONS** FOR THE **MONTH**  
**IN THE FLOWER GARDEN.**

**T**HE 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 bizarres 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 *Calceolareae*. *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 buds, 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 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 to the roots, and a very moderate degree of atmospheric moisture.

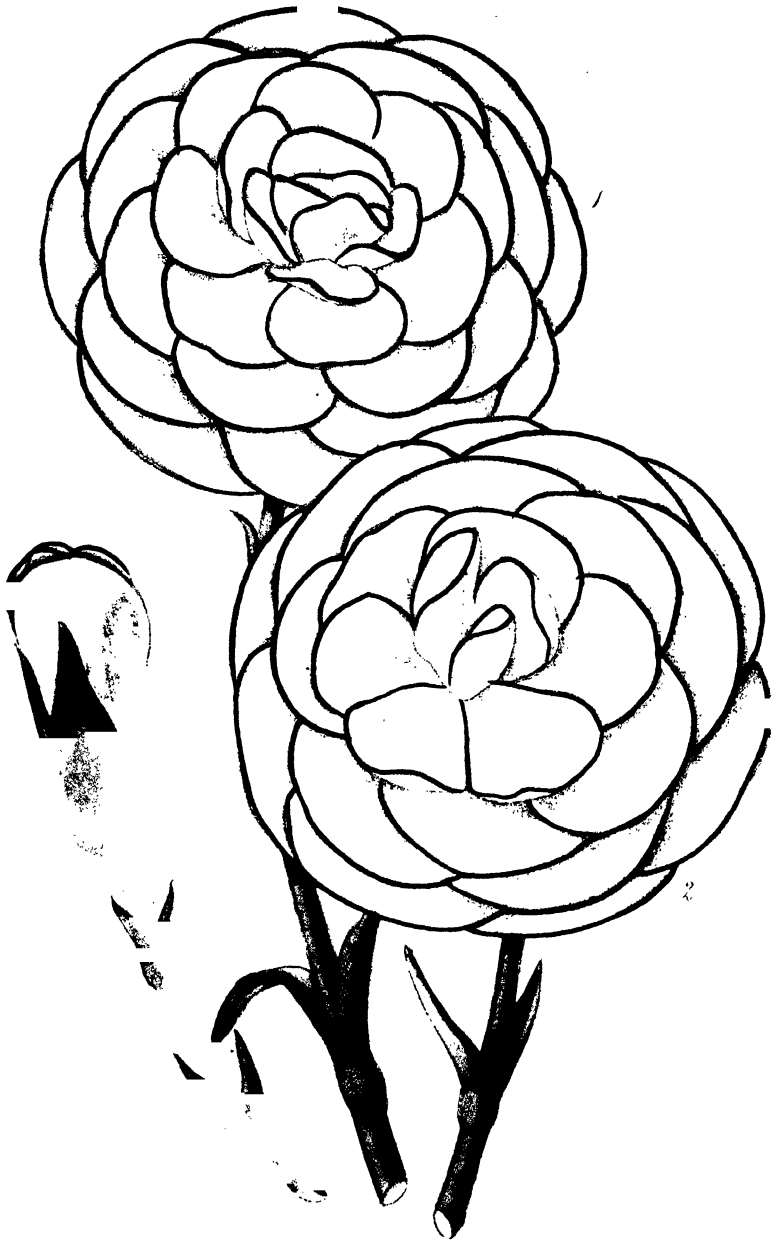
## ON PRUNING ROSES.

BY ROSA.

A ONE-YEAR old budded plant usually has but one shoot; such shoots 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 be in 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 be 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 on the interior of the head that, on pushing shoots, would grow inward 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.





*Picoles.*



PICOTEES.—1. MISS DUKE (BARRINGER). . 2. DUCHESS OF  
SUTHERLAND (BURROUGHES.)

**B**OTH 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 KLEEI.—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-PETALED.

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 BOWELL.

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 STAPELIOIDES.

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.

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#### 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 Schoenanthus*) 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 Dahlias, 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 Dahlias, 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 Dahlias. 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 off 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 *Marchantia*, 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*, *Erythrinus*, *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 jumbos*, 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*, *Tabernaemontana*, *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*, *Canna*, *Strelitzia*, and various *Murantacea*, numerous *Amaryllidæ*, 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 *Cerealia*, and the varieties of *Cotton*, *Sugar-cane*, &c.,

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## 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. Cirésse 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 Asturéen, 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.

**FRITTILLARIAS.**—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  $85^{\circ}$ .

“ 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  $85^{\circ}$ , 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, 10½ 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 *Dionœa 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.) *Meuziesia polifolia*—purple; 1s. (bog.) *Daphne gnidium*—white; 2s. 6d. *Polygala chamæbuxus*—white and yellow; 1s. (bog.) *Daphne*

cnearum—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 *marginis* 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 whilish 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.—*Chent 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.*



### IN THE FLOWER GARDEN.

**T**HE 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 Laurustinus, 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.

# INDEX.

## ILLUSTRATIONS.

	Page		Page
Browallia Jamesonii . . . . .	49	Potentilla, Brilliant. . . . .	25
Dahlia Œillet de Boheme . . . . .	73	————— Insignis . . . . .	25
Frontispiece . . . . .	1	————— Plantii . . . . .	25
Fuchsia corymbiflora alba . . . . .	97	Ranunculus, Dr. Channing . . . . .	217
Hoya bella . . . . .	121	————— Enchanter . . . . .	217
Mitraria coccinea . . . . .	241	————— Kilgrew's Princess	
Nemophila maculata . . . . .	1	Royal . . . . .	145
Pelargonium, Foster's Gipsy Bride	193	Tyso's Flaminius . . . . .	145
Phlox, General Duvivier . . . . .	217	Rhododendron Dalhousiæ . . . . .	265
————— Madame Frobél . . . . .	217	Schizanthus retusus albus . . . . .	241
Picotée, Miss Duke . . . . .	289	Verbena Junius . . . . .	49
————— Duchess of Sutherland . . . . .	289		

## ORIGINAL AND MISCELLANEOUS.

Abronia umbellata, remarks on . . . . .	113	Clematis Sieboldii, to bloom . . . . .	117
Achimenes, remarks on . . . . .	163, 185	Clove and Carnation, on the . . . . .	197
Alstromerias, a list of . . . . .	274	Combretums, remarks on . . . . .	164
————— remarks on . . . . .	273	Cotoneaster microphylla, remarks on	186
Amaryllises, treatment of . . . . .	313	Crocuses, early . . . . .	302
————— Jacobee, on blooming	314	Cypripedium insignis, culture of the	254
Ammonia, on supplying, to plants.	167	Cytisus Canariensis, remarks on . . . . .	186
Annuals, a list of fifty . . . . .	187	Dahlias, remarks on new . . . . .	9
Antirrhinum, on the . . . . .	203	Daisy, on the double . . . . .	260
Ants, to destroy . . . . .	309	December, floral operations for . . . . .	319
April, floral operations for . . . . .	93	Droseras and Pinguiculas, culture	
August, ditto ditto . . . . .	212	of . . . . .	311
Auriculas, remarks on . . . . .	184	Eccremocarpus scaber, on the . . . . .	310
Azalea Indicas, a descriptive list . . . . .	255	Epaeris, the cultivation of . . . . .	281
————— Indian, on . . . . .	320	Evergreens, transplanting large . . . . .	128
propagation of . . . . .	312	select dwarfish hardy . . . . .	312
Beds for Ranunculuses . . . . .	53	Exhibitions of Pelargoniums . . . . .	173, 200
Benthamia fragifera . . . . .	310	Tulips . . . . .	177, 205
Bignonias, the . . . . .	314	Floral, 114, 138, 171, 173,	
Botanic Society, exhibition of	138, 175	175, 177, 179, 200, 205, 209, 228,	
Brazil, on the vegetation of . . . . .	57	229, 256, 258.	
British Flowers . . . . .	301	Horticultural, their in-	
Bug, on the mealy . . . . .	71, 191	fluence . . . . .	31
Cactuses, on raising seedling . . . . .	24	February, floral operations for . . . . .	45
Cactus and other succulents, culture		Ferns, culture of . . . . .	232, 247
of . . . . .	314	Fish, gold and silver . . . . .	112
California, the vegetation of . . . . .	249	Floricultural Society, exhibition,	
Camellias, on . . . . .	61	114, 192, 209, 253	
on grafting . . . . .	84	Flower gardening, cheap . . . . .	236
remarks on new . . . . .	81	for ladies . . . . .	137
Carnations, on exhibiting . . . . .	63	gardens, on planting . . . . .	86
on raising from seed . . . . .	182	remarks on . . . . .	7
and Picotees, on cards. . . . .	196	gay in spring . . . . .	306
classes of, described . . . . .	315	spring ornaments. . . . .	311
on impregnating . . . . .	16	Flowers, drying and preparing . . . . .	129
on large blooms . . . . .	226	of our island . . . . .	56, 82
Chinese and Indian Azaleas, propa-		a succession of . . . . .	178, 310
gation of . . . . .	312	the arrangement of . . . . .	36, 65
Chorozemas, on the culture of . . . . .	225	the form of . . . . .	102
remarks on . . . . .	55	songs of the, 71, 96, 120, 143,	
Cucurarias, remarks on . . . . .	174	192, 215	
Clematis azurea grandiflora, on . . . . .	166	florists, notes on . . . . .	29

	Page		Page
Flowers, florists', remarks on . . .	9	Pinks, on beds for . . . . .	162
Forget me not, song of the . . . . .	215	Plants, directions for preserving . . .	87
Fuchsia, on the cultivation of the . . .	135	— for autumn, winter, and	
— remarks on new . . . . .	228	— early spring ornament . . . . .	303
— cordifolia, remarks on . . . . .	37	— greenhouse, to restore . . . . .	136
— serratifolia, remarks on . . . . .	33	— in pots, compost for . . . . .	215
— on wintering . . . . .	316	— on watering . . . . .	15
Garden, the Calcutta Botanic . . . . .	13	— in windows, on watering . . . . .	83
— pots, ornamental . . . . .	222	— for conservatories, green-	
Gardening, landscape, remarks on . . .	279	— houses, &c. . . . .	309
Geranium, on training the . . . . .	81	— on disease of . . . . .	245
— scarlet, on . . . . .	320	— on reviving withered . . . . .	110
Gladiolus, on cultivating . . . . .	18	— on the beauty of hardy her-	
— cardinalis, cultivation of . . . . .	169	— baceous . . . . .	104
— floribundus, varieties of . . . . .	317	— on the culture of Alpine . . . . .	106
Greenhouse, on warming the . . . . .	12	— stove, a list of . . . . .	161
— plants, treatment of, in		— on the odours of . . . . .	293
— October and November . . . . .	293	Plumbago Capensis, remarks on . . .	92
Heaths, Cape, on the culture of . . . . .	35	— Larpentæ . . . . .	300
Hollyhock, remarks on the, 15, 62, 275		Poinsettia pulcherrima . . . . .	309
Hollyhocks, a list of the best . . . . .	279	Polyanthuses, remarks on . . . . .	184
— to propagate . . . . .	64	Potentilla, on the . . . . .	224
Hooker's Journal of Botany . . . . .	168	Primrose, song of the . . . . .	72
Horticultural Society of London,		Quicklime, prevent dampness . . . . .	162
— exhibitions of, 171, 172, 179, 200,		Ranunculuses, on raising seedlings. . .	246
— 228, 229, 256		— remarks on . . . . .	66, 162
— meeting of . . . . .	17	Rhododendron, on budding . . . . .	181
Hydrangea, on the blue flowered . . . . .	136	— flowering of the . . . . .	313
India, remarks on seeds from . . . . .	191	Rhododendrons of Sikkim Hima-	
— gardening in . . . . .	304	— laya . . . . .	156
Iris pavonia . . . . .	312	Rooms, on rendering cheerful . . . . .	65
Ixia, on the culture of the . . . . .	19	Rose, on grafting . . . . .	90
Ixias, Gladioluses, Antholyzas, &c.,		— song of the . . . . .	192
— culture of . . . . .	298	Roses, a list of, for succession . . . . .	109
January, floral operations for . . . . .	21	— tea scented . . . . .	109
July, ditto ditto . . . . .	189	— culture of, in pots . . . . .	108
June, ditto ditto . . . . .	142	— infested with green fly . . . . .	188
Lagerstræmia Indica, remarks on . . . . .	38	— on budding . . . . .	184
Leschenaultia formosa, culture of . . . . .	272	— on forcing . . . . .	188
Lobelia, on the culture of the scarlet . . . . .	254	— on late blooming . . . . .	133
March, floral operations for . . . . .	68	— planting on lawns . . . . .	166
May, ditto ditto . . . . .	118	— pruning . . . . .	288
Mignonette, on growing . . . . .	7	— the cultivation of . . . . .	240
— on the tree . . . . .	66	— standard climbing . . . . .	215
— on winter blooming . . . . .	244	— weeping, remarks on . . . . .	199
Mosses and Lichens, culture of . . . . .	298	— yellow, remarks on . . . . .	211
Nerium Oleander, remarks on . . . . .	111	— superb, list of . . . . .	315
November, floral operations for . . . . .	285	— on striking . . . . .	316
October, floral operations for . . . . .	262	Salvia gesneriflora, remarks on . . . . .	110
Orchid houses, the atmosphere of . . . . .	235	— patens, on wintering . . . . .	63
— temperature of . . . . .	237	— remarks on . . . . .	64, 318
Oxalis, for winter flowering . . . . .	318	September, floral operations for . . . . .	239
Pansies, remarks on . . . . .	163	Shrubs, on planting in masses . . . . .	153
Passifloras, remarks on . . . . .	43	Slugs, to destroy . . . . .	224
Paulownia Imperialis, remarks on . . . . .	185	— traps for . . . . .	131
Penstemon speciosus, on the . . . . .	41	Snowdrop, on the . . . . .	33
Picotees, a descriptive list of . . . . .	41, 78	Spring, the flower garden gay in . . . . .	306
— new, remarks on a . . . . .	12	Stocks, on double . . . . .	252, 296
— on the yellow . . . . .	39	Swan River, floral productions of . . . . .	233
Pink, observations on the . . . . .	219	Sweet Williams, remarks on double . . . . .	229
— on the edging of the . . . . .	133	Tecoma Jasminoides, on . . . . .	235
Pinks, a chapter on . . . . .	283	Torenia Asiatica, on the . . . . .	187
— new, remarks on . . . . .	12	Tropeolum tricolorum, remarks on . . . . .	176

	Page		Page
Tulip, the properties of . . . . .	107	Violet, the sweet . . . . .	114
— remarks on . . . . .	124	— song of the . . . . .	96
Tulips, exhibitions of . . . . .	177, 205	Wallflower, song of the . . . . .	143
— the impregnation of . . . . .	134	Wintering fuchsias, on . . . . .	316
— remarks on new . . . . .	227	Wire-worm, destroying the . . . . .	90, 235
Verbena, notes on the . . . . .	29	Zauchneria Californica, remarks on . . . . .	89
— the culture of . . . . .	77, 134	Zinc, ink proper for writing on . . . . .	67
Victoria regia . . . . .	308		

**NEW OR RARE PLANTS NOTICED.**

Abronia mellifera . . . . .	150	Camellia Bealii . . . . .	77
— umbellata . . . . .	266	— Carswelliana . . . . .	77
Acacia celustrifolia . . . . .	101	— Chalmer's perfection . . . . .	77
— decipiens . . . . .	5	— Colletti . . . . .	77
— dentifera . . . . .	5	— Duchess D'Orleans . . . . .	77
— graveolens . . . . .	101	— fulgens superba . . . . .	77
— hybrida . . . . .	101	— Landrethii . . . . .	77
— leptoneura . . . . .	5	— Leana superba . . . . .	77
— lineata . . . . .	5	— Marchioness of Exeter . . . . .	77
— longifolia . . . . .	101	— Mont Blanc . . . . .	77
— ovata . . . . .	5	— Queen of England . . . . .	77
— pramorsa . . . . .	5	— Sherwoodii . . . . .	77
— prominens . . . . .	101	— teutonia . . . . .	77
— pulchella . . . . .	101	— tornietta d'Italie . . . . .	77
— rotundifolia . . . . .	5	Carnations (new vars.) . . . . .	243, 269
— sophora . . . . .	101	Cattleya amethystina . . . . .	122
— squamata . . . . .	28	— elegans . . . . .	122
— trinervata . . . . .	5	Cereus Leeanus . . . . .	26
— undulatafolia . . . . .	28	Choetogastra strigosa . . . . .	26
— verticillata . . . . .	101	Cheiranthus mutabilis . . . . .	4
— vestita . . . . .	5	Chirita Moonii . . . . .	74
Achimenes picta . . . . .	6	Chironia glutinosa . . . . .	2
— Kleei . . . . .	290	Cococypsilon tontaria . . . . .	28
— Jayii . . . . .	290	Cœlygyne asperata . . . . .	271
Aerides crispum . . . . .	51	— fulginosa . . . . .	122
Æschynanthus miniatus . . . . .	98	Colonyction macranthum . . . . .	74
Allamanda Aubletia . . . . .	2	Corrœa delicata . . . . .	76
Alloplectus capitatus . . . . .	195	— longiflora . . . . .	76
Alstromerias (new vars.) . . . . .	152	— ne plus ultra . . . . .	76
Amherstia nobilis . . . . .	195	— rosea pallida . . . . .	76
Anemone Japonica . . . . .	266	— sempervirens . . . . .	76
Ansellia Africana . . . . .	28	— tricolor . . . . .	76
Asclepias Douglassii . . . . .	2	Crowea stricta . . . . .	290
Asystacia scandens . . . . .	151	Cureuna cordata . . . . .	98
Azalea, Duke of Wellington . . . . .	101	Cychnoches barbatum . . . . .	290
— Queen Perpetual . . . . .	73	Cyrtanthera catalpæfolia . . . . .	122
— splendens . . . . .	101	Cyrtochilum citrinum . . . . .	195
— (new vars.) . . . . .	124, 270	Cytisus filipes . . . . .	100
Barkeria melanoacaulan . . . . .	121	Delphinium azureum . . . . .	267
Beaufortia decussata . . . . .	28	— cœrulescens flore-pleno . . . . .	267
Begonia fuchsioides . . . . .	6	Dendrobium Cambridgenum . . . . .	151
Bejaria coarctata . . . . .	74	— Devonianum . . . . .	74
Boronia triphylla . . . . .	98	— Farmerii . . . . .	3
Bossicea virgata . . . . .	5	— tortile . . . . .	290
Brachysema latifolia . . . . .	100	Dielytra spectabilis . . . . .	218
Brassavola Digbyana . . . . .	266	Dipladenia ecrophylla . . . . .	3
Brodiaea Californica . . . . .	102	— nobilis . . . . .	52
Browallia speciosa . . . . .	52, 290	— var. rosea . . . . .	122
Calanthe vestita . . . . .	151	— urophylla . . . . .	98
Calceolaria (new vars.) . . . . .	271	Epacris ærifolia . . . . .	101
Camellia Alberti . . . . .	77	— alba compacta . . . . .	5
— augustina superba . . . . .	76	— odorata . . . . .	101



	Page		Page
<i>Epacris campanulata rosea</i> . . . . .	4	<i>Lobelia densiflora</i> . . . . .	99
----- <i>rubra</i> . . . . .	4	<i>Luculia gratissima</i> . . . . .	291
----- <i>coccinea</i> . . . . .	101	<i>Macleania punctata</i> . . . . .	53
----- <i>delicatissima</i> . . . . .	29	<i>Mandevillea suaveolens</i> . . . . .	291
----- <i>hyacinthiflora</i> . . . . .	5	<i>Maxillaria leptosepala</i> . . . . .	99
----- <i>impresa</i> . . . . .	5	<i>Metrosideros florida</i> . . . . .	268
----- <i>limatus</i> . . . . .	4	<i>Miltonia Karwinskii</i> . . . . .	76
----- <i>magnificans</i> . . . . .	101	----- <i>spectabilis</i> , var. <i>purpurea</i>	
----- <i>miniata</i> . . . . .	4	<i>violacea</i> . . . . .	53
----- <i>nivea</i> . . . . .	4	<i>Mimulus tricolor</i> , var. <i>Hartwegi</i> . . . . .	271
----- <i>onosmaflora</i> . . . . .	5	<i>Mindia speciosa</i> . . . . .	28
----- <i>pungens</i> . . . . .	29	<i>Mirabilis</i> , var. . . . .	271
----- <i>purpurescens</i> . . . . .	29	<i>Mirbelia Meisneri</i> . . . . .	27
----- <i>rubra grandiflora</i> . . . . .	29	<i>Mitraria coccinea</i> . . . . .	123
----- <i>sanguinea</i> . . . . .	4	<i>Nematanthus ionema</i> . . . . .	218
----- <i>splendens</i> . . . . .	29	<i>Nemophila maculata</i> . . . . .	124
----- <i>ternatus</i> . . . . .	29	<i>Nymphæa ampla</i> . . . . .	268
----- <i>variabilis</i> . . . . .	29	<i>Oenothera Drummondii</i> . . . . .	270
<i>Epidendrum fragrans</i> . . . . .	272	<i>Oncidium flabelliferum</i> . . . . .	99
----- <i>sulphureum</i> . . . . .	123	<i>Rigbyanum</i> . . . . .	268
<i>Epimedium pinuatum</i> . . . . .	196	<i>Oxalis Boweii</i> . . . . .	291
<i>Erica dæbocia</i> . . . . .	270	<i>Pachystigma pteleoides</i> . . . . .	99
<i>Eriopsis rutidobulbon</i> . . . . .	98	<i>Passiflora Newmannia</i> . . . . .	27
<i>Eriostemon intermedium</i> . . . . .	98	<i>Pelargonium Gem of Scarlets</i> . . . . .	99
<i>Escallonia macrantha</i> . . . . .	267	<i>Scarlet Perpetual</i> . . . . .	102
<i>Exacum Zeylanica</i> . . . . .	52	<i>Unique</i> . . . . .	271
<i>Fuchsia corymbiflora alba</i> . . . . .	27	<i>Pentstemon Clowisii</i> . . . . .	102
<i>pumila</i> . . . . .	267	<i>ovatum cæruleum</i> . . . . .	123
<i>Funkia grandiflora</i> . . . . .	267	<i>Verplanckii</i> . . . . .	76
<i>Gardenia Sherbournii</i> . . . . .	218	<i>Picotees</i> (var.) . . . . .	243, 270, 292
<i>Stanleyana</i> . . . . .	123	<i>Pimelia Hendersonii</i> . . . . .	3
<i>Gesneria coruscans</i> . . . . .	218	<i>Pinks</i> (new vars.) . . . . .	244
<i>Herbertii</i> . . . . .	6	<i>Pteroma elegans</i> . . . . .	269
<i>picta</i> . . . . .	268	<i>Kunthiana</i> . . . . .	3
<i>zebrina</i> . . . . .	6	<i>Pæonia Moutan</i> , var. <i>atrosanguinea</i> . . . . .	272
<i>Gladiolus Brenchleyensis</i> . . . . .	3	<i>versicolor</i> . . . . .	272
<i>Gloxinia fimbriata</i> . . . . .	75	<i>Polygala myrtifolia</i> . . . . .	6
<i>Knightii</i> . . . . .	267	<i>Potentilla Menziesii</i> . . . . .	4
<i>Perryana</i> . . . . .	267	<i>Promeneæ Stapelioides</i> . . . . .	291
<i>Gmelina Rheedii</i> . . . . .	241	<i>lentiginosa</i> . . . . .	291
<i>Gompholobium hirsutum</i> . . . . .	75	<i>Rhododendron arboreum hybridum</i> . . . . .	123
<i>venustum</i> . . . . .	75	<i>campanulatum superbum</i> . . . . .	291
<i>Gonolobus Martianus</i> . . . . .	267	<i>formosum</i> . . . . .	219
<i>Godia pubescens</i> . . . . .	102	<i>Clivianum</i> . . . . .	291
<i>Hardenbergia Comptoniana</i> . . . . .	100	<i>Roses</i> (new vars.) . . . . .	270
<i>digitata</i> . . . . .	100	<i>Ruellia Purdiaba</i> . . . . .	152
<i>macrophyllum</i> . . . . .	100	<i>Salphizantha coccinea</i> . . . . .	100
<i>ovata</i> . . . . .	6	<i>Schomburgkia tibicinus</i> . . . . .	291
<i>Heterotrichum macrodon</i> . . . . .	27	<i>Scutellaria macrantha</i> . . . . .	28
<i>Hoya Cunninghamii</i> . . . . .	3	<i>Sericographia Ghiesbrihtiana</i> . . . . .	29
<i>Imperialis</i> . . . . .	242	<i>Siphocampylus manettiaeflorus</i> . . . . .	28
<i>Indigofera gracilis</i> . . . . .	101	<i>Sobralia macrantha</i> . . . . .	151
<i>decora</i> . . . . .	290	<i>Stemonacanthus macrophyllus</i> . . . . .	152
<i>Ipomœa</i> (nov. spec.) . . . . .	268	<i>Stiffia chrysantha</i> . . . . .	100
<i>Jasminum nudiflorum</i> . . . . .	242	<i>Swainsonia Grayana</i> . . . . .	4
<i>Kennedyia exinia</i> . . . . .	75	<i>Thyrsacanthus bracteolatus</i> . . . . .	123
<i>rubicunda</i> . . . . .	100	<i>Torenia Asiatica</i> . . . . .	6, 311
<i>Lælia anceps</i> . . . . .	6	<i>Verbena Barkeri</i> . . . . .	271
<i>Lantana Sellowii</i> . . . . .	271	<i>Verbenas</i> (new var.) . . . . .	152
<i>Lapageria rosea</i> . . . . .	151	<i>Weigelia rosea</i> . . . . .	242
<i>Lisianthus pulcher</i> . . . . .	52	<i>Wistaria Sinensis alba</i> . . . . .	271
<i>Loasa picta</i> . . . . .	53	<i>Zieria</i> (nov. spec.) . . . . .	102

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FLORIST'S MAGAZINE

1850.

*G. Habot, Linc.*



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## P R E F A C E.

ALMOST imperceptibly has another year passed away, and brought us to the period of tendering, as we respectfully do, our very sincere thanks to our readers for their continued support, and which we again solicit the favour of in future.

When we closed the previous volume, we entered into engagements as to the application of our labours in prosecuting the duties in connexion with the present one. Eighteen years ago we stated what was our aim in commencing the Magazine, and we have pursued the course then marked out, viz., “to render it *really useful* and *interesting* to those for whom it was intended, and that no other subjects would be admitted into its pages.” To the best of our judgment we have so conducted the publication, and our constant endeavour has been fully to realize the promises annually made to our supporters and friends. In referring to the present volume, we think we may say, without ostentation, that it is equal, if not superior, to any that has preceded it. We are very sensible of the obliging assistance which our contributors have rendered us, thus enabling us to fulfil our promises.

In infancy we lived among a profusion of flowers, and such has been our privilege and enjoyment up to the present time. We always admired and loved flowers, and the culture of them has been a source of much delight. The conducting of this Magazine has always yielded us much pleasure, and we think the last volume the chiefest.

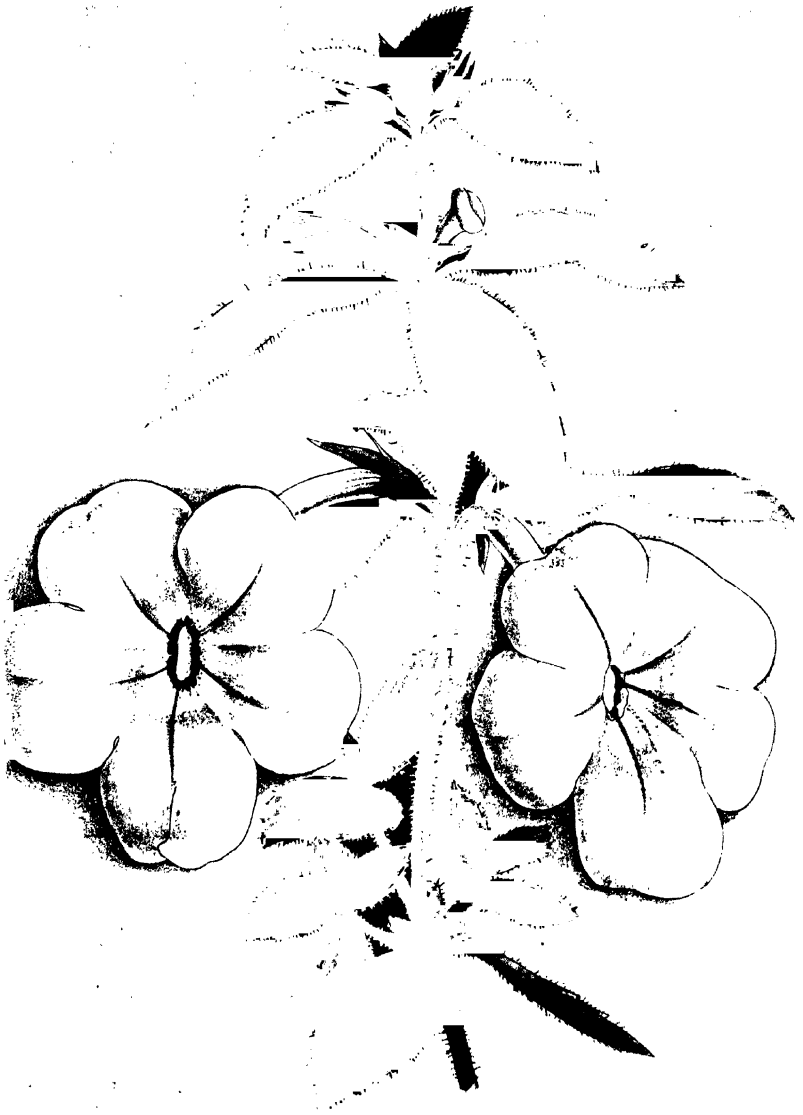
In reference to the future, we engage to use our utmost exertion to meet the wishes of our readers, and to accomplish which we respectfully solicit the aid of our friends in forwarding us communications of everything relative to Floriculture, however small in extent the subject may be. With their assistance we will endeavour to please and profit all, and doubt not of accomplishing our object satisfactorily. We have not received a single complaint during the past year, and had many pleasing testimonies of approbation.

The sale of previous years' volumes has likewise greatly increased, and we are now providing for future demand. The recommendations by our friends of the FLORICULTURAL CABINET AND FLORICULTURAL MAGAZINE to others will prove an additional stimulus to our exertions, and for such favours we will evidence a more corresponding proof of our gratitude by our deeds.

*Richmond, 26th November 1850.*







*Achimenes aureguia!*



JANUARY, 1850.

ILLUSTRATIONS.

ACHIMENES JAUREGUIA.

THIS lovely family is universally admired, and it affords us much pleasure to have the opportunity of figuring in our first Number of a new volume, the very charming addition we now do. We have been enabled to do so by the kindness of our respected correspondent, Mr. Friedrich Haage, jun., florist and seedsman, of Erfurt in Prussia; to whom, for the favour, we feel much indebted.

The following particulars relative to this valuable acquisition have been communicated by Mr. Haage:—

As with indigenous blue or violet-flowering plants, and some tropical sorts, the white colour is sometimes found amongst the wild growing ones; for instance, the *Campanula Gentiana*, the *Salvia pratensis* and *patens*, &c., so that indefatigable traveller, Mr. Warszewicz, found in the year 1847 upon an exhausted volcano, near Guatemala, the white-coloured, long-blossomed *Achimenes* above mentioned, in a single specimen amongst hundreds of others, though all of the lilac or red-flowering species. The delight of the collector at this splendid discovery is easily to be imagined. He cautiously dug the plant up, and conveying it to Guatemala, he planted it in the garden of the Prussian Consul, Mr. Klee. A lady of that place took a drawing of the flower, which Mr. Warszewicz sent me, with the remark that he had named this novelty after the lady, *Jaureguia*, and that with the first opportunity he would send me some tubers of it. On the 2nd of January, 1848, I received such a tuber fastened by means of a wafer to the letter in which it was enclosed; but the tuber, not having been better protected, was quite dried up, and all attempts at re-animation proved without success.

It was only in the present year (1849) towards the middle of August, after a voyage of seven months and a half, that I received, together with a number of *Orchidææ*, packed up in sand in a little tin-box, all

the remaining tubers, which had put forth many shoots on the way, and arrived in rather a dry condition; only here and there the extreme points gave signs of animation. These I planted with great care, kept them moderately warm, and caused them very soon to begin growing.

The most vigorous plants are now, in the midst of November, in full bloom, and afford an exceedingly charming aspect. I have caused a drawing to be made, and shall have it lithographed and coloured so as to give amateurs an idea of this splendid acquisition. Though the white colour itself, considered apart, is not the most brilliant amongst flowers, yet among the Achimenes, which are already cultivated *en masse* in greater towns by amateurs on account of their beautiful effect, only the lilac and violet-blue colours in the large-blossomed specimens have heretofore predominated. But since last year, owing partly to new importations, partly to the production of hybrids, larger flowers in orange, carmine, scarlet, and pink have appeared. All these brilliant colours will now be exceedingly enhanced by the above mentioned new, large-blossomed, strikingly handsome white species with carmine-red stellated centre.

This flower belonging, as above stated, to *Achimenes longiflora*, I think any further detailed description and explanation of the mode of culture is unnecessary.

## NOTES ON NEW OR RARE PLANTS.

### ADAMIA VERSICOLOR.—VARIOUS-COLOURED.

It is a dwarf shrub, which was found by Mr. Fortune at Hong Kong, in China, who sent it to the Horticultural Society; and in the greenhouse at Chatsworth Gardens it has lately bloomed. The foliage has much the appearance of *Hydrangea japonica*, but the flowers are different. They are borne in a pyramidal panicle, a foot in diameter. The flowers when in bud are globose, and white, but as they expand they change to purple, and finally to a violet-blue; when fully blown, each is about three quarters of an inch across. The fine heads of flowers are highly ornamental. If it should fruit too in this country, its rich blue berries will be beautiful too. The treatment given to the *Hydrangea japonica* suits this plant; it grows and blooms freely with it. (Figured in *Pax. Mag. of Gardening*.)

### ANGURIA MAKOYANA.—(MR. MAKOY'S.)

This plant belongs to the Cucurbitaceæ (or Cucumber tribe). It is a perennial plant, in the possession of Messrs. Knight and Perry, of King's Road, Chelsea, where it has bloomed in a coolish stove. The parts termed the flower (similar to petals) are near an inch long, very narrow, of a vermilion colour. They are produced in terminal bundles, and have a singular appearance. (Figured in *Pax. Mag. of Gardening*.)

### BRACHYSEMA APHYLLUM.—(THE LEAFLESS.)

It is a small shrub, of the Leguminose tribe (Pea-formed), a native of the Swan River colony. It is leafless, but blooms freely. The

corolla is at first orange sprinkled with red, afterwards becomes a deep blood colour. Each blossom is about an inch and a half long. It will form a very handsome greenhouse ornament, and ought to be in every one. Although figured in the *Botanical Magazine*, a living plant has not yet been introduced into this country.

*CLERODENDRON BETHUNEANUM*.—(CAPTAIN BETHUNE'S.)

Imported from Borneo by Mr. Lowe. It has bloomed in the collection of stove plants at Messrs. Lucombe and Pince, of Exeter. It is a tall growing shrub, in Borneo ten feet high, branching, and bears its flowers in large, loose, terminal panicles; forming a pyramidal thyrsis two to three feet long. Each blossom is nearly an inch across, of a rich crimson colour; the two side lobes have each a purple spot, and the upper lobe a spot of white. They are highly beautiful and ornamental. It will be one of the finest exhibition plants, and ought to be in every stove. Mr. Lowe, jun., states there are three other kinds which he has seen in Borneo, which adorn the banks of the Sarawak river; two bear white fragrant flowers, and the other is scarlet. Although the species figured grows high in its native country, it blooms freely in the stove; a dwarf plant, when grown in a small pot. (Figured in *Bot. Mag.*, 4485.)

*ESPELETIA ARGENTEA*.—(THE SILVERY.)

A native of New Grenada, growing five feet high. It is in the greenhouse of the Royal gardens of Kew. The stem becomes naked, three inches in diameter, and terminates in a dense crown of leaves, each a foot long. The flowers are borne in a large corymbose panicle, yellow, having the appearance of a *Gnaphalium*, each blossom being an inch across. (Figured in *Bot. Mag.*, 4480.)

*GESNERA GARDNERI*.—(MR. GARDNER'S.)

A native of the Organ Mountains of Brazil. It is an herbaceous plant. The flowers are produced solitary, from the axil of each leaf. The footstalk is about an inch and a half long. Each blossom is tubeformed, an inch long, and nearly half an inch diameter, of a rich crimson red. It is a pretty species, well deserving a place with others of the tribe. (Figured in *Pax. Mag. Bot.*)

*IXORA LAXIFLORA*.—(LOOSE-FLOWERED.)

A native of Sierra Leone, in the collection of Messrs. Lucombe, Pince, and Co. It is a shrub, growing a yard high. The flowers are fragrant, borne in a large terminal panicle, white tinged with pink, each about an inch across. The petals are very narrow. (Figured in *Bot. Mag.*)

*SALVIA PULCHELLA, SPECIOSA, SPLENDENS, FULGENS AND  
CARDINALIS*

Are now (December) fine ornaments in the greenhouse. Their brilliant and rich scarlet and crimson flowers produce a fine display, and as a succession is easily provided by cutting in later in autumn, such a show

may be had throughout winter; but it must not be expected in a cold damp greenhouse; a warm, light, dry one is essential to success. The noble and brilliant *S. gesneriflora* begins to bloom in February, and continues for a long period. This is the finest of the tribe, and ought to be in every greenhouse and conservatory.

**TABERNEMONTANA LONGIFLORA.**—(LONG-FLOWERED.)

A native of Sierra Leone, and has bloomed in the stove at Messrs. Lucombe, Pince, and Co.'s nursery. It is an erect branching shrub. The flowers are borne in threes on erect peduncles. The tube of each blossom is nearly four inches long, of a yellowish-cream colour. The limb (top of the flower) is five-parted, three inches across, white. It is a neat plant and a fine flower, deserving a place in the stove.

**WAILESIA PICTA.**—(PAINTED-FLOWERED.)

A stove orchideæ, a native of Malacca. The peduncle of flowers is about a foot long, the stem of which is of a purple hue. Each flower is about an inch and a half across. Sepals and petals spreading, narrow; the inside is yellow, spotted with brown, and the outside brown with a yellow edging, and spotted with black. The labellum is yellow at the base, and the lip white, tinged with rose. A very interesting pretty species. It is named in honour of George Wailes, Esq., of Newcastle-on-Tyne.

**NOTES ON SOME OF THE NEW DAHLIAS FOR 1850.**

**MAGNIFICENT (KEYNES).**—Distinct rosy-amethyst; general form excellent, the centre well up, large size, apparently quite constant, and shown well at all the principal exhibitions.

**SIR F. BATHURST (KEYNES)**—Crimson, fine petal, very symmetrical in arrangement and true outline, of great depth, but rather flat in centre.

**GEORGE GLENNY (BARNES).**—Bright yellow. Judging as far as we are able from a bloom shown at Birmingham, this is the best yellow Dahlia yet raised; it is of very large size, without being in the least coarse; fine symmetrical form and perfect outline. It is worth growing, were it only for the sake of one bloom, such a one as we saw.

**GEM OF THE GROVE (SODEN).**—Very dark rich maroon, medium size, fine centre; a constant and useful-looking flower.

**SNOWFLAKE (KEYNES).**—Milky-white, good centre, not always regular in arrangement, and the outline somewhat rosette; nevertheless it appears to be the most useful flower in its class yet produced.

**QUEEN OF PRIMROSES (KEYNES).**—Delicate and pretty colour, close and compact form, low eye; useful.

**QUEEN OF LILACS (TURNER).**—Above the average size, good centre, thin and coarse-looking as we saw it, but probably requires less stimulating growth; useful.

**LILAC GEM.**—Shown at Birmingham, but who was the raiser we did not learn; in colour near to Fearless, and in its general form inferior.

**MRS. SELDON (TURNER).**—Yellow, large size, centre mostly full; true outline, has a fine stout petal, and to all appearance a very useful and noble flower.

**PURITY (TURNER).**—White, outline and face pretty good, full and compact; centre very doubtful.

**GAIETY (KEYNES).**—Yellow, with a broad mottled lace of heavy red; novel for its colour, but of coarse and ordinary form.

**LADY GRENVILLE (BRAGG).**—Coral red, not very bright, tipped with white, good centre, well arranged, rather rosette outline; one of the best fancies of the season, and from the number of blooms we have seen, it appears most constant.

**FLORAL BEAUTY (WHALE).**—A pretty coloured white and crimson fancy variety, with a good petal and promising appearance. Mr. Whale's seedlings are always grown better by other people than himself, and we have no doubt another season will prove this flower to be an advance in its class.

**ELIZABETH (PROCTOR).**—A fancy flower, white, edged with lilac, full medium size, symmetrically arranged and good outline; rather flat in the face, centre well filled but hard to close, few of the many blooms we saw being perfect in the centre.

**MISS MITCHELSON (BURGESS).**—Dark scarlet and white, fancy flower, good centre, very thin, broken outline.

**FLYING DUTCHMAN (KEYNES).**—Light red, tipped white, centre and general form good; rather coarse-looking, useful when not overgrown.

**HIGHLAND CHIEF (KEYNES).**—White, with dull reddish orange edges; flat and more coarse than the preceding variety.

**MRS. BOYD (BATTIE).**—Yellow, confused in arrangement and flat in the face; occasionally useful.

**MISS COMPTON (LIDDIARD).**—White, with orange-red edges, inclined to flush a good deal; a fancy flower after the way of Bouquet de Bruel, upon which it is a great improvement; good centre and capital petal, rosette outline.

**FAME (TURVILLE).**—Peculiar colour, a sort of Burgundy; large size, excellent centre, often rough in arrangement, but new and worth a place.

**SYLPH (SERVEY).**—Blush, with rosy-lilac tip or lace, full and rather quilly, well arranged, good outline, medium size; useful.

**PREMIER (LEGG).**—Deep crimson, centre well up and regular, but somewhat disproportionately full; symmetrical arrangement, true outline, medium size; very useful.

**BEAUTE SUPREME (LEGG).**—Deep lake, tinged with dullish salmon, rather under medium size, well arranged, flat in centre; good outline.

**DUKE OF CAMBRIDGE (FELLOWS).**—Pencilled or silvery lilac, good centre and arrangement, petals open, rather angular, tolerable outline, useful; the colour being distinct and pretty.

**CLEMENTINA (FELLOWS).**—Pale amber, with a shade of red on the front of the petals; medium size, fairish arrangement, rosette outline, pretty, and may be useful.

**SERAPH (FELLOWS).**—Orange, compact, of tolerable general properties.

**CONQUEROR (TURNER).**—Salmon-peach, good stout petals and well disposed, true outline; a noble-looking flower, but the centre very doubtful.

**FAVORITE (BURGESS).**—Deep straw colour, with a reddish shade, good petal and outline, somewhat flat in the face; useful.

**THAMES BANK HERO (ROBINSON).**—Dark crimson, medium size, centre well up, compactly arranged, good outline; useful.

## CULTURE OF INDIAN AZALEAS.

BY A VERY EXTENSIVE LONDON FLORIST.

**IN** a recent Number of this Magazine some particulars were inserted on the culture of this beautiful tribe of greenhouse plants. I propagate, and send to the London markets, or dispose of on my premises where cultivated, three thousand plants every year. My extensive practice enables me to say something about the method of successful treatment. It is with pleasure I transmit the following particulars for the first Number of a new volume:—

When the young wood has become about what is termed half ripened, which is the case generally in April, May, or June, varying as to the earliness of being brought into bloom, I take off the suitable shoots, and cut each cutting across (having a sharp knife) close under a joint, the cutting being from an inch and a half to two inches long. After dressing off a few of the lower leaves, I insert them in a sandy bog peat, pressing the soil closely round the stem of each, and a good watering is then given to settle the soil to the cutting. It is necessary to pay attention, that the bottom of the cutting rests fairly upon the soil. I omitted to state I have two or three inches of drainage—broken pot, turf, sticks, &c. When the excess of wet has subsided, I place a bell-glass over each pot of cuttings, and plunge them in a pit, or hot-bed frame that has a good bottom heat, usually from 65 to 70 degrees. Occasionally the glass has to be taken off to clean it, and in a month the cuttings root freely. Not more than two in fifty fail. When they are well rooted, which is from the end of June and onwards, I have them potted off singly, into sixty-sized pots. I use half rotten vegetable mould, and boggy peat, with a good sprinkling of sand, having a liberal drainage. In planting I take care to press the soil tolerably firm down. This being done I place them in a hot-bed frame of gentle heat, shade them from sunshine, and when began to strike into the new soil, I give a little air, increasing it as the growth advances. About the beginning of September the shading is dispensed with, and the lights taken off to admit sun and air fully, in order to have the wood well ripened. All the most vigorous-grown plants I pot into large sixties at this time.

The usual care to preserve from frost on the one hand, and too much damp on the other, is of course given; this particular routine is so well known that I need not occupy space about it. At the end of February or early in March, I re-pot again into a size larger; and when a plant has attained six or eight inches high, I pinch off the lead to cause it to produce side shoots, and make a bushy plant. I prefer often potting

to the system of the one shift practice, the plants bloom sooner, and form better shaped specimens. When I want to have extra bushy plants, I stop the leads of side shoots too to induce the required production. Nice bushy plants are much preferable to the long-legged stragglers.

All my plants bloom freely in the second spring from the time of striking, and at that age I send out my stock of blooming plants. For the better sale of plants, I force them tolerably early into bloom. I also find this of great advantage to the well ripening of the young wood.

Some of the delicate-growing kinds, as *Gledstanni*, *miniata*, *variegata*, &c., grow much more vigorous by being grafted or inarched, upon a year old plant of one stem, or any of the strong growing kinds, as *robusta*, *formosa*, *phœnicea*, &c. The best time to do it is when the new wood is about three parts ripe. With the generality this is the case from the middle of June to August. In grafting, I cut off the head of the stock so low, that the bark of the graft on each side will fit together with that of the stock. I make a slit down the middle of the stock an inch long, inserting therein the graft, which is cut so as to fit it down to shaved point. I secure them by tying with worsted. After grafting, the plants are placed in a hot-bed frame, shaded, &c., or in a propagating house under a hand-glass. With the usual treatment of occasionally sprinkling over head, &c., they become united in three or four weeks. By inarching I merely cut off the head of the stock, leaving the cut in a sloping direction; then having cut a notch in it, I cut the shoot of the kind I wish to increase as is done in layering carnations, having the tongue formed so as to fit the notched incision, then securing the parts as is done with grafting. In this way I never had a failure. When the union is well effected, I sever the new plants from the parent, and place them in a frame, shaded, &c. The usual treatment is afterwards pursued.

It is essential to the *Azalea* blooming freely, that the wood be ripened early by forcing; after the growth is completed, then gradually to inure it to the open air, to which, and full sun, they must be fully exposed during August and September. This being done, the wood becomes firm and thoroughly ripened.

## ON CONTRASTING THE COLOURS OF FLOWERS.

SEVERAL correspondents have from time to time solicited information on this particular, so as to enable them to make the best disposition of flowers when grown in masses; and although some communications on the subject have been inserted in our Magazine, we are glad to obtain any additional observations likely to be serviceable to our readers in grouping their flowers. Some very interesting and useful remarks on this subject have been given by Dr. Lindley, in the *Gardeners' Chronicle* of December 15th, who observes,—“It is with a view of remedying the evil just noticed, that we proceed once more to lay before our readers, and in much more detail than formerly, the great principles



relating to the contrast of colours, as given by M. Chevreul, in his treatise *De la loi du contraste simultane des couleurs*. This eminent philosopher having been employed by the French Government to ascertain the cause of a supposed deterioration of the dyes employed in the national manufactures, satisfied himself that, in fact, no deterioration whatever had taken place; but that the want of brilliancy complained of arose from loss of skill in the art of blending colours. Hence his famous treatise, of which we propose to give a very short abstract.

“Every ray of white light is composed of a certain number of red, yellow, and blue rays combined in certain proportions. Red, yellow, and blue are called simple colours; other colours, being produced by a combination of two or all of these, are called compound colours. When white light falls upon any surface, it is either wholly absorbed or wholly reflected, or partly absorbed and partly reflected by that surface; in the first case the surface looks black, in the second white, and in the third it takes the colour of the reflected ray or rays. In the last case it is evident that the effect of the absorbed and of the reflected rays, if combined, would be the reproduction of white light. Now this property possessed by rays of different colours, or in other words by different colours, of producing, when combined in certain proportions, white light, is expressed by saying that such rays or such colours are complementary the one to the other. Thus we say, that—

Red	is complementary to green,	and	<i>vice versâ</i> .
Orange	, ,	to blue	, ,
Greenish yellow	, ,	to violet	, ,
Indigo	, ,	to orange yellow	, ,

because red and green, orange and blue, greenish yellow and violet, indigo and orange yellow, produce white light by their respective combinations.

“By the simultaneous contrast of colours, is meant the effect produced on the eye by two different coloured bodies placed side by side; by contrast of tone, is meant the modification in depth or intensity of colour; and by contrast of colour, the modification in the optical composition of each contrasted colour.

“The first great point to remember with regard to this subject is, that whenever the eye perceives at the same time two substances, differing from each other in appearance, it sees them as dissimilar as possible, both as regards their optical composition and the depth or tone of their colour.

“With respect to the tone or intensity of colour, it is universally true that, if two colours of different intensities, or if two portions of one and the same colour differing only in intensity, be placed side by side, the light colour appears lighter and the dark one darker by the contrast; and the difference is greatest when the contrast is strongest, and least where it is weakest; or in other words, the difference is greatest about the line of contact, and grows less and less as we recede therefrom.

“As to contrast of colour, it is found by experiment, and it may also be proved by *à priori* reasoning, that whenever the eye regards two or

more different colours at one and the same time, the colour of each is so modified that it appears by the contrast to be of that colour which would be produced by the addition of itself to the complementary colours of its neighbours; and this modification is, as above, greatest where the contrast is strongest, and least where that is the weakest.

“ Thus it will be seen by a reference to the following table, drawn up by M. Chevreul from actual experiments, that in No. 1, which is a contrast of orange and red, blue, the complementary of orange, when added to red makes it violet or amaranth coloured; and green, which is the complementary of red, added to orange, gives it a yellow tinge. So again with No. 2, red and yellow; green, the complementary of red, added to yellow, gives it a greenish tinge; and violet-coloured indigo, being the complementary of yellow added to red, gives it a violet tinge, and so with all the others.

The following table, showing the modifications produced by the simultaneous contrast of different colours of as nearly as possible the same tone, illustrates the above law, and may be otherwise useful to our readers:—

	Colours contrasted.	Modifications produced.
1.	{ Red appears tinged with violet.	
	{ Orange           ,,	yellow.
2.	{ Red               ,,	violet, or appears less yellow.
	{ Yellow           ,,	green, or appears less red.
3.	{ Red               ,,	yellow.
	{ Blue             ,,	green.
4.	{ Red               ,,	yellow.
	{ Indigo           ,,	blue.
5.	{ Red               ,,	yellow.
	{ Violet           ,,	indigo.
6.	{ Orange           ,,	red.
	{ Yellow           ,,	brilliant green, or appears less red.
7.	{ Orange           ,,	brilliant red, or appears less brown.
	{ Green            ,,	blue.
8.	{ Orange           ,,	yellow, or appears less brown.
	{ Indigo           ,,	blue, or appears clearer.
9.	{ Orange           ,,	yellow, or appears less brown.
	{ Violet           ,,	indigo.
10.	{ Yellow           ,,	brilliant orange.
	{ Green            ,,	blue.
11.	{ Yellow           ,,	orange.
	{ Blue             ,,	indigo.
12.	{ Green            ,,	yellow.
	{ Blue             ,,	indigo.
13.	{ Green            ,,	yellow.
	{ Indigo           ,,	violet.
14.	{ Green            ,,	yellow.
	{ Violet           ,,	red.
15.	{ Blue             ,,	green.
	{ Indigo           ,,	deep violet.

	Colours contrasted.	Modifications produced.
16.	{ Blue appears tinged with green.	
	{ Violet           ,,	red.
17.	{ Indigo           ,,	blue.
	{ Violet           ,,	red.

“ When colours that are as nearly as possible complementary to each other are contrasted, the colour of each is rendered more intense, or its tone is deepened. This follows immediately from the general principle last laid down, and is fully confirmed by experiment. Colours, when contrasted with white, are deepened in tone, and at the same time appear more brilliant, the white itself being tinged very slightly with the complementary of the contrasted colour. Contrasted with black, colours appear of a higher tone or less intense, and the black is feebly tinged with the complementary of the contrasted colour. Grey, being intermediate between black and white, produces an intermediate effect on colours with which it is contrasted; this is seen in the following results, obtained by placing different colours in contact with a grey ground :

“ **RED AND GREY.**—The grey appears greenish, in consequence of its receiving the complementary of red; the red appears purer, less orange-coloured perhaps.

“ **ORANGE AND GREY.**—The grey appears bluish; the orange purer, more brilliant, and perhaps a little yellower.

“ **YELLOW AND GREY.**—The grey is tinged violet; the yellow appears more brilliant, and at the same time less green.

“ **GREEN AND GREY.**—The grey is reddish; the green is more brilliant, perhaps yellower.

“ **BLUE AND GREY.**—The grey is tinged with orange; the blue appears more brilliant, and a little greenish.

“ **INDIGO AND GREY.**—As the last.

“ **VIOLET AND GREY.**—The grey becomes yellowish; the violet purer and less dull.

“ When two compound colours, having one and the same simple colour common to them both, are contrasted, the common colour loses its effect in a greater or less degree. For example, take orange (composed of yellow and red) and green (composed of yellow and blue); their common colour (yellow) being lost by the contrast, the orange appears redder and the green bluer.

“ When a compound colour is contrasted with one of its own elementary or simple colours, the compound colour loses that which is common to both, and the simple colour is modified by receiving the complementary of the compound colour with which it is contrasted. Thus with orange, composed of yellow and red, and pure red, the orange loses some of its red and appears yellower; whilst the red, receiving the complementary of the orange (namely, blue, as has been already shown) appears bluish.

“ If two simple colours are contrasted, we find that the general principle before laid down still holds good. If we contrast, for example, 1, *red and yellow*, it will be found that the red appears tinged

with purple, and the yellow with green; because violet, the complementary of yellow, is added to the red, and green, the complementary of red, to the yellow: 2, *red and blue*; the red has a tendency to become orange, and the blue, green; because orange, the complementary of blue, is added to the red, and green, the complementary of red, to the blue: 3, *yellow and blue*; the yellow has an orange, and the blue a violet tinge; because orange, the complementary of blue, is added to the yellow, and violet, the complementary of yellow, to the blue.

### 1. COLOURS AND WHITE.

“A. *Binary Combinations*.—All the simple colours are improved by being contrasted with white; binary colours, however, in similar circumstances, are not equally agreeable, and it is found that the effect produced depends very much on the tone of the colour contrasted.

“The following binary arrangements are placed in the order of their beauty, the best being the first:—

“1. Clear blue and white. 2. Rose and white. 3. Deep yellow and white. 4. Bright green and white. 5. Violet and white. 6. Orange and white.

“B. *Ternary Combinations of Colours complementary to each other with white*.—As it is impossible to arrange binary combinations of simple complementary colours, we shall merely state the effect of white interposed, either between the binary complementary arrangement, or between each of the complementary colours.

“RED AND GREEN.—1. Red and green alone is perhaps better than—2. White, red, green, white; and this is better than—3. White, red, white, green.

“BLUE AND ORANGE.—1. Blue and orange.—2. White, orange, blue, white is agreeable, and so is—3. White, orange, white, blue.

“YELLOW AND VIOLET.—1. Yellow and violet are better together than—2. White, yellow, violet, white; and these than—3. White, yellow, white, violet.

“C. *Ternary Combinations of non-complementary Colours with White*. RED AND ORANGE.—1. Red and orange look very ill together.—2. White, red, orange, white is hardly better.—3. White, red, white, orange is better, but not agreeable.

“RED AND YELLOW.—1. Red and yellow are not amiss, especially if the red inclines to purple rather than to scarlet, and the yellow to green rather than to orange.—2. White, red, yellow, white, is better than the above.—3. White, red, white, yellow, is still better.

“RED AND BLUE.—1. Red and blue do pretty well together, especially if the red inclines rather to scarlet than to amaranth.—Deep tones are preferable to light ones.—2. White, red, blue, white, is better than the above, and—3. White, red, white, blue, is better than either.

“RED AND VIOLET.—1. Red and violet do not do well together.—2. White, red, violet, white, is not so bad as the first. 3. White, red, white, violet, is better than either.

“ORANGE AND YELLOW.—1. Orange and yellow do infinitely better than orange and red.—2. White, orange, yellow, white, is agreeable.

3. White, orange, white, yellow, is not so good as the last, nor perhaps as the first; there is too much white."

(To be continued.)

## ON ACACIAS.

IN your useful and interesting Notices of New and Rare Plants, particularly in the noble collection at the Royal Gardens of Kew, during the last two seasons, I was much pleased with the remarks on a considerable number of Acacias grown there. They compose a most charming tribe of plants, each very distinct from the others, although the prevailing colour is a rich yellow. All are deserving of a place in every greenhouse. Their peculiar beauty and fragrance in the early period of the year highly entitle them to every attention, and the varied neat growth and form of foliage enhance their value.

Lately a publication on the Flora of Australia has been put into my hands, and as that is the native country of nearly all the Acacias, I have extracted some particulars of these lovely trees and shrubs, as displayed in their native climate. Admirers of the tribe in this country may be assisted in forming collections of the best, for nearly all have been introduced, and can be procured at the principal nurseries.

The forests of New South Wales contain immense quantities of species of Acacia, which, under various names, are well known to the natives and colonists, and are of considerable value not only for timber but various other useful products. Thus a gum very similar in properties to gum arabic, is produced by the Silver Wattle (*Acacia mollissima*), a shrub about eight feet high, with pinnate leaves, and the copious yellow flowers collected in globose heads; also by *A. decurrens*, a beautiful shrub, very like the last; and also by the Black Wattle (*A. affinis*), a plant of similar stature to the others, but with shortened flattened leaf-stalks instead of leaves, and heads of yellow flowers. This gum forms a material article of diet to the natives at certain seasons, and is also collected by the colonists. The bark of these and other Acacias also yields great quantities of a tanning principle much stronger in its operation on leather than oak bark, which has been imported into England in some quantities in the form of an extract, procured by boiling down the bark. Other sorts of wattles, as the Acacias are generally called in New Holland, are among the handsomest of shrubs; as *A. pubescens*, which has a light feathery pinnate foliage, slender, rather drooping habit, and produces a great profusion of spikes of golden-coloured flowers, arranged in little balls. *A. orycedrus*, also growing to about ten feet high, with an upright rigid habit, sharp spiny leaf-stalks or phyllodia, and dense spikes of rich yellow flowers. *A. leucophylla* is a graceful drooping plant, with thin angular branches, linear sickle-shaped leaves (phyllodia), which, as well as the young branches, are densely clothed with silvery hairs or down; the flowers are produced in bunches in the axils of the leaves. *A. salicina* has the appearance of a graceful drooping willow, with narrow oblong lance-shaped leaves covered with bloom, and bunches of yellow

flowers produced on the young shoots from the axils of the leaves. *A. sclerophylla*, with angular branches and rigid smooth phyllodia, the heads of flowers sessile, and all parts of the plant perfectly smooth. *A. farinosa* much resembles the last, but has narrow, blunt, sickle-shaped leaves, with mealy balls of flowers produced two-four together in the axils of the leaves. Near Mount Zero occurs *A. strigosa*, which is clothed with glandular hairs, with oblong narrow leaves, and bearing a profusion of brilliant yellow flowers. *A. Victoria*, a small bush of considerable beauty, with round branches, narrow, blunt, sickle-shaped leaves, and slender spikes of small yellow flowers. Another, growing to the height of five feet, is *A. uncifera*, having round, softly downy branches, oblique oblong leaves, and spikes composed of yellow flowers crowded into downy balls. *A. pendula*, the drooping branches and profusion of rich yellow flowers render it a great ornament at its blooming season, which continues several months.

(To be continued.)

## REMARKS ON THE CULTIVATION OF ALSTROEMERIAS.

BY MR. WILLIAM CHITTY, FLORIST, &c. OF STAMFORD HILL, NEAR LONDON.

I PERCEIVE in the list of species and varieties, appended to the "Remarks on Alstroemerias," in the last November Number, two only of them are put down as hardy. Now I think it will be found that nearly, if not quite the whole of those specified, will be found to flourish and enjoy themselves to a greater degree in the open border than in any other situation.

The foliage of some of the kinds is very susceptible of injury by frost; but if the roots are planted deep, say from eight to ten inches in depth, and out of the reach of frost, the foliage may be repeatedly destroyed by its effects, without at all injuring the blooming of the plant. For instance, for some years past I have had several plants of the beautiful *A. pelegrina*, growing in various situations, which flourished admirably, and bloomed in profusion and beauty without the slightest protection. Now as this species begins to vegetate very early, there is usually (if the weather has previously been mild) a crop of shoots above ground at Christmas; these are certain to perish by frost, but I have invariably found that they will produce a second supply of shoots, and flower as if nothing had happened to them.

Owing to the mildness of the last winter, they had made considerable progress by the middle of March, when an unexpected frost cut them entirely off; they nevertheless came up again, and some of them were perfect specimens of beauty in the months of July and August.

The foliage of some of the species, and more especially of those beautiful Chilian varieties introduced into notice by Mr. Van Houtte, are not in the least injured by frost; and the covering with straw which he recommended in this Magazine some time since, may be entirely dispensed with.

The kind of soil in which they will be found to succeed to the greatest perfection, will be a highly enriched and friable soil; and if a good

proportion of coarse river sand, say one fifth, can be incorporated with it, it will very much add to their vigour.

The various species and varieties make very interesting and beautiful objects as pot plants. The *A. pelegrina* is especially adapted for this purpose, because it retains its foliage entire until the plants have done blooming. Many of the kinds lose all their lower leaves by the time they are about to develop their flowers, much in the same way as the common white lily, but this defect is more than made up by their handsome trusses of bloom.

Few plants are more interesting and beautiful in their appearance than these; and for this reason every garden, upon which only common care is bestowed, should have a collection of them. And a few grown in pots, and placed in the greenhouse among other plants, when in bloom, make a variegation of the richest kind.

I trust the above remarks, being inserted in the first Number of another volume, will have the effect of introducing them into more general cultivation.

## ON THE CULTIVATION OF TULIPS.

IN LETTERS TO A FRIEND.

DEAR SIR,—It at all times affords me much pleasure to hear of the extension of floriculture; it is a science that seems to grow upon human nature, and never exhausts the patience. In your kind respects, you say that you intend to become one of the fancy, that you mean to cultivate Tulips to a considerable extent, and wish a few instructions from me on the subject. You seem to intimate that you suppose there are a few secrets attending their culture, and that it is a mystery that perhaps I might not like to divulge. I can assure you, that whatever mystery there may be about them, that may be known to me, I shall feel a pleasure to disclose to you, if by so doing I can add to the number of admirers of my favourite flower; it is a subject that will take some time to descant upon, so I must implore your patience.

You say that you shall have to purchase at once; allow me to suggest, "don't be too fast." I advise that you see several good beds in bloom before you buy a bulb; make a note of those that are of good form and perfectly clean in the bottom. By form I mean a good compact flower; the top of the petals or leaves quite round, and so close together, that it would hold water if poured into the cup. Purchase nothing but these good-formed and clean flowers. When you purchase go to a respectable, liberal man; for some, indeed a great part of the tulips in cultivation go, and are sold under different names, and you must be careful you do not buy one tulip half a dozen times over. If you buy of a liberal man he will not deceive you. Do not be over anxious to get new things, they are always high in price, and seldom turn out so good to grow as the old tried ones do. There are a large variety of good old sorts that are not to be beaten, to be bought cheap. But in a few years, as you go on, the experience you will gain by progressive practice will enable you to form a judgment of the different

things that will be presented to your notice : you must expect to buy experience ; perhaps that bought will prove the most useful.

Tulips are divided into four classes. Bizarres, which are yellow grounds with brown or black flame or feather ; Byblomens, white grounds with black, purple, or lilac flame or feather ; Roses, white grounds with scarlet or pink flame or feather ; Tricolors are when three or more colours are intermixed ; there are not many of this class ; some of them make a good variety in a bed, but are not allowed as a stage-flower. Some tulips are flamed, and some are feathered ; some feathered and flamed. The flame is a direct stripe or blotch up the centre of each petal ; the feather is fine streaks on the edges of each petal : with these features, and a perfectly clean bottom, they are much prized ; and, accompanied with a good cup, will be fit for competition.

There are a quantity of flowers that are not quite clean, yet are good bed-flowers, for their colours and variety sake, but are not prized by the fancy ; still it is possible for them sometimes to come clean, and then in some cases they are grand things (for instance, Louis the Sixteenth ; I once went thirty miles to see one ; it was splendid). So much for passing remarks which I could not well avoid ; they will be useful to you as you proceed. Now for their cultivation.

I would advise a bed to be made from east to west, of any length your fancy may dictate ; and you have bulbs to fill with, be careful it be not within the dripping of trees ; rather it were near a hedge than a brick wall. Mark it out four feet wide ; take out the earth one foot deep ; then in the middle make a drain about eighteen inches wide and one foot deep ; fill this up with brickbats, broken tiles, and stones, in order that it may be open to receive all the drainings that may come through and around the bed. Cover this with turf, with the grass downwards, so that the earth of the bed do not fill up the interstices between the bricks and stones ; then fill in six inches of good old rotten horse-dung and cow-dung, some sand or old mortar rubbish well mixed ; scatter over this some unslacked lime : when all this is incorporated, add twelve inches of good sweet mould ; if rotten turf the better, that has laid three or four years, and been turned over four or five times ; it may be sifted through a coarse sieve, and the roughest put at the bottom. If you have not this, some old rotten couch mould ; let it be sweet, and some lime sprinkled over it to destroy insects and worms, &c. If you cannot get either of these, use some good clean garden mould. I have seen tulips grown well in mould taken from a part of the garden that had been well dunged and had grown a crop of cabbages ; I would rather it not be too light. This mould will raise your bed six or seven inches higher than the paths ; the earth may be kept up with turf cut from a meadow ; if kept well trimmed it looks neat, but I much prefer boards ; if kept painted they last a long time, and need not any moving when the bed is made up for future seasons ; and another use will be mentioned as we proceed. Rake the earth a few inches higher in the middle than the sides for the water to run off in heavy rains.

Let this bed lay about a month before you plant, to properly settle down, in order that it may be rather dry. When you plant, I advise that the bed be covered over with something to keep off the wet a week



or two before planting, as it will be more congenial to the nature of the bulb after the dry and dormant state in which it has laid for the last few months. Having brought you thus far, I shall conclude in my next.—DAHL.

### THE DAHLIA SHOWS OF 1849.

SHACKLEWELL EXHIBITION.—*September 19, 1849.*—This was, we believe, the first meeting of a new society, and reflected considerable credit from the liberal, as well as spirited manner, in which it was conducted. We regret we are unable to give a full report of the winning flowers, as the list we have been furnished with contains only the names of the successful competitors, which we must omit as being of no practical interest to our readers. For the same reason we have withheld the reports of the South London and Birmingham meetings. It is essential that the secretaries of floral societies should enforce the rule that all stands of florists' flowers have the names of the kinds plainly written on forms prepared for the purpose, and attached to each stand *previous* to their being judged; as, where it is left to the exhibitor to be done afterwards, it is frequently omitted. Such was the case at this meeting; the only complete list our reporter could make, being of the new flowers, for which prizes were awarded as under.

#### THE BEST SIX BLOOMS OF NEW DAHLIAS SENT OUT IN 1849.

1. *R. Proctor Esq., Bermondsey.*—Fearless, Mr. Seldon, Purple Standard, Victory, Queen of the East, and Dreadnought.
2. *Mr. Harrison, Richmond.*—Duke of Wellington, Mrs. Bacon, Mr. Seldon, Fearless, Grenadier, and Queen of the East.
3. *Mr. Turner, Slough.*—Victory, Duke of Wellington, Mr. Seldon, Grenadier, Earl of Clarendon, and Mrs. Proctor.
4. *Mr. Robinson, Pimlico.*—Mr. Seldon, Lilac Standard, Duke of Wellington, Grenadier, General Negrier, and Victory.
5. *Mr. Hunt, Paddington.*—Lilac Standard, Mr. Seldon, Grenadier, Buffalo Gal, Fearless, and Duchess.
6. *Mr. Bragg, Slough.*—Emperor, Earl of Clarendon, Mr. Seldon, Violet Perfection, General Vyse, and Fearless.

SEEDLING DAHLIAS.—*First class certificates* were awarded to Mr. Keynes, Salisbury; for Magnificent and Sir F. Bathurst; and to R. Proctor, Esq., for Elizabeth. *Second class certificates* were awarded to Mr. Whale for Floral Beauty; to Mr. Bragg for Lady Grenville; to Mr. Turner for Queen of Lilacs; to Mr. Burgess for Miss Mitchelson; to Mr. Turville for Fame; to Mr. Liddiard for Miss Compton; to Mr. Legg for Premier and Beauté Supreme; and to Mr. Keynes for Queen of Primroses and Flying Dutchman.

A first-class certificate was also awarded to Mr. Turner, for a bright purple seedling Verbena, named Mrs. Mills.

In addition to the above productions, we noticed a most interesting exhibition of Melo cacti, from Charles Palmer, Esq.; and from Messrs. Paul of Cheshunt, a magnificent display of Roses.

The Dahlia and Hollyhock show for 1850 is already announced to take place on the second Tuesday in September.

## BRIEF REMARKS.

**CHRYSANTHEMUMS.**—Each successive period of the year has its general floral representative, and the vacuum which a few years ago existed towards the end of the year, has been filled up with a highly ornamental display of this extensive and very beautiful tribe of flowers; and the Chrysanthemum now takes its stand as a leading flower, so that distinct exhibitions of it are held throughout the country. Our continental friends have paid much attention to raising seedlings, and each successive season we have been favoured to receive in this country some of their improved varieties. During the present autumn, we have taken notes of the best flowers exhibited at the shows, or seen in the general nursery collections. The following are the best of the season.

*Marmontel*, deep bronzy red, quilled, tipped with golden yellow. Very singular and pretty.

*Virge Maria*, white, quilled, compact; very neat.

*Basquere*, lively red, petals very broad; very neat.

*Justine Lebois*, deep purple, very distinct and pretty.

*Rose du Eiel*.—The underside of the petals white, and the upper part purple and blush. Petals broad and slightly incurved. A very superb variety.

*Pierette*, peach-blush, petals broad; a very good flower.

*Meduse*, purple tinged with cinnamon and tipped with buff. Quilled. A very distinct and beautiful variety.

*Victorine Pele*, pretty purple, shaded with lilac, petals broad, and a very pretty flower.

*Pomponette*, a very bright yellow, the underside of the petals tinged with chestnut. Petals broad, and a very neat flower.

*Gazelle*, rich purple, petals broad; very handsome variety.

*Rose et Blanche*, rosy-blush and white, with the centre brown. Very singularly distinct, and pretty.

*Trilby*, chestnut-red, a compact flower.

*Jenny*, bright crimson-purple, petals broad, and a very handsome variety.

*Arthemise*, blush, broad petals, good flower.

*La Reine d' Or*, rich yellow, a very neat compact flower.

*Armand Tessier*, purple, with the outside of petals lighter; incurved.

*Sydenham*, crimson-red, petals broad, some of the outer ones tusselled; pretty.

*Pompon d' Or*, flower rather small, a bright yellow, and very distinct and handsome.

*Pompon la Lawne*, pearly white, smallish, anemone-flowered; very neat and pretty.

*Queen of England*, petals outside pure white, inside slightly tinged with flesh, fine petal and large flower; very good.

*Vesta Superba*, a pure white, very large, rather reflexed, but a fine variety.

*Berryer*, orange with a chestnut lower side; petals broad, and a superb flower.

*Rebecca*, rosy-pink, with a deeper-coloured centre, incurved; a superb flower.

*Pompon Bijou*, peach with a lighter centre, anemone-flowered ; very pretty.

*The Warden*, orange, with the back of the petals a purple crimson ; superb flower.

*Mrs. Coombes*, anemone-flowered, outside petals pure white, inner tipped with yellow ; very fine.

All the above we can strongly recommend to be added to any collection.

**BULBS GROWN IN POTS, &c.**—When these, as the Hyacinth, &c., are grown out of doors, they are covered with soil to some extent, and as the earth is warmer at that period than the atmosphere, the bulbs make abundance of roots to support them before the flower stalks appear. It is clear then that the roots should always be in advance of the stem, &c. In order, therefore, to in-door success, the potted bulbs should be placed out of doors, and be covered from six to nine inches deep with light soil, leaf mould, or similar material, the surface being protected from heavy rain, or frost. When properly pushed, they can be transferred to bloom in-doors.—*A Practitioner*.

**SCARLET GERANIUMS.**—Mr. Beaton, of Shrubland Park Gardens, states, that to get these charming plants into bloom early and fine, the following mode of treatment answers most admirably. One of the lodge keepers had for several years grown some of these plants in green boxes, much superior to what Mr. B. had seen elsewhere. The success resulted from the following treatment. He never shifted his plants out of the same soil or boxes for several years, and yet every succeeding season they were better and better. When he could no longer trust them to the frost, he carefully cut off all the leaves, kept the plants quite dry in a spare room all winter, and as soon as the sun had power in March, he brought them out in the day, and took them back at night, but no water was given till the leaves appeared. Mr. Beaton adds, he can confidently recommend it as the best plan he has seen, and ought to be adopted with all the scarlets grown in pots or boxes. The plants bloom more early and profuse, also very fine.

**THE GARDENIAS (Cape Jasmines).**—We suppose every visitor of the floral establishments, shops, stalls, &c. in Covent Garden, and around London, have become acquainted with, and admirers of this charming, deliciously fragrant tribe of flowers. They are to be had all the year, but especially in the early period thereof. The plants force well, and bloom profusely.

The desideratum in culture is to grow them in *moist peat*, and to have them in a hot bed frame, plunged up to the rim of the pot. Thus circumstanced, they flourish, and are saved from red spider, or any other insect. In this way, with proper attention to water, air, &c., the extensive cultivators bloom them with surprising success. Cuttings taken off as soon as the last shoots have made their growth, inserted in sand, and under a bell glass, plunged in a hot bed frame, strike very readily.

**ON PORTULACCA THELLUSONII.**—Treated as a half-hardy annual, the seeds of this beautiful flower may be sown in the beginning of March, on a gentle hot-bed, protected by common mats or thick can-

vass thrown over a temporary wooden framing; or they can be sown in pots, and these plunged in fermented material in any hot-bed that happens to be in use. When the young plants appear, they should be potted in small pots, and kept for a time in a warm frame or greenhouse, and afterwards transferred to an open frame, which should be covered at nights in cold weather, till they are required for transplanting. About the middle of May they should be transferred to the open ground; but a dry sheltered border or rockery must be prepared for them, and the soil should not be of a wet or retentive nature. They will thus flower during sunshine (for the flowers do not expand except under the direct rays of the sun) for a lengthened time, and seldom cease before the arrival of frost.

**TO PREVENT PINKS BURSTING.**—An Indian-rubber ring should be placed round the bud when it is approaching the period of the calyx opening; this being done, slit the calyx with the point of a penknife, or the sharp end of a pair of tweezers, and again replace the ring as the large petals of the flower develop themselves; place them carefully down, bringing down the next sized petals as they bloom, laying one over each pair of the guard petals, and so on with a third row, if there be one, and thus cover the pair of the second; the remaining should form a crown or centre, but should a ragged, deformed, or self-coloured petal appear, apply the dressers and quickly withdraw it.

**BEGONIAS.**—In 1847 you gave a very useful descriptive list of this fine tribe of winter flowering plants, that induced me to purchase a dozen of the best (to my judgment) kinds. Last winter they were in constant bloom, highly interesting and beautiful. They may be procured cheap, easy of culture, and deserving of a place in every stove or warm greenhouse.—*Alice.*

**FUCHSIA SERRATIFOLIA.**—In 1848 you recommended this very handsome Fuchsia to be grown in the open border; the last spring I obtained two dozen bushy plants, and the first week in May I turned them out of pots into a raised bed in my flower garden, the soil being a light loam mixed with vegetable mould; and their beautiful colours of waxy appearance when in profuse bloom, was quite enrapturing. It ought to be grown extensively in every flower garden. It is, too, one of the most valuable ornaments for the greenhouse or sitting room during autumn and winter.—*The Priory.*

**BRUNSVIGIA JOSEPHINE.**—In March, 1844, I received three fine bulbs, among various others, of *Brunsvigia Josephinae* from the Cape. They were at once potted in good fresh turfy loam, and in a month the leaves appeared. They did not however, grow finely; and in November, beginning to turn yellow, water was withheld, but resumed in December, new leaves again showing themselves. The pots were also plunged in water for a few hours, to ensure the ball of earth being fully saturated; the top mould was also taken off, and replaced with leaf-mould. During the winter they were kept in a warm greenhouse, in a temperature often down as low as 35°, and making leaf well. In May they were placed in a pit, kept dry, and exposed to the sun, the lights being kept closed. In the September ensuing one of the bulbs flowered, and the treatment being precisely similar, another flowered in 1846.

The first again flowered in 1847, and the second in 1848, appearing thus to require a year to recover their exhausted strength. This year forms, however, an exception, all three being now in flower, one of which is that now exhibited; and although at first the largest bulb, and always producing the finest foliage, is blooming only for the first time. I cut the flower-stem always off as soon as the last flower begins to wither, in order that strength may not be exhausted in perfecting seed, and I then place the pots out of doors, and keep them there as late into the autumn as possible, and until the leaves are grown so long as to make them liable to injury from strong winds or heavy rain. I have only further to add, that these bulbs have never been re-potted since I first planted them, but that liquid manure is occasionally given them when the leaves are approaching and have attained maturity. Under similar treatment I have twice bloomed the *Buphane ciliaris*, and last year I had also two or three other *Brunsvigias* in flower. There is, therefore, not so much difficulty in blooming these plants as has hitherto been thought.—*Charles Leach, in the Journal of the Horticultural Society of London.*

**TROPÆOLUM PENTAPHYLLUM.**—Early in last November a friend brought me a splendid blooming specimen of this very handsome flowering climber. I was struck with its beauty, not having seen a flower of it previously. Many others, I doubt not, are unacquainted with it. I therefore call the attention of your readers to it; and having since seen the fine plant in profuse bloom, I hesitate not to say it is one of the most charming and interesting climbers, deserving to be in every greenhouse or warm situation out of doors. My friend, who has grown it for many years, both in doors and out, writes me about it as follows:—

“*T. pentaphyllum.*—This plant I find to grow freely if allowed a large degree of pot-room, and to be kept in a very airy place in the greenhouse. I find it to do still better, to turn it out if the plant be moderately strong, into the open border in a warm situation. I have a plant at the front of a greenhouse that is trained to three stakes, and densely covers them to the height of nine feet, having many thousands of flowers.

“The soil is a good rich loam and peat, half a yard deep, upon a gravelly substratum; I have supplied it freely with water during dry seasons.

“At the end of November the top generally dies; I cut it off near to the ground, and cover the same with some dry straw chaff, this is laid six inches deep; over this I place a large milk pansion which shoots off all wet, keeps the root dry, as well as contributes to keep it from injury by frost. At the return of spring the tuber pushes freely, and during the months from June to November, is a perfect picture of beauty and interest.

“I have not had occasion to renew the soil of the border where the plant has grown seven seasons, but when it is indicated necessary by the condition of the plant. I shall take away the old soil at spring, nearly to the tuber, replace it by fresh loam and peat, but not to disturb the tuber at all.

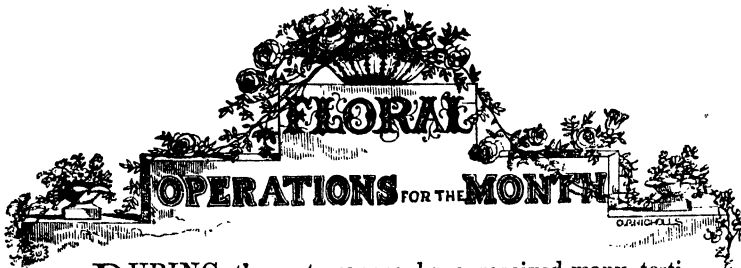
"Those grown in pots have a proper season of rest in winter, allowing them to become dry. In February I turn the ball of such out entire, and carefully take away what old soil I can without injuring the roots, and re-pot the plant in a pot a size larger, with a good rich loamy soil, having a free drainage. I have one plant turned out in the greenhouse, and trained to a pillar, which flourishes admirably."

It appears to be easy of culture, of vigorous growth, and a strong plant can be bought for half-a-crown.—*An Ardent Admirer.*

**GROWING PINKS IN POTS.**—I observe under the head of Florists' Flowers, in the "Calendar of Operations," that you recommend the growth of Pinks in pots. With this I agree, provided the object of the grower is not competition, more especially in the south, where there prevails a decided leaning towards size in all florists' flowers. As an exhibitor I have given the system a fair trial, and can state that they succeed well in pots, viz., they lace well, and possess all the requisite qualities, with the exception of size; and I have never been able to introduce into a stand blooms from pot-grown plants among those cut from a bed, without a great falling off being apparent in the size of the flowers. My object in noticing this is to caution beginners against disappointment; for pot cultivation they should be wintered in small pots, and re-potted about the middle of February into 9-inch pots, taking care to disturb the roots as little as possible. To grow them in beds for exhibition they should be planted in autumn; the best time is late in September or early in October. I always select plants with clean stems and healthy points, the fewer side branches there are the better; these will also winter the best. When pricked out from the piping bed, I grow them in poor soil, sandy and light, and use nothing stimulating until they are planted out for blooming, when they require a very rich compost.—*An Exhibitor.*

**FUCHSIAS IN THE OPEN BORDER.**—You recently mention a large Fuchsia growing in the open air in Norfolk. I have a Fuchsia Reccar-tonia that has been planted seven years, and when first put out was but a few inches long. It is nine feet six inches high, and thirty-three in circumference. It sheds its leaves every winter, but the branches remain uninjured. It is now (November) in profuse bloom.—*Dorsetshire.* [This is of the class of Fuchsias we recommended; there are two or three in the lot in Norfolk that we mentioned, which retain their leaves through winter; they are hybrids, but what obtained from we do not know. A light loam and a dry substratum are essential to success.—*CONDUCTOR.*]

**AUTUMN-BLOOMING PELARGONIUMS.**—The following kinds should have their leading shoots stopped in May; this induces a fresh supply of shoots which bloom in succession:—*Agrippina*, *Free Briton*, *Forget-me-not*, *Hebes Lip*, *King*, *Luna*, *Madelina*, *Mulberry*, *Negress*, *Orion*, *Othello*, *Phyllis*, *Priory Queen*, *Queen of Trumps*, and *Witch*. So will nearly all the scarlets. Plants thus treated I find become, like roses, habituated to it, and do not push so early as others unless excited by improper means; but as they are easily raised and stopped, it is best to take proper aged plants, and not to keep old plants year after year.—*Dr. Hawkins.*



**D**URING the past year we have received many testimonials to the practical utility of our Monthly Calendar. Want of space compels us to condense the subjects. We shall however endeavour to give what is really necessary, on every occasion, and to make the future more valuable than the past, as improvements in cultivation are successively discovered.

The winter has hitherto been very favourable, but the frosts that have occurred came very suddenly, and have been intense for the short period they endured. It is therefore essential that protection should be at hand for all tender plants out of doors; but in mild weather take off such coverings as can conveniently be done, in order to dispel damp, &c.

#### **IN THE FLOWER GARDEN.**

Any heads of Standard or Climbing Roses, of the tender kinds, or other tender shrubs, trees, &c., should be protected; this is best done by tying a number of Furze, Yew, or similar branches in, amongst, or over the branches. Sufficient protection is thus afforded, and yet a necessary portion of air is admitted to the shoots. All newly-planted Shrubs, &c., should be made secure from being loosened by the wind, and that no space is opened around the stem. Tender ones should have a little mulch, dry leaves, or fern over the roots, or around the stems. Collect leaves to rot, also turf, peat, manure, &c. Give fresh loam, or manure to flower beds; laying it upon them in frosty weather saves the cutting up of walks or turf by barrows.

**FLORIST'S FLOWERS.**—Auriculas and Polyanthuses should only be kept *just moist* (not wet), and be *just preserved* from frost. If the embryo flower be affected by frost, it is always injurious; give air, however, on every likely occasion. Most Auricula and Polyanthus growers sow seed early this month (see Articles in former volumes as to method). Carnations, Picotees, and Pinks in pots, require to have air freely, but water very sparingly. Protect them from continued excess of rain.

*Pinks* and *Pansies* in beds having had a thin layer of light sod around the beds, require little more attention now than seeing that the lateral branches are secured by pegs, so as to secure 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. *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, with garden mats 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 STOVE.

At the end of the month sow seeds of the tender annuals, as Cockscomb, Amaranthus, &c., to have them fine specimens for the greenhouse, 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 Jacobææ and Guernsey Amaryllises, with others of the genus, should be repotted; 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. Sow in pans seeds of Rhododendrons, Azaleas, Ericas, &c.; the plants will be fit to plant off in May.

#### IN THE GREENHOUSE, &c.

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, Alstrœmeria, Lilium, &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. The plants best adapted for forcing are various kinds of Roses, Persian Lilacs, Azaleas, Acacia armata, Neriums, Gardenias, Rhodora, Heliotropes, Correas, Deutzas, 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 Aphelandria 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. Cactus plants that have been kept in the greenhouse should occasionally be brought into the stove for flowering, which gives a succession.

### DESTRUCTION OF THE BUDS OF ROSES.

BY A CONSTANT READER.

I HAVE been for the last three or four years troubled with a grub which infests the buds of my Rose trees, especially the buds recently put in, so that when they begin to break in the spring, the buds are eaten off and the bush as good as destroyed. I remember seeing in one of your Numbers, notice of a remedy by rubbing some solution on the buds during winter, the receipt of which I should be truly glad of. Although we can destroy the grub when the shoots have germinated, yet it is impossible to get at it in the dormant bud. This is so bitter an enemy to my bushes, that I shall be truly thankful if I can obtain a remedy. I take the opportunity of expressing the wish of myself and many constant subscribers to your work, that you would favour us with paintings of some of the *new Roses*. I am sure if you were to do so we should gladly pay, sometimes, for a double number, to have a coloured figure of a flower, of all others, deserving notice. [We have drawings of some of the very best, and we will endeavour to comply with the wishes of our respected correspondent.]







### OXALIS ELEGANS—ELEGANT WOOD SORREL.

**T**HIS very pretty flowering plant was discovered by Humboldt on the Andes of Loxa, in Columbia, bordering on Peru, at an elevation of nearly seven thousand feet above the level of the sea. It has recently been sent by Mr. Lobb to Messrs. Veitch, of Exeter. It appears to be quite hardy, and flourishes when grown in the border in a warm, sheltered situation, and in a mixture of equal parts of sandy-loam, peat, and leaf-mould, upon a dry substrata, the roots being planted about half an inch deep. If the roots are allowed to remain in the border during winter, there should be a protection of dry leaves over them, which should have a sprinkling of chopped twigs scattered upon the surface, to prevent the leaves being blown away. In April this covering must be removed, at least the dry portion of it. In cold situations it would be best to forward the plants in pots, and having them kept during winter in a cool pit-frame, and not have much water; then at the latter end of April turn them out of the pots entire into the bed or border. It is one of the prettiest dwarf bedding plants, blooming profusely throughout summer and autumn, and merits a place in every flower-garden.

It is a very pretty plant for the greenhouse or sitting-room, succeeding admirably in either.

The proper time for potting is when the leaves have began to decay and the tubers are beginning to start, at which time, too, they must be separated, in order to multiply them.

The entire tribe of *Oxalis* amply repays for every attention bestowed. Some of the kinds, as well as the *O. elegans*, are very beautiful bedding plants. On a dry warm south border in the Horticultural Society's Garden at Chiswick, during the last summer and autumn, a bed of the *O. Boweii* was a complete carpet of lovely rosy-crimson flowers. The

following, too, are valuable for this purpose:—*O. floribunda*, red; *purpurata*, flesh and white; *rubra-flava*, red and yellow; *speciosa*, bright purple; with others.

There are a number of sorts which bloom freely in the greenhouse or sitting-room during winter, and are very ornamental. The *O. versicolor*, with its delicate handsome flowers of crimson and white, in contrast with a very neat and interesting foliage; *O. variabilis*, white and red; *O. variabilis grandiflora*, white; also the variety *Simsii*, white. These are peculiarly pretty. *O. rubella*, a pretty bright pink, admired by all; *O. purpurata*, pale purple, and *O. purpurea*, a deep purple; *O. pulchella*, very neat, white; *O. rosea*, bright rose; *O. tricolor*, orange, white, and red, is particularly interesting and elegant; *O. Emersonii*, of a rich saffron-yellow, giving a pretty contrast with the other colours; *O. multiflora*, lilac, which blooms nearly all the year; *O. compressa*, rich yellow; *O. Piottæ*, orange, very neat; *O. gracilis*, purple, small, but neat; *O. fulgida*, rosy-crimson, very showy; and *O. flava*, a very pretty yellow. All the above are most desirable plants for autumn, winter, and spring; their humble growth and profusion of flowers render them peculiarly interesting in contrast with all other winter flowering plants. They are easy of culture, increase freely, and amply repay for any attention bestowed. They do best when placed near the glass or window, so as to have full light and air on all proper occasions; also the water to have the chill taken off during the winter season. When done blooming water must be withheld, to give a period of rest to the tubers.

#### BEGONIA CINNABARINA—CINNABAR-FLOWERED, ELEPHANT'S EAR.

This very handsome species is a native of Bolivia, in South America, and Mr. Bridges sent seeds of it to Messrs. Henderson, of Pineapple-place Nursery. It proves to be a species that *flourishes in the GREENHOUSE*, which is a valuable acquisition, and blooms from June to the end of the season. The contrast between the green stem and darker green leaves, with the rich bright red of the long and short peduncles and stipules, together with the large bright orange-red flowers, is peculiarly striking and beautiful.

The entire genus of *Begonias* contains about 140 described species. (*A very extended descriptive list* is inserted in this Magazine in October and November 1846, which is well worth possessing.) All of them are very interesting, and some of them especially beautiful. They are chiefly natives of Asia and South America (none, it is said, have been found in Africa), and require to be grown in the stove. They are of a succulent nature, some having climbing half-shrubby stems, others creeping stems; a few are annuals, and a few have tuberous roots, to which section *B. cinnabarina* belongs, and as they lie dormant for a season after blooming is over, they then require to have but little water, only just enough to keep the soil from becoming absolutely dry. They flourish in equal parts of light loam and sandy-peat, with a very liberal drainage, and after potting they should be

placed in a warm pit or stove, near the glass, and not to have much water given till the plant has made some progress in growth. They are readily increased, some by cuttings, and others, which do not supply cuttings, by seeds, sown as soon as gathered in light sandy soil, and the pot being placed in moist heat they speedily vegetate, and by potting off the young plants, and keeping them for a period somewhat shaded, they grow quickly. All the tribe is well worth growing, and many of them are very interesting ornaments during the entire winter season.

TABERNÆMONTANA CORONARIA FLORA PLENA—  
DOUBLE-FLOWERED GARLAND TABERNÆMONTANA.

This fine old plant has long been known in our stove collections as *Nerium coronarium*. It differs from the original species in having larger flowers, wavy edges of the petals, and by having a peculiar delicious fragrance when fully expanded. It blooms during several successive months. A rich loam and turfy-peat suits it best, having a free drainage. It deserves a place in every collection. (Figured in *Pax. Mag. Bot.*)

VALORADIA PLUMBAGINOIDES.

Under the name of *Plumbago Larpentæ*, this really lovely plant has been for the last two years a subject of much controversy. It inhabits the neighbourhood of Pekin, the capital of China, from whence, no doubt, it had been taken to Shaughae, and planted on the city walls, where it had been subsequently discovered by Mr. Fortune. Sir William Jackson Hooker states that Bunge gathered it near Pekin, and sent a specimen in 1831, which Sir William possesses, and that Bunge named it *Ceratostigma plumbaginoides*. Its generic name was founded on the minute ramifications of the stigmas, *resembling horns*, which Dr. Hooker considers the most appropriate, and it ought now to be so called. Since Bunge named it, Boissier referred it to *Valoradia*, in which the glands are *entirely sessile*. Rather than sacrifice a multitude of existing names, Dr. Hooker retains *Valoradia*, rather than its recent one of *Plumbago*, and dispenses with its specific title of *Larpentæ* also, retaining *plumbaginoides*.

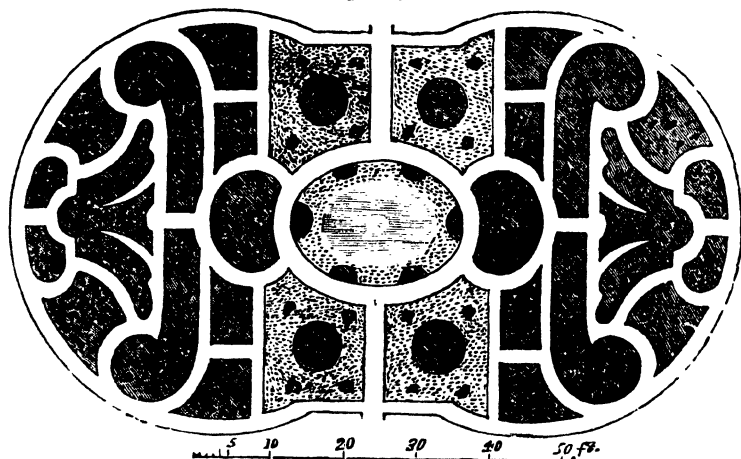
A great deal of discussion by cultivators has occurred relative to its merits as a border flower—much praised by some, and counted worthless by others; and these results are derived, we suppose, from the different conditions and local influences under which the plants have been placed by the cultivators. The petals of the flower are of very delicate texture, and soon affected by a current of wind, and immediately become shrivelled, and its beauty gone. It should be grown in a sheltered, sunny situation, when out of doors. In such places we have seen it bloom beautifully, without injury, from day to day; whilst, on the other hand, in exposed places, we have seen the flowers fade away almost as soon as they expanded. Properly grown in-doors, it blooms beautifully at all times, as it can be kept in any desired place. In its native country it grows in dry rocky situations, subject to great summer heat; but in winter it stands a considerable degree of cold, equal to that of most of our winters in England. It is readily increased

by cuttings, and grows freely in loam, peat, and vegetable mould, with a sprinkling of lime rubbish. In pots it must have a liberal drainage, and in the open bed there must be a dry bottom. Thus circumstanced it will not grow too vigorously, but bloom very freely. It is best to have good-sized plants for turning out at the end of April or early in May. They soon come into flower, and will continue to the end of the season. If it be tried out-doors through winter, it would be advisable to have a protection of dry leaves or fern over it.

## DESIGNS FOR FLOWER-GARDENS.

BY T. LUTGER, ESQ.

No. 1.



THE above is a design for a flower-garden, which may be placed on a lawn in any suitable place in the pleasure-ground. The beds should have box edgings, and should be surrounded with a close wire fence, to keep out rabbits or other animals that are injurious to a flower-garden. The four round clumps are surrounded with grass, on which are indicated places for Standard Roses. The pond in the centre for gold and silver fishes may be embellished with a fountain, and the surrounding verge of grass with vases or ornamental flower-pots, containing showy flowering plants.

## NOTES ON NEW OR RARE PLANTS.

### BLANDFORDIA FLAMMEA—FLAME-FLOWERED.

This beautiful flowering liliaceous plant is a native of Australia, from whence it was sent to Messrs. Low and Co., of the Clapton Nursery. It is an evergreen herbaceous perennial, growing three feet high. The leaves are about nine inches long, narrow. The flower

scape grows from ten inches to three feet high, bearing at its summit three or four almost bell-shaped flowers, pendulous, and each blossom being two inches and a half long. The six petals are of a rich orange-red, the outside deeply tipped with yellow, and the inside a bright orange-yellow. It flourishes in the greenhouse, and its charming flowers are of long continuance, also very showy. It succeeds with the treatment usually given to the Cape bulbs.

#### CHOROZEMA FLAVA.

The foliage is very similar to the holly-leaved *C. illicifolia*; the flowers of a clear yellow colour. It is a pretty acquisition. In Mr. Henderson's collection, at the Wellington-road Nursery.

#### CULBOA GLOBOSA.

A native of Mexico, sent by Mr. Hartweg to the Horticultural Society. It is a half-woody vigorous growing climber, a perennial. It will not bloom, it is stated, when grown in a pot; but planted out in a border in the greenhouse blooms freely, and rambles extensively, which, however, can readily be kept within desirable limits. The flowers are produced in naked umbels, several in each, the general footstalk bearing the umbel nine inches long. Each flower has a curved tube about two inches long, with a five-parted spreading, funnel-shaped limb (upper portion of flower), nearly two inches across, of a deep rich red colour. It is a fine species, and very suitable for a covering, to some extent, during summer. It is described as requiring to be kept in winter in a warmer situation than the greenhouse is generally. Perhaps if planted near the entrance of the flue, it would be sufficient warmth for the roots. However it is readily propagated by cuttings of the young shoots, so that a provision can be made for turning out a fresh plant every season.

#### ECHINOCACTUS RHODOPHTHALMUS—RED-EYED.

It is a native of Mexico, from whence it was obtained by Mr. Staines. The plants in the fine collection in the Royal Gardens at Kew are about five inches high, column-shaped, tapering upwards, eight or nine furrowed, having long spines at the ridges. The flowers are very handsome, produced at the summit of the plant; each is nearly four inches across, of a bright rosy-lilac colour, and a broad deep red ring around the numerous stamens. It flourishes in a mixture of light loam and leaf-mould, containing a small portion of lumpy lime rubbish, and a very free drainage. (Figured in *Bot. Mag.*, 4486.)

#### HELIANTHEMUM (CISTUS) SCOPARIUM.

A native of California; a prostrate hardy shrub, suited for rock-work. The flowers are borne in terminal spikes; they are small, of a bright yellow colour. Introduced by the Horticultural Society.

#### MACLEANIA CORDATA—HEART-SHAPED LEAVED.

A native of Chili. A greenhouse shrubby, evergreen plant, growing erect, three feet high. The flowers are borne towards the extremities



of the shoots, but only on one side; for a few inches, too, they are drooping. Tube near an inch long, red, with a yellow five-parted limb. Blooms all summer.

*METROSIDEROS TOMENTOSA*—DOWNY-LEAVED.

This beautiful flowering plant is a native of New Zealand, where it was discovered by Sir Joseph Banks, when accompanying Captain Cook on his celebrated voyage. In its native country it grows on the rocky sea-coast of the Bay of Islands. It becomes an ordinary-sized tree, blooming in December, and its brilliant flowers, borne in profusion, render it an extraordinary conspicuous object. A plant of it bloomed in the Royal Gardens of Kew the last summer. It is an evergreen bush six feet high; grows freely in the greenhouse. In May last it was planted out in the open ground, in a sheltered situation, and for the first time bloomed early in summer, and continued till the first frost. The flowers are borne in terminal corymbose heads. Petals small, yellow, and the immense number of long filaments are of a brilliant red. Each head of flowers is from three to four inches across. During summer almost every branchlet was terminated by a head of these brilliant flowers. It deserves a place in every greenhouse, and it might be turned into the open ground for blooming, and be taken in for shelter during winter. (Figured in *Bot. Mag.*, 4488.)

*MICROSPERMA BARTONIOIDES*—BARTONIA-LIKE.

This charming annual was recently obtained from Hamburg, by Mr. Charlwood, seedsman, of Covent Garden, London. It grows about a foot high, and blooms in profusion. The flowers are produced in terminal spreading panicles; each flower is two inches across, of a pretty sulphur-yellow above, and almost white beneath. It belongs to the same class as *Hypericum*, *St. John's Wort*, &c., and, like those flowers, has numerous long stamens, of a rich yellow colour. It is a very showy plant, blooming through the entire summer season. If it will flourish in the open border, as is very likely, it will be a valuable addition to our bedding plants. It will, too, be valuable as an ornamental plant for the greenhouse in summer, in contrast with *Balsams*. (Figured in *Bot. Mag.*, 4491.)

*OPHELIA CORYMBOSA*—CORYMBOUS-FLOWERED.

A pretty flowering annual from India; it grows about a foot high, bearing its flowers in large terminal, loose, corymbose heads. Each flower is nearly an inch across, pale purple, with a white eye. When in full bloom they have somewhat the general appearance of a dwarf *Gilia tricolor*. It is very likely to be a pretty addition to our bedding plants, as well as for a summer's ornament for the greenhouse. (Figured in *Bot. Mag.*, 4489.)

*PHARBITIS LIMBATA*—WHITE-EDGED.

*Convolvulæ.*

Introduced from Java in 1849. It is a very handsome stove climber, having much of the appearance and size of the well-known border

flower *Convolvulus major*. The flowers are produced singly, of an intense violet, edged with pure white; very handsome. Blooms throughout summer and autumn. It is in the collection of Messrs. Rollißon, of Tooting Nursery.

*RONDELETIA SPECIOSA MAJOR*—THE SHOWY, LARGE VAR.

The original species is a native of Havannah. It is a handsome flowering shrub, and is generally in the collection of plants shown at the exhibitions at the Horticultural Society's Garden, and others in and around London. The variety, however, we now notice is very superior to the original species; the flowers are much larger, and of deeper and richer colours. Each blossom is three quarters of an inch across; tube rose-coloured, and the rest of the flower a rich orange-red, shading off lighter to the centre, and the centre is a bright orange. It is a compact shrubby plant, and will succeed in a warm greenhouse, but must be in the warmest part; it does best, however, when kept in the stove. It, as well as the original species, deserves a place in every collection.

*SPATHOGLOTTIS AUREA*—GOLDEN-FLOWERED.

A native of Malacca, growing on the rocks of Mount Ophir, and is a *terrestrial* orchideous plant. The flower stem rises two feet high, terminating with half a dozen large golden-yellow flowers, having the lip spotted with brownish-red. Messrs. Veitch introduced it in 1848.

NEW TULIPS.

SCARRELL'S BIJOU.—Form first-rate; petals of firm substance, smooth on the edges, quite level, and clean at the base. The cup is the usual average size. Colour a brilliant carmine; feather richly and clearly defined on a crystal white ground.

JERSEY WONDER.—A superb byblomen; cup fine form, pure, with a very regular black feather. Considered to be a first-rate flower in all respects.

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OPINIONS OF THE NORTHERN AND SOUTHERN FLO-  
RISTS ON THE PERFECTION OF PINKS, PICOTEEES,  
AND CARNATIONS.

BY MR. JOHN EDWARDS, WACE COTTAGE, HOLLOWAY.

WITH your permission, I am about to offer a few remarks on the northern and southern raisers and cultivators of Pinks, Picotees, and Carnations, with a view to the settlement of certain existing differences. For years, I might say ever since their cultivation by florists, there has been a continual diversity of opinion respecting the standard of excellence for these popular flowers; claims are set up and discussions constantly agitated as to the respective merits and demerits of those productions which owe their existence to particular localities; indeed the wars of the White and Red Roses among our ancestors, though more sanguinary in their results, were scarcely conducted with more pertinacity than the opposition between the northern and southern

cultivators of those divisions of the *Dianthus* family known as Pinks, Picotees, and Carnations.

The first step, it appears to me, towards an amicable solution of the difficulty is to point out in what the difference really consists. In the first place, the northerns are challenged by the southerners for an extreme thinness, as being but just one remove from their primitive "single blessedness." On the other hand, the southerners are blamed for raising, fostering, and distributing quite the reverse, or full flowers, somewhat vulgarly denominated "mops."

Are these differences never to be adjusted? for in this one ingredient, viz., the number of petals constituting a perfect flower, lies the supposed barrier. That all growers agree as to colours, their brilliancy, and distribution, shape of individual petals, the desirableness of smooth edges and thickness of texture, their imbricating arrangement for the better display of such colours and markings, size of specimen, and distinctness of variety, no one has ever yet denied, therefore the difficulty is very far from insurmountable, if we calmly discuss the subject; let all be friends in the good cause, and vigorously set about the amalgamation of opinions, and so clear up existing doubts. The many floral organs now at our disposal offer a happy medium for intercommunication, and it must go hard indeed if, ere long, northerns and southerners be not so united that our metropolitan exhibition of "the happy family" shall no longer "stand alone in its glory." In offering my views on the subject, I anticipate and desire some rejoinder—I merely seek to open the question, so that by-and-by our editors, conductors, superintendents, and all "of that ilk," will have a goodly crop of seed, which, when harvested, and in due time "thrashed out," may, I hope, yield them a fair return for our occupying so much of their grounds—or pages.

What have we first to consider? The northerns and southerners are said to differ; this gives rise to other questions, viz., who are the northerns, and who are the southerners? are there no others interested in these differences? no down easterns, or far westerns? are they of no consideration? It may be all very fine, Messrs. Ely, Dodwell, Slater, Wood, Cheetham, Hepworth, Lightbody, Gatliff, and our other friends far north, for "York is wanted;" but Messrs. Puxley, May, Pond, Willmer, Headley, Twitchett, Barnard, Edmonds, Young, Creed, Keynes, Hale, Smith, Ward, Norman, Matthews, Kirtland, Trahar, Turner, Fellowes, Burroughes, Wilson, Garratt, "do not lodge there," for until the "boundary question" be first settled, all must be "confusion worse confounded."

Our midland friends (thanks to I. F. Wood for perpetuating the distinction by his powerful, yet merciful organ *The Midland Florist*,) Messrs. Fletcher, Marris, Hollyoak, Barringer, Holliday, and others, representing Birmingham, Warwick, Coventry, Bedford, Northampton, Leicester, and neighbouring districts, are purposely passed over, or only very slightly touched upon, for obvious reasons; they at present are almost without a "local habitation and a name," a sort of *hybrid*, or Jack-on-both-sides, and must so remain unless we give them a *settlement*; their claims are strong, however, and amongst them are men

who "will be heard." The important point next arising is, where is our line of demarcation to be drawn? We need no trigonometrical survey—no high and mighty referee, like the King of the Netherlands on the American boundary. This is the plan that I propose:—Take a map of England (to be found in every monthly issue of "Bradshaw," and sufficiently accurate for the purpose), place your ruler on Lynn and Swansea, and mark the line across the entire land from Norfolk to Glamorganshire; this I take to be a fair apportionment of interested localities and counties, and quite near enough to settle the matter; may my "land scheme" prove less harassing than others of higher pretensions; here we have a guide to know who is who; those who feel themselves aggrieved should forthwith appeal, and the commissioners I propose are Messrs. Wood, Beck, Neville, Harrison, Glenny, &c., who will, no doubt, hear evidence and make their award,—and a just one, too,—alike satisfactory to all. This settled, let us devise means to turn such decision to some account: to this end, a universal canvas must be made for certain returns; I therefore, with much pleasure, move—

That every cultivator furnish me with lists of the best twelve Pinks; ditto twelve Picotees; ditto twelve Carnations; giving in full the names of their chosen representatives, under whose ownership they are known, and in what county raised.

These will give us a stepping-stone for lasting reference; nor is that all, for such returns must be tested—that is the rub; means must be found; men of weight and character must be chosen; the tilting-grounds decided on; and in 1850 such a floral tournament proclaimed throughout the land, with "quality, not quantity," for its gathering cry, as shall make the welkin ring.

I have a printed form in preparation for general distribution to all post-paid applicants who may enclose a stamped and directed envelope; and I earnestly solicit the co-operation of every florist in every village, county, or shire, by applying for the same, with which full instructions will be given and prompt attention urged. The result of all this must, in the end, fully tend to confirm all herein stated; and, above all, bring about and increase that friendly spirit of rivalry, the want of which has alone kept up the seeming differences, amounting to almost animosity, which, with kindly aid, it is my object to remove and entirely dispel.

If the subject seem rather lengthily handled, there is yet matter of so much vital importance still untouched, that, at a future opportunity, I may again issue from my hiding-place, and, like a giant refreshed, "wage war" for the future and lasting welfare of the much neglected and too often abused recreative science of floriculture.

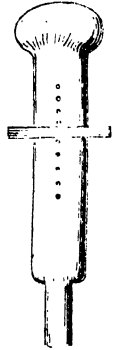
## ON THE CULTIVATION OF TULIPS.

IN LETTERS TO A FRIEND.

### *Letter II.*

DEAR SIR,—Having in my last brought you to the formation and state of the bed, I now proceed to further particulars. The time for

planting is about the 9th of November. When the bulbs are all ready, draw a straight line down the middle of the bed, and mark it; then three lines each side, the first six inches from the middle one, and the others five inches apart. A person each side of the bed, with a bit of string, can mark the cross lines six inches apart. Then at the parts where the lines meet for the planting of the bulbs, with a dibble make a hole four inches deep; but this dibble should be of this shape, viz., about a foot long, the upper end six or seven inches, about the size of a broom handle, and the lower end about half the size, or less. The shoulder, on the large part, makes a ridge in the earth, on which the bulb rests, and the hole made by the lower part for the fibres of the root to descend into. Several extensive growers have had, as they thought, the laugh at me for using this instrument, thinking it was of no sort of use; and I have had the laugh at them when the beds were in bloom. The use is obvious to every one who will condescend to give it a thought. Its uses are, first, the shoulder prevents the wet lodging near the bulb, and thus preserves it from rotting. Second, it is almost certain destruction to a bulb to come in contact with dung in any state, and yet it requires its exciting powers, and this dibble with the small part makes a way for the roots to find the very compost laid for them at the bottom of the bed, and the bulb is safe. Thirdly, at the time of bloom the sun generally has great power, and penetrates a considerable distance into the earth, and if the roots are running about a few inches only from the surface of the bed, the sun's rays cause a dryness in the earth which dries the fibrous roots, and the bloom has not the power to stand erect, consequently must be supported with sticks; and thus it is a common thing to see a whole bed of Tulips with sticks to them. Now through the use of this dibble the roots are enabled, not only to get to the food they require, but are away from the effects of the sun's rays, and the bloom, in nine cases out of ten, can support itself without the aid of sticks; thus a vast deal of trouble is saved, and the appearance of the bed is far superior. Well, with this dibble make the holes full four inches deep from the shoulder to the surface of the earth; then plant the bulb, laying it over the small hole made by the lower end of the dibble; cover it with some clean dry sand (be careful it is perfectly clean). The dry brown outside skin that covers the bulb should be taken off before the bulb is planted; if left on it often becomes a receptacle for insects, which injure the bulb. After having planted the bulbs, and covered them with a little sand, rake the earth into all the holes, and if you think they are not covered to the depth of four inches put on more earth, rake smooth, keeping the middle higher than the sides, as before mentioned. A very essential thing now remains to be done; put some hoops or iron frames over the bed, and cover with a string net; some small nails may be driven into the side boards, to which the net may be attached. This will be a guard to the bed, for cats are very fond of groping over a Tulip-bed, and where they leave their excrement destruction to the bulb is sure to follow. After this they want no further care till they



appear two or three inches above ground ; then it will do them good service to stir up the ground with a small piece of wood, making it smooth with the same stick. If sharp frost prevails, they will require a few mats thrown over the net, but only to remain on while the frost continues. If you wish to bloom under cover (which certainly is the best plan), and do not mind the expense, you must erect a frame to enclose the paths each side of the bed ; the top must be covered with something that will not admit the rain through ; the sides should be covered, so as to exclude the sun and violent winds ; but moderate air should be admitted at all times, as it keeps them longer in their beauty.

There are bulbs for four rows in a Tulip-bed—the first, second, third, and fourth (the fourth is the middle row) ; and then the third, second, and first again, which make the seven rows of a bed.

In planting, do not put two together of the same class ; what I mean is, do not plant two bizarres, and so on, side by side, but mix them. Begin with a rose, then a bizarre, and then a byblomen, so that you will want the same number of all the classes, except the tri-colours ; these are not prized by the fancy, but at all times, if you have any good ones of these sorts, plant them instead of a bizarre. When they have done blooming break off all the seed-pods ; they will then soon die down, and as the foliage dies off and becomes brown they may be taken up, and put away into a cool dry place, till time for planting again.

I like what is called a bed box, as after the bed is once made out there is no more trouble, except now and then removing a bulb from one hole to another more suitable for it. By a bed box I mean seven small square holes, about two inches square, across a box or drawer, and these seven holes are the first row of the bed. You may have boxes of any length you like, and each row of holes is a row for your bed. They are then planted and taken up with very little trouble.

I have said pinch off the seed-pods as soon as the blooms are over. I do not mean by this that you are not to save any seed. I advise that you should, but recommend that some strong bulbs of each class should be planted in another part of your garden, and the seed-pods allowed to ripen, that you may begin at once with what I think the most exciting part of the cultivation of Tulips. When the pods are ripe, gather them when dry, and hang them in a dry and airy place till the time for sowing, which will be about January or February. Sow in good-sized pots, and when you sow them do not lay them flat in the earth, but put them in sideways. With care, in a few years they will flower, and be what are termed breeders. The breaking of these breeders will be a very pleasant and exciting employ, and you will stand a chance of now and then getting a gem of the first water, which I hope will be the result.—DAHL.

## SOME OF THE BEST " FANCY DAHLIAS."

BY AN OLD GROWER.

I AM very fond of the variegated or " fancy Dahlias," as they are now mostly called, and well remember how greatly I was struck upon

beholding the first "fancy" variety met with, and which I believe was indeed the first of the class. This was a red and white flower, double, and as tolerable in form as most sorts at that time, now nearly twenty years gone. Levick, a Sheffield merchant, was the raiser, and its name was "Incomparable." I grew it many years, although it was more uncertain than the worst of this day, and long after it was superseded by better flowers of similar colours; but the fact was I esteemed it as a sort of "auld lang syne." Long acquaintance with the flower showed me the best method of managing it, which I found was to grow it exclusively in well-decayed dung. This lesson I have not forgot, and by treating some of the kinds now in my collection in a similar way I can bloom them with much more certainty than in the usual manner.

Many growers consider it necessary to grow all fancy Dahlias in poor soil, or without manure, but this is a very great mistake, as I have repeatedly proved. The first real striped Dahlia was, I believe, "La Carnation," sent out by Mr. Paul, of Cheshunt; Mountjoy's Phidias, Bates's *Striata formosissima*, and one or two others, came out about the same time. These are now quite beaten out of the field, the last few seasons having produced great improvements, some of the stripes being now really beautiful flowers, and of excellent form. It has occurred to me to offer you this list of the best fancy Dahlias I know, for publication in the CABINET, if you deem it of service. My name accompanies it to you, as a guarantee that the opinions set forth are those of an old grower, and in whom, perhaps, you may recognize one of your old correspondents.

#### NANKEEN OR ORANGE-BUFF AND WHITE.

*Adolph Dubras* (Vicomte de Ressequier).—If grown moderately, this is a certain flower, and it has a capital centre. Its great defect invariably is a very bad outline, and the face or front often irregular, requiring some little operation and skill from the hands of an ingenious exhibitor to regulate. Height 4 feet.

*Bou Maza* (Salter).—Centre well up, petals ribbed and inclined to reflex, outline irregular. A useful flower, but uncertain, and does best in a stiff soil. Height 5 feet.

*Miss Stevens* (Dodd).—Salmon-buff and blush white; the colours distinct enough from each other, but not well defined. Of medium size, very compact and excellent form, tolerably constant, and one of the best. Height 3 feet.

#### YELLOW AND WHITE.

*Florence Dombey* (Salter).—Uncertain in its form, being very much quilled and reflexed. Requires to be grown strong and well thinned out, when it will be found often showable; at any rate it is the best of the yellow and whites yet out. Height 4 feet.

#### RED AND WHITE.

*Belle Etoile* (Miquet).—Vermilion and white; clear and bright, good in size, outline, and petal, but very hard in the eye. Height 4 feet.

*Belle de Nugent* (Mea).—Large full deep flower, not very symmetrical in the face, and indifferent outline; good habit. Height 4 feet.

*Baron Freteau de Peney*.—When true, this is very pretty and distinct, but it is more uncertain than the average; the eye is sunk, and the petals incline to quill; other properties good. Old roots do best planted out entire in decayed dung alone. Height 3 feet.

*Comte de Flandre* (Van Renynghe).—A constant and distinct flower; good centre; rather open and flat in form, but very passable in a stand. Requires to be grown strong and well thinned out. Height 4 feet.

*Rainbow* (Keynes).—Orange-red and white, their petals of average qualities, medium size; a useful and compact flower. I have heard it confounded by some with another of this dealer's sending out at the same time, and named Sunbeam, but it is a variety without any pretensions to a show flower. Height 3 feet.

*Remembrancer* (Barnes).—Dull rosy-red and white, more or less flushed, flat in the face, good outline, and symmetrical. It is rarely free from florets, and therefore requires careful dressing. Height 4 feet.

*Triumph de Magdeburg* (Ehrig).—A bright and showy flower, flat, good outline, fairish form, but cannot be depended on. Height 5 feet.

#### LILAC AND WHITE.

*Dulcinée* (Morot).—A very constant variety, small and thin, but with stimulating growth it is frequently good.

*Queen of the May* (Harrison).—This is as uncertain as any, yet when true is very distinct and one of the best. Large size, correct outline, and symmetrical; rather flat in the face. Height 5 feet.

#### PURPLE AND WHITE.

*Charles Perry* (Kimberley).—Large size, well up, flimsy and long in the petal, but of good average properties for a fancy flower. Height 5 feet.

*Madame Wachy* (Wachy).—One of the very best; full size, constant, symmetrical, and circular. Requires thinning during the period of growth. Height 2 feet.

*Master G. Clayton* (Jeffrey).—This is another of the very uncertain ones, but it is still worth growing, being very prettily marked, and a bloom now and then, when wanted, repays for the frequent disappointment it is sure to occasion. I manage it best by planting out the old roots entire in common garden soil, giving no attention to them until the beginning of August, when I proceed to disbud and thin a little every week. By these means I can mostly get ten or a dozen well-filled blooms, fit for a front row in any stand of fancies I have seen. Height 3 feet.

*Miss Jane* (Howard).—Medium size; uncertain, being frequently cross in the eye. When in order it has a well-elevated centre, and, except being a little ribbed, is of good general form. Height 5 feet.

*Vicomte de Ressequier* (Dubras).—This, too, is very uncertain, and



an old flower, yet useful sometimes. It succeeds best with me by planting the old roots in decayed dung. Height 5 feet.

#### ROSY-CRIMSON AND WHITE.

*Comus* (Tassart).—A large and noble-looking flower, good outline, rather coarser than I like, but is constant, and looks well in a back row. Height 2 feet.

*General Cavaignac* (Hunt).—Throughout the season a good and constant flower with me, though a neighbour of mine was not able to cut a single decent bloom. It appears to me to require moderate growth, and not over-much thinning. Height 5 feet.

*Mrs. Shaw Lefevre* (Elphinstone).—Strong growth in a light soil and liberal thinning out suits this flower best; it must be caught to a day to have it good, or the eye opens. It is flat in the face, but not a bad shape, and the colours are pretty. Height 5 feet.

*Keepsake* (Barnes).—As symmetrical and regular in the face as the scales on the back of a fish; but it is flat, reflexed, and of ill-defined, dull colours. The habit is excellent. Height 4 feet.

*Conspicua* (Salter).—I do not know a more constant fancy Dahlia than this. Of good general form and size; colours clear and distinct. Tall in growth, and the flowers thrown so well up above the foliage that, as the name indicates, it is conspicuous amongst all. Height 5 feet.

#### DARK CRIMSON AND WHITE.

*Miss Blackmore* (Dodd).—One of the most beautiful; large in size, general properties fine. Its particular fault is that the petals do not always reach the centre. Must not be overgrown. Height 3 feet.

#### MAROON, OR BLACK AND WHITE.

*Discount* (Barnes).—With me always green in the eye, but I have seen it fine. Another season I shall grow it in manure alone, and I have no doubt with success. It is a large flower, of good general form, and sufficiently distinct. Height 5 feet.

*Empereur de Maroc* (Huidoux).—Taken on all points, this is acknowledged to be the best tipped flower out. It is generally, but not always, constant; excess in stimulants is almost certain to make the colours run; grown in a medium way, with moderate thinning, is therefore best suited to it. Height 3½ feet.

*Gasparine Furstein Reuss* (Sieckman).—The great contrast in the colours of this flower render it more attractive than perhaps any other. The ground colour is very rich and velvety, and the white as pure as snow. In form it is thin and flimsy-looking, yet its splendid colours are sure to make it a temporary favourite with all. Height 4 feet.

*Jenny Lind* (Barnes).—A useful flower when well grown, but wants substance in the petal.

#### STRIPED AND SPOTTED.

*Œillet de Boheme* (Van Geert).—The ground colour pale amber-yellow, striped with crimson; excellent petal, large size, double, and well set. Constant, and of fine habit. Height 4½ feet.

*Œillet Parfait* (Paris).—Deep yellow, striped with red; the colours well defined; large size, flat, well rounded, but thin petals; good outline. Very showy, but of drooping habit. Height 4 feet.

*Picotée* (Paris).—Pale yellow or sulphur, striped with crimson; large deep flower, irregular in arrangement and coarse; requires very moderate growth; constant. Height 4 feet.

*Striata Perfecta* (Batteur).—Lavender, striped with crimson; large size, capital centre, good shape and outline; constant. The best striped flower out; erect habit. May be grown strong and well thinned.

*Therese Richter*.—White, spangled with purple; large, flat, and coarse; the petals long and reflex. With moderate growth often showable, and particularly pleasing.

I think I have now enumerated all the good sorts that are out which I know. Of the new flowers, your own remarks, as published in the present (January) number, agree very much with the opinions I had formed of those I saw.

## ON ARRANGING STANDS OF FLOWERS.

EXHIBITORS of florists' flowers cannot have their attention too urgently directed to the necessity of uniformity in arranging their stands of blooms, and yet so little is this regarded that out of the hundreds of stands of Dahlias which we saw during last autumn, two-thirds of them appeared to have been set up regardless of order or contrast. The following observations on the point will be of some service to those who have paid little attention thereto; we gather them from *Glenny's Almanac* for the present year, a little annual remembrancer of which we may remark by the way is in no degree behind its predecessors, and of much practical utility to the amateur florist.

“Uniformity is one of the material points in making up a stand, yet we see constantly the heavy flowers, huddled together at one end, and light ones at the other, when the slightest attention to order would make variety and contrast striking and effective. We are aware of all the difficulties which differences of size create, and of another series of difficulties arising from the want of variety; all we care to enforce is the necessity of making the best of what we have. There are certain flowers which balance each other pretty well, although very different in colour; scarlet and orange, white and pale yellow, orange and deep yellow, bright lilac, or rose, and the heaviest of the tipped or mottled whites, and all the light and white flowers. In fact, we have only to range them all under light flowers and dark ones to make a stand uniform. A stand of twelve is the most difficult, but even here it is to be done. Let D represent dark flowers, and L light ones; they may be thus arranged:—

L	D	D	L
D	L	L	D
L	D	D	L

Can anything be more simple than this? And be it remembered that it is better to have a flower a little less, or even a little worse, to be subservient to this arrangement, than to have dark flowers predominate.

If you have not the even number of flowers, and either dark or light predominate, let a whole row be light, or a whole row dark, rather than throw all the gloom at one end. We never like to see more than two flowers in a stand approaching each other in shade among the dark colours, and it is bad taste to have more. Dark purple and black, two different crimsons, lilac and rose, orange and scarlet, yellow and white, light tip and dark tip. Here would be twelve flowers worth notice, if their form were first-rate; and be it remembered that this could be managed out of our present flowers. But there are shades and colours that would match better than even those we mention; say, for instance, we have the following twelve flowers, grown, as they can be grown, to make a splendid stand of twelve; we give two for choice:—

Fearless,	Stopford,	Sir F. Bathurst,	Magnificent,
or	or	or	or
Mrs. Anderson.	Triumph.	Standard of Perfection.	Mrs. Shelley.
Scarlet Gem,	Cornwallis,	Queen of East,	Shylock,
or	or	or	or
Duke of Wellington.	Antagonist.	Miss Vyse.	Nonpareil.
Radziwill,	Yellow Standard,	Toison d'Or,	Beauty of Hastings,
or	or	or	or
Delight.	Cleopatra.	Golden Fleece.	Queen of England.

“ We need hardly assert here that it is easier to arrange twenty-four than twelve; we have nothing to do but place flowers of marked character opposite each other. Suppose, for instance, we had exactly the same flowers mentioned in the top row, that is, all the eight for the back row of twenty-four, we should place Mrs. Anderson and Mrs. Shelley at the corners, Stopford and Triumph second at each end, Magnificent and Fearless third, and Sir F. Bathurst and Standard in the middle; take the next row, place Scarlet Gem and Duke of Wellington at the ends, Cornwallis and Antagonist second, Shylock and Nonpareil third, and Queen of East and Miss Vyse in the centre; and now, for a light bright row in front, Radziwill and Delight outside, Yellow Standard and Cleopatra second, Toison d'Or and Golden Fleece third, and Beauty of Hastings and Queen of England in the centre. Two of any colour together never look bad in the centre, but if we have brilliant flowers, they should be opposite and near the ends, because they lighten a stand materially. In short, the arrangement of twenty-four is only an enlargement and improvement of the plan for twelve; we have only to balance the flowers as well as we can in depth of colour, and begin at the ends.

L	D	L	D	D	L	D	L
D	L	D	L	L	D	L	D
L	D	L	D	D	L	D	L

“ If the dark ones preponderate, separate them as much as possible by the few light ones you have, or at least spread the few light ones about the stand as uniformly as you can; scarlets and lilacs and orange colours can be made to tell for dark flowers among light ones, or light

flowers among dark ones; but to see, as we have seen hundreds of times, four or five or more light ones all at one end, and a patch of dark ones at the other, is perfectly sickening to the judges, and uninviting to the public. The Dahlia offered the best illustration just now, but it is the same with Carnations, Picotees, Verbenas, Roses, and all other flowers shown in collections; even plants in collection are huddled together without the slightest regard to uniformity or contrast, and it is high time that judges visited this lack of arrangement with the penalty belonging to it. We confess that in the case of Dahlia stands this last season, the bad arrangement settled the fate of many exhibitors whose stands were pretty nearly balanced in other respects. Contrast, variety, and order have been weighed too lightly; they are very important points, enough to decide in favour of a stand with many blemishes. We may be told, perhaps, that the sizes of flowers prevent a good deal of this arrangement. Let it be remembered that the front row is none the worse for being smaller than the middle, and the middle none the worse for being smaller than the back, so that the flowers in the rows are equal. It is also to be remembered that hundreds of changes can be made with twelve flowers, to say nothing of twenty-four; and, therefore, that there is no excuse for committing any grievous informality."

### THE GLADIOLUS.

THIS very beautiful tribe of flowers now comprises almost all colours, of various shades, stripes, spots, and marbled hues.

Some kinds come into bloom early in May, and others follow in succession, up to the end of October.

I find them flourish best in a well-enriched moist loam, not clayey, and having a partial shade about mid-day.

The early bloomers require to be planted in October, the next class in December or January, and the late ones, such as *gaudanensis*, *floribunda*, &c., from January to the end of February. I usually give the bed a dug dressing of equal parts of old rotten cow-dung and vegetable mould every season before planting. The bed is well drained with six inches of broken bricks, stones, &c., over which I lay a course of grassy turf, broken into bits. In such a compost they are kept cool and free from an excess of wet, and their foliage is kept a rich green, not scorched and shrivelled, as is the case in dry soils.

The following are early blooming kinds:—

*Colvilli*, scarlet, streaked with yellow. *Blandus*, flesh colour, with crimson streaks. *Hirsutus*, flesh colour, streaked with rose. *Insignis*, rich red. *Atro-roseus*, fine deep rose. *Involutus*, pink. *Trimaculata*, white, red, and maroon. *Undulata*, pink. *Variegata*, red and white. *Graciles*, blue and white. *Campanulata*, purple. *Cochleatis*, white and red.

The following compose superb kinds of the second period of blooming:—

*Amphion*, blood-red. *Armadia*, bright orange-scarlet. *Elegantissima*, rich orange, with blood-red blotch. *Gloria Mundi*, vivid scarlet, with

dark crimson marks. *Gloriosa*, rich orange. *Imperialis*, purple, with white stripes. Incomparable, white, with scarlet marks. *L'Unique*, dark red, with maroon stripes. *Maid of Orleans*, French white, with scarlet streaks. *Minerva*, rose, with crimson mark. *Tricolor grandiflora*, scarlet, white, and crimson. *Island Queen*, orange, white, scarlet, and purple. *Carneus variegata*, flesh colour, with purple marks. *Lindleyana*, splendid orange. *Formosa*, saffron, marbled with white.

The following bloom latest, continuing from June to November:—

*Formosissima*, crimson-scarlet, with white stripes. *Queen Victoria*, superb rich scarlet. *Gaudanensis*, yellow and red. *Roseus major*, fine rose. *Rising Sun*, dwarf, scarlet. *Prince of Wales*, scarlet. *Robin Hood*, fine pink. *Vitellinus*, scarlet, with white streaks. *Speciosissima*, splendid scarlet-crimson. *Splendens*, superb orange-scarlet. *Floribunda*, rose, white, pink, and other shades in variety, all beautiful.

The entire are fine things for pot culture too. They require a free drainage, plenty of pot room, a rich loam and peat compost, and water in proportion to size and vigour of plant. They are very ornamental for a greenhouse, or to plunge in vacancies in beds, &c.

## BRIEF REMARKS.

**NEW ROSES.**—In the last and preceding numbers we have given more than usual descriptive lists of the finest Roses, in consequence of its being the planting season, and to enable our readers to make a satisfactory selection. We shall not insert more till next season. The following notes on the characters of the best New Roses, were made at the principal Rose nurseries and floral exhibitions, during the last blooming season:—*Provence*: *Adrienne de Cardioville*, rosy-crimson, large, full, and of good form. *Moss*: *Princess Royal* (*Portemer*), flesh-colour, of medium size, full, and of fine form; *Lanei* rosy-purple, large and full. *French*: *Perle des Panaches*, white, with clear red stripes, very pretty; *Œillet Flamand*, white, with broader rose and lilac stripes, and more striking, but less double, than the preceding; *Je me maintiendrai*, rose, large and double, distinct and good; *Oh!*, crimson, very large and full, fine. *Hybrid Provence*: *Hebe*, flesh-colour, large and full; *Comtesse de Segur*, flesh-colour, clear, and of fine form, but not so full as the former. *Hybrid China*: *Juno*, pale rose, very large, a little coarse; *L'Attrayante*, flesh-colour, large and full, good; *Anna de Rivoli*, clear pink, of beautiful effect on the tree, but not very double; *Fritz Dukerr*, deep crimson, in the way of *Fulgens*; *General Lamoriciere*, lilac, of good form, distinct; *General Jacqueminot*, purplish crimson, large and full, very good. *Hybrid Bourbon*: *Paul Ricaut*, vivid crimson, striking and fine. These are all summer Roses. Among autumnals—*Damask Perpetual*: *Julie de Krudner*, pink, a free bloomer, and good; *Pourpre Royale*, a fine Rose, but of an objectionable colour; *Duchesse de Praslin*, pink, pale edges, possessing the characteristics of the *Alba Rose*. *Hybrid Perpetual*: *Louise Bourdillion*, pink, distinct and pretty; *Reine des Fleurs*, rosy-pink, rather dull, but said to be fine in the autumn;

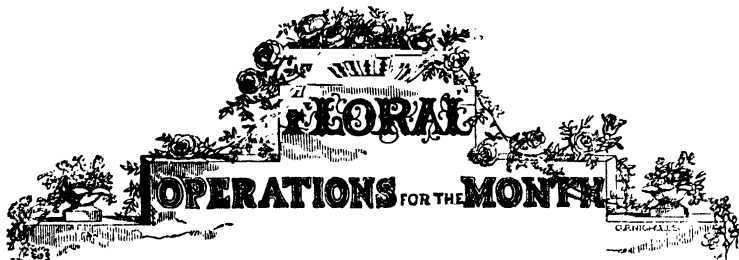
Cymedor, brilliant red, striking, but not too double; Madame Pepin, pale rose, large and full, and of good form; Gloire d'Angers, lively rose, rather small; Comte de Montalivet, violet, very large and showy, but not very double; Géant des Batailles, brilliant crimson, a real gem; Duchesse de Galliera, pale rose, full, very good; General Negrier, similar to the last in colour, but larger; Pius IX., crimson, large, and of good form; Soleil d'Austerlitz, which proves to be quite as good a Rose, though not so brilliant in colour, as Géant des Batailles; Standard of Marengo, raised by the person who raised Géant des Batailles, and which he stated would surpass it, a brilliant crimson Rose of the most perfect cupped shape, but not quite so full of petals as the Géant; Madame Guillot, deep pink, very double, and beautifully shaped; Dr. Arnal, a good Rose, like Madame Laffay in colour; Chateaubriand, of a bright glossy pink, scarcely double enough, still a very pretty Rose; General Morangiez, a most profuse bloomer, deep rose, tinted with lilac; L'Inflexible, very full, cupped, and finely shaped, colour—peach-blossom; Madame Trudeaux, light brilliant crimson, a beautiful variety; Henry IV., bright pink, a very vigorous grower; Commandant Fournier, very brilliant, like Cymedor in not being very double, a bright light crimson; Bouton de Flore, blush, blooming in very large clusters; La Gigantesque, very large semi-double, a brilliant crimson; Jeanne d'Arc, a pale blush, and pretty variety; Pauline Bonaparte, white. *Bourbon*: Charlemagne, silvery-blush, large and full; Menoux and Marquis de Moyria, brilliant crimson Roses; Leveson Gower, a new rose-coloured variety, with flowers as large as Souvenir de la Malmaison, does not appear to open freely, at least in the summer months. *Noisette*: Caroline Marniesse, creamy-white, like Felicité Perpetuelle. *Tea-scented*: Vicomtesse de Cazes, buff and yellow, variable.—*Rosa*.

**PLANTING ROSES.**—Those who grow upon a large scale may do anything, but the person whose means are limited must make the best of the advantages he has, and, as such, adopt those varieties which give him the longest period of bloom. It will, however, be necessary to order the Rose dealer to send as many different colours as he can, and to mark them with their colours, because, on planting, an eye must be kept to the necessary contrast to produce the best effect. There will be no difficulty in procuring red, pink, lilac, light rose, white, straw-colour, and yellow of various shades; and in planting you must endeavour so to group those that they shall form a varied mass of colour, not to have two reds together, nor two whites, nor two of any shade; and if among climbers you are rather embarrassed for particular colours, have duplicates. There would be no evil in having every other or alternate Rose in a row white, and the other alternate ones any other colour; indeed, Roses would look extremely well if there were none but red and white; but it is absolutely necessary for good effect to have alternate dark and light, whatever be the colour. But with the great variety that may be introduced the arrangement can be made perfect, for the lights and darks may be varied so as to form rich contrasts in themselves, so far as crimsons and purples and yellows and whites are contrasts to each other.

On good planting depends much of the success that attends the progress of a rosery. When the plants arrive, let all of them be examined, and the roots pruned, not that you can afford to lose any of them, but with all the care that can be given they will receive some injuries in taking up and travelling. Let every bruise and damage be removed with a sharp knife; having prepared all the roots, then dig in one good spit of rotten dung into the ordinary soil of the garden—for notwithstanding much pains have been taken, and are directed to be taken, in preparing the soil, the Rose is not a dainty plant—and completely mix it with a patch that shall be eighteen inches across; then take out as much soil as will make room for the root in width, and place it high enough to allow of the treading it down to its place, which is with the collar of the root even with the soil. See that the root is spread out as well as it can be spread; fill in the soil, treading it firmly all round about the extremity of the roots, but not close round the stem; and when in its place, and the soil regulated a little, drive down strong upright stakes behind the stem, tall enough to reach to the under side of the head, and fasten so that the tree is held in its place. Leave the pruning till the proper season, which is the spring, just before the sap begins to fill out the buds. The objection to close pruning in autumn is, that in very hard frost sometimes it kills back the branches two or three joints; and if they were pruned back to two joints in the autumn, it would spoil the tree altogether to kill any of them back a single joint.—*John Dean.*

**TORENIA ASIATICA.**—Some persons complain of the great difficulty of keeping this plant alive through winter. I place it in a moderately warm stove, and in that situation, if kept where it has good light, near to the glass, it flourishes and blooms freely all winter. A greenhouse is too cold for it. I grow it in good loam and sandy peat, in a rough (not sifted) state, and have a free drainage.—*A Flower Gardener.*

**LAYERING EVERGREEN SHRUBS.**—Many of our valuable evergreens do not produce seed in this country; the best method of increasing such is by layers, and it also furnishes a plant at once. I have adopted this method for many years, most successfully, with the Rhododendron, Kalmia, Phillyrea, Cistus, Arbutus, Magnolia, Daphne, Andromeda, Ledum, Holly, Arbor Vitæ, Juniper, &c. The period I do it is any time from early in January to the end of March. I cut an incision at the under side of a shoot, similar to what is done with the Carnation, making the cut just up to the pith, and carefully bend it into a prepared soil (keeping the tongue open), such as the plant usually flourishes in. It is secured down by means of a suitable hooked peg, and cover it over firmly with the same kind of soil. If there be a number of shoots upon a branch, I secure the branch down by means of a strong peg or stake, to which it is fastened by wire. By doing this early in the year the colosity gets formed, and roots emitted, before the dry weather commences. I adopt the same method with many of the choicest deciduous shrubs, as Althæa, Lonicera, Jasmimum, Wistaria, Tulip Tree, Azalea, Pyrus, Roses, Clematis, and others, with equal success.—*Alpha.*



THE display of flowers next season depends on the operations of this period, as the supply of plants must now be provided, whether from seed, cuttings, or division of plant at the roots. A PRESENT prompt attention is essential to a successful floral season.

#### IN THE FLOWER GARDEN.

Protection will still be necessary to all tender plants, but on all favourable occasions take off the covering, in order to dispel any damp air. See that all newly-planted shrubs remain secure, so that 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. Any Rose-trees to be planted must be done directly, or success is hazardous. Prune the open-air kinds of the entire hardy class now, and the tenderer sorts next month. 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 fresh soil and 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 that it may not 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 preserve the stems from being naked, 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. Sheep and cow dung, very old (reduced to earth), and decayed leaf-mould, suits well. Be careful that Tulips 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 most exposed. 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* while 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 of seed or otherwise, as with Verbenas, &c. Protect the early buds of Tree Peony, &c.

#### IN THE FORCING STOVE.

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 Fuchsias, Alonsoas, Ragwort, Calceolarias, Cupneas, 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° of temperature; thus kept, and temperature increased with the season, they will bloom luxuriantly, and when coming into bloom may be removed to the greenhouse, &c. Jacobææ and Guernsey Lilies, &c., should be re-potted. Mignonette should 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 GREENHOUSE, &c.

All air, in dry favourable weather, must be admitted, so as just to keep frost out. 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 has 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 Vol. XVI., 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 should be 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. In all cases when very severe weather continues for some time, it is necessary to keep the sashes of the pit 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. *Fuchsias*, to bloom early, should now be pruned, and as soon as the new shoots appear, re-pot them.

#### 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), as *Fuchsias*, *Calceolarias*, &c. Successive introductions of plants forced must be brought in, as *Roses*, *Lilacs*, *Azaleas*, *Acacias*, *Heliotropes*, *Correas*, *Coronillas*, *Cinerarias*, *Sweet Violets*, *Cactuses*, *Cyclamens*, *Gardenias*, *Justicias*, *Eranthemums*, *Honeysuckles*, *Pinks*, *Gesneria zebrinas*, *Neriums*, *Mignonette*, &c., and pots or boxes of *Hyaciuth*, *Narcissus*, *Persian Iris*, and *Crocus*, so as to have a constant succession of bloom. 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 destroyed, or they will soon spread their ravages, as will be exhibited by the leaves becoming brown and spotted.

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## NEGLECTED PLANTS.

BY PHILLO.

In reading the Article on *Alstroemerias*, in the last number of the CABINET, it occurred to me that *A. acutifolia* was almost lost, so seldom is it to be found in gardens of the present day. As a plant to train against a wall it succeeds admirably. In August it produces its magnificent heads of orange and scarlet flowers, so very distinct from all other creepers that I am surprised to find it so scarce. Another creeper of great beauty, of recent introduction, is not grown to the extent it deserves, I mean *Calystegia pubescens*. If planted in the open ground and trained to trellis-work, it produces a succession of its lovely double rose-coloured blossoms all the summer. The lovely *Myosotis Azoricus* is also a plant of great beauty, but little known. Grown either in pots or the open ground, it flowers through the summer months. The flowers open a rich purple, and change to red, so that two distinct colours are on the same plant at the same time. The two first are quite hardy, the last requires a little protection in winter. They ought to be in every collection. I intend to notice many other neglected floral beauties in successive numbers.





*Tropaeolum Wagenerianum.*



### TROPÆOLUM WAGNERIANUM.

FOR an account of this exceedingly elegant Spanish cress, lately introduced from mountains in the province of Trujillo, in Venezuela, we are indebted to the following communication by Dr. S. F. KLOTZSCH:—

“Of the *Tropæolum* species this is the third kind which has come to our knowledge since the year 1842 possessing the peculiarity of having its blossoms borne upon long thin stalks, spirally wound at the middle. The air of lightness and elegance thus given to the plant is more easily to be imagined than described. The first of the kinds having these spiral flower-stalks was discovered by Mr. Mathews at Chacapayas, in the Andes of Peru, ranged in his collection No. 3177, and described, with an illustration, by Sir W. J. Hooker, in his *Icones plantarum*, Plate 411, as *T. cirrhipes*. The present kind is, like the two others, tuberless, smooth, and with long, three-cornered, blunt, shield-like leaves; the spur of the chalice is orange-coloured, and the point of the same, as well as the petals, are said to be green.

“The second sort, discovered by Mr. Moritz in the colony of Tovar, in Columbia, but first introduced here by Dr. H. Karsten, by means of seed, was illustrated and described by these gentlemen in Karsten’s “Selection of New and Splendid Flowering Plants,” Plate 12, as *T. Deckerianum*. It is distinguished from *T. cirrhipes*, Hook., with which it has the greatest affinity in the form of its leaves, by all its parts, except the petals, stamens, and pistils, being covered with short and sparing hair, and by its azure petals.

“The third sort, which Dr. Karsten only lately discovered in some damp woods on the mountains of Trujillo, and also introduced here by means of fresh seed, was dedicated by him, as a mark of friendship, to his present companion, Mr. Wagner, the horticulturist. It is distinguished from *T. Deckerianum* by its want of hair, its *dark violet petals*,

and in the form of its leaves, which on the upper surface are dark green and shining; in this last respect it differs also from *T. cirrhipes*. *Trapæolum Wagnerianum*, Karsten. *Etuberosum*, glabrum, caule debile, radicante, scandente, foliis peltatis, oblongo-triangularibus, sub obliquis hastatis, basitruncatis, apice acuminatis, nitidis, subra saturata, subtus pallide viridibus; floribus in apice ramorum axilaribus, solitariis, pendulis; pedicellis tenuissimis, circinatis, bipollicaribus; calycis calcare tubuloso, recto saturate roseo, pollicem ad sesquipollicem longo, laciniis lacte viridibus, obtusis; petalis cuneiformibus, saturata violaceis, versus apicem septem dentatis; dentibus setosis calycis laciniis, pacello longioribus; staminibus octo, æqualibus, filamentis violaceis, antheris cœruleis."—(*Karsten, MSS.*)

We are enabled to add, this new *Tropæolum* was grown last summer from seed sent by Dr. Karsten to Mr. Decker's garden in Berlin. The treatment differs but little from that of other tuberless sorts. The propagation by *slips* is, as with others, very easy; seeds, on the contrary, run up with difficulty. Growing at an elevation of 5000 feet, it requires in winter a temperature not exceeding 8° (Réaumur); it is in general of a very hard texture, and displays rapid growth, and is therefore especially adapted for covering walls and arbours, particularly those with a northern and eastern aspect.

Moisture, and in particular daily watering over the leaves and shoots, is extremely advantageous. In its native country it is said to bloom the *whole year through*, and there is no reason why it should not do so in our greenhouses.

Mr. F. A. Haage, jun., florist, of Erfurt, is in possession of the entire stock of this very handsome species, and purposes to send out plants in April next.

## NOTES ON NEW OR RARE PLANTS.

### ACANTHOPHIPPIUM JAVANICUM.

*Orchidæ. Gynandria Monandria.*

A native of the woods of the mountain of Salak, in Java; introduced into this country by Messrs. Loddiges. It bloomed finely in the Royal Gardens of Kew last summer. The flower scape rises about a foot high, bearing six to eight flowers. Each blossom is about four inches across, yellow tinged, and beautifully streaked with purplish-red. It grows very freely in loose, turfy, peat soil, kept in the warm division of the orchideous house. It is a very handsome species. (Figured in *Bot. Mag.*, 4492.)

### ANEMONE JAPONICA, var. HYBRIDA.

This is a variety raised by impregnation of the *A. japonica* by the white-flowered *A. vitifolia*. The variety has smaller, cup-shaped blossoms than the Japan species, and the flowers are of a more delicate pale rose, almost white at the margin. It is a pretty variety. It was raised in the garden of the Horticultural Society. (Figured in *Mag. of Bot.*)

## CÆLOGYNE WALLICHI—DR. WALLICH'S CÆLOGYNE.

*Orchidæ. Gynandria Monandria.*

Found in great abundance by Dr. Hooker on his approaching Darjeeling, in Sikkim, Himalaya. It has bloomed beautifully in the collection at Chatsworth during last summer and autumn. Sir W. J. Hooker states that on his last visit to Chatsworth, next to the flowering VICTORIA, this Cælogyne was the most interesting of the many botanical rarities collected in that place. The pseudo-bulbs are very singular, flagon-shaped, dark green, warted, and frequently covered with a strong coating of loose net-work, formed by the old sheath. Only one flower arises at a time from each bulb, and this springs forth when the leaf has decayed. The flower stem rises about an inch and a half high. Each blossom is about four inches across; sepals lance-shaped, pink; petals of similar form and colour. The lip is very large, standing forward; the colour is pink, white, and yellow, dashed with red spots. It is a very interesting and beautiful flowering species. It flourishes in the cooler division of the orchid house, placed near the glass, and grown in turfy-peat, mixed with sphagnum moss. (Figured in *Bot. Mag.*, 4496.)

## CLEMATIS GRAVEOLENS—HEAVY-SCENTED TRAVELLER'S JOY.

It is a native of Chinese Tartary and the snowy passes of western Himalaya, at an elevation of 12,000 feet above the level of the sea. It was discovered by Captain Munro, who sent seeds of it to England. It is in the Royal Gardens of Kew, and blooms throughout the summer months. The flowers are yellow, tinged with green. It is an evergreen woody creeper, forming a bushy cover, like others of the genus, and is quite hardy. It is very suitable for the covering of a trellis, or to be trained against a wall. (Figured in *Bot. Mag.*, 4495.)

## CHOROZEMA FLAVA—YELLOW-FLOWERED.

This handsome species was, we believe, introduced into this country by Baron Hugel, who sent it to the Royal Gardens of Kew. It is of medium growth, bushy, and blooms profusely. The flowers are borne in terminal and axillary, open, leafy racemes, of a deep yellow colour, with a few green veins at the base, and the keel sulphur-coloured. Its delicate habit, shining green leaves, and numerous pretty yellow blossoms render it a very desirable plant for the greenhouse. (Figured in *Mag. of Bot.*)

## DIPTERACANTHUS SPECTABILIS—HANDSOME-FLOWERED.

This very handsome flowering species was discovered by Mr. Lobb on the Andes of Peru, and seeds were sent to Messrs. Veitch, and the plant has bloomed in the stove at their nursery. It is a soft-wooded plant, growing two feet high, and succeeds in a *warm* greenhouse. It blooms freely. The blossoms have much the form of those of the *Petunia*, and about two inches and a half across, of a rich *blue* purple colour. It propagates freely by cuttings. It is very showy and ornamental, and well merits a place in either stove or greenhouse. (Figured in *Bot. Mag.*, 4494.)



## ERICA REGALIS.

A hybrid obtained, it is supposed, from *E. vestita rosea*. The coronet of drooping flowers is large; in the one figured there are thirty blossoms. Each flower is tube-shaped, an inch long, of a pretty rosy-pink colour. It is in the collection of Messrs. Henderson, of Pineapple-place Nursery. It is a valuable acquisition.

## ERICA CAVENDISHIANA.

This hybrid was obtained in the same way that the now well-known beautiful *E. Cavendishii* was, viz., by *E. depressa* being impregnated with *E. Patersonii*. The flowers are tubular, about three-quarters of an inch long, of a rich deep yellow colour. It is of fine habit, and well meriting a place in every collection.

## ERICA LAQUEATUS-LUTEA.

A hybrid obtained from *E. tricolor-coronata*, impregnated with *E. depressa*. The flowers are ventricose (widest at the middle of the tube), nearly an inch long. The calyx is of a bright pink colour, the tube a pale flesh, and the end (limb) a pale yellow. It is an interesting variety.

## PENTSTEMON CORDIFOLIUS—HEART-LEAVED.

Mr. Hartweg found this, really a SHRUBBY species, on the mountain of Santa Inez, in California, in 1848, and seeds were sent to the Horticultural Society. It is a weakly-spreading shrub, but having the shoots stopped and properly trained it forms a neat bushy plant. The flowers are numerous, tube-shaped, near two inches long, narrow, of a light scarlet colour. It blooms through the summer season. (Figured in *Bot. Mag.*, 4497.)

## PELARGONIUM EXIMIUM; OR, FLOWER OF THE DAY PELARGONIUM.

This beautiful variety was raised by Mr. Kinghorne, gardener to the Earl of Kilmorey, at Twickenham. It was produced by impregnating Lee's Variegated Pelargonium with one of the best green varieties of that section, probably the *Globe compactum*. The leaves are large, of a deep green, with a broad border of silvery-white. The flowers are of a rich cherry-red, and borne in large trusses. The plant is of a dwarf, compact habit. It is a very desirable variety. (Figured in *Mag. of Bot.*)

## ZAUCHNERIA CALIFORNICA.

Forty-five years ago this handsome flowering plant was alluded to by Mr. König, in the "Annals of Botany," as existing in the Banksian Herbarium, "a beautiful new genus, a native of California, having the flowers of a Fuchsia, and a fruit exactly like *Epilobium*." Some of the specimens then collected (it is supposed by Mr. Menzies) Sir W. J. Hooker possesses. It was not further noticed till Presl published it in his "*Reliquæ Hænkeanæ*," under the name of *Zauchneria*, in compliment to Dr. Zauchner, a professor of natural history in the University of Prague. Presl added, though doubtfully, a second

species from Mexico. Sir W. J. Hooker states, "If we consider his two plants as distinct, we must make a third, for our cultivated plant is very distinct from *Z. Mexico*, as it is from the *Z. Californica*." The leaves of the plant now figured in the *Botanical Magazine* are much broader than any others we have seen; they are quite oval. It is a handsome pot plant when carefully trained, blooming freely, and its flowers, having deep red calyx and petals, are very showy. It is a good bedding plant for the flower garden; grown in a sandy-loam, and having the shoots stopped early in the season it throws out a number of lateral ones, which renders the plants *bushy*, and a proportionate profusion of flowers are borne. It is easy of increase, and ought to be in every greenhouse and flower garden.

The following descriptions of Rose Tulips are from the notes taken of each by Mr. Wood during the last blooming season, and which we extract from the *Midland Florist*:—

**GIBBONS' CATHERINE**, which we saw on several beds, still holds its place in our estimation. It is full enough of colour, but then it is so rich, and the base like ivory. It is also a bold flower, rising well to the third or fourth row.

**HAYWOOD'S MAGNIFICENT**, with us, was nothing like what the flower is represented to be in *Beck's Florist*. Ours, on opening, was "as yellow as a Primrose," and as for character there was none, except a bad one; we therefore conclude that it is an inferior break. We also saw it in similar style at Hinckley.

**LAWRENCE'S DUCHESS OF CLARENCE** is a flower that we think likely to suit northern growers. It is pure, of good colour, and beautifully marked, and though not without fault, yet we would advise our friends to inquire about it.

**ARLETTE**, with us, was flamed this season, and in that style very pretty. It certainly does not get on as it ought to do, evidencing a rather delicate constitution.

**BELVOIR ROSE**.—Originally from the gardens of Belvoir Castle, Leicestershire. Marks in the style of *Unique*, but the base is pure. There are several spurious sorts in circulation. We do not consider the form good, yet it is equal to many in the same class.

**KATE CONNOR** (Slater), a very good rose breeder, has become rectified in fine feathered style this season. The cup of this flower is much better than many others in the class, and the purity and beauty of the marking is unrivalled.

In byblomens, we bloomed a Scotch flower, called **REID'S PRINCE ALBERT**. It was from a very small bulb, and was pretty, the feathering delicate and the cup pure; but we fear it will prove too long.

**SAPPHIRE**.—A very fine flamed byblomen, getting up to the third, and, from a strong bulb, to the fourth row. Two bulbs only have flowered in this neighbourhood, but in both instances they were first-rate.

**VIOLET ALEXANDER** (Barr's strain).—A splendid feathered byblomen, and when right a match for most out. It is widely different from the flower known here as *Violet Alexander*, which is a flame, and similar to the sort grown as *Amyntus* and *La Bien Amie*.

In a former number we noticed **THE WONDER Tulip**. The following are additional particulars of this superb flower, by Captain Brown, in a communication to Mr. Wood:—

“Allow me to thank you for the notice of my Tulip, called by my Jersey friends ‘The Wonder,’ and as a beautiful and perfect flower deserving its name. You have compared it to Fanny Kemble [This was figured in our first volume of the **CABINET.—CONDUCTOR**], and really I ought to feel flattered; for that flower, with two offsets only, was purchased by the late Mr. Davy, of Chelsea, at the high price of 100*l.* He never lived to see the bloom, and at his death it was sold by auction to Mr. Goldham for 72*l.* 10*s.*, and yet I have the hardihood to say that Wonder is a better flower, superior in all its properties. The cup and marking of Wonder is more like Thalia, though of a different colour. Its form is very good, and the white dazzling and pure, with feather and star of the deepest puce, the nearest approach to black I ever saw in a Tulip. Added to this, it is constant, a great blessing to florists who covet a fine bloom every season. It was broken from a seedling of the late Mr. Clark’s, but such as scarcely had existence, and certainly had not flowered, at the time when Fanny was sold to Mr. Davy. It has never been offered for sale, but is in the hands of a few friends to whom I have given it. Yourself, Mr. Lightbody, Mr. Dobree, Mr. Dixon of Manchester, and Mr. Hardy of Warrington, are the only possessors of this flower that I am acquainted with; except, indeed, some garden thieves who plundered my bed last year. The stock remaining is very limited, seven or eight roots, including offsets, and a few breeders, are all I possess. Had it been in the hands of a London florist like Mr. Groom, it would have been a mine of wealth—a very Golconda or California—but as it is, I leave it to my northern friends to view and value it agreeably to their judgment. It stands alone, upon its own merits, of which the great Manchester show, next year, will be a fair test, as it will probably have to contend there with the choicest and best of all England.”

## REMINISCENCES ON GARDENS, FLOWERS, &c.

BY RISCEMARA.

CONTRIBUTIONS to the **FLORICULTURAL CABINET** being requested, I am induced to pen a few reminiscences of some gardens I visited last year, thinking that an allusion to a variety of plants may amuse and be useful to some of the readers of that very useful publication, while sitting by their winter fire-sides.

Leaving with regret my own scarlet *Rhododendrons*, *Azaleas*, &c., in full bloom, after staying in London, I visited a gentleman’s garden at Wisbeach, and saw an incipient stem growing out of a hardy *Yucca*, supposed to be the *superba*, which during the summer attained the height of about seven feet, and was very beautiful, with its base of abundant and luxuriant leaves, forming a striking ornament to the lawn. A *Yucca aloifolia* in the same garden, the year before, attained with its flowering stem the elevation of fifteen feet. It has survived

several winters, being protected by a wall, and is slightly covered with mats, except near the ground, where several offsets project curiously, and appear in perfect health. In a conservatory belonging to the same gentleman is a tall Cactus; it is more than thirteen feet high, and measures full half a yard in circumference. I once saw it in flower, which was yellow, and opened about seven o'clock in the evening. I am sorry I have not its distinct name. In the garden of another gentleman there I saw with pleasure a fine *Pawlonia imperialis*, about fourteen feet high, and the elegant *Aralia japonica*, about eight feet from the ground, and which had been abundantly in flower. In the summer I was highly gratified by inspecting the beautiful grounds of the Botanic Garden, Regent's Park, London. In the conservatory creepers were hanging down from the roof in flower, such as *Passiflora kermesina*, *Tacsonia grandis*, *Stephanotus floribundus*, &c., forming a resemblance to drapery, and waving in the slight breath of air which occasionally reached them. In the stove was suspended from the sloping roof a fine specimen of the curious *Torenia Asiatica*, which I am now lamenting my inability to keep through the winter. [Keep it in a stove through that season, and in a growing condition strike cuttings early in spring. It produces seed freely, and plants are readily raised.—CONDUCTOR.] The *Æschynanthus* also hung down its rich scarlet blossoms. The many rare plants here I cannot attempt to enumerate. In the garden, the blue edging produced by (I suppose) a species of *Lobelia*, gave an elegant and novel effect. The flowers were most abundant, and the plants dwarf and compact. The plan of the grounds gave me many new ideas. The rosery is admirably adapted to exhibit those beautiful flowers in perfection. Some exquisite and rare *Gladioli*, forming a bed in a gentleman's garden at Aspley, proved the high claim of this bulb to the attention of the lovers of flowers. At Wrest, the seat of Earl De Grey, the blue *Ceanothus azureus*, growing against a lofty wall, and covered with blossoms, arrested my attention, never having seen it in such perfection before; the effect was good and uncommon, and the space completely covered was considerable. I pass by the flower beds and noble forest trees in the grounds, long celebrated as the Silsoe Gardens, and originally laid out by CAPABILITY BROWN. We glanced at, but did not enter, the gay greenhouse at Chatsworth, near the residence and belonging to the head gardener. It appeared one sheet of flowers. The grounds near the mansion attracted us, but although we had introductions we were unable to walk through the large and celebrated conservatory, the Duke of Devonshire being expected every minute to arrive at home: we were only allowed to look down it, which was quite a disappointment. Our next floral treat was at York. In the stove of a lady there, we saw a fine specimen of Bread Fruit; the flowering branch hung down in considerable length. The Coffee Plant was interesting, and the *Begonia fuschoides*, a very elegant ornament. In the grounds of Backhouse and Son, the blooming plants were numerous, and the fernery interesting and well planned. The *Yucca glaucescens* was in flower; it is rather a dwarf species, but well worth growing. Specimens of many rare trees here

made me regret my want of time to examine them more minutely. The beautiful bulb *Tritonia aurea* (figured in the FLORICULTURAL CABINET in May, 1848,) was brilliantly in flower. At Matlock, in a garden formed on the almost precipitous side of high cliffs, and commanding an extensive and rich view towards Cromford, a fine collection of hardy Ferns interested me. The gardener said fourteen varieties of this curious tribe might be found in that romantic region. In the grounds at Islam, near Dovedale, the lodge was adorned by the climbing branches of the *Calystigia pubescens*, and as it had survived the winter, this at present rare plant promises to be quite an acquisition as a climber. The conservatory had some fine specimens of the *Lilium lancifolium punctatum*. The beds on the lawn in front varied from the usual plan, in having many *different flowers* in each, and the effect was good, having less monotony than so many being filled with only Verbenas. A dwarf Phlox, with its purple blossoms, was very ornamental. A hasty glance at the Arboretum at Derby is an interesting finish to my gardening recollections; I should be glad to see some account of its rare inhabitants in the FLORICULTURAL CABINET. [We should be obliged if some one of our Derby friends would thus favour us with some short particulars.—CONDUCTOR.] I remember many extraordinary trees, but forget their names; I wonder if the *Religious Silver Fir* of Mexico has survived this inclement season. At home I had the pleasure of seeing my *Brugmansia arborea* nobly in flower out of doors. Near it, the *Solanum*, with its purple blossoms, formed a striking object; it is hardy, and has reached the height of about ten feet, and is well worth growing: it is not, I think, sufficiently known and appreciated. Beneath these shrubs, the *Anemone japonica* reared its many pink blossoms so high as to resemble at a little distance the China Rose; I had never seen it so beautiful before.

[We respectfully thank the lady for her obliging attention and contribution. We hope it will not be the last favour of the kind. Other ladies, we hope, will similarly oblige us by remarks on trees, plants, flowers, garden designs, &c. They are very interesting and useful.—CONDUCTOR.]

### RHODANTHE MANGLESII.

THIS most lovely little annual succeeds best when sown in pans or large pots, about the middle of March, in a compost of turfy-peat and loam, with plenty of silver-sand and a good drainage of about an inch deep. It is best not to sow the seed too thick, as it causes the plants to come up weak. When the seed is sown, cover it with a thin coat of silver-sand, and water it slightly with a very fine syringe, not allowing it once to get dry during the process of vegetation, and still not to over-water it, so as to rot the seed. If the pans or pots are plunged in a gentle hot-bed, the plants come up much finer and better than if merely put in the greenhouse. When the seedlings have formed two leaves besides the seed-leaf, they should be pricked out round forty-eight sized pots, about half an inch from the side. They do best when put about six in each pot. When thus potted, place them again in the

hot-bed till they recover from shifting, and when they begin to grow they may be placed in the greenhouse, and as soon as mild weather has fairly set in plant them out in beds, in a sheltered situation; or if desired to continue them in the greenhouse, they must be shifted into thirty-two sized pots, and in the same kind of compost as before.

When treated in this way they make fine plants, and are a great acquisition to either the greenhouse or flower-garden.

## ON PRODUCING TALL ORNAMENTAL PLANTS OF SCARLET GERANIUMS (PELARGONIUMS).

BY A NOBLEMAN'S FLOWER GARDENER.

WITH much pleasure I have read several articles in this Magazine on the management of Scarlet Geraniums, as suited for bedding plants in the flower-garden during summer, but I have not seen any observations about growing them to large plants, suitable for ornaments in the conservatory, greenhouse, or to stand out upon a terrace, or placed in vases on the lawn or in the flower-garden.

In the floral department in the establishment of which I am manager we have numerous fine specimens from five to ten feet high, grown in ornamental pots and tubs, which are disposed of in the conservatory and greenhouse, where, by having a succession, they bloom all the year; others, also, are placed for ornaments upon a terrace, which is sheltered from the wind on every side but the south, having the benefit of an open, warm aspect. No plants are more ornamental than these, whether in-doors or out, and they amply repay for every attention, more especially so *now*, when we have such a number of strong-growing varieties suitable for the purpose.

The following is the mode of treatment I have most successfully pursued for many years:—

Early in spring I put off cuttings, and as soon as well rooted pot them off singly in a compost of equal parts of loam, leaf-mould, and old well-rotted cow-dung, or well-rotted hot-bed dung. A liberal drainage is given, and I never have sifted soil, but well chopped with the spade or trowel. As soon as I perceive the roots have began to push afresh I stop the leads of all shoots that are six inches long, in order to cause the production of side shoots; and when these are an inch long I retain the uppermost to train erect, in order to form the plant aright, so as to have it any desired height, which, being properly attended to every following season, is readily effected. The leading upright shoot is stopped at every six or eight inches, in order to have a regular supply of side shoots up to the summit. As the side shoots advance they too are stopped when five or six inches long, and of the lateral ones they produce, two of them, best placed for forming the plant, are kept, and the others taken away. By this process of stopping, thinning the young shoots, &c., in all the stages of its size, an admirable plant of any height and form is easily obtained. The branches are secured at proper distances, either to sticks, or, which is far better, a hoop of brass wire, to which they are tied; it is a very neat and

effectual security. Successive re-potting is attended to, and care is always taken before the side shoots, or leading upright one, is pruned back, to withhold water, so that the soil is kept nearly dry for a fortnight or three weeks; this checks the flow of sap, and on being cut the wounds do not bleed. After the pruning-in, more water is gradually given, and when the new shoots are an inch long the plants are re-potted, shaking off what soil can well be done. At this time, too, all surplus shoots are rubbed off. When the plant becomes too wide, the branches are cut in. Towards the end of summer I lessen the proportion of water given to all plants out of doors, in order to get the new wood well ripened, and thus be fitted for winter operations. By withholding water the wood becomes more firm, whilst a continuous free supply tends to produce gross, soft shoots, that are very liable to perish. I find this class of plants like a full sun-light, whether indoors or out. The time of housing the out-door stock is when the greenhouse or pit-frame plants in general are. By pruning-in, stopping, and re-potting, at successive times, a few plants at each, a bloom may be had all the year. I accomplish this by the following mode of treatment. About the 1st of July I begin to lessen the supply of water, to dry the plants off, as it is termed. By the middle of the month I cut back all the branches requiring it, and when the new shoots are an inch long I re-pot the plants and thin the shoots. These plants bloom from April onwards. I cut-in another portion at the latter end of September; these come into bloom in July, and continue to the end of the season. A third race I cut back in March; they bloom from October onwards; or some of the plants cut back in September may have their young shoots stopped in April; these will bloom from October. In order to have fine heads of bloom, it is the practice of some persons, as soon as the infant heads of flowers appear, to pinch out the lead, in order to throw more vigour to the bloom. Of course this does not increase the number of flowers in each head; these are already formed; but it gives vigour to the petals. In order to have large heads of bloom, I give manure water twice a-week, beginning when the shoots start growing; and by having vigorous shoots I have finer heads in proportion.

### ON CONTRASTING THE COLOURS OF FLOWERS.

IN our January Number we inserted a portion of some valuable remarks on this subject by Dr. Lindley, which appeared in the *Gardeners' Chronicle* of December 29; as well as a very interesting extract from a French publication. We strongly recommend our readers to purchase that paper, as well as that of January 5, 1850, and thus possess the article entire, ours being but an abridgement of it. The following is a part of the continuation, and it comprises illustrations of the principles M. Chevreul has laid down:—

“ For the month of FEBRUARY.—If the winter has not been very severe or long, three varieties of *Crocus* make their appearance in this month, viz., the white, violet, and yellow. A border of a single line

may be made with these placed in any one of the five following orders, viz., 1—yellow, violet, yellow, violet, &c.; 2—yellow, violet, white, yellow, violet, white, &c.; 3—yellow, white, violet, white, yellow, white, violet, &c.; 4—yellow, violet, yellow, white, yellow, violet, yellow, white, &c.; and, 5—violet, yellow, violet, white, violet, yellow, violet, white, &c. They may also be arranged in quincunx, either in a border or a basket.

“ For the month of MARCH.—Winter Aconite may be opposed to Snowdrop, or vernal Spring-flake (*Leucoïum vernum*). In some seasons the Christmas Rose (Black Hellebore) remains in flower in this month, and may be surrounded with winter Aconite, Violets, and Snowdrops, in no particular order. White, rose, and blue Hepaticas may be arranged in a border thus—white, blue, white, rose, white, &c. Primroses, being of several distinct colours, offer considerable facilities in their arrangement. A border of Primroses in the following order looks well: red, white, orange, lilac, yellow, brownish-violet, white, red, white, orange, &c., repeating the series in the same order. If a circular or elliptical border be required, one composed of Primroses arranged as follows will be found agreeable to the eye: white, red, white, orange, or orange edged with brown, violet or lilac, yellow, Oxlips or Cowslips, violet or bluish-lilac, orange, or orange edged with brown, white, red, white, and so on as before. The yellow Oxlips or Cowslips occurring at equal distances produce an excellent effect, their straight peduncles, covered with yellow flowers, agreeably destroying the flat appearance which would otherwise arise from the uniformity in the height of the other plants.

“ If from the last arrangement the orange flowers be taken away, the effect is greatly deteriorated by the loss of symmetry. This observation must be borne in mind whenever a border forming a closed circle is, from its small size, at once taken in by the eye; if this be not the case, the first arrangement may be preferred to the last.

“ B. The large-flowered *Arabis*, *Saxifraga crassifolia*, the *Arabis*, Caucasian *Doronicum*; then repeat in the same order. If the *Arabis* are left to themselves they spread too much relatively to the *Saxifrages*, and there is then too much white. If it is too much trouble to keep the *Arabis* in bounds, the following arrangement will be found useful: *Arabis*, *Saxifrage*, *Doronicum*, *Arabis*, *Saxifrage*, *Doronicum*, &c.

“ C. *Doronicum*, purple *Honesty*; or, *Saxifrage*, *Doronicum*, *Arabis*, purple *Honesty*; or, *Saxifrage*, *Arabis*; then begin again, observing the same order. To insure this border looking well, care must be taken that the flowers of the *Arabis* and *Doronicum* do not spread too much relatively to the *Saxifrages* or the *Honestys*. Again, in the last arrangement, one *Honesty* may alternate successively with one *Saxifrage*, so as to have the *Honestys* between two *Doronicums* and the *Saxifrage* between two *Arabises*.

“ D. 1—Blue *Hyacinth*, yellow *Narcissus*, blue *Hyacinth*, yellow *Narcissus*, &c.; 2—*Hyacinths* alone, in the following order: White, red, white, red, &c.; or thus: White, blue, white, red, white, blue, white, red, &c. Large baskets of blue *Hyacinths* alternate well with *Doronicums*; so do large baskets of white *Hyacinths* with *Saxifrages*.



“ E. 1—Evergreen Candytuft (*Iberis sempervirens*), Rock Alyssum (*Alyssum saxatile*), Candytuft, Alyssum, &c.; 2—Candytuft, Virginian Lungwort (*Pulmonaria virginica*), Alyssum, then repeat; 3—Candytuft, Phlox verna (purple), or Anemone pavonina (red), or Anemone apennina (sky-blue); Alyssum, Phlox verna, or Anemone pavonina, or A. apennina, then begin again and repeat in the same order.

“ F. Beds of Periwinkle (*Vinca minor* and *major*), white and blue mingled with white and violet Violets, and with Anemone nemorosa, or Isopyrum thalictroides; and, if the beds are of any size, with yellow flowers, such as Cowslips, Ranunculus, Ficaria, &c., produce a good effect.

“ G. 1—Dwarf Peach-trees, with double red flowers (*Amygdalus persica*), Kerria japonica, dwarf Peaches, Kerria japonica, &c.; 2—Dwarf Peaches, yellow Jasmine (*Jasminum fruticans*), dwarf Peaches, yellow Jasmynes, &c.

“ II. Tartarian Honeysuckles (*Lonicera tartarica*), red, the white-flowered variety of the same plant, then the red again, then the white, and so on. This is, however, rather heavy; a Kerria japonica may be interposed between two Honeysuckles, red or white, but in consequence of the great difference in their form they must not be so near as to touch each other; there must be, moreover, behind such a line as this other good-looking plants.

“ I. A *Pyrus japonica* rising in the form of a bush above a bed of Violets produces a good effect, by the contrast of its scarlet flowers with the colour of the Violets.”

## ON BEDDING GERANIUMS.

GERANIUMS (properly Pelargoniums) FOR BEDDING.—My employment renders it necessary for me to travel several times a-year around the suburbs of London, and supplies me with opportunities of observing the progress of floriculture. During the last four or five seasons I have been much pleased to notice an annual advance in the cultivation of this charming class of flowers, both as ornamental bedding plants for the flower gardens and lawns, but also as decorations for the windows.

Within the last four years a quantity of what is termed the FANCY CLASS of Geraniums has been raised, and I have observed in several places that a number of the first-raised varieties have been grown out in beds very successfully. They are not of such brilliant colours as the scarlets (Tom Thumb, &c.), but they are profuse in flowers, very neat in growth, being of a dwarf habit, and form a pleasing contrast with the others. The following varieties answered most admirably:—

*Unique*.—The foliage is very interesting and pretty; it is a light green, rather of the broad oak-leaved form, but the wavy surface is much more contrasted. The flowers are of a *rich bright purple* colour, borne in compact heads, and produced in profusion. The plants usually grow from one to two feet high, spreading nicely, and when in bloom the display is very charming. If the plants are growing too

high, the shoots are readily bent down, or if they be cut in, it induces the production of new shoots and a proportionate increase of bloom. I saw, in October last, a large bed of plants that had been cut in, in order to obtain a supply of cuttings for next season's purposes, and the new shoots were *then* in full bloom, and had a beautiful appearance. I also saw three plants of it, which were of two or three years' growth, turned out into a small bed upon a lawn, and trained up about five feet high. They formed a beautiful pillar of bloom, and scarcely anything I have seen in flowers this season pleased me so much, the trusses of its lovely purple blossoms standing out so very nicely beyond the general foliage. It ought to be grown in every flower-garden, &c. It is, too, a charming plant for pot culture. It does well in a room, allowing it air and light in sufficiency. It is easily increased by cuttings. A fresh loam and well-rotted vegetable mould suits it well.

*Anais*.—This charming variety has been shown in every collection of fancy Geraniums in or around London the last two seasons. Its lovely flowers of white ground, and bright rose in contrast, produced in vast profusion, exhibit a very striking appearance, and for a small bed requiring dwarfish plants from one foot to half a yard high it is admirably adapted. Its unusual pretty colour is admired by all.

*Ibrahim Pacha*.—This variety is of similar growth to *Anais*, but the flowers of a very dark hue, and being so unusual in colour, contrast most singularly with light and scarlets. The plant is a profuse bloomer; the upper petals are blotched with dark crimson, and the margin a light crimson; lower petals are lighter, banded with dark crimson.

*Quercifolium rubra*.—This pretty oak-leaved variety, whose flowers are of a rich red colour, with two very distinct black spots on the upper petals, is very interesting and beautiful. Its habit is dwarf, growing a foot or little more high, and blooms very freely. It is a charming addition for a small bed. There is a variety which grows half a yard to two feet high. The flowers are white, with dark crimson spots. The soil should not be quite so rich as for the previous varieties, or it produces too great a proportion of foliage; grown properly, it is very pretty.

*Statiaskii*.—This variety is a free bloomer, exhibiting the flowers well. The upper petals are of a velvet-crimson, with a white margin; the lower ones blush, with a broad band of pink across the middle of each. These strikingly contrasted colours present a beautiful appearance. The soil must not be too strong a loam.

*Nosegay*.—This is a profuse bloomer; the petals lilac, feathered with crimson, and have a veined blotch on each of the upper ones. I saw a bed of it, with an edging of *Ibrahim Pacha*. They produced a pretty contrast, the light flowers surrounded with the rich dark margin. I also saw another bed of the *Queen Victoria*, flowers blush-white, with a bright rose spot in each of the upper petals. It had a charming effect, being so profusely in flower, and had an edging of the *Unique*. The contrast of these was very handsome. Next month I shall give an additional list of others.

## ON THE CULTIVATION OF TULIPS.

IN LETTERS TO A FRIEND.

*Letter III.*

DEAR SIR,—Your last respects I have perused with considerable satisfaction. I am pleased with the progress you have made. On reading the list of your purchases, I find there are some I should not have bought, but still some are very good, and the whole will please you for some time to come. Your progressive experience will add to your discrimination, and aid your judgment. You are pleased to say that you could not do otherwise than go ahead, after the instructions contained in my letters; and as it seems such easy work to me to write about Tulips, you have a lot of questions to ask, and having made a beginning I must go on, and tell you all I know on the subject. This I will not promise, as we labour under disadvantages, being so far from each other. Epistolary communications must always be as concise as possible, but still I will make my communications as entertaining and serviceable as the nature of the subject will allow. Now to your questions. You say you have procured a list of flowers that have gained prizes at the principal meetings in the south, and you wish me to send you the names of those that win in the north. You wish to know if I have ever made any experiments in the cultivation of Tulips, and if I can inform you what sort of seedlings they are raising in the north, and if any of these are likely to become popular, and likely to become standard flowers with cultivators. Again, you say you have some that come with eight petals: What is the cause, and what will prevent it? You say you have more questions yet to ask, but for the present you have done. I am glad of it; you have set me a task, but as it is my favourite theme, I will do as well as I can with them; it will take more than one or two letters to answer them. Strange to say, that for the last three years I have made considerable exertions to get lists of all the principal meetings in the north, and have been rather successful. I did it that I might compare notes, “not thinking of any application on the subject,” and thus I am able to meet your wishes, and shall conclude this letter by giving you a list of Rose Tulips that have gained prizes in the north in the last three years; the other classes shall follow. You must bear in mind that in the north they show in classes; each bloom is shown separately, and not in pans, as in the south, and by this method prizes go to a long extent, and are given for the best flamed and feathered of each class. In the annexed list, those that have got the most prizes are mostly old flowers, both here and in the south; some of those with the smaller numbers are from the south, and others raised and broke in this neighbourhood (or seedlings if you please), which, with your other questions shall be attended to in my next.—DAHL.

*A List of Rose Tulips that have gained Prizes in the North in the last Three Years.*

Heroine . . . . .	53	Newcastle . . . . .	35
Lady Crewe . . . . .	85	Walworth . . . . .	55
Dolittle . . . . .	42	Andromeda . . . . .	12

Compt Vergennes . . . . .	68	Rose Premier . . . . .	1
Duke de Bronté . . . . .	17	Rose Cerese Primo . . . . .	6
Hero of the Nile . . . . .	25	Princess Victoria . . . . .	1
Hurst's Rose . . . . .	1	Rose Grandis . . . . .	1
Holden's Rose . . . . .	4	Rose Miniature . . . . .	2
Rose Selina . . . . .	2	Magnificent (Headley's) . . . . .	1
Thompson's Seedling . . . . .	1	Mrs. Mundy . . . . .	2
Lady Middleton . . . . .	24	Mrs. Bradford . . . . .	1
Arlette (Dixon's) . . . . .	1	Lady Colville . . . . .	1
Madame Malibrán . . . . .	1	Zuill's Mary Lamb . . . . .	1
Catherine (Gibbon's) . . . . .	2	Highland Mary . . . . .	2
Claudianna . . . . .	2	Reed's 39 . . . . .	9
Matilda (Mason's) . . . . .	7	Sans Equal, or Juliana . . . . .	1
La Belle Nanette . . . . .	10	Monument (Dixon's) . . . . .	3
Amelia . . . . .	1	Surpassant . . . . .	2
Scipio Africanus . . . . .	1	Diana . . . . .	1
Rose Camilius . . . . .	1	Duchess of Clarence . . . . .	3
Sans Pareil . . . . .	2	Amadis . . . . .	1
Lady Gray (Haigh's) . . . . .	3	Thalestris . . . . .	3
Josephine . . . . .	2	Rose Elegans . . . . .	2
Iphigenia . . . . .	2	Rose William . . . . .	1
Lady Wilmot . . . . .	11	Princess Wilhelmina . . . . .	1
Rose Unique . . . . .	83	Model of Perfection . . . . .	3
Triumph Royal . . . . .	111	Rose Quarto . . . . .	1
Vesta . . . . .	44	Rose Desire . . . . .	1
Lord Hill . . . . .	41	Camillus . . . . .	1
Vanquisher . . . . .	4	Fleur des Dames . . . . .	1
La Vandyke . . . . .	20	Incomparable Royal . . . . .	1
Lady Lilford . . . . .	3	Yorkshire Rose . . . . .	1
Rose Ann . . . . .	6	Lawrence's Athalia . . . . .	1
Regina . . . . .	7	Dixon's Huntress . . . . .	1
Ruby . . . . .	6	Georgius Tertius . . . . .	1
Vulcan . . . . .	2	Madame Vestris . . . . .	3
Lady Sale . . . . .	2	Dutch Ponceau . . . . .	15
Rose Camuce . . . . .	1	Aglaiá . . . . .	43
Alexander Le Roi . . . . .	4	Ellis's 26 . . . . .	2
Cerise Belle Forme . . . . .	6	„ 47 . . . . .	2
Lady Stanley . . . . .	2	„ 49 . . . . .	1
Turner's Rose . . . . .	1	Sisigambis . . . . .	1
Jenny Lind . . . . .	2	Imogene . . . . .	1
Princess Royal (Walmsley's) . . . . .	3	Rose de Purre . . . . .	1
Atlas . . . . .	1	Marandia . . . . .	1
Fairy Queen (Slater's) . . . . .	1	Guerrier . . . . .	10
Camuce de Croix . . . . .	3	Joan of Arc . . . . .	2
Hebe . . . . .	6	Rose Lillis . . . . .	1
Goldham's Maria . . . . .	2	Belvoir Rose . . . . .	1
Sherwood Rose . . . . .	6	Rose Monti . . . . .	1
French Rose . . . . .	2	Roi de Cerise . . . . .	12
British Queen . . . . .	1	Lamb's Rose . . . . .	2
Rose Blandina . . . . .	1	Rose Navorina . . . . .	1
Rose Bacchus . . . . .	5	Gibbon's Rose Seedlings . . . . .	10

## BRIEF REMARKS.

**SOIL SUITED FOR ROSES.**—If planted in a light or sandy soil, they always push weakly, and generally die in a year or two. They flourish in a *rather strong* brownish-yellow loam, upon a dry substratum; if it be not so naturally, it must be made so by drainage. The soil should be at least a foot deep, and be well enriched with old rotten cow-dung. This is cool, and suits well.—*Rosa*.

**FINE AUTUMNAL-BLOOMING BOURBON ROSES.**—The following are strongly recommended by a correspondent:—*Souvenir de Malmaison*, cream-coloured, very large, full double. *Cerese*, bright rose-colour, fine form. *Madame Angelina*, a delicate creamy-white, petals stout and of a fine waxy appearance. *Souchet*, crimson and violet, richly blended, petals stout and of a waxy appearance. *Gloire de Rosamene*, brilliant scarlet, exceedingly showy. *Madame Souchet*, bright rose, with a deeper coloured margin, fine form. *Queen of Bourbons*, buff coloured, very fragrant. *L'Enfant de Ajaccio*, a very rich scarlet, abundant bloomer. *George Cuvier*, a very beautiful rich pink colour, always admired.

**DOUBLE-FLOWERED POMEGRANATE.**—I observe a correspondent complains that after numerous efforts with a plant growing against a south-aspected wall, he has hitherto failed to bloom it. I had one for years in similar circumstances. At last I thinned away three parts of the young shoots, and cut-in short those I reserved, in order to obtain strong young wood the following season. This operation was performed in February. When the new shoots pushed, they were much more vigorous than I had had any previously. Judging that I had kept the plant too crowded with wood during summer, I rubbed off what I deemed superfluous shoots when they were about three inches long, and only retained sufficient to form the plant properly in every part, similar to what is done with the peach or nectarine. As the flowers are borne on the present season's shoots, and they were much stronger than any previous ones, I anticipated a good bloom. My expectations were more than realized. This was in 1843, and by a judicious pruning in February, and hand-dressing early in May, I have had a fine bloom each successive summer. It far more than repays for the attention given.—*A. B., The Rectory*.

**TRANSMISSION OF SEEDS AND ROOTS TO DISTANT COUNTRIES.**—Some experiments have been most successfully tried of having the seeds, &c., well dried in the air, then wrapping them up in brown paper, previously dried in an oven, and the packets put into coarse canvass bags, and, finally, these are laid between dry blankets. A suitable box being provided, which will admit air, the blankets, folded up properly, are placed in it tier upon tier. The flannel is a non-conductor of heat, admits air, and at the same time, any seed rotting, &c., and causing moisture, it is readily absorbed by the flannel.—*A London Seedsman*.

**TIGRIDIA PAVONIA AND T. CONCHIFLORA.**—To grow these handsome flowers vigorously, pot the bulbs in autumn, have rather deep pots, place a free drainage, and upon it fill in four inches deep of old rotten stock bottom and well-rotted cow-dung, mixed together; then fill in two or three inches deep of good rich loam; place upon it the

bulb, and over it the loam to the brim. After potting, they should be placed in a cool pit or frame, to be kept from frost in winter. Thus grown, I have had them bloom of a *much larger* size than I ever saw elsewhere.—*Clericus*.

COLOURED GLASS.—A few years back a great stir was made about the advantages it afforded to cuttings of plants; they struck root much sooner, and grew more successfully. I have tried it repeatedly, but I do not realize any advantages. I find the common rough glass to be far the best; it admits sufficient light, but is dark enough to preserve the vegetation from being scorched by the sun.—*Amicus*.

LESCHENAUTIAS.—Cuttings of these beautiful plants, taken when the young wood has just began to harden, and cut close under a joint, at about an inch and a half long, then, having a good drainage in the pot, fill up with sand and peat, in equal parts, to about an inch and a half from the rim; lay upon this silver sand to the level of the rim; water it, and then insert the dressed cuttings about half their length, and press the sand closely to them, and give them, finally, a watering sufficient to settle all together. When dry, place over them a bell-glass, and sink the pots in a frame, or bark pit, where there is a gentle bottom heat, and in a very short time they will strike root. Put in a hundred, and scarcely one will fail.—*A London Propagator*.

DWARF CHRYSANTHEMUMS.—Some useful remarks on having dwarf blooming plants of this lovely tribe of flowers are given in the last two volumes of this Magazine. Since I read them I have adopted the method, but found it rather hazardous, of breaking the ends of the shoots at the part I cut them, where roots are to be expected. To prevent that, I wrap a piece of worsted round the stem, at the part where I am about to cut, having the coils a little above half an inch apart. This allows me quite space enough to cut the shoot for the tongue, and at the same time preserves the shoot from breaking. When about to layer, I have some soil mixed up to *stiff* mud, and the tongue being cut, I bend it slightly, and rub a portion of the mud into the incision made, which keeps it open; and when the shoots are finally bent into the pots sunk in the open border, and so covered up, not one has failed of quickly rooting. As soon as well rooted, I have them severed from the parent plant, well furnished with flower-buds, and taken into the house for blooming.—*A Country Curate*.

IXIAS, SPARAXIS, and other Cape bulbs of that kind, I find should be re-potted in October, and plunged in a cool frame, or they may be planted out in a frame of prepared soil, and their elegant blossoms used for decorative purposes. It is not by any means a good plan to part these plants too frequently, as it causes them to produce weaker and fewer flower-stalks in the following season. If grown in pots, therefore, unless they are very much crowded, it is best merely to turn the ball out of the pot, and after carefully removing as much of the soil as can be managed without disturbing the bulbs, to replace them in the same or a larger pot, and surround them with fresh soil. For the smaller growing kinds, the compost should be light and sandy, containing a considerable admixture of peat; but for Gladioli, and others of similar growth, a soil somewhat richer should be used. These

plants should be carefully guarded from cold-or damp, as their leaves are very liable to be injured thereby.

**RAISING SEEDLING RANUNCULUSES.**—The seed should be sown every year in autumn, or early in spring; growers will thereby have the pleasure of seeing a constant succession of new flowers of superior size, shape, and colour, and will obtain a profusion of bloom. In an unfavourable season, some years since, when the old roots did not bloom more than ten in a hundred, even then my seedling beds presented masses of bloom. If persons will only make a trial of Seedling Ranunculuses, they will find it very amply to repay them, both in its interesting expectation of beautiful novelties, and obtaining such as are of merit in form.—*Senex.*

**CLIMBING ROSES.**—A correspondent asks for a descriptive list of a few of the best; he does not state the section he wishes for, we therefore give the names of some in each:—

*Sempervirens* Section.—Adelaide d'Orleans, rosy-pink. Felicité perpetue, creamy-white, with under side of petals pink. Leopoldine d'Orleans, white shaded with rose. Rampant, pure white. Princesse Marie, French-white and pink. Carnea grandiflora, pretty flesh-colour. These have shining green leaves, which are retained till winter. Bloom in fine clusters.

*Ayrshire.*—Dundee Rambler, white edged with pink. Queen of the Belgians, white with creamy centre. Ruga, blush-pink. Myrrh-scented, blush. Queen, purple-crimson. These are rapid growers and profuse bloomers.

*Boursaults.*—Amadis, rich crimson and purple. Elegans, bright purple with white streaks. Quick growers.

*Hybrid Climbers.*—Garland (Wood's), creamy-white and pink. Clair (single), vivid scarlet. Sir John Sebright, brilliant scarlet. Madame d'Arblay, white.

*Noisette.*—Aimée Vibert, white.

*Multiflora.*—Grevillea (or Seven Sisters), bright red, shading off to purple. Borne in cluster of seven flowers. Does not grow so rapidly as the others.

**SUPERB CHRYSANTHEMUMS.**—In our January number we inserted a portion of the best Chrysanthemums we had seen in 1849. The following complete the list we took notes of. All are excellent varieties, and deserving a place in every collection. Annie Salter, pale yellow, very double. Airies, flame-coloured, good petal. Madame Poggi, deep crimson, broad petal. Beauty, white tinged with blush at the under side, broad petals, and incurved. Queen of the Yellows, rich deep yellow, under side reddish, petals broad. Cyclops, yellow, each petal having a broad stripe of brown at the under side, incurved. Etoile de Versailles, very double, quilled, blush. Nancy de Sermet, white, Anemone-flowered. Madame Mina, buff, broad petal, very double. Reine des Belges, pink with yellow centre, broad petals. Diogenes, deep crimson, incurved, broad petals. Phidias, rosy-crimson, very double, Ranunculus form. Polar Star, tasselled, white, very pretty. Rosa Mundi, deep rose, part tasselled. Demosthenes, brown with yellow centre, very double. Competitor, purple, broad petal.

England's Queen, deep rose, broad petal. Vulcan, deep crimson centre, incurved. La Reine d'Or, rich yellow, very double, in clusters. Fleur de Maria, white, Anemone-flowered. Barbette, bright rose. Nelson, rosy-carmine, yellow centre. Philiaris, bright purple, lighter centre, broad petal. Agenora, deep pink, very double. Victorine, rosy-salmon, broad petals, very double.

**STRIKING CUTTINGS OF SHRUBBY CALCEOLARIAS.**—I used to find much difficulty in striking cuttings of these plants, and that difficulty I have found was in consequence of my attempting it at the wrong time. I had considered them as requiring similar treatment to greenhouse plants in general, and therefore put off Calceolarias from the middle of April to the end of July, and placed the pots of cuttings in gentle heat, as done with the stock of greenhouse plants. I never succeeded with a quarter of what I inserted. Reading over some of the volumes of this Magazine last October, I saw you strongly recommended cuttings and slips to be put in in autumn, and to be struck in an exhausted hot-bed or cool pit-frame. I immediately put in a quantity from the plants then just taken up out of the flower-beds; also a second lot in November; and on looking them over a week back, I found every cutting and slip had struck root. I am therefore satisfied a cool atmosphere is essential to success; even winter will do.—*Juvenis.*

**AZALEA INDICA.**—This charming tribe of flowering plants is now in floral bud. Care must be taken that the collar of the plant be an inch above the rest part of the ball of soil, so that no water is allowed to collect at the trunk. For want of this precaution I had several fine plants die last season. I also give a liberal drainage when potting; I find that to be essential to health. I use crocks two inches deep, upon which I place a layer of turfy-peat, broken into pieces.—*Clericus.*

**VERBENAS.**—From the plants that have survived winter take cuttings early in February, and strike them in sand, in gentle heat, and pot off, as soon as rooted, into small sixty-sized pots, and when requiring more room re-pot into two sizes larger, and pinch off the tops, in order to make the plants push laterals, and to form bushy plants. These side shoots should be thinned, so as to leave only three or four at most, at equal distances. Such as are for bedding-out may be allowed to grow without pinching-in again; but if to be retained in pots, for blooming through the season, pinch off the early blooming heads, and when fresh side shoots are pushed thin them properly; only retain as many as will furnish the plant so as to be open and free. Cultivated in pots, the compost should be equal parts of rich loam, peat, and leaf-mould, with a sprinkling of bits of charcoal.—*A. B.*

**ON PROTECTING PLANTS IN GREENHOUSES, PITS, OR FRAMES, FROM FROST, &c.**—The late severe frost has produced a considerable stir amongst amateur gardeners relative to the cheapest, best, and readiest mode of protecting plants in the above-named situations, and where there was not the advantage of fire. I have adopted the following with perfect success for the last two years. In April 1846, I procured in London a number of the thick woven bass mats, at 6s. per dozen, which I had, being tightly stretched, nailed securely to a wooden



frame-work, the bars being two inches deep and one broad. It was formed of four pieces of wood, the length of the mat, and they were joined at the top and bottom, at equal distances apart, to similar cross pieces; and across the interior part of the frame I had three strips of thin sheet-iron nailed on from side to side, which kept the bars firm in their places. After being thus formed, I had them coated over twice with hot gas tar, and when the last coat was put on I had it wholly sprinkled over with fine sand; this gave it a rough surface, like stone. During the very severe frost we have recently had, I found them to answer most fully. The frame-work keeps the mat from touching the glass, and a space of two inches exists, which prevents the frost from reaching the glass. However, during the severest nights I had a portion of short dry hay (saved from the sweepings of the lawn in summer) laid upon the glass, and the mat frames placed upon it. Not a plant was in the least affected, although I had not any fire heat. The frame covers are soon put on and taken off; no breaking of glass, as is generally happening with other modes; and I am confident, if these covers are fresh coated with gas tar every season, they will endure for many years. They cost me 2s. each in materials, and my own labourer in the garden nailed together, and otherwise completed them, at sundry times when wet weather occurred. I used to pay 1s. 6d. each for mats every season, but this method is a considerable saving, and far more effectual.—*G. G.*

CULTIVATION OF BRUNSVIGIA JOSEPHINÆ.—In March 1844, I received three fine bulbs, among various others, of *Brunsvigia Josephinæ*, from the Cape. They were at once potted in good fresh turfy-loam. In November the leaves became yellow, and water was withheld, but was resumed in December, when new leaves began to appear; they were also plunged in water for a few hours, to ensure the balls of earth being saturated; the top mould was also removed, and replaced with leaf-mould. During the winter they were kept in a warm greenhouse, in a temperature often down as low as 35°. The flower-stems are always cut off as soon as the last flowers begin to wither. The pots are then placed out of doors, and are allowed to remain as late in the autumn as possible.—*Charles Leach, in the Journal of the Horticultural Society.*

BELLADONNA LILY.—This showy and truly splendid bulb has, I fear, not been treated with that attention which its merits as a late autumn flowering bulb deserve. It is true that we may here and there see a few imported plants of it in flower in pots, decorating the greenhouse or conservatory at this season; but they afford but a poor idea of the gorgeous flowers which this Lily produces when cultivated out of doors.

About twelve years ago I had a number of imported bulbs, and after they had blossomed in pots, they were planted out close to the front wall of a greenhouse, but they had no more protection there than they would have had at the bottom of any south wall. The holes in which they were planted were about eighteen inches deep, and wide in proportion, four feet apart, and filled up with good sandy loam. In these holes four bulbs were planted, four inches deep; they were then covered

with ten inches of leaf-mould, in a conical form ; they remained in this condition during the winter. As spring advanced, I stirred and removed a portion of the leaf-mould, in order that the heat from the rays of the sun might penetrate to invigorate the languid and blanched foliage, which at that season makes an effort to reach the genial air. This should be done until the bulbs are within four or five inches of the surface. If the weather is dry and warm, let them have some good waterings, with a view to encourage a rapid and strong growth of the foliage. Care should be taken that no plants of tall growth be planted in front of them, to shade their foliage from the full effect of the meridian sun, nor a leaf removed until the ripening process has been fully accomplished, which, in favourable seasons, will be about the beginning of August. It was not until the third year after planting that these bulbs flowered with me. They are impatient of removal, and therefore the greatest care should be taken when offsets are removed not to interfere with the general mass of bulbs. When once established they produce offsets freely, and flower abundantly, so much so that I have now (October 10) masses of them in full bloom, containing from twelve to eighteen flowering stems, with from eight to twelve blooms in each umbel.

About the first week in September let the ground be stirred deeply around the bulbs, without interfering with their roots, and thoroughly watered with diluted manure water once or twice. This will induce torpidity, and accelerate the protrusion of the flowering stems. One objection may be made against these Lilies, and that is, that they are without foliage during their blooming period ; but this may be greatly obviated by planting them in alternate patches with the Jacobæa Lily, which flowers splendidly at Midsummer, and whose fine green foliage will be in perfection during the flowering season of the Belladonna Lily.—*Gardeners' Chronicle*.

## REVIEW.

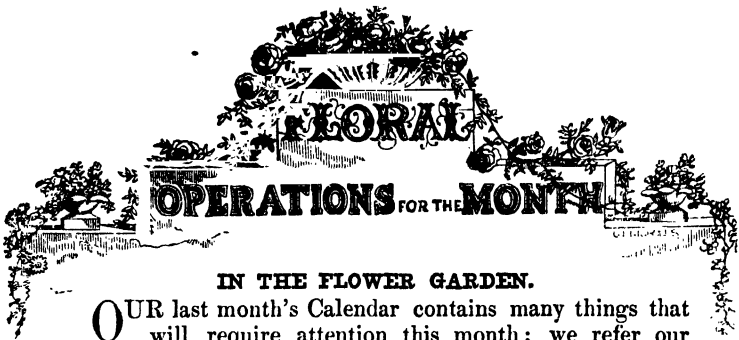
### *A Packet of Seeds saved by an Old Gardener.*

SUCH is the very expressive title of a little book of 48 pages, in which is noted down, in a plain and familiar way, some of the varied incidents and vicissitudes in the life of an industrious and honest gardener.

The "PACKET" contains the produce gleaned during the period from his leaving the village school at an early age to the time when he very properly styles himself "AN OLD GARDENER."

The examination of the entire contents will not only prove interesting, but some of the seeds will be found to be of the best quality ; and if such are sown at the proper season, in good ground, will, with proper management, produce an excellent HARVEST.

In addition to the quantity and quality of the seeds, they are here offered at NINE-PENCE per "Packet," and every YOUNG GARDENER should procure a PACKET of these SEEDS, by which he may gather many a useful hint from the instructions given respecting their cultivation. It would amply repay every employer to give a copy of this book to every young gardener employed in their service.



**FLORAL**  
**OPERATIONS FOR THE MONTH**  
**IN THE FLOWER GARDEN.**

**O**UR last month's Calendar contains many things that will require attention this month; we refer our readers to it. Proceed, however, in 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. Add fresh loam, leaf-mould, rotten dung, &c., to beds, before sowing seeds or re-planting. 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, Stocks, &c.

**FLORISTS' FLOWERS.**—At this time *Auriculas* and *Polyanthuses* that were top-dressed, and since received due attention, will have commenced growing. Admit air on all favourable occasions, to prevent them being drawn. 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. Sow seeds of the above.

*Anemonies* and *Ranunculuses* must be finished planting immediately. If no bed has 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. Such as were planted in the autumn will now be making their appearance above ground. It is very necessary to keep the soil closed firmly 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. They *must be* screened from cutting winds by fir, yew, or whin branches. In forming new beds the situation must be where there is 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 this 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. Protect beds from cold easterly winds. *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 STOVE.

Sow seeds of any tender and half-hardy annuals that have been omitted. Sow liberally of *Cinerarias* and Chinese Primroses, for if the plants be properly attended to, they will produce a fine bloom for autumn. In watering tender annuals, &c., 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 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* shoots, when about three inches long, should be taken off, cut close under a joint, and be struck in sand. Re-pot and forward *Amaryllises*, *Gesnerias*, &c., as directed last month. *Ipomeas*, *Echites*, and similar plants, may be trimmed in, disrooted when necessary, and brought here to excite early growth.

## IN THE GREENHOUSE, &amp;c.

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. Supply *Cinerarias* with manure water occasionally. Save them from green fly; smoke or tobacco water must be applied at the first attack by the pest. Pot off seedlings, &c., for successive bloom. If any of the soil looks black and wet, and the pot feels heavy, there is something wrong. 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. Immediately stop the shoots of *Pelargoniums* which are to bloom from June, in order to induce new lateral ones. Let *Pelargoniums* have plenty of air, but close up early in the afternoon. Syringe overhead twice a-week after shutting up. In watering give enough to moisten the entire soil.

*Cupheas*, *Calceolarius*, *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.

*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.

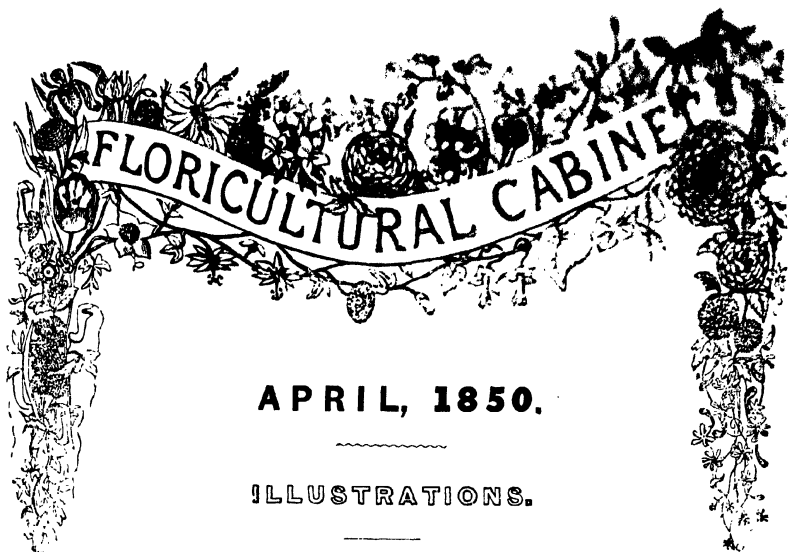
## ON WOOD LICE.

BY A SUBSCRIBER.

THESE pests in plant-houses, frames, pits, &c., are readily destroyed with a *strong* solution of salt and water. I poured it into the holes and crevices where they harboured, repeating it three times a few days between each; and although I had hosts of them, the entire race was exterminated in 1848; not one has been seen since. Care was taken not to allow any of the solution to fall on the plants.







GEANT DES BATAILLES.—HYBRID PERPETUAL ROSE.

“ Just like love is this fine Rose,  
Heavenly fragrance round it throws ;  
Yet tears its dewy leaves disclose,  
And in the midst of briars it blows,  
Just like love.

“ Called to bloom upon the breast,  
Since rough thorns the stem invest ;  
They must be gather'd with the rest,  
And with it to the heart be prest,  
Just like love.”

THE Rose is pre-eminently the FLOWER OF LOVE and Poetry, the very perfection of floral realities, and stands unrivalled still the QUEEN OF FLOWERS. It is considered sacred to the Goddess of Beauty. Berkeley, in his Utopia, describes lovers as declaring their passion by presenting to the fair beloved a Rose-bud, just beginning to open : if the lady accepted and wore the bud, she was supposed to favour his pretensions. As time increased the lover's affection, he followed up the first present by that of a half-blown Rose, which was succeeded by one full-blown ; and if the lady wore the last, she was considered as engaged for life.

Poetry is lavish of Roses ; it heaps them into beds, weaves them into crowns, twines them into arbours, forges them into chains, adorns with them the goblet used in festivals, and plants them in the bosom of beauty : nay, not only delights to bring in the Rose itself upon every occasion, but seizes each particular beauty it possesses as an object of comparison with the loveliest works of nature. As soft as a Rose leaf ; as sweet as a Rose ; rosy-clouds ; rosy-cheeks ; rosy-lips ; rosy-blushes ; rosy-dawns, &c.



Fabulous writers on the Rose have said the Red Rose has been indebted to the blood which flowed from the feet of Venus when running through the woods in despair for the loss of Adonis; as the White Rose is also said to have sprung from the tears which she shed upon that occasion. Our readers will remember that the Red Rose has been usually termed, from its long dwelling with us, the English Rose.

The often-expressed *BED OF ROSES* is not altogether a fiction. The Roses in the garden attached to the Palace of the Emperor of Morocco, it has been said, are unequalled, and mattresses are made of their floral leaves for persons of rank to recline upon. Eastern poets have united the Rose with the nightingale; the Venus of Flowers with the Apollo of Birds; and they have supposed the Rose has burst forth from its bud at the song of the nightingale. Persia is the very land of Roses. A festival is held, called the feast of Roses, which lasts the whole time they are in bloom.

Sir R. K. Porter, speaking of the garden of one of the royal palaces of Persia, says, "On my first entering this bower of fairy land, I was struck with the appearance of two Rose-trees, full fourteen feet high, laden with thousands of flowers, in every degree of expansion, and of a bloom and delicacy of scent that imbued the whole atmosphere with exquisite perfume. And I believe that in no country does the Rose grow in such perfection as in Persia, nor cultivated so extensively and prized by the natives. Their gardens and courts are crowded by its plants, their rooms ornamented with vases filled with the gathered bunches, and every bath strewn with the full-blown flowers. But in this delicious garden of Negaaristan, the eye and the smell are not the only senses regaled by the Rose; but the ear is enchanted by the wild and beautiful notes of multitudes of nightingales, whose warblings seem to increase in melody and softness with the unfolding of *their* favourite flowers. Here, indeed, is the genuine country of the nightingale and the Rose."

Sir W. Ouseley says, in his *Travels in the East*, "On a visit to a man of high rank at Teharan, though there was a great profusion of meat and fruit at the entertainment, it might have been styled the feast of Roses, for the floor of the great hall was spread in the middle and in the recess with Roses, forming the figures of Cypress trees. Roses decorated all the candlesticks. The surface of the reservoir of water was completely covered with Rose leaves: the walks, too, were thickly scattered over with them."

The Rose was in high esteem with the Romans, and they were at great expense to procure them in winter. Suetonius states that the Emperor Nero spent thirty thousand pounds for Roses at one supper. When Roses are associated with a moral meaning, they are generally identified with mere pleasure; but some writers, with a juster sentiment, have made them emblems of virtue.

Now every country boasts of the Rose, and every beholder of the increased beauties admire them; and it is our national emblem. In the first volume of our Magazine, eighteen years ago, we inserted a descriptive list of one thousand kinds of Roses; and to that number we have annually added a description of new and improved varieties. At

the time we mention, the Rose was not a prominent flower at the exhibitions, and there was not a standard of the properties requisite to constitute a perfect flower fixed upon; but this once having been determined, there has since that period been constant attempts to its approximation by impregnation of the kinds most likely to produce such, and an annual advance in superior seedlings has been the result.

The Rose we figure in our present number is a most valuable acquisition. The large size of its flowers, their fulness, petals of good substance, and dazzling brilliancy of colour, render it deserving a place in every garden. Its formation is not equal to some others; but it is, nevertheless, truly a splendid Rose. We doubt not but there will, ere long, appear another gem, possessing the brilliancy of its colours, with the flower having an outline forming a complete circle, petals of firm substance, cupped, regularly disposed, and of proportionate depth. The *Geant des Batailles* is an hybrid perpetual, apparently partaking most of the Bourbon character. It is of vigorous habits, fine foliage, blooming freely; the flowers are very sweet-scented. It is not only a valuable Rose for the lawn and flower-garden, but is an excellent one for forcing, and highly ornamental for the greenhouse, sitting-room, &c., in the winter and spring months.

This fine Rose was first sent out in 1847 by Mons. Guillott, of Lyons, in France. Its origin is not exactly known, but it has probably been raised from that brilliant coloured Rose, *Gloire de Rosamene*; but the colour of the *Geant des Batailles* is more vivid than that Rose. Grown in closish contrast with the white and other light Roses, the effect is increasingly magnificent and beautiful. We feel assured no contemplative-minded individual could behold an assemblage of such various beauties, and inhale their delightful perfumes, but must with admiration ask with our fair poetess—

“Then wherefore, wherefore were they made,  
 All dyed with rainbow light,  
 All fashioned with supremest grace,  
 Upspringing day and night.  
 Our outward life requires them not—  
 Then wherefore had they birth;—  
 To minister delight to man,  
 To beautify the earth.  
 To comfort man—to whisper hope  
 Whene'er his faith is dim;  
 For whoso careth for the flowers,  
 Will much more care for him.”

## NOTES ON NEW OR RARE PLANTS.

### ADENOCALYMMA NITIDA.—THE GLITTERING GLAND-BEARING TRUMPET FLOWER.

*Natural Order, Bignoniads.*

It is a hot-house climbing plant, and a native of Brazil, where it grows in thickets and dry places near Rio Janeiro, and on the Coro-

mandel Mountain. Messrs. Knight and Perry, of the King's Road Nursery, received it from Mr. Makoy, of Leige, under the name of *Fridericea Gulielma*. It, however, proves to be a very different plant. It is a smooth, shining-leaved yellowish-looking shrubby plant, a climber of medium habit. The flowers are produced in clusters, and on the present cultivated plant there were seven flowers in a cluster. It is said that in its natural situation as many as thirty blossoms are borne in a single cluster. Each blossom is two inches long, trumpet-shaped, and nearly as much across the mouth, the end curving outwards, and the edge divided into five nearly equal spreading lobes. The flower is of a thick leathery substance, and a deep yellow colour. It is grown in a pot at Messrs. Knight and Perry's; but so treated it does not bloom freely, and it evidently requires to be grown in a large tub, or to be turned out into a bed in the stove. If the roots can receive a due degree of warmth, it would very materially promote the vigour and bloom of the plant. We have found this mode of treatment to be very essential in blooming some other plants of the Bignoniads. In its native situation it blooms very freely, and we do not doubt of its doing so in our stoves. It is a very neat climbing plant, well meriting a place in every stove. It would prove to be a beautiful plant for exhibition, coiled round a wire frame. (Figured in *Paxton's Flower Garden*, plate 2nd.)

#### ARISTOLOCHIA PICTA.

Mr. Van Houtt, of Ghent, possesses this pretty species. It is a native of South America, a smooth twining plant. Flowers tessellated, of a rich purple, and in the centre a large spot of deep yellow.

#### ÆSCHYNANTHUS JAVANICUS.—THE JAVA ÆSCHYNANTHUS.

This very beautiful flowering species has been introduced by Messrs. Rollisson, of Tooting Nursery. It is a compact-growing, climbing, soft-stemmed *shrub*, much branched and readily increased, as the trailing branches emit roots at every joint. The flowers are produced in terminal corymbose heads of eight or ten in each. The corolla is tube-shaped, and the limb (end of flower) of four spreading lobes; the upper one notched, the others entire. The flower is of a bright red colour, having a broad irregular circle of rich yellow round the mouth. This neat, handsome-flowering, trailing species, deserves a place in every stove collection. It is very likely to flourish, too, in the greenhouse during the warm season of the year. It does well grown in a pot, or in a basket suspended. It requires a free supply of water in summer, but very sparingly in winter. It should be shaded from *mid-day* sun, as all the other species do. (Figured in *Bot. Mag.*, 4503.)

#### CALLIANDRA BREVIPES.—SHORT-PEDUNCLED.

A very elegant and graceful mimosa-like shrub, growing from three to four feet high, and branching much. It is a native of Brazil, and was introduced into this country by Mr. Van Houtt, of Ghent. It grows luxuriantly in the stove, and flowers very freely. The heads of flowers are produced at the axils of the leaves. The corolla is very

small, yellow; but the numerous stamens, an inch long, of a bright rosy-red colour, produce a handsome appearance. With due attention to tying and stopping the leads, the plant may be formed to a bush of any size desired. It is very likely to flourish and bloom during the summer season in the greenhouse, and to be in the warmest part during winter. It deserves a place in every one, being very interestingly ornamental. (Figured in *Bot. Mag.*, 4500.)

#### CEPHALOTAXUS FORTUNI.

This is a handsome spreading evergreen tree, a native of the north of China, and is found in this (England) country to be perfectly hardy. Mr. Fortune states that in China it grows from forty to sixty feet high. It is of the Yew-Coniferæ tribe. Messrs. Standish and Noble, of Bagshot, have plants of it which stood uninjured the last winter. (Figured in *Bot. Mag.*, 4499.)

#### CEREUS TWEEDIEI.—MR. TWEEDIE'S GOLDEN-FLOWERED CEREUS.

Seeds of this most beautiful Cereus were received from Mr. Tweedie, from Buenos Ayres; and the plant has recently bloomed in the splendid collection of the Royal Gardens of Kew. The tallest plants are from a foot to half a yard high, and the stem an inch in diameter, of a cylindrical form, growing erect. The flowers are produced freely for several inches of the upper portion of the plant. Each flower is nearly three inches long, rising upwards in a curved direction outwards. The flowers are of a rich orange colour, and the numerous anthers, of a deep purple extending beyond the rest of the flower, give additional beauty to it. (Figured in *Bot. Mag.*, 4498.)

#### CATTLEYA WALKERIANA.

It was found by Mr. Edward Walker in Brazil, on the stem of a tree overhanging a small stream of water. It has lately bloomed in the fine collection in the Orchid House belonging to C. B. Warner, Esq., at Hoddesdon, in Herts. The stems are oval, rather short, each having one oblong leaf. The flowers grow singly, or in pairs. A separate blossom is five inches across; sepals and petals of a rosy-lilac colour. The lower part of the labellum is of a sulphury-white, the margin of the lip is of a rosy-red, and the middle a light yellow, with a spot of crimson. It is a very pretty species. (Figured in *Paxton's Flower Garden*, plate 2.)

#### FRITILLARIA PALLIDIFLORA.

A hardy species, flowers yellow. Van Houtt's Flora.

#### LAGETTA LINTEARIA.—JAMAICA LACE BARK—(Syn. DAPHNE LAGETTA).

This often-heard-of plant was introduced to the Royal Gardens of Kew in 1844, where in the stove it bloomed and fruited last season; the plant being about three yards high. The flowers are borne at the terminal part (near a foot of each) of the *main branches*. They are arranged in spikes (produced every few inches along the stem), each

spike of blossoms being about four inches long. The flowers in bud are of a greenish white, full blown a pure white, having much the appearance of large flowers of an *Andromeda floribunda*. (Figured in *Bot. Mag.*, 4501.)

#### LARDIZABALA BITERNATA.

A *hardy* handsome evergreen climbing shrub, a native of the woods of Chili, and is a rapid grower. The leaves are borne in three's, on a single stalk. Each leaf much resembles those of the smooth-leaved Holly; occasionally there is a spine at the edge. The flowers are produced in drooping spikes, of a deep purple-chocolate colour, with a circle of green and white at the centre. Each flower is about an inch across. It is well adapted for covering walls; its handsome foliage and very singular looking flowers render it highly interesting. (Figured in *Bot. Mag.*, 4501.)

#### SPIREA DECUMBENS.

A hardy bushy shrub, which grows about a foot high, blooming very freely. The flowers are produced in small corymbose heads, white with a rose-coloured eye. A separate flower is about half an inch across.

#### IN THE BELGIUM NURSERIES.

**BLANDFORDIA FLAMMEA.**—This fine Lily grows a yard high; it has bloomed in the nursery of Messrs. Low and Co. The flowers are of a bright orange scarlet, margined with golden yellow. A separate flower is about four inches long and one across the mouth. (*Journal of Hort. Soc.*)

**CALBOA GLOBOSA.**—(Syn. **MORENA GLOBOSA**, **QUAMOCLIT GLOBOSA**).—It is of the *Convolvulus* tribe of plants; a greenhouse twining perennial, of vigorous growth. The flowers are borne in umbels, on a peduncle nearly a foot long. Each flower is near three inches long, and as much across the mouth, of a rich red colour. It requires to have plenty of root room, and then will bloom freely. It is a fine plant for soon covering a large space. (*Journal of Hort. Soc.*)

**BERBERIS DARWINII.**—This is a fine evergreen shrub, growing five feet high. The shoots are of rusty colour, and the leaves a deep rich green; similar in appearance to a flat-leaved green Holly. The flowers are produced in erect racemes, of a deep orange-yellow. It is a fine addition to our *hardy* shrubs, and ought to be in every collection. (*Journal of Hort. Soc.*) Messrs. Veitch imported it, as also the following.

**BERBERIS WALLICHIANA.**—(Syn. **B. ATROVIRENS**, **B. MACROPHYLLA**).—A beautiful evergreen, *hardy* species. The leaves grow in clusters, and are about four inches long. The leaves turn a claret colour in autumn. It is said to grow ten feet high. (*Journal of Hort. Soc.*)

**BERBERIS TINCTORIA.**—A low evergreen shrub. The leaves are a dull green above and glaucous underneath, of an oblong form. It has

not bloomed in this country. The fruit, it is said, is of a dull red. (*Journal of Hort. Soc.*)

**BERBERIS LOXENSIS.**—A half-hardy evergreen, not bloomed in this country. The leaves are of a shining green, obovate shaped. The flowers are small, borne in erect paniced racemes, and stand above the foliage; colour not stated. (*Journal of Hort. Soc.*)

**BERBERIS JAPONICA.**—(Syn. *ILEX JAPONICA*, *MAHONIA JAPONICA*, *BERBERIS BEALII*.)—This is a noble evergreen shrub. The leaves are pinnated, each leaflet being about three to five inches long, and nearly four broad. An entire leaf is a foot or more in length, of a stout leathery texture. It is not yet ascertained whether it will prove hardy in this country. Mr. Fortune states it grows from 100 to 150 miles north of Shanghae, in China. Messrs. Standish and Noble, of Bagshot, have the plant.

**SPATHODEA SPECIOSA.**—A noble *tree-like* plant, requiring to be grown in the stove. It is of the Bignoniad order. The flowers are produced in terminal panicles, each blossom being  $2\frac{1}{2}$  inches long, trumpet shaped, a pink colour stained with crimson. It is a valuable acquisition, and is in the Belgium nurseries, and said to have been received from England.

#### SHOWY PLANTS NOW IN BLOOM IN THE ROYAL GARDENS OF KEW.

**ACACIA DECURRENS.**—A tree eight yards high, in profuse bloom. The flowers borne in large branching panicles, of a deep yellow colour.

**A. DEALBATA.**—Light yellow.

**A. MUCRONATA.**—Pale sulphur.

**A. PUBESCENS.**—Most profuse in bloom, panicles drooping, fine foliage, six yards high.

**A. LANCIFOLIA.**—Bright yellow, five yards high and four across.

**A. RICEANA.**—Pale yellow, profuse.

**A. SUAVEOLENS.**—Pale yellow.

**A. ROTUNDIFOLIA.**—Deep yellow, very pretty.

**A. ERIOCARPA.**—Globes large, a rich yellow.

**A. LINEATA.**—Long spikes of deep yellow flowers, very pretty.

The above were highly ornamental, and the greenhouse was delightfully perfumed with the fragrance. All the kinds bloom freely when small plants, and they are readily kept, by pruning, to any desired size. Every greenhouse or conservatory ought to have some of the lovely tribe.

**ACHIMENES PICTA.**—In fine bloom in the stove.

**A. OCCELLATA CONFLUENS.**—Several plants had been potted into a pan, about six inches deep, in loam, pieces of charcoal, and peat. The plants were four feet high, and the very neat flowers, of a rich blood-red, streaked and spotted with black, were very pretty.

**ADIANTUM VARIUM.**—This is a very pretty exotic fern. The young leaves are of a bright rosy-red colour, which finally become a rich green. The contrast is very striking.

**ÆSCHYNANTHUS BOSCHYANUS.**—A cone formed of pieces of bricks

and turfy peat, three feet high, and near as much in diameter at the bottom, was constructed upon the front stone table of the Orchid house, and at its summit a plant had been placed in the peat, and the branches regularly disposed down the sides. Some small ferns and mosses had been interspersed around the cone, and the whole nicely grown, commingling together, had a pretty effect. The *Æschynanthus* grew rapidly, and when in bloom will have a charming appearance. Many of the Orchids are similarly planted, and do admirably well.

The following were in fine bloom :—

*DENDROBIUM CÆRULESCENS*.—Sepals and petals white, tipped with purple-blue ; labellum white, with the inside of the tube a deep velvet. Very fine.

*DENDROBIUM CAMBRIDGEANUM*.—Petals and sepals a rich yellow ; labellum same, with a large spot of crimson-velvet in front, edged with yellow. Very handsome.

*DENDROBIUM WALLICHIANUM*.—Sepals and petals white, with violet tip ; labellum white, with deep velvet inside.

*PHAJUS (LIMODORUM) GRANDIFOLIUS*.—A large plant, had eight stems, four feet high, with from twenty to thirty flowers on each. The sepals and petals white ; labellum white, with the end of a rosy-red colour.

*PHAJUS INTERMEDIUS*.—Sepals and petals a nankeen colour ; labellum white, with a rich maroon end. A very pretty species.

Several very pretty flowering species of *BIGONIAS* were in fine bloom ; their delicate pink, white, and rose-coloured blossoms had a delightful appearance. *B. odorata*, white. *B. erythrophylla*, white. *B. hydrocolilifolia*, blush. *B. manicata*, pretty pink. *B. crassicaule*, rosy-red. *B. læle virens*, white, tinged with pink, drooping panicles, very pretty.

*CORRŒA ROSEA*.—A plant four feet high, and same across, in profuse bloom.

*C. TRICOLOR*.—Lower part white, next rose, and green tipped ; pretty.

*C. PULCHELLA*.—Orange-scarlet, one inch long.

*C. MAGNIFICA*.—Sulphur, an inch and a half long.

*C. BRILLIANTA*.—Bright rosy-red, with a yellow tip.

*CHOROZEMA CORDATA*, and *C. VARIA*, were in fine bloom. One plant was six feet high and as much across, beautiful.

*TETRATHECA VERTICILLATA*, with its pretty narrow foliage and its drooping campanulate, violet-blue flowers, had a beautiful appearance. By pinching off the leads of the shoots, the plants are complete broad bushes.

*EPACRIS COCCINEA*.—A deep scarlet, near an inch long ; fine.

*ERICA CERINTHOIDES MAJOR*, with its fine heads of rich scarlet flowers, was very beautiful. This species requires the shoots to be stopped in order to make it bushy.

*E. GRANDINOSA*.—White, little globes, numerously produced ; very pretty.

*E. WILMOREANA*.—Rose, tipped with white, tube an inch long ; pretty.

*E. PELLUCIDA*.—Bright rose, tipped with white, an inch long ; very pretty.

**E. WESTCOTA.**—Purple-lilac, white end, an inch long ; very handsome.

These *Ericas*, blooming so freely during winter and early spring, are valuable.

**TEMPLETONIA GLAUCA.**—Bright red, and much the appearance of the flowers of the scarlet runner Bean. Profuse in bloom was very showy.

## ON THE CULTIVATION OF PLANTS IN ROOMS.

BY DAHL OF MANCHESTER.

“ The love of Nature’s works is born with all,  
Is an ingredient in the compound man ;  
E’en in the stifling bosom of the town,  
A garden in which nothing thrives, has charms  
That soothes its rich possessor.  
It serves him with a hint that nature lives.”

THERE is a great pleasure arising to the contemplative mind, and more particularly when that mind extends to the science of floriculture, to see that the admiration of nature, with its extensive beauties, is extending far and near.

In my rambles wherever I go, I find that the cultivation of flowers in rooms is attempted, from the humble cottage to the lordly mansion ; and much do I enjoy, when by chance I happen to find a good flower, and carry it home in my hands, while passing children of various grades, I now and then see their little eyes sparkle with joy as they survey the flower as I pass. The mind of the little man, the man in embryo, seems as if it were expanding to take in a ray, a beam, of light, that the little beauty of nature has just raised. I admire it, it seems to me a prelude to some future greatness ; and have not some of my readers seen the little man, the little woman, of their own families, if they get a branch or a cutting of a plant, go to some little corner and plant it, and perhaps the next day have seen them pull it up again to see if Dame Nature had performed her part, and it had got a root ; and when, by a little instruction, the thing has grown and made a plant, how pleased they have been ? It seemed to have formed the beginning of a new life to them, and thus these small, these first conceptions, are the sources from whence spring in after years our agriculturists, our floriculturists, our artists, and indeed are the germs to the whole of the sciences. This digression, though in point, brings me to where I first sat out, viz., the cultivation of flowers in pots in rooms ; and here I must confess I often find better specimens of plants in the humble cottage than in the more respectable habitations. In some cases it may arise because they have less time to spend over them. Plants do not require a large amount of attention so much as a little regular care ; but what I have had to complain of is, too much water where pans are used, and too little where they are not. It is quite proper that in a well-furnished room the pot should stand in a pan ; but the water should never be allowed to stand in the pan more than



half an hour after the plant has been watered, provided it has been properly watered. The effect is, when the water is allowed to stand in the pans the earth gets sour and rank, and the consequence is, the roots rot and the plant only lives half its time. There are some exceptions, such as the Callow, Oleander, and several others, which, while in a growing state, and when making their blooms, and while in bloom, should have water in the pans; but often the water should be drained off and the pan washed clean, as there are certain excrescences that are thrown out by the roots and washed down by the water that would be better for the plant not to absorb again.

Another essential thing towards the well-doing of plants in rooms is, that once or twice a-week they should be well washed over the foliage to clear them of any accumulation of dust, as all plants in rooms perspire, and the dust stops up the pores of the plant, which the washing prevents, and again the absorption that takes place in the washing extends to all parts of the plant, and enables it to sustain its vigour.

All plants should be placed as near the glass as it is possible to put them; if they stand away from the glass they will be certain to draw up and become weak, consequently the sap of the plant is nearly expended to make foliage, and the blooms will not be worth the trouble of keeping the plants. Air should be given at all times when convenient; not violent draughts; the windows should be put up and the door shut, except in the midst of summer, when the draught is warm. There will be some care required in repotting; some good loam or sweet earth from a bank or field, with some quite rotten dung and a little sand, will make very good stuff for them (if you cannot get leaf-mould and peat to mix with it); full an inch or more of broken pots or small bits of tiles should be put at the bottom of the pots for a drainage (the life of the plant in a great measure depends upon this).

All plants will want potting once or twice in the year, and once a-month in the growing time the top earth in the pot, to about an inch in depth, should be raked off (taking care not to disturb the roots), and some fresh earth put on, which is called top-dressing.

To keep through the winter, all that has to be done is to keep the frost from them; be very sparing of water, only give enough to keep them alive, as that will allow them a time of rest, which they require for their well-doing in their future time of growth.

It would be of great service to plants kept in rooms to be turned out of doors on summer evenings and taken in again in the morning, as they will absorb the soft genial dews, which will much invigorate them.

If these instructions are followed out, I am quite sure, from experience, that they will do well, and give satisfaction.

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## LAWN GRASS DESTROYED BY A GRUB.

BY M. S.

I BEG of you to permit me to avail myself of your journal to obtain advice and information on a subject in which I am at present interested. I feel the less reluctance in preferring the request, as the communications which may be elicited may be of public usefulness.

I am resident in one of the squares of the metropolis, as open, perhaps more so, than any other; the soil is dry, the substratum being gravel. The garden committee of the square have taken much pains in forming and preserving the lawns, which have been laid down with turf, and sown with good grass seed and kept carefully weeded. We have been much vexed at the prospect of having spent some years in fruitless labour by reason of having recently had our lawns visited by the black grub, which seems to threaten their entire destruction. It is stated that this grub, about an inch in length, is the larva of the common long-legs fly, which deposits its seed or spawn at the root of the grass, which the grubs entirely devour. The appearance of portions of the lawns is now very much that of a web perforated with holes the size of a small pencil, and there is little doubt but that when the weather becomes warmer and the insects are in a greater state of activity, the lawns will be entirely laid waste unless some timely remedy is applied.

About twelve years since the lawns in Russell-square were visited by the black grub, and were entirely destroyed; they continued there about the space of three years. I am informed that in this and other localities which have been similarly affected, soot, lime, potash, and soap ashes have been used, but only with very limited success, and that these remedies have not availed to save the lawns.

It may be that the investigations of modern science applied to the culture of garden ground may have discovered some effectual means for eradicating this grub without destroying the grass; and I shall feel myself greatly indebted to any of our correspondents who will favour me with the result of their experience on this subject, and point out how these grubs may be removed.

## THE SPLENDOUR AND FELICITY OF INSECT LIFE IN THE BLOOM OF A CARNATION.

BY DAHL OF MANCHESTER.

MR. EDITOR,—I was so much pleased with the following description of the felicity of insect life in the bloom of a carnation, which lately came under my notice in a little volume that I have been reading, that I have made the extract, thinking it deserves extended circulation.

“The principal flower in an elegant bouquet was a Carnation; the fragrance of this led me to enjoy it frequently and near. The sense of smelling was not the only one affected on these occasions. While that was satiated with the powerful sweet, the ear was constantly attacked by an extremely soft and agreeable murmuring sound. It was easy to know that some animal within the covert must be the musician, and that the little noise must come from some little creature suited to produce it. I instantly distended the lower part of the flower, and, placing it in the full light, could discover troops of little insects frisking with wild jollity among the narrow pedestals that supported its leaves, and the little threads that occupied its centre. What a fragrant world for their habitation! What a perfect security from all annoyance in

the dusky husk that surrounded the scene of action! Adapting a microscope to take in at one view the whole base of the flower, I gave myself an opportunity of contemplating what they were about, and this for many days together, without giving them the least disturbance. Thus I could discover their economy, their passions, and their enjoyments. The microscope on this occasion had given what nature seemed to have denied to the objects of contemplation. The base of the flower extended itself under its influence to a vast plain; the slender stems of the leaves became trunks of so many stately cedars; the threads in the middle seemed columns of massy structure, supporting at the top their several ornaments, and the narrow spaces between were enlarged in walks, parterres, and terraces. On the polished bottoms of these, brighter than Parian marble, walked in pairs, alone or in larger companies, the winged inhabitants; these from little dusky flies (for such only the naked eye would have shown them), were raised to glorious, glittering animals, stained with living purple, and with a glossy gold that would have made the labour of the loom contemptible in the comparison.

“I could at leisure, as they walked together, admire their elegant limbs, their velvet shoulders, and their silken wings; their backs vying with the empyrean in its blue, and their eyes, each formed of a thousand others, outglittering the little planes on a brilliant, above description, and too great almost for admiration. I could observe them here singling out their favourite females, courting them with the music of their buzzing wings with little songs formed for their little organs, leading them from walk to walk among the perfumed shades, and pointing out to their taste the drop of liquid nectar just bursting from some vein within the living trunk. Here were the perfumed groves, the more than mystic shades of the poet’s fancy realized; here the happy lovers spent their day in joyful dalliance, or, in the triumph of their little hearts, skipped after one another from stem to stem among the painted trees, or winged their short flights to the close shadow of some broader leaf, to revel undisturbed in the heights of all felicity.”

### THE WILD HYACINTH.

“And all about grew every sort of flowre,  
To which sad lovers were transformde of yore;  
Fresh Hyacinthus, Phoebus’ paramoure  
And dearest love.”

“The melancholy Hyacinth, that weeps  
All night, and never lifts an eye all day.”

IN the last year’s volume of this Magazine there appear some interesting remarks on raising hybrids of this lovely spring ornament, and the approaching season of its bloom induces me to forward some historical particulars relative to it.

The Hyacinth, so celebrated in the songs of the poets, from the time of Homer to the present day, is made hieroglyphical of play, or games,

in allusion to the fabulous origin of this favourite flower, which mythologists tell us sprang from the blood of Hyacinthus, a youth greatly beloved both by Apollo and Zephyr; but who, preferring the Sun to the Winds, created a jealousy in the bosom of the latter god, which caused his destruction.

Hyacinthus, being at quoits with Apollo, Zephyr, unperceived, took the opportunity of revenging himself on his rival, by causing him to become the instrument of the death of their favourite; for, whilst Apollo's quoit was in the air, Zephyr blew it from its course towards the head of the unfortunate youth.

An annual solemnity, called Hyacinthia, was held at Amyclæ, in Laconia, in honour of Hyacinthus and Apollo, which lasted three days, the first of which was observed by affected mourning for the death of Hyacinthus, during which time none appeared with their usual garlands about their heads, and they refused to eat bread or to sing in honour of Phœbus; but the two following days were spent in the games customary at ancient festivals, and even the slaves were liberally entertained during this period, and the altars of Apollo were loaded with the accustomed victims.

Homer mentions the Hyacinth amongst the flowers which formed the genial couch of Jove and Juno:—

“Thick new-born Violets a soft carpet spread,  
And clust'ring Lotos swell'd the rising bed,  
And sudden Hyacinths the turf bestrow,  
And flow'ry Crocus made the mountain glow.”

*Iliad, Book 14.*

Crowns of Hyacinths were worn by the young Greek virgins who assisted at the weddings of their friends. Some authors suppose the Red Martagon Lily to be the poetical Hyacinth of the ancients, but this is evidently a mistaken opinion, as the azure blue colour alone would decide; and Pliny describes the Hyacinth as having a sword grass, and the smell of the Grape Flower, which agrees with the Hyacinth, but not with the Martagon. Again, Homer mentions it with fragrant flowers of the same season of the Hyacinths. The poets also notice the Hyacinth under different colours, and everybody knows that the Hyacinth flowers with sapphire-coloured, purple, crimson, flesh, and white bells, but a blue Martagon will be sought for in vain.

The English Hyacinth, *nutans*, or *non scriptus*, commonly called the Marebell, has scarcely been less celebrated by our native poets than that of the ancients by their fables. It is hardly possible for a person of a poetical imagination to pass our sloping hedge-rows when covered with the azure bells of this native Hyacinth, mixed, as they generally are, with the delicate colour of the Primrose, without having their ideas softened into song, when they

“Behold the woolly scene  
Deck'd with a thousand flow'rs of grace divine.”

ARDREINI.

Milton says—

“ I know each lane, and every alley green,  
Dingle, or bushy dell of this wild wood,  
And every bosky bourn from side to side,  
My daily walks and ancient neighbourhood.”

The fair poetess, who personated our bard's Perdita so charmingly, contemplates on our native Hyacinth under the name of Bluebell :—

“ Bluebell ! how gaily art thou drest,  
How neat and trim art thou, sweet flow'r ;  
How silky is thy azure vest,  
How fresh to flaunt at morning's hour !  
Couldst thou but *think*, I well might say  
Thou art as proud in rich array  
As Lady Blithesome, young and vain,  
Prank'd up with folly and disdain,  
Vaunting her pow'r,  
Sweet flow'r ! ”

MRS. ROBERTSON.

Mr. W. Brown says,—

“ The Harebell, for her stainless azured hue,  
Claims to be worn by none but those are true.”

It has been common to compare the Hyacinth flowers to curls, the curling flowers bearing a striking resemblance to a cluster of hair curls :—

And hyacinthine locks  
Round from his parted forelock manly hung clustering.”

Dallaway, speaking of the women of the Island of Chios, says, “ The ringlets which are so elegantly disposed round the fair countenances of these fair Chiotess are such as Milton describes by ‘ hyacinthine locks, crisped and curled like the blossoms of that flower.’ ”

Collins has the same simile in his Ode to Liberty :—

“ The youths whose locks divinely spreading  
Like vernal Hyacinths in sullen hue.”

Sir Philip Sidney writes, “ It was the exquisitely fair queen Helen, whose jacinth hair, curled by nature, but intercurled by art, like a fine brook through golden sands, had a rope of fair pearl, which, now hidden by the hair, did, as it were, play at fast and loose each with other, mutually giving and receiving richness.”

This flower is called Harebell from the campanula, or bell-shape of its flowers, and from its being found so frequently in those thickets most frequented by hares.

The name of Bluebell is a sufficient distinction for those cottage children who know but few besides their native plants, but we have occasionally found them in coppices with a pure white corolla. Gerard tells us that they have been found with “ a faire Carnation colour ; ” but we should suspect that these were the remains of the bulbs brought into this country by the Romans, as the places noticed where they have

been found are known to have been the stations of these people when in this part of the world.

In the time of Queen Elizabeth, when the high-plaited ruff was worn both by gentlemen and ladies, the juice of the bulbs of this plant was used to make starch, and also to paste books, and to fix feathers upon arrows, instead of glue.

Gerard calls this plant "Blew Harebel, or English Jacint," which was evidently from the French *Jacinthe*. The term of *Non Scriptus* was applied to this plant by Dodonæus because it had not the  $\Delta$  Ai on the petals, and therefore could not be the *Hyacinthus Poeticus*.

## TO THE GROWERS OF PICOTEES AND CARNATIONS.

THE following remarks and suggestions are given in continuation of my letter in the FLORICULTURAL CABINET for February on the subject of these interesting flowers. I shall not seek to make any vague or obscure observations, but endeavour to plainly state what I think would prove highly beneficial to all parties concerned:—

1st. That there be two exhibitions in 1850, the one to be held in or near London, at one of our metropolitan floricultural shows; the other to be held in the north of England, say about 150 miles from London, in such town as the growers of the north themselves may select, and on such a date as they, the said northern growers, themselves may decide.

2nd. That the boundary line I have proposed be the division by which to know the northern from the southern; moreover, to avoid neutrality, every town through which the said line passes be considered a northern town.

3rd. That there be SIX CLASSES OPEN TO ALL ENGLAND at each of the proposed two exhibitions, viz. :—

Class I.—For six blooms of dissimilar varieties of northern-raised Carnations.

Class II.—For six blooms of dissimilar varieties of northern-raised Picotees.

Class III.—For six blooms of dissimilar varieties of southern-raised Carnations.

Class IV.—For six blooms of dissimilar varieties of southern-raised Picotees.

Class V.—For the Premier Carnation Prize; (the best stand in Class I. and the best stand in Class III. alone to compete in this class.)

Class VI.—For the Premier Picotee Prize; (the best stand in Class II. and the best stand in Class IV. alone to compete in this class.)

4th. That there be a subscription opened in every interested locality, and all sums collected be lodged with a general treasurer, thus forming AN ALL-ENGLAND CARNATION AND PICOTEE FUND.

5th. That the prizes offered to the several classes range in the following order (higher or lower according to the amount collected), viz. :—

	£.	s.	d.
Class I.—For the best six blooms of dissimilar varieties of northern-raised Carnations . . . . .			
	2	0	0
For the second-best ditto . . . . .	1	10	0
For the third-best ditto . . . . .	1	0	0
For the fourth-best ditto . . . . .	0	10	0
	5	0	0
Class II.—For the best six blooms of dissimilar varieties of northern-raised Picotees			
	2	0	0
For the second-best ditto . . . . .	1	10	0
For the third-best ditto . . . . .	1	0	0
For the fourth-best ditto . . . . .	0	10	0
	10	0	0
Class III.—For the best six blooms of dissimilar varieties of southern-raised Carnations . . . . .			
	2	0	0
For the second-best ditto . . . . .	1	10	0
For the third-best ditto . . . . .	1	0	0
For the fourth-best ditto . . . . .	0	10	0
	15	0	0
Class IV.—For the best six blooms of dissimilar varieties of southern-raised Picotees			
	2	0	0
For the second-best ditto . . . . .	1	10	0
For the third-best ditto . . . . .	1	0	0
For the fourth-best ditto . . . . .	0	10	0
	20	0	0
Class V.—Premier Carnation Prize; (the best stand in Class I. and the best stand in Class III. alone to compete in this class) . . . . .			
	2	10	0
Class VI.—Premier Picotee Prize; (the best stand in Class II. and the best stand in Class IV. alone to compete in this class) . . . . .			
	2	10	0
	<u>£25</u>	<u>0</u>	<u>0</u>

And supposing that the above be the schedule of prizes for the SOUTHERN EXHIBITION (which of necessity must be the first), that an exact counterpart be also binding for the NORTHERN EXHIBITION.

7th. That the flowers be shown on cards, in raised tubes, so as fully to display the pods.

8th. That uniform stands and cards be provided.

9th. That every northern contributor to the fund give in the name of a gentleman to act as censor, also every southern contributor to the

fund give in the name of a gentleman to also act as censor; the majority of votes to decide the election of such censors, and that the two so chosen censors have the power to call in a third censor, or referee, if they so desire.

10th. That there be no appeal from the censors' award; and,

Lastly, That such other regulations as may be considered necessary (not being contrary to the spirit of the foregoing) be added to these rules.

And now, gentlemen, Carnation-growers of England, let me here state that I desire to assume little, and dictate less, nor have I knowingly made any arbitrary suggestions; it is for you to decide, yes or no, in this great cause.

There can be little doubt about readily obtaining an amount sufficient to carry out the schedules after the above form. A sum of 50*l.* pays the prizes, and I know little else except the censors' travelling expenses that could form any item of expenditure, for I take it that in a truly national affair, as I wish this to assume, all growers and exhibitors will readily offer their gratuitous services (and contributions) in each and every floral district.

*Wace Cottage,  
Holloway, Middlesex.*

I am, growers of England,  
Your brother in arms,  
JOHN EDWARDS.

## FLORAL EXHIBITIONS.

### HORTICULTURAL SOCIETY.

*March 19.*—Mrs. Lawrence exhibited a specimen of the long-tailed Ladies' Slipper (*Cypripedium caudatum*), an extraordinary looking species, which has just flowered at Ealing-park for the first time in England. As far as colour is concerned, the flowers have little to recommend them, being, as near as possible, greenish yellow; their peculiarity consists in the petals being extended into two long brown narrow tails, which hang down from either side of each blossom, and keep on growing and growing as the flower gets older, till it is difficult at present to say what length they may eventually reach. Those in the specimen exhibited were nearly eighteen inches long, and when the flowers are elevated, as they should be, some two or three feet above the foliage, these tails must give them a most remarkable appearance. Dr. Lindley stated that the existence of tails was not uncommon among Orchids, and that an unimportant species of *Uropedium*, named *Lindenii*, inhabiting the Cordilleras, near the lake of Maracaybo, possessed these appendages even in a more remarkable degree than this *Cypripedium caudatum*. The latter comes from Peru, and may now be met with in one or two collections in this country. A large silver medal was awarded it.

The halberd-lipped *Odontoglossum* (*O. hastilabium*), another new Orchid, or at least comparatively new, was exhibited by Mr. Ivison, gardener to the Duchess Dowager of Northumberland, at Syon. Like the Ladies' Slipper just mentioned, this is not distinguished by bril-



liancy of colour ; but it is, nevertheless, a pretty species. It had a fine spike of flowers on it, whose sepals and petals were pale green, transversely marked with brown dots or lines ; the lip was large, pure white, and pale red at the base. It comes from New Grenada. A certificate of merit was awarded it.

Messrs. Henderson, of Pine-apple-place, produced a most beautifully grown and flowered *Acacia diffusa*, for which a certificate of merit was awarded ; and along with it small plants of *Boronia triphylla*, *Epacris hyacinthiflora candidissima*, and the red variety of *Eriostemon cuspidatum*.

Mr. Henderson, of St. John's Wood, sent *Gesnera macrantha purpurea*, a brilliant scarlet variety, with a dwarf habit ; a winter-blooming Heath, in the way of *Linnæoides*, called *Burnetti* ; *Siphocampylus lanceolatus*, and an example of *Conoclinium ianthinum*, a new Composite, in its present state not so handsome as the blue *Ageratum* (*A. cælestinum*).

Mr. Fry, gardener to Miss Dent, Manor House, Lee, Kent, exhibited a self-acting contrivance for fumigating glass houses. It was made of sheet iron, cylindrical, and had a grate at the bottom lifted up on feet sufficiently high to allow a current of air to pass through the fuel on which the fumigating material is placed. It was stated that its chief advantage was that it would burn readily the very cheapest and coarsest tobacco that could be obtained.

The garden of the Society furnished a beautifully bloomed specimen of the orange-flowered *Epidendrum* (*E. aurantiacum*), a species which few can flower at all, and *Hovea chorozemæfolia*. The latter formed a nice little greenhouse shrub, covered with brilliant purplish-blue flowers ; but like all *Hoveas* it is somewhat difficult to manage.

## M. CHEVREUL'S SCHEMES OF FLOWERS FOR OCTOBER.

IN the month of October *Chrysanthemums* are in perfection, and beautiful arrangements can be made with the white, red, rose, orange, and yellow varieties, with which, too, can be associated with considerable advantage the great blue-flowered *Aster* ; these arrangements are the more easy to realise, as *Chrysanthemums* can be fully developed in pots.

The following arrangements will be found to be of considerable beauty ; the colours to which the name of no flower is attached refer to *Chrysanthemums* :—

A. *Chrysanthemums in lines*.—1. White, red, white, rose, yellow, large blue-flowered *Aster*, orange or mahogany coloured *Chrysanthemum* ; then repeat in the same order. 2. White, red, yellow, large blue-flowered *Aster*, orange *Chrysanthemum* ; then repeat.

For linear arrangements, with a symmetrical centre, the following are recommended :—1. Red, yellow, white, orange, large blue-flowered *Aster*, orange, white, yellow, orange. The same arrangement may also begin and end with a white *Chrysanthemum*. 2. White, orange, large blue-flowered *Aster*, yellow, white, yellow, large blue-flowered

Aster, orange, white. And Chrysanthemums may be added to the beginning and end of the last arrangement, if there is room.

B. *Groups of seven Chrysanthemums.*

1.	2.	3.
white	white	blue
o	o	o
red yellow	yellow yellow	orange orange
o o	o o	o o
blue	blue	yellow
o	o	o
yellow red	white white	white white
o o	o o	o o
white	yellow	blue
o	o	o

C. *The annexed groups of Chrysanthemums* have a good effect :—

R	Y	Ro	Y	Ro	Y	R
W	B	W	W	B	W	
			R			
	Y			Y		
	Ro	B	B	Ro		
		Y				
	W			W		
		R	R			
			W			

In the above diagram the colours are marked by their respective initial letters, R standing for red and Ro for rose.—*Gardener's Chronicle.*

## BRIEF REMARKS.

**SPRING FLOWERS.**—All spring flowers possess very peculiar charms, and, in my opinion, not one excels the lovely *Erica carnea*. It begins to display its beauties in January, and continues to bloom in vast profusion till June. The mass of its charming flowers, of a bright pink colour, having each flower tipped with black anthers, have a pretty appearance. The plant is dwarf and compact, well suited for an edging to a flower-bed, or the front of a border near to the dwelling-house, or by the side of a frequented walk. It enlivens and beautifully adorns every situation it occupies. It also succeeds in large pots or vases, if kept cool and moist at the roots, and replaced early. It is valuable for replenishing winter bouquets, especially in cool rooms. It may not, perhaps, be generally known that if half the plant or plants be covered with soil (or probably with any other light material) for a period before the flowers attain their colour, it will blanch them to such a degree as to present the appearance of a distinct pale or white variety, forming a lively contrast with the rosy-pink hue of the unblanched

plants. This Heath may be planted in the ordinary flower-borders, using as a substitute for peat or heath-mould one half finely sifted, pure unfermented leaf-mould (divested of its earthy matter), the remainder equal portions of fine river or white sand and sandy-loam, well mixed. This compost should be well pressed previous to the plants being firmly planted in it. It is sold at a very trifling price, and deserves to be grown near every dwelling-house.

**CAMPANULA PYRAMIDALIS.**—The time for potting off plants for blooming this season is now arrived, and I beg to call the attention of the readers of this Magazine to its culture. It has long been a great favourite of mine, and I have annually, for the last twenty years, had splendid floral specimens as inmates in my sitting and dining rooms, as well as the greenhouse, and others placed in vases, which are suitably disposed of as ornaments to an elevated stone terrace. I grow the species with blue flowers as well as the white variety, and by placing the former in the shade in my rooms, just before the blossoms expand, they become a very delicate, handsome French white. Thus I have the three contrasts. I pot off suckers, or seedlings, each spring, and grow them vigorously during the year, placing them in a cool pit-frame during winter. At the latter part of February I pot off a sufficient number into their blooming pots, which are eighteen inches across the mouth and twenty-four deep, giving a free drainage, and in a compost of one-year-old rotten dung and old turfy-loam, in equal parts, with about one-half of the proportion of either of the others of turfy-peat. When there are any offsets to the plant, previous to repotting I take off what are unnecessary to be kept, in most cases only retaining the central stem and but three at most of any side ones. After being thus potted off, I place them in a pit-frame that is heated on the hot-water system, with three-inch piping. In this situation I keep them till the main stem is pushed two feet or even a yard high, and having a little warmth, and the pit being rather deep, the main stem soon runs up to that height. I then remove them into the greenhouse, which is what is usually termed a *warm one*, being adjoining my drawing-room, from which is an entrance. I have it always well furnished with flowers, to effect which it is heated by hot-water piping. I have grown splendid specimens, from seven to nine feet high, with numerous side-shoots, forming a pyramidal pillar of beauty, and most amply repaying for the attention given. I water with liquid manure every third time after the centre stem begins to push.

**THE RANUNCULUS.**—This has been my favourite pet flower for many years, and I have been much gratified to notice the increasing interest which is taking place to promote its more general cultivation. What has operated against its universal culture has been the failures of some to manage it successfully. Now my means are very simple ones, almost as easy as growing a common vegetable for the kitchen, and I have succeeded well for the last dozen years. My object, however, in this communication is to invite the attention of all growers to keep a record of the treatment of their present beds, extending from their formation, as to the nature of the compost, time and manner of planting, successive treatment, the time of blooming, size of the flowers, the names of each,

and description of the flower; also what number of failures, if any, and what appeared to be the cause of failure. If more than one system of culture has been practised, then the results of each, and which succeeded best, &c. Now by a little interesting attention of this kind, and the results being forwarded, and inserted in the FLORICULTURAL CABINET, it will inspire confidence and encourage persons far more generally to grow this universally-admired flower.—*An Ardent Amateur Grower.*

LILIUM LANCIFOLIUM, AND ITS VARIETIES.—February is the usual time for potting and planting these charming Lilies. Where there is choice, select the finest bulbs, if double-crowned the better; place three or four in a pot, not less than fourteen inches diameter at the top and sixteen inches deep. If there be four or five good stems of these noble flowers to every pot, they make a fine display when in bloom. A liberal drainage is essential. The compost should be formed of one part of good old turfy-loam to two parts of turfy sandy-peat. In potting, fill up a foot, upon which place the bulb or bulbs; then just cover over the crown, and place the pot in a cool pit-frame. Do not water till the bulb begins to push, but as they proceed in growth so increase the water. When the stem has risen two or three feet high, a number of rootlets push around the lower part of it. A rim of zinc, six inches deep, or a square rim of wood instead, should be fixed at the top of the pot, and be filled up inside with turfy-loam and turfy-peat. Into this these rootlets push, and contribute essentially to the vigour of the plant. They may then be placed in the greenhouse, kept up near to the glass, and have abundance of air, to prevent them being drawn up weakly. Keep them as stiff and robust as possible, till the branching flower-head is formed; then their height is determined. When the roots have pretty well filled the pots, give liquid manure-water, into which a small portion of soot has been well stirred, once or twice a-week, and at other times soft water. Before the flowers expand, syringe the plants every day. If green fly attack, the pest is readily destroyed by smoking or dipping in strong tobacco-water. When bloom is over, gradually withhold water, and in a short time turn the pots on one side, and place them in a dry shed, free from frosts, till the planting season.

BRACHYCOMA IBERIDIFOLIA.—This charming flowering annual deserves a place in every stove, greenhouse, or flower-garden. Its handsome daisy-like flowers, of several colours, borne numerously in large paniced corymbose heads, and neat pinnated foliage, alike combine to compose its beauty. The plant, too, is a nice height, from half a yard to two feet. Seed sown in August or September, the plants potted off early into small pots, and preserved in a cool pit or greenhouse through winter, should be re-potted into their blooming pots early in March, and the plants will be delightful ornaments through the summer.

If seed be immediately sown, the plants will bloom at the latter part of summer. Plants for a bed out of doors should be those saved through winter. Such may be had of the nurserymen at a trifling cost, if necessary to purchase.—*Lucy.*



# FLORAL OPERATIONS FOR THE MONTH

**E**SPECIAL attention is now requisite to see that the proper quantities of plants, seeds, &c., are in due course of preparation for the summer display. 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 PICOTEEES.**—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, &c.**

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 re-pot (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.

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.







New Seedling *Chrysanthemum*  
(natural size)



CHRYSANTHEMUM INDICUM MINIMUM. DWARF  
CHINESE VARIETIES.—1. LE JONGLEUR. 2. MADAME  
MIRBEL. 3. PEQUILLO. 4. BOUTON DE VENUS. 5. LA FIANCÉE.  
6. RENONCULE. 7. ELISE MEILLEZ.

SINCE the Flora of China has poured her autumnal gifts over our parterres, and decorated our greenhouses and sitting-rooms, the winter of those situations is considerably shortened; and of all the flowering ornaments which that country has afforded us, none has so much contributed towards enlivening the dreary months as this favourite flower of the mandarins.

In the Chinese language the generic term of this tribe (*Chrysanthemum*) is *Kuk fa*, or *Kok fa*, and those of the largest flowers are distinguished by the name of *So Ee kok*, and the whole varieties are generally called *Yok qui lung kok fa*. The beauty of these flowers are frequently displayed through the entire empire on the lackered ware, for which they are so eminent, as well as pictured in the representations of their saloons and trellised verandahs.

The name *Chrysanthemum* is derived from the Greek *choros*, gold, and *anthos*, a flower (literally, "flowers of gold"). The name was given to this genus of plants, because the species which was most familiar to the Greeks produces flowers of a gold colour. Thus by forming the generic name from that one species of a golden colour, we have the anomaly of the pink, lilac, white, yellow, purple, red, crimson, brown, rose, and buff all indiscriminately styled GOLDEN FLOWERS.

The Indian or Chinese *Chrysanthemum* was introduced into this country in 1764, Miller having received it from *Nimpu*, and cultivated it in the Botanic Garden at Chelsea. It was, however, lost, and a second time introduced. *M. Blanchard*, a *Marseilles* merchant, brought the well-known purple variety from China to France in 1789, from

whence it reached England in 1795. It was then sold at a very high price by the London nurserymen. Like the Roses of China, the *Chrysanthemum* soon escaped from the confinement of conservatories, and rapidly spread through every part of this country, displaying its beauty alike in the parterre of the opulent and the window of the cottager.

Some of the kinds have very aromatic foliage, as well as flowers of a similar odour, shedding a very agreeable perfume. The great diversity, too, in the form of the flower adds to their beauty. Some have strap-shaped petals, others quilled, spoon-shaped, tasselled, &c.; some flowers are flat, others conical, globular, &c.: and much diversity is now apparent in the size of the flowers and habit of the plant. Much attention has been paid during the last ten years to the raising of seedlings; and by proper attention in hybridizing the best-formed varieties a vast improvement has been effected, and each successive season additional beauties have appeared.

The nurserymen and florists of France, Belgium, and Germany have recently paid particular attention to the improvement of this flower; and M. Lebois, a florist, has been the successful raiser of the very beautiful and interesting varieties which we figure in full size in our present plate. They merit a place in every conservatory, greenhouse, sitting-room, or flower garden. Being of a dwarf habit, they occupy little space; and blooming profusely, are charming ornaments.

The *Chrysanthemums* are highly valuable autumn and early winter flowers; and in the language of flowers they signify, "Do not leave me;" and this meaning is more significant than many things expressed by floral symbols, as they are the latest blossoms of the year. On this account, too, it may properly be presented as the symbol of *cheerfulness under adversity*—a blessing which is not possessed by all when in adverse circumstances, yet it is even more desirable than to find plants that reserve their beauties to enliven the months so adverse to the reign of Flora.

## NOTES ON NEW OR RARE PLANTS.

### ADAMIA VERSICOLOR.—THE CHANGEABLE ADAMIA.

Is belonging to the natural order of Hydrangeads. A native of China, which was introduced into this country by the Horticultural Society, through Mr. Fortune, in 1846. He found it in Hong Kong, growing in ravines about half way up the granitic mountains of that island. It is considered to be a *greenhouse* bushy shrub, having the habit of the *Hydrangea*. The flowers are produced in large pyramidal-shaped terminal panicles. Flowers in six or seven parts with about twenty stamens. Each blossom is about three-quarters of an inch across. When in bud they are white; more advanced it becomes a violet and ultramarine colour; and when fully expanded a rich blue. The contrasted colours produce a very pretty effect. In order to cultivate it successfully, it is stated in "Paxton's Flower Garden" that it requires the climate of the open air in Devonshire during its season of

rest, and the climate of the tropics when in its growing state. In Hong Kong it is exposed to 120 degrees whilst ripening its wood, and afterwards to 40, until the rains and heat return. (Figured in *Paxton's Flower Garden*, No. 5.)

**ANIGOZANTHUS TYRIANTHINA.—TYRIAN-PURPLE FLOWERED.**

This fine species was discovered in the interior of the south-west of the Swan River settlement by Mr. Drummond. It grows three or four feet high, growing in masses, and bearing paniculated branches and copious flowers, clothed with dense wool of the richest Tyrian purple. The flower inside is of a straw colour. The plant requires protection in winter, but flourishes in the open air during summer. (Figured in *Bot. Mag.*, 4507.)

**CEANOTHUS DENTATUS.—TOOTH-LEAVED.**

A native of California, discovered by Mr. Douglas. Seeds of it were sent by Mr. Hartweg to the Horticultural Society, who have raised a number of plants, which have been extensively distributed. It has bloomed in Her Majesty's garden at Frogmore. It is a small bushy plant, covered with a rusty down. The leaves are small, about half an inch long, toothed at the edges. The flowers are bright blue, produced in stalked heads, which are sometimes racemes, or thyrses, or almost umbels, each head being about three parts of an inch across. (Figured in *Paxton's Flower Garden*, No. 4.)

**FUCHSIA BACILLARIS.—RED-BRANCHED.**

Introduced many years ago from Mexico. It is a neat smallish-leaved species, having its branches of a brownish-red colour when ripened. The flowers are small, about half an inch long, tube (ovary) red, and the petals a rosy-pink. It blooms profusely. We have had it growing and blooming freely in the open bed for many years in Norfolk. It is an interesting and handsome species. (Figured in *Bot. Mag.*, 4506.)

**GESNERIA SEEMANNI.—MR. SEEMAN'S GESNERIA.**

Discovered at Panama in Mexico by Mr. Seeman, who sent roots of it to the Royal Gardens of Kew, where it has bloomed. It is a very handsome profuse-flowering species. The stem rises two or more feet high, producing its flowers in a succession of whorls, of ten or twelve in each. A blossom is near an inch long, of a bright orange brick-red colour; the inside a light orange, and spotted with red upon the five-parted limb. The flower is about three parts of an inch across the limb. It deserves a place in every collection. (Figured in *Bot. Mag.*, 4504.)

**HÆMATOCHILUM.—THE PURPLE-LIPPED.**

Imported from New Grenada by Messrs. Loddiges, who have it under the name of *O. luridum purpuratum*. In foliage it is like *O. Carthaginiense* and its allies, leaves being stiff, hard (about six inches long), a dull green, spotted with brown. The flowers grow in the

### RHODOLEIA CHAMPIONI.—CAPTAIN CHAMPION'S RHODOLEIA.

This is a small tree-like plant, received from Hong Kong; and Captain Champion, writing from that place, says, "This is admitted by all here to be the handsomest of Hong Kong flowering trees, and new to Europeans till I discovered it in February last. It is a small tree; but probably, like the Camellia, would bloom profusely as a shrub, each branch bearing from six to eight flowers. The flowers are borne at the extremities of the numerous branches; each blossom is two inches and a-half across; sepals (calyx) about twelve, a rich brown colour; petals eighteen, of a bright rose colour, and the interior filled up with from thirty to fifty stamens, with large brown anthers. The fruit is about the size of a hazel-nut. In growth it exactly resembles those of Camellia Japonica, and about of the same hardihood. Seeds of it have been sent to the Royal Gardens of Kew; but they failed to vegetate. A specimen was sent, and a drawing made by a Chinese artist was also sent, and now it is figured in the *Bot. Mag.*, 4509.

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### FLOWERS IN BLOOM AT THE ROYAL KEW GARDENS.

- The following very superb CINERARIAS were in fine bloom, viz. :—
- ALBONI.—White, with a broad lavender margin.
  - ELEANOR.—White, with a rose margin.
  - ANNIE.—White, edged with plum colour.
  - ROSAMOND.—White, with bright rose tip.
  - CERITO.—White, edged with lavender.
  - WELLINGTON.—Disk blue, next white and purple margin.
  - NYMPH.—Lilac purple disk, rest white.
  - CLIMAX.—Dark disk, next run of pure white, margin of rosy violet.
  - CORONET.—Disk buff, white, tipped with purple.
  - ROSETTA.—Deep rosy purple, with dark disk.
  - GARDONI.—Purplish-red, showy.
  - BESSY.—Dark purple velvet.
  - ADELA VILLIERS.—Disk buff, white, with crimson purple margin.
  - NYMPH.—Disk violet, petals white.
  - WELLINGTON.—Blue disk, white, with purple crimson margin.
  - MADemoisELLE PERODA.—Disk dark, white, with violet tip.
  - CERITO.—White, with a beautiful lavender margin.
  - GARDONI.—Purple crimson, large, showy.
  - CARLOTTA GRISI.—Disk buff, white, tipped with rosy-violet.
  - AMANDA.—White, edged with fine blue.
  - TRIUMPHANS.—Disk gilded with yellow anthers, and petals a rich blue.

CLEMENTINE.—White, tipped with crimson.

ROYAL CRIMSON.—Bright and showy.

WEDDING RING.—White, with broad edge of crimson.

NEWINGTON BEAUTY.—White, with purple-crimson margin.

LADY COTTON SHEPPARD, with a crimson margin.

All the above are fit for any collection; they are of fine form and beautiful in colour. To them a few others might be added, which were not in bloom there.

ECCREMOCARPUS SCABRA.—A plant had been turned out into a border in a cool greenhouse, and trained to the back wall, which covered a space of twelve feet high and nine broad. It was in beautiful bloom, and no doubt will continue all the year.

SCILLA.—In a bed of these lovely spring ornaments, the *S. siberica* was very strikingly handsome. The flowers are borne in profusion, of a rich blue, each blossom being nearly an inch across. A charming plant, six inches high, to form an edging near a dwelling-room.

We have given the above descriptive particulars of plants in bloom, that such of our readers as may require early flowers may be able to select.

#### *In the Greenhouse.*

BOSSIÆ CORDIFOLIA.—This is a lovely shrubby plant, blooming most profusely; and its pretty pea-flower shaped blossoms yellow, with a dark chocolate coloured keel, have an interesting appearance.

BOSSIÆ VIRGATA.—This, too, is a profuse bloomer, the flowers are yellow with a red eye, and the keel a rich blood-red. It is very handsome, and deserves to be in every greenhouse.

GOODIA LATIFOLIA.—Similar shaped flowers to the Bossiæ, blooms profusely, flowers yellow, and, when expanded, nearly an inch across. Very showy.

ERIOSTEMON BUXIFOLIA.—We have noticed this in former Numbers; its profusion of white flowers had a pretty appearance. There is a variety now in some of the nurseries having rose-coloured flowers.

CHEIRANTHUS MUTABILIS.—This pretty single-blossomed shrubby Stock was in fine bloom; its changeable colours, from a white to rose and purple, have an interesting appearance. It blooms the greater part of the year.

CYTISUS FILIPES.—The plant had a stem about four feet high, and a head similar to a standard Rose. Its vast profusion of white fragrant flowers gave a pretty contrast amongst the blue, scarlet, and yellows of its neighbours. It is well worth having.

PODOLOBIUM STAUROPHYLLUM.—Flowers pea-formed, yellow, with a red keel.

PULTENEÆ POLYGALIFOLIA.—Flowers pea-formed, of a rich yellow, and pretty.

DAVIESIA LATIFOLIA.—This is another of the lovely pea-formed flowers, blooming very copiously, and its deep yellow and red flowers have a pretty effect. All the tribe are interestingly pretty.

VERONICA FORMOSA.—A shrubby plant, a yard high, very branching. The flowers are borne in spikes, white at first, changing to a

lilac. It is very showy and pretty, well worth growing. Its foliage much resembles the *Pimelea decussata*.

*CHOROZEMA CORDATA*.—A plant grown in a large pot, is seven feet across, and about the same height, forming a dense bush, and in most profuse bloom, having, apparently, thousands of spikes of lovely flowers. It is far the best-grown plant of it we ever saw, and is a striking plant of first-rate culture and beauty.

*TETRATHECA VERTICILLATA*.—The fine foliage, arranged in interesting whorls around the stems, is very neat, and has a striking contrast with the umbrella-shaped drooping flowers, of a rich violet blue. Each blossom is near an inch across. It deserves a place in every greenhouse, blooming freely, and from April to the end of summer.

*BORONIA PINNATA*.—This is a well-known plant, having neat foliage, and its numerous pink blossoms have a pretty appearance. It well merits a place in the greenhouse.

*SALVIA GESNERIFLORA*.—There are several large plants in profuse bloom, and the large spikes of its splendid scarlet flowers have a fine effect; they are truly magnificent. Small plants, too, bloom in profusion. It deserves to be in every greenhouse and conservatory.

*SALVIA SPECIOSA*.—This is a somewhat dwarf-growing plant, if the buds be but pinched off occasionally. It blooms very freely, and the flowers are of a most vivid rich scarlet. It ought to be in every greenhouse or sitting-room window.

*LINUM GRANDIFLORUM*.—A dwarf-growing hardy annual, very suitable for the edging or front of a flower-bed. The flowers are very showy, each blossom being an inch across, of a brilliant crimson, with a small white eye. It is an abundant bloomer.—[It is in the Paris Nursery Gardens, and we expect a stock of it being sent us immediately.—EDITOR.]

*METROSIDERUS FLORIDA* (or *Melaleuca florida*).—This beautiful greenhouse shrub has been profusely in bloom in the Royal Gardens of Kew. The plant belongs to the natural order Myrtaceæ (*Myrtle Blooms*). The flowers are large, of a rich crimson colour.

*CLEMATIS INDIVISA*.—A greenhouse shrubby climbing plant. The flowers are white, and the anthers a fine crimson colour, producing a pretty contrast. We find it grow very freely.

*THERESIA PERSICA*.—This pretty flowering bulbous plant has the habit of the Lily, with flowers of the form of the *Fritillaria*, viz., bell-shaped, drooping. It is a hardy species, highly spoken of in Belgium.

*TROPÆOLUM DECKERIANUM*.—A greenhouse perennial species. The flower spur is two inches long, scarlet, tipped with green; the petals are short, of a rich blue. The intermixture of scarlet, blue, and green produce a very pretty contrast. It will probably flourish in the open border during summer, and form a neat climber for a trellis. It is a beautiful species, but said not to be so handsome as the *T. Wagnerianum*, which we figured in our Number for March last.—[We possess both species, and shall have them in bloom shortly.—EDITOR.]

*CAMELLIA*, var. *DRYSDALIA*.—We noticed this beautiful variety in our last volume. The flower is of fine form, excellent outline, petals

round, of firm substance, of a beautiful rose colour, having a stripe of white down the centre of each petal. It merits a place in any collection.

**CALLISTEMON BRACHYANDRUM.**—This is a handsome, stiff-growing, shrubby, greenhouse plant, of the natural order Myrtle Blooms. The leaves are an inch long, very narrow. The flowers are produced numerous; and the fine, crimson-coloured, thread-like filaments and golden anthers have a neat and very showy appearance. It blooms during the entire summer season. In the Horticultural Society's Garden.

**PENTSTEMON HETEROPHYLLUS.**—This is a half-shrubby species, with very narrow leaves. The flowers are borne in large paniced heads, of a rich rosy-lilac. Each blossom near two inches long, and three-quarters of an inch across the mouth. It is a handsome species, found by Douglas in California.

**POLYGALA GRANDIFLORA.**—This is by very far the handsomest of the tribe. The greater portion of each blossom is of a beautiful lilac colour. The keel is white at the lower part, and the rest of it a rich dark crimson; and extending beyond it is a large crown of feathery-ended stamens, having a very interesting appearance. Each blossom is about two inches across. It deserves a place in any greenhouse, and can be kept in desired limits by pruning. It blooms very freely.

**PROSTRANTHERA ROTUNDIFOLIA.**—This is a very free-blooming shrubby plant. The flowers are bell-shaped, each about an inch long, of a pretty purple colour. It is well worth possessing, blooming all the season.

**PODALYRIA STYRACIFOLIA.**—This is a fine blooming shrub. The flowers are pea-shaped, of a pretty rosy-lilac colour, with a white eye, each flower being two inches across. It is a fine flowering plant.

**EPACRIS MUCRONATA.**—The flowers are borne in terminal racemous heads; they are of a snowy white, and have a pretty appearance. It ought to be in every greenhouse.

**IBERIS SEMPERFLORENS.**—A shrubby plant, nearly a yard high. The flowers are produced in heads similar to the well-known Candy Tuft, and are of a pure white. It blooms freely in winter and early spring months, and is thus valuable.

**ACACIAS.**—Of this very charming tribe there are numerous species and varieties in bloom, of various shades, from white to the deepest golden yellow, and the perfume was powerful. In our last volume we gave a descriptive list of nearly all in the collection, to which we refer our readers who want to procure the best kinds, and this renders it unnecessary to give the same again in our present Number. The entire race deserves a place in the greenhouse or conservatory.

In the stove we noticed some splendid specimens in bloom of *Achimenes picta*; one was four feet high, having nine very long spikes of its very beautiful scarlet and yellow flowers. In a recent Number we gave the particulars of growing them to this extraordinary size.



## ON THE CULTIVATION OF TULIPS.

IN LETTERS TO A FRIEND.

*Letter IV.*

DEAR SIR,—I now resume the old subject, viz., the cultivation of Tulips. In my last I partly complied with your first request, and forwarded you a list of Rose flowers that have gained prizes during the last three years in the north. A list of Byblomens will be annexed to this. Your next question is, if I have ever made any experiments in the cultivation of Tulips. Experiments with Tulips are rather dangerous, and I would not advise a beginner to try them. If he has a few hundred bulbs more than he wants, and does not value them, then let him experiment to his heart's delight, and not repine if he loses them all. I knew an extensive grower in the vicinity of London some thirty years ago, who thought if he well supplied them with dung he should do better; the consequence was that he nearly lost all. I knew an amateur, about twelve years since, who had more money than wit, and a small smattering of chemistry, and every year he must needs make experiments, and to my knowledge he lost a hundred pounds worth for some years, till at last he got tired, and was satisfied to proceed in the usual routine. I have tried several myself, but will only relate what has proved useful. Some years since I had the earth removed to the depth of fourteen inches from my Tulip-bed, in order to mix a little fresh mould with that taken out; at the same time I had a man to dig a hole in the garden, in which to deposit some night-soil. When he had got some three feet down, he came and told me that six years before he had put some night-soil in the same place; he had just come to it, and it was rare stuff, and would advise me to let him put it aside, as it was prime manure for anything. A thought struck me that if it was good for everything, it was good for Tulips. It was a dangerous thought, at least I thought so at the time; but I was determined to try it. I had four inches of it laid at the bottom of the bed, and incorporated with it some sifted old mortar rubbish, had the mould put upon it, and planted my bulbs; and at the next blooming season I had the finest bloom I had ever had before, or have had since; and the reason I have never tried it again is, I have never had the good old stuff to do it with. Since I have resided in Manchester, where good compost for Tulips is difficult to procure, I have been forced to make experiments, or procure mould from a distance. I have freely used urine. After the bulbs are taken up, I lay the bed up in ridges; and every morning, for two months, the urine is poured over the bed from the rose of a waterpot; its beneficial effects are far more extensive than I ever anticipated, and I would advise every grower, who is in like manner circumstanced, to try its effects; indeed, I should use it every year if I was surrounded with mould the most congenial for their cultivation, feeling assured it is conducive to their well doing. I have heard some cultivators affirm that the mould of the Tulip-bed should be changed every year, saying that Tulips could never be grown well if it was neglected; and when I first began growing Tulips I adhered to this rule, but after found the change was for the worse,

which confirmed the old adage, "Out of the frying-pan into the fire." I was told some time since by an old, extensive, and good cultivator in the west of England, that he had not changed the mould of his Tulip-beds for twenty years. His garden-ground was what was usually termed stiff; and every year after his bulbs were taken up he covered his beds with a coating of fresh cow-dung, which in the course of the summer was well incorporated with his stiff stuff, and from my own knowledge he never had to find fault with his blooms. I have now nearly done with experiments. One more for your guidance. If before your buds burst into bloom, you may see some that bid fair to be too heavy in colour, you may tie the stem to a stick, and about three inches from the bloom, with a sharp penknife cut a slit about two inches in length through the middle of the stem; it will draw off the sap from the bloom, which will greatly conduce to the bloom coming clean and finely marked. I think for this time I have said enough, and shall attend to your other questions in my next.

Respectfully yours,

Manchester.

DAHL.

*List of Byblomens that have gained Prizes in the North in the last Three Years.*

Bienfait . . . . .	120	Violet (Waller's) . . . . .	34
Ambassador . . . . .	26	Alexander Magnus . . . . .	15
Gaystitta . . . . .	1	Daphne . . . . .	1
Buckley's Beauty . . . . .	15	Sable Rex . . . . .	17
Grotius . . . . .	16	Violet Fond Noir . . . . .	20
Buckley's 46 . . . . .	1	Tout . . . . .	26
Wolstenholm's Byb. . . . .	2	Pyramid of Egypt . . . . .	4
Beguet . . . . .	86	La Belle Narene . . . . .	54
Fair Flora . . . . .	2	Ogden's Seedlings . . . . .	1
Violet Winner . . . . .	20	Pearson's Alexander . . . . .	1
La Mère' Brune . . . . .	4	Roi de Siam . . . . .	29
Czarina, or Empress of Russia	13	Atlas . . . . .	3
Lancashire Hero . . . . .	7	David . . . . .	4
Washington . . . . .	40	Queen Charlotte . . . . .	13
Regina . . . . .	1	Prince Eli . . . . .	6
Mungo . . . . .	16	Duchess de Modena . . . . .	1
Countess of Flanders . . . . .	1	Gad's Magnificent . . . . .	11
Duc de Bourdeaux . . . . .	12	Demoroe . . . . .	4
Grand Financier . . . . .	1	Sampson . . . . .	1
Lady Durham . . . . .	2	Maid of Orleans (Gibbons's)	12
Maître Partoute . . . . .	18	Gibbons's Grace Darling . . . . .	6
Sportsman . . . . .	2	— Great Western . . . . .	1
Lysander Noir . . . . .	1	— Van Amburgh . . . . .	1
Bell's Violet . . . . .	1	— Criterion . . . . .	3
Sang de Bœuf . . . . .	3	— Prince Albert . . . . .	5
Bellona . . . . .	1	— Venus . . . . .	1
Eclipse . . . . .	1	— Sir Henry Pottinger . . . . .	1
Lilliard . . . . .	10	Lady Flora Hastings . . . . .	6
Incomparable Virpout . . . . .	35	Princess Charlotte . . . . .	13

Allen's Sarah Ann . . . . .	1	Dr. Newton . . . . .	2
Catherina (Gibbons's) . . . . .	3	Napoleon . . . . .	2
Wirtemberg . . . . .	2	Neat and Clean . . . . .	1
Grand Imperial . . . . .	1	Bishop of Exeter . . . . .	1
Glory . . . . .	1	Violet Imperial . . . . .	1
Duc de Florence . . . . .	1	Perle Blanche . . . . .	5
Pandora . . . . .	1	Pompadour . . . . .	1
La Brun Amie . . . . .	1	Imperatrix Florum . . . . .	4
Connoisseur . . . . .	1	Diana . . . . .	4
Laura . . . . .	2	Incomparable La Panache . . . . .	2
Angelina . . . . .	1	Lord Vernon . . . . .	2
Grisdelin . . . . .	1	Bank of England . . . . .	1
Violet Surpassant . . . . .	5	Rubens . . . . .	7
Sancta Sophia . . . . .	3	Triomphe de Lisle . . . . .	4
Lawrence's Friend . . . . .	5	Duke of Cumberland . . . . .	1
Transparent Noir . . . . .	1	Violet Alexander . . . . .	10
Euclid . . . . .	2	Norwich Beguet . . . . .	5
Roi de Minse . . . . .	1	Clark's Lavinna . . . . .	3
Valerius Publicola . . . . .	1	Winifred . . . . .	3
Poupre Superb . . . . .	2	Louis Sixteenth . . . . .	4
Dorothea Superfine . . . . .	1	Gloria Mundi, White . . . . .	1
Turk . . . . .	1	Adelaide . . . . .	2
Queen of May . . . . .	2	Eagle Noir . . . . .	1
Clark's Thalia . . . . .	3	Edgar . . . . .	1
Penelope . . . . .	3	Slater's Lewold . . . . .	3
Salvator Rosa . . . . .	3	Patroclus . . . . .	1
Rutley's Queen . . . . .	1	Margrave de Baden . . . . .	1
Countess of Harrington . . . . .	1	Cid Grand . . . . .	4
La Bien Emma . . . . .	1	General Barnevelde . . . . .	1
Princess Royal . . . . .	10	Violet La Bing . . . . .	1
Reed's Tam O'Shanter . . . . .	1	Vulcan . . . . .	2
— Charles the Twelfth . . . . .	1	Reine d'Egypt . . . . .	1
La Pucelle . . . . .	1	Elegance . . . . .	1
Hepworth's Queen of North	1	Thompson's Byb. . . . .	1
Proserpine . . . . .	1	Portia . . . . .	1
Reine des Amazones . . . . .	2	Brown's Wonder . . . . .	1
Dixon's Bion . . . . .	3	Gibbons's Seedlings . . . . .	24
Premier Noble . . . . .	3	Queen Victoria . . . . .	3
Cleopatra . . . . .	1	Vorhelm's Incomparable . . . . .	1
Duchess of Kent . . . . .	1	Lord Gough . . . . .	1

*List of Bizurres that have gained Prizes in the North during the last Three Years.*

Chadwick's Trafalgar . . . . .	42	Magnum Bonum . . . . .	68
Surpass Cat . . . . .	73	Goude Beaus . . . . .	12
Duc de Savoy . . . . .	27	Duke of Wellington . . . . .	17
Rising Sun . . . . .	13	Lord Lilford . . . . .	8
Firebrand . . . . .	28	Sultana . . . . .	12
Crown Prince . . . . .	34	Rufus . . . . .	15
Waterloo . . . . .	63	Sir Sidney Smith . . . . .	18

Grand Duke . . . . .	11	General Chase . . . . .	3
Duke of Lancaster . . . . .	11	Agricola . . . . .	2
Royal Sovereign . . . . .	25	Juliette . . . . .	2
Gibbons's Pilot . . . . .	14	Comte de Villaflor . . . . .	1
Lustre . . . . .	46	Earl of Warwick . . . . .	2
Albion . . . . .	36	Parnassus . . . . .	2
La Cantique . . . . .	27	Earl of Bradford . . . . .	1
Farrar's Liberty . . . . .	11	Sir J. Banks . . . . .	1
Charbonnier . . . . .	23	Lara . . . . .	1
Black Prince . . . . .	11	Majesté . . . . .	1
Magnificent . . . . .	1	Banton's Sir Harry Smith . . . . .	1
Cato . . . . .	8	Thomas Brown . . . . .	3
George the Fourth . . . . .	48	Earl Douglas . . . . .	1
Polyphemus . . . . .	62	Walker's Coronation . . . . .	2
Dutch Cat . . . . .	11	Grieg's Osiris . . . . .	1
Captain White . . . . .	55	The Wonder . . . . .	1
Duke of Richmond . . . . .	1	Don Carlos . . . . .	4
Turner's Biz. . . . .	3	Lord Duncan . . . . .	1
William the Fourth . . . . .	1	Slater's Lord Howick . . . . .	2
Bishop of Exeter . . . . .	2	Lord Stanley . . . . .	3
Diadem . . . . .	3	Wood's Caliph . . . . .	1
Shakspeare . . . . .	7	Sir E. Codrington . . . . .	1
Lord Milton . . . . .	7	Arthington's Rainbow . . . . .	2
Prince of Russia . . . . .	1	Royal Gem . . . . .	1
Pompey's Pillar . . . . .	3	Gigantea . . . . .	1
Grand Curio . . . . .	3	Demetrius . . . . .	1
Carlo Dolci . . . . .	5	Prince Albert . . . . .	3
Flamme de Grade . . . . .	1	Harrison's Border Chief . . . . .	1
Smith's Alexander . . . . .	1	Duke of Northumber-	
Pluto . . . . .	1	land . . . . .	1
Leonatus Posthumous . . . . .	4	Glory of Haarlem . . . . .	2
Morning Star . . . . .	1	Competitor . . . . .	1
Naylor's Truth . . . . .	3	Humphry Cheetham . . . . .	1
Paganini . . . . .	5	Earl Stanhope . . . . .	1
Glory of Holland . . . . .	1	Duck's Don Cossack . . . . .	1
President . . . . .	2	Napoleon . . . . .	3
Suwarrow . . . . .	2	Lord Brougham . . . . .	3
Gabell's King . . . . .	1	Needham's Anthony . . . . .	1
Duke of Hamilton . . . . .	1	Emperor of China . . . . .	1
Pizarro . . . . .	5	Lord Melbourne . . . . .	2
Don Phoenix . . . . .	1	Leopold . . . . .	1
Duke of Devonshire . . . . .	3	Gresswood's Grace Darling . . . . .	1
Franklin's Washington . . . . .	2	Fabious . . . . .	1
Hannibal . . . . .	1	Gibbons's Captain Sleigh . . . . .	1
Hutton's Optimus . . . . .	6	Earl St. Vincent . . . . .	2
Apelles . . . . .	1	Vampire . . . . .	1
Strong's King . . . . .	3	Platonia . . . . .	2
Ricton . . . . .	3	Donzelli . . . . .	3
Sir R. Peel . . . . .	1	General Blucher . . . . .	2
Woolstenholme's Biz. . . . .	1	Southern's Britannia . . . . .	2

Clegg's Knave . . . . .	1	AMICUS . . . . .	.
Wright's 63 . . . . .	1	Catterell's Elizabeth . . .	.
Lawrence's Bolivar . . . .	3	Lord Hawkesbury . . . . .	.
Kouli Khan (Kearsley's) . .	2	Earl of Nottingham . . . .	.
Prince of Wales . . . . .	1		

## A FEW HINTS UPON THE PROPAGATION OF VARIOUS PLANTS,

BY G. C. H.

SUCH will probably be acceptable to many of your readers. I will, therefore, commence with the common Wallflower, which I consider may be raised to the greatest certainty; in fact, with ordinary care, not a single failure ought to happen. Take two, three, or four inches of the upper shoots and cut them off clean with a sharp knife just below an eye, then draw the point of the knife down the bark and just through it, in two or three places, so as to be able to detach the bark from the woody stem, and just separate it; then plant it under a north wall, watering occasionally. This operation will succeed in spring, summer, or autumn. I have not tried it for Major Stocks; but I should think that it would answer. Crown Imperials, Lilies, Carnations, Gloxinia, and Achimenes, I will notice in a future number, if agreeable. [We shall be much obliged by other communications.—CONDUCTOR.]

## THE WILD HYACINTH.

(Continued from page 87.)

Ovid, however, mentions the circumstance as follows:—

“ A well-pois'd disk first hasty Phœbus threw,  
It cleft the air, and whistled as it flew;  
It reach'd the mark, a most surprising length,  
Which spoke an equal share of art and strength.  
Scarce was it fall'n, when, with too eager hand,  
Young Hyacinth ran to snatch it from the sand;  
But the curst orb, which met a stony soil,  
Flew in his face with violent recoil.

As in a water'd garden's blooming walk,  
When some rude hand has bruis'd its tender stalk,  
A fading Lily droops its languid head,  
And bends to earth, its life and beauty fled;  
So Hyacinth, with head reclin'd, decays,  
And, sick'ning, now no more his charms displays.

Quick to his aid distress'd Apollo flew,  
And round the hero's neck his arms he threw;  
But whilst he held him to his throbbing breast,  
And all the anguish of his soul exprest,

His polish'd limbs, by strange enchantment's pow'r,  
 Shoot into buds and blossom into flow'r,  
 His auburn locks in verdant foliage flow,  
 And wreaths of azure flo'rets shade his brow."

"Nor are the Spartans, who so much are fam'd  
 For virtue, of their Hyacinth asham'd;  
 But still with pompous woe and solemn state  
 The Hyacinthian feasts they yearly celebrate."

Mrs. Charlotte Smith, who spent her youth at Bignor Park, one of the most romantic and beautiful spots beneath the Sussex Downs, tells us—

"In the lone copse, or shadowy dell,  
 Wild clustered knots of Harebells blow."

For this sweet spot we may justly borrow the lines of Milton, calling it

"A wilderness of sweets; for Nature here  
 Wanton'd as in her prime, and play'd at will  
 Her virgin fancies, pouring forth more sweet,  
 Wild above rule or art, enormous bliss."

The distinguished family who now reside at Bignor Park have too correct a taste to destroy the natural beauties of the spot, which our fair poetess has made celebrated, either by the introduction of the axe, or the line and rule, yet we perceived here

"Flowers worthy of Paradise."

Shakspeare's magic pen alone is sufficient to stamp celebrity on any plant it has glided over; for however slightly he touches on it, it is fully painted to our senses.

"——— With fairest flowers,  
 While summer lasts, and I live here, Fidele,  
 I'll sweeten thy sad grave: thou shalt not lack  
 The flower that's like thy face, pale Primrose, nor  
 The azured Harebell, like thy veins; no, nor  
 The leaf of Eglantine, whom, not to slander,  
 Outsweeten'd not thy breath."

## DRAINAGE OF PLANTS IN POTS.

THE general laws which regulate the vegetable economy are alike in plants grown in the open ground and to those cultivated in pots. The vegetative principle is never changed or altered, either in the plants subjected to artificial treatment, or in those which may be said to occupy a more natural position. In accordance therewith, plants grown in pots should be treated in all essential particulars like those grown in the open ground, especially in relation to drainage. In its application to agricultural purposes great benefits have been derived, and so it may be in horticulture and floriculture. The operation of draining a pot requires to be done with a perfect understanding as to

the mode it is likely to effect the greatest benefit. The hole at the bottom must not be covered over by a flat piece of pot, slate, or other material, or the water would not pass off; but a hollow piece should first be properly placed; then broken pots, angular stones, pieces of brick, &c., to a suitable depth, varying, according to the depth of the pot, from one to two inches. Over this a layer of turfy loam, turfy peat, or moss should be placed to prevent the soil being washed amongst the drainage materials. It is now well known that pieces of brick, from their porous texture, act in the manner of a sponge for the azote, which is so essential to the nourishment of plants. Such substances become, in fact, by their physical action and chemical properties, an actual manure for plants; the soil being aerated, and the water passing rapidly off, most essentially promotes the health of the plant. Broken or crushed bones have been tried with the soft-wooded plants with great success, a layer being placed over the potsherds.

## ON LAYING THE BLOOM HEADS OF CHRYSANTHEMUMS.

BY DAHL OF MANCHESTER.

THERE having been lately in the FLORICULTURAL CABINET, and other floral publications, some papers on what is called dwarfing these fine flowers, my attention was drawn to the subject.

One elderly gentleman *I heard think very loud* on the subject. In general I am very much pleased with his thoughts, being mostly of a very practical nature; but he thought that if the operator came off with the loss of 25 per cent. he might congratulate himself. One of your correspondents says he binds two parts of the stem with worsted, so far apart as to make a tongue in the space; and when pegged down he fills up the space between the tongue, and the stem with thick mud. With the idea of a loss of 25 per cent., with the binding the joints with worsted, with the mixing up mud and applying it to the incised wounds, I could not bring my mind to assent to, and resolved to allow the few I had, which were fine sorts, to stand the chance of being spoiled by the frost.

But finding my plants were making fine bloom heads, I began to think if there could not be some plan devised by which the whole could be done without so much risk and trouble. A thought struck me. I thought that if the stem was gradually bent down, so that the end of it reached the ground, the sun's rays would draw up the end. Such was the case. I got some sticks with hooks at the ends, and placing them about the centre of the stems, gently and gradually forced them down, so that each end met the ground. In a few days the whole of them had turned up about six inches, with a fine round shoulder. I got some small pots, and sunk them to the rim in the ground, and pegged them down. In about three weeks the pots were filled with roots. I then separated them from the stems, and potted into larger pots, and sunk them in the ground, till the time for taking them in to blow in the house. The stems, by the time the tops are taken off, will have

made a quantity of lateral shoots, and these will be raised up by the rays of light; and the stems having been in this bent position so long, may be safely pegged down to the ground, and covered with earth; and should the weather prove fine and warm, each stem will make a row of flowers, though not so large and fine as the heads that have been taken off, but still make a gay appearance. Each joint will make good roots, and cause a large increase if plants are wanted.

Now, Mr. Editor, as I dislike mystery in any part of floriculture, I was quite pleased with this simple process, and strongly recommend it. No cutting, no breaking, no loss, but certain success.

## CULTURE OF THE PELARGONIUM,

BY MR. PARKER, GARDENER TO D. OUGHTON, ESQ., OF ROEHAMPTON,  
NEAR LONDON.

As Mr. Parker is universally admitted to be one of the best growers of Geraniums in the kingdom, perhaps the following account of the way in which he manages his exhibition plants may not prove uninteresting. To begin: he strikes his cuttings, which are obtained as soon as the wood is thoroughly ripe, under hand-glasses in the open ground, watering them very slightly for a week or two, but exposing them to dews at night. When they are well rooted, they are lifted and potted in turfy loam, two-year-old cow-dung, some peat and silver sand, all well mixed together, and placed on an efficient drainage. The plants are then set in a cold frame, and kept close in the day-time till they have become established; but they are left open at night. Ultimately the lights are off during both day and night; and, as soon as they will bear it, they are placed on boards, exposed to all weathers, until the long, cold, late autumn nights cause them to be placed in-doors. The main point in their out-door treatment is, never to allow them to get water-logged or stunted in their growth. They receive a shift in November, using the compost mentioned above without the peat. They are again shifted in February, and each shoot stopped at the fourth joint. Lateral shoots are then produced, and these are tied out horizontally, so as to form the basis of the future specimen. The lateral shoots are also stopped, and by these means plenty of wood is obtained for large plants in the following season. But Mr. Parker has another mode of proceeding, which is, to take strong plants in April or May, pot them in 11-inch pots, place them out of doors, and pick the flowers off them throughout the season. Next year they are fit for exhibition. The plants that are to blossom in May are never stopped after they are cut down in July. The June plants are stopped early in January, and those for July in February. To grow Geraniums successfully, Mr. Parker finds that much depends on their winter treatment. They should not receive too much water or fire-heat, and the wood should be well ripened before they are allowed to flower, if a fine head of bloom is wanted. Mr. Parker's general time for cutting down is between the first week of July and the middle of August, according to the ripeness of the wood. When the plants have fairly broken, the



old soil is shaken clean from their roots ; the latter are trimmed-in a little, and the plants are repotted and placed in a frame till they have become established, when they are placed out of doors till they are removed to their winter quarters. To come in for exhibition in May and June, they are repotted in November, and for July in February. When they begin to show flower-buds, liquid manure is occasionally given them. The latter is made by putting into a large tub of soft water half a barrow-load each of cow, sheep, and horse-dung, and a peck of lime, mixing well and using the clear liquid, after two-thirds of clean water has been added to it. During the blooming season plenty of water (not liquid manure, that is only given five or six times just before they come into flower) is required, otherwise the foliage becomes discoloured, and the blossoms come small and deformed.—*Gardeners' Chronicle*.

## A BED FOR THE CROCUS, VERBENA, &c.

BY DAHL OF MANCHESTER.

HAVING been applied to for advice to give effect to a bed that fronted a sitting room window, for the early part of the year, I proposed the following, which proved all that could be desired.

Suppose a bed of any shape or size, according to fancy, and extent of room : in the autumn plant it with Crocus, in rows about a foot apart ; let each row be of different colours ; these in the spring will have a beautiful effect ; in May, or the beginning of June, plant in between the rows, Verbenas of diverse colours, of which now there are a great variety ; stop the leading shoots, to make them throw out, pull out or cut off the stems of the Crocus as they die off, and cover with a little fresh earth ; as the Verbenas make foliage, spread them over the bed, and at each joint peg them down, or lay upon each joint a small stone to keep them down, they will soon make roots, and penetrate the earth, and cover the whole bed, and be one mass of flowers : the effect will be splendid.

But to add to its beauty, place some neat painted uprights, all round the border of the bed, about two feet apart, eighteen or twenty inches high ; from each of these uprights, suspend some pliable copper wire ; in the border, then insert some plants that have been prepared of the following climbers, one or more as the size of the bed may admit, or the fancy may dictate : the Corben Scandens, the Sophaspermum, the Tropæolum Canariense, or the Eccremocarpus Scabra ; let these be trained in graceful festoons to the wire, and the effect from the sitting room will be so pleasing, that I am sure that the person who has had it one year, will have it continued. For the present season the Crocuses are past, but for the other part, the present is the time to have it done, the Crocuses may be planted at the proper time.

## BRIEF REMARKS.

CALCEOLARIAS.—This flower has long been a favourite of mine, and each season I have purchased the best new ones, but as regularly lost them after they had bloomed. The plan I adopted was to grow them

in my greenhouse, and after blooming, to place them in a sunny sheltered situation. Last summer I was instructed to pursue a different treatment, and having attended to it, I am glad to say the result is satisfactory. I have saved all my last year's blooming kinds, and now (March 6) I have a fine stock of very healthy plants. The plan I adopted in summer to keep my plants, especially after blooming, in the sun, was very injurious. The pots became *heated*, and the roots perished. Instead of that exposure, I now have my plants placed in the shade, even in the greenhouse by a covering, and the pots placed inside another much larger, and the space between is filled with moss, which is always kept damp. By this means the roots are *kept cool*, which is essential to success, and the same attention is given to the plants when placed out of doors. They are best where shaded, and the roots kept cool by moist moss. The compost I use—turfy loam, peat, old rotten dung, and leaf mould, in equal parts. In February I pot off my cuttings, into the proper sized pots, and re-pot when the roots indicate the plant requires it. They require a free admission of air at all times. I put off slips in *autumn*, this is the best time, and keep them in winter in a cool but dry pit frame. Plenty of water is necessary in their growing season.—*Clericus*.

ACHIMENES—Early in the last year's volume of this Magazine I read an account of some very superb specimens of this charming tribe of flowers. I immediately adopted the course of culture with all my vigorous growing kinds, and last summer I had splendid pots of them in fine bloom. My tubers had been watered and the pots placed in a hot-bed frame; the plants were an inch or two long in March. I then took them up carefully, and having procured some pans, about six inches deep and twenty across, with holes around the bottom for overplus water to escape, I filled them up with a compost of turfy-chopped loam, which had been turned, &c., for nearly a year, turfy peat, and well rotted leaf mould, adding a moderate sprinkling of pieces of charcoal. The plants flourished amazingly. As the roots do not run deep, I find these broad pans answer admirably. I placed the plants about six inches apart. In order to make the plants bushy, I stopped the leads when the plants were six inches high; this induced laterals, and in proportion the plants were in profuse bloom; but the flowers not so large as those which were permitted to grow unmolested. I have a bark pit in a plant stove, and I plunged the pans half deep in the bark, and continued them so till the plants were nearly coming into bloom, when I placed them in the greenhouse, &c. I watered once a-week with liquid manure. *A. grandiflora* I had plants three feet high; also *A. pedunculata* four feet; *hirsuta* and *longiflora* similarly vigorous. The *A. picta* I have had in splendid bloom during all winter, plants two feet and a half high. The *Achimenes coccinea*, with most of the newer kinds of that habit, I grew in similar pans with great success. I had a pan of a sort, and in some cases I had a pan of eight or ten different kinds, which variety had a very pretty appearance. All are deserving every attention, and most amply repay for it.—*Clericus*.

ROSE STOCKS.—The Dog Rose (*Rosa canina*) is the kind of Stock

which is extensively employed for budding Roses upon in this country, particularly for standards, half standards, and dwarfs. The following classes grow *well* upon it:—Provins, Moss, Gallica, Hybrid Provins, Alba, Hybrid China, Hybrid Bourbon, Damask Austrian, Damask Perpetual, Hybrid Perpetual, with the *free* growing Bourbon and Noisettes. The delicate kinds of the last two classes do not thrive upon it. The Manettii Rose Stock (a cultivated kind) is an excellent one for working upon. It is valuable for its free, vigorous, and continuous growth, which lasts up to winter. It also ripens its wood well, becomes hard, firm, not subject to decay, nor are the shoots gross and pithy. On dry, warm, or sandy soils, it is the best of all Stocks, especially for Hybrid Perpetuals, and they force well upon it; also Bourbons and Noisettes. Such of these as are delicate and will not flourish on the Dog Rose, do admirably upon this Stock, as also do the Tea and China Roses. The best method, however, with the two last-named classes is to work such delicate ones upon the Common Monthly (*Rosa Indica*). The Manetta Rose strikes as freely as a Willow, and may be had cheap at the public nurseries or general Rose growers. The Crimson Boursault Rose Stock is used by some extensive growers, as also the Rose Celine; but the kinds worked upon them do not flourish or endure so well as upon the Manettii. Mr. Rivers states the Cloth of Gold Rose succeeds best when worked upon the Celine Rose Stock. Duc Decazes Rose Stock is of free growth, firmness, and solidity of wood. It is a Hybrid Bourbon, and many of the Bourbons, Chinas, Teas, and Noisettes, succeed well upon it. Stocks of the above are very superior to all others, and are strongly recommended in an article inserted in the *Journal of the Horticultural Society*, from Mr. Saul, of Durdham Down Nursery, near Bristol.

ALLAMANDA CATHARTICA.—A correspondent lately asked for information how to bloom this handsome climber. By the following treatment it succeeds admirably:—In a small stove for plants I have a bark pit, at one corner; a portion is divided by a piece of wood, in which are a number of holes to allow roots to push through. Inside this partition I placed a foot deep of broken bricks, &c., for drainage. I filled it up with the following compost: equal parts of one year old chopped turfy loam, turfy peat, and leaf mould. Grown in this, and thus situated, it blooms most profusely. I have two plants grown in pots; they have a free drainage, and the compost as above, excepting a little more loam is added. I guard against over potting; but when I find that the roots are matting round the ball, I re-pot into two sizes larger. In re-potting I carefully loosen the tips of the coiled roots, so as to incorporate them into the fresh compost at once. Early in November I begin to withhold water, and only just keep the soil from being dry, and allow the plant to rest till the first week in February, at which time I place it in more heat, water it, and when the shoots have just pushed I re-pot carefully. During its period of growth water is increased as its necessities justify. During its period of growing I give a good watering of liquid manure (from a tank in the Cucumber bed ground), once a-week. Nothing can flourish and bloom better than the plants do. They are trained round a barrel-shaped wire

frame, and are grown in a stove of medium temperature. Being thus situated, the summer shoots get well ripened, which is essential to its blooming well the following year. Any pruning required I do just when the buds begin to start in February.

**GAZANIA PAVONIA.**—I should feel greatly obliged to any of your numerous correspondents if they would inform me how to flower the above splendid greenhouse perennial, which I find (from *Loudon's Encyclopædia of Plants*) was introduced into this country in 1804 from the Cape of Good Hope, and thrives in peat and loam. I have grown the plant for many years, and have always found it a very shy flower; the plants grow well and look very healthy, but throw out few blossoms. The *Gazania rigens* is a very old plant, having been introduced from the Cape in 1755. This is a very free flower, very nearly hardy, and is a very showy plant in the border in June. The flowers are of the shape of a large single-flowered common Marigold, four inches across. Those of *G. pavonia* are yellow, each petal having at its bottom a dark blotch, in the centre of which is a white spot. Those of *G. rigens* are of a rich orange colour. When expanded, they are very pretty. They deserve to be in every greenhouse and flower-garden during summer. Both kinds are easily increased by cuttings or division in July and August.—*G. S. H.*

**COMPOST FOR AURICULAS.**—The following, from long experience, has proved an excellent compost for Auriculas. Our practice has been to cultivate these flowers expressly for exhibition, we can therefore give it with confidence:—Four measures of night soil, well decomposed; two measures of sheep manure, ditto; two measures of heath peat, taken from beneath the wild heath of the commons, about four inches from the surface (not deeper), so that it is full of decayed vegetable matter; two measures of light sandy yellow loam, full of fibre; and one measure of very fine sand—that used by brick-makers about London for moulding the bricks in, is excellent for the purpose. We have accustomed ourselves to screen these articles, before mixing, to ensure having the proper quantities.—*I. T. Neville.*

**HYBRID LILIES.**—In some of our former volumes we remarked upon a number of beautiful seedling Lilies which had been raised by our friend Mr. Groom, florist, of Clapham Rise, from *Lilium bulbiferum*, impregnated with *L. atrosanguineum*. We saw them in fine bloom last season, and as before, we recommend them to every lover of this beautiful tribe of flowers. They are perfectly hardy, and bloom profusely. Among many others the following are the best:—

*Nabob.*—Twenty-two inches high, bright orange, with very dark blood-coloured blotches, fine, twelve to sixteen flowers on the stem.

*Louis Philippe.*—Twenty-six inches high, very bright deep red, with a few blotches and black spots, produces from sixteen to twenty blossoms, very fine.

*Titian.*—Fifteen inches, red orange, with a few dark spots, free bloomer; produces from sixteen to twenty flowers, very good.

*Duke of Wellington.*—Sixteen inches, bright rich red, with a few dark red blotches, fine and rich, ten to fourteen blossoms.

*Vulcan*.—Twenty-two inches, very dark red, and very much blotched with deep blood colour; produces from thirteen to sixteen flowers.

*Voltaire*.—Dwarf habit, thirteen inches, light orange, with reddish brown blotches; from twelve to sixteen blooms.

*Rubens*.—Seventeen inches high, rich dark red, with a few blotches and some black spots; a very showy sort.

Mr. Groom grows the fine Japan Lilies in immense numbers in the open ground; and attempts are making to obtain a hybrid race between these and the common Lilies of our gardens, viz., the Orange, White, Turncap, Tiger, Japonicum, bulbiferum, &c. It would amply repay any person to give attention to such improvements.

**WEeping THORN**.—A short description of a species of *Cratægus*, forming a principal ornament among shrubs of various kinds in the pleasure-ground of a lady in the neighbourhood of Prescott, near Liverpool, and from its peculiar habit of growth called the Weeping Thorn, may be interesting from the circumstance of its having been propagated from a cutting taken from an ancient specimen growing in Regent Murray's garden, Edinburgh, and said to have been planted by the hands of the unfortunate Mary Queen of Scots. This interesting memento of the ill-fated queen stands about twelve feet high, the laterals springing from the principal branches forming a graceful and gentle sweep in their descent, and trailing a short distance along the ground; the middle branches growing in a vertical direction, give the entire mass the form of a true cone. The blossoms and fruit are similar to those of the common Hawthorn, but larger. From the peculiar habit of growth, a small party could be commodiously accommodated under its shade, the outer circumference forming a complete circular screen of about forty feet round, impervious to the sun's rays, or only admitting a pleasantly subdued light.

**ON DRYING PLANTS SO AS TO PRESERVE THEIR COLOURS**.—No science, perhaps, requires so much practical knowledge as botany; in its study, botanical ramblings and the preservation of gathered specimens are of the greatest assistance. The usual method, however, of drying plants is generally long and troublesome, and, above all, very uncertain. Indeed, whatever quantity of papers is employed to separate the plants, and even if the damp papers are replaced by dry ones every twelve hours, ten days are required before the plants are properly dried, and at the end of that time they are so discoloured, and their characters are so altered, that a great deal of practice is requisite to enable one to make them out. I have made several attempts to remedy these inconveniences, and I take the liberty of laying their result before the Academy.

In a botanical excursion, I arrange my plants between sheets of grey paper, which immediately absorbs any free water arising from rain or dew. In this state the plants can be preserved for twenty-four hours without alteration. The next day I place them in very dry paper; then I put them in an apparatus of my own invention, in which they are completely dried in twenty-four or thirty hours, preserving the colour of their leaves and the brilliancy of their flowers.

The following is the theory of my method:—The water of compo-

sition and interposition evaporates but slowly in ordinary cases. It, however, struck me that by raising the temperature and diminishing the atmospheric pressure I should probably arrive at a good result. I accordingly made a copper cylinder, half a yard high and two feet in diameter. In this vessel I place a packet of papers containing one hundred specimens. I then put about 8 lbs. of lumps of unslaked lime in the spaces between the paper and the side of the cylinder, and fix the top of the cylinder on. I then put the whole into a small tub, and raise the temperature to about 125° or 130° by means of boiling water poured into the tub. The air is then exhausted from the copper cylinder by means of a small air-pump screwed into its lid. I make use of no anemometer, because, at this temperature, as the air is drawn out its place is filled by aqueous vapour, and, besides, in such an operation as this no precision is requisite. The vacuum once made, that is to say, after having pumped at intervals for two or three hours, the apparatus is left to itself for twenty-four or thirty hours; at the end of this time, on opening the apparatus, the plants are found dry, and like the specimens I have the honour to lay before the Academy.—*Gannal in Comptes Rendus.*

MARTYNIA LUTEA.—To the lovers of a combination of magnificent foliage and sweet-scented blossoms, this *Martynia* will be most acceptable; without exception it is the noblest annual with which I am acquainted; and from its robust habit and beautiful leaves of a foot in diameter, supported majestically upon a footstalk of a proportionate length and thickness, surmounted by a spike of sweet-scented yellow blossoms, it is well calculated either for a single specimen or a bed, if suitable to the taste of the grower. My plan of raising them is this: early in March I sow the seeds in pots filled with a light soil, and place them in shallow pans of water (in the hothouse), which by constantly evaporating softens the leathery epidermis of the seed, and enables the embryo to perform its functions; much disappointment will be caused if the pans of water are neglected, as it is almost impossible for the embryo to eject its coatings without it; other means have been resorted to, such as cutting it through with a knife, which is unnatural, and should, I think, be avoided. A melon or cucumber-bed will suit admirably to get them up in. When about two inches high they are potted off; grown strong, and hardened by a colder atmosphere than that in which they were raised, and eventually planted out the beginning of May, from which time they will form subjects of admiration until Nature has performed her office, and when flowers and leaves cease to exist. The seed-vessel claims an equal share of praise for its curiosity. If I may use the phrase, it is more like a woodcock's head and beak than an ordinary seed-vessel; and most beautifully has Nature provided in this instance a powerful lever in the beak, for the ultimate expansion of the seed-vessel. One thing must not be forgotten; take care to procure seeds from a first source, for if the vital principle is ever so slightly impaired, your efforts to make it grow will be futile.—*Gardeners' Chronicle.*



**M**AY—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 Voltarianum*, *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. *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, &amp;c.

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.

*Pelargoniums*.—Never allow the plants to flag, or the bottom leaves will turn yellow, and the plants then become naked. Put cow, horse, and sheep dung in equal parts, with a sprinkling of quick lime into a tub, and to one peck of these add five gallons of rain or other soft water. When taking it for use, draw it off clear, and give the plants a watering twice a-week. Give air freely, shut up early, and syringe the plants overhead three times a-week till the flowers expand. Now strike cuttings of the scarlet class of *Pelargoniums*, as *Compactum*, *Gem*, *Queen*, *Royal Dwarf*, &c., and when rooted pot off, which by the autumn will fill their pots with roots, and being what is termed pot-bound, they will bloom during the winter season.

*Calceolarias*.—Keep the lower side shoots pegged down; it will induce roots to push up the stems. Fumigate occasionally to keep down the green fly.

*Azaleas*.—When done blooming the growth must be promoted, see Articles upon culture.

**WATERING**.—At this season increasing attention is requisite; care must be taken that the *entire ball* of soil is made moist, particularly with the plants grown in sandy peat or sandy loam; a few holes made by means of an iron pin down through the ball will admit water into its interior.







JUNE, 1850.

ILLUSTRATIONS.

### LAPAGERIA ROSEA.

**T**HIS very beautiful flowering plant is a native of Chili, from whence it was received in 1847 at the Royal Gardens of Kew. It is of the natural order *Smilacæa*, a half shrubby, climbing plant, which, being a native of Chili, may be expected to prove tolerably hardy; but it has hitherto been kept in the greenhouse. It highly merits a place in every one, and should it prove hardy, ought to be in every flower garden. It would be a charming ornament to train against a wall, &c. It grows very freely, and proves to be of easy cultivation. The genus was named in compliment to Josephine Lapagerie, wife of Napoleon Bonaparte, who was a great encourager of Botany, and the cultivator of flowers in the beautiful gardens of Malmaison.

### NOTES ON NEW OR RARE PLANTS.

*ACHIMENES ESCHERIANA*.—It has the habit of *A. rosea*, but stronger. The limb is a rich crimson, spotted with blue violet when going off. The centre orifice is yellow.

*AMARYLLIS RETICULATA*.—The flowers are of a light pink, beautifully veined with red. It is in the collection at Messrs. Hendersons.

*BORONIA TRIPHYLLA*.—The flowers are large size, and of a bright rosy-pink colour. Very neat and pretty.

*BORONIA TETRANDBRA*. A smooth shrub, with very neat pinnate foliage. Its appearance is much like a dwarf *B. pinnata*. The flowers are produced at the axils of the leaves, each about half an inch across, of a pale pink colour. It is very common in Van Diemen's Land. It has bloomed in the garden of the Horticultural Society at Chiswick. The plant has a very neat and pretty appearance. (Figured in *Paxton's Flower Garden*, plate 8.)

**CÆLOGYNE WALLICHII**.—Dr. Wallich's *Cælogyne*. Found in great abundance by Dr. Hooker on his approaching Darjeeling, in Sikkim, Himalaya. It has bloomed beautifully in the collection at Chatsworth during last summer and autumn. Sir W. J. Hooker states that on his last visit to Chatsworth, next to the flowering *VICTORIA*, this *Cælogyne* was the most interesting of the many botanical rarities collected in that place. The pseudo-bulbs are very singular, flagon-shaped, dark green, warted, and frequently covered with a strong coating of loose net-work, formed by the old sheath. Only one flower arises at a time from each bulb, and this springs forth when the leaf has decayed. The flower stem rises about an inch and a half high. Each blossom is about four inches across; sepals lance-shaped, pink; petals of similar form and colour. The lip is very large, standing forward; the colour is pink, white, and yellow, dashed with red spots. It is a very interesting and beautiful flowering species. It flourishes in the cooler division of the orchid house, placed near the glass, and grown in turfy-peat, mixed with sphagnum moss. (Figured in *Bot. Mag.*, 4496.)

**CEANOTHUS PAPILLOSUS**.—The Horticultural Society introduced this pretty species from California, and it proves to be quite hardy. Trained against a wall, it flourishes and blooms very freely. The leaves are two inches long, narrow, and the flowers are borne in capitate (headed) racemes, blue, with yellow anthers. (Figured in *Bot. Mag.*)

**CEANOTHUS DENTATUS**.—This pretty species was also introduced by the Horticultural Society from California, and with a similar treatment to the previous described species; it thrives in the open air against a wall. Both of them do well in the greenhouse or conservatory, being very ornamental, and force well for winter and spring bloom. The flowers are of a pale blue colour, borne in round heads, half-an-inch in diameter, one cluster proceeding from the axil of each leaf.

The *Ceanothus* answers admirably for training against a wall, but grown in the shrub border, or in a pot, the plant grows long and straggling, but if the leads be stopped, or pruned back to a proper length, side shoots are freely produced, and the plant forms a pretty bush. (Figured in *Bot. Mag.*)

**CHOROZEMA FLAVA**.—Yellow-flowered. This handsome species was, we believe, introduced into this country by Baron Hügel, who sent it to the Royal Gardens of Kew. It is of medium growth, bushy, and blooms profusely. The flowers are borne in terminal, and axillary, open, leafy racemes, of a deep yellow colour, with a few green veins at the base, and the keel sulphur-coloured. Its delicate habit, shining green leaves, and numerous pretty yellow blossoms, render it a very desirable plant for the greenhouse. (Figured in *Bot. Mag.*)

**CLEMATIS GRAVEOLENS**.—Heavy-scented Traveller's Joy. It is a native of Chinese Tartary and the snowy passes of western Himalaya, at an elevation of 12,000 feet above the level of the sea. It was discovered by Captain Munro, who sent seeds of it to England. It is in the Royal Gardens of Kew, and blooms throughout the summer

months. The flowers are yellow, tinged with green. It is an ever-green woody creeper, forming a bushy cover, like others of the genus, and is quite hardy. It is very suitable for the covering of a trellis, or to be trained against a wall. (Figured in *Bot. Mag.*, 4495.)

*CLIANTHUS FORMOSUS*.—Messrs. Veitch, of Exeter, possess this beautiful species. It is similar in habit to the old *C. puniceus*. The flowers are borne in axillary umbellate heads, on long footstalks. They are of rich crimson colour, with a large dark shining boss at the base of each blossom.

*COLQUHOUNIA COCCINEA*.—Scarlet flowered. *Labeata, Didynamia Gymnospermia*. A native of Nepal. It is a tall-growing subscandent shrub. It flourishes in the open air in this country, when trained against a warm aspected wall. The flowers are produced in whorls around the stem at the joints where the leaves proceed from. They are small, each about half-an-inch long, of an orange-scarlet colour. It bloomed profusely against a wall the latter part of summer. (Figured in *Bot. Mag.*, 4514.)

*CONOCLINIUM IANTHINUM*.—A native of Brazil; half shrubby. The flowers are produced in terminal crowded corymbose heads; the corolla is rose-coloured. The stigmas are very long, of a delicate violet colour. It belongs to the natural order Eupatorieæ. It flourishes in the greenhouse during summer, and it is very probable that in a warm situation it would flourish out in the open border through the summer. It has bloomed at the nursery of Messrs. Rollisson, of Tooting, in Surrey. (Figured in *Bot. Mag.*)

*CYPRIPEDIUM LOWII*.—This is a very handsome species, a stove perennial. The flowers are borne in racemes, or sometimes singly. Sepals green tinged with purple at the base; petals long, of a greenish yellow with purple blotches, and a violet purple tip at the end. It was introduced by Mr. Low, of Clapton Nursery, from Borneo. It blooms at the end of summer.

*CAUDATUM*.—The long-tailed Lady's Slipper. A greenhouse herbaceous plant from Peru; found growing in marshy places near Numegal, in Quito. It has recently bloomed in the fine collection of Mrs. Lawrence at Ealing Park.

In most species the petals are very short, but in the present species they grow to the length of eighteen inches, forming narrow tails, which hanging down, wave in the wind. The sepals are nearly six inches long, of a greenish-yellow. The lip (slipper-shaped) is two inches and a half long, of a pale yellow, tinged and spotted with rose colour. The flower stem rises two feet high, and bears several flowers. The growth of the long petals is surprising, extending about eighteen inches in four days. (Figured in *Paxton's Flower Garden*, plate 9.)

*DIPTERACANTHUS SPECTABILIS*.—Handsome flowered. This very handsome flowering species was discovered by Mr. Lobb on the Andes of Peru, and seeds were sent to Messrs. Veitch, and the plant has bloomed in the stove at their nursery. It is a soft-wooded plant, growing two feet high, and succeeds in a warm greenhouse. It blooms

freely. The blossoms have much the form of those of the *Petunia*, and about two inches and a half across, of a rich blue purple colour. It propagates freely by cuttings. It is very showy and ornamental, and well merits a place in either stove or greenhouse. (Figured in *Bot. Mag.*, 4494.)

**DOUBLE WHITE-FLOWERED PEACH.**—This very pretty plant was introduced by the Horticultural Society from China, and has recently been in bloom. It blooms early, and is thus exposed to the casualties of frost, and the flowers being damaged; but escaping such injury, it is a lovely plant for the shrubbery. It does well grown in a pit-frame, greenhouse, or conservatory, and proves to be a good plant for forcing.

**EPACRIS HYACINTHIFLORA CANDIDISSIMA.**—The plant has the habit of the *E. impressa*, with flowers twice the size. It is the finest white in this country. At Messrs. Hendersons.

**FUCHSIA NIGRICANS.**—A native of Central America, figured in Mr. Van Houtte's *Flora*. The flowers are small, each about three-quarters of an inch long. Calyx rose coloured, and petals of a deep violet. The leaves grow in whorls of three or four around the stem. It is an interesting species, and well deserves a place in the greenhouse.

**GASTROLOBIUM HUGELII.**—A native of the Swan River colony. It is a pretty greenhouse shrub, bearing a profusion of its pea-formed yellow flowers; every main shoot, as well as the branchlets, are clothed with them, forming charming spikes of blossoms. A single flower is half-an-inch across. Messrs. Knight and Perry possess the species. (Figured in *Bot. Mag.*)

**GRAMMANTHES GENTIANOIDES.**—A dwarf half-hardy annual. The flowers are of a salmon colour, with a deeper-coloured stain at the centre. They are borne in hemispherical heads, about an inch across. It is of the natural order *Crussulacea*, and very pretty. In the Belgium gardens.

**GRIFFINIA LIBONIANA.**—A beautiful *Amaryllidæa*, introduced from Brazil, and has bloomed in the stove at the gardens of the Horticultural Society. The flowers are produced on a scape six inches high, of a rich ultramarine blue. It is a pretty spring ornament.

**ILEX MICROCARPA.**—Small-fruited Holly. It has been introduced by Messrs. Standish and Co., and proves to be a hardy evergreen tree. It much resembles an evergreen Oak, having the leaves smooth on each side.

**ILEX CORNUTA.**—Introduced by Messrs. Standish and Co. from North China. It is quite hardy, and a remarkably fine species. The leaves generally have three spines at the end. These fine Hollies are valuable introductions.

**IXORA BARBATA.**—The Bearded. Dr. Wallich sent this species from the Calcutta Botanic Garden to the Royal Gardens of Kew,

where it bloomed, in the stove, last summer. It is a fine shrubby plant, and will grow six feet high if allowed, but it is readily grown as a bushy one by stopping the leads. The flowers are borne in large, loose, corymbose heads, they are white and very fragrant. Each blossom is about an inch and a-half long. The flowers will contrast very prettily with the high-coloured kinds. (Figured in *Bot. Mag.*, 4513.)

**LIBOCEDRUS CHILENSIS.**—Messrs. Low and Co. introduced this fine plant from Chili. It has the habit of an *Arbor Vitæ*, and is a fine evergreen tree, from thirty to eighty feet high. It is a handsome species.

**LIBOCEDRUS TETRAGONA**, or *Juniperus uvifera*.—A very fine evergreen, introduced by Messrs. Veitch from the cold southern regions of South America. It is a magnificent species, a rival for *Araucaria imbricata*. It grows from fifty to eighty feet high.

**NUTTALLIA CERASIFORMIS.**—Bird Cherry-like. A native of California, growing in the woods. It is a hardy shrub, two feet high. The flowers are produced in nodding racemes, of a greenish-white. It is in the garden of the Horticultural Society.

**ONCIDIUM TRILINGUE.**—A half-climbing species of Orchid, from Peru, which has been introduced into this country by Sir P. M. G. Egerton, Bart., M.P., of Oulton Park, in Cheshire, where it has recently bloomed. The flowers are of a deep chocolate brown, the petals and crest of the lip being edged and spotted with bright yellow.

**PIMELEA VERSCHAFFELTII.**—Mr. Ayres, of Blackheath, possesses this new species. The leaves are lance-shaped. The blossoms are white, and fragrant in the evening.

**RHODODENDRON ROLLISSONII.**—It is a half hardy tree from the mountains of Ceylon, being the wild tree *Rhododendron* of the Cingalese Hills, and it differs much from the other Indian tree *Rhododendrons*, the leaves being broad and short, whilst those of the latter are narrow and long. Mr. Booth, gardener to Sir Charles Lemon, Bart., M.P., describes it as follows in Paxton's *Flower Garden for May*, where a fine figure of it is given. "This is now in great beauty in the open border (in Cornwall), and proves to be a very fine thing, far surpassing, in my opinion, the old *Rhododendron arboreum*, or any of the numerous hybrid productions that have originated from it. The head of flowers is round and compact; they are of a rosy-red, with an orange blotch on the upper segment. A single flower is near two inches across.

The plant has been growing in the open air in Sir C. Lemon's garden for several years, and not in the least injured by the severity of winter. Dr. Lindley remarks, there are now the following five distinct races of Indian *Rhododendrons*:—The *old Scarlet Tree Rhododendron* (*R. arborea*), having rich blood-red flowers, long flat leaves, silvery underneath; it is doubtful whether there be a white variety. The *Cinnamon Tree Rhododendron* (*R. cinnamomeum*), leaves long, flat, deep green, wrinkled and narrow, covered beneath with a coarse, shaggy, rusty wool. The *Bearded Tree Rhododendron* (*R. barba-*



tum); Messrs. Loddiges have disposed of some of this some years ago; but it is little known. It has remarkable coarse stiff hairs on the leaf stalks. The *Campanulate Rhododendron* (*R. campanulata*, bell-shaped), broad flat leaves, heart-shaped at the base, and short stellate rusty down. The *Ceylon Rhododendron* (*R. Rollissonii*).

**VERONICA FORMOSA.**—Handsome Speedwell. It is a native of Van Diemen's Land, where it inhabits Mount Wellington. It is a shrubby plant growing two or three feet high, erect and bushy. The flowers are produced in terminal racemous spikes, of a bright and deep purplish-blue. It is a very neat growing evergreen plant. It blooms profusely in the greenhouse; but a plant was trained to an eastern aspect wall out of doors, and it bloomed freely, enduring the winter unprotected. It deserves a place either in the greenhouse or out of doors. (Figured in *Bot. Mag.*, 4512.)

**WARREA LINDENIANA.**—A beautiful orchidea, which has bloomed in Messrs. Hendersons' collection. Sepals and petals long, of a creamy white, and lilac. Labellum lilac streaked with purple, and a yellow eye. (Figured in *Bot. Mag.*)

## A FEW HINTS UPON THE PROPAGATION OF VARIOUS PLANTS.

BY G. C. H.

**THE CROWN IMPERIAL** usually sends off sufficient young bulbs to supersede the necessity of more attention, therefore what I am about to mention may be practised for the curiosity of the fact. I have no doubt of all professed gardeners being aware of the circumstance, but it is not for them I write, although people constantly derive pleasure from seeing matters familiar to themselves noticed by others.

At the season of rest, damage in any way a bulb of Crown Imperial, Hyacinth, Tulip, or Lily, and instead of flowering the following season, a number of young bulbs will be formed. Some years ago I witnessed my gardener digging up some yellow Crown Imperials at **Midsummer**, when the foliage was dead; and there was one large bulb which had not flowered, but had sent off twenty-four young bulbs, eight being good-sized ones, fit for flowering the next year; I found that the old bulb had been pierced through the crown with a fork, which had damaged it.

**LILIUM LONGIFLORUM** may be raised in abundance without any of the roots or seeds; and this is to be done by taking some of the stems which are not strong enough for flowering, and cutting them into little pieces with only one leaf attached to each, and planting them thickly in a pot of sand, constantly kept moist, and in a gentle heat. I have not yet succeeded in this way with the *L. lancifolium*, but intend trying again this summer. The splendid new lilies may be readily increased by breaking off a few of the scales from the outside of the bulb, and planting them in any light soil, protecting them from the frost during winter.

Any one may try this with the common Turk's-cap Lily, by digging some up in the autumn, breaking them up, and planting again in the open ground without any particular care.

CARNATIONS may be easily raised by pipings; take three joints, pull off the lower leaves, and cut close to the joint, and then cut through the middle for about a quarter of an inch, and keep the sides separate by a little earth, and plant under a handlight.

GLOXINIAS may be raised from single leaves cut off at any part of the stalk, and kept in a bottle of water; but a very much better way when the opportunity offers, is to take a good large cutting of two or three joints which will flower in the course of the summer as well as the old plant. This latter plan is equally applicable to the Achimenes.

The ERYTHRINA ought to be much more generally cultivated than it is. My method for propagation is as follows:—I take up the old plants out of the garden in October or November, pot them, and as winter advances cut them down to within six inches or so of the pot; water once or twice during the winter; in the spring cut them still lower, and place in the melon-pit, and try to make them throw up from underneath, by rubbing off the buds from the upper stem as they appear; then when the young shoots have grown up to eight or ten inches, which will be early in June, I turn the plant out of the pot, and let it fall on the ground so as to shake off all the earth, and the root being divided with a strong knife; potted again, and put into a frame for ten days or a fortnight, by which time they are good plants, well rooted.

## ON THE CULTIVATION OF TULIPS.

IN LETTERS TO A FRIEND.

### *Letter V.*

DEAR SIR,—In accordance with your request, I now continue my communications on this subject. You will bear in mind that my last was in answer to your question, if I had ever made any experiments in the cultivation of Tulips, and concluded with a list of Byblomens that had gained prizes during the last three years in the north. Your next question shall now have my attention, viz., are they raising seedlings in the north that are likely to become standard flowers with cultivators? This is the most difficult question I have had to answer; my means of gaining information has not been so extensive as I could wish, still it is a subject that has engaged my attention, and the information I have gained is at your service.

It appears there has been a person in the north, who has gained considerable notoriety, and may be called the Clarke of the north; he has raised a large quantity of seedlings; they are here called "The Chel-lestan Seedlings;" they have been dispersed into a great many grower's hands; they were let out under numbers in the breeder state. These numbers have got changed, which has caused considerable confusion, and I much fear that, like Clarke's breeders, they will be broken under many names.

I have seen some of these seedlings, indeed at one meeting that I attended there was a good sprinkling, and some of them pleased me much; several were splendid things, and many of them will become standard flowers; there are many of excellent qualities, and in their strains will not be surpassed in the south. You will find in the lists appended to these letters, that a number have been broken, and are becoming popular in the north. I heard a short time since of a young grower asking an old one, if he had ever seen a bloom of *Salvator Rosa*, if he had, the Chellestan seedlings would drop into insignificance; the answer he gave was, that he had both seen and grown *Salvator Rosa*, and he was certain that some of these seedlings would be equal, if not superior to that flower. In this opinion I must coincide, for from what I have seen and heard of these seedlings, I am inclined to think that many of them will be as good as *Salvator Rosa*, and this is saying a great deal, as it is a good thing. From the raiser of this flower, the late Mr. Charles Brown (who was the most persevering and enthusiastic cultivator of his day), I gained my first rudiments of tulip growing; we were neighbours and friends. Near the middle of his nursery was a quickset hedge more than a quarter of a mile in length, and on each side of this hedge was planted most years two rows of his breeder tulips, (which gave rise to the remark of Mr. Glenny in one of his papers, some years ago, of Tulips by the mile). Walking one day with him down this hedge, I was struck with a fine Rose flower, to which I called his attention; he told me it was a new broke thing that season, and he had named it *Salvator Rosa*. My answer was, it was worthy of its name: it came out in his printed catalogue for that season at 50*l*. On going over his bed the next year, I inquired for this flower, when he informed me that the root had rotted, but he had broke a very fine *Byblomen*, quite as good a flower, which must take its place; this was the origin of *Salvator Rosa*.

Mr. John Slater, of Cheetham-hill, near this town, has been very successful in raising seedlings; he has been for some years crossing different varieties, and saving seed to a large extent, and now possesses a large stock of breeders which are very fine, displaying good qualities, and every year rewards him with some good breaks, and some fine flowers. There are a great many persons, with whose names I am not familiar, who are doing the same, and in a few years when these good things increase, there will be a large quantity of sterling flowers emanating from the north, that will be able to stand side by side with those raised in the south, and it is my confirmed opinion that a few years more will bring the Tulip to a greater perfection than it has ever yet attained.

So much for the northern seedlings.

In answer to your question about eight petals, the cause and the cure, I think the probable cause is an over-growth of root; some Tulips are more apt to come so than others. I recollect once a friend sending me a dozen roots, with a fine name attached; the bulbs were the size of large onions, it was intimated they were middle row flowers. They came up very strong, and most of them had three blooms on the stem, and many of the blooms with eight petals; they

were such coarse unwieldy things, that I gave them to some flower-growing cottagers, but never heard of their following the progeny of Typhon again, and assuming their three-headed monster shape. I would advise that when these overgrowths happen, to let the bulb ripen the seed pod, which will have a tendency to prevent it another season; another good plan is, when you see enough of the bloom bud, and find there will be eight petals, to break off the bud about half way down the stem, and the root will most likely break out into offsets, which in a season or so, will make nice blooming bulbs.

In a corner of your last respects, I see you ask—If you save seed, how long will it be before you may expect some broken flowers? From a young and ardent beginner this is a very natural question, but here allow me to remind you of the old saying, “Patience is a virtue.” You will need a little. “Rome was not built in a day.” It will be some years before the bulb will arrive at a blooming state, and then in all probability it will come a plain colour, or what are termed breeders, and generally takes some years more before it breaks, or becomes what are called here “rectified flowers.” I have grown some of Clarke’s breeders ten years before they have broken; I have been told by some growers, that they have grown breeders twenty years before they have got a broken flower; I would advise that they be allowed to mature their seed-pod every year, and that their position in the garden be changed every year. As change of soil has a tendency to make them strike out into colour, I think a good plan would be to plant them five in a clump, in all parts of the borders of your garden, say four to eight inches apart, and one in the middle thus—

*	*
*	*
*	*

the probable chance of a break is 10 to 1 this way, than if planted in a bed in one kind of soil; and if a fine strain should appear, it would be easy to cover it from the weather. I think I have now done with your questions, and time I had. I hope they are all answered to your satisfaction, if not, you must take the will for the deed. Allow me to say, I wish you every success. I annex a list of Bizard Tulips that have gained prizes during the last three years at the northern meetings.

Yours truly,  
DAHL.

*Manchester.*

P.S.—I have just been informed that there will be a meeting at some public place in Manchester, in May next, (1850,) at which it is expected will be exhibited a large quantity of new and good tulips from all parts of the country; I am looking forward to a treat; if any are worth remark, you shall hear from me again.

## CULTURE OF ERICAS.

MANY of our readers have seen the splendid specimens of *Ericas* exhibited at the shows held at Chiswick, Regent’s Park, and Surrey Zoological Gardens, by Messrs. Fairbairn, of Clapham, near London.

The following are particulars in cultivation which Mr. James Fairbairn recommends, and considered essential to a successful raising of this lovely tribe of plants:—

*Soil.*—Obtain it from a locality where the common wild Heath grows luxuriantly. Take the turfy portion, but do not go deeper than four inches. Obtain it during the summer season, and lay it up in a piled heap, and it will be fit for use the following year.

*Potting.*—Cut the pile down similar to what is done with a hay-stack; an old hay-knife is suitable, as it does not disarrange the other part of the heap. Chop it well together, and rub it with the hands, which is far preferable to sifting, as it leaves the fibrous vegetable portion in it. To this add one-fifth part of fine white sand. In repotting he recommends such a remove at once, as a plant from a four-inch diameter pot to a nine-inch one, using plenty of broken potsherds, and with larger plants pieces of sandstone, pebbles, &c. In potting, care is taken that the fresh soil is well pressed down around the ball to fix the plant securely. In watering particular care is taken that at each time a sufficiency is given, not merely to moisten an inch or two at the top, and all the lower portion of the ball be quite dry, but to moisten *all* the ball. There are some kinds which have a tendency to become long legged, and have scarce any side shoots. To have these form bushy plants, the leading shoots require to be stopped once every season, doing it just before the plant pushes in the spring. By a little attention at the proper time nice bushy plants are obtained.

## ON BEDDING PLANTS.

BY A NOBLEMAN'S FLOWER GARDENER, NEAR LONDON.

MAY being the proper time for putting out into beds what are usually termed *bedding plants*, I forward a few remarks upon some of the best for that purpose.

*Pelargoniums* (Geraniums, generally termed Scarlets, but which now include scarlet, rose, pink, crimson, salmon, cherry, and other varying colours).—Compactum, Punch, Judy, Tom Thumb, Frogmore, Shrubland, Vivid, Surpass, Tom Thumb, Huntsman, Victoria, Ingram's Dwarf, King, Prospect or Pre-eminent, Pink Nosegay, New Globe, Cooperii, Lucia rosca, Venus Blush, Royal Dwarf, and Queen. All the above are of dwarf habit, free bloomers, and comprise all the shades of the colours above enumerated; and persons not possessing them may safely leave a selection to a nurseryman if required. Nothing exceeds these fine flowers for bedding.

*Fancy Pelargoniums.*—Several of these have lately been mentioned in the March Number of this Magazine by a correspondent; I, therefore, omit the names in this place. They are very beautiful in beds, having a good sandy soil; peat, loam, and vegetable mould suit.

*Bouvardias.*—These are a lovely tribe of trumpet-shaped flowers, red, scarlet, and yellow. They are very handsome; when planted closely have a charming appearance, growing a foot high.

*Alstræmerias.*—These comprise plants which grow from half a-foot

to three, and may be arranged so as to form a cone. I had a small round bed last season in fine display. It contained orange, white, dark velvet and white, rose, yellow, and pink-coloured kinds.

*Cupheas*.—The *C. platycentra* is a charming plant; its beautiful red flowers tipped with white in such profusion are very ornamental. The *C. strigulosa*, with its yellow, green, and red flowers, is very pretty. It grows erect, and does well for the centre of the bed and the other kind around it.

*Anagallis*.—The blue *Compactum* is a most profuse bloomer, and grows half a foot to a foot high. *Brewerii* is a fine large blue, grows a foot high or more. *Grandiflora*, with its fine orange-red flowers, is also very showy, growing a foot high. All beautiful.

*Lobelias*.—The fine upright growing kinds of crimson, scarlet, white, lilac, red, purple, and pink colours are alike handsome, always admired. The dwarf prostrate kinds, as *L. erinus*, *erinus lucida*, *lucida compacta*, *erinoides*, &c., form a neat edging to the others. They bloom profusely.

*Alonsoas*.—Their beautiful spikes of scarlet flowers are very showy. The erect-growing *Articifolia* does well for the centre, and the *Incisa-grandiflora* around it.

*Heliotropiums*.—The *Voltaireanum*, with its deep blue flowers, is very pretty; the bed should be planted full, as it is not so rampant as the other kinds in its growth. *Triumph de Leigh* has immense heads of white flowers, and, grown in a sandy loam and vegetable mould, blooms very freely. The old *Grandiflorum*, with its bluish-white flowers, is known so well, I need not recommend it more.

*Anemone Japonica*.—This is a beautiful bedding plant, blooming from July to November; grows half a-yard high, and its fine rose-coloured flowers are particularly showy at the latter part of the season.

*Pentstemons*.—There are many fine kinds, which answer admirably, and bloom profusely. *Cloasii*, scarlet outside, pure white inside, is most charming. *Gigantea elegans*, with its brilliant crimson flowers, very showy. *Chandlerii*, with its neat rosy-red, is very pretty; it is of a dwarf shrubby habit. The fine blues, as *diffusus*, *ovatus*, *pubescens*, and *speciosus*, are alike beautiful, profuse bloomers, and very neat.

*Roses*.—Mr. Cox, of the Durdham Down Nursery, has given a list of Roses, that answer admirably for grouping in this style of cultivation. The following kinds are what he enumerates, and which we extract from the "Magazine of Botany." Such might be obtained in pots, and supply for the present season's bloom.

*Hybrid Perpetual*.—*Baronne Prevost*, bright rose; *Dr. Marx*, carmine; *Duchess of Sutherland*, mottled-rose; *Geant de Batailles*, brilliant crimson; *La Reine*, glossy-rose; *Madame Laffay*, bright crimson; *Standard of Marengo*, brilliant crimson; *William Jesse*, lilac-crimson.

*Bourbon*.—*Bouquet de Flora*, carmine; *Compte d'Eu*, bright carmine; *Enfant d'Ajacio*, scarlet-crimson; *George Cuvier*, rosy-crimson; *Grand Capitaine*, fiery scarlet; *Pierre de St. Cyr*, glossy rose; *Queen*, fawn colour; *Souchet*, purple-carmine; *Souvenir de la Malmaison*, white with fawn centre.

*China*.—Archduke Charles, light rose; Clara Sylvain, pure white; Eugene Beauharnois, bright lake; Mrs. Bosanquet, creamy-white.

*Tea-scented*.—Adam, rosy-blush; Comte de Paris, creamy-blush; Devoniensis, cream with buff centre; Elise Suavage, cream with orange centre; Safrano, deep fawn.

*Noisette*.—Aimie Vibert, pure white; Narcisse, pale lemon; Ne plus Ultra, creamy-white; Ophirie, bright gold and salmon.

The above will bloom till frost arrest them. None of the kinds produce the green centres which some others are subject to. He recommends a bed of a sort, and contrasting the colours as distinctly as possible to produce the best effect.

*Calceolarias*.—The amplexicaulis is a fine kind, grows two feet high, and if the plant is properly managed, by pruning in, stopping the leading shoots, it forms a fine bushy one. The flowers are of the more globe-shaped, large, and a beautiful primrose yellow colour. If allowed, it rises two feet high, but by stopping the leads, it will bloom freely at any height desired. The *C. integrifolia* is more woody, and the flowers of a deeper colour, also of a less size, but are produced in vast profusion. It is a fine species. *C. viscosissima*, is of a sulphur-yellow colour, and beautiful. The Kentish Hero is a strong grower, and blooms freely. The flowers are of a bronzy-red and orange colour. It blooms admirably in the open air. There are some others of the shrubby class, with flowers of the following colours, viz., a rich crimson, purple, velvet, and orange.

*Dianthus refulgens* is a splendid thing for a bed. The flowers are of the richest crimson, and rise about a foot high. It blooms from May to the end of the season. There are a number of beautiful varieties of the old well-known Indian Pink, having double flowers, that are admirable for a bed of dwarf flowers. A fine assortment has been raised by the continental gardeners, and which have been sent over to this country. Some with single flowers, too, are truly elegant in stripes and spots.

*Fuchsias*.—I scarcely need to do more than just name this very charming family of flowers, as admirable bedding plants. The slender-growing kinds, such as the old *F. gracilis*, *splendens*, *Thompsonia*, *elegans*, *formosa elegans*, *microphylla*, *globosa major*, *coccinea*, *bacillaris*, *multiflora*, and similar habited ones, do the best; their wiry branches throw out the flowers to full view, and, hanging so gracefully, are admired by all beholders. Every flower garden ought to have these charming ornaments.

*Hydrangeas*.—These are noble flowers for a bed; the blue, in contrast with the rose-coloured, are very pretty. The best way to manage this is to have the plants in pots, and forward them in a frame or greenhouse, till it is seen they are certain to have heads of bloom. This being ascertained, turn them out into the bed. If it be desired to have an early flowering bed, that can be easily provided for, and a succession of later blooming plants be afterwards plunged in between the first ones, or when the others fade, take them up and fill in with a fresh supply.

*Mesembryanthemum tricolor*.—This makes a bed of truly beau-

tiful dwarf flowering plants. They require to have full sun to expand their lovely blossoms; they require a rich loam and a sprinkling of lime rubbish. The flowers are of a purple and white, with a dark eye. *M. coccineum*, red flowers; *M. micans*, shining scarlet; and *M. speciosum*, rosy crimson, also do well in beds, in a sod as above named.

*Oxalis Boweii*.—This is a charming plant for a bed, when the flowers are required to be from six inches to a foot high. They bloom beautifully up to October.

*Oxalis Lutca* is also a fine plant; its bright golden-yellow flowers are very showy.

*Petunias*.—So numerous are the varieties we now have, that they can be had of many shades of colour. They should be planted where they can have the benefit of a free air. *P. model*, a rich purple with a light eye, makes a fine bed, but the branches should be pegged down. *P. beauté supreme*, flowers purple, large, and showy. Each of the varieties of so numerous a family, are handsome, and make a pretty show. Thin away all luxuriant shoots, which soon repays.

*Phlox Drummondii*.—Now there are numerous varieties of this charming flower, all of which are handsome, and succeed well in a compost of equal parts of loam, peat, and leaf-mould, and a slight covering over the surface of the bed, between the plants, is essential to success in hot weather. I have it done with neat moss, which is kept at its place with small sticks pricked in. If the soil become much heated by hot sun, the plants soon die. The variety *LEOPOLDINA* has very pretty deep pink flowers, with a clear white centre. It is particularly handsome, and one of the best for flourishing in the open bed. It merits a place in every flower garden, as does the variety *P. oculata*, white with violet eye. The *Phlox depressa* is a fine plant for a bed; the flowers are of a rich rosy-purple colour, produced in profusion, and blooms from the middle of May to the end of summer. The plant is of stiff vigorous growth, about a foot high. It is an hybrid variety, raised between one of the hardy perennial kinds and *P. Drummondii*.

*Silene Shaffrői*.—This is a beautiful little hardy herbaceous plant, growing about six inches high, forming a carpet of its foliage and pretty bright purple flowers, each flower an inch across. It continues in bloom from May to the end of summer; and for a bed of dwarf flowers, it is a valuable and elegant plant.

The subject will be continued in your next number.

## DIRECTIONS FOR GROWING WINDOW PLANTS.

A FEW young men, resident at the village of Cow Cross, near Stockport, have established (in connexion with a Sunday-school) a society for encouraging a taste for gardening; and in order to promote the culture of *window plants*, have drawn up the following directions, which we gladly insert, and hope it may induce others to follow so laudable an example:—



Give a free supply of air every day, except in very frosty weather.

Water your plants as they require it; which will be about once a-day in summer, but in winter much less frequently. In summer, the evening is the best time for watering; in winter, the morning.

Never let your pots stand in water. It is a good plan to fill the saucers about two-thirds full of small pebbles or coarse gravel, on which to place the pots.

Keep your plants near the glass, and in a window where they will receive the direct rays of the sun.

Do not turn your plants often, or the stems will become weak and sickly.

Put your plants out of doors occasionally when it rains, and water them overhead at least once a-week. Keep the leaves perfectly free from dirt.

Allow all your plants a season of rest in winter, by giving them very little water, and keeping them in a cool place; taking care, however, to protect them from frost. Those which are required for flowering very early in spring, may be kept growing in winter.

Always use rain-water for watering your plants, and let it stand in the same room with them an hour or two before using it.

Keep your plants free from insects; tobacco smoke destroys the green-fly instantly.

Keep the outsides of your pots as clean as possible, and never paint them. The common earthenware pots are the best. Stir the soil at the tops of the pots occasionally, and train the plants as they grow. Remove dead leaves and flowers as they appear.

Geraniums, Petunias, Verbenas, and some other plants, are apt to become straggling in their growth. To prevent this, pinch off the ends of the shoots occasionally, which will induce them to throw out side branches.

Repot when necessary, taking care that the new pots are quite clean and dry. Put a handful of broken earthenware, in small pieces, at the bottom of each pot, and above it a layer of moss or rough turfy mould, to ensure drainage. If the roots are matted together, loosen them before repotting.

When your plants become too large, raise young ones from cuttings, taking care to cut them off just below a joint. Remove a few of the lower leaves, and plant the cuttings in sandy soil; they will soon strike root in the spring and summer months.

If you can conveniently do so, let plants which flower in winter and spring stand out of doors during the summer months.

A soil suitable for most window plants is one composed of three parts light fibrous turfy soil, from the surface of a pasture, and one part thoroughly rotten stable dung, with river or brook sand in sufficient quantity to allow of water passing freely through the soil. If peat can be obtained, a quantity of it can be added equal to the proportion of dung recommended to be employed. This soil should lie in a heap some time before it is used, and should not be crumbled too fine. A few lumps of charcoal mixed with the soil prove very beneficial to most plants.

## HORTICULTURAL SOCIETY'S EXHIBITION,

HELD AT THE GARDENS, CHISWICK, ON SATURDAY, MAY 18.

IN our remarks on the Exhibitions which took place at these gardens last year, we stated that in the immense number of plants shown, there was scarcely an ill-grown specimen presented. Not only were the plants of healthy appearance, but in *profuse* bloom, displaying the highest state of excellent cultivation, and that it certainly did appear no advance upon it could be made. Plants may be shown larger, but not in a better state of management. These remarks equally apply to the entire collection presented at the meeting just held. We have not space in our present number to give the entire descriptive particulars of the plants shown, and must reserve them for a future one.

The following NEW PLANTS were shown; and foremost was the QUEEN OF AQUATICS, VICTORIA REGIA; a flower and two leaves (one inverted so as to exhibit the under side to view) from Mr. Paxton, gardener to the Duke of Devonshire; who also presented a landscape, representing the manner of growth of the plant in its native waters. A flower and leaf of the same plant was shown by Mr. Ivison, gardener to the Duke of Northumberland at Sion House gardens, near Brentford.

By Messrs. Veitch. *Rhododendron jasmineflora* (Jasmine-flowered). It is a greenhouse evergreen plant, with long narrow petalled, waxy, white flowers, very fragrant.

By Mr. Stanley. *Hovea*, a new species, in the way of *H. Celsii*, but of much better habit, more bushy, and a better bloomer.

By Messrs. Standish and Noble. *Viburnum plicatum*, a shrub bearing a profusion of large balls of white flowers. It is a native of Japan, and was first imported by the Horticultural Society. It is a very valuable acquisition.

By Messrs. Veitch. *Stytidium ciliare*; the flowers pale yellow, with fringed edges; very pretty. And *Dendrobium transparens*; the flowers are pink and white; very handsome. Also *Bolbophyllum Lobbianum*, spotted and marked with buff; a *Cælogyne*, *Pimelea Reippergiana*, and *Bossiaea Hendersonii*.

*Rhododendron formosum*; a fine specimen was sent by Mr. Edmonds from Chiswick House gardens. The flowers are white, stained and spotted in the upper petals with yellow. They are fragrant, too.

PELARGONIUMS—(New seedlings). By Mr. Hoyle. *Ocellata*; a rosy-pink, having a very distinct deep crimson spot on each petal; very beautiful, and good form.

*Incomparable* (1849 seedling). By Mr. Beck. The colour is fine, a rich dark scarlet with a large velvet blotch on the upper petals. The margin was slightly notched, but very probably it is not always so.

*Diana* (1849). Upper petals, a large clouded spot, edged off with crimson; the lower ones a flesh colour, with a slight spot of crimson on each. The upper petals had a somewhat wavy surface.

No. 1, Mr. Beck's. Upper petals, a large velvet clouded blotch, edged off with crimson; lower, rose veined with crimson; centre, white. The edges of upper petals a little wavy, but otherwise superb.

*Purpurea*, Mr. Beck's. Upper petals, a dark clouded blotch, edged

off with crimson; lower, purple with a darker spot on each; fine form.

**COLLECTIONS.** New varieties, in 8-inch pots. 1st, Mr. Cock of Chiswick—Salamander, Pictum, Centurion, Rosamond, Mont Blanc, and Mars; 2nd, Mr. Robinson, gardener to J. Simpson, Esq.—Forget-me-not, Gulielma, Orion, Armada, Negress, and Pearl; 3rd, Mr. Stains, Middlesex-place, New-road—Alonzo, Pearl, Negress, Lalla Rookh, Forget-me-not, and Gulielma. Nurserymen: 1st, Mr. Dobson, gardener to Mr. Beck—Cuypp, Mont Blanc, Rosamond, Gulielma, and Emily; 2nd, Mr. Gaines—Rosamond, Aspasia, Mrs. Beck, Juliana, Armada, and Duke of Northumberland. Old kinds in 11-inch pots: 1st, Mr. Cock—Rosamond, Salamander, Bertha, Forget-me-not, Pearl, and Orion; 2nd, Mr. Parker, Roehampton—Orion, Zanzummim, Forget-me-not, Pearl, Negress, and Rosy Circle. Nurserymen: In this class Mr. Gaines was the only competitor. His plants were insufficiently in bloom.

**FANCY PELARGONIUMS.** 1st, Mr. Robinson—Anais, Queen Superb, Statuiski, Jenny Lind, Fairy Queen, and Empress; 2nd, Mr. Stains—Yeatmanianum grandiflorum, Nymph, La Belle Africana, Madame Miellez, Statuiski, and Queen; 3rd, Mr. Gaines—Madame Miellez, Elegans, Jenny Lind, Anais, Madame Rosati, Odorata, and Magnifica. Mr. Ambrose had Statuiski, Anais, Lady Rivers, Ibrahim Pacha, Duchess d'Aumale, and Picturata. Mr. Moseley also had six varieties, but they were not different from the above.

**AZALEAS** were numerous, large, and fine, and they made, as they always do at the May show, a striking display. Two excellent collections of twelve plants were produced; one from Mrs. Lawrence, of Ealing Park; the other from Mr. Green, gardener to Sir E. Aubrus, Bart. It is difficult to say which of these groups was the best; Mr. Green's plants were better flowered than those of Mrs. Lawrence, but they were all, or nearly all, trained "to a face," while those from Ealing Park were alike bushy on all sides. They consisted of coronata, optima, præstantissima, Gledstanesi, double red, Chinese yellow, variegata, Lawrenceana, lateritia, exquisita, magniflora, and Rawsonii. Mr. Green had a fine plant of exquisita, indica alba, triumphans, lateritia, Chinese yellow, præstantissima, variegata, Gledstanesi, optima, and rosea punctata. Mr. Lane, of Great Berkhamstead, sent indica alba, double purple, magniflora, optima, Leucomegista, mirabilis, double red, Broughtonii, grandis, triumphans, picturata, and punctata. Groups of six plants were furnished by Messrs. Frazer, Carson, and Bruce. Among these we remarked, optima, variegata, sinensis, Smithii, coccinea, exquisita, lateritia, Gledstanesi, præstantissima, speciosissima, and splendens.

## FERNS GROWN IN WARDIAN CASES.

BY CLERICUS.

I HAVE noticed with much pleasure that there are advances making now-a-days in the culture of this charming tribe of plants, especially by the ladies; and as they can be grown in rooms, in Wardian glass cases, every large sitting-room can be enlivened by them. The fol-

lowing descriptive list of the most suitable and ornamental, I extract from the *Magazine of Botany*, which will be a guide to purchasers.

Most of the following sorts mentioned are to be obtained without much difficulty :—

*Polypodium Dryopteris*.—Bright green, delicate, and pretty ; fronds nearly triangular in outline, annual ; height four to eight inches ; caudex creeping.

*Polypodium vulgare cambricum*.—Evergreen ; fronds broadly lance-shaped, with a kind of fringed margin ; height six to ten inches ; caudex creeping.

*Allosorus crispus*.—Very elegant, parsley-like ; fronds almost triangular in outline, annual ; height four to six inches ; caudex tufted.

*Lastrea Oreopteris*.—A sweet-scented Fern ; fronds lance-shaped in outline, annual ; height one and a-half to two or three feet ; caudex tufted.

*Lastrea Filix-mas*.—One of the commonest, but a very elegant Fern ; fronds lance-shaped in outline, annual ; height two to three feet ; caudex tufted.

*Lastrea rigida*.—Very elegant ; fronds lance-shaped in outline, annual ; height one to two feet ; caudex tufted.

*Lastrea Farniseii*.—Very elegant and compound ; fronds nearly triangular in outline, annual ; height one to two feet ; caudex tufted.

*Polystichum Lonchitis*.—Very rigid and holly-like, evergreen ; fronds narrowly lance-shaped in outline ; height six inches to one foot ; caudex tufted.

*Polystichum angulare*.—Very elegant and graceful, sub-evergreen ; fronds broadly lance-shaped, drooping ; height two to three feet ; caudex tufted.

*Cystopteris fragilis*.—Very delicate and pretty ; fronds lance-shaped in outline, annual ; height six to ten inches ; caudex tufted. There are several varieties, all of which are very interesting.

*Athyrium Filix-femina*.—The Lady Fern, one of the most elegant ; fronds lance-shaped in outline, drooping, annual ; height one to three feet ; caudex tufted. There are several varieties, of which one is like a dwarf-curved parsley, but the most elegant has tasselled pinnæ.

*Asplenium Adiantum-nigrum*.—Evergreen and glossy ; fronds elongate, triangular in outline ; height six inches to a foot ; caudex tufted.

*Asplenium marinum*.—Evergreen and glossy, dense in its habit ; fronds lance-shaped in outline ; height six to ten inches ; caudex tufted.

*Asplenium Trichomanes*.—Evergreen, with black wiry stalks ; fronds very narrow ; height about six inches ; caudex tufted.

*Ceterach officinarum*.—Evergreen ; fronds lance shaped in outline, green above, scurfy beneath ; height about four inches ; caudex tufted.

*Scolopendrium vulgare crispum*.—Evergreen and very distinct in appearance ; fronds narrow lance-shaped, undivided, the margins crisped ; height, eight inches to a foot ; caudex tufted.

*Adiantum Capillus-veneris*.—Evergreen, and very elegant and distinct ; fronds irregular, but somewhat ovate in outline, the little wedge-

shaped leaflets attached by fine wiry stalks; height, about six inches; caudex tufted.

*Blechnum Spicant*.—A very elegant and distinct Fern; fronds narrowly lance-shaped in outline, annual; height, one foot or more; caudex tufted.

*Trichomanes radicans*.—Delicately transparent, and very beautiful when seen in a vigorous state; fronds either triangular-ovate or lance-shaped, drooping; height six inches; caudex creeping.

*Hymenophyllum Tunbridgense*, and *H. Wilsoni (unilaterale)*.—Moss-like, forming dense matted masses, deep dull green, and uninteresting at first sight, but very beautiful on minute examination.

### BRIEF REMARKS.

GAZANIA PAVONIA (Erratum, page 115.) The petals are very much larger than those of the *G. ringens*, of a dark orange colour, while the latter are of a yellow orange colour.—G. C. II.

INGA PULCHERRIMA.—Last summer I purchased a plant in bloom; it ceased only with the approach of winter. I kept it rather dry during its winter rest, and in February put it into a larger pot, and placed it in a moderately heated small stove, and now it is in profuse bloom. Its splendid crimson, thread-like, long filaments, like so many beautiful tassels, render it one of the most charming shrubby plants for the greenhouse or sitting-room that I ever saw. The foliage, too, is of the Acacia or Mimosa form, elegant and pretty. I recommend the plant to all admirers of flowers possessing a habitation for it.—*Clericus*.

ON POTTING AND SHIFTING PLANTS.—Much, if not the greater part, of the success in cultivating plants in pots depends upon a proper method of potting and shifting them, and this as much in the state of the materials employed, as in the manner of employing them. But in vain may soil, situation, and treatment be consonant to their natures, if care and attention have not been paramount in this branch of their treatment. When plants are in their borders, they are in a great measure attended to by nature herself. But when we place them in pots, we give them an artificial habitation, and they then require of us artificial treatment to reconcile them to an abode foreign to their natures.

First, the soil will, of course, be a composition suitable to the particular plant or plants to be potted; but of whatever it may be composed, particular care should be taken that it is not too wet nor too dry. If the former, it becomes, during the process of potting, a compact mass, which, contracting as it gets drier, leaves a vacuum between the exterior of the pot and the ball of the plant, thus allowing the free admission of light and air, which is, of course, anything but beneficial to the plant. If, on the other hand, it be too dry, it prevents, for a considerable time, the free passage of moisture to the roots, and it will often be found, especially if the plant itself is dry at the time of potting, that it will suffer greatly ere it receive sufficient moisture to recruit the evaporation of its juices. Secondly, the pots, if not new ones, should be scrupulously clean; for if the advantage were nothing more

than the facility obtained in turning out the plant to examine or re-shift it, it would amply repay the trouble. But independent of this, a plant enjoys better health in a clean than in a dirty pot; and if no other consideration would urge to cleanliness, appearance would decide in its favour. Thirdly, drainage should combine two properties—to allow free exit to the superabundant moisture, and to prevent the entrance of worms; and although the latter object is somewhat difficult of attainment, we should seldom have to complain if plants, when placed in situations where worms are likely to abound, were set upon a sufficiently thick layer of cinder-ashes, or some similar material; cinder-ashes, I think, claiming the preference, as we seldom see worms attempt to penetrate them if two inches in thickness. To allow a free passage to the superabundant moisture, let the crock covering the drain-hole be placed so as to form an arch, with a few smaller ones placed round it, covering the whole with a slight quantity of moss, sufficient to prevent the finer particles of soil being washed round the larger crock, which would effectually obstruct the drainage, when the soil would become sour and unhealthy, and, as a natural consequence, the plant would follow its example. Fourthly, the depth of potting should be regulated by the mark which nature points out, and which is always conspicuous in plants raised from seed; at all events, let it not be placed deeper than when it receives its first remove from the cutting or seed-pod. To bury an inch or two of the stem of a plant is very injurious, although a practice of common occurrence with careless potting. Fifthly, in leaving a sufficient space in the pots to receive water, let it on no account form a kind of basin, that is, a hollow, round the stem, but let the soil round the stem be as high as the rim of the pot, receding gradually to a depth round the rim, agreeably to the size of the pot, the nature of the plant, or the situation in which it is to be placed.

I feel confident, if these few simple rules were followed, many plants which we now see dying, or at best barely vegetating, would be *vice versa*.—*Gardener's Chronicle*.

**CHEIRANTHUS MARSHALLII.** (Marshall's Wallflower.)—We have some plants in bloom of this very beautiful hybrid, which has been produced between the *Erysimum Perofskianum* and *Cheiranthus ochroleucum*. The flowers are of a rich orange-yellow, and have a powerful violet fragrance. No doubt but it will be as hardy as the common Wallflower, and as easily propagated and cultivated. It is a charming plant either for pots or the open border.—*Conductor*.

**ON THE PROPER MODE OF EXHIBITING CARNATIONS.**—We cannot see such a movement in floriculture as that proposed by Mr. Edwards, without regretting that there should be anything introduced that creates a difference of opinion; but that man must surely be in error who cannot see where a difference begins; and the entire responsibility of all divisions rests on the individual who makes the first deviation from established and approved rules. The great northern tulip show might have been a grand affair, had there been no "split;" and on whom does the responsibility of this rest? On the first man who proposed an alteration in the subscription, from five shillings to ten. On whom will the responsibility of the worst division that ever took place

rest, if Mr. Edwards persist in the unfloristlike withdrawal of the test applied ever since showing was the fashion? Why, on Mr. Edwards. It is an insult to a good florist to propose that he shall show his flowers with a card. It is a reflection on the best florists of the day, to introduce a system that shall enable every man to mask his flowers, and force a good grower to hide by a card that portion of his flowers which it is his pride to show in health and perfection; for notwithstanding the Irish language in which the eighth proposed rule is couched—notwithstanding it is impossible to conform to it, until a thing “covered” is a thing “exposed,” we all know what it means. It does not mean that the pod shall be exposed, but it does mean that the card shall in part cover it. Let any florist (we speak of those who can command a good bloom by their skill, and not of those who rely on numbers for the chances of finding enough, and who would rejoice in the toleration of split pods), let any florist see the various means by which cards are kept in their places, and say that pods can be exposed. We have seen the best growers, after the judges have done their work, carding the flowers: some cut their cards so that vandyke springs, as it were, cover the best or largest portion of the pod; others drag the stems and pods through pieces of paper; something must be done to keep the cards up in their places, and hide the pods, whereas the pride of a good florist is to show that he can get a good bloom without damaging his pod; the pride of a good flower is that it shall bloom freely without bursting. What but a determination to raise two parties in the floral world, can be the object of changing the tests by which skill in raising and skill in blooming are to be recognized? We are not prepared to cast a slur upon thousands of old florists whose lessons we respect, and who have always regarded the slightest tie or card as a disqualifying blotch; and however much we may respect Mr. Edwards and his motives, we can tell him that his proposal, which is only carrying out Mr. Lightbody's, Mr. Slater's, Mr. Barringer's, Mr. Twitchett's, and twenty other growers' notions, is popular; but if he persists in showing on cards, there will be a worse split than ever deranged floriculture before, and that on him alone will rest the responsibility. That he will get up a show there is no doubt; but if he, or any other grower, will tell us seriously that it will be half so good, or be competed at by half so many good florists, as it would with the old honest way of showing, we should contradict him with nearly forty letters from respectable florists, who thank us for the stand we have made in behalf of fair, open, honest showing, and who declare that those who choose to create a new division in floriculture, may show by themselves. We have felt half inclined to publish these letters, because many are from men whose names would carry weight; but we are in hopes that the good sense of all classes will prevail sufficiently to force the abandonment of so discreditable a proposition as judging carnations and picotees on cards.

G. G.

*To the Northern Growers of the Carnation and Picotee.*

GENTLEMEN,—Enabled by the courtesy of the editor of this excellent work, to address you, I beg to invite your attention to the remarks of Mr. Edwards, at pages 47 and 101, on the difference, or assumed difference of opinion existing between northern and southern culti-

vators of these flowers, and to the proposed means of merging such difference. I believe every thinking florist will agree with me in regarding the subject as one of great moment to all individually, and its important bearing on the interests of floriculture cannot be questioned. Speaking from experience, I can truly declare, that I have long felt the necessity for bringing this question to an issue, and I presume that I am not singular in this experience. What then, gentlemen, is our plain duty? Let us take counsel together. Should we be lukewarm and indifferent, or prompt and energetic, in the expression of our opinion, as confident in our faith? Can we hesitate? Are we men possessed with a reason for the faith that is in us, and earnestly desirous of diffusing the truth? or are we mere pretenders—empirics—seeking to delude, and shunning the light? These are questions we must severally answer, and our future position depends on our response. Come forth then, gentlemen, in your whole strength, and soon this hydra-headed discord shall melt before your might. Examine the proposition fairly, give it your most attentive consideration, and I feel persuaded, the more you consider it, the more will you approve the plan, and the more heartily join me in rendering honour to those who conceived and who are now busily engaged in perfecting this good work. And, gentlemen, it will be perfected. Every sign of the times indicates the progress of our dearly-prized science, and forbids that delusion, and doubt, and empiricism, shall obscure its path. All honour to the men who have stood forth to rescue us from taint and shame, and who now stand forth ready to lead to further victory.

But one point may excite your doubts and fears; it is proposed that “the flowers be shown on cards.” Let us calmly and temperately reason on this. The knowledge of the truth is to be arrived at only by careful research, and by wholly divesting ourselves of prejudice and foregone conclusion. To this I invite you. You are told the introduction of the card will be the prelude to every evil: that in its train will come thin petals, short gouty and split pods, and all that can debase our own pet flower. Can this be so? If thin petals must of necessity follow the permitting the flower to be shown on a ground, how is it that the pansy, a flower always so exhibited, has attained the substance it now possesses? And as to the possibility of admitting split pods, the asserters of such a fact must be strangely ignorant of the application of the card, or presume wonderfully on your gullibility; for if I have read “your annals” right, no pod is a split pod, unless the division reach the sub-calyx; and as the length of the pod above the sub-calyx is on an average full an inch or upwards, how a card the sixteenth or twentieth part of an inch in thickness, can cover an inch or more, I am indeed at a loss to discover. It is merely an illustration how far men may go when blinded by passion or prejudice. But this is not all. You are told, “judges cannot discriminate the better flower on a card.” Who and what, then, are judges? Are they abstract creations, of different requirement to all ordinary men? or are they not, if of the best, merely exhibitors of the highest class? And you, exhibitors, do not you invariably discriminate the better flower on cards? Is it not your regular practice to select your flowers for exhibition whilst on cards? Why then should you question the ability of men



whom you hold to be in advance of yourselves to do so? Put away such fears, they become you not. No evil can be alleged as attendant on the card, which does not exist in at least as eminent a degree without it. Why then should we hesitate? The grace and finish is admitted by all, even by those who would fain excite your prejudice. An excellent cultivator, writing from Leeds, says, "many here laugh at the idea of showing on cards. However, I was convinced of the merit of the plan, when with you, last year; and only wish others would go this year, and at all events give the thing a fair trial."

Gentlemen—I am so convinced of the merit of the system—so convinced of its beneficial effect on the culture of these flowers, that all I ask of you is, give it a fair trial. Be assured, the model flower of the north, its faultless outline, spotless purity, and brilliant marking, is as much enhanced by the card as the confused heap of petals your fears may conjure up is aided; and, my word for it, your opinion will suffer nothing by its adoption.

One word before I close. At the time I write (April 15), the success of this movement is decided. Already an expression, unprecedented in its unanimity, has been recorded; and those who would desire to claim a share in bringing this question to an issue, must be prompt, or be too late. Rest assured, opposition cannot hinder, or supineness retard its progress.

I am, Gentlemen, your faithful servant,

(*Midland Florist.*)

E. S. DODWELL.

BRITISH FERNS.—The following are the most elegant, and flourish when grown in glass cases:—

*Polypodium Dryopteris*, bright green, pretty; eight inches high.

— *vulgare Cambricum*, evergreen, lance-shaped; nine inches.

*Allosorus crispus*, parsley-like, very elegant; six inches.

*Lastrea oleopteris*, lance-shaped, fragrant; two to three feet.

— *Felix mas*, lance-shaped, very elegant; two to three feet.

— *rigida*, lance-shaped, very elegant; one to two feet.

— *Faniseeii*, compound leaves, very elegant; one to two feet.

*Polystichum Lonchites*, evergreen, holly-like, very stiff; one foot.

— *angulare*, sub-evergreen, broad lance-shaped, very elegant, two to three feet.

*Cystopteris fragilis*, lance-shaped, delicate and pretty; nine inches.

*Athyrium Felix-feminae* (Lady Fern), lance-shaped, one of the most elegant; one to three feet.

*Asplenium Adiantum nigrum*, evergreen, glossy; nine inches.

— *marinum*, evergreen, glossy, lance-shaped; nine inches.

— *Trichomanes*, evergreen, black wiry stalks, narrow leaves; six inches.

*Ceterach officinarum*, lance-shaped, evergreen; four inches.

*Scolopendrum vulgare crispum*, evergreen, lance-shaped; one foot.

*Adiantum capillus-veneris*, evergreen, very distinctly elegant; six inches.

*Blechnum Spicant*, narrow lance-shaped, very elegant; one to two feet.

*Trichomanes radicans*, transparent, delicate, beautiful; six inches.

*Hymenophyllum Tunbridgiense*, moss-like, beautiful, dull green.

*Osmunda regalis*, lance-shaped, almost too large; but a small plant will thrive well, lance-shaped.—*Moore on Ferns.*

**OPERATIONS FOR THE MONTH**  
**IN THE FLOWER GARDEN.**

**T**HE recent fine weather would allow for the planting out in beds, &c., half-hardy as well as the tender annuals, Heliotropes, Pelargoniums, Verbenas, Petunias, Celcias, 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, &c.**

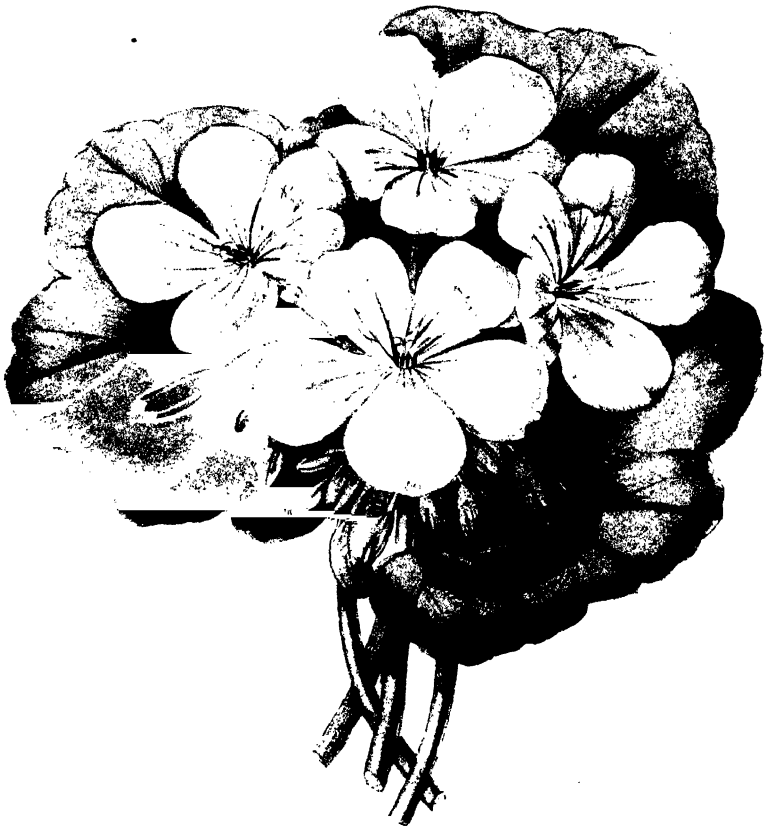
The greenhouse plants which are placed out of doors will require be duly watered, for if allowed to flag the result is the leaves damaged. Moss sprinkled between the pots keep the soil cool.

The house will now have to be kept gay and sweet by Balsa Globe *Amaranthus*, Cockscombs, *Brachycoma*, &c. Re-pot as require to keep the plants in a growing state. *Achimenes* will now be com into bloom; they repay for every attention. Cuttings of nearly greenhouse plants should now be put off: May and June are the months for that purpose. *Cinerarias* are highly ornamental, and worth encouraging. Cuttings of *Roses* may be put in, and will strike. *Camellias* that have been forwarded by forcing the shoots and buds, should now be placed in a cooler situation, to give vigour them. When the grass of *Ranunculus* or *Tulips* is quite dead, 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, & others may follow them as fast as they go out of bloom. Examine plants very carefully, and see that they are in a proper state as 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 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 proper foundation for a good specimen. As the principal specimens go out of bloom they may be removed to a shaded situation to maintain their growth, being previously cut in if necessary. Supports for awning must be placed over them, so that in case of heavy storms 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 a short time. Re-pot any requiring it, but do not over-pot; the one-sided 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.)





*Tom Thumb's Bride.*



### PELARGONIUM. VAR. TOM THUMB'S BRIDE.

**W**ITHIN the last half-dozen years particular attention has been directed to obtain improved varieties of that class of Pelargoniums, usually termed SCARLET GERANIUMS, and the result has been very successful.

Of the section denominated HORSE-SHOE LEAF GERANIUMS, which comprises varieties whose leaves are very distinctly horse-shoe marked, others wholly destitute of it, and the flowers of all shades of colour from the richest crimson and scarlet down to the white flowered, there are sixty named kinds, and each successive season there is a nearer approach to perfection in form of flower, so that we have some that when fully expanded very nearly fill up a complete circle.

In habit of growth there is too a great variety, from the very dwarf SCARLET MINIMA to those of gigantic stature, some of which we have seen trained to the height of ten or twelve feet. The charming variety Tom Thumb, now so well known and generally cultivated as a bedding plant, or for outside of windows, is a universal favourite, and recently some seedlings from it have been raised equally dwarf, but having more perfectly formed flowers. About three years ago a very pretty variety, named Lucia-rosea, was introduced into this country from Paris, having flowers of a beautiful delicate colour, with the lower portion of the two upper petals white, being much admired; plants were soon in every nurseryman's possession throughout the country. The charming variety we now figure was raised by Mr. Salter, of Versailles Nursery, Hammersmith, from a seed obtained from Lucia-rosea, which had been impregnated by one of the dwarf scarlets. The plant is of dwarf habit, compact, and a profuse bloomer. It is a very lovely variety, and merits a place in every greenhouse, dwelling-room, window, or flower-garden.

The following selected varieties are now offered for sale at the general nurseries, and may be obtained at a very reasonable price:—

Albiflora.	Magnum Bonum, fine.
Antagonist (Knight's).	Master Squires.
Beauty of St. John's Wood.	Miss Arnott.
Brompton Hero.	Mrs. Maylor.
Captain Darley.	Nimrod.
Cerise Unique.	Perpetual (Glendinning), fine for
Cherry Cheek.	winter flowering.
Collins's Scarlet.	Prince Albert.
Commander-in-Chief.	of Wales.
Compactum superba.	Princess Royal.
Cottage Maid.	Prizefighter (improved).
Eclipse.	Punch, very fine.
Fair Helen.	Queen (Rigby's).
Fireball.	of Summer.
Fire Queen.	Rosea florabundum.
Frogmore (improved).	Rosy Morn.
Gem of Scarlets.	Royalist.
Globe (compacta).	Scarlet compactum.
, scarlet.	Shrubland, superb.
Hartwick's Surprise.	Symmetry.
Hendersonii.	Tedworth horse-shoe.
Honeymoon.	Tom Thumb.
Huntsman.	, improved.
Hydrangæflora, fine.	's Bride.
Ivery's Scarlet.	, General.
Judy.	, Master.
King (Rickard's).	Trentham Scarlet.
Lady Agnes Byng, fine.	Vivid.
Lucia-rosea.	Winchester, scarlet.
superba.	Zonale (white flower).

We have inserted the above that our readers may know how extensive the assortment now is, and a general collection of them is well worth possessing. They can be procured readily and at little cost, are easily cultivated, readily increased, and kept without difficulty.

For many years we have had in our collections of Geraniums two varieties, named the gold and silver edged, the former having bright rosy-red flowers, and the latter of a lilac colour, but the markings on the leaves were not very distinctive, and the flowers of inferior form, having very narrow petals. Attention has recently been paid to improve this very interesting section, and now we have varieties with beautiful variegated foliage of both the gold and silver edged kinds.

The following are the best kinds, and whether grown in-doors or in the open beds they are alike beautiful:—

GOLDEN BEAUTY, or large-leaved golden	} Both have scarlet
GOLDEN MULTIFLORA, or lesser-leaved golden	
LEE'S NEW STRIPE. The leaves have a broad edging of white, and	

the centre has a deep green leaf-formed mark, the flowers are scarlet of fine shape too.

**THE GOLDEN CHAIN.**—Leaves large, with a broad rim of rich yellow, and having a leaf-shaped green at the centre. The flowers are scarlet of excellent form. It is a charming variety.

**THE FLOWER OF THE DAY.**—This fine variety was recently raised from seed by Mr. Kinghorne, gardener to Earl of Kilmorey, of Orleans House, Twickenham, who also raised Lee's New Stripe. The latter variety was impregnated by the Scarlet Globe Compactum, and the result was the production of the Flower of the Day. Lee's New Stripe is of a tardy growth, and not very readily increased, but this one grows most freely, and strikes quickly. It is of medium habit of growth, soon forming a bush. The leaves have a deep green centre, with a broad margin of a creamy-white. The flowers are of good form, borne in large trusses, and a rich crimson-red colour. Messrs. Lee possess the stock of this fine variety, and we recently saw several hundred fine plants of it.

**SILVER BELT.**—This variety has a pure white margin.

**NARROW SILVER-EDGED.**—The edging is distinct, it is bent just like that of a narrow-edged Picotee. The flowers are of pretty lilac colour.

**QUEEN OF THE YELLOWS.**—The centre of the leaf is a rich green, then a distinct dark horse-shoe mark, and beyond a broad margin of pale yellow, very pretty.

There are a few varieties which have a yellow leaf-shaped mark in the centre of the leaf, and the remainder a rich green. The Queen of Summer is of this class, and is very neat. Some of the new varieties have a very dark horse-shoe mark; one variety, named Prince of Wales, has leaves which are strikingly beautiful. The green is of the richest dark kind, and the shoe mark is black. The leaf itself is of medium size, pretty round shape, of thick substance and even surface. It is a neat compact grower; the flowers are of a rich scarlet, good form, and showy.

The entire race of what is termed *Scarlet Geraniums* is easy of cultivation. Cuttings should be taken off early in June; when rooted pot off singly, and as soon as the leading shoot has extended six to nine inches, the top must be stopped in order to induce side shoots; this attention will perhaps be again necessary towards the end of summer. The object is to have good bushy plants. This is very essential for bedding plants, as well as dwarf ones for the greenhouse stage. Large specimens for the conservatory are easily obtained. In June or July cut down a young plant so as only to leave two eyes on the old wood, place it in an exposed situation out-doors, giving it but little water till new shoots have pushed; then shake off all soil, trim the roots, and re-pot the plant. Set it in a frame or pit, giving it little water until it begins to grow. When the plant will do without shading, place it in the sun. Rub off all the shoots that push except two of the strongest and best placed, and let them be secured. As the pots get filled with roots re-pot. Previous to frost take the plant in-doors, give but little water in winter. As the shoots push in spring thin away superfluous



ones, and tie those left in regular order, securing the lower ones to the rim of the pot, and so upward in regular succession. By this attention a plant of any desired height may be had, and of handsome form. By cutting in a young plant at various times, say July, September, and March, and duly treated, a bloom may be had nearly all the year.

Large plants with long shoots should have them cut back near to their origin, to be formed anew.

## NOTES ON NEW OR RARE PLANTS.

**AZALEA COCCINEA-SUPERBA.**—A fine orange-red, and of excellent form.

**AZALEA SMITHII-COCCINEA.**—Bright orange-red, with a purple tinge on the upper segment; good form.

**AZALEA OPTIMA.**—Fine orange, with darker blotch on upper segment; flower large, good form, and very showy.

**AZALEA IVERYANA.**—A white flower, with streaks of pink, and fine shape. It deserves to be in any select collection.

**AZALEA RAMENTACEA.**—This small neat-growing species was sent from China to the Horticultural Society by Mr. Fortune. The flowers are white, small, and produced in umbels at the ends of the shoots. It is in the Society's garden at Chiswick.

**BERBERIS LUTEA.**—Mr. Lobb discovered this fine species in Peru, and sent it to Messrs. Veitch. It is a neat evergreen bush, growing eight feet high. The flowers are produced in large clusters, of a rich yellow colour. It is supposed to be hardy; if so, will prove valuable for the shrubbery.

**CÆREUS TWEEDIANA** (or *C. Leeanus*.)—This very beautiful species has recently been exhibited by Messrs. Lee, of Hammersmith, at the London shows, and much admired; its lovely orange flowers having a very pretty appearance. It bloomed last year in the fine collection at the Royal Gardens of Kew, and we then noticed it in our Magazine. It deserves to be grown wherever practicable.

**CAMELLIA DRYSDALII.**—In a previous Volume we noticed this very handsome variety. It was raised from seed in the nursery establishment of Messrs. Drysdale & Co., of Glasgow. The ground colour is a pretty rose, and each petal has a broad white stripe up the middle. The flower is a full double, and the petals of fine shape, round at the exterior, and free from notch, also of firm substance. The plant, too, is a free bloomer. It will be an acquisition to any select collection.

**CEPHALOTAXUS FORTUNII.**—A hardy tree from China, which grows from forty to sixty feet high. The leaves are four inches long, and broad. Mr. Fortune sent it, in 1849, to Messrs. Standish and Noble, of Bagshot.

**CHEIRANTHUS MARSHALLII.**—An hybrid wallflower, of considerable beauty, said to have been raised from seed obtained from a wallflower being impregnated with the fine orange-flowered *Erysimum Perofskianum*. The seedling retains the appearance of the wallflower, with light green leaves, and the flowers are of a rich orange-

yellow colour. They have a delicious violet fragrance. It is a lovely plant, grows very freely, and blooms profusely. The spikes of flowers are nearly a foot long.

**CLIANTHUS DAMPIERI.**—Dampier's Clianthus. (Synonymes, *C. Oxleyi*, *Kennedyia speciosa*, and *Donia speciosa*.) This handsome flowering plant has been raised from seed sent from New Holland to Messrs. Veitch, of Exeter, in whose nursery it has bloomed. It is a greenhouse perennial trailing plant. The foliage is like *C. puniceus*, pinnate, but the leaves more wide apart and larger. The flowers are borne in umbellate pendant heads of four or five in each. The standard is of a bright scarlet, with a deep purple stain at the base. The keel and wings are scarlet, much like those of *C. puniceus*. Each blossom is four inches across. It is said to be one of the greatest ornaments of the desert regions of Australia. It is readily cultivated and well merits a place in the greenhouse. (Figured in *Paxton's Flower Garden*, No. 10.)

**CLIDANTHERA PSORALIOIDES.**—This is one of a new genus of the pea-flowered order of plants. It is a native of New Holland, a half-shrubby plant. The flowers are white, and produced in spikes. It grows two feet high.

**GALANTHUS PLICATUS.**—A much finer snowdrop than the old one of our gardens. The blossoms are white and green; the latter colour very distinct, contrasting well with the white. They are larger than the common kind.

**HEDYCHUM CHRYSOLEUCUM.**—Golden and white garland flower. This is a fine old stove plant, growing four to five feet high. The flowers are borne in large spiked heads of numerous blossoms, each blossom being two to three inches across, of a pure white with a bright rich orange centre. They are deliciously fragrant. It blooms at the end of summer and autumn, and well merits a place in the stove. Like the tribe of Carmao it requires a good share of room. (Figured in *Bot. Mag.*, 4516.)

**HOYA PURPUREA-FUSCA.**—Brown purple flowered. Mr. Lobb found this interesting species in Java, and forwarded it to his employers, Messrs. Veitch, of Exeter. He states "it is a handsome climber, common in the woods at Panarang." It has bloomed in profusion in the stove at Exeter. It is a twining, smooth, branching shrub. The flowers are produced in heads similar to the *H. carnosa*. The corolla is of an ashy-brown colour, and the centre crown of a rich purple-brown. (Figured in *Bot. Mag.*, 4520.)

**HOYA CORIACEA.**—Coriaceous (leathery) leaved. Mr. Lobb discovered this species in Java on Mount Salak, and it has bloomed in the stove at Messrs. Veitch's nursery. It is a vigorous climber, leaves large, and the flowers in similar formed heads to *H. carnosa*, and are of a pale tawny-brown colour. This interesting tribe of climbing plants now known by botanists consists of about fifty described species, which are generally found inhabiting the moist woods of tropical India, and the Malayan Islands. The present species is figured in *Bot. Mag.*, 4518.

**MEDINILLA MAGNIFICA.**—The Magnificent. This fine species was

found by Mr. Lobb in Java, where it grows in the forest. It is an evergreen, stove, upright growing, bushy evergreen shrub, belonging to the natural order of Melastomads. It requires to be grown in a powerful moist stove heat, similar in degree to the Pitcher plants. This fine species has recently been exhibited at the London shows. It is a noble-looking plant, its massive leaves are a foot long and about five inches broad, of a leathery texture, and of the richest green. The flowers are borne numerously at the ends of the branches in large pendant panicles of nearly half a yard long. Each blossom is about an inch across, of a rich glossy rose colour, with purple petals, and large ribbed bracts near four inches long of a beautiful pink colour. (Figured in *Paxton's Flower Garden*, No. 12.)

**METROSIDEROS BUXIFOLIA.**—Box-leaved. Allan Cunningham describes it, when growing in its native country, New Zealand, as “a rambling shrub adhering to trees, and by its lateral roots climbing to the summits of the loftiest trees in the forests of Wangoara, Bay of Islands. In this country (at the Royal Gardens of Kew) it has a myrtle-like habit, five feet high, with robust branches and broad myrtle-like evergreen leaves. The flowers are in heads of an inch in diameter, petals small, white, filaments four times the length of the petals, white with bright yellow anthers. It requires to be grown in the greenhouse during winter. (Figured in *Bot. Mag.*, 4515.)

**MIMULUS RUBINUS.**—The colour is a rich crimson and yellow; the crimson forming a broad belt round the mouth of the flower. The inside of the flower is slightly spotted with crimson.

**MIMULUS AURANTIA SUPERBA**, or Prince of Orange. The colour is a beautiful orange-scarlet and yellow. The former colour forming a broad belt round the mouth. It is slightly spotted inside. The flower is large, and very handsome.

**MIMULUS** —The colour is a bright yellow, with fine large, well-defined, velvet-crimson spots at the front of the flower, one spot in each division of the mouth (limb). The blossom is very large and handsome.

**PENTADYNAMIS INCANA.**—The flowers are produced in racemes of a yellow colour. (*Paxton's Flower Garden*).

**PENTSTEMON AZUREUS.**—Azure-flowered. This very handsome species was discovered by Mr. Hartweg on the Sacramento Mountains in California, and sent by him to the Horticultural Society. It is a half-shrubby plant, growing half a yard to two feet high. It is a neat branching plant, which blooms in profusion, the spikes of flowers are nine inches or upwards long. Each blossom is a little more than an inch long, and the neat bell-shaped tube half an inch through. The size of the flowers, produced in profusion, and of a beautiful azure blue colour, render it a handsome plant either to grow singly, or in masses in beds, or even in the greenhouse in pots. It deserves a place in every flower garden or greenhouse, being highly ornamental. (Figured in *Bot. Mag.*)

**PENTSTEMON HETEROPHYLLUS.**—Variable-leaved. This beautiful species was discovered by Douglas in California. It is a half-shrubby species, growing two feet high, and the flowers are borne in long

spikes. Each flower is an inch and a half long. The tube is in shape much like the common Foxglove. The flowers are of a pretty lilac-pink, with the five-parted mouth of a higher colour. It blooms profusely, and is a valuable acquisition to this charming tribe of flowers. Their showy character, and long-blooming season—from June to November—render them very valuable flower-garden ornaments. (Figured in *Bot. Mag.*)

*PRIMULA AURICULA*.—Double Black Auricula. This interesting variety was raised on the Continent, and from thence was last year introduced into this country. The flowers are about an inch across, of a full double, and a deep purple colour.

*RHODODENDRON JASMINIFLORUM*.—It is a dwarf evergreen shrub, having elliptic leathery leaves, two inches long. The flowers are produced in terminal umbels, of about a dozen flowers in each. Each blossom is tube-formed, an inch and a half long, with the five-parted end (limb) an inch across. The flowers are sweet scented. Messrs. Veitch possess this interesting species.

*SYMPLOCIS JAPONICA*.—A fine hardy evergreen shrub, said to grow in the south of Japan to the size of our common ash-tree. The leaves are about the size of the bay-tree, and of similar form. The flowers are produced in clusters, of a pale yellow colour. The branches are much used by the inhabitants of Japan to decorate the shrines of their idols, its fine evergreen leaves being suitable. It has been introduced by Messrs. Standish and Noble into this country.

*TRECHOPLIA SUAVIS*.—The sweet-flowered. This pretty species of orchid has recently bloomed in the collections of R. S. Holford, Esq., Mrs. Lawrence, and Messrs. Loddiges. The flowers are borne in short peduncles, two in each; petals narrow, nearly straight, white with a slight tinge of flesh colour. Lip very large, wavy at the margin, white with numerous rosy spots. Each blossom is about two and a half inches across.

## FLORAL EXHIBITIONS, &c.

SINCE our last Number was published, three splendid Exhibitions of Flowers have been held:—By the Horticultural Society at the Gardens at Chiswick; the Royal Botanic Society at Regent's Park Gardens; and the Royal South London at the Surrey Zoological Gardens. The entire collections exhibited on each occasion were of superior merit to whatever were shown on any previous occasion. We should have had much pleasure to have remarked particularly upon all, but our space will not admit. We, therefore, insert such parts of the plants and flowers as we judge will be of most use to our readers. In each separate collection we give the names of the winning flowers or plants, and the merits of the kinds will, generally, be ascertained by the number of any particular one shown.

THE HORTICULTURAL SOCIETY, CHISWICK, JUNE 8TH.

PELARGONIUMS (*Amateurs*), new and first-rate in 8-inch pots: 1st prize, Mr. Cock, Chiswick, for *Gulielma*, *Orion*, *Centurion*, *Mont*

Blanc, Rosamond, Sikh; 2nd prize, Mr. Black, gardener to E. Foster, Esq., Clewer Manor, near Windsor, for Victory, Ariel, Constance, Gipsy Bride, Alonzo, Narcissus; 3rd prize, Mr. Staines, New-road, for Orion, Negress, Alonzo, Pearl, Victory, Rosamond; 4th prize, Mr. Robinson, Pimlico, for Gulielma, Rosetta, Superb, Forget-me-Not, Negress, Pearl, Orion; (*Nurserymen*) 1st prize, Mr. Dobson, gardener to E. Beck, Esq., Isleworth, for Delicatissima, Prince Arthur, Emily, Mont Blanc, Rosalind, Star; 2nd prize, Mr. Bragg, Slough, for Gulielma, Phyllis, Centurion, Pearl, Marian, Norah; 3rd prize, Mr. Gaines, Battersea, for the Nun, Centurion, Grenadier, Model, Negress, Mrs. Brock.

PELARGONIUMS in 11-inch pots: (*Amateurs*) 1st prize, Mr. Cock, Chiswick, for Rosamond, Pictum, Salamander, Pearl, Centurion, Thisbe; (*Nurserymen*) 1st prize, Mr. Gaines, Battersea, for Model, Miss Holford, Gulielma, Negress, Aspasia, Emma.

FANCY PELARGONIUMS: (*Open class*) 1st prize, Mr. Robinson, Pimlico, for Fairy Queen, Statiaskii, Queen Superb, Reine de Français, Anais, Madame Miellez; 2nd prize, Mr. Gaines, Battersea, for Priam, Orestes, Oderata Magnifica, Hero of Surrey, Reine de Français, Elegans; 3rd prize, Mr. Ambrose, Battersea, for Madame Miellez, Anais, Defiance, Magnifica, Ibrahim Pacha, Jenny Lind; 4th prize, Mr. Staines, New-road, for Queen Victoria, Madame Miellez, Bouquet tout fait, Statiaskii, Jehu Superb, Yeatmanniana grandiflora.

CAPE PELARGONIUMS: 1st prize, Mr. Parker, gardener to —, for Roseum, Elatum, Blanfordianum, Glaucifolium, Elegance, Glaucum; 2nd prize, Mr. George Stanley, gardener to — Berens, Esq., for Tricolor, Reniforme, Elatum, Flexuosum, Bicolor, Ardens; 3rd prize, Mr. Staines, New-road, for Bipinnatifidum, Bicolor, Bicolor Rosea, Blandfordianum, Ardens, Quinquenvulnerum.

CALCEOLARIAS: 1st prize, Mr. Gaines, Battersea, for Baron Eden, Astarte, Regulator, Esteem, Desperandum, Pantha; 2nd prize, Mr. Glendinning, Chiswick, for Full Moon, Lady Gray, Mulberry, Homer, Lord Cockbourn, Marquis of Abercorn; 3rd prize, Mr. Stanley, gardener to H. Berens, Esq., for Solicitor-General, Don Sebastian, Canary, Chancellor, Attraction, Beauty. A well-grown collection exhibited by Mr. Franklin, gardener to Mrs. Laurence, Ealing Park, did not obtain a prize in consequence of their being shown in too large pots.

ROSES IN POTS: (*Amateurs*) 1st prize, Alexander Rowland, Esq., for Aspasia, Augustine, Mouchelet, Queen, Mrs. Bosanquet, Coupe de Hebe, Blanch Fleur, Comte de Paris, Goubault, Marquis de Ailso, Doctor Marx, Hybrid Perpetual, Lanei; 2nd prize, Mr. Roser, gardener to — Bradbury, Esq., for Eugene Beauharnais, Aubernon, Marquis Bocella, Duchess of Buccleuch, Beauty of Billiard, La Dauphine, Devoniensis, Mrs. Elliott, La Reine, Marjolin du Luxemburgh, Las Cases, Coupe de Hebe; 3rd prize, Mr. Terry, gardener to Lady Puller, for Mrs. Bosanquet, Aubernon, Boule de Nanteuil, Charles Duval, Eliza Sauvage, Coupe de Hebe, Las Cases, Souvenir de la Malmaison, Parfait, Duchess of Sutherland, Fulgens, Princess Marie; (*Nurserymen*) 1st prize, Messrs. Lane, Berkhamstead, for Duke of Devonshire, Comtesse Mole, Souvenir de la Malmaison, Queen, Comte de Paris,

Baronne Provost, Miellez, Devoniensis, Emperor, Probus, Celine, Souvenir, d'un Ami, Marie de Champlouis; 2nd prize, Mr. Francis, of Hertford, for Fulgens, Minette, Madame Laffay, Coupe de Hebe, Triomphe de Laqueue, Blairii, Las Cases, Mrs. Elliott, Daphne, Mirabile, Aubernon, Captain Sissolet.

FOR TWENTY-FIVE VARIETIES OF CUT ROSES, Mr. Terry, gardener to Lady Puller, 1st prize, for some fine clean blooms; also 1st prize for Cut Yellow Roses—the yellows were, Harrisonii Single, Ditto Double, Persian Yellow, Banksia, Williams' Yellow, Comtesse de Cazes.

YELLOW ROSES exhibited by Messrs. Lane in pots were Queen Victoria, Persian Yellow, Pellonia, Smith's Yellow, Viscomtesse de Cazes, Harrisonii. Yellow Roses, Francis's, were Double Yellow, Harrisonii, Elise Sauvage, Le Pactole, Pauline Plantier, Viscomtesse de Cazes.

In collections of 20 STOVE AND GREENHOUSE PLANTS, the first prize was awarded to Mr. May, gardener to Mrs. Lawrence, of Ealing Park, for a group, beautifully bloomed, and, with perhaps two exceptions, exhibiting the very best cultivation. At the back stood an enormous *Epacris grandiflora* (not the same plant which was exhibited in May), well furnished with foliage and blossoms to the very pot; supporting it on one side was an immense *Polygala acuminata*, quite a mass of purple flowers, and on the other, an equally fine *Coleonema rubrum*. In front were *Ixora coccinea*, richly ornamented with noble heads of scarlet flowers; the purple blossomed variety of *Aphelaxis macrantha*, the best of all the Everlastings; a pyramidal *Eriostemon buxifolium*, a well-flowered *Pimelea spectabilis*, at least 4 feet across and as much in height; *Erica Bergiana*, 3 feet high and as much through, covered with small round rosy-purple blossoms; the clear yellow *Allamanda grandiflora*, the blossoms of which suffered much from exposure, the plant having been brought out of a close warm house; *Epacris miniata*, by far the most brilliant of the genus; a beautiful blue *Leschenaultia*, and a plant of the red variety, forming quite a globe of flowers; a capital bush of the rosy-pink *Pimelea Hendersoni*, a yellow Cape Heath, the fragrant *Adenandra*, a small *Chorozema ovata*, loosely supported on a few sticks so as to form a well-flowered little bush; the sweet-scented *Sphenotoma gracilis*, *Franciscea acuminata*, and *Azalea variegata*. The second prize was awarded to Mr. Cole, gardener to H. Collyer, Esq., of Dartford, for evenly grown plants, approaching so closely the perfection of those from Ealing Park that when they were first staged in the morning some persons imagined that they would be placed first. At the top was an *Allamanda Schottii*, with bright yellow blossoms, nearly 6 inches across, and in front an excellent *Stephanotis floribunda*, also beautiful plants of *Dipladenia crassinoda*, *Pimelea Hendersoni*, *Ixora coccinea* and *crocata*, Gledstane's *Azalea*, a large spreading *Pimelea decussata*, the Box-leaved *Eriostemon*, not very thickly flowered; two capital Everlastings, a good plant of the red-blossomed *Leschenaultia*, the beautiful *Echites splendens*, with six open flowers on it; *Sphenotoma gracilis*, *Chironia glutinosa*, *Chorozema Henchmanni*, *Crowea saligna*, a good plant, but insufficiently in bloom; the showy *Clerodendron squamatum*, and a Cape Heath. A third collection was contributed

by Messrs. Frazer, of Lea-bridge. It consisted of the large-flowered *Epacris*, two red *Azaleas*, *Ixora coccinea*, *Chorozema varium*, the yellow-blossomed *Hibbertia Cunninghamii*, *Erica Cavendishii*, and a variety of *E. Linnaeoides*, *Polygala acuminata*, an Everlasting, Henderson's *Pimelea*, the white-flowered *Lachnæa Erioccephala*, *Gompholobium polymorphum*, in the shape of a dwarf bush, supported by a few sticks; *Franciscea acuminata*, *Boronia pinnata*, the Jasmine-like *Rhynchospermum*. and *Hypocalymna robustum*.—Mr. Pamplin, of Lea-bridge-road, sent a fourth group, in which were the opposite-leaved *Polygala*, a large white Heath, the woolly *Pimelea* (*P. lanata*), *Epacris miniata*, the brilliant red *Azalea* called *Optima*, a neat well-flowered *Erica cubica minor*, the Box-leaved *Eriostemon*, two *Vincas*, the fragrant *Stephanotis floribunda*, and a few other plants.

In collections of 15 STOVE AND GREENHOUSE PLANTS, the first prize was awarded to Mr. Green, gardener to Sir E. Antrobus, Bart., of Cheam. In this group we remarked well-managed plants of the large-flowered *Allamanda*, *Rondeletia speciosa*, *Stephanotis floribunda*, the best of all climbers for the roof or stove, when it can be planted out in the bed; *Epacris miniata*, two *Helichrysums*, *Sphenotoma gracilis*, the opposite-leaved *Polygala*, Wilson's excellent variety of *Erica tricolor*, *Chorozema varium*, *Leschenaultia formosa*, Henderson's *Pimelea*, *Erica depressa*, *Ixora coccinea*, and the variegated *Azalea*.

In the class of 10 STOVE AND GREENHOUSE PLANTS there were seven exhibitors, all of whom sent creditable collections. A Gold Banksian Medal was awarded to Mr. Carson, gardener to W. F. G. Farmer, Esq., of Cheam, for large and well-managed plants of *Polygala oppositifolia*, *Allamanda cathartica*, *Epacris grandiflora*, the Anemone-leaved *Boronia*, a purple Everlasting, *Leschenaultia formosa*, and the best variety of *L. Biloba*; *Sphenotoma gracilis*; a small *Ixora coccinea*, with thirteen fine heads of flowers, and the showy *Medinilla speciosa*. A second prize was assigned to Mr. Taylor, gardener to J. Coster, Esq., of Streatham, for a group in which were a beautiful *Erica Westphalingia*, quite a mass of bright crimson blossoms; *E. Cavendishii*, a red *Azalea gracilis*, a large bush of the opposite-leaved *Polygala*, the white-blossomed *Pavetta caffra*, *Boronia serrulata*, *Azalea variegata*, a purple-flowered *Helichrysum*, and *Leschenaultia formosa*.

In collections of six STOVE AND GREENHOUSE PLANTS, the first prize was awarded to Mr. Kinghorn, gardener to the Earl of Kilmorey, [Orleans House, Twickenham, for a large and fine *Erica Cavendishii* in a tub, the large-flowered *Epacris*, a flat and spreading *Azalea Gledstanesii*, *Leschenaultia formosa*, a little cone of flowers; *Aphelaxis humilis*, and a charming bush of the violet-blossomed *Tremandra verticillata*.

HELICHRYSUMS: collections were shown by Messrs. Green (1), Young (2), Cole (3), and Stanley (4). In these we remarked *Aphelaxis sesamoides purpurea*, *humilis*, and its large flowered variety, *argentea*; *macrantha purpurea*, *spectabilis grandiflora*, and *Phænocoma proliferum*.

ORCHIDS: fine as these were in May, they were far excelled both in

quality and quantity on Saturday last. Mr. Holford's gardener, Bassett, produced a *Camarotis purpurea* 5 feet in height, quite a pyramid of purple flowers from the top to the bottom. This formed, as well it might, an object of general admiration. Scarcely inferior to it was an *Odontoglossum citrosimum* in the collection of Mr. Mylam, gardener to S. Rucker, Esq. This had five glorious spikes of flowers on it, and they were most beautifully coloured. Indeed, the amount of colour which they possessed formed a distinguishing characteristic of all Mr. Mylam's productions. His yellows were decidedly yellows, his purples purples, and his pinks pinks. Each colour, whatever it might be, was "brought distinctly out." By this means, even *Vanda cristata*, usually a dingy-looking plant, was, in Mr. Mylam's hands, really charming. But in addition to his plants exhibiting to the best advantage all the colours which they naturally possessed, they were capitally cultivated and flowered; and on this account richly deserved the large Gold Medal which was awarded them. The group comprised, in addition to the *Odontoglossum citrosimum* and *Vanda cristata* above alluded to, *Cattleya violacea*, with six spikes of handsome flowers; *C. Mossiæ*, with from seventeen to twenty expanded blossoms; the true *C. intermedia*, *C. candida*, *Dendrobium formosum*, with some twenty blossoms on it, large and beautiful; the rare *Anguloa Clowesii*, with three yellow blossoms; a copiously bloomed *Barkeria spectabilis*, in a wire basket; the same excellent *Saccolabium præmorsum* that was produced on the 18th of May, still in perfection; the rare *Aerides maculosum*, and *Odontoglossum Karwinskii*; the large flowered Butterfly plant (*Phalænopsis grandiflora*), *Cypripedium barbatum*, a large *Aerides* affine, *A. odoratum*, a tall *Vanda teres*, and *Brassia verrucosa*.

CAPE HEATHS were plentiful, well cultivated, and finely flowered. Those in 11-inch pots consisted mostly of small plants; but they were generally perfect examples of good Heath growing. In collections of ten varieties, a first prize was awarded to Mr. Smith, gardener to J. Quilter, Esq., of Norwood, for beautiful plants of *elegans*, *Bergiana*, *vestita coccinea*, *v. alba*, *suaveolens*, *Cavendishii*, *metulæflora*, *perspicua*, *Westphalingia*, and *Bruneoides*. Second, Mr. Mylam, gardener to S. Rucker, Esq., for *tricolor rubra*, *t. Wilsonii*, *Cavendishii*, *halicacaba*, *jasminoides*, *ventricosa hirsuta v. grandiflora inflata rubra*, &c. Mr. Cole was third, with *Cavendishii*, *Wilson's tricolor*, *t. rubra*, *Bergiana*, *gemmifera*, and *splendens*. Among Nurserymen, Mr. Epps was first, with good plants of *splendens*, *perspicua nana*, *vestita coccinea*, *propendens*, *ventricosa alba*, *ampullacea vittata*, *Cavendishii*, *tricolor dumoso*, and *ventricosa coccinea minor*. Messrs. Rollisson, who were second, had *ventricosa hirsuta*, *v. prægnans-superba*, *v. breviflora*, *v. grandiflora*, *Cavendishii*, *tricolor*, *amabilis*, *Beaumontiana*, and *ampullacea nana*. Messrs. Veitch were third, with *densa*, a distinct looking species; *rubella*, a minute rosy-flowered kind; *splendens*, *depressa*, *florida*, *ventricosa grandiflora*, *Cavendishii*, and *metulæflora*. Messrs. Fairbairn produced *perspicua nana*, *tricolor*, *depressa*, *Bergiana*, *Cavendishii*, *mutabilis*, *elegans*, *Beaumontiana*, and *ventricosa breviflora*. Mr. Epps showed three pretty seedlings; one more especially, called *tricolor Eppsi*, is a promising flower.



SINGLE SPECIMENS consisted of splendid plants of *Aphelexis purpurea* and of *Erica depressa*, from Mr. May, gardener to E. Goodhart, Esq.; a charming *Indigofera decora*, from Mr. Ivison, gardener to the Duchess Dowager of Northumberland, at Syon; the best variety of the blue *Leschenaultia*, from Mr. May, gardener to Mrs. Lawrence; *Aphelexis humilis*, from Mr. Bruce; *Pimelea decussata*, from Mr. Hill, gardener to T. Davies, Esq.; *Polygala acuminata*, from Mrs. Lawrence; an Everlasting and *Chironia glutinosa*, from Mr. Cole; *Erica depressa*, from Mr. Green; the same species of Cape Heath, from Messrs. Fairbairn; *Epiphyllum Jenkinsoni*, from Mr. Collins, gardener to Mr. Elliotson, of Clapham, and a large *Coleonema*, from Mr. Terry, gardener to Lady Puller.

#### ROYAL BOTANICAL SOCIETY, REGENT'S PARK.

PELARGONIUMS (*Amateurs*): for collections of twelve new first-rate and distinct varieties, grown in 8-inch pots, 1st prize, Mr. Cock, of Chiswick, Forget-me-Not, Star, Centurion, Salamander, Mars, Peril, Arion, Rosamond, Sikh, Cruenta, Gulielma, and Grandiflora; 2nd prize, to Mr. Black, gardener to E. Foster, Esq., of Windsor, for Alderman, Lamartine, Lalla Rookh, Armida Improved, Norah, Victory, Constance, Gipsey Bride, Alonza, Ariel, Narcissus, and Conspicuum. Mr. Staines and Mr. Robinson were made equal, priority being a difficulty to arrive at in these collections. Mr. Staines showed Marian, Lamartine, Negress, Forget-me-Not, Pearl, Victory, Orion, Rosamond, Star, Alonzo, Lalla Rookh, and Norah. Mr. Robinson's collection included Gulielma, Star, Forget-me-Not, Chimbarazo, Pearl, Orion, Negress, Gustavus, Sun Down, Rosetta Superb, Cassandra, and Sir Walter Raleigh. (*Nurserymen's Class*): 1st prize to Mr. Dobson, gardener to Mr. Beck, for Symmetry, Star, Emily, Delicatissima, Emilie, Governor, Rosa, Mont Blanc, Agatha, Centurion, Sarah, and Cupy; 2nd prize to Mr. Brag, of the Star Nursery, Slough, for Princess, Centurion, Phyllis, Conspicuum, Lalla Rookh, Correggio, Marian, Norah, Narcissus, Gulielma, Bertha, and Pearl; 3rd prize to Mr. Gaines, of Battersea, for Centurion, Adonis, Noblissima, Negress, Sikh, Model, Grandiflora, Mrs. Beck, The Nun, Gulielma, Crusader, and Grenadier. In collections of six, large pots (*Open Class*): 1st prize to Mr. Cock, of Chiswick, for Thisbe, Centurion, Salamander, The Pearl, Rosamond, and Pictum; 2nd prize to Mr. Parker, gardener to J. H. Aughton, Esq., of Roehampton, for Orion, Matilda, Forget-me-Not, Aurora, Zenobia, and Negress; 3rd prize to Mr. Gaines, of Battersea, for Gulielma, Lord Warden, Aspasia, Forget-me-Not, Miss Holford, and White Surrey.

FANCY PELARGONIUMS (*Amateurs*): 1st prize to Mr. Robinson, of Pimlico, for Anais, Bouquet tout fait, Statiaskii, Jenny Lind, Empress, and Magnifica; 2nd prize to Mr. Staines, for Yeatmanniana grandiflora, Queen Victoria, Statiaskii, Madame Miellez, Jehu Superb, and Bouquet tout fait; 3rd prize to Mr. Miller, gardener to R. Mosley, Esq., for Woodsinii, Statiaskii, Jehu Improved, Rossotii, Yeatmanniana grandiflora, and Madame Miellez. (*Nurserymen's Class*): 2nd prize to Mr. Ambrose, for Reine de Français, Formosa, Magnifica, Jenny Lind,

Fairy Queen, Picturata, Ambrose's seedlings; Mr. Henderson, of St. John's Wood, and Mr. Gaines, of Battersea, were placed equal, 3rd prize being awarded to both; Mr. Henderson showed Queen Victoria, Anais, Amelia, Albon, Mrs. Loudon, and Fairy Queen; Mr. Gaines, Anais, Reine de Français, General Jung, Madame Rosati, Priam, and Orestes.

CAPE PELARGONIUMS: 1st prize to Mr. Parker, for Elatum, Glaucum, Flexuosum, Bicolor, Blandiflorianum, Elegance, Glaucifolium, and Erectum; 2nd prize to Mr. Staines, for Bicolor rosea, Bipinnatifidum, Blandiflorianum, Flexuosum, Bicolor, Ardens, and Quinquenvulnerum; 3rd prize to Mr. Stanley, gardener to H. Berens, Esq., for Ardens, Elatum, Flexuosum, Bicolor, Sæpeflorens, and Tricolor.

ROSES, in POTS: (*Amateurs*): 1st prize to Mr. Terry, gardener to Lady Puller, Herts, for Baronne Provost, Souvenir de Malmaison, Brennus, Marquis Bocella, Madame Hardy, Robin Hood, Coupe d'Hebe, and Comtesse Mole; 2nd prize to Mr. Roser, gardener to — Bradbury, Esq., Streatham, for La Reine, Miss Glegg, Beauty of Billiard, Duchess of Buccleugh, Marquis Bocella, La Dauphine, Mrs. Elliott, and Eugène Beauharnais; 3rd prize to A. Rowland, Esq., Kent, for Duke de Chartres, Blanche fleur, Persian yellow, Devonensis, Comte de Paris, Queen, Coup d'Hebe, and Madame Plantier, (*Nurserymen's Class*): 1st prize to Messrs. Lane, of Berkhamstead, for Devonensis, Fauvier, Souvenir de Malmaison, Paul Perros, Miss Glegg, Great Western, Madame Plantier, Chenedole, Comtesse Mole, Souvenir d'un Ami, and Miellez; 2nd prize to Messrs. Paul, of Cheshunt, for Duke of Cambridge, Baronne Prevost, Madame Nerad, Charles Duval, Mrs. Bosanquet, Leopold de Beaufremont, Belle Marie, William Jesse, Niphetas, Madame Laffay, Paul Perras, and Augustine Mauchelat; 3rd prize to Messrs. Francis, of Hertford: Hybrid Perpetuals—for Lane, Fulgens, Pauline Plantier, La Cossar, Chenedole Duc de Cazes, Coupe d'Hebe, Mrs. Elliott, William Jesse, Mirabilo, Madame Laffay, and Belle de Cyr.

YELLOW ROSES, IN POTS: 1st prize to Messrs. Lane, for Pellonia, Persian Yellow, Queen Victoria, Clara Wendell, Harrisonii, Smith's Yellow, Vicomtesse de Cazes, and Tea Yellow; 2nd prize to Messrs. Francis, for Persian Yellow, Smith's Yellow, La Pactole, Vicomtesse de Cazes, Pauline Plantier, and Harrisonii.

FOR CUT ROSES, in fifty varieties, the 1st prize was awarded to Mr. Terry, and the 2nd prize to Mr. Roser.

CALCEOLARIAS: 1st prize to Mr. Henderson, of Pineapple-place, for Park, Mount Beauty, Incumara, Umbrosa, Coronata, Laura, and Resplendens; 2nd prize to Mr. Catleugh, gardener to Mrs. Griffiths, Avenue-road, for Carreglwyd, Lord Fullerton, Athlisle, Catherine, Earl Roslyn, and Marion; 3rd prize to Mr. Franklin, gardener to Mrs. Lawrence, of Ealing Park, for Isabella, Queen Victoria, Elegans, Earl Roslyn, Earl Dalhousie, Lord of Islen; 4th prize to Mr. Layton, Fulham-road, Hammersmith, for Layton's Blanche, Valley, Emperor, Eliza, Emily, and Julia.

PANSIES: 1st prize to Mr. Turner, of Slough, for Lucy Neal, Queen of England, Ophelia, Marchioness of Lothian (seedling), Constellation, Climax, Viceroy (seedling), Goliath, Mrs. Beck, Sambo,

Bellona, Mr. Beck, Garrett's Seedling, Addison, Lord Hardinge, Thisbe, Supreme, White Sergeant, Zabdi, Milton, Jenny Lind; 2nd prize to Mr. Bragg, for Bellona, Duchess of Rutland, Lucy Neal, Sir Robert Peel, Juventa, Aurora, Thisbe, Magnificent, White Sergeant, Viceroy, Lord Hardinge, Emma, Eliza, Salamander, Mrs. Beck, Clio, Helen, Punch, Milton, and Supreme.

**RANUNCULUSES:** 1st prize to Mr. Tyso: Dr. Channing, Berinus, Conspicua, Apollo, Amasis, Lentula, Brennus, Gomer, Festus, Apollo (dark), Eliza, Dido, Princess, Homer, Enchanter, Alexis, Horatio, Comtesse, Plaisance, Delectus, Saladin, Tysonia, Captivator, Saressa, Niobe, Temeraire, Bouquet, and two or three other very pretty varieties; 2nd prize to Mr. Keynes, for Elizabeth, Wellington, Conqueror, Miss Strong, Bellona, Village Maid, Bonny Jane, Mrs. Marten, Dr. Horner, Ruby Ellen, Sarah Cremona, St. Andrews, Dr. Bowring, Orpheus, and some other exquisite flowers we were prevented from noticing in the hurry of the moment.

**FUCHSIAS:** 1st prize to Mr. Tivey, gardener to — Aiguelin, Esq., Hertford, for Sir Robert Peel, Duke of Cambridge, Napoleon, White Perfection, Emerald, and Comte de Boileau. Certificates were awarded to Mr. Bragg's seedling Pansy Joseph Hunt, Mr. Henderson's seedling Calceolaria Horatio, Mr. Ager's fancy Pelargonium Formosissima, and Mr. Ambrose's Prince Arthur. Mr. Henderson also obtained a certificate for a Calceolaria named Mrs. Stanley.

**COLLECTIONS OF FIFTEEN CAPE HEATHS.**—1st prize to Mr. Mylam, gardener to S. Rucker, Esq., Wandsworth. This collection was allowed to be the finest ever yet exhibited, every plant being quite healthy and full of bloom. *Erica elegans stricta*, was a perfect beauty, both in form and colour; only 2 feet high, but 3 feet across. *E. vasiflora*, a large plant in the best order; 3 feet by 3 feet. *E. favoides elegans*, most beautiful; 2½ feet by 2½ feet. *E. suaveolens*, a fragrant species, very well got up; 2½ feet by 2½ feet. *E. mutabilis*, a complete mass of flowers; 2 feet by 2 feet. *E. tortillæflora*, a rare specimen, not quite in perfect bloom; 2 feet by 2 feet. *E. Hartnellii*, very high coloured, full of flower; 3 feet by 3 feet. *E. aristata major*, rather small, but excellent in bloom; 1½ feet by 1½ feet. *E. ventricosa coccinea minor*; 3 feet by 3 feet; 2nd prize to Mr. Smith, gardener to W. Quilter, Esq., of Norwood. *Erica elegans stricta*, a fine plant, but not so full of bloom as the preceding; 2 feet by 3 feet. *E. fastigiata lutescens*, a good specimen; 2 feet by 3 feet. *E. Beaumontia*, a large plant, well flowered; 3 feet by 3 feet. *E. favoides elegans*, finely bloomed; 2 feet by 3 feet. *E. perspicua nana*, a large bush, completely covered with bloom; 4 feet by 4 feet. *E. favoides purpurea*, novel and fine; 3 feet by 2½ feet; 3rd prize to Mr. Cole, gardener to — Collyer, Esq., Dartford. The following were the best—*Erica mutabilis*, finely flowered; 2 feet by 2 feet. *E. ampullucea vittata*; 3 feet by 2 feet. *E. ventricosa superba*; 2½ feet by 2 feet. *E. ventricosa coccinea minor*; 2 feet by 2 feet. *E. vestita rosea*; 3 feet by 2 feet. *E. Cavendishii*; 3 feet by 2 feet.

**COLLECTIONS OF TWELVE—Nurserymen only.**—The 1st prize was awarded by the judges to Messrs. Rollisson, Tooting (the justice of this award was disputed by several connoisseurs, who declared, in our pre-

sence, that the second ought to have been first; it is certain Mr. Veitch's collection was generally better bloomed). Messrs. Rollisson's heaths were large, fine specimens, and most of them finely in flower. We noticed the following:—*Erica fastigiata lutescens*, a good specimen; 2½ feet by 3 feet. *E. nitida*, a neat, well flowered plant; 2 feet by 2 feet. *E. Beaumontia*, exceedingly well bloomed; 2½ feet by 2½ feet. *E. Cavendishii*, a large, fine plant, in good health, but scarcely in bloom; 4 feet by 4 feet. *E. viridis*, very rare; 2 feet by 2 feet. *E. perspicua nana*, very fine; 2 feet by 2 feet; 2nd prize to Messrs. Veith and Sons, Exeter. Handsome, well grown, and freely flowered plants, especially *Erica propendens*, a dense bush, covered with flowers; 3 feet by 3 feet. *E. ventricosa coccinea minor*, fine; 2 feet by 2 feet. *E. depressa*, very finely bloomed; 2½ feet by 2½ feet. *E. tortillæflora*, a well managed, finely bloomed plant; 2½ feet by 2 feet. *E. mundula* and *E. perspicua nana*, both pretty little bushes, densely flowered; 2 feet by 2 feet; 3rd prize to Messrs. Fairbairn, Clapham. The following were excellent:—*Erica mutabilis*, densely flowered; 2 feet by 2 feet. *E. Syndriana*, a rather new heath, beautifully grown; 3 feet by 2 feet. *E. suaveolens*; 4 feet by 3 feet. *E. vestita alba*, very large, full of bloom; 4 feet by 4 feet. *E. Beaumontia*, thin, but full of bloom; 3 feet by 2½ feet.

#### ROYAL SOUTH LONDON FLORICULTURAL SOCIETY EXHIBITION

Was held at the Surrey Gardens on June 19th. We have not space this month to do more than give an abstract of the plants and flowers shown, similar to what we have done in the cases of the Horticultural and Royal Botanic Societies exhibitions. An additional interest was given to this meeting by reason of the *Annual Seedling Pelargonium exhibition* being arranged to take place on the occasion.

The subscribers to the Seedling Pelargonium Fund state their object to be "the improvement of the Pelargonium in form, novelty, brilliancy, and beauty in colouring, freedom of bloom, and general habit of the plant." On this occasion six prizes were offered, the first 5*l.*, second 4*l.*, &c. The merits of the two best flowers shown, were considered equal by the judges, and two second-class prizes were awarded to them, viz., 4*l.* each. The same decision was come to with the two next best, as to equal merits, and 3*l.* each was awarded. No prizes were awarded for the other flowers exhibited. The two best were **AJAX** (Hoyle's).—Upper petals velvet-maroon, having a narrow edging of fiery crimson; lower petals a pinkish purple; the flower being large, and the foot-stalks very firm, the heads of bloom stand above the foliage, and render it very showy. The petals are of good substance, and even at the edges.

**GIPSEY RIVAL** (Black's).—Upper petals velvet-maroon, edged with fiery crimson; lower petals a deep rose colour; the centre is bright, nearly white; the flower is of middle size, and excellent form.

*The two second best*:—**INCOMPARABLE** (Beck's).—Upper petals a rich fiery red, with a very distinct black spot; lower petals same colour; flower large and showy. Mr. Beck's seedlings are generally remarkable for having petals of firm substance, this variety, however,

is not equal in this particular to most others sent out by him, and in consequence the edges are slightly crumpled. It is nevertheless a very distinct and showy variety.

**OCELLATUM** (Hoyle's).—Upper petals a large dark-shaded blotch, with a broad edging of rosy-flesh colour; lower petals a rosy-flesh, having in the centre of each a very distinct dark spot, rendering it very handsome, and a near approach to what are now classed as fancy varieties, centre of flower nearly white; it is of medium size, good form, and firm petals. The plant blooms profusely. It will always be admired for its distinctive beauty.

The following varieties were shown, but no prizes awarded to them:—

**MAJOR DOMO** (Beck's).—The flower is extraordinarily large, and of firm substance; upper petals a rosy-flesh, with a large spot of maroon-velvet; lower petals pinky-flesh colour; centre of flower nearly white; the flower is not of good outline, but very showy.

**CARDINAL** (Hoyle's).—Upper petals having a large blotch of velvet shading off to scarlet; lower petals scarlet; it is very showy, and will rank well as a second-rate variety.

**PRINCE ARTHUR**.—Upper petals large, dark clouded blotch shading off to flesh colour; lower ones flesh colour, centre white; petals of firm substance.

**ZANETTE** (Hoyle's).—Flower large; upper petals large, dark clouded blotch with scarlet margin; lower petals a rosy-scarlet; it is a very showy variety.

**AGATHE**.—Upper petals a large dark spot shading off with red and scarlet margin; lower ones lilac; the flower is of medium size but very pretty.

**SILK MERCER**.—Upper petals a large dark blotch edged with rose; lower ones flesh colour.

**ROSA**.—Upper petals dark spot, shading off with scarlet; lower ones a bright rosy-scarlet.

**VAN STRY** (Foster's).—Upper petals a large clouded blotch edged with fiery-scarlet; lower ones a bright rosy-crimson. Centre light. A very showy variety, and will be an acquisition to any collection on that account.

**PINKS**.—It was too early for them; most of those shown were out of true character. (*Nurserymen's Class*): twenty-four blossoms: 1st prize, Mr. Norman, of Woolwich; Read's Jenny Lind, Lady Dartmouth, Musqueteer, Harriet, Smith's Goliah, Young's Lady Mildmay, Wilmer's Princess Royal, Hilyer's Goliah, Elridge's No. 10, Smith's Diana, Garrett's Alpha, Willmer's Surplus, Hodges' Melona, Henbrey's Rubens, Young's Winchester Rival, White's Warden and Duchess of Kent, Omega, Elridge's Pickwick, Hodges' Gem, Coster's Alfred Morrison, King of Purples, Willmer's Laura, and Giddy's Jenny Lind. 2nd prize, Mr. Ward, Woolwich; Kerr's Harriett, Smith's Goliah, Bell's Henry, Winchester Rival, Melona, Parke's Jenny Lind, Miss Jane, John Neville, Double X, Laura, Twyford Rival, Harkforward, John Dickson, Diana, Wonder, King of Purples, Brilliant, Duchess of Kent, Hodges' Gem, Alpha, Blackheath Hero,

Susannah, Read's Jenny Lind, and Lord Valentia. 3rd prize, Mr. Wilmer, Sunbury; Rubens, Lord Valentia, Star, Prima Donna, Queen of Purples, Coronation, Bate's No. 9, John Hampden, Benjamin, Henry, Princess Royal, Brinklow's Gem, Goliah, Laura, Brilliant, Ruby, Read's Jenny Lind, Miss Jeans, Duke of Northumberland, Lord Norris, Wilmer's No. 1, Suwarrow, Melona, Lord Hardinge. (*Amateurs' Class*): twelve kinds; 1st prize, J. Edwards, Esq., Holloway; Benjamin, Winchester Rival, Morning Star, Rubens, Mrs. Herbert, Laura, Melona, King of Purples, Blackheath Rival, Read's Jenny Lind, Joseph Sturge, and Duchess of Kent. 2nd prize, Mr. Ellis, Woolwich; Goliah, Jenny Lind, Fanny, Alfred Morrison, Melona, King of Purples, Harriett, Hodges' Gem, Winchester Rival, Laura, Narborough Buck, Hardstone's Prince Albert. 3rd prize, Mr. Halladay; Kirtland's Prince Albert, Duchess of Marlborough, Rubens, Jenny Lind, Mrs. Gray, Eliza, Winchester Rival, Harriett, Brilliant, Laura, Harkforward, and Lord Valentia.

**RANUNCULUSES.**—Of this lovely flower there were fourteen stands exhibited, most of them in excellent condition. (*Nurserymen's Class*): twenty-four varieties; 1st prize, Mr. Tyso, of Wallingford; Festus, Captivation, Mrs. Neilson, Sabine, Demosthenes, Amasis, Queen, William Penn, Melange, Charlotte, Edgar, Dark Apollo, Crimson Apollo, Temeraire, Village Maid, Naxara, Coronation, Crocus, Mrs. Veriatt, Alexis, Gomer, Suaviter. 2nd prize, Mr. Franklin, Islington; Nomijs, Rob Roy, Prince Albert, Dr. Franklin, Lord John Russell, Apollo, Mrs. Wyse, Veriatt, Princess Royal, Marshal Soult, Elizabeth, Burns, Nonpareil, Eliza, Annette, Atlas, Charlotte, Dr. Gardiner, Harold, Melange des Beau, Eliza, Jerome, Arricheon. 3rd prize, Mr. R. Hook, Brixton; Parody, Triumphans, Dolphin, Alice Maude, Marshal Soult, Beauty of Suffolk, Rhododendron, Amaryllis, Princess, Mary Queen of Scots, Milo, Wonder, Catherine, Village Maid, Clarissa, Alexander, Albemarle, Duchess of Leeds, Bellissima, Louissetta, Darling, Danubas, Bathsheba. (*Amateurs' Class*): twelve varieties; Mr. Airzee, 1st prize; Victory, Claudine, Bijou, President, Jenny Lind, Ferdinand, Herald, Theresa, June, Ariel, Miranda, and Britannia; all seedlings of his own except Herald. 2nd prize, Mr. Reeves; Demosthenes, Rob Roy, Belvedere, Orange Boven, Burns, Princess Royal, Queen, Herald, Dilectus, Lord John Russell, and two not known. 3rd prize, Mr. Gurney, Bethnal-green; Elizabeth, Galatin, Charlotte, Veriatt, Nemesis, Burns, Scarlet and Gold, Herald, Rob Roy, Prince Albert, Hummums, and Beauty.

**EXQUISITE.**—Upper petals white ground with rosy-purple spot, becoming lighter to the centre; lower petals white with a rosy-purple bar across the middle of each petal; second-rate excellence.

**PURITY.**—Upper petals crimson-purple with a white margin; lower ones white with a purple bar; second rate.

**MARION.**—Upper petals very dark with a white margin; lower ones white with a rosy-red bar; second rate.

**BLACK PRINCE.**—A very dark flower, more so than La Belle Afrique; second rate.

**BEAUTY OF ST. JOHN'S WOOD.**—Upper petals a bright rosy-purple

with a white margin ; lower ones white with a rosy-purple bar ; centre of flower white ; second rate.

**PRINCE ALBERT.**—Upper petals a rich dark crimson with white margin ; lower ones white with a veined bar of purple ; at the centre of each petal a dark spot ; very good form and handsome flower.

**PRINCESS ROYAL.**—Upper petals rosy-purple with white margin ; lower ones white with a very distinct rosy-purple bar ; second rate.

**ORATOR.**—Upper petals, very dark with a white margin ; lower ones white with a very distinct dark spot at the centre of each ; second rate.

**CLEOPATRA.**—Upper petals very dark, with a narrow margin of white ; lower ones white, with a rosy crimson bar ; second rate.

**NE PLUS ULTRA.**—Upper petals dark with a white margin ; lower white, with a broad bar of rosy-purple ; centre of flower white ; second rate ; a very free bloomer.

**BELLE MARIA.**—Upper petals a dark maroon with a very clear white margin ; lower petals white with a purple spot on each ; second rate.

**GAIETY.**—Upper petals dark velvet with a white margin ; lower petals white with purple spot ; second rate.

**ADA.**—Upper petals rosy-purple with white margin ; lower, white with purple spot ; good form.

**GIPSY QUEEN.**—Upper petals, dark velvet shaded with crimson, and a white margin ; lower, white, a slight spot of purple ; second rate.

**FORMOSISSIMA.**—Upper petals crimson-purple with white margin ; lower ones white with a broad veined bar of purple ; second rate.

**BRUNETTE.**—Upper petals dark maroon, with white margin ; lower ones flesh colour with a dark spot at the centre of each ; good form.

**CALIBAN.**—Upper petals maroon with white edge ; lower ones white with a bar and spot across the middle ; third rate.

**RICHARD COBDEN.**—Upper petals dark maroon, with white margin ; lower white with a broad veined bar of purple ; centre white ; third rate.

**BELLE MARIA.**—Upper petals dark maroon, with a clear white margin ; lower petals white with purple spot.

**FLUSH.**—Upper petals rosy-salmon tinged with purple, margin lighter ; lower ones white with rosy purple bar ; centre light ; third rate.

The above new seedlings were exhibited by sundry persons, but no prizes were offered for this class of flowers. As some, if not all, of the above will be offered for sale next season, we deemed it right to give the particular colours and merits of each, as a guide to any of our readers desirous of purchasing new varieties.

## REMARKS ON LATE FLOWERING AND EARLY FORCING PELARGONIUMS.

**MR. H. ROSIER**, of Brookland's Nursery, Blackheath, writes in the *Magazine of Botany* for June 8th, "that if cuttings of Geraniums (Pelargoniums) which have been forced and the wood partially ripened, be put off by the middle of June, and as soon as rooted, potted off into 3 or 4-inch (diameter across the mouth) pots, and treated as follows,

they make fine vigorous plants for autumn flowering and early spring forcing, and adorn the conservatory, greenhouse, &c., through the winter and spring months. When the plants have got well established in the small pots, and are about six inches high, the leads are stopped, to induce side shoots. After these have pushed a little, the plants are re-potted into larger pots, in a rich compost of equal parts of turfy loam, peat, and old rotten cow-dung or horse-dung, with a good portion of silver or river sand. The potting may be repeated in the autumn for spring-blooming plants, but the winter blooming ones do not then require it. When the shoots are somewhat numerous, the weakest are cut away to invigorate those remaining. Fancy kinds of Geraniums being rather delicate, require more drainage: broken pieces of charred cow-dung, placed upon the crock, is highly beneficial to the plants. The plants are placed out doors, and occasionally moved to prevent the roots penetrating the subsoil. When taken into the house, they are placed as near the glass as possible; it prevents them from being drawn. For the forcing, put in the first lot of plants in January; a moderate heat at first, and increase gradually till the flower buds appear.

“The best kinds for blooming in autumn, being free flowering and strong growers, are, Forget-me-Not (Lyne), a fine high-coloured flower, and one which will be found to give satisfaction to all who grow it; it will also force well in the spring. Meteor (Beck), a showy flower, and well adapted for late purposes. Negress, a dark flower, and very free; also adapted for spring forcing. Sultana, or Perpetual, of dwarf close habit, and free flowering. Gauntlet, a fine large bright flower; also well adapted for early spring forcing, as it will stand a very high temperature without going blind. Selina, a bright red, and beautiful variety; this is also well adapted for early spring forcing. Lady Mary Fox, a bright red; this, with a little warmth, will be found to flower all through the winter, and, as a bouquet flower, is most desirable; it will be found a beautiful bedding plant, if cultivated to that end, being a most profuse bloomer. Quercifolia superba, a bright scarlet flowered oak-leaved variety; this will force well, and is invaluable for bedding purposes. Duke of Cornwall, an established favourite of fine high colour, and good trusser; this may be forced successfully with the second crop in spring. Mrs. Johnson (Dennis), a flesh colour, and most profuse bloomer; will be found to contrast well with the other colours. Laneii, a variety which should be grown by all who require winter flowers, as it will flower through the whole of the winter, and stand a high temperature in the spring. When the beauty of the plants is not so much an object as the flowers, they should not be cut down, or re-potted, when housed, which should be done early in the autumn. Top dress the pots, and pick out all dead flowers, decaying, and superfluous leaves. A few of the fancy varieties should also be selected. The following will be found distinct and free bloomers: Anais, Jenny Lind, Fairy Queen, Queen Superb, Statiaski, and Sidonia. The following, for early forcing, will stand the most fire heat: Admiral Napier, red; Alba multiflora, white; Surpass Admiral Napier, red; to be followed by



General Washington, red; and Colleyanum, purple; with such others as I have enumerated above. Scarlets must not be neglected, and the following, I think, will be well adapted:—Gem (Ayres); this will stand a high temperature, and throw fine trusses; Queen, or Perpetual; Royal Dwarf; and Compactum.

## ON THE CULTIVATION OF TULIPS.

IN LETTERS TO A FRIEND.

### *Letter VI.*

#### REMARKS ON THE GREAT NORTHERN TULIP SHOW.

DEAR SIR,—In accordance with my promise and your express wish, I hasten to give you some little description of the Great Northern Tulip show, held at the Corn Exchange in this town on Tuesday, the 28th of May. It was got up under the patronage of earls, lords, and commoners. Tulips were not the only flowers that were presented to notice, there were some of as good specimens of greenhouse plants as I ever recollect to have seen, but Tulips was the ostensible purpose for which the meeting was held. The number of blooms exhibited was about five thousand, and considering the unfavourable season for their production were as good as could be expected; a few more fine days would have enabled the exhibitors to have placed them on the tables in much greater perfection, but as it was it exceeded my expectation, and I was pleased to see an improvement in the right direction.

There were prizes given to four pans of six blooms each, which contained the following flowers:—

1st Pan. Polyphemus, Royal Sovereign, Queen Charlotte, Lancashire Hero, Unique, and Heroine.

2nd Pan. Charles the Tenth, Polyphemus, Gibbon's Princess Royal, Gibbon's Maid of Orleans, Heroine, and Triumph Royal.

3rd Pan. Charles the Tenth, Sans Joe, Lac, Incomparable, Atlas, and Heroine.

4th Pan. Passe Perfecta, Captain White, Baguet, La bien Aime, Heroine, and Triumph Royal.

There were twenty-four prizes for breeder Tulips, and twelve prizes for each class of broken flowers, as under:—

#### *Flamed Bizards.*

1. Sans Joe.
2. Lord Stanley.
3. Polyphemus.
4. Cyclops.
5. Gibbon's Pilot.
6. Paul Pry.
7. Prime Minister.
8. Page's King.
9. Admiral Benbow.
10. Josephus.
11. Lord Provost Hastie.
12. Albion.

#### *Feathered Bizards.*

1. Charles the Tenth.
2. Polyphemus.
3. Duke of Hamilton.
4. Goude Beurs.
5. Slater's Mayor of Manchester.
6. Emperor Charles.
7. Duke of Savoy.
8. Surpass Catifalque.
9. Lord Melbourne.
10. Paul Pry.
11. Crown Prince.
12. Chadwick's Trafalgar.

*Flamed Roses.*

1. Triumph Royal.
2. Vandyke.
3. Lawrance's Aglaia.
4. Unique.
5. Camellas.
6. Lady Wilmot.
7. Lady Stanley.
8. Rose Elegans.
9. Rose Tertia.
10. Monta Duca.
11. Vesta.
12. Count Vergenes.

*Flamed Byblomens.*

1. Holmes' Queen Charlotte.
2. Gibbon's Princess Royal.
3. Violet Wallers.
4. Bienfait.
5. Groom's Violet Blanche.
6. Gibbon's Van Amburg.
7. Turner's Lord Denman.
8. Mango.
9. Holmes' Queen Charlotte.
10. Gibbon's Salvator.
11. Unknown.
12. Glory.

*Feathered Roses.*

1. Heroine.
2. Dixon's Virginia.
3. Aglaia.
4. Lady Crewe.
5. Unknown.
6. Sir Henry Pottinger.
7. Andromeda.
8. Walworth.
9. Duke de Bronti.
10. Jupiter.
11. Queen Catherine.
12. Newcastle.

*Feathered Byblomens.*

1. Gibbon's Sable Monarch.
2. Lancashire Hero.
3. Baguet.
4. Buckley's Beauty.
5. Bienfait.
6. Louis Sixteenth.
7. Washington.
8. Mango.
9. Naylor's Edgar.
10. Imperatrix Florum.
11. Gibbon's Princess Royal.
12. Deringborough.

These seventy-two prizes were selected from nearly five thousand flowers, and were in the main good blooms, but here and there a fault might easily be detected, of which a word or two hereafter.

Gibbon's Sable Monarch, Princess Royal, Maid of Orleans, Pilot, Van Amburg, Sir H. Pottinger, Dixon's Virginia, and Slater's Mayor of Manchester are all new northern flowers, and I believe Naylor's Edgar and Turner's Lord Denman. Gibbon's Sable Monarch is a fine deep-feathered byblomen, good cup and clean base; his Princess Royal a fine flamed byblomen, perfectly clean; his Maid of Orleans a fine byblomen, broke from the same breeder with a pure bottom; his Pilot is a flamed bizard, good cup and very pure; his Van Amburg a flamed bizard, good cup and substance, a good round petal, it opens creamy, but soon clears out, and is a good thing; all these I can recommend to you (indeed you must have them), having seen them, though not in their best state, owing to the season not having been so propitious as could have been wished; the traits in their character foretell their future usefulness. In a conversation I had with the raiser, who introduced himself to me while going round the tables of blooms, I find they are to be procured at a very reasonable rate, much lower than new Tulips are generally sold at, owing to the breeders having been for some years sold out and in a great many hands. There are a quantity of this person's seedlings that have been broke, viz., Salvator,

Catherine, Fair Maid, Queen of Scarlets, Princess Augusta, Duchess of Sutherland, Model of Perfection, Prince Albert, Venus, Captain Sleigh, and several others, of which at some future time you shall have my opinion, when I can speak with more certainty as to their merits. There were a few other seedlings in the room without name, but none possessing traits to call forth remark.

I am informed that this was the most extensive exhibition ever made in this town, and I believe there was nearly one hundred exhibitors. I am extremely sorry to be obliged to make remarks that may not perhaps be pleasing to those engaged; I am not over fastidious, but still so much so as not to be silent where censure is due. In the first pan to which a prize was attached of a silver cup, valued at six pounds, were two stained bottoms; who to blame I cannot say, the censors or the rules of the Society, but certainly no Society can have for one of its rules of decision, that a dirty bottom should gain a prize, even provided that every other point was correct. With me a stained bottom disqualifies a pan. I remember some years since, near London, being requested to enter a room with Mr. Gregg and Mr. Alexander (names familiar with most Tulip growers) to judge a large table of pans. Our first work was to put aside all disqualified pans, and a stained bottom was one point of disqualification.

I confess I was much surprised that the first pan I looked into, the premier prize, should display such a glaring defect, but after such a precedent no wonder that some of the classes displayed the same trait.

I am sorry that at this great concentration of Tulip growers such a thing should have been allowed to pass. I must say, and I hope I shall be forgiven for saying so, that I think it a blot in the character of the Northern Society, which I hope to see entirely blotted out.

You have now my remarks on this great exhibition. My answer to your question on your perforated bulbs in my next.

Yours truly,  
DAHL.

Manchester.

## CRITICAL NOTICES.

*A Select Descriptive Catalogue of Hardy Ornamental Plants, for the Autumn of 1850 and Spring of 1851.* Messrs. STANDISH and NOBLE, Nurserymen, Bagshot, Surrey.

AMERICAN plants are grown on a very extensive scale at the above-named nursery; and in addition to many other valuable observations on the class of plants which are contained in this useful Catalogue, there are extended remarks on the treatment of that noble family, the RHODODENDRON, from which we extract the following particulars. In reference to their own nursery, they observe,—

“A more unpromising appearance than the original condition of their present American nursery can scarcely be imagined; and as in its present improved state it affords a good example of what can be done in the most sterile spots, they beg to describe the nature of the

soil, and the mode of procedure they have adopted to induce its present condition. The nursery-ground in question forms part of fifty acres, the whole of which is rated in the poor's-rate book at 8*l*. The soil, which is from 12 to 15 inches in depth, is a black sandy peat, resting upon a clayey subsoil, very deficient in vegetable matter, and naturally incapable of producing any crop whatever; but with cultivation it has been rendered in the highest degree productive.

"The first operation was to drain it from 3½ feet to 4 feet deep; it was then trenched 2 feet deep; and to every acre so treated, from thirty to forty tons of good farm-yard manure was added; and as a precautionary measure, to exhaust the consequent rankness, it was deemed necessary to take a root crop previously to planting shrubs, as potatoes, carrots, turnips, and mangold. After this treatment American plants are found to thrive amazingly; but, like all crops in very poor soils, they are benefited by the application from time to time of suitable enriching materials.

"This, then," it is added, "being the system pursued by us in the very poor soil as above described—and we can safely assert that nowhere are Rhododendrons more expeditiously or handsomely grown—it will be evident to those who have not as yet realized their hopes in the cultivation of this most charming of hardy plants, that seemingly unpropitious circumstances need be no effectual bar to their realization; and the desponding will gather fresh vigour in the pursuit, from the conviction that success will ultimately crown their efforts.

"It must not, however, be understood that American plants will flourish in a very poor soil; on the contrary, there is evidence everywhere that nearly all plants delight in a rich one. Even Mosses, Lichens, and Heath are more healthy and vigorous in the richest localities. With a trifling expense, however, the poorest soil may be rendered suitable for Rhododendrons. An excellent compost may be made as follows:—To two parts of sandy loam or peat, or in fact any sandy soil that does not contain much calcareous matter (American plants exhibit a great dislike to that), add one-fourth leaf-mould, one-eighth sand, and one-eighth rotten manure. If wanted immediately, the whole should be well beaten, and thoroughly incorporated before using. It would, however, be of great advantage to allow the mixture to remain twelve months, turning it well two or three times during that period. In old exhausted beds, a good dressing of rotten manure forked in will be found highly beneficial.

"To all growers of American plants we wish to impress the following suggestion; however simple it may appear, it is the foundation, when practically carried out, of all success in the cultivation of the Rhododendron, and indeed of all fine-rooted plants of a similar character: it is this, *never allow them to become thoroughly dry at the root*. When such a condition occurs, the whole structure of the plant is affected, deficiency of vital energy is the result, and the natural consequence of a deteriorated constitution is disease, and possibly death. The Rhododendron and its allies suffer more from a condition of excessive dryness than any plants which we recollect; therefore a damp situation, natural or supplied, must be procured for the site of an American garden. In

situations where stagnant water is likely to be present, drains must be employed, and they should be 3 feet in depth. If the soil is not naturally suitable, a compost, as before described, must be supplied; and if the beds are so situated that the plants can enjoy the shade of trees without drip from them, it will be an acquisition.

“At Highclere, the seat of the Earl of Carnarvon, in the lake at Milford, are several small islands of from 10 to 20 yards in diameter, planted with American plants, presenting the highest state of luxuriance; many of the plants are from 10 to 15 feet high, and constitute, in the blooming season, masses of beauty, from their summits to the very surface of the lake. The soil of these islands is not more than 18 inches above the water.

“On the Himalaya Mountains, the Rhododendron is invariably found growing near or on the margin of morasses. So magnificent is the appearance of masses in flower of the scarlet species of these mountains, that Dr. Wallich compares the effect to that of regiments of soldiers in scarlet uniforms in the full sun when viewed at a distance. In America and other parts of the world, where any of the very extensive tribe, commonly known as ‘American plants’ are found, it is always on the margin of lakes, rivers or bogs, or on the nearest portions of dry land in their vicinity. Surely, then, if the many boggy places and swamps which are to be found in the plantations, on the borders of ‘drives,’ and even in view from many of our noblemen’s princely mansions, are not worth reclaiming for any other purpose, they afford excellent situations for the display of taste and liberality; the ultimate result of which must be to gratify the eye of the proprietor, to enrich the landscape, and to give to our woodland scenery a beauty which is now, except in a few isolated cases, confined to the shrubbery and the pleasure ground.

“If only a moderate amount of stagnant moisture is present, ordinary draining is all that will be requisite. But there are situations in which this is not available, or would be too expensive, as, for instance, where the bog is of such a depth as would require a large amount of labour to procure sufficient ‘fall’ for the drains. Under such conditions the desired end can be arrived at by the following means: Procure a quantity of brushwood, faggots, poles, old ‘pollards,’ or any materials of a like nature, and with them form a foundation on the spot you wish to plant; upon this sufficient soil must be placed, that, allowing for subsidence, not less than 18 inches of suitable compost will remain above the surface of the bog. In such localities the Rhododendron will flourish in all its native beauty, and as the growth will be rapid, the whole substance of the soil will quickly become matted together by the roots of the plants, completely preventing any subsidence in the soil after the wooden foundation is decayed.”

If the soil of a situation desired to plant in be naturally dry, the opposite to what Rhododendrons best flourish in, still a bed may be formed which will retain a degree of moisture that the plants will succeed in, and the writers observe:—

“It now becomes our duty to show in what manner the Rhododendron can be induced to succeed in dry situations, as we have established

the fact that a moist situation is a *sine quâ non* to its successful cultivation. The means by which this can be attained are, we consider, very simple, and which we will endeavour to show. They are these: By deep trenching the natural soil, and keeping the beds in which the plants are growing perfectly flat, and below the surrounding surface, in order to prevent the escape of a drop of moisture otherwise than by evaporation. In preparing beds for American plants in such situations, it is absolutely necessary to trench or in some way prepare a soil, 3 or 4 feet in depth, as the only means of establishing a lasting resource of moisture. The following will be found an excellent mode of procedure where the situation is dry and the soil wholly unfit for the growth of American plants. Having decided the outline of your beds, remove the soil a good spade's depth, with all its attached vegetation, to some convenient spot immediately contiguous to your operations; then cart away from 18 inches to 2 feet of the remaining soil, well breaking up the bottom, or trenching it 18 inches would be better still. Upon this cast in the surface soil previously removed, well chopping it with the spade as the work proceeds; filling up with a sufficient quantity of prepared soil, that after settling down it shall be a few inches below the natural surface. During dry weather, after the beds are planted, the surface should be kept constantly stirred with the hoe and rake, for the double purpose of preventing the growth of weeds, and by maintaining a smooth surface retarding evaporation. Should an excessive dry season occur, the whole surface of newly planted beds may with advantage be wholly covered with the short grass from the lawns. It will at least prevent the necessity of a frequent use of the watering-pot, the application of which in all out-door gardening is a practice 'more honoured in the breach than in the observance.' If the beds are situated in the neighbourhood of trees, they are sure to be invaded by a legion of roots, which, if allowed unmolested possession, will in a few seasons appropriate the whole of what you had intended for your favourites. But as we recommend American plants in such situations to be replanted and the soil trenched to a depth of 2 feet every autumn, and every third or fourth year the whole mass of soil trenched to the bottom, there will not be much to fear upon that point—and the mass of soil by being constantly rendered permeable to the autumn rains will always contain a large amount of moisture. There need be no fear of the plants suffering from removal, as Rhododendrons can be transplanted with perfect safety, even after they have attained an immense size, and particularly so when they have constantly been subjected to such treatment."

The catalogue may be had by post, on remitting four postage stamps to Messrs. Standish and Noble, and we recommend it to our readers as well worth procuring.

## ARRANGEMENT OF AMERICAN PLANTS.

BY SCRUTATOR.

IN many places, where ornamental planting has been attempted, proper advantage does not appear to have been taken of the very beautiful

class of plants commonly known as American plants. This is the more surprising, as of late great progress has been made, both in increasing the number of varieties, and in improving their qualities. In very few places can anything worthy the name of a collection be found; the one almost invariably met with is the common *Rhododendron ponticum*, and very few, if any, of the hybrid varieties are to be seen in the pleasure grounds of country seats.

But the want of variety is not the only blemish to be pointed out. There is much to blame in the manner in which these splendid plants are disposed; the place where they are generally planted being that which is the worst of all for producing anything like effect, viz., in borders and shrubberies. Were I on the point of planting a collection, I should much prefer to form symmetrical beds on the lawn; and if these could be viewed from an eminence, it would be much better. These beds should be planted with as much care, in respect to the arrangement of colour and habit, as is looked for in planting the flower garden; they should be filled with *Rhododendrons*, *Azaleas*, *Kalmias*, &c., and I have no doubt the effect would be good. No one who saw the splendid exhibition of American plants, in King's Road, Chelsea, in the spring of 1847, could for a moment doubt that a similar exhibition ought to be seen at the country seat of every gentleman; and for my own part, I see no reason why it cannot be so.

Though such a disposition of American plants would be preferable to promiscuous planting, to fill up open places in borders, it is not the disposition I should prefer, where the requisite conditions could be had. It is now twelve years since I saw the most splendid effect produced by American plants. The place was a wood or shrubbery, in the pleasure ground, in which was a large hole, called the "pit hole." The banks of this hole were "levelled," and the bottom formed into an oval figure, encircled and crossed transversely by a walk. The ground enclosed by the walks, and the lower parts of the banks, were planted with *Rhododendron ponticum*, and, as near as I can recollect, the common yellow *Azalea*; the higher parts of the banks were planted with *Cytisus laburnum*; above which were seen the darker forms of oaks, elms, &c. The descent was by steps at the end.

Though there was decidedly a want of variety, yet the effect produced, on entering this "pit hole," was grand in the extreme; the purple of the *Rhododendrons* contrasted so powerfully with the rich golden racemes of the *Laburnum*, that the place might literally be said to be

"Gleaming with purple and gold."

I have never since seen the spot, and though time, and the hand of man may have altered the scene, the impression then made has never been forgotten; and I should enjoy few scenes more than to see the idea there embodied carried out to perfection. The conditions required to produce this effect are not always at hand; but they often are. Generally these holes are made the receptacles of rubbish, thus rendering that place a nuisance, which might be made the brightest gem of the pleasure ground.

I hope the above remarks will not be taken in any other sense than that in which they are written ; my only object being to excite to improvement, not to condemn that which I cannot appreciate. An ardent love of the subject has prompted me, and I now take leave of it, with the hope that I shall not have written in vain.

## CULTURE OF THE CHILIAN ALSTRÆMERIA.

BY A COUNTRY CURATE.

IN some recent numbers of this Magazine there are articles inserted on the treatment of this charming tribe of flowers, but as the following judicious observations by Mr. Van Houtte, the celebrated nurseryman of Ghent, have been given in the "Gardeners' Chronicle," I have transcribed them for insertion in the CABINET, in order to promote the still more general and more successful growth of this fine tribe of flowers. His observations are as follows :—

" Nothing whatever presents more ornament to our gardens, during a great portion of the year, than this beautiful production, whose flowers are at once so numerous and so splendid, and yet nothing can be more easy than its culture and multiplication. The thousand varied, but always charming, tints, which tinge the corollas (flowers) of these Alstræmerias, present a difficulty in establishing a just horticultural nomenclature for them, as, like their brilliant rivals, the Calceolarias, they would defy, on that point, the most rigid examination. One may affirm, without exaggeration, that all are beautiful, and one may also infer that they will soon become as popular as the Wallflower, the Mignonette, the Carnation, &c.; in fact, cut for nosegays, to grace the various apartments of the house, no other flowers can be compared with them.

" The length, thickness, and number of their fascicled roots, hinder them from flourishing under pot-culture ; they succeed best in the open ground, in the free air, which, if subjected to the following treatment, they can brave with impunity. A bed is dug about 14 inches deep, in length and breadth proportioned to the number of roots required to be planted, at a foot apart, from heel to heel ; the bottom of the trench must be filled with rubble of potsherds, fragments of bricks, tiles, &c., in order to permit a prompt and easy drainage. It is then filled with a rich compost, formed of one-third fresh loam, one-third sandy bog earth, and one-third spit dung, and some such strong manure as guano may be added, in the proportion of one-thirtieth of the whole mass. The whole is to be mixed well together, and left in heaps, about two months before making use of it.

" Each rhizome (root) is planted in the month of October, taking care that its growing point is 10 inches below the surface of the soil. On the frost becoming severe, the bed is covered with a framework, and surrounded by mulch ; the air being abundantly admitted whenever the thermometer is not below 30 degrees Fahr. We have, however, known the cold to descend to 25 degrees, and the roots not to be injured thereby.



“As long as the severe frost lasts the frame is covered with litter or straw, which is removed at all times when the plants can enjoy the benefits of the sun’s rays. So soon as the cold is no longer to be dreaded, the above protections are removed, and the plants, whose shoots are already apparent, are left perfectly free to all atmospheric influences, and finally treated like other perennials. They must be very sparingly watered during the ripening of the seed, and should great rains follow after the seeds are gathered, they must be protected by the frames, to prevent the rot. The roots are to be taken up towards the end of July, and the rhizomes cleaned and separated; afterwards they may be left exposed on shelves, in a very airy dry place, until the moment of replanting.”

[Descriptive lists of kinds are given in this Magazine, last year’s Volume, pages 152, 274.]

### BRIEF REMARKS.

ROYAL SOUTH LONDON FLORICULTURAL EXHIBITION.—This (usually denominated the Tulip show) was held at the Surrey Gardens, on the 23rd of May. The specimens of plants were superb, and evidenced the very superior skill of the cultivators. We cannot, in our present number, enumerate the various productions presented, and must reluctantly reserve it for another. The Tulip blooms were not so good as last year’s collection; no doubt the flowers had been injured by sudden frosts in an early stage of growth, and showed the propriety, for future years’ management, of *every night’s protection*, in cold weather. The following kinds were exhibited.

1st Prize, for 12 blooms, Mr. Lawrence—Madame Vestris, Iago, Lady Sale, Selim, Rasa Bianca, Musidora, La Bella Nanette, Violet Alisanda, Vivid, Catalani, Duc de Boufers, Hamlet.

2nd Prize, Mr. Turner—Madame Vestris, Bolivar, Musidora, Hamlet, Lac, Holme’s King, Platoff, Catalani, Triumph Royal, Polyphemus, Queen, Talma.

3rd Prize, Mr. Batten—Platoff, Alcom, Triumph Royal, Lawrence Friend, Brankaster Pet, Cerise Blanche, Fanny, Walker’s King, Polyphemus, Fleur de Dames, Mary, Hercules.

4th Prize, Dr. Bushell—Aglaiia, Globe, Duke, Roscius, Triumph Royal, Abercrombie, Commodius, Bacchus, Ponceau, Mont Blanc, Roi George, Brilliant.

Many other stands were exhibited.

Extra prizes were offered for amateur flowers only :—

1st Prize of 3*l.* (given by Mr. Lawrence) Mr. Wallace, for—Duke of Devonshire, Rose Emily, Lawrence Friend, Fabius, Aglai, Bijou des Amateurs, Cræsus, Lord Hawksbury, David, Platoff, Polyphemus, Unknown.

2nd Prize, 2*l.*, Mr. Bellender—Fabius, Lady Exeter, Ambassadeur, Madame Catalani, Musidora, Sir E. Codrington, Triumph Royal, David, Platoff, Polyphemus, Reine des Flora, Madame Vestris.

3rd Prize, 1*l.*, Mr. Gurney—Rose Aglaiia, Roscius, Platoff, Triomphe

Royal, Carlo Dolce, Claudinia, Rubens, Victory, General Bournavell, Gloria Mundi.

Several other stands had prizes awarded in this class.

**THE PROPERTIES WHICH CONSTITUTE PERFECTION IN THE PANSY, AS RECOGNISED FOR EXHIBITION.**—The outline should be quite circular, the petals even on the edges, and quite flat; the face of the flower smooth (viz. free from crumple), otherwise the best-formed variety will have a coarse appearance. In the outline we have many varieties that approach very near our standard, the deficiency generally being in the lower side of the bottom petal. It must have been observed that every step we have taken towards obtaining a perfectly round Pansy, so much less is there seen of the top petals; this arises from increased size in the side and bottom petals, which, obliterating the deep indentations in the outline, have encroached upon the visible portion of the top petals. The side petals, if of good proportions and shape, will meet some distance above the eye; this will also improve the appearance of the belting, whether narrow or broad. The next point to notice is the centre or eye, which may be either solid or radiated, so that the lines do not extend to the margin; this latter is a material point. Another most desirable feature is, that the ground colour should be entire; whether white, lemon, or deep yellow, it should be the same in all the petals: many of the yellow-ground colours have a tendency to be of a deeper shade in the bottom petal; this is a fatal defect. The colours should be distinct, whether bright or deep, well-defined, and not joining the ground colour by a watery or indistinct edge. The oblong shape of the face or ground colour, as seen in some varieties, is very objectionable, as it gives the flower a long appearance, although the outline may be perfect. Selves of any shade should be dense and rich, with a bold dark eye, and the more glossy the surface the better. Richness of surface is of course essential to all of them, as well as substance; neither should they be deficient in size, to be useful as show-flowers. There are too many of those called Selves which really do not belong to that class; neither can they well be classed with the yellow or white ground flowers. The yellow or white being indistinctly mottled with the dark colour about the eye is most objectionable.—*C. Turner.*

**A COUNTRY GARDENER'S JOTTINGS ON THE CHISWICK FETE.**—Such a May day as Saturday was, even Old Herrick himself would have rejoiced at, and doubtless could the old lover of out-door amusements have revisited the earth, a special invitation to his Corinna to go a-Maying would have celebrated the occasion. And Maying it was in earnest, if sunny skies and happy faces, flowers of every hue and clime, and music the most classical, could in their combination constitute a May festival. For all these were present. And the glory of an English garden—a lawn of velvety turf, in the highest possible condition, formed no mean adjunct in the combination. But of the flowers staged for competition, what could be said of them more than, as a whole, the superlative of excellence was stamped upon them. To enter into a minute description is not the object of this notice. Those who were present need it not; those who were not fortunate to look

upon them would gather but a slight gratification from a description. All I wish to do is to offer a few remarks from jottings made at the exhibition, and such as possibly will not form part of the official report. Of course the queen of the exhibition was the Victoria regia, flowers and leaves of which were exhibited; novelties which few of us had previously the good fortune to behold. The chaste beauty of the flowers forcibly reminded one of the exquisite lines which Mrs. Hemans has addressed to our own less attractive but no less elegant "queen of the lake:"

" Bright lily of the wave,  
Rising with graceful form at every swell,  
Thou seem'st as if a spirit meekly brave  
Dwelt in thy cell."

The large drawing afforded a good idea of the habitat of this wonderful flower. The exclamation of an enthusiastic foreigner as he entered the grand tent, and caught a perspective view of a combination of floral beauty not to be described—"Superb! superb!" will convey as full a description as is possible. And superb indeed it was. If the shades of some of our old gardeners who have "slept with their fathers for half a century, could again have tenanted their clay," and mixed with the busy scene, what exclamations would have escaped them, and how would they have extolled the industry and skill of gardeners, and the enterprise of gentlemen and ladies, by which such scenes are produced! Here, in one galaxy of beauty, were collected the minute and hardy denizens of the Alpine heights—regions of snows and storms, the Papilionaceous plants of New Holland, and all the beauties of the Cape. From the woods and plains of the tropics, Orchids of every hue and fragrance, exhibiting forms as indescribable as their beauty. From every latitude, tropical, temperate, and frigid, the industry and enterprise of man had borne some trophy of his perseverance, and bade them blossom in a foreign climate beyond their natural wont. As one stood amid such a scene, and allowed the mind to wander beyond the mere glittering surface, beautiful as it was, and in fancy beheld the toils and anxieties, the hopes and fears, the proud satisfactions which claimed their birth from circumstances connected with it, how was the mere ocular gratification augmented by a higher and nobler one, a mental gratification! To particularise the Orchids would be next to impossible, suffice it to say they were magnificent. *Stanhopea tigrina* was unquestionably the queen. As one wandered along, the eye was caught now by the chaste *Calanthe veratrifolia*, the quaint spider-like *Brassia maculata*, or the Weeping *Scuticaria Steelii*; *Phalænopsis amabilis*, resembling nothing earthly but a quantity of white butterflies perched on a slender twig; the singular *Acanthophippium bicolor*, and the no less so *Acineta Humboldtii*, with the *Vandas*, *Oncidiums*, and *Saccolabiums*, presented themselves in such rapid succession, that each vegetable beauty seemed to give place to a greater. The remark of a lady when examining this department of the exhibition was a just one. It was to the effect, that our artificial flower makers and designers for fabrics would do well to study from them

more than at present they appear to do. I recollect seeing the other day in a window in Regent-street, a carpeting with designs of Orchids. It is needless to say how novel and rich was the effect. Amongst the plants claiming notice from their comparative rarity in exhibitions was *Lyperia pinnatifida*, a mass of rosy-purple blossoms, apparently an ordinary greenhouse plant; *Indigofera decora*, a native of China, with beautiful pinnate foliage and racemes of blossom; *Siphocampylos microstoma* and *Franciscea macrophylla*. Amongst the *Gardenias*, of which there were several, *Fortunii* must bear away the palm; a more superb plant it would be difficult to imagine. The petals are of so fleshy a nature as to give the flower an appearance of richness not to be described. A fair admirer,

“Herself a fairer flower,”

compared them to *Roses* transformed to marble. *Acrophyllum venosum*, with the foliage of an *Ilex* and the flowers of a *Spiræa*, must not, however, be omitted. Signs of a better taste in many climbing plants was exhibited in the specimens of *Tropæolum*, by Mr. Stuart. When will the old pudding-shaped trellis give way to something more in accordance with taste and elegance? And now a word or two on the tendency of such exhibitions, as affecting the gardeners. Unquestionably they offer a great stimulus to exertion, and in minds rightly constituted the result must be beneficial. Bringing together, as such exhibitions always do, the best flowers of the best kinds, and in the highest degree of development, they form epochs in the history of gardening, periods at which we can look back upon, and from which we can note the rapidity of our progress. And as a *fête*, a gala day to all the lovers of flowers—and who does not love them?—it affords a means of the fullest gratification, a gratification which, unlike much that we extol, brings with it no sting for the morrow. The pleasure is purely an innocent one; it involves no cruelties, it has no immoral tendencies. The secret of this is, it produces no false excitement.—*L., in Gardeners' Chronicle.*

**GREEN CENTRES IN ROSES.**—Last year this defect was very prevalent, which was caused by the extra moisture of the spring, causing a super-abundance of sap, which the cold damp nights checked in the leaves, many having then fallen off; whilst the absence of the sun also prevented the flower buds from maturing the extra quantity of sap into petals, and thus the unsightly excrescence grew under their shelter before the calyx was disclosed. The plan I adopted was to cut off all such flowers as soon as perceived.

In such wet seasons it is advisable to lay over the roots of any choice kind which is liable to this defect, some asphalt, or similar covering, during wet days or nights, to shoot off extra moisture. This will check the production of super-abundant sap, and prevent the production of green centres.—*Clericus.*

**VICTORIA REGIA.**—A very small plant was received last September by Mr. Ivison, gardener at the Duke of Northumberland's, Sion House, near London, from the Royal Gardens at Kew. And in the short space of three months cultivation in a slate tank, in a small spau-

roofed house, it commenced blooming. The tank is twenty-two feet long, twelve wide, and two and a-half deep, becoming shallower to the sides. Prior to its being placed in the tank, the plant had been kept in a tub, but was removed to the former a little after Christmas. A hillock of well-decayed turfy loam, mixed with a little river sand, and having brickbats below to keep it open, was placed in the middle of the tank. The water is warmed by a two-inch pipe at the top, and a four-inch pipe at bottom, and it is fed from a small slate cistern at one end, which keeps continually pouring warm water on a broad wheel about a foot in diameter, the revolving of which produces *motion* in the water in the tank. The water is supplied from a rain-water cistern in the open garden. Mr. Ivison considers it of the highest importance to success, that the water be in *constant circulation*. The water is kept at eighty-five degrees of temperature, and the air of the house at from eighty to ninety degrees.

The plant has eleven leaves, and some of them are five feet across. They are almost circular, and at the under sides of a pink colour, deeply ribbed, and have a turned rim of near two inches high, the outside of which is of a rich rosy-purple. The first flower opened on April 10th, since which more than a dozen others have bloomed, and now four more flower buds appear. Some of the flowers measured thirteen inches across. A blossom continues about two days, and about five o'clock of the first day it opens, continues expanded till ten the following morning (the second day), then closes, but re-opens about two in the afternoon. The petals which at first were white, now have changed to pink, and they gradually fall down on the water, and then an inner row of large petals striped and mottled with purple and red, unfold about three o'clock, which reflex and by four fall back upon the first expanded petals, and now the flower assumes a flattened appearance, and discloses to sight a quantity of smaller petals, overlapping each other, and gradually tapering to a central rose-coloured point. About six o'clock it exhibits to view its numerous yellow coloured stamens, surrounded by a ring of small petals of a rosy-red colour, which, contrasting with the first reflexed petals, now of a lighter colour, present a most beautiful display, and the blossom of this queen of aquatic flowers, appears in its meridian grandeur.

SOME ACCOUNT OF THE VICTORIA REGIA IN ITS NATIVE WATERS.—  
 “We at length reached the Igarape, and were at once gratified by seeing the Victoria growing by the opposite shore of the Igarape itself. We were warned by the people not to go amongst the plants, as their prickles were venomous: but I got both hands and feet considerably pricked without experiencing any ill effects. We were fortunate in finding the plant in good flower, but, according to the testimony of all at Santarem who have seen it, the leaves attain their greatest dimensions in the winter. Captain Hislop assures me he has seen many leaves 12 feet in diameter, whereas the largest we saw measured a very little above 4 feet across, and they were packed as close as they could lie. But I can easily conceive how, in the wet season, their dimensions should be considerably augmented, for whereas at present the plant is growing in less than 2 feet of water, in winter the Igarape

will be filled to its topmost banks, or at least 15 feet deeper than at present, while its breadth will also be greatly increased, so that the petioles of the *Victoria*, lengthening doubtless with the rise of the waters, will bring the leaves to a much greater surface, on which they will have room to dilate to about twice their present size. The aspect of the *Victoria* in its native waters is so new and extraordinary that I am at a loss to what to compare it. The image is not a very poetical one, but assuredly the impression the plant gave me, when viewed from the bank above, was that of a number of tea-trays floating, with here and there a bouquet protruding between them; but when more closely viewed, the leaves excited the greatest admiration, from their immensity and perfect symmetry. A leaf turned up suggests some strange fabric of cast-iron just taken out of the furnace; its colour, and the enormous ribs with which it is strengthened, increasing the similarity. I could find no prostrate trunk as in the other *Nymphæacææ*. The root is central, the thickness of a man's leg, penetrating deep into the mud (we could not dig to the bottom of it with our tréسادos), and sending out fascicles of whitish radicles, about 25, from below the base of each petiole, the thickness of a finger, and 2 feet or more in length. The radicles are imperforate, and give out here and there a very few slender fibres. From the same root I have seen flowers uniting the characters of *Victoria regia* and *cruziana* (of the latter I have only the brief description in Walpers), so that I can hardly doubt their being the same species, as had been already more than suspected. The Igarape, where we gathered the *Victoria*, is called Tapiruari. I had two flowers brought to me a few days afterwards from the adjacent lake, which seems to have no name but that of the sitios on its banks; Mr. Jeffreys has also brought me flowers from the Rio Arrapixuna, which runs into the Tabajoz above Santarem, and in the wet season unites the Tabajoz and Amazon. I have further information of its growing abundantly in a lake beyond the Rio Mayaca, which flows into the Amazon some miles below Santarem. Mr. Wallace, who recently visited Monte Alegre, had a leaf and flower brought to him there; I have seen a portion of the leaf, which he dried. Lastly, I have correct intelligence of its occurring in the Rio Trombetas near Obidos, and in lakes between the rivers Tabajoz and Madeira, so that there can be no doubt of its being plentifully distributed throughout the whole of this region, both north and south of the Amazon."—*Mr. Spruce's Voyage up the Amazon, in Hooker's Journal of Botany.*

ON WATERING POTTED PLANTS.—In the operation of watering potted plants persons not practically familiar with plant culture are apt to make serious mistakes. Cultivators find, by experience, that an excess of water at the roots is very injurious to almost all plants, and hence it is usual to direct that great caution be used in the application of water, especially in winter. The result is, that frequently the opposite extreme is fallen into, to the great injury of the plants. From the moment that the soil becomes so far dried that the fibres of the roots cannot absorb moisture from it, the supply of the plant's food is cut off, and it begins to suffer.

Some plants can bear this loss of water with more impunity than

others; some again, and the Heath family among the rest, are in this way soon destroyed. The object in watering should be to prevent this stage of dryness being reached, at least during the time a plant is growing, and at all times in the case of those of very rigid structure; at the same time that excess, which would sodden the soil and gorge the plants, is also avoided. Within these limits the most inexperienced persons may follow sound directions for the application of water with safety. But whenever water is given to pot plants, enough should be employed to wet the soil thoroughly, and the difference between plants that require less or more water should be made by watering more or less frequently, and not by giving greater or less quantities at one time.—*Magazine of Botany.*

DESTRUCTION OF SLUGS, SNAILS, AND WIREWORMS.—Having suffered very much in my garden from the depredations of these vermin, I have been induced to try the effect of Swede Turnips as a decoy for them. I had a large basketful cut up into slices rather more than half an inch in thickness, and placed about my garden (about a quarter of an acre), and the result of ten consecutive days' operations is the securing of the enormous quantity of 9,096, besides a great quantity of wireworms and millipedes. The second morning's collection was 2,056 slugs and snails; 510 is the smallest collection I have made. The Turnip slices I have been using are now put into the ground edgeways, the better to trap the wireworms, and I am employing fresh slices for a further destruction of slugs and snails.—*Thomas Colley, Ipplepen, Devon. (Gardener's Chronicle.)*

GARDENERS' BENEVOLENT SOCIETY.—Each successive year there is held what is termed an Annual Meeting of this very valuable Society. This year (1850) it was held at the London Coffee House on May 15th, and the excellent Earl of Carlisle presided on the occasion, there also being seventy-four of the principal nurserymen, seedsmen, and horticulturists assembled. A few years back the Duke of Northumberland obtained a most valuable Nectarine from Syria, since which a number of plants had been propagated, and now fit for final planting. His Grace directed that twenty-four of them should be sold by public auction, and the proceeds should be presented to this Society in order to form the NUCLEUS of a fund for the erection of almshouses for aged and indigent gardeners and their widows. The proceeds of the sale was 16*l.* 17*s.*

As usual, at the anniversary, donations to the Society are made, and on this occasion the amount was 400*l.* We feel assured that so excellent an institution will have, at least, the approval of all our readers, we therefore insert the admirable speech of the noble president on the occasion, believing it will not only be read with pleasure, but be an inducement to some to contribute to the support of the Society.

After the usual loyal toasts, the Chairman rose to call attention to the special purpose for which they were assembled. We have hitherto (said the noble Earl) dealt only with those great things and persons connected with royalty, war, and the concerns of empires; but we are met together this evening to put forward the claims of the Gardeners' Benevolent Institution. (Hear, hear.) The first consideration that

might naturally occur to myself is, what business have I to be in the chair on such an occasion, and to have thus the privilege of addressing you? for it is scarcely necessary that I should observe that I do not myself exercise the very honourable profession of a gardener, and furthermore I am sorry to say I am not fitted to hold the place amongst you I am now occupying, by any knowledge or proficiency I have acquired in your delightful science. ("Hear, hear," and a laugh.) But there seems to me to be this peculiarity in the business or profession of a gardener, that while it admits of the highest possible degree of progress and perfection, it also, in its most humble grades, and in artificial methods, opens up sources of healthful, innocent, and pleasurable employment. (Cheers.) The art of the gardener, dealing as it does with perhaps the most exquisite of all the raw materials which Nature supplies—the flowers of the earth; the art of the gardener seems to me to combine the healthy exercise and sturdy out-door life of the agricultural labourer, with the more intellectual and studious employment of furnishing models for the most ingenious imitations of the milliner, the most delicate enamellings of the jeweller, the richest colourings of the painter, the brightest day dreams of the poet—(hear, hear)—and there is hardly a spot of earth so rugged, scarcely a tribe of man so rude, that the art of the gardener will not be found to produce something like loveliness to the scene, and some idea of beauty to lift up the mind to the supreme fountain of light and beauty, and the Giver of all goodness (cheers); and the pursuit of gardening, gentlemen, seems to me not only to enhance, but also to make compensation for the beauties of nature—for the charms of scene, and the loveliness of landscape, are necessarily confined to limited portions of the globe's surface. The full enjoyment of these can be but the privilege of the few, and it is only some amongst us who can visit, and comparatively very few can enjoy permanently, such scenes as the valley of Cashmere, the Bay of Naples, the shores of Genoa, or even our own Windermere, Loch Lomond, or the lakes of Killarney, present to us. (Cheers.) But we must remember that there is hardly any spot of ground so built on but the monotony of the scene may be diversified by the gay parterre—scarcely a cottage so small that it may not have the Woodbine twining round its porch; nay, more, there is hardly a lodging or dwelling in the most squalid alley of this metropolis, but it may have its Geranium in the window-sill—(hear, hear)—and I have heard, and I believe the statement is true, that the poor weavers of Bethnal-green take especial pride in rearing their Geraniums, their Hyacinths, and their Tulips. (Cheers.) It would thus appear that there is a sort of spell or charm about flowers, something like magnetism or mesmerism, which, independently of fashion, or the pleasures of sight and smell, tends to soothe the spirits and compose the mind. (Hear, hear.) I need not seek, gentlemen, to corroborate the respectability or honour of your craft, by alluding to its antiquity; but you will not forget that the first spot on which man was placed on earth was a garden, and it is fair to presume that the first avocation of man must have been that of a gardener—(cheers)—and the shrubs must have been green, and the flowers must have looked bright among the glades of Eden before sickness, pain,



sorrow, or sin entered into our world. (Cheers.) However, gentlemen, we know that those drawbacks and disfigurements abound near the pursuit and profession of a gardener as they do to every other calling or occupation. And this brings me especially to the claims which such a charity as this puts forth for your support. I learn, gentlemen, that the Gardeners' Benevolent Institution is adapted to afford relief to aged and infirm gardeners above 60 years of age, and their widows, in all parts of the United Kingdom; that it has now 34 pensioners upon its funds, 11 women and 23 men, whose claims have all borne the strictest investigation, and who have been reduced in their old age to penury and destitution; and I find that the average ages of these parties are 74 years for the women, and 76 years for the men. I am further told that it will appear by one of your rules, that this society, besides providing pecuniary relief for the distressed and broken down, in the shape of charity, partakes also of the nature of a friendly society, and encourages contributions from gardeners, by promising which, while in the heyday of their vigour and prime, they acquire a right of preference and a title to the enjoyment of your bounty in the event of darker days coming across them. (Applause.) I find that during the few years (eight I believe) that the society has been in operation, it has contributed relief to the amount of 2,280*l.* (Hear, hear.) But does the relief it is enabled to give meet all the claims made upon it? By no means. I regret to have to add, that, though this much has been done, yet at this time your Committee, out of twenty eligible candidates for your bounty, can only elect two of them this year. (Hear, hear.) I have now to invite your considerate attention on behalf of these broken-down veterans in a pursuit so honourable, so respectable, and so useful. You will not forget—I am sure those who exercise the same craft will not forget—you will not forget, you who, by the favour of your Creator, are in easy circumstances, and in an affluent position, that all the enjoyment you derive from what is beautiful to the sight and fragrant to the smell in the rich and varied products of your gardens—you will not forget that the life and pursuit of a gardener is a laborious one, and subject to much competition; subject to many reverses; subject to the change of taste, and the caprice of fashion, and trying and unhealthy to some constitutions; exposed to unhealthiness in some situations, and often bending the stout back and stiffening the active limbs of those who minister to your luxury, your comfort, and your pleasure. (Hear, hear.) These are claims which you will not, I am sure, forget. You will remember that in the brightest foliage, and in the most gorgeous colours, there often lurks the most mischievous poison, and that even the fairest rose is never without its thorn—(hear, hear)—above all, you will remember that amid all that is bright and beautiful in nature, there is still no blossom of plant or shrub or tree that blows with such unfading colours—there is no scent of earth so fraught with undying fragrance—as the bloom of good and charitable works, and the sweet-smelling savour of that pity which feels for the wants and relieves the distresses of our friends and our brothers. (Loud applause.) Gentlemen, I feel that a cause like this is safe in your hands, and I have only to recommend, with all good-will and all the fervour it deserves, the

claims of this institution on your support, and to beg that you will join with me in drinking "Success to the Gardeners' Benevolent Institution." (Loud cheers.) The toast was drunk with three times three and one cheer more.

**PROLONGING THE BLOOM OF PELARGONIUMS.**—The art of producing a lengthened bloom is well worthy the attention of all lovers of this charming tribe of flowers, and to effect this successfully attend to the following particulars:—Place those plants which flower earliest under a wall, and fully exposed to the sun's influence, in order that the succulent wood may be well and early ripened; when this is effected, cut them down to within four inches of the pots: remove them to a rather close frame until they begin to break, when air may gradually be given them; eventually the lights may be taken off, in order that the young shoots may be hardened and strengthened, previous to the plants being placed in their winter quarters. By having a succession of plants so treated, a prolongation of bloom is readily obtained.

One of the main points in the culture of the Pelargonium is keeping the plants near the glass, and sufficiently far apart to prevent the foliage of one touching that of another. Give abundance of air in mild weather, and allow it to circulate freely amongst the plants. This will check their tendency to get leggy. Good loamy soil, moderately rich, suits the Pelargonium perfectly; for liquid manure can be readily administered in spring when it is growing rapidly.

**GUANO BENEFICIAL TO AMERICAN PLANTS.**—I have been in the habit of using guano and other strong manures in a liquid state for some years past, to the Rhododendron, Ghent and Indian Azaleas; and with great advantage. My practice is to use the guano in the proportion of one pound to thirty gallons of manure-water, that runs from the stables and farm-yard. I water the Rhododendrons and Ghent Azaleas as soon in the spring as I perceive the blossom-buds beginning to swell, and continue it at the rate of eight or ten gallons to each plant until the flowers are expanded, varying the watering according to the weather; if the weather continues dry, water is given once a week, but if damp, only once a fortnight. I also vary the quantity given each time according to the size of the plant, taking care that each plant gets enough. As soon as the blossoms begin to drop I again have the plants well drenched with guano-water, so as to encourage the early growth of wood; by this means the latter is made earlier, and is consequently better ripened, and the foliage is of a much deeper colour than if no stimulus had been given. I treat the Indian or greenhouse Azaleas in the same way, with the exception of giving them a short rest for a fortnight or three weeks after flowering, when they receive but little water of any kind. I then bring them out, and give them such pruning as is necessary to keep them in a good pyramidal shape, after which they are supplied with strong guano-water, until they have completed their growths; they are then placed out of doors in a sunny situation, where they remain with the pots protected from the action of sun and wind until the autumn rains set

in, when they are housed for the winter. The advantages of manure or guano-water to the greenhouse Azalea is, that the blossoms are much finer, and the petals of better texture ; and I find that by the use of manure-water the most deciduous kinds retain their foliage through the winter, and are well clothed with foliage when in blossom, which I consider adds much to the beauty of the plant ; even the old, but now rare one, "Flore pleno," under this treatment, is an ever-green, and although one of the most delicate of Azaleas, it will bear guano water as well as any of the more robust kinds. When it has not been convenient for me to have the manure-water previously prepared for the Azaleas, I have placed a piece of guano, about the size of a walnut, on the surface of the soil, and watered upon it from time to time, and I never found any bad effects from this practice.— (*Gardeners' Chronicle*).

MR. GROOM'S TULIPS.—The present season has been unfavourable to a fine display of Tulips. This fact, the last South London Floricultural Show amply proved. It is certain the flowers were injured before opening (very likely at an early stage of their growth) by the sudden severe frosts that occurred, notwithstanding, however, this circumstance and the prevalence of dry north-easterly winds, which we have experienced, Mr. Groom has had a good exhibition of this favourite flower. His best bed, 120 feet long, and containing not less than two thousand flowers, has been nearly as fine as we have ever seen it in any former year. The following favourite sorts were in good condition when we saw them. *Bizarres*: Polyphemus, Duke of Devonshire, Catafalque, Emperor of Austria, Nourri Effendi, Marshall Soult, Strong's King, Platoff, Everard, Pompe, Garrick, Optimus, Prince of the Netherlands, Countess of Wilton, Louise, Lord John Russell, Earl of Lincoln, and Duke of Norfolk. *Byblæmens*: Victoria Regina, Laurence's Friend, Rubens, Louis XVI., Imperatrix Florum, Michael Angelo, Earl of Haddington, Violet, Alexander, Duke of Buccleugh, Claude, Monte, Bijou des Amateurs, Desdemona, Bloemart, Homer, Lady Sale, and Camarine. *Roses*: Duchess of Sutherland, King of Saxony, Cameuse de Crai, Cerise Blanche, La Tendresse, Claudiana, Emily, Aglaia, Lady Peel, Catalani, Triomphe Royal, Cerise Belle Forme, and Ponceau très Blanc. Dr. Horner and Prince of Wales, new bizarres, are promising flowers.

PANSIES.—Mr. Edwards, of Wace Cottage, Holloway, attended the celebrated Pansy Exhibition recently held at Hammersmith, and in the "Florist" he gives a list of the best kinds then shown.

*White-ground Varieties*.—Queen of England (Fellowes); Almanzor (Le Messurier); Helen (Hunt); Mrs. Beck (Turner); Miss Thomson (Thomson); Duchess of Rutland (Thomson); Penelope (Thomson); Caroline (Thomson); Sir R. Peel (Bragg), very fine; Clinax (Bell); Princess (Turner); Ariadne (Cook); Mrs. Hamilton (Nasmyth).

*Yellow or Straw-ground Varieties*.—Constellation (Thomson); Bellona (Hooper), a large variety; Rubens (Turner); Miss Edwards (Turner), an early flower; Duke of Norfolk (Bell), the boldest flower in cultivation; Supreme (Youell); Addison (Turner); Leader

(Hooper); Juventa (Hooper), a large variety; Lady Franklin (Thomson); Mrs. Bragg (Bragg); Viceroy (Turner); Example (Turner); Mr. Beck (Turner).

*White Sels.*—I can report nothing very excellent. Snow-flake (Thomson) has shape, but requires smoother edges; White Sergeant (Cook) was more purple than white, being much mottled; even moderate whites are in request.

*Yellow Sels.*—Ophir (Widnall); this flower is by far the best early yellow; as the season advances it sadly degenerates, and at the present time its shape is very deficient; Emma (Lane); Malvern.

*Dark Sels.*—Disraeli (Hunt); Rainbow (Hall); Lucy Neal (Scotcher); Sambo.

In the above list there is variety with quality in an eminent degree; and I may safely assert that it would prove impossible to select a number of varieties that in combination could surpass fair-grown specimens of the above. If any one inclines to begin the enjoyable pursuit and employment of Pansy-growing, he will require very few beside the varieties here enumerated; and further, a stand of twenty-four selected from them would defy competition for quality of flower. That grower who does not possess *every variety* above mentioned should lose no time in procuring them, although, perhaps, there may be some difficulty in obtaining all of them until the autumn.

ON SHOWING PICOTEES ON CARDS.—At a meeting of several of the Oxford florists, held on the 14th of May, 1850, it was unanimously agreed that, in the opinion of the persons present, the system lately adopted of showing Pinks, Carnations, and Picotees on cards is contrary to the true interests of the growers of the above flowers; that the various defects, such as split petals, the quartering of the blooms, down flowers, false pods, and petals partly eaten by insects, cannot be so easily detected, greater facilities of hiding such defects being afforded by the use of the card; and they trust that all exhibitors who have the interest of floriculture and the encouragement of the true property of the above flowers in view, will use their utmost exertions against such a system.

(Signed)	WILLIAM COLCUTT.	ALEX. KIRKPATRICK.
	JAMES MALTBY.	HENRY BELL.
	WILLIAM PLAISTER.	JOHN PAYNE.
	THOMAS COOK.	WILLIAM WALE.
	THOMAS LOOKER.	WILLIAM R. HOBBS.

CULTURE OF LISIANTHUS RUSSELLIANUS.—This beautiful and much esteemed plant was introduced into this country in 1835 from Mexico. Being found to be capable of producing ripe seed in abundance, a large stock of plants was soon diffused amongst our best cultivators, who hailed it with delight. Nevertheless, strange to say, its successful cultivation, except in a few instances, still remains a desideratum—a fact amply proved by the paucity of really well-cultivated plants produced at our great metropolitan exhibitions.

Having been somewhat more successful than some of my neighbours in growing and flowering this plant, truly magnificent when well

managed, I will give my plan, which is as follows:—I sow early in spring; I first fill a six-inch pot half full of potsherds, over which I place one inch of sphagnum moss; I then fill the pot within one inch of the top with rich light sandy soil. When all is pressed down equal and firm, and a smooth surface made with the bottom of a small pot, I sow the seed, and cover it very slightly with dry white sand. I cover the pots with bell-glasses, and place them on a shelf in a shady part of an early vinery, keeping the surface constantly moist by pouring water on the outside of the glasses. As soon as the plants have come up air is admitted, and increased as they advance in growth. When sufficiently strong they are pricked out into small pots, having the same drainage, moss, and mixture as the seed-pots, and are again shaded with hand or bell-glasses until the plants become established. In three weeks or a month they require to be potted off singly into small pots, and I encourage their growth as much as possible by placing them in a shady part of either a vinery or melon pit, whichever is kept at the highest temperature, with a humid atmosphere. As soon as they begin to fill their pots with roots I give them once a week a little clarified manure water.

I re-pot into winter pots about the middle of August, using pots to suit the size of the plants, and replacing them in the same growing temperature as before till their pots are filled with roots. After this I begin to prepare them for winter, by giving them less moisture, more air, and a cooler temperature; and finally they are placed on a shelf, near the glass, in the coolest part of the stove, and wintered rather dry. Early in February I begin to increase the heat and moisture, and as soon as they begin to grow freely I re-pot them, which is generally about the second week in March. They receive another shift in April, and those that are intended for large specimens a third in May, using eighteen or twenty-inch pots, and a mixture consisting of equal quantities of good strong maiden loam, peat or bog mould, burnt clay, leaf mould, and cow manure, with a little white sand. These materials are well mixed together, and if dry are moistened to prevent them running too close in the pots. In potting I use a large quantity of drainage, and plenty of rubble stones, small potsherds, and coarse river sand amongst the mixture. I make the mixture just firm, but am very careful to keep it quite porous. I give very little water till the roots reach the sides of the pots; it is increased as the plants and the season advance, giving heat and moisture in proportion. Too much stress cannot be put upon making a proper mechanical arrangement of rich, porous, and well-drained soils, which are essential for the healthy development of plants of the nature of the *Lisianthus*.

When the young shoots are sufficiently advanced I stop them immediately above the second joint, each shoot will then produce four, they require stopping about three times. The last stopping for plants required to bloom early should take place in the first week in June, and for plants required to bloom later the first week in July. As they advance in growth the branches will be required to be tied out with sticks, to make round and well-formed plants.

When the plants are growing freely they are sometimes attacked with a disease at the base, which is produced by the moist and confined

atmosphere that is required for their fine growth. To prevent this I allow the surface to become dry once a week, during which the plants are supplied with moisture from feeders or pans, in which the pots are placed for a few hours, being careful not to allow any stagnant water to remain about them. As soon as the blooms begin to expand I keep a drier atmosphere, and expose them to more air and light, which much improves their colour.\*—(*J. Green. Journal of the Horticultural Society.*)

FANCY GERANIUMS.—A correspondent inquires how he is to grow these beautiful and interesting plants, “such as *Anais, Queen Victoria, Ibrahim Pacha, Statueski, Reine de Français, Bouquet tout fait*, &c.; the time for inserting the cuttings; the soil; the temperature, top and bottom (if requisite); if to be cut down as other geraniums in the autumn; when to place them in their flowering pots; the most approved form to train to so as to get them large, say from eighteen to twenty-four inches in diameter, and one mass of bloom; the difficulty consisting in the facts that the plants root so much at the bottom of the pot, with very few roots at the sides, and show bloom in the earliest stages when the plants are extremely small, and when the bloom buds are pinched off again forming them, instead of growth and wood.” As it has been deemed necessary that something more than a passing notice to these matters in the correspondents’ column should be given, I shall be happy to render any little assistance in my power, merely premising that as there are now many beautiful varieties which I have not yet grown, the statements I may make will be freely open to emendations from those coadjutors and friends who may have had more kinds under their direct cultivation.

First. *The time in which to take off and insert the cuttings.*—This may be effected at any period. A cutting of a ten shilling geranium plant is not to be slighted at any time; autumn and spring, however, are the best periods for striking these fancy geraniums, and so far as present and ultimate success are concerned the spring is better than the autumn, not but fine plants may be produced from autumn-struck plants, as from some of the free growing kinds we have had plants as large as that desired by our correspondent in the following summer, but then there is greater risk of failures and disappointments. The reason of this is owing to the difference in habit of these plants when contrasted with the other favourite but more succulent-stemmed geraniums. In the case of the latter it is requisite, both for the ensuring of the breaking of the old plant when cut down, and also for the producing of healthy young plants from the cuttings, that the shoots should be well matured by exposure to sun and air, and a diminished supply of water for some time previously. Fancy geraniums, from their profusion of blossom, their compact growth, and less succulent stems, require less of this maturing before the cuttings are removed; but if no attention to maturing the wood is given, then in all likelihood many of the cuttings will damp off at once, and even when they strike

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\* A plant sent to the meeting of the Horticultural Society had 500 blossoms expanded at once.

root they can only be preserved during the winter by keeping them in the most favourable circumstances, where all danger of damp and a stagnant atmosphere are provided against by the ability to maintain when necessary a dryish atmosphere, and a temperature of from 40° to 45° in the coldest weather. If, on the other hand, the wood of the cutting is over-matured, that is, if its juices are highly elaborated, there is a likelihood that its organized material will be developed more in the production of bloom than of wood buds. This is still more likely to be the case if the young plants have been starved during cold weather in winter, by being shut up and covered for days in cold pits. The diminutive character, instead of being accidental, has now become constitutional. The stem from being hard, and having its juices so thoroughly inspissated, is quite incompetent to act as the vehicle for the transmission of fluids that would be necessary for a large-headed plant. As roots and branches act and re-act relatively and co-relatively upon each other, the stunted head is attended with few and diminutive root feeders. Of all stunted plants there is nothing more discouraging than a stunted geranium. The cutting off the flowers, as our correspondent has done, will only prove a slight palliation of the evil—though when persevered in, and other points of good culture are attended to, fine plants ultimately may be gained. What would be good culture for free-growing plants, however, will not suit these stunted gentlemen; light rich soil is the thing in which they generally delight, but until you set the stuntedness adrift you must use only the light, abjure the rich, employ small pots well drained, and keep the plants in a closer atmosphere than usual. Your object would sooner be gained by taking off a cutting or two, just in that state when the wood is neither soft nor thoroughly indurated. Properly treated it will soon shoot ahead of the old plant. Cutting the plant down to the surface of the soil, if it has got any roots of consequence, will also be attended with more success than doctoring the stunted head. The plant should be kept close, rather dry than damp, until the fresh shoots appear, then shaken out and re-potted in the usual way. Foresters are well aware of the benefit of acting upon this principle; they do not stand picking and cutting the miserable twigs of a stunted young oak, that scarcely gets larger by inches in a twelvemonth, they cut it off close to the ground, and in a year or two they have a clean luxuriant plant, such as the original would never have been. Cuttings taken off in July or August, stopped when struck, potted into small pots, stopped and re-potted again in October, and potted again in early spring, will make nice little bushy flowering plants the first summer, but if large fine plants are wanted, growth rather than bloom must be encouraged by stopping and keeping the plants rather shaded, pinching back the tops or cutting them down, removing the most of the soil, or only a portion, and re-potting in July or August, just as the varieties are slow growing or the reverse, and early fine blooming plants will be obtained for spring and summer.

As we have said, however, we prefer spring-struck cuttings, as there is comparatively little danger of them getting into a stunted habit, and scarcely a cutting will fail of being made into a plant, while time will

be saved. Cuttings may then be obtained from thinnings of the young shoots on established plants, or, better still, an old plant stopped in the autumn should be left on purpose. It will stand comparatively hard treatment during the winter, but in February or March it should be put gradually into a moist atmosphere, and a temperature of from 45° to 55°, or a few degrees more. As soon as the young shoots are from one and a-half to three inches in length they should be taken off close to the stem and properly treated, the strongest would bloom in the open air in summer if desirable; if potted, stopped, and re-potted in August they would make nice little flowering plants during the winter, if a temperature not less than 45° is then given them with fresh air. Similar plants, having their flower-buds removed, the points of the shoots pinched out, the shoots themselves trained into the desired shape, and re-potted in September, will make nice flowering plants in spring and summer. For the end of summer and autumn others should be re-potted in March and April.

*Soil, and a few matters essential to success in propagating.*—The soil should be light and sandy, free from worms and insects; one part peat, one part leaf-mould, one half part loam, one part pure sand, will answer admirably, with just an additional dusting of silver sand upon the surface, such a compost will neither be too close nor too open. If mere soil, &c., were present, the air would obtain too free an access to the base of the cutting when the compost became dry, and then the opposite evil would ensue from the moisture remaining too long around the cutting after watering, causing it to mould and decay. A similar effect would be produced by inserting cuttings, as some do wholly in sand; enough of air then would not be admitted, and thus a shanking-off would be liable to ensue, for the circumstances that would ensure the safety of a hard-wooded cutting would ruin a soft-wooded geranium. Then if the cuttings are inserted into pots, these pots should be half filled with drainage, and the remaining portion with different layers of the prepared compost, reserving the finest for the surface. Before inserting the cuttings the pots should have been previously well watered, and the moisture allowed to drain away, as most of the waterings afterwards had better consist of sprinklings from the syringe. In early autumn, when the weather is still warm and the sun's rays powerful, little or nothing in the shape of bottom-heat will be required, but the cuttings should be placed at such a distance from the glass that they may enjoy the direct, though diffused, rays of light; this will prevent the necessity of shading much to prevent flagging. The more direct though somewhat diffused light they will stand, the sooner will roots be protruded, and the more sturdy and healthy will the plants become. Of course they would require to be placed nearer the glass as the power of the sun declines. Every hour's shading, however necessary it be at times, is just so far encouraging the mere expansion upwards of what is contained in the cutting, without doing much for encouraging the protrusion of roots. In sunny weather they will require to be kept close, and receive frequent sprinklings from the syringe, to lessen their powers of evaporating their juices, but at night and morning air may be given, and the sashes at times wholly removed. When propagating in spring



the same course may be adopted with one or two exceptions. First, as the presence of sun at that period is not so much to be depended on as in the autumn, the cuttings should be placed pretty near the glass, and shading in bright weather resorted to when necessary, as otherwise in long continued dull weather the cuttings would become weak and spindled. And, secondly, as the cuttings had been slightly forced before their removal from their mother plant, a little mild bottom-heat, of from 60° to 80°, would be of great service to them, giving them a top temperature of from 50° to 60°. These, as we have already hinted, are the circumstances under which the finest plants are most easily produced.—*Cottage Gardener*.

R. FISH.

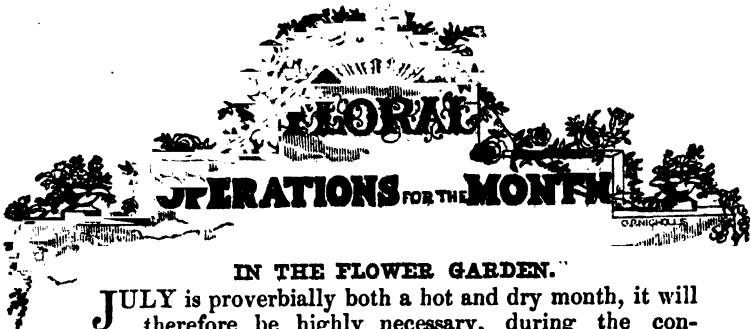
**PEGGING-DOWN BEDDING PLANTS.**—This trailing growth of the Verbenas brings me to the first stage of summer dressing the beds. All plants which trail on the ground, or grow sideways, like Verbenas, must be trained or tied down, to fill the more open spaces, so as to get the soil in the beds covered as soon as possible. This training in our forthcoming dictionary will be called “*pegging*,” because, in former days, the training was effected with little hooked or forked pegs; but there are many ways of “*pegging*” without the use of pegs at all; and one of the simplest with Verbenas is to take hold of a flower truss in bud, make a hole with a stick, or with the two fore-fingers, and poke the truss down in it. The shoot is then held in the right position at once, and without knowing how the thing was done, no one could make out that the shoot did not naturally grow in that position from the first. Unless the surface of the bed is very loose indeed there are many plants, such as *Petunias*, trailing *Geraniums*, and the like, which may be trained after the same fashion, being kept in the right direction by means of a leaf here and a leaf there buried in the soil. The foot-stalk of the leaf, like the flower-stalk of the Verbenas, being still attached to the plant, it holds down a shoot just like one holding a pig by one ear. This may be called the simplest, or cottage mode, of training. The next higher in the scale, is a plan of training invented some years since by one of our fashionable gardeners, and consists of doubling thin strips of matting, of four or five inch lengths, round the shoot, and then burying both ends of the matting in the soil. In large places, or where large quantities of training matting is required, the ends of the new mats bought in the autumn are reserved in little bundles for this purpose, when the mats are being tied, and boys split the strings into the smallest threads, or shreds, on wet days; so that a trainer, with no more matting than he can hold in one hand, can fasten down some thousand shoots. Another way is, to have bundles of short sticks, say of six-inch lengths, and as small as can be got, and stick them down slantways against the shoots and branches of many plants. Two such sticks so placed opposite each other, will have the parts above ground crossing one another, like the letter X, and form a very strong holdfast. The very tops of the fuchsia shoots might be put by for this purpose, as I suppose that no cottage gardener is so extravagant as to burn or cast away his annual crop of fuchsia stalks, for they are the handiest things possible for staking many things; and all the dressing they require is to cut them into the required lengths and

sharpen one end. Then, at this dressing, thousands of little tops are discarded as useless; and a man is sent to the fields and hedges in the height of summer, for whole days, to look out "pegs" to do what the fuchsia tops would have done much better, unless one chooses rather to work on the old plan of training "by hooks and by crooks."

Speaking of Geraniums in this the height of *the crossing season*, let me urge on cross-breeders to try to get us a set of good bedding sorts, with very small leaves and distinct colours. Pure whites and lilacs we are very much in want of, and the large poppy leaves of the fancy sorts are altogether unsuitable for bedding ones. Between one thing and another, I shall not be able to cross much this season, but from what I have done I am quite satisfied of the possibility of originating a section for bedding with very small leaves, and large clear-coloured flowers. The best new seedling of this season which I have seen, has clear white flowers about the size of those of *Queen Victoria*, and much after the same shape, but the largest of the leaves could be hid under a shilling; but I did not learn if the plant is a perpetual summer bloomer like the Queen, but I believe it is. I have seen another seedling from the fancy sorts, which takes after the habits of the florists' Pelargonium, of great beauty; the flower is quite round, the back petals of that deep shade peculiar to *Ibrahim Pasha*, a clear white eye, and the front petals light salmon. It is, therefore, beyond a doubt that the Pasha and *Anais* are capable of imparting their shades to the better forms of the old sorts, although at first every breeder thought this cross would be worthless, seeing the clouded and speckled seedlings which the first two or three crosses brought to light. I would recommend breeders to discard *Anais* altogether, and employ *Ibrahim Pasha* instead, and always as the mother plant; for there is not much truth in the idea, that "breeding in and in" will deteriorate the offspring—not at least the flowers; and if the leaves could be rendered smaller that way, it would rather be an advantage; but I have little faith in that either.—*D. Beaton, Cottage Gardener.*

ON PROPAGATING EVERGREENS.—I have lately observed a method most successfully practised by a friend of mine in Argyleshire, which is not, I think, sufficiently known. He plants in an oval or circular space, prepared as usual, as many shoots of the year's growth as it will hold closely placed; he fences the plot with brushwood, and never thins them. In three or four years the shoots unite into an extended and beautiful bush, and in two years they are an ornament to the woods and shrubberies.

My friend has some fine old Laurels, with bare and unsightly stems; he has planted round them, at the distance of a foot or more, a number of these shoots, and the effect is extremely good, as they soon unite with the old bush, and continue its dark foliage down to the ground. This plan answers best with the Laurel, Laurestinus, Berberis, Ma-tronias, and Rhododendrons.



**J**ULY is proverbially both a hot and dry month, 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. Clip box edgings now, the young shoots which push will then get well ripened before winter.

**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 *Picoters*, 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. Pipings are struck in the same manner as Pinks, on a gentle hot-bed: 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 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; also the roots be kept cool, by being plunged in moss, or coal-ashes, &c. 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 a shady place 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.

## REVIEW.

*Curtis's Beauties of the Rose.* PART I. Groombridge and Sons.

THIS admirably executed work is published quarterly. Part I. contains coloured figures of the following Roses, viz.—

*Devoniensis.*—Tea-scented; creamy-white, centre changing to buff-yellow, slightly tinged with pink. Petals thick and Camellia-like. Very fragrant.

*The Duchess of Sutherland.*—Hybrid perpetual. Bright rosy-pink, of superb form, and very sweet.

*Cloth of Gold.*—Tea Noisette. Outer petals pale yellow, with a deep golden centre; globular, large, and superb.

*Armosa.*—Bourbon. Delicate pink, middle size, fine form.

## PART II.

*Geant des Batailles.*—Hybrid perpetual. Vivid scarlet-crimson; large and very double. A most splendid variety.

*Elize Suavage.*—Tea-scented China. Pale yellow, with an orange centre; large and full.

*Archduke Charles.*—China. Rose, changing to crimson. Petals notched.

*Pomponne de St. Radegonde.*—Hybrid perpetual. Rich purple-red and violet; small size, exquisite form, and very pretty.





*Pentstemon azureus.*



### PENTSTEMON AZUREAS. AZURE-FLOWERED.

THE Pentstemon family of plants is now become numerous in species and varieties. The flowers of all are interesting and pretty, but some of them are exceedingly showy and handsome, being very ornamental, whether grown singly in the borders, or in masses in beds, and meriting a place in every flower-garden. This charming tribe is hardy, of easy culture, and many of them bloom from May to October. It also comprises flowers of showy colours, as crimson, scarlet, rose, purple, pink, and blue, with some white ones. Of the beautiful blue section there are several which we have had in this country for some time, and to which, within the last four years, three or four very valuable acquisitions have been introduced. The species we now figure however exceeds in beauty all that we have seen. It is of neat habit, a half-shrubby plant, growing about half a yard high, very branching, producing a profusion of flowers in long spiked racemes, and is highly ornamental throughout the entire summer season. It ought to be grown in every flower-garden.

The plant was discovered by the Horticultural Society's collector, Mr. Hartweg, on the Sacramento Mountains in California, and by him sent to the garden at Chiswick, from whence the Society have distributed it.

### NOTES ON NEW OR RARE PLANTS.

**ABUTILON INSIGNE.**—A native of New Grenada. It is a charming addition to this pretty flowering tribe. In beauty it rivals the handsome *A. venosum*; and, like that fine species and others, the present new one flourishes and blooms freely in the open ground during the summer season. The flowers are produced in axillary racemes from



three to seven in each. A separate blossom is nearly two inches long, and when the funnel-shaped corolla is expanded it is the same across, of a rich rose colour, with deeper coloured veins of a purple shade, having also some streaks of white. It highly merits a place wherever it can be grown. Although it will succeed well out-doors in summer, it will require to be taken in for protection in winter. It, like the other kinds, can by proper stopping of the shoots be cultivated in pots as desirable low bushes, and will bloom freely in pots in the greenhouse or open air in summer. Figured in the *Flore des Serras*, edited by Mr. Van Houtte.

**AMARYLLIS ACRAMANNI PULCHERRIMA.**—In May last this fine variety was shown at the Chiswick Gardens, by Messrs. Garraway and Co., nurserymen of Bristol. It is stated to be a hybrid between *A. aulica-platypetala*, and *A. psittacina*. The flowers are of the richest scarlet-crimson, having a green stripe from the origin of the petals extending about half way up. Each flower is near six inches across. It well merits a place in the stove. (Figured in *Magazine of Botany*.)

**AMYGDALIS PERSICA; FLORA SEMIPLANA.**—Double-flowered Chinese peach trees. When the Horticultural Society sent Mr. Fortune to collect plants in China, particular instructions were given him to procure all the varieties which he could obtain. The Society possessing authentic drawings of the following, were anxious that plants should be transmitted to this country. 1. Large semi-double Crimson. 2. Large semi-double Rose. 3. Large semi-double Red. 4. Small semi-double Red. 5. Small semi-double White. Mr. Fortune succeeded in obtaining a semi-double Crimson, and a semi-double White, which is not in the above list. They have recently bloomed in the garden of the Society at Chiswick, and prove to be valuable acquisitions. They are hardy, but the blossoms suffer somewhat from wet cold nights, when in damp situations. They have the habit of the common Peach-tree, but more excitable, similar to the Almond, and in consequence force well, and bloom better under glass than the open air. The flowers being semi-double, it is expected fruit will be produced, and it has been proved in 1849, in France that such seedlings have semi-double flowers similar to the parent plant. The two varieties bloomed in the Society's garden at Chiswick have been figured in *Paxton's Flower Garden for July, Plate 13*.

**BEGONIA DIPETALA.**—Two petalled. Said to be a native of Bombay, which has been in the collection of the Royal Gardens at Kew, and at Messrs. Loddiges' nursery for some time. The flowers are of a pretty rosy pink-colour, borne in clusters, and like all of this lovely tribe of flowers are particularly neat, elegantly graceful, and interesting. These charming ornaments are additionally valuable in consequence of blooming during the winter months, and up to May or June. In our Magazine for 1846, Vol. xiv., and at pages 241 and 266, there is an excellent article on the culture of the Begonia, and a lengthy description of forty-three kinds. We particularly recommend the perusal of it to our readers, and their growing of this pretty class of flowers. They are

easy to cultivate, readily propagated, and may be procured at a small price.

**CAMELLIA MARIA MORREN.**—This is a very superb variety, of the imbricate (tiled-like) section. The flowers are large, fine outline, well filled to the centre, of a bright carmine colour, with irregular-shaped patches of white. It merits a place in every collection. Mr. Van Houtte possesses the variety.

**CAPE PELARGONIUMS.**—The following are the handsomest of what we have seen exhibited this season. They are a lovely, interesting tribe, and ought to be grown in every greenhouse. The cultivation is now becoming more general, from the circumstance of many being brought to the London and other large exhibitions, and thus being seen well grown, they attract much attention.

*Bicolor*, white ground with broad stripes of crimson.

*Bicolor rosca*, a delicate lilac rosy ground, with a dark spot on each petal.

*Erectum*, pink, each petal having a white patch at the centre, forming an eye.

*Fulgidum*, scarlet with black stripe.

*Blandfordium*, white with a rose spot on each petal.

*Reniforme*, pink and red stripe.

*Flexuosum*, deep rosy-red and white.

*Glaucifolium*, yellow and brown stripe.

**COLUMNEA AURANTIACA.**—This is a most beautiful species, deserving a place in every stove or warm greenhouse. The flowers have much the appearance of a large wide flower of a *Siphocampylus*, two inches long, and front spreading portion an inch and a half broad, of a rich orange colour. It is a half-shrubby plant, somewhat climbing, and of a succulent character. It grows and blooms very freely. It requires to be treated same as the *Æschynanthus*. (Figured in the *Flora of the Gardens of Europe*, and may be obtained from M. Van Houtte.)

**CUPHEA IGNEA.**—The *Cuphea platycentra* of our gardens is not the true species, and the one now generally known as such has been altered to *C. ignea*, the fiery. We record this here, in order that none of our readers may order under the new name what they already possess.

**CYPRIPEDIUM LOWEI.**—Mr. Low, jun., discovered this pretty species growing on high trees in thick jungle in Borneo, who forwarded it to the Clapton Nursery. It bloomed for the first time in this country in the garden of A. Kenrick, Esq., of West Bromwich. It requires to be grown in the Orchid stove, and in rich vegetable compost, such as one-half decomposed sphagnum moss, and the other half rich fibrous peat soil. Each flower has lateral (side) petals three inches long, of a yellowish-green near the base, spotted with purplish-brown, purplish-rose with yellow margins and midribs on the upper half. Labellum one and half inches long, with the pouch an inch deep, of a purplish-green. Sepals green with a purple tinge. (Figured in *Magnazine of Botany*.)

**ECHINOPSIS CRISTATA**; var. *purpurea*.—The crested-flowered. The Cactæa order of flowers has within a few years been divided into several new genera, and the present plant is one of that number. The flowers of the present species is of the form of the old Night-blooming Cereus, each blossom has a tube about seven inches long, a yellowish green. The flower, when expanded, is about seven inches across, of a pretty purple colour tinged with rose. A plant blossomed in the Royal Gardens of Kew in 1846, and the flowers were purple; another in 1847 bore white ones. The plant is of the globe-shaped, but depressed at the top, and the finest one is seven inches in diameter. The spines are large. It is a fine variety, and well merits a place in every collection, the fine purple colour of the flowers being unusual, and being so large, upon a globe-shaped plant, render it peculiarly striking and handsome. It is a native of Chili, and flourishes in light loam, a little leaf mould, and a few pieces of lime rubbish, also having a liberal drainage.

**FUCHSIA VENUSTA**.—A Peruvian species, somewhat in the way of *F. spectabilis*, or *serratifolia*. The flowers about three inches long. The tube is salmon-coloured; the sepals same, but tipped with green. The corolla is salmon-coloured, and spreads quite open and flat at the surface with the tip reflexing.

**GLADIOLUS**.—Mr. Plant, Florist, of Cheadle in Staffordshire, exhibited twelve selected seedlings of great beauty. They are particularly distinct, abundant bloomers, and grow about two to two and a half feet high. In our next number we shall give their particular colours. They are perfect gems in form and colour, far surpassing all others we have seen.

**GLOXINIA FYFIANA**.—A plant of this handsome variety was exhibited at the Chiswick Gardens, having thirty-one flowers expanded. Their upright position, in form like the spring dwarf *Gentianella*, white with a blue inside, had a beautiful appearance. It deserves to be in every warm greenhouse or stove.

**IXORA SALICIFOLIA**.—Willow-leaved. This very beautiful flowering species was discovered by Mr. Lobb in Java, and forwarded to his employers, Messrs. Veitch of Exeter, in whose collection it has bloomed. It is a handsome growing shrub from two to three feet high. The flowers are produced large, terminal corymbose heads, of a deep rich orange colour. It is an abundant blooming plant, even when six inches high it will produce flowers. (Figured in *Bot. Mag.*, 4523.)

**LUVUNGA SCANDENS**.—(Synonyme *Limonia scandens*). A tall, loose-growing shrub, from Silhet and Chittagong. It is of the orange family, the flowers very much resemble those of the orange in form, white, and delicately fragrant. It was introduced into the Royal Gardens of Kew in 1823, but never bloomed till the present year. (Figured in *Bot. Mag.*, 4522.)

#### MINIATURE OR POMPON ROSES.

*Clementine Duval* (dwarf hybrid Perpetual).—Light rose colour, brilliant and beautiful; rather a slow grower; a most profuse bloomer

from May to November; every little shoot is terminated with a bunch of flowers. A neat and distinct flower.

*Coquette de Montmorency* (dwarf hybrid Perpetual).—Cherry colour, shaded with violet. This truly unique Rose has but one fault, namely, that of blooming itself to death. From its first efforts of growth in spring, to the latest in autumn, the shoots, on attaining a few inches in length, commence blooming; and through the season it is clothed with its distinct and pretty flowers. Extremely beautiful and distinct.

*General Merlin* (dwarf hybrid Perpetual).—Bright rose colour, very beautiful; rather of dwarf growth, like the preceding; from its abundance of bright flowers it contrasts nicely with many of the others. Perfect and good.

*Leonie Verger* (dwarf hybrid Perpetual).—Colour rosy-pink, brilliant, very beautiful, though rather delicate. A free flowerer. Very distinct and fine.

*Pauline Bonaparte* (dwarf hybrid Perpetual).—Pure white, distinct. This will be found very useful, affording a colour to contrast with the others. Very pretty.

*Pompon* (dwarf hybrid Perpetual).—Rosy-pink; small, but extremely pretty. This very beautiful little Rose should be in every collection, however small; it is of dwarf growth, blooming profusely in clusters. Distinct and striking.

*Pompon de St. Radegonde* (dwarf hybrid Perpetual).—Brilliant purplish carmine, of rather stronger growth than the preceding, and flowers larger; but, like it, quite unique and pretty.

*Psyche* (dwarf hybrid Perpetual).—Bright pink, neat and pretty, blooming freely in clusters; in growth a little freer than some of the preceding. A charming variety, and will group well with the others. Very beautiful.

*Pactolus*, or *La Pactole* (tea-scented China).—Bright yellow, blooming in clusters, very freely; will be found the best yellow to group in this section. From its freeness of bloom, together with its habit of growth, this fine Rose is indispensable.

*Nemesis* (Noisette).—Very deep crimson, blooming abundantly in clusters, through the summer and autumn, and will be found to group in contrast admirably with the other varieties. Though classed as a Noisette, it is very distinct from that section, and will be found more at home with the little group I have attempted to collect together. A distinct and good Rose.

*Alba* (miniature China).—Pure white; rather too delicate for out-of-doors, but what ladies call a "tiny beauty" when grown in very small pots. This, with the few following, are found in catalogues in the class that are usually called miniature China. Very pretty.

*Blush* (miniature China).—Blush; though not so striking in colour as some of the others, it is an extremely free flowerer, and grows stronger than some of those classed as dwarf hybrid Perpetuals. Will be found useful in bedding with the others. Makes a good strong edge.

*Crimson* (miniature China).—Brilliant crimson, clothed through the season with its lovely little flowers. This is unquestionably the

very best Rose we possess for edgings for Rose-beds, or the Rosary in general, being perpetually in bloom, and a free, though tiny grower.

*Jenny* (miniature China).—Brilliant crimson, and, like the preceding continually in flower. A very pretty and desirable miniature Rose.

This dwarf and very free blooming class of Roses are now designated THE FANCIES or Pompon Roses, and are charming varieties for bedding, in *small* beds, in the flower-garden. The kinds have been selected by Mr. John Saul, of the Durdham Down Nursery, near Bristol, and inserted in the *Magazine of Botany*.

ODONTOGLOSSUM CERVANTESII.—A greenhouse Orchid, from Mr. Loddiges' collection. Its natural locality is the mountains west of Mexico. Sepals and petals rosy-pink, the bottom portion of each having numerous short brownish crimson bars upon a yellowish ground. The lip is large, of a pale flesh-colour. Each flower is near three inches across. The stems rise about nine inches high, and each head (scape) has three or four flowers. They are very handsome.

PETUNIA MELEAGRES.—A hybrid from Belgium, raised by Mr. Van Houtte, having a light ground, beautifully chequered with blue and purple.

M. M. Leon Lille, nurseryman of Lyon, has raised a number of very beautiful hybrid stocks. Among them are the following:—

1. Pale yellow, shaded with lilac; 2. Pale yellow, shaded with violet; 3. Golden yellow, shaded with maroon; 4. Pure golden yellow; creamy-yellow; 5. Deep maroon and purple shade; 6. Light ground, shaded with deep violet; 7. Light ground, shaded with maroon; 8. Light ground, shaded with rose and lilac. Seeds will be offered to the public the ensuing autumn by M. M. Leon Lille.

RHODODENDRON JASMINIFLORUM.—The Jessamine-flowered. Mr. Lobb discovered this very beautiful species at Mount Ophir, Malacca, who sent it to Messrs. Veitch. It is a smallish shrub, the largest of Messrs. Veitch's being half a yard high. A plant in bloom was shown in May last at the Exhibition in the Chiswick Gardens. The flowers are produced in terminal umbels of twenty or more in each head. A separate blossom is salver shaped. The tube is two inches long. The five-parted spreading limb is nearly an inch across, white with the tube slightly tinged with rose. The inside of the tube at its upper part exhibits a small red or yellow eye with the anthers. It is a charming plant, and will be a valuable addition to the greenhouse. (Figured in *Bot. Mag.*, 4524.)

SIPHOCAMPYLUS SCHLIMMIANUS.—A native of New Grenada. The leaves are almost round, an inch and a half across, very neat. The flowers are of a beautiful violet-purple colour, two and a half inches long. A very beautiful species.

S. LEVIGATUS.—The foliage is of a shining green, and the flowers a bright scarlet. Also from New Grenada.

S. MOLLIS.—A low-growing species, bearing fine orange-red flowers. A native of Venezuela, in South America.

**S. POLYPHYLLUS.**—It is a half-shrubby plant, branching, bearing rich scarlet-coloured flowers. A native of New Grenada.

**S. LASIANDRUS.**—A half-shrubby plant, somewhat of a climbing habit, producing rich scarlet-coloured flowers. From New Grenada.

**THE TULIP, DR. HORNER.**—This fine variety was raised by Mr. Groom, of Clapham Rise. It is a light-feathered bizarre, with a slender beam down the centre of each petal. It is a superb formed flower, pure rich yellow ground, with rich dark maroon feather and beam. (Figured in *Magazine of Botany*.)

**THIBAUDIA SCABRIUSCULA.**—A very pretty greenhouse, evergreen bush, a native of New Grenada. It is of the Cranberry order of plants. The flowers are produced at the ends of the branches, drooping, about six together. Each blossom is about three-quarters of an inch long, the corolla is of a rich crimson-colour tipped with green. The flowers are at their origin surrounded with pink scales. It is grown in the Syon Gardens.

#### ON EPACRIS GRANDIFLORA AND CORRÆA SPECIOSA, &c.

IN reading over a recent Number of the FLORICULTURAL CABINET, I see a correspondent wishes for information on the following genus of plants; if my mite of knowledge will be of any service to him, or any one similarly situated, and you consider it worth occupying a space in your useful Magazine, you are at liberty to publish it in any shape you please.

*Epacris Grandiflora*, propagation of, from January to March.—1st. Take a clean 48-size pot, put a large cork in the bottom, then add a quantity of small crocks, or coarse cinders, until the pot is half full; upon this put a layer of moss beat down firm, fill up with fine sifted peat mould, and white silver sand; an equal quantity mixed together, pressing it down firm to within a quarter of an inch of the rim of the pot; fill up with clean sifted silver sand, passing a stick over the pot to make the surface level; give a slight watering with a fine rose pot or syringe; take a bell glass, press it lightly on the sand so as to leave the circumference; then select your cuttings from last year's ripened wood, cut the tops of the shoots about one inch long, strip the cutting half its length of leaves, lay it on your thumb nail, with a sharp knife, cut the base at a joint quite smooth, and when a sufficient quantity to fill the pot is prepared insert the cuttings as far as stripped, keeping the tallest, if any, in the centre; give a good watering to settle the sand about them; let them stand until dry; cover with the bell glass, and plunge the pot in a cold frame facing the north; keep the light on, protecting from frost with covering, or, for want of a frame, place the pot on a north shelf in the greenhouse, but by no means in the sun; wipe the glass once a day; water according to judgment, keeping them rather dry than moist. When the cuttings begin to grow, take the glass off occasionally half an hour, and increase with air as the cuttings increase

in growth, until it may be left off altogether; then remove to the greenhouse, pot them off the following March into thumb pots, well drained, using peat mould and sand in equal quantities; place them in a cold frame until rooted; during summer, top any long shoot, and by the autumn you will have snug bushy plants, producing in spring beautiful pendant blossoms.

*Corræa Speciosa, &c.*—May be increased by cuttings potted early in February or March, but the quickest method is by inarching upon *Corræa alba*, any time from February to July, and if the plants can have the advantage of a stove heat, the better, as the inarched shoot will have united in the course of eight or ten weeks; it may then be cut off, care being taken not to disturb the shoot inarched, but by no means head off the stock at present; place them in a cold frame, keep them close and shade for a fortnight; expose them to the air by degrees, and when the inarched shoot has recovered begins to grow again, then head off the stock; loosen the ligature that was bound round the plant, otherwise it will cut; bind a fresh piece of bass loosely round the plant at the union, tie the plant up to a neat stick in case of accident, remove the plants to an airy part of the greenhouse, attend to water, and in the spring you will have a bushy plant covered with handsome blossoms. I have not mentioned the mode of inarching, thinking it not necessary; as almost all persons having any knowledge of plants must know the process.—*The Propagator in a London Nursery.*

## REMARKS ON SPHÆRIA ROBERTSI AND S. SINENSIS.

BY MR. SHORT, OF STRANWILLIS, NEAR BELFAST.

PERHAPS in the vegetable world there are no two plants more extraordinary than the above, and few created a greater sensation than they. It matters not whether we take their remarkable formation or the manner in which they grow (from the head of a caterpillar), both are equal objects of wonder.

SPHÆRIA ROBERTSI, attains a length of from six to sixteen inches, the colour being dark brown, and its structure hard, with an elongated stipe, which, though simple in all the specimens yet examined, presents an appearance of being occasionally branched. The capitulum or head is elongated, acuminate, vermiform. The root of the fungus is embedded in the head of the caterpillar.

Some specimens in my collection\* have two stipes growing out of the head of the same caterpillar, one with a perfect capitulum, the other decayed or wanting; in other specimens the embryo of a third is visible. In some the stipe is branched, as if a second capitulum had been formed, and one specimen presents a double capitulum, which is a rare occurrence.

The Lepidopterous insect, on whose larvæ this fungus grows, is not

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\* The collection of Sphærias exhibited by Mr. Short at the Royal Botanic Society's Gardens, Belfast, is allowed to be the largest and finest in Europe.—*Ed.*

uncommon in New Zealand. It is found at the root of trees, principally under the *Metrosiderous robusta*, a myrtaceous plant.

The account given by the natives who gathered the specimens for me, as far as I can learn, is that they are found in the earth under and around trees. In living state the caterpillars are whitish, and crawl in the earth like worms, and from that they change into their present state, and the fungus grows up out of the ground as far as the capitulum extends by which they are found.

The natives are very fond of eating the caterpillars when in a living state, and when roasted they say they are so fat that the oil runs out of them. They are considered a great delicacy.

SPHÆRIA SINENSIS.—The specimen I possess of this rare fungus was brought to England by Mr. Reeves; the description is taken from those given by Du Halde, Reeves, Pereira, and Thunberg.

This extraordinary production, including the caterpillar, is about four inches in length, it is a native of China and Thibet. "The Chinese appear to regard it as partaking at one season of the quality of animal, at another of vegetable nature. Du Halde\* calls it *Hia-tsaotontchong*, (*i. e.*, summer plant winter worm.) Mr. Reeves says that it is better known at Canton in the common dialect as *Ton-chong-hacho*, which means winter worm summer plant.

Mr. Reeves states that "it is brought to Canton tied up in bundles, each containing about a dozen specimens, each of which is about three inches long. About one-half is a caterpillar of the usual cylindrical form, and a light yellowish brown colour. The head, neck, segments of the body, and legs (thoracic) ventral and anal are all distinctly recognisable. Projecting from the back part of the head is a slender club-shaped body, this is the fungus."

Du Halde says, "the insect fungus is scarce, and that at Pekin it is considered to be a foreign production;" he adds, "it grows in Thibet, but is found also, though in small quantities, on the frontiers of the province of Le-tchuen, which borders on Thibet or Laza."

Thunberg also states, "that it is reputed to possess cordial virtues." But, according to Du Halde, "its properties are considered to be similar to those of *ging-sing*." It strengthens and renovates the powers of the system which has been reduced either by over exertion or long sickness.

"The physicians of the Emperor of China state that they only use it in the palace on account of its scarcity. Black, old, and rotten specimens cost four times their weight in silver.

"The mode of employing it is very curious. A duck is stuffed with five ounces of the insect fungus, and the bird boiled on a slow fire. When done, take out the fungus, the virtues of which will have past into the duck's flesh, which is to be eaten twice a day for eight or ten days."—*Pereira*.

I cannot in justice omit to mention that I am indebted to the lady of the Rev. W. Woon, of Wasmate Pevanaki Looth, in New Zealand,



for my extensive collection from that locality; and to the Rev. Gerard Smith, Ashton Hays, Cheshire, for my Chinese specimen.

## GREAT NORTHERN TULIP SHOW,

AT THE BELLE VUE GARDENS, NEAR MANCHESTER, 29TH MAY.

*Pans of Six Rectified Tulips.*—1. Royal Sovereign, Captain White, Britannia, Queen Charlotte, Heroine, and Triomphe Royale—Mr. Thomas Houghton, Hempshall, near Nottingham. 2. Charles X., Polyphemus, Maid of Orleans, Princess Royal, Heroine, and Triomphe Royale—Mr. John Gibbons, Chellaston, Derbyshire. To these two pans the silver cups were awarded. 3. Charles X., Baguet, La Bien aimée, Heroine, and Triomphe Royale—Mr. Godfrey, Chellaston, Derbyshire. 4. San Joe, Gibbon's Seedling, Incomparable, Heroine, and Ponceau Brilliant—J. Thorniley, Esq., Stockport. 5. Charles X., Charbonnier Noir, Baguet, Bienfait, Heroine, and Alexander le Roi—G. W. Hardy, Esq., Warrington.

*Pans of Three Breeders.*—1. Sir Thomas Picton, Lady Stanley, and Violet le Grande—G. W. Hardy, Esq. 2. Catafalque, Lord Derby, and Queen of the North—Mr. Ackerley, Altrincham. 3. Pilot, Orleans, and Lord Derby—Mr. Gibbons, Chellaston. 4. Pioneer, Lord Stanley, and Lady Flora Hastings—Mr. Parkinson, Derby. 5. Bizarre (unknown), Byblœmen (unknown), and Amelia—Mr. John Smith, Derby.

*Best Pan of Gibbon's Seedlings.*—Mr. William Astle, Melbourne.

### *Feathered Bizarres.*

1. Charles X. J. Thorniley, Esq.
2. Catafalque, Mr. Houghton.
3. Polyphemus, Mr. Marsden.
4. Emperor Charles, G. W. Hardy, Esq.
5. Grand Duke, Mr. John Smith.
6. Good Beurs, Mr. James Hardman.
7. Lord Lilford, G. W. Hardy, Esq.
8. Sydney, Mr. Bromiley.
9. San Joe, G. W. Hardy, Esq.

10. Mayor of Warrington, G. W. Hardy.
11. Dentonian, Mr. Naylor.
12. Trafalgar, Mr. Peter Daine.

### *Flamed Bizarres.*

1. Polyphemus, G. W. Hardy, Esq.
2. Lord Milton, Rev. S. Creswell.
3. Charbonnier Noir, Mr. E. Dean.
4. Page's King, Mr. Marsden.

## ON BLOOMING THE CLOTH OF GOLD ROSE.

BY MR. J. SAUL, DURDHAM DOWN NURSERY, BRISTOL.

ON the introduction of this beautiful rose to this country a few years back, rose fanciers expected to find one of the finest, if not the very finest of yellow roses; nor have they been disappointed, for when well and finely bloomed it stands unrivalled as a yellow rose, but comparatively few have succeeded in blooming it well and freely. From what cause is this failure? I think, if we examine minutely the nature of

the plant, the manner in which it is generally recommended to be grown, and which is as frequently acted up to, we shall, to a great extent, see the cause of failure, and approach more closely to a system by which the flowering of this splendid rose shall take place with some degree of certainty. I think it was in the "Gardeners' Chronicle" (but I quote from memory) a correspondent lately inquired the best way of managing it, and was answered by directions to grow it in rather poor soil, as it is a strong grower. Now this I consider very questionable advice, yet I know it is what is generally given. It is classed in that group of roses called Noisettes, a class which a recent writer called, with much propriety, a "jumble of hybrids;" and certainly many varieties in the group are as distinct as if they were placed in separate classes, being crossed and raised from very dissimilar groups. Taking the old Noisette, as the type of the class, a large section called Tea-scented Noisettes will be found to differ from it and its congeners very materially, from their affinity with the tea-scented, being raised from the latter class; to this section belongs the Cloth of Gold, Solfaterre, Clara Wendel, Lamarque, Triomphe de la Duchéne, and many other fine roses. The second named, Solfaterre, is very little inferior to the Cloth of Gold, and was raised from the same parents. All this latter section require peculiar treatment, approaching, in some degree, to what we give the strong growing tea-scented kinds; whilst the former section of Noisettes will grow and flower with freedom, rambling over walls or trellis-work, and in any soil tolerably rich.

Let us examine the mode of growth of tea-scented and also China roses, and we shall see they differ very much from others. Nearly all the strong growing summer and climbing roses, including one section of Noisettes, when they grow freely and produce strong luxuriant shoots, bloom indifferently; indeed these strong shoots we are speaking of, seldom or never produce flowers; not so with the tea-scented and Chinas: the strong shoots bring forth invariably the finest blooms. Who has not noticed this with the common China on the cottage wall? I have known gardeners, who have bedded out crimson and other China roses, cut them down to the surface of the ground every spring, with the best result, as the plants grew freely, and bloomed finely afterwards. Again, all the tea-scented and Chinas, which are budded during the summer and autumn, will, the following season after being headed-back, produce strong shoots terminated with beautiful heads of bloom. The finest blooms I have ever seen of *Devoniensis*, *Adam*, *Bougere*, and other fine teas, have been grown in this way as well as the best Cloth of Gold, Solfaterre, and other tea Noisettes. This all goes to show that the latter, together with tea-scented, Chinas, &c., should be grown strong, free, and vigorous, in order to produce fine bloom. Indeed, under the starving system, many of these roses will scarcely bloom at all, and when they do, so poor and worthless are the flowers, as, in many instances, not to be recognised as to what variety they belong to. Take, for instance, a tea-scented or China rose in spring, let it remain in the pot which it stood in during the previous winter, "not shifting," but giving a little pure water as it requires it, when summer and autumn come, what shall we have? A plant; true, but

a wretched one, sickly in appearance, with a few miserable, pale, semi-double flowers! How different from the bright rich colour, large size, fulness, and substance of petal which we find in the well-grown plant. Let us now take the same plant in spring: if the head is large cut it freely, give it a liberal shift into good rich compost, and water freely through summer with liquid manure, and what will be the result? Handsome, vigorous plants, with large, rich, clear-coloured flowers produced in profusion.

We have been viewing the tea-scented and Chinas growing under the starving system, and under better culture. Turn now to the Cloth of Gold, and its congeners, and we shall find the remarks I have been making as applicable in this case as in that. Under the starving system I have seen Cloth of Gold so semi-double, small and worthless, that had I not been positive of its correctness, I should have questioned its identity; it is also very shy in blooming under this system; I have seen large plants which cover a considerable space of wall, stand year after year without producing a solitary bloom. Why was this so? The plants (like the tea-scented and China roses we have been speaking of) not growing strong and freely, having expended all their strength in covering the wall, grow slowly, producing no flowers, but the same sickly, stunted appearance which the teas and Chinas do. I have already remarked having seen magnificent blooms of Cloth of Gold, produced from buds of the previous season, if budded on strong stocks, such as Celine, Manettii, &c. These buds, the first season after being headed back, when they commence growing, and are from fifteen to eighteen inches in length, should they not show symptoms of bloom, ought to have their extreme points pinched out, and the laterals will generally bloom fine in the autumn. On the common dog rose growing standard and half standard high, I have bloomed it freely in the same way, not that I recommend it for a standard, indeed, I consider it unsuited for the purpose; but should a grower wish to try it in that way, he should protect the head from extreme cold in winter, pruning hard in spring, and supply liberally with liquid manure during the spring and summer to induce free vigorous growth; all strong shoots, on attaining fifteen to eighteen inches in length, must have their points picked off, and the laterals will in general bloom. I have also known them (the strong young shoots) bloom finely when stopped at from nine to twelve inches in length.

To grow it well and bloom it finely, procure a strong healthy plant worked upon a Celine or Manettii stock in spring; plant it out against a south wall, having the border well prepared. If the soil is naturally good, it will be sufficient to well enrich it with good rotten dung, having the border previously well drained; but should the natural soil be bad, it had better be removed, filling up with rich turfy loam and dung, drained well as before. In this it will grow vigorously, and should be assisted during summer every ten days or a fortnight, with a good soaking of liquid manure; as growth proceeds nail closely to the wall, and stop all strong shoots at distances varying from twelve to eighteen inches. Many, both of the stopped and unstopped shoots, will bloom freely. In cold situations it would be as well to give a

slight protection in very cold weather during winter. The spring pruning should not take place until late, say the end of March, when all danger from very severe frosts is past; prune hard, cutting well out, and shortening back considerably the old wood, to induce free vigorous growth. Give the same attention the following season as to stopping, watering with liquid manure, &c. The south wall will be found of great importance in ripening the wood well during the summer and autumn, which will enable it to resist the winter's cold.

When grown as a pot Rose, it should not be allowed to get overcrowded with wood; in spring thin and shorten the branches well, tying a portion down to the rim of the pot, grow vigorously, and all strong shoots should be stopped at from nine to twelve inches, and neatly tied down into their proper place; give liquid manure as required. In this way it may be bloomed pretty well, though not so freely as against a south wall, which is the best situation in which this Rose can be grown.—*Extract from Magazine of Botany.*

## ROYAL SOUTH LONDON FLORICULTURAL SOCIETY'S EXHIBITION.

ON July 23rd, what is usually denominated the Carnation and Picotee Show was held in the Surrey Zoological Gardens. We have not space in our present number to give the particulars of the stove, greenhouse, and other plants exhibited, but we may add they were of the usual excellent character. The following collections of Carnations and Picotees were shown, but the flowers were much inferior to what was exhibited last year.

**TWELVE BEST CARNATIONS (Dealers).**—1st Prize. Puxley's Princess Royal, Puxley's Prince Albert, Holliday's Lord Raneliffe, Brooks' Flora's Garland, Jaques' Georgiana, Ely's Lady Gardiner, Squire Meynell, Vivid, Admiral Curzon, Sir Harry Smith, Puxley's Queen of Roses, Jackson's Squire Trow. (Mr. Ward, of Woolwich.)

1st Prize (equal with the above). Puxley's Princess Royal, May's Duncan, Antonia, Brutus, Beauty of Woodhouse, Justice Shallow, Puxley's Queen, May's Bardolph, Admiral Curzon, Ariel, Flora's Garland, Puxley's Perfection. (Mr. Turner, Slough.)

3rd Prize. Hollyoake's Dido, Puxley's Queen, Wilson's Harriett, Rainbow, Elliot's Duke of Sutherland, Hepworth's Vivid, Simpson's Queen, Squire Meynell, Count Pauline, True Briton, Flora's Garland, Admiral Curzon. (Mr. Norman, Woolwich.)

4th Prize. Lady of the Lake, Brutus, Prince Arthur, Duke of York, Flora's Garland, Lord Raneliffe, Beauty of Woodhouse, Sarah Payne, Ariel, Count Pauline, Sir Harry Smith, Martin's Splendid. (Mr. Bragg, Slough.)

5th Prize. Majestic, Hale's Prince Albert, Lorenzo, Cartwright's Rainbow, May's Defiance, Flora's Garland, Puxley's Queen, Duke of York, Squire Trow, Count Pauline, Prince Nassau, Hepworth's Defiance. (Mr. Keynes, Salisbury.)

6th Prize. Hale's Prince Albert, Jaques' Phœbus, Lady of the

Lake, Conquering Hero, Miss Pym, Ariel, Rainbow, True Briton, Duchess of Kent, Beauty of Woodhouse, Marquis of Chandos, Brutus. (Mr. Wilmer, Sunbury.)

**TWELVE PICOTEES (Dealers).**—1st Prize. Marris' Prince Albert, Green's Queen Victoria, Gem, Goliath, Venus, Burrough's Lavina, May's Dodwell, Wilmer's Princess Royal, Marris' Prince of Wales, Cleopatra, Juliet, Mrs. Barnard. (Mr. Turner, of Slough.)

2nd Prize. Headley's Venus, Mrs. Norman, Mr. B. Norman, Lord Nelson, Duchess of Newcastle, Gem, King of the Purples, Marris' Prince of Wales, Hollidays' Delicata, Jaques' No. 2, Mrs. Barnard. (Mr. Norman, Woolwich.)

3rd Prize. Mrs. Bevan, Wilmer's Princess Royal, Marris' Prince Albert, Duke of Bedford, L'Elegant, May's Juliet, Lorina, Mrs. Barnard, Headley's Venus, Regina, Delicata. (Mr. Ward, Woolwich.)

4th Prize. Mrs. Barnard, Gem, Hon. H. E. , Sebastian, Smylax, Julia, Lady Dacre, Green's Queen Victoria, Enchantress, Prince Albert, Lady Alice Peel, Venus. (Mr. Bragg, Slough.)

5th Prize. Privateer, Seedling, Isabella, Mrs. Bevan, Enchantress, Useful, Lady H. Moore, Portia, Sir H. Hardinge, Venus, Seedling, Miss F. Irby. (Mr. Keenes, Salisbury.)

6th Prize. Portia, Emperor, Regina, Sebastiana, Constant, Isabella, Lord Hardinge, Mrs. Bevan, Duchess of Sutherland, Duke of Newcastle, British Queen, Lady H. Moore. (Mr. Wilmer.)

**TWELVE BEST CARNATIONS (Amateurs).**—1st Prize. Princess Royal, Brutus, Rainbow, Grenadier, Puxley's Prince Albert, Sharpe's Defiance, Flora's Garland, Paul Pry, William Cobbett, Mary Anne, Georgiana, Conquering Hero. (Mr. Reeves, of Barbican.)

2nd Prize. Beauty of Woodhouse, Simpson's Queen Victoria. The following, Mr. May's Seedlings, Coriolanus, Antonia, Somerset, Duncan, Lorenzo, Bardolph, Falconbridge, Justice Shallow, Romeo, Bolingbroke.

3rd Prize. Prince Albert, Harriett, True Briton, Lady of the Lake, Rainbow, Flora's Garland, Hotspur, Sarah Payne, Beauty of Woodhouse, Solander, Lydia, Admiral Curzon. (John Edwards, Esq., Holloway.)

4th Prize. Ariel, Georgiana, Lord Pollington, Sir W. Middleton, Squire Meynell, Harriett, Flora's Garland, Hale's Prince Albert, Beauty of Brighouse, Chance, Hero of Middlesex, Lady Gardiner. (R. Ellis, Esq., Woolwich.)

**PICOTEES (Amateurs).**—1st Prize. Cleopatra, Ophelia, Isabella, Marris' Prince Albert, Ernestine, Marris' Prince of Wales, Juliet, Portia, Viola, King James, Bianco, Mrs. Barnard. (M. May, Esq., Sonning.)

2nd Prize. Goliath, Lady Dacre, Mr. Trahar, Gem, Honourable H. Annesley, Green's Queen, Mrs. Barnard, Isabella, Juliet, Venus, Amy. (W. Lockner, Esq., Paddington.)

3rd Prize. Augusta, Green's Queen Victoria, Mrs. Bevan, Mr. Trahar, Princess Royal, Enchantress, Lady Douro, Isabella, Regina, Mrs. Barnard, President, Rosalind. (No name attached.)

4th Prize. Lord Hardinge, Mrs. Bevan, Prince Albert, Princess

Royal, Lady A. Peel, Miss Edwards, Duke of Newcastle, Mrs. Barnard, King James, Regina, Ernestine, Venus. (J. Edwards, Esq.)

Prizes for the best single specimens of each class of Carnations and Picotees were offered; but there was scarcely any competition.

Best Scarlet Bizarre, Emperor; Pink Bizarre, Twyford Perfection; scarlet-flake, Justice Shallow; 2nd. May's Seeding; rose or pink flake, Flora's Garland; 2nd. Romeo; best red-edged heavy Picotee, Mrs. Norman, 2nd. Prince of Wales; red-edged, light, Gem; 2nd. May's Dodwell; purple-edged heavy Seedling; 2nd. Alfred; purple-edged, light, Lorina; 2nd. Prince Albert; Rose-edged heavy, Venus; 2nd. Victoria Regina; rose-edged light, Mrs. Barnard; 2nd. Seedling.

SEEDLINGS.—Mr. Bragg exhibited a yellow Picotee named Princess Alice. The flowers were small in the present state. Petal of excellent form and substance; yellow, deep, good, Edging dark red, but very clearly defined. If the flower should become of a proper size, there is not a yellow that we have seen will be equal to it. A first-class certificate was awarded. Duke of Wellington; a scarlet bizard Carnation, also had a first-class certificate awarded.

## ON THE CULTIVATION OF TULIPS.

IN LETTERS TO A FRIEND.

### *Letter VII.*

DEAR SIR,—Yours of the 2nd ult. came duly to hand.; I hasten on the first opportunity I have had to reply, to condole with you under the serious loss you have sustained. This is only one of the mishaps attendant on the cultivation of tulips; you say, that when you took up your bulbs last year you noticed a considerable number had small holes or perforations as if punctured by worms. You took no particular notice of it, but put them by and planted them at the proper season, but not one of those so perforated have thrown up a bloom bud, most of them are gone quite rotten, and all you have left are a few chips that were not affected. This, certainly, is mortifying, but you must not be disheartened at this your first disaster, as proper care for the future will prevent this again occurring to any great extent, as my subsequent remarks will show. I remember, for some years, I suffered the same thing, but not to any extent, and other growers, to whom I have mentioned the circumstance, were similarly affected; they attributed it, some to grubs of some sort, and others to worms. One year it was more serious than it had been before, and the subject grew upon my attention. One day, while musing, I recollected, while in my teens, reading the travels of a naturalist, he was at the time in Holland, I believe at Haarlem (I write entirely from memory); he appears to have been a lover of nature in all her courses; he often visited an extensive Tulip grower's grounds, and while there he particularly noticed that one species of the bee was very busy among the beds; he noticed their entering the ground near the stem of the bulbs; he was extremely anxious to take up some of the roots, in order perfectly to ascertain the

amount of mischief done, but he was not allowed, as the Dutchman thought them too valuable to be disturbed; he offered a considerable amount for certain roots that he had so marked in the beds, as to be able to select them, but all to no purpose, they were not to be bought, at least at the price that was offered for them. (You must bear in mind that at one time so great was the value set on the Tulip by the Dutch that a single bulb was thought a magnificent gift to a maiden for her marriage portion.) It appears the naturalist could not divest his mind of the subject, but in a few months made another visit to the Dutchman, and on inquiring if the bulbs had been taken up was informed he might have a quantity of them, as they were useless, having been perforated by some grub that would eventually cause them to rot. He accepted the bulbs offered him, of which he took particular care, and in process of time each bulb produced a grub, which in the end became a perfect bee, and the bulbs rotted.

The recollection of my boyhood readings gave me pleasure, as I expected to reap instruction; I made up my mind to investigate the matter, so waited patiently for the next season, but it passed off without adding a ray of light to the subject, the whole of the season being wet, and not propitious for the flight of these little busy bodies. The next year we had plenty of sun and heat, and I made sure of success, nor was I disappointed, bees came in numbers, were continually watched, but I found that the working bee, as they are called, or the bee of the cottage hive, did not attempt to go near the ground, but only buzzed in and out of the flower-cup. I was at a stand, my faith in the naturalist's remarks began to waver, fearing the philosopher's bee was somewhat approximate to the philosopher's stone, and would all end in smoke, but still I held on. One fine afternoon, while sitting in my rustic chair at the bottom of my bed, the glass door at the top of the bed being wide open, I was luxuriating in the splendour of the blooms before me, when my attention was arrested by the buzz of a bee; I was at once on my legs, and soon found the little busybody flying around the stems of the flowers, and was some time before it could find one to its choice, at last it alighted at the stem of one on which I did not set much value, and I permitted it to carry out its pranks; it began its work of excavation, and was out of sight under ground in a short space of time. It was of the humble bee species, rather small, of a light brown hue, rather thick and short in the body. Some years afterwards I was walking in a village in Buckinghamshire, I saw a quantity of what I thought was the same species of bee, which had taken up their habitation in the crevices of an old brick outhouse. I made inquiry of the inhabitants of the place, they told me they were perfectly harmless, but could not inform me if they made a comb in which to deposit eggs or honey, and I am not philosopher enough to solve the question myself. But to return to the bee and the bulb, I watched at the root with intense interest, with a stick in my hand, to destroy the invader.

I cannot say the exact time it was under ground, it might be ten minutes, or less, or more; but when it came to the light it was too sharp for me, it had performed the part designed to it by nature, it got away unhurt. For the next few days we had a great many of the same

visitors, but being carefully watched a quantity were destroyed, and others made their escape without doing much damage. Thus, with little care, you may prevent much injury for the future, now you know the enemy with which you have to contend. It is only in very fine warm weather in the blooming season that they will visit you.

You have never told me in your letters that you take the FLORICULTURAL CABINET, if you do, you will find that I send a copy of my letters to you to that publication, thinking that if what they contain are useful to one person they will be useful to many. What I write is the result of practice, and I feel a pleasure in imparting to others what little I have gained. Man, when in his most pure state—when he emanated from the hands of the Almighty Creator—was placed in a garden; if we contemplate that garden, our powers are lost in its grandeur; the Architect was God himself. It was planted with the richest fruits; it was adorned with the sweetest flowers; it was designed for the abode of pure beings—beings but one step below angelic forms—beings created in the image of the Deity—beings in whose form was shrouded an immortality that should exist after this earth shall have melted away in fervent heat. So mindful was the Creator of the wants and happiness of this his new formed being, that to sum up all the beauties of this garden it was made a paradise.

Though *we* are not such pure beings, and our gardens are not a paradise, yet with a contemplative mind, surrounded with the beauties of nature, we may have our enjoyments, and with pleasure trace ,

“ Nature up to nature’s God.”

Yours truly,

DAILL.

*Manchester.*

## ON THE CULTIVATION OF THE CAMELLIA.

BY AN OLD PRACTITIONER.

THIS beautiful tribe of plants has not received much attention from your correspondents. I will, therefore, describe a mode of cultivation which I have practised with great success.

As soon as the usual flowering season is over, which is about the end of March or the beginning of April, repot such of the plants as require it in well-prepared compost of good loam, dung, peat, and sand; the quantity of each must be arranged according to the state of the plants, for if the plants have been growing very vigorously, and have not flowered freely, it will be desirable to use about equal parts of loam, dung, and peat soil, and about a fourth part of sand; but if otherwise, make the compost a little richer, that is, not to use quite so much peat. After the plants are potted, place them in a shady house, fronting the north. If you have not got a house on the north aspect, place them in any other house where you can shade them when required, and where they will be subject to a heat of from sixty-five to seventy-five degrees by day, and from fifty-five to sixty degrees by night. This heat, I think, is far better than greater, during their time of growing, as too much heat at this time has a tendency to render the growing shoots



both weakly and short. Always make it a rule to syringe them every morning and evening when in a growing state, and if the sun shines powerfully, shade them slightly. I have seen them, under these circumstances, to flourish and look far better, both at this time and the time of flowering, than when exposed to the sun's rays during any period of the season. Water them freely, and give as much air as the weather will permit. As soon as the young shoots have done growing, which is easily perceived, raise the heat to eighty degrees by day, and from sixty-five to seventy degrees by night. This increase of heat enables them to form their flower buds with greater facility and strength, and in far greater quantities. You must particularly observe this increase of heat; it ought to be applied immediately they have perfected their shoots, before they come to a woody texture, for, if delayed until the wood becomes hard, it has not the desired effect, of producing abundance of flower-buds. When they have completely set their buds, which will be in about three weeks or a month after they are subject to this increase of heat, gradually decrease the heat until about the end of June, when they will be sufficiently hardy to stand out of doors. Be careful to place them in rather shady situations, for if placed where they are exposed to the sun's rays, the leaves are not only liable to be blotched and unsightly, but the plants are apt to push their flower-buds prematurely. This is the great reason why the flower-buds fall off without properly coming into flower; too sudden heat causes them to fall and push forward too rapidly; and, on the contrary, a decrease of warmth at that time checks their growth, and in that case causes them to fall. It is astonishing how very easily the flower-buds, when nearly ready to expand, are acted upon by either heat or cold; the variation of only a few degrees will considerably affect them at this time, particularly if it be in the winter season. In the spring so much care is not required, as in general each succeeding day is a little warmer than its predecessor, but in the winter months, when the weather is changeable, and plants are only excited by artificial heat, the greatest care is necessary, in order to keep them from advancing too much, and also not to allow the temperature to decrease, for fear of the flower-buds. If it be desired to flower them only in the natural time in the spring months, they ought to be kept as cool as possible during winter, but as the Camellia is so easy of culture, if moderate attention be paid to it, no flowers can be better adapted to bloom during the whole of the winter months, when but few plants cheer us by their expanding blossoms. Every precaution is necessary to prevent worms from effecting an entrance to the roots; if any do find their way, as soon as possible water them once or twice with a weak solution of lime water, which will speedily make them come out. If the weather continues favourable, that is, without frost or excessive rains, do not take them into the house again until October or perhaps the end of September, and keep them in a cold situation till the blooming season.

The foregoing observations apply to plants that are to produce flowers at their usual season, but if they are wanted to flower in autumn or winter, it is necessary they should be put into a growing state at least a month earlier; they should be taken out a month earlier in the

spring, and be got out of doors as early as possible in June, when they will be ready to be brought into the greenhouse or conservatory to flower, by the end of September. The heat required to expand the blossom-buds is by day about fifty-five degrees, and by night fifty degrees; if this be attended to, and the atmosphere never allowed to reach a much higher or lower temperature, the plants will continue in flower for a length of time.

## REMARKS ON THE CULTURE OF THE VERBENA.

BY A DERBYSHIRE FLOWER GARDENER.

VERBENAS supply us with almost every shade of colour. This with their neat habit and easy management render them indispensable for the purpose of grouping, in fact, they would of themselves supply variety of colour enough to fill a group or parterre. The method I pursue with these plants is as follows:—I put in cuttings the latter end of August in large 48-sized pots, which I consider the best size for the purpose; they are half filled with potsherds, over this I put a bit of moss, and then a few siftings, such as would pass through a half inch sieve, filling the pot very nigh to the brim with some fine sandy compost, and covering the whole with a little silver sand. When the cuttings are put in, they should receive a watering with a fine rose, but not until the cutting pots are placed in the frame, or pit, where they are to be struck, and I prefer at this time of the year a close, cold pit or frame, rather than bottom heat. They will require very little further attention than sprinkling and shading, which must be done as required; never allowing them to flag, and giving them as much light as they will bear, without flagging; always allowing the sun to shine on them about one hour every afternoon. As soon as they are struck, they should be gradually inured to light and air, and as soon as the plants will admit the lights may be taken off altogether, and the points frequently pinched back. In November they should be on shelves in a lateinery or some similar situation, as near the light as possible, and giving them no more water than is absolutely necessary; at the same time they should not be allowed to suffer for want of it. About the middle of February they may receive more water, and be frequently sprinkled over with the syringe. As soon as they begin to grow the tops may be taken off for cuttings, and be put in pots as before recommended. They may be placed in a brisk bottom heat, where they will root in about a fortnight. These will make the best plants for bedding. They should be potted off singly as soon as they are a little hardened, and encouraged as much as possible. If they are not stunted by bad management, they will soon surpass plants that were potted off and established in autumn. The plants in the store-pots should be potted off singly as soon as the first lot of cuttings are taken off and placed in a little bottom heat; if required, another lot of cuttings may be taken from these plants; also, the first struck cuttings which, if well managed will make nice little plants before time to plant them out. I consider it preferable to keep the plants in the cutting-pots during winter; for,

after considerable practical experience, I find they keep much better than when potted off singly. They also require less room, which is a matter of considerable importance; for, if potted after spring, they will grow very well in turf pits, with a little bottom heat, or any similar place, which would be wholly unfit to keep them in during winter. It would be impossible to say which are the best varieties, there are so many whose merits are equal; the object is to get the hardiest and most free-growing kinds of each class; that is, if they are most *distinct*. I always prefer the upright growing varieties, as they make the best beds. I never peg down a *Verbena*, as I consider the beds have a bad effect so managed; instead of pegging them down, I stick a quantity of small twigs in the bed, and tie the shoots to them. I find this much the best plan; as I put the twigs in so as, when covered, the bed has just the shape I wish; and in case of having rain, the plants remain erect, while, if pegged down, they would be laid like a field of corn after a severe storm. By this precaution that is prevented. I place twigs (brushwood) among most of my bedding plants, as *Geraniums*, *Petunias*, *Calceolarias*, &c., and the plants are thus kept steady, the branches soon spread amongst them, and no wind can injure the plants either to break or twist them. The leaves and flowers cover the brushwood out of sight in a short time, for the plants being kept thus steady encourages their growth. In order to produce variety, and in some instances much increase the beauty, I have the brushwood laid higher or lower in the various parts of the bed, so that I obtain an undulated surface of any desired form, for the plants grow higher or lower as is the surface of the brushwood.

## ON BLOOMING THE ROCHEA FALCATA (FORMERLY CRASSULA FALCATA).

BY A NOBLEMAN'S FLOWER GARDENER NEAR LONDON.

THIS is a charming plant when well grown and in full bloom. Its fine heads of rich scarlet and gold are peculiarly beautiful. It is not, however, often to be seen well cultivated, nor bloomed one-half, as it can be done. I have however succeeded in growing it to the admiration of all who have seen it, and am desirous to promote its cultivation in better proportion to its merits. I send the particulars for insertion in the *CABINET*.

Cuttings will root freely in sand, without a glass; even when lying in a damp, shady place, they will emit roots freely; the common mixture of loam, peat, and sand suits it perfectly. I have tried richer materials, but could not perceive any improvement either in growth or flowering. The principal thing to be attended to in growing this plant is the situation: it loves a full exposure to sun-heat, and to be near the glass; therefore I always keep it on shelves till in flower. By this means the plants acquire a strong, stiff habit, and produce large heads of flowers. Cuttings struck early in the spring, and well grown through the summer, should flower strongly in the following spring. I begin late in autumn to gradually withhold water, and in

winter I give none. When quite dry the leaves will become shrivelled, but when I begin to start the plants into growth early in the spring they become quite plump in a few days. Sometimes these plants will show flower late in the autumn; when this is the case I withhold water till the spring, as when they flower late in the season the flowers will be green instead of scarlet, being a strong proof of the plant requiring a bright sunny situation in which both to grow and flower it.

When a young plant flowers for the first time, it generally produces only one head of flowers, which, if the plant be well grown, will be large and fine; when done flowering, young shoots will begin to make their appearance in the axils of the leaves on different parts of the stem. The plant should now have a good shift, and these young shoots encouraged to grow as speedily and as strongly as possible; and for this purpose placing the plants for a few weeks on a shelf in the hothouse will be of the greatest benefit, taking care, however, not to let them remain there too long, or they will begin to draw up weakly with too strong a heat, which they will not bear for a length of time.

In the second time of flowering the heads of the flowers will not be so large as in the first instance, when there was only one head; but still, if well managed, the plant will present a splendid appearance, with seven or eight heads all in flower at one time. After flowering three or four times, and having received repeated shifting, the plant becomes naked and unsightly. In this case I reduce the ball sufficiently small for a 6-inch pot, prune the plant, leaving a few of the most healthy and strongest shoots, place it in gentle heat for a few weeks, when it soon recovers and makes a handsome plant; at the same time it is a good plan to keep putting in a few cuttings every season, to keep up a succession of young flowering plants, and early in the spring to plant as many of these strong young plants as would conveniently go into a 12 or 15-inch pot; they should be picked as near of a size as possible; place them in a pit close to the glass, and, if managed nicely, they will produce an astonishing mass of bloom.

## BRIEF REMARKS.

A CHAPTER OF FLOWERS.—Flowers of all created things are the most innocent and simple, and most superbly complex; playthings for childhood, ornaments of the grave, and the companion of the cold corpse in the coffin. Flowers, beloved by the wandering idiot, and studied by the deep thinking man of science! Flowers that of perishing things are most perishing, yet of all earthly things, are the most heavenly. Flowers, that unceasingly expand to heaven their grateful and to man their cheerful looks—partners of human joy, smoothers of human sorrow; fit emblems of the victor's triumphs, of the young bride's blushes; welcome to crowded halls, and graceful upon solitary graves! . . . . Flowers are in the volume of nature, what the expression, "God is love," is in the volume of revelation. . . . . What a dreary desolate place would be a world without a flower! It would be a face without a smile—a feast without a welcome . . . .

Are not flowers the stars of the earth, and are not flowers the stars of heaven? One cannot look closely at the structure of a flower without loving it. They are emblems and manifestations of God's love to the creation, and they are the means and ministrations of man's love to his fellow creatures; for they first awaken in his mind a sense of the beautiful and the good. . . . The very inutility of flower, is their excellence and great beauty; for they lead us to thoughts of generosity and moral beauty, detached from, and superior to all selfishness; so that they are pretty lessons in nature's book of instruction, teaching man that he liveth not by bread or from bread alone, but that he hath another than an animal life.

**TIGRIDIA CONCHIFLORA.**—Last year all the first flowers of this showy bulb came up crimson, resembling in appearance the old *Tigridia* (*Ferraria*) *Pavonia*, when, having been in flower for a fortnight or three weeks, all the latter flowers in a fine bed of them came up true, the petals being fine yellow spotted with crimson. They are doing exactly the same this year, after having been in flower for about a fortnight. Can an explanation of this sporting be given?—*Eliza*.

**BEST CARNATIONS AND PICOTEES.**—Mr. Edwards has recently applied to a number of the general Florists throughout the kingdom to furnish him with a list of 12 of the best of each class of the above flowers. That number is greater than amateur growers require, we therefore extract the best three of each, as that will comprise three dozen.

**CARNATIONS.**—*Scarlet Bizarres.*—Admiral Curzon, Lord Raneliffe, and Martin's Splendid.

*Crimson Bizarres.*—Lord Milton, Thomas Hewlett, and Cartwright's Rainbow.

*Pink Bizarres.*—Sarah Payne, Puxley's Prince Albert, and Princess Royal.

*Purple Flakes.*—Beauty of Woodhouse, Squire Meynell, and Earl Spencer.

*Scarlet Flakes.*—King of Scarlets, Simpson's Queen Victoria, and Firebrand.

*Rose Flakes.*—Flora's Garland, Ariel, and Lorenzo.

**PICOTEES.**—*Heavy-edged Red.*—King James, Marris's Prince of Wales, Isabella.

*Light-edged Red.*—Gem, Duchess of Sutherland, and Jenny Lind.

*Heavy-edged Rose.*—Wilmer's Princess Royal, Headley's Venus, Green's Queen Victoria.

*Light-edged Rose.*—Mrs. Barnard, Lady Dacre, and Lady Alice Peel.

*Heavy-edged Purple.*—Marris's Prince Albert, May's Portia and Jessica.

*Light-edged Purple.*—May's Juliet, Lorina, and Cox's Regina.

The first name is the best flower in each class, &c.

**FLORAL**  
**OPERATIONS FOR THE MONTH**  
**IN THE FLOWER GARDEN.**

I will soon be the time for propagating plants for turning out into beds next year ; but before it 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.

**FLORIST'S FLOWERS.**—*Auriculas*, or *Polyanthus*, seedlings that have hitherto been kept in pans or boxes may now be potted singly in small pots, 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. *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 desirable 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*, 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. *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*, 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. Or they may be increased by cuttings.—See Articles in last Volume. *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 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 a small pot as their roots can be got into. 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 cleansed, 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.









## LISIANTHIUS PRINCEPS. THE CHIEF, OR KING OF LISIANTHUSES.

IT is a branching, *shrubby*, greenhouse plant, a native of New Grenada. It was introduced by Mr. Linden, who states, that in its native clime it forms a tufted shrub two to three feet high, growing at the entrance to the table land of Pamplona, at the height of ten to eleven thousand feet above the sea. It has bloomed in the collection of Mr. Linden, at Luxemburgh. The plant blooms very freely, and the flowers are produced in hanging clusters of four in each, borne at the ends of the twigs. It is one of the noblest plants that has hitherto been introduced. No doubt it will soon be procured by British nurserymen, and become a general ornament in our greenhouses throughout this country. It has been figured in Van Houtte's Flora.

## NOTES ON NEW OR RARE PLANTS.

ARCTOCALYX ENDLICHERIANUS.—It is of the Gesneriaceæ order of plants, and was found in the forests of Vera Cruz. The stem is very shaggy, of a brownish black. The flowers spring from various parts of the stem, and not exclusively from the axils of the leaves. Each blossom has a tube two and a half inches long and three quarters of an inch through, and terminates with a five-parted limb, an inch and a half across, somewhat like a long *Gloxinea* flower. It is of a golden yellow colour, and streaked inside with lines of large crimson spots. It is a singular, showy, and pretty flowering plant. Introduced to Vienna by M. Abel.

BEJARIA COARCTATA; THE CLOSE-HEADED.—This plant belongs to the natural order of Heathworts. It is a half-hardy evergreen  
Vol. XVIII. No. 45.—N.S.

shrub, a native of the mountains of New Grenada. It has recently bloomed for the first time in Europe, in the Syon House Gardens. Messrs. Veitch's collector discovered it too on the mountains of Peru. The genus is nearly related to the *Rhododendron*, from which it differs in its petals being all distinct, overlapping each other, and not united into a tube. In its native habitations it rivals the *Azaleas* and *Rhododendrons* of the United States and India. The flowers are produced in close, erect, terminal heads, of from six to ten in each. Each blossom is an inch and a-half long, of a deep crimson colour. It forms a handsome shrub, well meriting a place in every garden. (Figured in *Parson's Flower Garden*, *Plate 17*.)

*BEJARIA ESTUANS*.—This superb species was discovered by Messrs. Veitch's collector (Mr. Lobb), and has bloomed in their nursery. The flowers are large, borne in terminal heads, rose-coloured. Messrs. Veitch also have another fine new species, whose flowers are of a rich purple colour. It has been named *B. cinnamomea*, the wood being of a cinnamon-brown colour. This genus now comprises twelve species, all charming plants, meriting every care and attention. The treatment usually given to Indian *Azaleas*, will suit the stronger growing kinds, and that of *Rhododendron Chama Cistus* the weakest. M. Linden, nurseryman of Luxembourg, states they grow and bloom very freely in the open ground in his establishment.

*BEJARIA LINDENIANA*.—This beautiful species has also flowered in the Syon House Gardens, and it was exhibited by Mr. Ivison, at the Horticultural Society's Garden at Chiswick, in last June. It is a neat shrubby plant, and the flowers are produced in loose terminal heads, of a pale pink streaked with a deep rose.

*BRUGMANSIA KNIGHTII*.—In the greenhouse at the Royal Gardens, Kew, there is a plant trained with a single stem five feet high, having several branches forming a head three feet across, now in fine bloom. It numerous long white double drooping flowers are exceedingly beautiful. Complaints have been made that in consequence of the doubleness of the flowers they were liable soon to decay, by reason of damp inside the tube. That is not the case with the blossoms at Kew. The plant is in an airy greenhouse where a current of air passes through, and in consequence there is not any dampness. Care is taken not to water over the blossoms. The plant deserves a place in every greenhouse or conservatory. Very small plants bloom freely.

*CAMPYLOBOTRYS DISCOLOR*, TWO-COLOURED LEAVED.—This beautiful plant has recently been received at the Royal Gardens of Kew, from the Jardin des Plantes at Paris, and said to have been introduced from Bahia. It flourishes in the stove at Kew; the leaves and branches are the principal ornaments. The leaves are oval, nearly six inches long, and the upper surface of a satin-green with darker shades. The under side tinged with red. The branches are of a rich red-purple, contrasting beautifully with the foliage. The flowers are very small, of a red colour. It is a pretty addition to the variegated-leaved plants

which now form a very interesting group for the greenhouse or stove. (Figured in *Bot. Mag.*, 4530.)

**CHEIRANTHUS MARSHALLII.**—This beautiful *orange* coloured Wall-flower, with *violet* scented flowers, is a most charming plant, and ought to be grown in every greenhouse and flower garden. It flourishes either in pots or the open border, and being readily increased, a supply for beds would easily be obtained.

**CHELONE BARBATA COCCINEA.**—This is a charming variety, a plant now in bloom has a branching spike of flowers nearly five feet high, they are of a *bright scarlet* colour. This, as well as the original species *C. barbata*, and the varieties *carnea* (flesh colour), and *alba* (white), well merit a place in every flower garden. They are very gracefully handsome, and bloom nearly all the summer.

**CUPHEA CINNABARINA.**—A half-shrubby plant, the flowers being crimson or deep purple, each about an inch long. It makes a pretty plant for bedding. Introduced by Mr. Van Houtte.

**DENDROBIUM KINGIANUM; CAPT. KING'S DENDROBIUM.**—Mr. Bidwell discovered this rare species in Australia. Each flower stem bears about six blossoms, the sepals and petals are of a purple colour, and the lip white streaked with purple. A separate flower is an inch across. (Figured in *Bot. Mag.*, 4527.)

**DIALYTRA SPECTABILE.**—This fine *Fumaria*-like plant proves perfectly hardy, surviving the severity of last winter uninjured and now blooming beautifully. It can now be obtained at a very low price, and deserves to be in every flower garden or greenhouse. Its fine racemes of drooping rich rose-coloured flowers are very interestingly pretty.

**EUGENIA BRASILIENSIS.**—A native of Brazil, where it forms a small tree. It is in the stove at the Royal Gardens of Kew. The foliage is large, somewhat like a common Laurel. The flowers are snowy white, and produced in branching heads at the ends of the shoots. Each blossom is about an inch across, in appearance like those of the Strawberry. When the flowers are in bloom, leaf buds push among them, and the young leaves then produced are of a deep purple-brown, contrasting beautifully with the white blossoms. (Figured in *Bot. Mag.*, 4526.)

**GRAMMANTHUS CHLORÆFLORA.**—A dwarf succulent annual, very much resembling a *Sedum*, and as a pot plant for the greenhouse is interestingly pretty and showy; it will also thrive in the open air, in warm sunny situations, especially as a rock plant, during summer. The flowers are produced in loose cymous branching heads. Each star-like flower is about half an inch across, of a rich orange, or orange red, changing to deeper colour with its age. It deserves a place in every greenhouse as a summer ornament, or in the flower garden as a rock plant, or edging to a bed or border. It is cultivated in the Apothecaries' Garden at Chelsea. (Figured in *Magazine of Botany*.)

**HYPOCYRTA GRACILIS**; THE SLENDER.—A native of Brazil, from whence it was imported by Messrs. Backhouse, nurserymen of York. It is a *creeping* Gesneraceous-like stove plant. The leaves are in size and form similar to the common Box tree. The stem roots freely from the underside. The flowers are produced singly, or in pairs, at each joint along the creeping branches. Each blossom is campanulate-funnel-shaped, tube about an inch long, with the limb five-parted, creamy-white, spotted with orange on the underside of the tube within. It is a very interesting and pretty plant, well deserving a place among the stove Orchids, or to run among stove or warm greenhouse Ferns. (Figured in *Bot. Mag.*, 4531.)

**LANTANA DELICATISSIMA**.—This very beautiful kind has the habit of *L. Sellowii*, and blooms very freely, the flowers being of a rosy-pink colour. It is a very neat bushy plant, and whether grown in pots or in beds is a charming object.

**LOBELIA RAMOSA**.—This is a highly ornamental plant for the greenhouse throughout the summer. Its rich large-spreading blue flowers with a white eye, produced in profusion, are exceedingly pretty. It also makes a fine bedding plant. By some persons it is considered an herbaceous perennial, but generally a biennial. Seeds should be sown early in September, and the plants be potted off singly when strong enough. They may be kept in a dry cold frame or greenhouse through winter, and be repotted in the following spring. Such will bloom all the season, even up to November. A number of these beautiful plants adorn the greenhouses in the Royal Gardens of Kew.

**LOBELIA MAGNIFICENT**.—The flower spike is three to four feet long, and the plant of robust habit. The blossoms are large and the petals very broad, of a brilliant scarlet-crimson. It is much superior to every other we have seen.

**NERIUM TANGLEII**.—This is a beautiful flowering plant. The flowers are of a deep rose, each petal being shaded (or striped) with rich crimson. The blossoms are large and full double. The plant blooms very freely, and deserves to be in every greenhouse.

**ODONTOGLOSSUM NÆVIUM**; THE SPECKLED-FLOWERED.—This is a very beautiful flowering stove Orchid from the mountains of New Grenada. Messrs. Loddiges exhibited a plant in bloom at the Horticultural Society's meeting at Chiswick, in May last. The flowers are borne in spreading panicles. Each blossom is about four inches across. Sepals and petals narrow, pure white, speckled numerously with deep crimson. Lip of the same colour, with a yellow centre. (Figured in *Paxton's Flower Garden*, Plate 18.)

**PASSIFLORA MÆDUSÆA**.—In Mr. Van Houtte's *Flora* this pretty flowering stove species is described, but its native country is not stated. It is of slender habit, blooming freely. The rays of the flowers are orange-coloured the first day, and rosy-red or lilac the following.

**PENTSTEMON CLOUSII**.—This is a most superb variety. The plant is of the habit of *P. gigantea* elegans, and a most profuse bloomer.

The flowers are large, the outside of the tube a beautiful rosy-scarlet and the inside a pure white. It deserves to be in every flower garden, and grown in masses, or singly, is a striking object. A bed of this grown in contrast with *P. azureus*, with their rich blue flowers, would have a fine effect. Now is the time to provide, by striking cuttings, a stock of young plants for next year's bloom.

*PIMELEA NEBERGIANA*.—The plant is of a dwarf and bushy habit. The flowers white, neat, and pretty.

*PIMELEA VERSCHAFFELTII*.—The foliage is of a light hue. The flowers are white with very showy yellow anthers. The above were exhibited at the London Horticultural shows, the past season.

*RHODODENDRON CINNAMOMEUM*, VAR. *CUNNINGHAMI*.—This most beautiful variety is an hybrid raised between *R. Cinnamomeum* and a late *R. white-flowered maximum*. It was raised in the nursery of Mr. George Cunningham, of Liverpool. It is quite hardy, and the heads of flowers are large, each blossom being two and a half inches across, a pure white, and beautifully spotted on the upper section of the flower with dark purple, which produces a pretty contrast on the white ground. It is a valuable acquisition to this noble tribe of plants. (Figured in *Paxton's Flower Garden*, Plate 16.)

*ROUPELIA GRATA* (Syn. *Strophanthus Stanleyanus*.)—A smooth half-climbing shrub, from Sierra Leone. The flowers are produced in terminal cymous heads of six or eight in each. A separate blossom is two inches and a half across, fleshy, white tinged with pale rose; tube one inch and a half long. As the flowers become older they change to a cream colour. If the plant be properly grown it blooms very freely and becomes one of the finest stove climbers, the flowers being fragrant adds to its value. Being a native of tropical Africa it requires vigorous growth *first*, and a thorough ripening of the new shoots in order to a successful bloom. With such attention an abundance of flowers is produced. (Figured in *Magazine of Botany*.)

*VERONICA SPECIOSA*, VAR. *KERMESINA*.—A variety raised in Devonshire, the flowers being a beautiful rose colour. The variety raised two years ago, named *V. speciosa coccinea*, is a beautiful addition. These varieties, grown in contrast with the original species, with its deep purple-violet flowers, will produce a pretty effect. We have had some large plants in profuse bloom in the open air for a long time, and they appear likely to continue. These charming shrubs will flourish without injury in the open air, when grown in a dry situation, and protected from the north-east winds in winter. It is indispensable to get the new wood well ripened. This being obtained the plants are as hardy as the common Laurel and ought to be in every shrubbery. As we now possess several fine new shrubby species of *Veronica*, it is well worth attention to impregnate the flowers with each other in order to obtain other handsome varieties. Having the red, white, rose and purple-violet, and other colours, a beautiful progeny may be readily obtained.

## MIGNONETTE.—RESEDA ODORATA.

‘ the fragrant weed,  
The Frenchman’s darling.”—COWPER.

It is only one age since this fragrant weed of Egypt first perfumed the European gardens, yet it has so far naturalized itself to our climate as to spring from seeds of its own scattering, and thus convey its delightful odour from the parterre of the prince to the most humble garden of the cottager.

In less than another age we predict (without the aid of Egyptian art) that the children of our peasants will gather this luxurious little plant amongst the wild flowers of our hedge-rows.

The *Reseda Odorata* first found its way to the south of France, where it was welcomed by the name of *Mignonette*, Little-darling, which was found too appropriate for this sweet little flower to be exchanged for any other. By a manuscript note in the library of the late Sir Joseph Banks, it appears that the seed of the Mignonette was sent in 1742, by Lord Bateman, from the Royal Garden at Paris, to Mr. Richard Bateman, at Old Windsor; but we should presume that this seed was not dispersed, and perhaps not cultivated beyond Mr. Bateman’s garden, as we find that Mr. Miller received the seed from Dr. Adrian van Royen, of Leyden, and cultivated it in the Botanic Garden at Chelsea, in the year 1752. From Chelsea it soon got into the gardens of the London florists, so as to enable them to supply the metropolis with plants to furnish out the balconies, which is noticed by Cowper, who attained the age of twenty-one in the year that this flower first perfumed the British atmosphere by its fragrance. The author of the *Task* soon afterwards celebrates it as a favourite plant in London—

————— “ the sashes fronted with a range  
Of orange, myrtle, or the fragrant weed.”

The odour which this little flower exhales is thought by some, whose olfactories are delicate, to be too powerful for the house, but even those persons we presume must be delighted by the fragrance which it throws from the balconies into the streets of London, giving something like a breath of garden air to the “close-pent man,” whose avocations will not permit a ramble beyond the squares of the fashionable part of the town. To such it must be a luxurious treat to catch a few ambrosial gales on a summer’s evening from the heated pavement, where offensive odours are but too frequently met with, notwithstanding the good regulations for cleansing the streets and the natural cleanliness of the inhabitants in general. We have frequently found the perfume of the Mignonette so powerful in some of the better streets of London, that we have considered it sufficient to protect the inhabitants from those effluvia which bring disorders in the air. The perfume of Mignonette in the streets of our metropolis reminds us of the fragrance from the roasting of coffee in many parts of Paris, without which some of their streets of business in that city would scarcely be endurable in the rainy season of the year.

The Sweet Reseda or Mignonette is now said to grow naturally in some parts of Barbary, as well as in Egypt. Monsieur Desfontaines observed it growing in the sands near Mascar in the former country, but it might have been accidentally scattered there, or have escaped from the gardens of the Moors.

This genus of plants, of which we have twelve species, was named *Reseda* by the ancients, from *resedare* to assuage, because some of the species were esteemed good for mitigating pains; and we learn from Pliny, that the Reseda was considered to possess even the power of charming away many disorders. He tells us, that it grew near the city of *Ariminum*, now Rimini in Italy, and that when it was used to resolve swellings, or to assuage inflammations, it was the custom to repeat the following words, thrice spitting on the ground at each repetition:—

“Reseda, cause these maladies to cease: knowest thou, knowest thou, who hath driven these pullets here? Let the roots have neither head nor foot.”

We notice these absurd superstitions of the ancients, which are scarcely yet extinct in many country villages of this and other countries, to show how much the minds of the ignorant have always been prone towards the marvellous, and not that we

“Hold each strange tale devoutly true.”

Although it is so short a time since the Sweet Reseda has been known in Europe, we find that it has crept into the armorial bearings of an illustrious family of Saxony; and, as Cupid does not so frequently bestow honours of heraldry as his father Mars, we cannot avoid relating the romantic tale which introduced this fragrant and modest little flower to the Pursuivant-at-Arms.

The Count of Walsthim was the declared lover and intended spouse of Amelia de Nordbourg, a young lady possessing all the charms necessary for the heroine of a modern novel, excepting that she took delight in creating little jealousies in the breast of her destined husband. As the beautiful Amelia was an only child of a widowed mother, a female cousin, possessing but few personal charms, and still less fortune, had been brought up with her from infancy as a companion, and as a stimulus to her education. The amiable and humble Charlotte was too insignificant to attract much attention in the circles in which her gay cousin shone with so much splendour, which gave her frequent opportunities of dispensing a part of that instruction she had received to the more humble class of her own sex. Returning from one of these charitable visits, and entering the gay saloon of her aunt, where her entry or exit was now scarcely noticed, she found the party amused in selecting flowers, whilst the Count and the other beaux were to make verses on the choice of each of the ladies. Charlotte was desired to make her selection of a flower; the sprightly Amelia had taken a Rose: others a Carnation, a Lily, or the flowers most likely to call forth compliment; and the delicate idea of Charlotte in selecting the most humble flower, by placing a sprig of Mignonette in her bosom, would probably have passed unnoticed, had not the flirtation of her gay



cousin with a dashing colonel, who was more celebrated for his conquests in the drawing-room than in the field of battle, attracted the notice of the Count, so as to make his uneasiness visible; upon which the amiable Charlotte, who, ever studious of Amelia's real happiness, wishing to amuse and to call back the mind of her cousin, demanded the verse for the Rose. The Count saw this affectionate trait in Charlotte's conduct, took out his pencil, and wrote for the Rose,

“ Elle ne vit qu'un jour, et ne plait qu'un moment,”

which he gave to the lovely daughter, at the same time presenting the humble cousin with this line on the Mignonette:—

“ Ses qualités surpassent ses charmes.”

Amelia's pride was roused, and she retaliated by her attention to the colonel and neglect of the Count, which she carried so far as to throw herself into the power of a profligate, who brought her to ruin. The Count transferred his affections from beauty to amiability; and rejoicing in the exchange, and to commemorate the event which had brought about his happiness, and delivered him from a coquette, he added a branch of the Sweet Reseda to the ancient arms of his family, with the motto,

“ Your qualities surpass your charms.”

The Mignonette is one of the plants whose unassuming little flowers never weary our sight; it is therefore made the image of those interesting persons whom time cannot change, and who, although deficient in dazzling beauty, attach us for life, when once they have succeeded in pleasing without its aid. Hence it is but a natural desire that we should wish to give an annual plant a perennial existence, which has, in a great measure, been accomplished, since the odorous Tree Mignonette is now frequently to be met with, and which was at first supposed to have been a different variety when Lady Whitshed introduced it from Liege about the year 1816, and who received it from M. L'Abbé L'Arbaleste of that city; a spot made familiar to many readers, by the scenes which the popular author of *Quentin Durward* has recited as passing in that ancient commercial town.—*Flora Historica*.

#### COMPOST SUITABLE FOR CHOROZEMAS AND SIMILAR NEW HOLLAND PLANTS.

RICH fibrous peat, two parts; leaf mould, one part; turfy rich loam, two parts; clean potsherds and charcoal, broken to the size of horsebeans, one part; with sufficient gritty sand to make the whole, when mixed together, light and porous. Time was, and that but a year or two back, when cultivators, to secure porosity, used the soil in rough pieces, and “a down westward” cultivator, to show the strength of his affection, has recommended pieces the size of a brick. Thus, though this served the purpose of growing the plants rapidly for

a short time, they soon became unhealthy, for, the compost being deficient in silicious matter, from the impossibility of mixing the sand with the coarse pieces of turf, it soon became unhealthy, and hence the plants were brought to a premature end, much to the disappointment of the cultivator, whose labours were cut short just at the time when his anticipations were at the highest pitch. Now, those who understand the mixture of composts, pursue an opposite course, and, after selecting their soil, and divesting it of all superfluous and inert matter, they break it into small pieces, so that the whole will pass through the meshes of a half-inch sieve; and secure porosity by the intimate admixture of sand, potsherds, charcoal or soft porous sandstone broken small. In this way the compost is of the same quality throughout; and hence the roots receive neither check nor change of food, but when large pieces are interspersed through the mass, the roots of the plants either avoid entering them altogether, or by entering them, are subject to constant changes. This is the rock upon which the advocates of "the accumulative," "the one shift," and "the large shift" potting system foundered; they got plants to grow rapidly for a time, but that time was limited, and at the end of it, death was the *finale*.

Let us not be misunderstood. In repudiating the rough compost, and the one shift, we do not disapprove of a large shift, but we would enter our protest at once and for ever against the use of rough compost. Look to nature, the primæval clod, do we find it like a honeycomb, loose and open like a basket for Orchids? No. But do we not on the contrary, while it is *sufficiently* permeable for the free ingress of air and water, find that it is firm and compact, and sufficiently solid to prevent the changes of every breeze that blows. In this way progress is comparatively slow, but certain; and the plants, instead of progressing with great rapidity for a time, produce strong, healthy, thoroughly matured wood, and dwarf compact growth, yielding abundance of bloom; and which abide with you for years. But to return to our young plants:—Having prepared your compost examine the roots of the plants, and if they are strong and healthy, prepare a pot two sizes larger, and after draining it properly proceed to pot your plants, placing some of the roughest part of the compost over the drainage, and proceeding to fill up firmly with the finer soil. Many of the New Holland plants, as Chorozemas, Hoveas, &c., are subject to the attacks of red spider, thrips, and mildew; such plants should be laid upon the side, and be well syringed, or the top be well dipped in a tub of water, or pumped upon at the under side of the leaves, then be well dusted with sulphur, this will usually destroy the pest.

## PROPAGATION OF NEW HOLLAND SHRUBBY PLANTS.

PIMELEAS, BORONIAS, EUTAXIAS, BOSSIAS, and similar plants are propagated by cuttings of the half ripened, young wood, taken off in July or August, making choice of the short, stiff, and weak, or medium growth, but avoiding twigs of a robust habit. These, after being trimmed, should

be about one inch long, and must be inserted in sand, under the protection of a bell-glass. In preparing the pot for the cuttings, take care to drain it thoroughly, by filling it half full with potsherds, then place fibrous peat about an inch deep over the drainage, fill up with clean silver sand, and the pot is ready for the cuttings. It is indispensable that a little peat be placed under the sand, as it affords nourishment to the young plants, until they are potted off, and admits of their being allowed to remain longer in the cutting pot than would be advisable, if they were growing in sand only. After the cuttings are all in, place the pot in a close cold frame, water when necessary, and wipe the condensed moisture from the inside of the glass, twice or thrice a week. Here the cuttings must remain until they are ectrized, when they may be removed to a rather warmer situation, the pots to be plunged in a very slight bottom heat, and, in a few weeks, they will be ready to pot off. If it is late in the season, say the end of October, before the cuttings are in a fit state to pot off, it will be the best plan to let them remain in the cutting pot through the winter, and to pot them off in February, but if they are not fit for single pots in September, then they will be much benefited by being potted off early.

#### THE PRINCIPLES ON WHICH PLANTS ARE PROPAGATED BY CUTTINGS.

THE propagation of plants by cuttings is an operation of frequent use, and of considerable importance in all horticultural establishments. The many thousand plants that are annually propagated to embellish flower-gardens and pleasure grounds, and the taste displayed in the arrangement of colours, demand the greatest skill, vigilance, and forethought, to prepare, to arrange, and to provide for the display, that the pioneers of modern improvements, and of refined taste, have introduced into flower-garden and pleasure-ground scenery.

The conditions necessary for the propagation of plants by cuttings are, a certain portion of organized matter, the assistance of leaves, a degree of heat and moisture accordant with the nature of the plant, and free drainage at the roots.

When the aqueous or ascending sap reaches the leaves, the water is discharged through the minute invisible pores, called stomata, and by the decomposition of carbonic acid gas, which separates to carbon, and sets the oxygen free, a vital action is performed, by which the sap is elaborated or changed into the organic matter, called the "true" or descending sap. It is then that all parts of the plant are supplied with a store of organized matter, which renders the parts fit to be employed as cuttings. When removed from the parent, that store, under proper management, will enable them to put forth roots and new leaves, and to develop all the parts required for the growth of the plant. If the shoots are in a rapid state of growth, full of rising sap, their tissues lax and not matured, failures may be expected to attend all attempts to propagate them by cuttings.

The next part of the subject is to inquire in what manner the leaves

retained on the cuttings assist the protrusion of roots, and the development of other leaves.

As the removal of the cutting from the parent branch will make no change in the nature of the sap, which is always more or less in circulation in the whole system of the plant, and as it is the office of the cambium, or proper juice, to descend in the cutting to the joint at which it was cut; when its downward course is impeded, it accumulates there until a callous is formed, and roots are protruded; the organized matter of the cutting is diminished to supply the development of roots, and the leaves are required to secrete more, to replace that which was expended in the formation of roots. It is when there is sufficient organized matter in the cutting to supply the roots without exhausting its own vital energies, that the external assistance derived from the leaves may not be needed.—(*Magazine of Botany.*)

### BUDDING ROSES.

THE best season for budding is July. The best time of the day, is either early in the morning, or at least, as early as seven o'clock, or after three o'clock in the afternoon; cloudy, moist days are most suitable. Cut off the head of your stocks, and all the side branches to three, that is for standards. For dwarfs, cut off to within six inches of the ground; then, with the knife, make an incision on the upper side of the young side branches, as close to the main stem as possible. This incision should be about an inch long, lengthwise on the branch. Cut a cross just at the top of this incision, in a direction somewhat slanting. Then take off the bud, previously cutting off the leaf, leaving part of the leaf stalk. Cut away with the bud, a portion of the bark from the parent stem, which is technically called *the shield of the bud*, and a portion of wood with it. This bud, and the bark and wood with it, should be, altogether, rather more than three-quarters of an inch long. Turn the bud over between your finger and thumb, and dexterously take out the greater part of the wood, but be careful to leave the wood full in the eye of the bud. Then raise one side of the bark of the incision, in the shape of a T made in the stock, and, with the ivory handle of the budding knife, slip in one side of the bark attached to the bud, then turn your knife, and lift up the other side of the incision, and the bud will drop into its place: press the bark of the bud to the further end of the incision, and, if any projects beyond the cross incision on the stock, cut it off. Then tie with the worsted neatly, and the operation is complete.—(*Cottage Gardener.*)

### THE TULIP (FOR A BEGINNER).

I DOUBT not but amongst the readers of this Magazine there are some beginners in Tulip culture, and a word of advice may be of use to such from an old grower of some eminence. I beg to observe that in making his selection he should begin with clean flowers only, never minding

how cheap they may be; if they are clean, they will always be fit for a best bed. Let us look rather to cheap, good things, than dear ones.

*Roses.*—Madame Vestris, Triumph Royale, Catalani, Rosa Blanca, Lavinia, Cœur Blanche, Comte de Virgines, Camuse, Cerise Belle Forme, Aglaia, Manteau Ducal, Lucetta.

*Byblomens.*—Reine de Sheba, Siam, David, Rubens, Holmes' King, Diogenes, Washington, Violet Alexandre, Grotius, Alcon, Duc de Bourdeaux, Franciscus Primus.

*Bizarres.*—Polyphemus, Sanzoe, Surpass Catafalque, Charbonnier, Platoff, Globe, Titian, Fabius, Duke of Clarence, High Admiral, Glencoe, Marcellus.

With these to begin with, and which can be had reasonably of any fancier, will be laid the foundation of a good bed: not but that there are flowers as good as any mentioned here, and there may be some better; but these are clean, which is a great point,—healthy, strong growers, which is another point; they are very unlike each other, which is highly important; and they will, by merely multiplying them, form a very showy, clean, and interesting bed at any time. It will be easy to find rather dear additions, but it may be as well to say that Rose Magnificent and Bijou would be superb additions to the Roses; the Duke of Northumberland and Queen of the North would be fine among the Byblomens; and the Duke of Devonshire and Tom Brown would be fine additions to the Bizarres. Let no one be deterred from growing Tulips for want of a stage and awning. They are as fine as most flowers without any protection, and by beginning with these few, which will increase every year, he will soon produce enough for a bed worth protecting. Let the earth be dug out two feet deep, let the ground be well drained, the Tulips planted in four feet wide beds, six inches apart every way, and keep such account of the names or numbers of each as shall prevent their names being mismatched or lost. Until they have increased enough to be worth arranging in their proper rows, they may be planted in sorts, with labels to them. They should be planted full three inches deep, taken up when the top of the flower-stem shrivels, and be put away in the dry and the shade. As soon, however, as the flower declines, the seed-pod should be taken off, otherwise it keeps exhausting the root to perfect the seed; whereas, if removed, the stem will begin to decay soon after the bloom, and the bulbs should be taken up before the green is entirely out of the stem. The stem should be cut off an inch above the bulb, and the earth not cleaned off nor the fibres taken away until the bulb has been dug up a week or a fortnight, when they may be cleaned and placed away in their boxes until planting time. Another point is worth mentioning. When the spikes are just through the ground, in the spring, the surface of the earth should be stirred, and all the lumps broken, so as to lay close round the plants, for it lets the air into the roots, and greatly facilitates the growth of the plant.

The offsets of Tulips, particularly the smallest, should be planted in the early part of October, or many would be lost, as the smallest often shrivel during the winter, and die. Early planting saves all these casualties, and promotes their growth and early maturity. The first

week in November is early enough for the best bed, or rather the best grown and principal bulbs; but from the moment the bulb commences growth, and shows the spike, it begins to suffer.

## ON PROPAGATING CHINA ROSES.

BY ROSA.

IN cultivating the tribe of *Rosa odorata*, or Tea-scented Roses, I have practised the following method with great success: early in January or February, I take some pots of plants into a stove which is heated to 60 or 70 degrees of heat. In the course of a short time, there are some young shoots ready, which, as soon as they have five or six leaves, I take off, and strip some of the under leaves from them, finishing them with a clean cut at a joint. Having prepared the cuttings, I next prepare some 48-sized pots with two parts fine sand, one part sandy peat, and one part leaf-mould. I then insert several in each pot, and with a fine rose watering pot, give them water just sufficient to settle the earth. I then plunge them into a hotbed frame, or they will strike equally well in the stove, provided they are covered with a small bell glass. After they have taken root, I pot them off into 60's, using at this time sandy loam and leaf-mould. About the middle of May, I turn a quantity out into the beds and borders in the flower garden where they bloom exceedingly well, and fill the air with that delicious fragrance that is exhaled from them. The remainder I keep in pots, to supply any place that may require them.

## CULTURE OF ROSES FOR FORCING.

BY A LONDON GROWER FOR COVENT GARDEN.

THE present is a good time to prepare soil, &c., to pot roses for next season's forcing. I prepare it as follows:—During the early part of autumn I have some loam put in a sheet-iron pan, made to go in the ash-pit under the fire, the heat of which completely bakes it; by turning it over once or twice it is prevented from burning; this is put away when done, and more put in, and by this means I get a good quantity ready by the time it is wanted without much trouble. When the time for potting arrives, I chop the loam in very rough pieces, and mix with it a little coarse sand, a small quantity of half-rotten dung, and some pieces of charcoal, not small, but from one to six inches diameter. I use the light clinkers, made from the refuse ashes for drainage, instead of broken pots; and I consider this material keeps the drainage more open than broken pots. Over the drainage I put a little moss, which keeps the soil clear of the bottom of the pot. The next operation is to put the plants in the prepared soil; when this is done I have the pots plunged up to the rims, and over the surface of all I have spread a thin coat of dung from an exhausted lining. All they require after this is keeping them clear of weeds, and watering as they require it. My plants of the common moss, white, and cabbage Provence, have shoots from two to three and a half feet long: and there is not one pot in fifty but what is fit for forcing. The plants of

Bernard and Rose du Roi are as good in proportion: those of Spong's rose are more like plants two years' bedded in the open ground; and some of the Persian yellows are remarkably fine. I use the same soil for all my other roses which I grow in pots; and every year convinces me more, that they like a purer soil than is generally given to them. The Hybrid Perpetual Roses will not require potting till the end of October.

The kinds most suitable for early forcing, and which require one season's preparation, are:—

*Moss*: Common, Blush, White Bath, Pompone, Grandiflora, Malvina, Unique de Provence. *Provence*: Artimese, Common Cabbage, Cristata, Spong's De Meux, Unique Panachee, Monstrous. The following force exceedingly well, but are not very early:—

*Damask Perpetual*: Bernard, Magador, Rose du Roi. *Austrian Briar*: Harrisonii, Persian Yellow. *Isle de Bourbon*: Acidalie, Bouquet de Flore, Desgaches, Souchet. *Tea-scented*: Smith's Yellow, Devoniensis, Moire, Comte de Paris, Elize Sauvage, Bougere, Yellow China, Lord Carnarvon. *Hybrid Perpetuals* all force well, but the following are unrivalled for this purpose:—Baron Prevost, William Jessee, Robin Hood, La Reine, Earl Talbot, Dr. Marx, Clementine Duval, Clementine Seringe, Lady Alice Peel, Madame Daméne, Rivers' Madame Laffay, Duchess of Sutherland, Lilace, Mrs. Elliott, Louis Bonaparte, Comtesse Duchatel.

## TREATMENT OF THE INDIAN AZALEAS.

BY MR. JAMES WALDRON, OF CROW HALL, SURREY.

A FEW months back I noticed some remarks on the cultivation of the *Azalea indica* were inserted. As I have never seen plants grow healthier, and bloom more vigorously than those under my care, I forward the particulars for insertion in your Florists' Magazine, confident it will prove useful to those who may follow the same mode of treatment.

Two seasons ago I commenced with plants half a foot high, grown in three-inch pots. I excited them to grow by placing them in a stove. I stopped every shoot as it grows at the second or third eye; this induces all the eyes to break regularly, by which means I have a compact symmetrical plant. I give very liberal shifts in a compost of well decomposed cow manure, leaf-mould, turfy peat, loam, and sand, using nearly equal portions of each. The first shift from a 3-inch pot is into a 6-inch pot; from that into a 12-inch, and so on in proportion to the size of the plant. When they have got a little established in their pots I remove them into a vinery, where they have a temperature of from 65° to 70°. Here they receive the same treatment as the vines, using the syringe constantly to the undersides of their leaves. I continue to pot, &c., and to finger and thumb prune throughout the whole of the growing season. My maxim the first season is to form the foundation of a good specimen. I discard the thought of flowering the first season's growth. In the next season I start them into growth in my usual way, paying due attention to stopping; and when the roots have got nicely

in action, I then give the final shift. I grow them in a high temperature throughout the whole of the growing season, and never expose them to the external atmosphere. Some growers turn them out when they fancy the wood is ripened; but how is this to be ascertained? By examining it? No; nor yet by feeling at the points of the shoots for buds. How then? By seeing with your naked eye the flower-buds as large as the top of your thumb; then the wood is ripe. It is from ripe wood we get bloom. I cannot afford to wait the whole of the winter in suspense expecting that my Azaleas may bloom. I must be satisfied upon that point before they leave the vinery. I keep them there till their flower-buds are full and almost breaking their floral envelope; then I consider them to be safe. No anxiety need be entertained that they will not bloom when in this state. I now remove them to a cool greenhouse. All the care they require through winter is to keep them secure from frost, and to give them a little water. Some of the varieties, as *Variegata*, *Gledstanesii*, &c., do best in a moderately warm greenhouse through the winter. They are sorts that are liable to go off in their inactive state, worked or not worked; but I believe this difficulty may be obviated by growing the plants in heat, and well ripening the points of the shoots. By this mode of treatment I have succeeded in two seasons to obtain plants 3 feet high by 2 feet through, and which are now a dense mass of bloom. Keep the following principles in view in cultivating the Azalea, and I will guarantee success;—first, plenty of pot room; second, thorough drainage; third, light, heat, air, water; fourth, well ripened wood; and lastly, never turn the plants out of doors.

## HORTICULTURAL SOCIETY'S EXHIBITION.

THE last for the season was held in the Gardens at Chiswick on Saturday, July 20th; and superb as have been the past July meetings, the plants on this occasion exceeded every other. It appeared impossible to excel the generality of specimens except in size. The fine healthy plants in profuse vigorous bloom were all that could be desired, and certainly display the most superior skill and industry of the cultivators, and entitle them to corresponding reward. The beautiful grounds of Chiswick House were opened to the visitors by direction of his Grace the Duke of Devonshire, which added to the other enjoyments of the day; about eight thousand visitors were assembled on the occasion. Want of space prevent our giving a list of the splendid plants exhibited, and as we have particularized the generality of the collections in previous numbers of our Magazine of this season, we omit them on this occasion. Among other striking objects there were two leaves, each about 6 feet across, and a flower of the magnificent *Victoria Water Lily*, sent from Syon Gardens by Mr. Ivison the gardener. There were several splendid specimens of the new Javanese *Ixoras*, viz., *crocata* and *javanica*, and their large heads of fine orange flowers produced a charming display. Messrs. Veitch sent a plant in bloom of the most beautiful *Rhododendron javanicum*. The flowers are of a rich orange



colour, and the centre tinged with red. Each blossom is four inches long and three and a half across. The flowers are borne in terminal heads, and although the plant exhibited was a smallish one, and appeared unhealthy, yet there were ten blossoms in each head. It is a charming addition to this noble family of plants. Mr. Green had a plant of the very showy *Pleroma elegans* in profuse bloom. The flowers are of the richest Tyrian purple colour, each blossom being 3 inches across. The plant had upwards of one hundred expanded flowers. It is of the *Melastoma* order of plants, and the flowers somewhat the form of a large flat-faced, round, firm-petalled *Petunia*. It deserves a place in every warm greenhouse or plant stove. There was a large plant of *Echites Franciscea* exhibited in Mr. Colyer's collection. The flowers are whitish with a red eye.

Two noble plants of the *Kalosanthus* (*Crassula*) *versicolor*, or varieties from it, were shown. One was 4 feet high and 3 across, and had upwards of one hundred heads of flowers. *Dipladenia crassinoda* used to be shown with a few flowers even on a large plant, but on this occasion we observed one coiled to a wire frame, almost covered with its very beautiful large rosy flesh-coloured flowers, each about 5 inches across. Many of our readers know the beautiful orange-flowered *Rondoletia speciosa*, there is one now which surpasses it, viz., *R. speciosa* major. The flowers are twice the size of the other kind. Its fine heads of blossoms have a charming appearance. It deserves to be in every warm greenhouse. *Stephanotus floribundus*, trained round a strong wire frame, is now grown so as to be literally covered with its fine heads of large pearl-white flowers. It merits a place in every warm greenhouse or stove, and, as a climbing plant, will suit to any shape desired.

FANCY PELARGONIUMS.—The following Seedlings were shown by Mr. Ayres:—

*Electro*, rosy-crimson blotch on a lilac ground.

*Painted Pet*, upper petals dark crimson with a white margin. Lower white with a very distinct rich purple spot.

*Enchantress*, upper petals dark maroon with a flesh-coloured margin. Lower flesh-colour with a crimson spot on each petal.

*Carabas*, upper petals very dark with a pure white margin. Lower white with a very distinct spot on each of crimson-purple. It is of first rate form and excellence.

Mr. Ambrose had *DELICATA*, a large white flower having a rich violet spot on each of the upper petals. It is of good form, and very showy.

*Enchantress*, a white ground having a clear spot of lilac at the centre of each petal. Good form, and very pretty.

*Anne*, upper petals crimson with white margin. Lower white with a crimson spot on each. Large and showy.

*Angelina*, a white ground, having a large rosy-crimson blotch on each of the upper petals. Very good form.

*Desirable*, white with lilac margin. The edge of the petals is somewhat crumpled, but the outline is excellent, nearly an entire circle. Very pretty.

*Dianthiflora*, white ground with crimson blotches, only second rate.

*Mignon*, ground colour rosy-pink with a dark blotch on upper petals. Second rate.

*Erubescens*, upper petals rosy crimson with a white margin. Lower white with a purple spot on each. Good form.

*Monarch*, upper petals dark maroon edged with white. Lower white with a bright crimson spot on each. Good form.

*Eclipse*, upper and lower petals of a dark mulberry colour, and edged with white; centre of flower white. Good form.

*Crimson King*, upper and lower petals a bright crimson with a light margin; centre of flower lighter. Very showy, and good form.

*Bandonna*, upper petals crimson with a light margin. Lower lilac with a white edge. Very excellent form.

*Resplendens*, upper petals crimson with white margin. Lower white with a broad bar of purple across the middle. Very showy, but only second-rate form.

*Gipsy King*, upper petals dark with a crimson edge. Lower flesh colour with a red spot on each. Centre of flower white. Good form.

*General Jung*, upper petals a dark maroon edged with white. Lower ones white. Good form and very pretty.

*Julia*, white ground, and each petal having a purple spot at the centre. Very showy.

*Horseshoe-leaved Pelargonium*. Mr. Gaines had *Cerise Unique*, light scarlet, with a small white eye; very good form. The middle of the leaf is yellowish, then a brownish horseshoe mark, and the rest to the margin a rich green.

*Star*, a scarlet of fine form, the best of that class shown. The name of exhibitor not given.

*Oriflamme*, a bright scarlet of good form, by Mr. Salter.

*Princess Alice*, a light scarlet, good form.

PETUNIAS.—A number of new varieties were shown, but all of inferior form, the petals generally flimsy, or outline irregular and angulated, and many of them had the surface very wavy. The only favourable character was, some were spotted or striped, and if such novelties in colour and marking are upon good formed flowers they will be worth growing. Mr. Salter had one named, *Picturata superbe*, a reddish purple, spotted and streaked with white that was pretty. Some person exhibited one named *Captivation*, white with a purple eye, pretty.

VERBENAS.—Some stands were shown, but few of the new flowers were better than what we previously had. *Madame Buenzod*, white with dark crimson eye, was the best of its class. In our next number we will give a descriptive list of the best grown in this country.

## BRIEF REMARKS.

BIGNONIA VENUSTA.—This is one of the most splendid flowering climbers, which ought to be in every stove, conservatory, or greenhouse. When the plant has got established it blooms profusely, its large clusters of flowers, nearly twenty in each, of a fine orange colour, being

exceedingly showy. Each trumpet-shaped blossom is near three inches long. If the roots of the plant have the advantage of a bark-pit, or otherwise warmed, it greatly promotes its vigour, and is the means of bringing it early into bloom. It is now extensively grown for cut specimens, along with *Stephanotus floribundus*, for Covent Garden, London.—*Flora*.

ON BLOOMING THE SPLENDID CRIMSON-FLOWERED AMARYLLIS JACOBEE.—On flowering this, 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. It ought to be in every flower garden. Bulbs are cheap.—*Clericus*.

ON DESTROYING WOODLICE.—How am I to destroy, most effectually and readily, woodlice, with which I am pestered in my greenhouse and frames to an enormous degree.—*Alpha*.

[Cold boiled potatoes put into small garden-pots, and covered with a little loose moss, and placed where most likely to be found by the insects, is the best method we have tried. The insects are fond of the potato, and remain concealed under the moss. The pots require examining early in the morning, and the insects destroyed; when requisite, replace with fresh potatoes. We have used ingredients, poisonous, which, mixed up with other things, effectually kill the insects partaking of it; but as danger attends such a mode of destruction, we do not recommend its adoption.

HYDRANGEA INVOLUCRATA, VAR. FLORE PLENO.—A double-flowered Hydrangea, having bright rose-coloured flowers, is mentioned by Dr. Siebold, which he discovered growing on the highest mountains of the Island of Niphon and Sikok, in Japan, where it blooms during the months of July and August. It is grown plentifully in the gardens of these parts, and forms a handsome plant, with a stem about three feet high. According to some travellers there are four varieties of it; one lilac, the others with flesh-coloured, yellowish, and rose-coloured flowers. Living plants have not yet been introduced into this country.

ON PRUNING RHODODENDRONS.—What should be done with respect to Rhododendrons when they grow straggling, as I am afraid of cutting them, lest I should injure the bloom for next spring. If some reader of the CABINET, who has had practical instruction, would favour me with a reply, I should be greatly obliged.—*Kalmia*.

[We have frequently cut in straggling growing Rhododendrons, and they have made fine showy plants by the second summer. The time when we cut in the branches was early in April. Several young shoots were generally produced upon each branch, and lest they should be too close we thinned out a portion, and only left three or four. By cutting in the branches at this early season, the plants were more certain to

push shoots than if cut late, and the young shoots had time before the autumn to grow vigorously, and be sufficiently matured to withstand the effects of severe frost without injury; whereas, if cut late in summer, the young shoots would be tender, and liable to suffer.]

VERONICA SPECIOSA.—Having long been a subscriber to your Magazine, I venture to request that you will oblige me by inserting in your next Number directions for the propagation of the *Veronica speciosa*; and also inform me whether you consider it sufficiently hardy to remain in a warm south border during the winter.

[Take half-ripened young shoots, cut them close under a joint, at about three inches long; dress off the leaves half that length, and insert the cuttings in the usual white sand; water well, and when dried a little cover with a bell glass, and plunge the pot where it will have slight bottom heat. Shade from hot sun, and KEEP the sand just moist. If there be too much moisture on the glass wipe it out once a day—cuttings readily strike root. We have had several plants growing in the open ground for the last three years, and they have not suffered in the least. The soil is a sandy-loam, and the substratum is gravel. They are upon a south aspected border, which is protected from the north and east. The principal thing is to have a dry substratum. Plant out as early as possible to get established before winter.]

ON THE CINERARIA, &c.—I shall be obliged if some reader will inform me if the *Cineraria macrophylla*, the *Armeria cephalotes*, and the *Euphorbia characia* are plants easily obtained, and of moderate price.—*An old Subscriber.*

[The beautiful *Armeria* is cheap, and may be had at any nursery. The *Cineraria* is an old resident in this country, but rarely cultivated. It is in the flower garden at Kew. The other we do not know.]

ON THE CULTURE OF CYCLAMENS.—A Subscriber to the CABINET would feel himself extremely obliged if any Correspondent would inform him of the best method of growing the Sweet-scented Cyclamen. I purchased several roots in bloom three years ago, but have not had the pleasure of witnessing a single bloom on them since. By giving this insertion in your next Number, you will still further oblige yours, &c.—*Alpha.*

ORNAMENTAL CREEPERS, &c.—I should be very much obliged if some reader of the CABINET would give a list of Ornamental Creepers, or climbing plants, suited to train against a wall, trellis, or arbour. A list of greenhouse, and one of hardy kinds, will confer a great kindness on.—*Flora.*

ON STRIKING AND SUBSEQUENT CULTURE OF THE ORANGE AND CITRON, &c.—I beg leave to communicate to you my mode of cultivating the Orange and Citron, which I have practised for many years with great success which may be of service to some of your subscribers—that is from single eyes with a leaf attached to it; I immerse the eye in the mould about half an inch deep, and they begin to make roots very soon, sending up a strong shoot at the same time. I have struck fifty to a hundred in a large sized pot, and scarce one of them failed, and of course a plant on its own bottom is preferable to a plant

introduced on another stock. When potted, they should be watered liberally, and introduced into dung heat and shaded. I find they strike most readily in a cucumber bed, the pots plunged to their rims. The compost I generally use is rich loam and rotten dung, the pots well drained, and about three inches of soot at the bottom of the pot, if a little old mortar, so much the better. I also find the Dahlia strike very freely from single eyes, and much the best mode for summer propagation when you wish to propagate valuable seedlings, as they make strong plants by autumn. I also find Bigonias strike freely by the same method.—*A Practitioner.*

**GREAT TRIAL EXHIBITION OF NORTHERN AND SOUTHERN CARNATIONS AND PICOTEES.**—This splendid show (for the North) was held in the County Hall at Derby, on August 7th, 1850, and far exceeded the previous exhibition of this class of flowers, which was held at Slough a fortnight earlier. In connection with these exhibitions the Midland Horticultural Society's was also held. The number of stands were fifteen of *twelve blooms*, thirty-six of *six blooms*, and about one thousand shown in classes as *single blooms*. The following twenty-four kinds of CARNATIONS were in the greatest number of WINNING STANDS exhibited at Derby and at Slough, viz.—

Admiral Curzon, scarlet bizarre—Twenty. Squire Meynell, purple flake—Twelve. Flora's Garland, rose flake—Eleven. Lord Milton, crimson bizarre—Eleven. Premier, purple flake—Nine. Firebrand, scarlet flake—Six. Lord Raneliffe, scarlet bizarre—Five. Jenny Lind, crimson bizarre—Five. Lady Ely, rose flake—Five. Oberon, rose flake—Four. Vivid, scarlet flake—Four. Duke of Devonshire, scarlet flake—Four. Apollo, rose flake—Four. William the Fourth (Wood's), crimson bizarre—Three. President (Martin's), purple flake—Three. Ariel (May's), rose flake—Three. Prince Albert (Hale's), scarlet bizarre—Three. King of Scarlets, scarlet flake—Three. William the Fourth (Wilson's), scarlet flake—Three. Justice Shallow—Three. Lovely Ann, rose flake—Three. Squire Trow, purple flake—Three. Paul Pry, crimson bizarre—Three.

**PICOTEES.**—Mrs. Barnard, light-edged rose—Eighteen. Venus (Headley's), heavy-edged rose—Thirteen. Alfred (Dodwell's) heavy-edged purple—Twelve. Juliet (May's) light-edged purple—Twelve. Queen Victoria (Green's), heavy-edged rose—Twelve. Princess Royal, rosy-scarlet edge—Twelve. Prince of Wales (Marris'), heavy red edge—Twelve. Isabella, heavy-edged red—Ten. Jenny Lind (Edmond's), light-edged red—Eight. Gem (Youell's), heavy-edged red—Eight. Princess Alice, light purple edge—Seven. Lorina, light-edged purple—Five. Mary (Dodwell's), light red edge—Five. Miss Rosa, light-edged rose—Five. Miss Fanny Irby, heavy-edged rose—Five. Portio, heavy-edged purple—Five. Prince Albert (Marris'), heavy-edged, purple—Five. Viola (May's), purple-edged—Five. Duke of Rutland (Hollyoake's)—Four. Eliza (Sykes), heavy-edged rose—Three. King James, heavy-edged red—Three. L'Elegante, light purple edge—Three. President, heavy-edged red—Three.

There were a great number of other kinds which were amongst the winning ones, but only one of each kind was shown. Nevertheless some of them are of superb character, but few of them being sent out will account for there not being more in the winning classes. However, the above twenty-one kinds are of excellent character, and persons desirous of growing only good kinds, and wishing to procure such, may rely upon them being first-rate in form, colours, marking, and edging.

**MONSTROUS FLOWERS OF PELARGONIUMS.**—The following extract from a paper read by Mr. Sowerby at the *Conversazione Meeting* of the Royal Botanic Society, in the Regent's Park, describes an interesting case of monstrosity. After pointing out the distinguishing characters of the genera *Geranium* and *Pelargonium*, Mr. Sowerby proceeded to say, "The gardener, as in this case, when he finds nothing but external beauty to recommend a plant, endeavours, by selecting the most perfect, and then cultivating it highly, to increase in the succeeding both the beauty of colour and of form; and as the beauty of form depends on the same elements as that of colour, that is, as before explained, upon the indication of perfect adaptation to the end, or the resemblance of that indication, a full round form is especially aimed at by the cultivator of flowers, and the *Pelargonium* fancier endeavours to obtain five broad and equal petals to form a round flower, with the upper two deeply and brilliantly coloured, to produce a contrast to the three lower and light-coloured ones; but with all his care the flowers do not come constant, and now and then one will play the truant, and sport as he calls it, and this commonly happens among the most petted or highest cultivated varieties. When the dark colour disappears from the upper petals altogether, and the petals become equal in size and form, it will be observed that the characteristic tubular nectary also disappears. The want of the nectary or honey tube is also accompanied by a regular arrangement of five anther-bearing and five abortive filaments. The white varieties are less liable to this change than those with rose or salmon-coloured petals, and it is also rare among the new fancy varieties: frequently it occurs in the central flower of the truss. In some flowers the nectary is also shortened, and in others a small spot will remain on one petal when the nectary is absent. In the fancy variety called *Yeatmannianum grandiflorum*, which has spots on all the petals, the spots become equal, the two large spots being reduced. An additional petal also accompanies the change in a few cases. One plant of the *Beauty of Clapham*, a rose-coloured variety, has almost every flower changed more or less. Thus it appears that cultivation makes one species of plant appear to run into another, and may destroy a remarkable generic character, consisting of the presence of an important organ in the flower, &c. Thus the gardener seems by over-cultivation to reduce his flower to a lower standard, but I do not think this is exactly the case; for though he may apparently reduce a *Cape Pelargonium* to a *European Geranium* in the eye of a botanist, or partly so, still he would have a more truly beautiful flower if he could obtain a full truss of beautiful large rose-coloured or pink

flowers; we would recommend a trial of the seed from these sporting flowers."—*Magazine of Natural History*.

**DESTROYING GREEN FLY ON ROSE BUSHES.**—Take one pound of quassia chips (to be had of a druggist), and having put them in a jar, pour over them two gallons of boiling water. When cold the shoots affected by the fly may be dipped into a portion of this decoction, or the plant be sprinkled with it. The result will soon be seen in the death of every insect, whilst the Rose is uninjured. The fly will not soon again attack the bush thus sprinkled, the decoction is too bitter for the taste of the insect.

## REVIEW.

*The Bee-keeper's Manual.* By HENRY TAYLOR. Fourth edition.

Published by Groombridge and Sons, London, and may be had of all booksellers.

WE have carefully looked over its pages, and we believe it contains EVERY NECESSARY INFORMATION FOR THE SUCCESSFUL MANAGEMENT OF BEES. The author observes that in its *present renewed* form he has entered more at large into the subject of bee management, and the general details of practice.

The book is neat, in 12mo, containing 184 pages, and about 100 engravings. It is offered at a very reasonable price. All interested in the subject, and desirous of good, plain, useful information thereupon, should possess this publication.

*An Analysis of the British Ferns, and their Allies.* By G. W.

FRANCIS, F.L.S., author of the Little English Flora, Grammar of Botany, Dictionary of Arts and Sciences, &c. Fourth edition. Published by Simpkin and Marshall, London.

WE are glad that there now is such an increasing interest taken to become acquainted with this lovely tribe of plants, especially so by the ladies, and there is a much more general cultivation of them. A collection is to be obtained at a trifling cost. They are easy of cultivation, and at all times interestingly beautiful. We are glad that there is, too, a call for a fourth edition of Mr. Francis's excellent publication. It is interesting, and practically useful. Each genus is systematically described, and the various particulars relative to it are illustrated by from six to a dozen magnified engravings of the parts. As, A one of the pinnæ of the frond of CISTOPTERIS, the BLADDER FERN; B a magnified lobe, &c. In addition to this family description, there are excellent engravings of the best species, and each very clearly defined.

# FLORAL

## OPERATIONS FOR THE MONTH

SPRING

### 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 *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 of 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 protection, the vigour in-



creases 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. *Roses* may still be budded. Nail to the wall young shoots of Banksian *Roses*. Cut clear away those not wanted. Prepare beds of *Sweet Violets*. *Roses* for forcing too.

#### SHRUBBERY.

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.

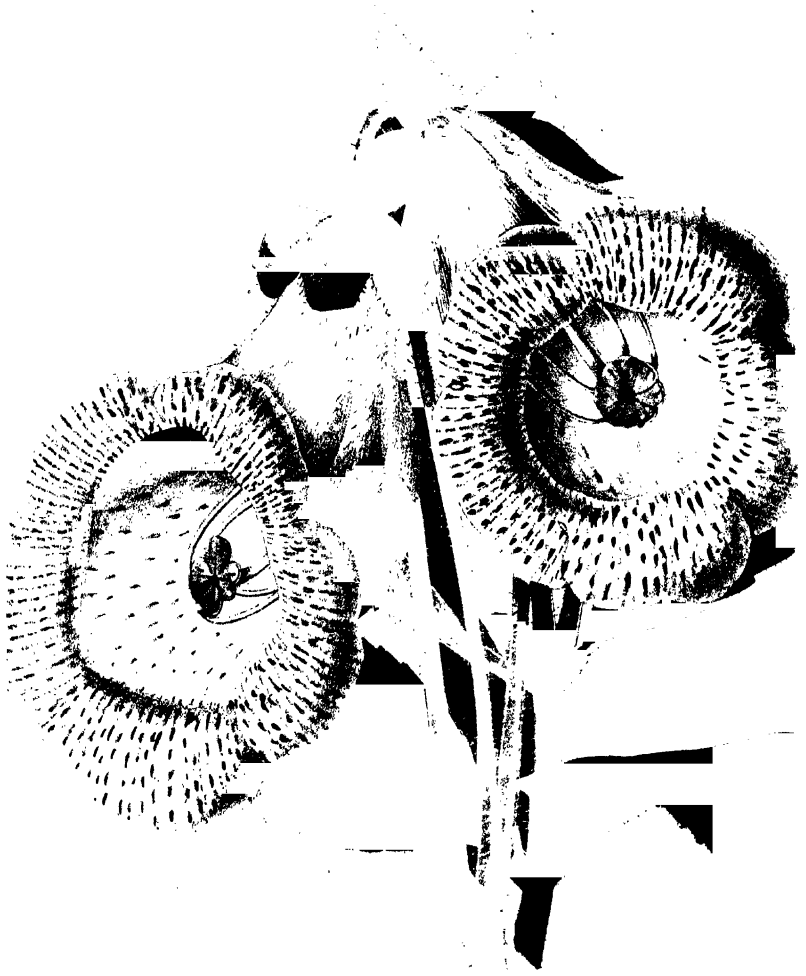
#### IN THE GREENHOUSE, COLD FRAME, &c.

Towards the end of the month take in the tenderer greenhouse plants, but the house should be whitewashed, &c., previously if required. Repot *Chrysanthemums* if the pots they are in be full of roots. *Cinerarias* pot off singly the offsets, also seedlings. Seed may still be sown, but as early as possible, in order to have the plants strong enough to pot off before winter. Cuttings of bedding plants should be put in directly. Pot off singly rooted cuttings of *Pelargoniums* &c. Cuttings of *Tea Roses*, &c., soon strike root at this period.

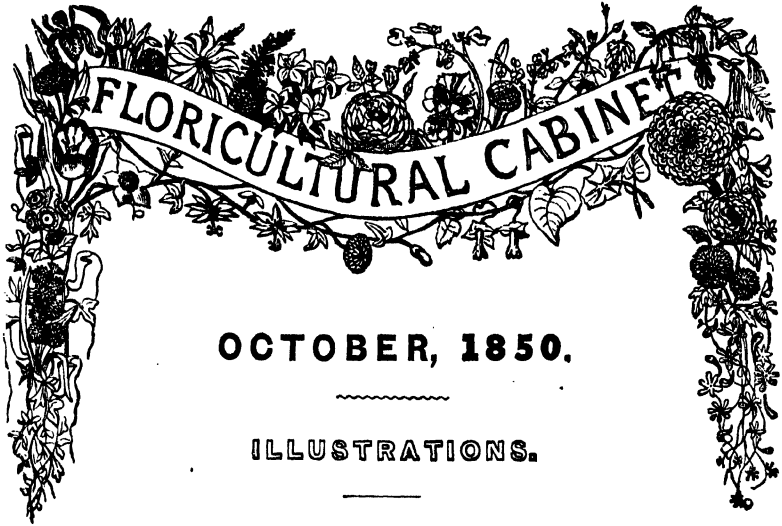
#### ON PENDULOUS GROWING TREES.

Excuse me if, through your useful and widely circulated CABINET, I intrude an observation or two on pendulous trees, as I am often astonished to find so small a number generally grown, when so many more are equally graceful with them. *Æsculus pendula*, budded six feet high, is very beautiful; *Amygdalus pendula*, a very fine one, if six feet high; *Betula alba pendula*; *Cotoneaster nummularia*, if grafted six feet high, is very fine; *Cratægus Georgica*, the same; *C. pendula*; *Cytisus laburnum pendulus*; *C. capitatus*, *C. decumbens*, *C. aralensis*; grafted on *Laburnums*; *Fagus sylvatica pendula*; *Fraxinus lentiscifolia pendula*, very fine; *Populus pendula*; *Prunus Chinensis pleno pendula* if grafted six feet high, looks well; *Pyrus communis pendula*; *Quercus pendula*; *Robinia pendula*; *Sophora Japonica pendula*; *Tilia pendula*; *Ulmus pendula*; *Abies pendula*; *Larix pendula*; *Pinus Fraseri*; *Cupressus pendula*; *Juniperus repanda*; the *Deodore cedar* &c. Some of these are new, and very scarce; they may be obtained at the public nurseries.





*Capania grandiflora*



**CAMPANEA GRANDIFLORA.—LARGE FLOWERED.**

**T**HIS very handsome flowering plant is of the order Gesneracæa, having the habit of the Gloxinia. Mr. Linden, of Luxembourg, collected seeds of it in New Grenada, and plants have bloomed in his establishments, from whence other nurserymen have obtained it. It flourishes in a good greenhouse, and with the treatment usually given to the more hardy of the Gloxinias. The plant is somewhat woody at the base, herbaceous above, and grows about a foot high. The flowers are produced in a tuft at the ends of the shoots. It is a magnificent blooming plant, and merits a place in every light greenhouse; as it will flourish equally well in a moderately warm hot-bed frame, or pit, it may be forwarded in such, and when near blooming be placed in a sitting-room window, or other suitable situation, and after blooming, be taken away and treated as the Gesneracæa usually are.

**NOTES ON NEW OR RARE PLANTS.**

**BOLBOPHYLLUM LOBBII.**—An interesting stove orchideous plant. Sepals and petals narrow, of a pale yellow, tinged with rosy-red. Labellum a deep yellow, streaked with crimson at the under side. Each flower is about four inches across. (Figured in *Bot. Mag.*, 4532.)

**BRYANTHUS ERECTUS.**—This is a charming little bush; a hybrid which was raised at the nursery of Mr. Cunningham, of Comely Bank, Edinburgh, between the *Menziesia cœrulea* (the lovely Heath of Scotland) and *Rhododendron Chamæcistus* (the *Cistus Rhododendron*). It forms a round, compact bush, about a foot across, and nine inches high; and when in bloom it is covered with its lovely rose-coloured flowers, somewhat resembling a miniature *Kalmia latifolia*. It is

quite hardy, and begins to bloom in April. The foliage is like that of a short-leaved *Erica*, and the flowers in terminal corymbose heads of eight to ten in each. A separate blossom is half an inch across. It is a beautiful little shrub, well worth a place in every shrubbery. (Figured in *Paxton's Flower Garden*, No. 19.)

**CACCOLOBA MACROPHYLLA.** SEA-SIDE GRAPE.—It is an interesting upright growing stove plant, having very large, heart-shaped leaves. The principal ornaments are the immense leaves, and long, dense spikes, composed of brilliant red berries. (Figured in *Bot. Mag.* 4536.)

**DELPHINIUM CHEILANTHUM, VAR. HENDERSONI.**—This very showy variety of Bee Larkspur was raised by Mr. Chauvière, Nurseryman, of Paris, and purchased by Mr. Henderson, Nurseryman, of St. John's Wood, London. It is a charming perennial, and deserves to be in every flower garden. The flowers are single, each being nearly two inches across, of a rich, bright azure blue, with a white centre, having a small yellow spot upon it. It is a very showy variety. (Figured in *Bot. Mag.*)

**ECCREMOCARPUS SCABRA.**—There is a plant growing in a border, and trained to the back wall of a greenhouse in the Royal Gardens of Kew, which closely covers the wall of twelve feet high and thirty feet long. It has been in beautiful bloom from March to the present time, and will continue to the end of autumn. Its pretty foliage and flowers have a nice appearance. It was planted in its present situation two years back, and has a summer and winter pruning to keep it neat, and form a dense cover to the wall.

**GONGORA MACULATA, VAR. JENISHII.**—A stove orchid from Venezuela, which has recently bloomed in Mr. Rucker's fine collection at Wandsworth. The flowers are borne in drooping racemes, about a dozen on each. A separate blossom is two inches across; the sepals, petals, and labellum, are narrow, yellow, beautifully mottled, and blotched with a rich crimson and red. It is an interesting variety, well deserving a place in any collection. (Figured in *Bot. Mag.*)

**NYMPHÆA MICRANTHA.** SMALL WATER LILY.—The leaves are about six inches across. The flowers are white with a slight tinge of sulphur, each being three inches across. (Figured in *Bot. Mag.*, 4535.)

**ONCIDIUM SESSILE.**—A stove orchid, from Santa Martha, in Peru, sent by Mr. Purdie to the Syon House Gardens. The flowers are borne in panicle racemes, each blossom is an inch and a-half across, of a bright yellow, slightly spotted with brown, and the lip has a blotch of the same colour on each side its centre. A neat species. (Figured in *Paxton's Flower Garden*, 21.)

**PÆONIA MOUTAN, SALMONEA.** THE SALMON-COLOURED.—The Horticultural Society sent Mr. Fortune to China to collect plants, and he had particular instructions to obtain plants of the fine *Pæonies* which, as had been stated, existed in that country, some having flowers

which were yellow, others black, purple, blue, lilac, &c. He sent several kinds to the garden of the Society at Chiswick, and the present one (figured in *Paxton's Flower Garden*) is one of those he introduced, and which has bloomed there. Each flower is about eight or nine inches across, double, as the well-known Garden Pæony, and when full blown are of a pale salmon colour, the inner petals have a deeper salmon tint than the outer ones. It is a valuable acquisition, and perfectly hardy. It is said the Chinese reckon their varieties of Moutans by hundreds, as we do with Roses and other flowers in this country. Dr. Siebold obtained from the Imperial Gardens of Jeddo and Mijako all the finest sorts known in Japan, and cultivates them in his nursery at Leyden. The following are in his enumerated list:—

Alexandre Verschaffelt. Petals purple-red, variegated, dotted with white and lilac. Disk (centre) deep purple.

Comte de Flanders. Flowers semi-double. Petals carmine streaked with purple. Disk crimson.

Duc de Brabant. Petals pink, tinted with lilac. Disk white.

Duc de Devonshire. Petals carmine red. Disk dark purple.

Duchesse d'Orleans. Petals white, with a straw-coloured tint, the outer streaked with green. Disk white.

De Vriese. Petals dark rose, streaked with purple.

Flora. Petals white, with a straw-coloured tinge, and a pale lilac spot at the base. Disk whitish-green.

Helena. Petals pink (clear rose before expansion). Disk purple.

Ida. Petals pale rose (streaked with straw colour, and tinged with green before expansion). Disk pink.

Madame de Cock. Petals white (before expansion greenish-straw colour) dotted with dark lilac at their base. Disk yellow.

Nymphæa. Petals pure white. Disk white.

Prince Albert. Petals dark brown red, the outer ones variegated with white and green. Disk purple.

Princess Charlotte. Petals pale rose with darker streaks. Disk white.

Reine Victoria. Petals white. Disk dark purple.

Reine des Belges. Petals white, greenish on the outside, with a pale rose-coloured spot at the base. Disk white.

Reinewardt. Petals dark rose, streaked with purple and carmine. Disk dark purple.

Roi des Belges. Petals dark crimson, with a purple tinge. Disk carmine.

Von Hulthem. Petals purple-red. Disk purple.

Von Siebold. Flowers semi-double. Petals carmine-red streaked with purple. Disk deep purple.

The wild Tree Pæony. On this are worked the varieties obtained by cultivation. Flowers bright scarlet with a black spot at the base of each petal. Fragrant.

PELARGONIUM ZONALE, VAR. SALMONII.—This is one of the horse-shoe leaved, of medium habit, and the flowers are of rich salmon colour, very beautiful, and grown in contrast with the scarlets, lilacs, &c.,

has a very pretty effect. It is a profuse bloomer, and bears large heads of flowers. It is in the public nurseries.

**PENTSTEMON HARTWEGII.**—The flowers are three inches long, of a crimson-purple colour, very showy. It is a neat plant, well worth cultivating.

**PENTSTEMON SHEPHERDII.**—The flowers are much larger than *P. coccinea*, and of a much brighter scarlet. Very handsome.

**PENTSTEMON CLOUSII.** The flowers are large, and the five parted limb (end of the blossom) spreads to an inch and a-half across, and the pure white inside of the tube is fully exhibited, which produces a very beautiful contrast with the bright scarlet outside. It blooms profusely, and is particularly showy and handsome.

## ROSE STOCKS.

BY THOMAS APPLEBY, ROSE MOUNT NURSERY, YORK.

I HAVE read with a good deal of interest the various comments in the columns of a contemporary upon Rose stocks, and having myself had seven or eight years' extensive practice, and tried various experiments on a variety of stocks, and also with Roses on their own roots, I can with a degree of confidence and satisfaction speak of their different merits. First, then, as to the Boursault stock: this I consider the very worst of stocks for general purposes. I have worked a variety of sorts upon it, and I have frequently bought in Roses which I have found worked upon it, and I have invariably found it subject to produce innumerable suckers, requiring much labour to get rid of them; and, besides this, it is unfit for all the summer Roses and the class of hybrid perpetuals; and although some of the Bourbons, Chinas, Teas, and Noisette Roses will thrive upon it for a time, they, with a few exceptions, eventually pine and die. Mr. Curtis, a writer in the *Gardeners' Chronicle*, also says the Crimson Boursault is "apt to suffer in winter from intense cold," and that it "naturally produces strong root suckers." These are serious objections to it. He also recommends heading off with a knife (not scissors) the tops of the stocks immediately above the shoots for budding, to save it from decaying. But whence the necessity for lateral shoots to bud upon? Why not bud upon the main stems close to the ground? If a stock is found to be equally suitable for all Roses, needing no precautions to save its life—"is not affected by intense cold," and is "not subject to produce suckers," why then cultivate a variety of stocks for different Roses? And that such a stock is found I have proved, as I will show before I conclude this paper. The next I shall notice is the Celine stock, being far superior to the Boursault for general purposes; but it is too robust and rough for delicate Roses, and especially for Teas and Chinas, and it is not fit for pot culture on account of its strong roots and paucity of fibres. Another serious objection to this stock (as Mr. Rivers truly observes) is the uncertainty of the cuttings rooting. This, with amateurs and gardeners, may be a trifling objection, for if

they obtain thirty plants out of a hundred cuttings, their wants are probably satisfied ; but not so with the nurseryman who has to calculate upon a certain number annually. I need say little about the Briar, or Dog-rose ; it has been so long in use, that all who grow Roses know its capabilities in their particular localities. In strong, rich soils, it grows the majority of Roses well, but on some light soils it will not thrive at all, and on others only very indifferently ; and parties having such land to cultivate will not buy a Rose upon a briar if they know it. It is also totally unfit for pot culture, and for growing Roses of delicate habits on any soil. In my ground (which grows briars tolerably well) many of the French, Bourbon, and Tea-scented Roses will hardly push their buds upon the briar, although well united ; and others will only make a feeble growth for a year or two, and then pine and die. And all this time the stocks are producing innumerable suckers and natural shoots to retain life ; but as those are displaced, and the sap is not of a nature congenial to the health of the buds, the functions of the roots, under such circumstances, cease for the want of foliage, to assimilate the sap, and death is the consequence. And now I will speak of the Rose *Manettii*, which, of all others, is the stock for Roses generally. Cuttings from this stock root with the same certainty as Willows. It does not suffer with intense cold, nor extreme heat ; it does not produce root suckers, neither does it require any precaution to keep it from decay. You may prune it with scissors, or with what else you please ; or you may break it or abuse it as you like, and still the wounds will not fail to heal. Its tenacity of life is most astonishing ; and, as an instance, I may mention that, in the spring of 1849, I had some of it grafted with various Roses, and, the season being late, a few of the grafts failed to grow. The stocks had been cut below the eyes that were left on when the cuttings were planted, but I naturally concluded that there might be some latent buds near the base of the stocks that would push from below, or otherwise the stocks would go dead ; but they did neither. In a little time there were large, white callosities formed over the tops of them, and they were actually alive this spring, having survived a summer and winter without any foliage whatever. This also occurred with some of the same kinds of stocks in pots under similar circumstances ; I grafted them again this spring, and some of them are now living plants. It is particularly adapted to pot culture, it produces such abundance of fine fibrous roots. Last year (in July) I budded a quantity in pots with Bourbon, China, and Tea-scented Roses ; in autumn they were nice plants, a foot high, and such as I could not in the same time have produced from cuttings, or by any other means. I can fully bear Mr. Rivers out in his remarks respecting the progress of shy-growing Roses on this stock ; but as I enumerated a number of those in my paper on the same subject, which appeared in the *Journal*, p. 772, 1849, I need not here repeat them ; but I may state that I have some such as Charles Souchet, Deuil de Duc d'Orleans, Souvenir de Dumont d'Urville, Madame Verdier, Ernest de Barante, &c., fine bushy plants from last year's buds, known as shy growers, yet in such perfection as these sorts are seldom seen. I have also Tea Roses upon



this stock one year from the bud ; these, when taken up and potted last autumn, are larger than I could possibly have grown them on their own roots in four years. Then as to free-growing Roses, you, Mr. Editor, were an eye-witness to a specimen which I sent you last autumn, of Moss Laneii, having six branches five feet high. It was by no means a solitary specimen, for I had at the time a large quarter in my nursery full of plants of a similar character, and seen by nurserymen and many other persons, in the course of last autumn. Mr. William Paul is the only party I have yet heard speak, or seen write against the merits of Rose Manettii as a stock, and this gentleman appears to me to have been prejudiced against it from the first, for when he called upon me two years ago, he then admitted that "although they had been in possession of the Manettii Rose for two or three years, they had not cultivated it to any extent." And Mr. Paul remarked, "I have no good opinion of it, it grows too robust, and will be subject to produce natural suckers, &c. ; and although they are fine now, they will never come so fine again when they are cut down." In this he was mistaken, for their strength has increased with their age—the bud and stock mutually swelling together. Mr. W. Paul now says (see *Gardeners' Chronicle*, June 8th, p. 358), that the Manettii has had five or six years' fair trial in their nursery, and he is still of the same opinion. This will, however, depend upon what he calls a fair trial. Have they tried a thousand stocks with a hundred different varieties of Roses in equal quantities from the various classes ? and have they tried it in rich land, and in poor land, and in pots ? If they have not done this, they have not given it a fair trial. Mr. Paul next finds a deputy (Mr. Saul) to express his ideas, and intimates to parties interested in the matter, that if they refer to Mr. Saul's letter, they will there find facts and reasons, evidently the result of observation and study. As desired, I have referred to Mr. Saul's letter in the *Chronicle*, but I find that instead of the Manettii stock being there condemned, Mr. Saul merely mentions it in the way of a reference to the remarks of "An Amateur." Facts, however, are stubborn things ; and I am speaking of what has really occurred in my *actual practice*. In my opinion, it is the suitable quality and not the quantity of sap in stocks that will ensure the greatest success in all grafting and budding operations. It is well known that many sorts of Pears will not take, and others make but feeble progress upon Quince stocks ; but place the same upon Pear stocks—no matter how robust they are, or how abundant the sap—it being more congenial to their nature, on this they will thrive. In like manner many of the French Roses, and the most delicate growers of the Bourbons, Chinas, and Teas will scarcely unite, or if they do take, they seldom exist more than a year or two upon the briar, yet they will take freely, and grow amazingly upon the Rose Manettii, and continue to thrive, producing both foliage and flower of the most robust kind. I one day last week visited a gentleman's garden some miles distant from here, the situation of which is low and damp, and I there saw a quantity of Rose trees which I had supplied last autumn. About half of them were upon briars and the other half on the Manettii. Some of those on briars were dead ; the others,

although alive, were not thriving ; but those upon *Manettii* stocks were all growing vigorously, and blooming beautifully. Some of them had been reduced to one stem, and this only shortened to three feet ; by that means they had formed beautiful half standards, with good heads full of bloom, the second year from the bud ! Some Tea Roses, upon the same stocks, planted against a wall, were in the most vigorous health, and had been covered with flowers for a considerable time. Those were larger plants the first year from the bud than could have been obtained on their own roots in four years ; they also withstood the winter without any protection, although newly planted. Previous to this Tea Roses could never be made to live here *on their own roots* in the same situation. I have extended this letter a great deal further than I intended when I started, but it was my wish to adduce practical proofs (not logical reasonings) of the excellent properties of the Rose *Manettii*. It is my firm conviction that ere long dwarf Roses at least will not be saleable on any other stocks ; nor do I despair of it making good standards, for I have this year a plant of Moss grandiflora which was left uncut down ; upon the strongest shoot it broke five or six eyes about four feet from the ground. When I noticed this I cut away the other shoots, and a piece from the top of the strong one ; it is now as fine a standard Rose as need be seen, with a full head of bloom the second year from the bud ! In this way standard Rose-trees may be obtained in the same way as standard Fruit-trees on their own stems, which I have no doubt will swell with the growth of the head—*Gardeners' Journal*.

## ON THE CULTIVATION OF TULIPS.

IN LETTERS TO A FRIEND.

### *Letter VIII.*

DEAR SIR,—Your last respects came duly to hand, containing lots of thanks for my communications on this subject. One part of yours, I note, it does not please me. You say that you are sure that the breaking of the breeder Tulip must be a pleasing employ, and particularly exciting ; to this I agree, and am glad that you are come to this conclusion, because it is quite in accordance with the views I have always held, but still it is a course that requires a vast deal of care, and you have begun it in a way that is certain to bring you continual dissatisfaction. You say that your patience would not allow you to wait for the breaking of your own seedlings, and you have purchased two or three hundred of a Tulip fancier, who assures you they are good things ; you did not see them in bloom. This is certainly an unwise procedure, not in accordance with your usual discrimination, and demonstrating a predominance of that verdure, manifested by the rustic on leaving the confines of his native village, and entering on the more active scenes of life. You saw not a bloom, know nothing of their shape, form, or colour, and their bottoms may be as black as a Jew's eye for aught you know, and what then ? Your trouble for nothing, your money thrown away,

time lost, and a large amount of mortification, and who to blame but yourself? Some years since I knew a person who bought a bed of seedlings which had not blown, and when they did, they all proved to be dirty bottoms, and what did he do with them? he sold them, it might be to some person like yourself, who had not patience, or who, in an unguarded moment, bought them without seeing them in bloom, and thus the mortification was the greater, because carelessness was the cause. I never would buy a breeder without seeing it in bloom; not that you can be certain that from the most perfect breeder, you will get perfect blooms when broken, but the chances are greatly in favour of it; they should possess a good substance of petal, the cup not over-large, but well formed, not loose and straggling, the colours clear, and the most essential with you in the South, a fine clean bottom; but according to the rules of the Northern Association, a stained bottom may, by chance, gain a prize, at least it was so at their last great exhibition in this town: but I think that their days are numbered from what I hear. The chance is, that, for the future, they will be excluded, and, for their credit sake, the sooner the better. It was held by Mr. Charles Brown, (whose name has before been introduced into these letters,) that a dirty, or stained-bottom breeder, would never break clean, and I believe that it is now an opinion that has gained universal credence. If the stain should be very trifling, there is a chance that should it break finely feathered, it may clear out, but should it break with a good flame, the stain will remain, and thus cause the flower to be useless for an exhibition in the South, and I hope from this time for the North.

I am at a loss to know what you, as a private grower wanted with so many; you say they were cheap, so much the worse, as they are more likely to be useless; it is easy to accumulate a quantity of rubbish to take up the room of better things and cause constant vexation.

I wish that in May last you had sent me your 10*l.*, intimating what you wanted, I would have visited some of the Northern growers, and selected for you a few things, of which there would have been a chance of giving you that satisfaction that a cultivator receives when he finds he has something that pays him for his trouble. I would much rather you had began with some good Northern seedlings, as there are at the present time many Northern stars and a large quantity of good Northern breeders; that, if infused with the Southern collections, will be much prized by active cultivators, and become useful.

I omitted to inform you in my paper of the Great Northern Exhibition, that there was a fine break of Slater's Kate Connor, but not exhibited for competition, as it came with seven petals. Kate Connor has for some time past been a popular Rose breeder, and broke (this season I believe, but am not certain,) for the first time. The one shown was a fine flame, but one bulb has broken finely feathered, in either state it will have many friends. The next day, at an exhibition, a short distance from this town, was a new broke rosy byblomen, called Slater's Ada; though not fully blown, enough of its beauties were developed, to show it was a choice thing, and it will rank high in the class to which it belongs.

I think that considerable praise is due to the Northern growers, for the magnitude of their exhibitions; there is nothing of the amount in the South, the only approximation that occurs to my mind was some years since, at Lawrance's, at Hampton, when the late Queen Adelaide gave a cup of the value of twenty-five guineas for the best collection. In the South the blooms at an exhibition are counted by the hundreds, in the North by the thousands; an example I could wish the Southern to follow. And why could it not be done? and a concentration made of Tulips to the same extent as Dahlias? to the cultivators it would be quite as exciting, and to the public quite, if not more gratifying. In some future letter, I may perhaps give you some idea of the extent to which the cultivation of the Tulip is carried in the North.

Yours truly,  
DAIL.

Manchester.

### ON TRAINING PLANTS AGAINST WALLS, TRELLISES, PILLARS, &c.

*CALYSTEGIA PUBESCENS*.—Most of our readers have by this time become acquainted with this *double* flowering Bindweed, introduced a few years ago from China. A plant of it growing in an ornamental barrel in the Swiss Garden at Shrubland Park has this season produced single blossoms. Each flower is about the size of those of *Ipomœa Learii*, the colour between salmon and French white, with five stripes or divisions of a lighter colour, and is exceedingly beautiful. Being quite hardy, and increasing rapidly, it is a charming climber, and will prove a fine plant for the summer covering of a wall, fence, verandah, &c.

*SOLANUM JASMINOIDES*.—In the Royal Gardens of Kew there are some fine plants trained to an east aspected wall, which prove quite hardy, grow freely, and bloom profusely. The numerous fine heads of white flowers, borne throughout the summer, render it a valuable acquisition.

*BIGNONIA JASMINOIDES*.—This very beautiful flowering plant, growing against an east aspected wall, has bloomed very freely during the present summer, more profusely and larger blossoms than when grown in the greenhouse. It requires a slight protection so as to be preserved from frost and damp; this being afforded, it thrives and blooms admirably.

*MANDEVILLIA SUAVEOLENS*.—This charming flowering plant grows and blooms very freely either against a wall or pillar in a sheltered situation. It only requires a slight protection in winter just to keep it from frost. The great thing with it is to have its growth promoted early in the spring, so that the wood may be fully hardened by the end of the growing season. It blooms from July to October. A large plant, growing in a pot in the greenhouse, was taken out last April, and the pot sunk in a border at the foot of a pillar in the flower garden. It grew rapidly, and now is twelve feet high, in profuse bloom. At the time of sinking the pot the crocks at the bottom were removed,

and the entire bottom of the pot broken out, this permitted the roots to push into the surrounding soil, it has been duly watered during the dry weather. It is intended to remove the plant in winter to the greenhouse, and turn it out the next season. This mode of treatment answers admirably with many of the half-hardy and greenhouse climbers, as well as such others as can be trained to a wall, &c., as *Melaleucas*, *Polygalas*, &c., they bloom more freely and vigorous. And the sides of the pot being kept entire, the ball remains so when the plant is taken up at the end of the season. If necessary the plant can be readily turned into a similar sized pot with its bottom entire; or be placed in a saucer till turned out again in spring.

### THE LONDON FLORICULTURAL SOCIETY,

HELD AT PORTMAN ARMS, DORSET SQUARE, SEPTEMBER 9TH.

IN exhibiting a single flower, termed CLASS-SHOWING, the following awards were made:—

**DAHLIAS.** *Amateurs.*—Blush, tipped, or mottled—1st, Mr. Hunt, for Mrs. C. Bacon; 2nd, Mr. Hunt, jun., Queen of the East; 3rd, ditto, ditto. Rose and lilac—1st, Mr. Lochner, Fearless; 2nd, Mr. Hunt, jun., Madame H. Gobert. Scarlet—1st, ditto, Scarlet Gem; 2nd, ditto, Nonpareil; 3rd, Mr. Sandilands, Shylock. Yellow—1st, Mr. Hunt, jun., Harrison's Queen of Yellows; 2nd, Mr. Lochner, Yellow Standard; 3rd, Mr. Hunt, jun., Queen of Yellows. Maroon and crimson—1st, ditto, Sir F. Bathurst; 3rd, ditto, Negro. Purple—1st, Mr. Lochner, Richard Cobden; 2nd, Mr. Hunt, jun., Mr. Seldon; 3rd, ditto, Richard Cobden. Light fancy—1st, Mr. Lochner, Rowena; 2nd, ditto, Miss Compton. Dark fancy—1st, Mr. Lochner, Candidate; 2nd, ditto, ditto; 3rd, ditto, Empereur de Maroc. Additional varieties—2nd, ditto, Andromeda. *Nurserymen's class*—Blush, tipped, or mottled—1st, Mr. Hunt, Mrs. C. Bacon; 2nd, ditto, ditto; 3rd, ditto, Dr. Bushell. Rose and lilac—1st, ditto, Daniel's Elizabeth; 2nd, ditto, Fearless; 3rd, Mr. Hunt, Queen of Lilacs. Scarlet—1st, Mr. Stein, Nil Desperandum; 2nd, Mr. Hunt, Shylock. Yellow—2nd, ditto, Queen of Yellows; 3rd, Dr. Bushell, Yellow Standard. Maroon and crimson—1st, Mr. Stein, Nepaulese Prince; 2nd, ditto, ditto; 3rd, Mr. Hunt, Sir F. Bathurst. Purple—2nd, ditto, Mr. Seldon; 3rd, Dr. Bushell, Richard Cobden. Orange, buff, and salmon—1st, ditto, Battie. Light fancy—1st, 2nd, and 3rd, Mr. Stein, New Standard. Dark fancy—2nd, Mr. Hunt, General Cavaignac; 3rd, ditto, Lady Grenville.

### BRIEF REMARKS.

**MR. CHATER'S HOLLYHOCKS, SAFFRON WALDEN, ESSEX.**—A visit to the nursery grounds of Mr. W. Chater at this season of the year, in consequence of the peculiar department in which he has shown his

skill as a florist, is positively a treat, and great numbers of gentry, amateurs, and professional gardeners (not a few coming from distant parts of the kingdom), have already responded to his invitation, so widely given by advertisement, and have inspected his truly magnificent flowers. His splendid stock of ten thousand Hollyhocks of almost every delightful shade and hue, and the great majority of which are now in their blaze of beauty, bloom, and perfection, contains some seedlings entirely new, and others which are manifestly grand improvements on former named plants. His beautiful deep crimson "Comet," as a standard of the perfection to which these giant productions of Flora may be brought, still stands everywhere unrivalled; its immense disc of individual bloom, its stiff petals formed into a compact hemisphere on an elegant narrow flat, and smooth-edged guard leaf, render its lofty and gorgeous spikes conspicuous and attractive, even where all its compeers around are beauteous and brilliant. Alike distinguished amongst his present extended collection is his "Walden Gem," no plant of which he has yet parted with; it is a flower of rare qualities, a rosy, ruby red, and its properties greatly similar to "Comet," of the same character also, and bidding fair to be equally valued, is a seedling of last year, "Charles Baron," a pale salmon, and named in honour of the amateur florist who first brought Hollyhocks into superior cultivation as florist flowers at Saffron Walden. In addition to these, and the beauties named in the inspections of last year, ranking as first class flowers, are "Purpurea elegans;" "Rosea alba;" "Surprise," a deep crimson; "Rosy Queen;" "Obscura," silver-shaded puce; "Sulphurea palmata," an early blooming flower; "Spectabilis," an exceedingly showy specimen; "Conspicua;" "Sulphurea perfecta; also a new seedling, "Orion," a deep rose; with a host of other varieties whose splendour in an autumnal noonday sun cannot be overdrawn by pen or pencil.—*A. Barfield. Dunmow, August 22.*

**LILIUM GIGANTEUM.**—Gorgeous as are many of the lilies, none can compete with this in magnitude of flower, altitude of growth, or in fragrance. I believe it was first sent to this country by Major Madden, with a large collection of other seeds, which were distributed among the public gardens of the country. Mr. Ferguson, of the Belfast Royal Botanic Gardens, has been the most successful in raising this splendid plant; and, I believe, the largest bulbs of this giant of the vegetable world are to be found at and near Belfast. When of full growth it attains the height of twelve feet, bearing very large white flowers, spotted with crimson; and the scent is so powerful that a single flower cannot be endured in a room for any length of time. Flowering bulbs are not yet in the country, but both at the Belfast Botanical Gardens and this place they are coming on apace. Many persons have received seed of this plant; but as it requires peculiar management, few of the seeds vegetate. It is perfectly hardy, and will for some time be a scarce and rare plant. Splendid as the above species is, there is yet another which surpasses it in magnificence, flowering bulbs of which are now in the Belfast Botanical Gardens; but more about it some other time.—*Kciv Short.*

**CUPHEA PLATYCENTRA.**—As a bedding plant this is the best of all the Cupheas. I may also say it is second to none of any kind whatever, although there may be many flowers more showy at a distance; but upon closer inspection there is none to be found more interesting, as its white-tipped bright crimson tubular blossoms are very handsome. It also stands rough and stormy weather much better than any of our more cherished flower-garden favorites, and blooms well towards the latter end of the year. Its propagation and cultivation are very easy. Cuttings put in the first week in March, in a little bottom heat, will strike freely. When struck they should be potted off singly, and kept in a frame until April, when they should be hardened off, and bedded out the latter end of May, where it will flower beautifully, until it is destroyed by frost.—*J. Mc Ardell.*

**DESCRIPTIVE LIST OF CHOICE BOURBON ROSES.**—This beautiful and numerous family of Roses, with shiny foliage and gorgeous flowers of nearly every hue, may be more readily distinguished than perhaps any others. They may be termed hardy Chinas, combining as they do so great a similarity to that family, with the hardihood of the Hybrid Perpetual. Constantly in blossom, from June till November, they enliven the garden with their brilliant tints, perhaps more than any other family; and much is it to be regretted that they possess so little perfume. The rule for summer pruning perpetuals equally applies to this family. *Acidalie*, white, large, and double superb, likes a warm situation, forces well. *Alfred*, rosy red, distinct. *Aménaïde*, pale rose colour, vigorous. *Anne Beluze*, delicate rose colour, cupped. *Armosa*, delicate pink, of perfect shape, small, and very pretty. *Bouquet de Flore*, fine pure carmine, an excellent autumnal bloomer, and good pillar rose. *Beauté de Versailles*, deep rich crimson, very double and perfect shape, pendent globular. *Comice de Seine et Marne*, cherry red, shaded with crimson, superb, beautifully cupped. *Comte de Chamborde*, crimson purple, free bloomer. *Comte de Colbert*, deep crimson, shaded with purple. *Comtesse de Rosseguier*, pale blush, cupped, delicate. *Dumont de Courset*, deep crimson, purple. *Dupetit Thouars*, brilliant crimson, shaded fine. *Emilie Courtier*, rose colour, with thick petals, fine. *George Cuvier*, brilliant rosy pink, in form like the preceding. *Gloire de Paris*, crimson and purple, shaded, very fine. *Grand Capitaine*, rich scarletty crimson, delicate dwarf habit. *Henri Lecoq*, brilliant carmine. *Imperatrice Josephine*, pale blush, the habit of *Madame Lacharme*. *Le Grenadier*, vivid light scarletty crimson, a good pillar rose, superb. *La Gracieuse*, rosy pink, beautiful. *Leveson Gower*, rose colour, very double, large and good for forcing. *Madame Oude*, delicate rose colour, of fine shape, beautiful. *Madame Angelina*, cream colour, with petals of great substance; the nearest approach to a yellow Bourbon. *Madame Nerard*, or the *Wax Rose*, delicate blush, very charming wax-like petals, of rather delicate habit. *Madame Souchet*, blush, sometimes edged with red, distinct and curious. *Margat Jeune*, crimson purple, very fine. *Marianna*, pale rose colour, shaded with crimson, very double and fine. *Menoux*, vivid light crimson. *Oscar, Le Clerc*, bright crimson, shaded with purple, superb. *Paul Joseph*, dark rich crimson purple, of dwarf habit, very distinct, superb.

Pierre de St. Cyr, pale glossy rose colour, most abundant autumnal bloomer, and good pillar rose. Pourpre de Tyre, fine deep crimson purple, peculiar scent, a good pillar rose, partaking highly of the Noisette. Pourpre Superbe, rich crimson purple, changing to deep purple, superb, a fine pillar rose. Proserpine, crimson purple, shaded, delicate dwarf habit. Queen, most beautiful fawn or salmony blush; very abundant autumn bloomer, and fragrant. Reine de Vierges, delicate blush, nearly white, like Souvenir de Malmaison, but of rather more globular form, rarely blooming well in the open air, but a good rose for forcing. Souchet, scarletty crimson, shaded with purple, splendid expanded form. Souvenir de Malmaison, creamy flesh brush, with magnificent foliage, very large and distinct, a superb rose. Splendens, brilliant crimson, shaded, very robust habit, a good pillar rose. William the Conqueror, pale rose colour, shaded with lilac, beautiful.

LILY OF THE VALLEY.—When produced in perfection, few plants are more esteemed than the Lily of the Valley, more especially when brought into bloom during winter. Its fragrance and simplicity never fail to elicit for it a tribute of esteem from the fair sex. Nevertheless, how seldom do we see it flowered in winter in private gardens. Let us, therefore, point out how this may be obtained.

As its name implies, it is the Lily of the Valley, delighting in rich deep alluvial soil. It will not thrive under trees, where all nutriment and moisture are absorbed. It would be nearly as consistent to expect a Water Lily to grow on a rock; such situations are, however, frequently assigned to it. A spot suitable for its successful growth should be selected where the staple is light, rich, and deep, and where moisture can be conveniently applied in dry weather when the plant is making its foliage, for unless a vigorous foliage is obtained, the flowers will be partial and small. In preparing the ground for planting, a generous coating of well-decomposed manure should be given, and if vegetable manure, such as decayed leaves, can be obtained, a large portion of this may be safely applied. Let the ground be turned up at least 18 inches deep and the manure well incorporated with the soil.

The best time to form new plantations of the Lily of the Valley is during autumn, when the foliage is becoming yellow; when planted at this season, in one year they will make strong flowering plants. If the plantations are made with a view to the plants being eventually potted and forced, they should be planted in patches of two or three roots, 18 inches apart, and 2 feet between the rows. By constant attention to moving the soil amongst them, and keeping the land clear of weeds, they will form strong roots fit for forcing in a year. The patches should be taken up whole and placed in the pot without disturbing the mass of roots, or tearing them asunder, as is frequently done, which, in fact, is one cause of failure.

Plants treated as above described are almost certain to bloom freely. A mixture of light loamy soil and leaf-mould will be found suitable material to pot them in. The pots should be placed in a cold pit or frame, and if a succession of bloom is required, a portion only should be put into the forcing-pit or hothouse at a time. A temperature of 60°



will be found suitable for them. The surface of the pots should be kept moist, and as soon as they begin to emerge from the soil, frequent slight syringings should be afforded them. When the plants are coming into flower, they should be gradually exposed to a lower temperature, which will be the means of keeping them longer in perfection; or if they are intended for bouquets, they will not flag so soon as when they are cut from a stove. *Pharo.—Gardener's Chronicle.*

GENUS AND SPECIES OF PLANTS.—What is a genus, or what is a species, is a point upon which scarcely two botanists are agreed at the present day. With regard to the former, however much it may be necessary to subdivide in a system comprehending the known plants of the whole world, so as to retain only a limited number of species in each genus, the same does not apply to a local Flora; and it is there preferable to constitute sections or subgenera, particularly when the limiting characters are inconstant, difficult, or obscure. A *species* cannot be so treated; it is formed by our Maker as essentially distinct from all other species, as man is from the brute creation; it can neither for convenience be united with others, nor be split into several; but the difficulty is to ascertain what is such a primitive or natural species, and it is here so great a difference of opinion exists. Some pronounce a species to be distinct if it presents a different habit or appearance to the eye, particularly if this be constant, although often indefinable; others consider it a species, although exhibiting no difference of aspect, provided it can be defined, even although the differences are so minute that they can be detected only by the microscope; while a third party are of opinion that the validity of a species may be tested by cultivation. The authors are not inclined to believe that any one of these tests is sufficient. Of all the works of creation, we have a specific account only of man; but as the others appear to be formed on the same plan, there is a strong presumption in favour of those arguments which assimilate the species of plants to what we know of the human race. With regard to mankind, it is universally acknowledged that there now exists so great diversity between an inhabitant of the torrid and an inhabitant of the frigid zone, and even of any one part of the globe and of another, that it can only be accounted for on the principle that each succeeding generation has a tendency to recede more and more, in general appearance, from the original type; and if we apply this to the vegetable kingdom, we must at once allow that, although cultivation may sometimes in a single year or two satisfactorily show that two supposed species are the *same*, a thousand years' cultivation cannot prove them *distinct*. The more we cultivate a plant, or the more it is limited in its wild state to a particular climate or place of growth, the more permanency is given to the peculiarities of what was originally derived from the same root, or even seed-vessel, of another apparently widely different form. Hence a rare mountainous plant may frequently be a mere alpine permanent state of some common lowland species, or a Swedish species the more northern race or state of a southern one; and it is from this cause that we see in our gardens so many called species (as in the genus *Achillea*), which cannot now be referred satisfactorily to any of the wild ones, although primarily

derived from them. Knowing, then, this tendency of nature to give permanency to a variety of forms obtained from one primitive species, there appears to be less violence done to her laws by combining too much, than by subdivision, unless where there is an anatomical or physiological distinction. Linnæus took nearly all his specific characters from conspicuous parts, especially from the stem and foliage, and they were therefore natural; but at the present day we are prone to select minute ones: of these some are of trifling value, while others, sufficient to constitute subgenera, are connected with the habit of the plant, and should therefore not be neglected. Indeed the time may ere long arrive, when what are now called genera or subgenera will alone be considered species, and another Linnæus be requisite to reduce the chaos into order. In the meanwhile we have endeavoured to steer a middle course; the species admitted in former editions are seldom reduced, unless where it was found that the characters were insufficient or variable; and as rarely has sanction been given to those which have been split off from other species, by the too-refined ingenuity of the German, Swiss, and modern Swedish botanists. If in one or two cases this neomania has been yielded to, it has been more on account of the remonstrances of the author's friends, who had opportunities of examining the living plant, than from any conviction of either the necessity or utility of so doing.—*British Flora, by Sir W. J. Hooker, and G. A. W. Arnott.* (This is a very useful publication.—EDITOR.)

AN INVALID'S GARDEN.—I am and have been for years a great invalid, and am passionately fond of flowers, though unable to enjoy their beauties out of doors, and am therefore confined to those which I can tend in my windows. Whilst endeavouring to wile away many weary hours, the thought has frequently been forcibly impressed upon my mind, that an immense increase of recreation and pleasure is yet within reach of sufferers like myself. It may be visionary, yet I assure you I have dwelt on my plan with the most delighted feelings, and pictured in my mind's eye a perfect little paradise of flowers. The late measures of Government in removing the duty on bricks and glass, will now enable even me to attempt what I have long only thought of. My plan is simply this: to have built a span-roofed pit, covered with thick rolled glass, which is not much dearer than slates; and on each side to have a bed, if I may so call it, heated by hot water (to be used only when required); the service of the bed to be of sheet iron, painted and vulcanised, or undergone some process to prevent rust. In this iron I would have a series of circles cut, into which I would fit earthenware vessels, like seed pans, with ornamented margins, and arranged artistically. Now, would it not be possible to have these pans filled with beautiful flowers? and, to keep up the beauty of the place, as the flowers went out of bloom, might not the pans be lifted, and others, from a reserve garden, substituted? Could not one pan have scarlet Verbenas, pegged down so as to make a mass? another white, and so through all the various shades? Could there not be some filled with Gladioli, Ixias, Achimenes, &c.? Could there not be circular masses of Crocuses, Hyacinths, and flowers of a similar character, for spring? These might be succeeded by scores of other things, and why not thus

have a miniature flower garden? Here could the effect of combination and contrast of colour be carried out, affording information of the most interesting kind; and here could I, or any other invalid, secure from draughts and damp, tend these beautiful offsprings of Nature, and though debarred from the enjoyments which many others have, here we could, in thankfulness, look from Nature up to Nature's God. How beautiful would be masses of Russian Violets, the lower sorts of *Calceolarias*, *Campanulas*, *Mimuluses*, and every other plant that is used for bedding. Then I would have wires stretch over-head, on which might hang in festoons the *Maurandya*, *Calempelis*, *Passiflora*, &c. I would have no single plants, except the climbers; and the others should be so planted as to fill their respective pans or beds. Now, do you not think my plan possible? and would it not be very beautiful? *I. F., Manchester*.—[We like the idea much, and if well carried out it would indeed be beautiful.—*Midland Florist*.]

**TO PREVENT CARNATIONS BURSTING.**—Take a broad bean from its pod, cut off both ends, and cut the remainder into two or three slices, according to the size. Push out the green part from one slice, and you have remaining a compressed ring of skin. Slip this over a bud of a carnation, and let it hang on the lower part of it; by the next day it will have collapsed into a tight and scarcely visible bandage.

**SUPERB CARNATIONS AND PICOTEES.**—In our last month's Number we inserted a list of these flowers which were in the greatest number of the winning stands, exhibited at the great shows of southern and northern flowers. We remarked too that other superb varieties were shown, but being quite new they had not had time to be extensively grown, some very limited indeed, and which accounted for their position in the stands on those occasions. These observations apply especially to the following very fine varieties:—

*Carnations.*—Princess, Taylor's, pink bizarre, fine form; Howard, Puxley's, scarlet bizarre; Prince of Wales, Puxley's, purple flake, very excellent; Bardolph, May's, vivid scarlet bizarre; Sarah Payne, pink bizarre, fine; Falconbridge, May's, pink bizarre, excellent; Duncan, May's, crimson bizarre, very fine; Paxley's Jenny Lind, crimson bizarre, first rate; Gladiator, Slater's, crimson bizarre, first rate; Squire Trow, purple flake, excellent; Lord Lewisham, scarlet bizarre, very superb.

*Picotees.*—Pic Nic, heavy-edged red, fine form; Prince of Wales, Marris's, heavy red, superb; Mary, Dodwell's, light edged red, very fine; Alfred, Dodwell's, heavy purple, very superb; Duke of Rutland, Hollyoake's, medium edged purple, very excellent; Miss Rosa, rosy-salmon edged, very neat; Ophelia, May's, light purple, fine form.

All the above varieties are fit for any select collection, and may be depended upon as suitable for exhibiting. To which may be added the first two given varieties of each class of flowers we gave last month. We must, however, add that there are some varieties of most excellent character, which were not shown on those occasions. Seedlings now coming out for the first time, as well as some of former years, which are of equal merit, and essential in forming a first-rate collection of the very best kinds.

In some of our earlier numbers for this year we inserted some interesting and useful communications relative to Carnations, &c., which were contributed by John Edwards, Esq. There had been some little boasting by the Florists of the northern part of this country as well as the southern ones, and Mr. Edwards (to whom all admirers of these flowers are much indebted) suggested the propriety of having a Northern and Southern Exhibition, under regulations which he described. We gave a list of flowers exhibited at those meetings in our last Number. The following superb Seedlings, &c., were shown:—

*Carnation*.—Duke of Devonshire, Barringer, scarlet flake, fine form.

*Picotee*.—Elizabeth, Robinson's, heavy red edged, excellent white ground, and bright red edge.

One flower of each of the following kinds obtained prizes in CLASS SHOWING, at Slough, in the order they are here recorded:—

*Carnations*.—Scarlet Bizarres: 1st, Emperor, Paxley's; Admiral Curzon; Prince Albert, Hales's; Bardolph, May's. Crimson Bizarres: Lord Milton; 2nd, Lord Milton, Seedling; Lord Milton. Pink Bizarres: Henry Kirke White; Falconbridge; 3rd, Falconbridge; Twyford Perfection. Scarlet Flakes: Justice Shallow; William Fourth, Wilson's; Justice Shallow; Lydia. Purple Flakes: Premier, Milwood's; Perfection, Paxley's; Great Northern, Ely's; Lord Byron. Pink Flakes: Flora's Garland; Prince Arthur; Rosetta; Ariel.

*Picotees*.—Light, red edge: Mary, Dodwell's; Mary; Cassandra; Gem. Light, purple edge: Prince Albert; Juliet; Purity; Circe. Heavy, purple edged: Alfred Dodwell's; Viola; Seedling, May's; Viola. Light, rose edge: Mrs. Barnard; 2nd and 3rd the same; Countess Howe, Hollyoake's. Heavy, red edge: Prince of Wales, Marris's; 2nd and 3rd, the same; King James. Heavy, rose edge: Queen Victoria, Green's; Venus; Unexpected, Marris's.

*Class showing at Derby: Carnations*.—Scarlet Bizarres: Admiral Curzon; 2nd and 3rd, the same; Seedling, Scholefield's. Crimson Bizarres: Jenny Lind, Paxley's; 2nd and 3rd, the same; Black Diamond. Pink Bizarres: Prince Albert, no other shown. Purple Flakes: Squire Meynell; Lord Byron; Premier; Squire Meynell. Scarlet Flakes: 1st, 2nd, 3rd, and 4th, Duke of Devonshire, Barringer's. Rose Flakes: Lady Ely; Lady Ely; Princess Royal; Flora's Garland.

*Picotees*.—Heavy, red edge: Pic Nic, Harrison's; Isabella; Pic Nic; King James. Light, red edge: Dodwell's No. 70; Paymaster; Gem; Gem. Heavy, purple edge: Alfred, Dodwell's; 1st, 2nd, 3rd, and 4th. Light, purple edge: Leader; Leader; Juliet; Juliet. Heavy, rose edge: Queen Victoria; Green's; 2nd, ditto; Venus; Victoria Regina; Mrs. Barnard; 1st, 2nd, 3rd, and 4th. Light rose.

Now is the season to obtain any desired kinds, and the most celebrated dealers are advertising their collections; aided by their catalogues, and the lists we have given in our last and present numbers, a collection of the very best show flowers may readily be selected.

Holder, for *Atro-Sanguinea*, *Queen*, *Venosa Rubra*, *Rosea Grandiflora*, *Sulphurea Perfecta*, *Obscura*, *Black Prince*, *President*, *Purpurea Elegans*, *Comet*, *Miss Cook*, *Enchantress*; 3rd, to Mr. Black, for *Belea*, *Cobden*, *Rosea Grandiflora*, *Prince Albert*, *Marmion*, *Lady Clark*, *Caroline*, *Sulphurea Perfecta*, *Novelty*, *Model of Perfection*, and *Queen*.

*Nurserymen*: 1st, to Mr. Bircham, for *Elegans*, *Enchantress*, Mrs. C. Baron, *Rosea Grandiflora*, *Defiance*, *Sulphurea Perfecta*, *Fireball*, *Queen*, *Model of Perfection*, *Comet*, *Magnum Bonum*, *Delicata*; 2nd, to Mr. Chater, for *Walden Gem*, *Purpurea Elegans*, *Pulchella Elegans*, *Boule Blanche*, *Enchantress*, *Delicata*, Mrs. C. Baron, *Queen*, *Rosea Grandiflora*, *Comet*, and *Surprise*; 3rd, to Mr. Bragg, for *Rosea Elegans*, *Maiden's Blush*, *Delicata*, *Purpurea Elegans*, *Snow Flake*, *Magnum Bonum*, *Princess Alice*, *Magnifique*, *Model of Perfection*, *Princess Helena*, *Attraction*, *Sulphurea Elegans*.

The following varieties appeared in the first twelve winning stands in the proportions as follows:—

Duke of Wellington (Drummond) . . . . .	16 stands.
Yellow Standard (Keynes) . . . . .	14 ,,
Richard Cobden (Stein) . . . . .	12 ,,
Shylock (Collisson) . . . . .	11 ,,
Mr. Seldon (Turner) . . . . .	10 ,,
Sir F. Bathurst (Keynes) . . . . .	9 ,,
Fearless (Barnes) . . . . .	9 ,,
Mrs. C. Bacon (Whale) . . . . .	7 ,,
Imbricata (Hodges) . . . . .	7 ,,
Grenadier (Turner) . . . . .	7 ,,
Queen of the East (Barnes) . . . . .	5 ,,
Thames Bank Hero (Robinson) . . . . .	5 ,,

The following Seedling Dahlias were exhibited, and for which certificates of merit were awarded.

In a future Number we shall give FULL PARTICULARS of all the new seedlings which have come under our notice during the season.

Mrs. Hansard. (Union.)—A beautiful yellow, with each petal very distinctly tipped with pure white. Flower large, outline excellent, depth proportionate to its size. A most charming variety, which ought to be in every next year's collection.

Nil Desperandum. (Stein's.)—A very rich red, large and good form.

George Glenny. (Barnes.)—A very large flower, depth suitable, and a pretty yellow. It will be a fine back-row flower.

Queen of Beauties. (Mitchell's.)—Waxy-white, tipped with bright cherry colour. Large, fine cup, and very beautiful.

Admiral. (Bragg's.)—Fine lilac, large, good outline, well up in centre. A superb back-row flower. It had a prize, as the best seedling not sent out.

Hon. Mrs. Herbert. (Keynes.)—White, slightly tinged with lilac. A very neat flower.

Regina. (Hales.)—A pretty rosy-purple, good form.

Ambassador.—A rich maroon-crimson, good form.

Arminata.—Bright rosy-carmine, good form.

Roundhead. (Hooper's.)—A dingy-red, middle-sized, good cup and centre.

Nepaulese Prince. (Stein's.)—A dark crimson, shaded with red. Good cup, but small flower.

Nepaulese Ambassador. (Rawlings.)—A very dark maroon, almost black, and likely to be excellent when properly grown.

The following were also shown:—

Country Gentleman. (Whale's.)—White, tinged with purple, fine cup and outline, well up.

Wonder. (Whale's.)—Rich orange, fine outline, good cup, deep flower. Very good.

Le Grand. (Whale's.)—White, tipped with crimson, good outline and cup, well up in centre, medium size.

Lady Craven. (Whale's.)—White, edged with rose, excellent form, medium size, well up in centre.

Colonel Bacon. (Whale's.)—Crimson-purple, very good form, medium size.

Mary. (Whale's.)—White, tipped with deep cherry, deep flower, good centre.

Elizabeth. (Whale's.)—White, with violet tip, fine cup and good outline, excellent.

John Weeden.—Rosy-red, fine cup and outline, good centre.

Miss Pope. (Keynes.)—Sulphur-yellow, tipped with white. Pretty.

Nepaulese Chief.—Red, with yellow edges. Pretty.

Yellow Gem. (Gurney's.)—Pretty colour, centre well up.

Beauty of Chelsea.—Buff, tipped with rose, good outline. Reflexes similar to Princess Radzville.

Minerva.—Pretty rose. A fine formed flower.

Rosalind.—Blush, with a reddish tip. Pretty.

Lady of the Lake.—White, with a rosy-purple tip. Flower too thin of petals.

Mr. Clayton.—Yellow, and of medium properties.

Lady Cathcart. (Turner's.)—White, tinged with pink, medium form, softish petal.

Masterpiece. (Sealy's.)—A bright orange, centre well up, and medium form.

Prince Arthur.—Deep red, medium form.

Lovely.—White, with rosy-purple tips, eye low, otherwise good form.

Miss Hoyle.—Buff, red, and white. Flower too thin.

Coquille. (Bushell's.)—Flower small, but of fine form, deep crimson, tipped with whitish-blush when first opens, and bleaches off to pure white.

**METROPOLITAN ANNUAL SHOW OF DAHLIAS.**—It was held in the gardens of the Grecian Saloon, City-road, London, on September 19.

The show of flowers was extensive and of excellent quality. At this

late period of the month we cannot insert all particulars in our present number. The following new seedlings were exhibited:—

*Nonsuch*. (Turner.)—Ground colour a pretty fawn colour edged with light scarlet, good outline and cup. large flower of second class.

*Tricolor*. (Turner.)—Yellow with white tips and some streaks of crimson; a very thin flower, petals large and wide apart.

*Pretty*. (Turner.)—A dull crimson-red with whitish tip, flower coarse.

*Duchess of Sutherland*. (Turner.)—White with purple margin, small flower.

*Miss Hawtrej*. (Turner.)—Blush-purple, small flower.

*Victory*. (Turner.)—Purple with white tip, good outline, but flat flower.

*King Fisher*.—White ground and light red margin, centre good, but the petals are flat.

*Mr. Palmer*.—Orange-red, the flower wants depth and has a very flat appearance.

*California*.—Yellow, flat flower, outline irregular, low centre.

*Lady Watson*.—Crimson, irregular outline.

*Queen of Fairies*. (Barnes.)—Light orange with white tip, low centre.

*Miss Wayland*. (Union.)—Light orange and red tipped with white, very pretty.

*Queen of the West*. (Sealy.)—White with a slight tinge of colour, centre well up, petal too flat.

*Stonehenge*.—Straw colour, centre good, outline rather irregular, and a notch at the end of the petal.

*Baruard*. (Holmes.)—White with a greenish centre, outline irregular.

*Queen of Fairies*. (Donogan.)—White ground with purple-crimson edges, good outline and centre, flower flattish but very pretty.

*Hon. Mrs. Ashley*. (Bragg.)—White with blush tinge, good outline, centre, and petal; an excellent flower.

*Novelty*.—Red with small yellow tip, good outline, centre, and petal; eye green, flower flat.

*Elegantis sina*.—Lilac with white tip, second rate.

*Rosebud*.—White with crimson edges, large petals, third rate.

*New Standard*. (Stein.)—White with crimson edges, small flower.

*Beauty of the Grove*.—Dark crimson, small, and ribbed petal.

*Sir Robert Peel*.—Scarlet, good petal, outline and centre.

LAYERING CALCEOLARIAS.—As I have met with much disappointment by trying to strike cuttings of some hard-wooded Calceolarias, I tried with success the plan of layering, as follows:—I took the plant, with its ball of earth, out of a pot, and cut away part of root and earth, and laid it in a long dish—so every shoot becomes a plant. The above will answer for all sorts of plants I have tried that will root by cuttings, only a peg should be put down where each division is to be made, to save ruining all with the knife.—*T. Hill, Pinxton*.



### IN THE FLOWER GARDEN.

**H**OLLYHOCK seeds should be collected, and the flowering stems be cut down in order to the production of offsets, either to obtain an increase of soon, or for blooming several shoots together next summer. *Now* make new plantations of these noble flowers. 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 strong frost which has hindered the tender things in some places; (our Dahlias were most severely damaged by frost on September 3rd and 4th.—**CONDUCTOR.**) 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. Beds of Pansies may be made.

**SHRUBS** of all kinds may now be planted. (See remarks in our September Calendar.)

**ROSES** now planted **SOON** PUSH NEW ROOTS, and become well established before winter, the soil being somewhat warm excites the roots immediately. Such plants will bloom well next season.

**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, Corraëas, Chinese Primrose, Aconites, Mignonette, Primroses, Cinerarias, Stocks, Persian Iris, Crocus, Cyclamens, Sweet Violets, Hyacinths, Lily of the Valley, &c. Seeds of many Annuals should now be sown in the border, and others in pots. Such will bloom early next spring.

#### 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. Thin away the flower buds of Chrysanthemums, water occasionally with liquid manure.

**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 re-potted 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. Camellias inarched in spring, should now be cut off from the parent plant.







### CHEIRANTHUS MARSHALLII.

**T**HIS very handsome flowering plant was raised by Mr. John Marshall, of Linburn, from seeds which had been obtained from *Cheiranthus ochroleuca*, flowers of which had been impregnated with those of the fine orange-coloured flowers of *Erysimum Peroffskianum*. It is strikingly intermediate between those very distinct looking plants. Mr. Marshall was induced to impregnate the *Cheiranthus ochroleucus* in consequence of the difficulty of obtaining seeds from it. The seeds he thus secured were sown in the open border in 1846, and the following year the plants bloomed. One was a pale yellow, like the *C. ochroleuca*, and the others had orange-coloured flowers. The one we now figure was selected as the best. It is a *half-shrubby* plant, growing from one foot to eighteen inches high, forming a pretty bush. It blooms copiously, and the flowers have a very delightful fragrance, something of a combination of the *Violet* and *Primrose*. It flourishes when grown in pots or in the open border, and equally well in the greenhouse, sitting-room, or open air. It grows very freely, and is readily propagated. It deserves a place in every collection of flowers.

### NOTES ON NEW OR RARE PLANTS.

**AERIDES MACULOSUM, VAR. SCHRÖDERI.**—J. H. Schroder, Esq., of Stratford Green, Essex, purchased this handsome flowering plant at a sale in Covent Garden, being a portion of an importation from the hills near Bombay. The flowers are produced in a drooping, open, many-flowered panicle; they are beautifully delicate. Sepals white, tinged with lilac and spotted with lilac-rose. Labellum, middle lobe lilac, marked with rich rose, and the spur shading gradually into a bright yellow-green. It is a highly interesting and beautiful variety. (Figured in *Mag. of Botany*.)

**BESSERA MINIATA.** THE LESSER BESSERA.—A handsome bulbous plant, introduced by M. Louis Van Houtte from Mexico. The flowers are white and scarlet, produced in umbels. It is nearly hardy, and only requires the protection of a cold frame. It belongs to the Lilyworts.

**CALAMINTHA MIMULOIDES.** THE MIMULUS-LIKE CALAMINTHIA.—A hardy half-shrubby herbaceous plant, a native of California, from whence it was introduced by the Horticultural Society. The flowers are produced in August and September, from the axils of the upper leaves, and are about two inches long, of an orange-yellow. The plant grows about a foot and a half high. The leaves are a pretty deep green.

**CALANTHE MASUCA.** PURPLE-FLOWERED.—A terrestrial orchideous plant from India, which has been known in some collections as *Bletja Masuca*. The flower scape rises about half a yard high, bearing a long spike of flowers. Sepals and petals a lilac-purple, and the labellum a very deep purple. Each flower is about three inches across. (Figured in *Bot. Mag.*, 4541.)

**CATASETUM FIMBRIATUM.** THE FRINGED CATASETUM.—An orchid of no great beauty or interest, the labellum, or lip, being of a dirty white, deeply fringed. The sepals and petals are speckled with red. Native place unknown.

**CATTLEYA LABIATA.** VARIETIES OF THE RUBY-LIPPED—

1. *C. labiata candida.* *White Ruby-lipped.*—This very handsome variety is in the noble collection of orchids at Sion House Gardens. Sepals narrow, three inches long, white; petals broad, three inches long, white, with a tinge of sulphur; labellum, tube one inch and a half long, white; lip two inches across, curled and wavy; lower part orange and crimson, then lilac spotted with red, and a white margin. These fine flowers are very beautiful, and the plants worthy a place in every collection.

2. *C. labiata picta.* *The Blotched.*—Sepals broad, about three inches long, of a rosy-purple colour; petals as long, and two inches broad, of a similar colour, blotched with rosy-crimson; the tube of the labellum is of the same colours outside, an inch and a half long; lip near two inches across, crisped and wavy; one portion of the margin is a bright yellow, and the remainder a lilac-purple, spotted with red. The centre portion of the flower is of a cinnamon-red colour. It is a fine species, well meriting a place in every collection. (Figured in *Paxton's Flower Garden*.)

**CONOCLINIUM IANTHINUM.** THE PURPLE CONOCLINIUM.—A native of Brazil, introduced by M. Alexander Verschaffelt. This is a stove herbaceous plant of great beauty, with heads of flowers six inches across, of a violet colour, and possesses the fragrance of honey. It will require to be grown in a moist stove, and to be kept from the attacks of the red spider, &c.

**CYCHNOCHES PESCATOREI.**—A stove orchid, a native of New

Grenada, in the collection of M. Linden, of Luxembourg. The flower stem hangs down a yard long, and one had ninety-six flowers upon it. Sepals a dull yellow; petals and lip a bright yellow. Each flower about two inches across.

**CUPHEA CINNABARINA.** THE CINNAMON-COLOURED.—Very similar in habit to *C. strigulosa*. The flowers are borne in profusion, in racemose panicles; each blossom nearly an inch long, of a pale cinnamon-red, with green ribs and tips. Introduced from Guatemala to Belgium by Mr. Van Houtte. Very pretty.

**DIANTHUS CRUENTUS.**—A very handsome Pink, which Mr. Van Houtte obtained from the Botanic Garden at St. Petersburg. It is quite hardy, bearing numerous flowers in a large globular head, similar to a Sweet William. The calyx is of a violet colour, and the petals of a vivid rosy-carmine. It is a charming plant for the flower-garden.

**ECHÉANDRA TERNIFLORA.**—A very pretty Lilywort plant from Mexico, and requires similar treatment to the *Commellina caelestis*, taking up the tuberous roots at the close of the blooming season, and preserving them from frost in winter, &c. The flowers are borne on a long spike, and come out in succession for a long time. Each blossom is an inch across; a pretty yellow flower. It is as ornamental as an *Ixia*, and well worth a place in the flower-garden. It blooms in August and September.

**ERIOCNEMA MARMORATUM.**—MARBLED-LEAVED.—A melastomeæ plant from Brazil. The leaves on the upper side are of a bright green, marked with brown stains and streaks of white; the underside is a rich purple. The flowers are produced in spikes, of a rich rose colour. It is a handsome plant, as is also *ERIOCNEMA ÆNEUM*, the leaves of which are of a dark greenish-brown or bronze colour, very shining. Both are grown by Mr. Henderson, of Wellington Nursery, St. John's Wood.

**ERYTHRINA ERYTHROSTACHYA.**—A very beautiful dwarf species of this ornamental tribe of flowers. The flower spikes are six inches long, and the blossoms produced in threes, each one being about two inches long, and of a brilliant scarlet colour. In Belgium it is turned into the open border in spring, blooms freely, and forms one of the most charming ornaments of the flower-garden.

**GORDONIA JAVANICA.**—A native of Java, now in the collection of Messrs. Rollisson, at Tooting. It has the habit of a *Thea* (Tea Plant), or a *Camellia*. A plant two feet high has bloomed in the stove in the Royal Gardens of Kew. The flowers are produced singly at the axil of a leaf. Each blossom is about an inch and a half across, white, with a yellow centre of stamens. (Figured in *Bot. Mag.*, 4539.)

**HAKEA CUCULLATA.**—A proteaceous plant from the Swan River colony. The leaves are large and leathery; the flowers of a pink colour. It requires to be in a greenhouse or conservatory. Grows about four feet high.

**HOYA OVALIFOLIA.** OVAL-LEAVED.—Mr. Gibson, who was sent out to India by His Grace the Duke of Devonshire to collect plants,

sent specimens of this very pretty flowering species to Chatsworth, where it has bloomed. The habit of the plant is similar to our old favourite *Hoya carnosa*; the leaves are narrower, and six inches long. The umbels (heads) of flowers are not quite so large as those of *H. carnosa*, of a distinct yellow colour. (Figured in *Paxton's Flower Garden*.)

**HOYA PALLIDA.**—The leaves are about half the size of the former species, the umbels of blossoms rather less too, and of a pale yellow or straw colour. They are very fragrant. (Figured in *Paxton's Flower Garden*.) Both kinds are interesting and handsome, well deserving a place in every stove or warm greenhouse.

**HYPOCYRTA GRACILIS.**—A gesnerad plant from Brazil, introduced by Messrs. Backhouse, of York. It is a creeper, and bears its flowers singly or in pairs from the axils of the leaves, each bell-funnel tubular-formed blossom being an inch long, of a creamy-white, spotted with orange inside at the lower portion. Limb nearly an inch across. A very pretty plant.

**LILIUM WALLICHIANUM.**—An Himalayan Lily, sent, along with many others, by Major Madden to the Glasnevin Botanic Garden, Dublin. Dr. Wallich's account of it is as follows:—"This is a very distinct and noble species, tall (four feet high). The flowers are white, fragrant, extremely large (nine inches long). The tube widens gradually into a wide-spreading limb, and in size they exceed those of *Lilium giganteum*."

**LYCASTE CHRYSOPTERA.**—A stove orchid, from Mexico, introduced into Belgium by the Government. The flowers are of a rich golden-yellow, with the lip spotted with dark crimson-red. Very handsome.

**MALESHERBIA THYRSIFLORA.**—Belonging to the Crownworts; introduced by Messrs. Veitch. The flowers are borne in long spikes, a dull red and yellow colour, an inch and a half long. A greenhouse half-shrubby plant.

**METROSIDERAS BUXIFOLIA.**—A pretty shrub, said to be a climber, from New Zealand, where it climbs up the trunks of trees in the damp woods. The flowers are of yellowish-white. It has recently bloomed at Kew.

**MEDINILLA SIEBOLDIANA.**—We have lately remarked on *M. magnifica*, and now another superb species is introduced from Java by Mr. Van Houtte to his noble establishment in Belgium. It is much like the *M. magnifica* in habit. The flowers are of a waxy-white, with a yellowish-brown calyx, and deep rose-coloured stamens.

**MOUSSONIA ELEGANS.**—Introduced by Mr. Van Houtte from Guatemala. It is a stove gesnerad, but being a native of the mountains, it blooms in the open ground in Belgium in summer. The flowers are produced in umbels of three or four in each. Corolla with a tube an inch and a half long, with a spreading limb three-quarters of an inch across. The tube is scarlet, and the limb yellow, spotted in lines with purple. A very pretty species.

**OPUNTIA SALMIANA.** PRINCE DE SALM'S OPUNTIA.—The plant is of small stature, one to two feet high, erect. The flowers are produced in a cluster at the ends of the branches. Each blossom is about two inches across. In bud it is red; when opened it is a sulphur-yellow, streaked with red and rose-colour. This slender species grows and flowers freely in light loam and leaf mould, placed under the full influence of the sun in summer. It should be frequently syringed in the mornings or evenings during hot dry weather. A free drainage must be given. Water sparingly in winter, and keep the plant at night in a temperature of about 55°.—(Curator of the Royal Gardens.) Figured in *Bot. Mag.*, 4542.

**PITCAIRNIA JACKSONI.**—Imported from Guatemala by Mr. Jackson, nurseryman, of Kingston, and requires the temperature of the stove. The flowers are borne on an erect large raceme, and are of a rich scarlet colour, very showy; and the fine spike of blossoms rising out of the pine-plant long serrated leaves produces a very pretty effect. Each blossom is three inches long. (Figured in *Bot. Mag.*, 4540.)

**PUYA MAIDIFOLIA.**—Mr. Linden introduced this very handsome stove herbaceous plant from Caraccas. It belongs to the Bromeliads. The flower spikes are long, cone-shaped, consisting of brilliant crimson bracts, tipped with green. The corolla is two inches long, of a pale cream colour. (Figured in *Annales de Gand.*)

**RHODOTHAMNUS KAMCHATICUS.**—A hardy evergreen dwarf shrub, a native of eastern Siberia, where it grows in muddy, mountainous places near the sea. It is known in some places as *Rhododendron Kamchaticum*. Messrs. Loddiges, of Hackney, have it, where it proves quite hardy, but finds it will only flourish under a north wall. The shrub is more nearly related to the Chinese Azaleas than the *Rhododendrons*; it forms, however, a compact little bush like the *Rhododendron hirsutum*. The flowers are produced at the ends of the shoots, generally singly. Each blossom is an inch and a half across, nodding, of a deep purple colour. It is a very pretty shrub, well deserving to be in every shrubbery. (Figured in *Paxton's Flower Garden.*)

**RHYNCHOSPERMUM JASMINOIDES.**—Mr. Fortune sent this plant from China to the Horticultural Society. It is a slender, climbing, evergreen shrub, rooting along its branches wherever it touches a damp surface, similar to Ivy. The flowers are white, produced in corymbose heads, upon short side shoots, successively along the branches. Each blossom is much like the front of a flower of the common white Jasmine, half an inch across; they are deliciously fragrant. It blooms freely, and is a very interesting plant for the greenhouse, to cover a wall, trellis, &c., growing very freely.

**SPATHODEA LEVIS.** SMOOTH-LEAVED.—This fine flowering plant was introduced into this country by Messrs. Lucombe, Pince, and Co., of Exeter, and has bloomed in their establishment. Their plant is now sixteen feet high, producing its flowers in large terminal panicles, somewhat of corymbose form. Each blossom is bell-funnel shaped, white, spotted and streaked with rose, the tube widening upwards.



Each blossom is about two inches across. It is a noble flowering plant for the conservatory, but can be bloomed most successfully when of a very small size. (Figured in *Bot. Mag.*, 4537.)

**STYLIDIUM MUCRONIFOLIUM.** BRISTLE-POINTED.—Imported by Messrs. Lucombe and Pince from the Swan River colony. A small growing, but very pretty species. The flower stems rise about six or eight inches above the foliage. The flowers are borne in terminal panicles. Each blossom is about half an inch across, of a bright yellow, with zigzag lines of orange colour around the mouth. It is a very neat, pretty species. (Figured in *Bot. Mag.*)

## ON THE WINTER TREATMENT OF CARNATIONS AND PICOTEEES.

BY A MIDLAND FLORIST.

MANY persons have experienced much difficulty in properly treating these plants during what is termed their winter season; some keeping them too close and warm, others in having them in too wet a state. Now the following is the practice of an old and most successful grower, and I send the particulars, so that they may appear in the November number of the *CABINET*, and with a hope that they may be of some service during the coming winter. I must, however, go back to the period of potting the layers. Having carefully removed the layers, they may be potted, a pair together, in pint pots. Some florists in their prescriptions recommend manure to be mixed with the soil for potting at this season; but as doctors differ, I also must beg leave to give my veto against this practice. The mixture I winter mine in is one-half road-scrappings, one-fourth willow-dust, and one-fourth turfy-loam, broken and mixed up with the spade, but on no account riddled. This is not too forcing, but will keep the layers in good health, it being a great point in their after management not to have them of too gross a habit during winter, which the presence of manure in the soil would have a tendency to promote. The drainage of the pots must also be well attended to, and putting a small piece of moss over the potsherds will prevent the soil from mixing with them and clogging up the drainage. The pots containing the layers must be very slightly watered (but not over the foliage), and should then be placed in a cold frame for a few days, and the lights closed and shaded, so that they may strike fresh root, after which they must be gradually exposed and inured to the open air, and when convenient removed to any suitably sheltered spot, taking care that a thick layer of coal-ashes, or boards, are under the pots, to prevent the ingress of worms.

As Carnations are by no means partial at this season to much wet, many florists erect a temporary covering with the lights belonging to their frames, and this answers the purpose very well. But the same gentleman whom I have before alluded to, and who supplied the list of the best twenty-four Carnations in the west of England, built a sort of greenhouse, open at the sides and front, under which he had a stage near the glass, on which the pots were placed. In rough windy

weather, in sleet or snow, or when apprehensive of a severe frost, he made a good protection of mats, but on all other occasions they had all the weather; the result was that his layers were healthy, the produce great, and flowers fine. I also recollect seeing lately an account of some layers in France, which had been potted in strong soil, and placed in a north aspect; they were seldom watered, and were protected from rain. They escaped in the severe winter of 1837-38, whilst most other collections, which had been more tenderly nursed, were destroyed. I may here observe that, from being placed in a north aspect, and having but a small quantity of moisture, the innumerable small cells or vessels contained in the stem of the layer were undoubtedly not overcharged with sap, as is the case with plants of a gross and robust habit, and would escape the effects of severe weather; whilst, on the other hand, those whose sap-vessels are fully distended would experience ruinous effects from the frozen sap becoming too large for their vessels or cells, and a complete rupture takes place throughout the plant, causing its dissolution. As a familiar illustration, the same effects may be observed in our own gardens; for in severe frosts, when a flower-pot is filled with wet soil, and the mass becomes frozen through, the destruction of the pot is the consequence. From this it will be seen that it is imperatively necessary that they should be kept nearly dry through the winter months. My own plan, immediately after removing the layers from the closed frame before alluded to, was to place them under a slight awning, made of thin calico, stretched on a frame about twelve feet long by three feet broad, and painted with oil and a little white lead. This is attached to a wall, so that I can let it up or down at pleasure. They remain beneath this, alike sheltered from too much sun, which is injurious at their first removal, as well as the heavy dashing autumn rains, till the approach of frost gives a hint that some further protection is necessary.

For my own part, I think that many layers are annually lost by over-kindness, being made more susceptible of cold by the nursing and stewing they get in frames; and where Mr. Bucknall's plan can be followed, for wintering them under a glass roof with open sides, I most certainly would recommend it.

But for those who either cannot or will not be at the expense of such an erection, the old system of protection must suffice. They must, therefore, choose a north aspect for their frames, and put a thick layer of coal-ashes on the bottom, on which rows of bricks are laid, sufficiently far apart that the pots may stand just touching each other: the frame must be tilted at bottom, so as to admit a free current of air, which it is desirable to obtain as long as possible. Brick pits or frames, which are decidedly preferable, should have square apertures, both before and behind, with a sliding panel or door, as in rainy weather, when the lights are down, a circulation could not be obtained; and on this I would lay great stress, for being kept too close engenders mildew, and too often ruins a whole stock. I have tried the plan, and found it answer, of plunging my pots in barley chaff: this keeps the roots from too great extremes, occasioned by the action of the air on the pots; it is also an excellent preventive against frost, and com-

pletely sets the inroads of snails and worms at defiance. The only objection to its use was that sparrows would get into the frame, and in their search for corn scatter the awns over the tops of the pots, and they lodged between the leaves; but this I easily obviated by adopting Mr. Anderson's plan of stretching black thread just under the lights, which completely rid me of these troublesome visitants.

While in their winter quarters, attention must be paid to take off the lights on every opportunity, and draw them over again on the appearance of rain. In fact, it must be borne in mind that abundance of air, without unnecessary exposure to cutting winds, is essentially requisite for the health of the layers.

During the time they are in the frames, the soils or compost in which they are to be flowered should be well looked after. The heaps should be often turned, and especially in frosty weather, when a vigilant look-out must be kept for the brandling or wire-worm.

The compost I would recommend is two barrowfuls of good rotten turf, well broken with the spade; two barrowfuls of very rotten horse manure from a melon or cucumber bed; one barrowful of either rotten leaves, sticks, or thatch, and one barrowful of wash-sand from a road-side. All this should be well mixed and repeatedly turned, so that the incorporation may be complete.

## PRUNING THE TREE-ROSE.

BY CLERICUS.

THE increasing number of splendid varieties of the much esteemed family of Roses, and their admission into every flower-garden and pleasure-ground, is to me a source of much gratification. During the present summer I have been much struck with the increasing taste for the culture of Standards on lawns, and thus to exhibit their splendid heads in the centre of a flower-bed, or back part of a border.

The pruning season of most Roses having now arrived induces me to draw up a few particulars relative to that operation, which I trust will of some use to those persons who hitherto have had little experience in such matters.

In remarking on the growth of a Tree-rose, I must observe that the rings round the bottom of both stem and branches are the depositories of a dormant bud, which will not be called into action unless the buds above be injured, or unless the sap arise so profusely as to be unable to expend itself by the upper parts, in which case the buds below break out; though, indeed, they will occasionally do so as the natural act of the tree, in preference to rising higher. This is more observable in the Wild Rose than almost any other plant, and perhaps may, in some degree, explain the reason why budded Roses are shorter lived than those on their own bottom; for any one who has at all observed the growth of wild stocks must have noticed that the original head is seen generally in hedges in much worse plight than the shoots which have been subsequently formed at its base. The tendency of the Dog Rose to break out below must be checked in two ways; the first, by destroy-

ing every sucker and shoot as it starts, and the second, by finding full work for the sap above, and by giving it a free passage.

If then, in cutting the top of a tree at pruning time, you leave a couple of buds on every shoot of last year's growth, or three at most upon a very strong one, there will be quite enough to occupy the sap, keep the tree within bounds, make it much handsomer, save the sap the expense of maintaining old wood, and give it a free course. If there be more sap than enough, a fresh shoot will likely enough start from the crown of the graft, or the rings upon the first year's shoot, and increase the head of the tree, as well as bring you back with new wood nearer home—a matter always desirable, as tending to keep the head from straggling.

Cutting to the lowest buds always leaves the sap with but a short channel to pass through, strengthens the branch below the buds, and is every way beneficial, if care be taken that a sufficiency be left to occupy the sap.

If the tree be not pruned at all, it will lose its shape entirely in a single year, afford little or no bloom the next, and eventually straggle to death.

Trimming the shoots has nothing essentially different in the manner of execution to trimming the stock. In trimming to a bud, barely the thickness of a sixpence should be left above the bud, and the excision should form a slant about equal to that caused by dividing a square from angle to angle: if more were left above the bud, it would die down to the bud, and prevent the bark from healing over the wound; in general, the line of the bud is the slant the knife should make in its passage through the shoot.

Cutting out old wood should always take place where it can, the desirable point being to keep near home, as it is called; when, therefore, your tree throws out a fresh and vigorous shoot, close to the base of an old branch which has straggled too far from the graft, cut out the old wood close to its base, leaving the young shoot to supply its place, and receive its nourishment. This principle, well applied, will always keep the trees in proper bounds.

## AUTUMN AND AUTUMNAL FLOWERS.

THE present period of the year suggests that some remarks on the few flowers of the season will not be unacceptable to your readers, and with that impression I forward the following for insertion in the November number, which will be succeeded by others.

“Autumn, nodding o’er the yellow plain,  
Comes jovial on.”

“And you, in gay variety that grace,  
In later months, with beauty the parterre,  
Making a sunshine in the shady place,  
As Una and her milk-white lamb were there.”

In the baronial days of our ancestors, Flora seldom lengthened her reign in these realms beyond the end of the summer months; but since floriculture has been so justly appreciated as one of the most refined and rational amusements for the leisure hours of peace and tranquillity, the fair goddess has been pleased to continue her smiles on this happy island throughout the year.

In the history of the plants which we have to describe under this season, it will appear that nearly all the flowers which grace the autumnal parterre have been borrowed from warmer climes, and which, through the art of our florists, have been naturalized and made to flourish in this northern part of the globe, so as to lengthen the appearance of summer by the gaiety they give to the pleasure-grounds, and thus detain Flora in the open garden, until

“The radiant ruler of the year  
At length his wint’ry goal attains,  
Soon to reverse the long career,  
And northward bend his steady reins.”

The floral queen then holds her court under the crystal temples that her numerous votaries have erected for her security against the attacks of Boreas.

“’Tis a bower of Arcadean sweets,  
Where Flora is still in her prime,  
A fortress to which she retreats  
From the cruel assaults of the clime.

“While earth wears a mantle of snow,  
There Pinks are as fresh and as gay  
As the fairest and sweetest that blow  
On the beautiful bosom of May.”

The beauties of autumn formerly consisted of the change which then takes place in the tints of the foliage of trees and plants. Akenside says—

“Autumn tinges ev’ry fertile branch  
With blooming gold and blushes like the morn.”

To these beauties is added the glowing colours of ripened fruits, which have called forth the lively effusions of the poets of all ages. Horace observes, in the fifth ode of his second book,

“Autumn soon, of various dyes,  
Shall with kinder warmth arise,  
Bid the livid clusters glow,  
And a riper purple show.”

Donne tells us, in poetical numbers,

“No spring or summer’s beauty hath such grace  
As I have seen in one autumnal face.”

Pope seems equally to have regarded these grand changes of nature:—

“Not the fair fruit that on yon branches glows  
With that ripe red th’ autumnal sun bestows.”

And since to these numerous autumnal dyes which nature throws over the plants of our country, we have added the brilliant colours which the sun bestows on the plants of China’s flowery vales, and the more gaudy beauties of African shores, together with the vivid tints of the flowers of Columbia’s land, we may safely exclaim, in the words of Waller,

“No, not the bow, which so adorns the skies,  
So glorious is, or boasts so many dyes.”

AFRICAN MARIGOLD. *Tagetes erecta*.

FRENCH MARIGOLD. *Tagetes patula*.

“As wands of divination downward draw,  
And point to beds where sov’rign gold doth grow.”

The generic name of these Mexican flowers is said to have been derived from Tages, a grandson of Jupiter, who first taught the science of augury and divination to the twelve nations of the Etrurians, who from hence became so celebrated for their pretended knowledge of omens and incantations. But as Tages could not have taught the use of plants peculiar to lands which the gods themselves had not visited, we think the name badly adapted, unless the Spaniards pretend that they were instructed through the arts of Tages to seek for the precious metal in fields covered with these golden flowers, and this will be as readily believed as that the species called French Marigolds became first stained and marked with a dark red by the blood of the unhappy Mexicans whom the insatiable Spaniards slew in their own peaceful fields.

M. Pirolle tells us, and with a greater degree of probability, that these flowers were called *Tagetes* from the Greek *tagé*, meaning principality, which shows the rank these plants held in the parterre.

The *Tagetes* appears to have been introduced into this country as long back as the year 1573, and we conclude that they were called French Marigolds from our having first received the seed from France. Gerard says the African Marigold was first obtained “when Charles, the first emperor of Rome, made a famous conquest of Tunis; whereupon it was called *Flos Aphricanus*, or *Flos Tunetensis*.” But as these plants do not grow naturally in Africa, we may conclude that they were first received in Spain from South America about the time Charles returned from the coast of Africa, and in compliment to that monarch for having given liberty to twenty-two thousand Christian slaves, they were called African Marigolds.

The French call the larger kind *Grand Œillet d’Inde*, Great Pink of India, and *Rose d’Inde*, Indian Rose, and *Tagetes patula* they name *Petit Œillet d’Inde*, the Little Pink of India.

Thunberg, who visited Japan about the year 1775, for the purpose of making discoveries in botany, tells us that these plants are cultivated by those jealous and cautious islanders; and Loureiro notices that the

*Tagetes* is also cultivated in China, Cochin-China, and many parts of India; but he remarks that it is not indigenous in those countries. Hernandez mentions it as a native of Mexico, in his history of that country, and the plants of the *Tagetes*, which flowered in the Eltham garden as long back as 1727, were raised from seeds sent direct from Mexico.

The students of botany will find these plants placed in the second order of the nineteenth class of Linnæus's sexual system, on account of the flowrets of the disk being bisexual, and those of the radius containing only female organs, whereas those of the Marigold, *Calendula*, stand in the fourth order of the same class, the flowrets of the disk in the latter containing only anthers, and those of the margin only stigmas. The Mexican flower also differs from the European Marigold in not closing its petals at night, a gift of nature so frequently noticed by our poets:—

“The Mary-budde that shutteth with the light.”

“The Marigold, that goes to bed with the sun,  
And with him rises weeping.”

“See the day is waxen olde,  
And 'gins to shut in with the Marigold.”

It is remarked by Linnæus that the Marigold usually opens its petals about nine in the morning, and closes them again at three in the afternoon; but we observe that it depends more upon the state of the atmosphere than on the hour of the day.

Keate says—

“Open afresh your round of starry folds,  
Ye ardent Marigolds!  
Dry up the moisture of your golden lids,  
For great Apollo bids.”

The African and French Marigolds usually begin to flower in July, and continue to give out a succession of blossoms until the branches are destroyed by frost; on which account they are considered rather an autumnal than a summer flower, and when judiciously planted they add considerably to the gaiety of the parterre during the later months of the year; the tall African Marigold forming a brilliant back-ground to clumps of China Asters, or displaying its golden corollas amongst the evergreens of the shrubbery; whilst the more richly painted petals of the *Tagetes Patula*, or French Marigold, is well calculated to contrast with the blue or purple stars of the Aster, since no plant displays a richer colouring of carmine and gold.

The French Marigold sports considerably in varying its corolla, some being single, semi-double, quadruple, or full; whilst Flora seems to have given the petals as many changes as can be wrought in two gay colours, one flower displaying petals of a rich carmine, slightly edged with gold, others exhibiting yellow flowers, so fancifully striped or dashed with crimson that it is difficult to find two plants with flowers alike.

These flowers have only their gaiety to recommend them, since their

odour is more offensive than agreeable, and may be compared to those persons who depend more on their wardrobe than their conduct for making themselves agreeable, and we therefore present them as emblematical of vulgar minds.

MEADOW SAFFRON, or AUTUMN CROCUS. *Colchicum Autumnale*.

Shakspeare says, in his play of Cymbeline,—

“ One that sick o’ th’ gout, had rather  
Groan so in perplexity, than be cur’d  
By th’ sure physician death.”

To such sufferers we therefore address our history of the singular plant which has been named *Colchicum*, from its growing so abundantly in the vicinity of Colchis, a city of Armenia, celebrated for its numerous poisonous plants, and as the birthplace of Medea.

It is thus noticed by Horace, in the thirteenth ode of his second book :—

“ Or temper’d every baleful juice  
Which poisonous Colchian gelbes produce.”

Fabulous history informs us that this autumnal flower owes its origin to some drops being spilt in the fields of the magic liquor which Medea had prepared to restore the aged Æson to the bloom and vigour of youth; and on this account the *Colchicum* was anciently regarded as a preservative against all sorts of maladies.

Could we divest the tales of antiquity of their fabulous dress, we should find them all explanatory of real events, and not the mere ideas of poetical imaginations; perhaps we should then discover that Medea having relieved Æson from a fit of the gout, his subjects celebrated her praise as having restored this monarch to youth and sprightliness. As Medea is sometimes called Colchis, we will surmise, for the consolation of our gouty friends, that it was the *Colchicum* that relieved Æson from his infirmities; and we will also hope that they may derive similar benefit through the aid of their medical friend, assisted by the virtues of this powerful plant. Most of our superstitious customs, however ridiculous they now appear, originated in the first instance from some reasonable cause; and thus, because the *Colchicum* was a remedy against one complaint, credulity magnified its powers as a sovereign antidote. The Swiss peasants tie the flower of this plant around the necks of their children, with a firm belief that it will render them invulnerable to all diseases.

The *Colchicum* is thought to be the same root as the *hermodactylus* of the ancient physicians, and which, after having been entirely disregarded for many generations, is now again become an important article in the *Materia Medica*. It was for some time employed in the form of a concealed medicine, under the name of *Eau Medicinale*, which attracted great attention by its success in relieving the gout and rheumatic affections of the joints.

The poisonous properties of this plant seem known to all animals, as it were by instinct, since no cattle will touch it; the very lambs fly at its aspect; yet the young shepherdesses of the mountains become sorrowful when it appears amongst the grass, lest their playful flock



should inadvertently swallow it. It is no uncommon thing to see these plants standing alone in pastures where every other kind of herbage has been eaten down, without a leaf of this plant being touched. The French give this plant the appalling name of *Tue Chien*, Kill Dog, and *Mort au Chien*, which also signifies Dog's Death.

In floral language, this flower expresses "My best days are past;" for, far from inspiring us, like the Spring Crocus, with joy and hope, it appears to announce to all nature the loss of the fine days, and the approach of a cheerless atmosphere. It appears naked, like a sprite amongst flowers, to warn them of their destiny; and nature seems to have reversed its order in some of the characters of this curious plant, which cannot fail to interest the students of natural history and botany; and the closer they investigate the apparent phenomena of the Colchicum, the more will they be struck with the wonderful arrangements that the all-wise Creator has adapted in the formation of vegetables, which appear, on a superficial inspection, to act by contrarieties, whilst their actions are governed by the most consummate wisdom. Let us regard the Colchicum as a native of our moist pastures, and we shall find that its corolla is sent out of the earth with its parts of fructification at a season when they have only time to mature the anthers, that the stigmas may receive and convey the fecundating particles of vegetable nature to the numerous empty seed-shells that are prepared to receive it in the three-lobed capsule; and as the season of the year would not allow the fruit of this late-flowering plant to ripen so as to multiply its kind, Providence has so contrived its structure that it may be performed at a depth within the earth, out of the reach of the usual effects of the frost; and as seeds buried at such a depth are known not to vegetate, a no less admirable provision is made to raise them above the surface when they are perfect, and to sow them at a proper season. For this purpose the seed-vessels are lodged in the bosom of the embryo leaves, and are consequently thrust forth with the foliage about the month of April. By the end of May they are generally ripe, and the leaves then wither and the root decays, having finished its duties, not only by its oviparous nature, but by having at the same time given birth and nourishment to a new bulb in the earth by its viviparous powers. The new bulbs take their rise from the caudex, at the base of the flower-tube, and are united by communicating vessels to the old bulb, from the juices of which the new bulbs extract their nutriment, until the parent bulb decays, as is the case in the Tulip. The Colchicum has generally perfected its new bulb by the middle of May, and as no exhaustion has then taken place in forming either flowers or foliage, it is natural to suppose that the bulb must be then possessed of the most powerful medicinal properties.

It was formerly supposed that this plant produced its seed before its flowers, and for want of investigation this error gained general belief; but as a knowledge of botany became more generally known, the impossibility of such a circumstance was seen, and the natural history of the Colchicum was then developed.

The bulb sends up a flower in September similar in appearance to the Purple Crocus, excepting that it is quite destitute of foliage, and hence our peasantry name it the Naked Lady. The flower is mono-

petalous, the six deeply-divided segments being united to the neck of the corolla, which forms a long tube, reaching the bulb in which the seed-vessel is seated, and from whence the three long styles proceed through the neck of the corolla, carrying their stigmas to a sufficient height out of the ground to be matured and impregnated by the farina of the six anthers, which are also carried up to the air by being united to the corolla; when the necessary properties of the farina has been received by the stigmas, and conveyed to the seed-vessel by means of the long styles, the flower decays, and the fruit continues to grow until the spring, when it is sent out of the ground under the guard of the four leaves, which afterwards separate, and the seed soon becomes ripe. Thus this plant, reversing the accustomed order of the seasons, mingles its fruit with the flowers of the spring, and its flowers with the fruits of autumn.

For cultivation, the Colchicum bulbs should be taken out of the ground in May, when the leaves are decayed, and they may be preserved out of the ground as Tulips and other flowering bulbs; but in the early part of August they should be committed to the earth at about three inches in depth, forming them into clumps wherever it may appear desirable to add dwarf flowers. They have the best effect when springing out of turf, as the naked appearance of the flower is not then so conspicuous, and the purple or the white corollas shine to more advantage on the green sward than on the bare earth. There are several varieties of these flowers, some being perfectly white, others of a light or a dark purple, and some that have the petals striped with white and purple. These varieties are farther increased by the flowers being doubled.

## ARRANGEMENT IN PLANTING ROSES.

I HAVE often intruded my remarks in your Magazine, and the proper period of planting out this charming tribe of plants having arrived, I cannot allow myself to withhold a few remarks upon the arrangement of them, in order to produce the best effect when planted out.

There are three causes of beauty in a tree—shape, foliage, and flowers. Shape, to a certain degree, we artificially gain; foliage and flowers must depend upon the sort: the foliage is the more permanent, the flower the more striking. Planting out, then, must depend entirely upon the effect desired, and the taste of the party planting, as to variety of foliage, height, flower, its colour and continuity: a tree with rambling shoots suits one place, and with a cauliflower-head another. The Tree Roses never look well in a round clump; they must have a single appearance, or be in some sort of line.

If your Roses are to look, when finished, like a sloping bank, plant your heights in succession, viz., each under each; but if they are to have a less forced and regular appearance, and a more single and light look, leave out an intermediate height, as thus—a two-feet in front of a three-feet, &c.

Be it observed, that a three to four foot standard is most in keeping with the head it carries, and being nearer the ground, has a very natural and steady effect, and in confined places it is unquestionably best in its appearance; but if the tree is to be distant from the eye, or the shrubbery or walk be large and increasing in distance, a four-foot standard is certainly more distinguishable, and has a much greater effect.

A foot standard is of little or no use, except it be intended to approach the edge of a border, or is grafted for the convenience of affording nosegays or increasing the quantity of the plant placed upon it.

The heights most in use having been shown, it may be remarked that for a weeping Rose to stand singly, (perhaps surrounded with a wire guard, and creepers upon it, to have a more marked effect,) you cannot find a stem too high, if it be proportionally strong. A fine plant of this sort, six, seven, or even eight feet high, budded with a noisette or boursault, looks beautiful; and its long free branches, covered with clusters of Roses, have a wild and luxuriant appearance, which give a distinct character to a tree budded in this way.

Thus having arranged where the plants are to be, and having made the earth good all around, stake up each tree with a neat, clean hazel stake (unless the stock be so strong as not to require it), saw off the top level with the top of the wild stem exactly (a matter that conveys a great air of neatness), and with a piece of bass, or, better, a small strip of pitched rope, attach your tree to the stake.

## REMARKS.

**DOUBLE STOCKS.**—My attention has been directed to the article on double flowers; as I have been growing Stocks for the last seventeen years, I may be able to give an opinion on the subject; but I have had no occasion to puzzle my brain about the best method of getting double ones, as mine is a sort that produces more double than single every year—I should say, in the proportion of seven out of nine, invariably. They are good colour, and bloom beautifully, not spilling up in the middle and lasting but one year, but yielding a great number of fine flowers, and standing two or three years. I had one, two or three years ago, on which I counted fifty-three flowers: and the plant about three feet high. I should have been happy to have sent you some seed, but unfortunately I did not save any last year, as I removed from the neighbourhood, and the few plants that I have are all double; there are some growing in the neighbourhood, from which I hope to get some seed. About twenty-five years ago, I sowed some seeds from the plants; I selected thirty-five for planting, and gave away the rest. I supposed I kept the best plants for myself; out of the thirty-five I had seven double ones. But on inquiry I found that the plants I gave away produced a much larger proportion of double than mine, so I concluded that to have double flowers it would be best to choose small plants. Mentioning the subject to a nurseryman several years afterwards, he said, “There was a lady here this spring for some plants,

she says, 'Pick out the small plants, Sir;' I said, 'Madam, why do you wish to have the small ones?' 'Because,' said she, 'there is a better chance of getting double flowers from small plants.'" This mode of selecting plants may be best in some sort of Stocks, but for the sort I have there is no necessity. Some people (and it is a favourite notion among most people) imagine that if you tie a single Stock to a double there is a greater chance of having double ones; but I would as soon tie it to the leg of a stool as to a double one, for the chance I should have of double ones. If a bee alights on a double Stock, it will not tarry there a moment, there is nothing there for it. It may be deemed huge presumption in me to suggest to a master in the floral department, but I would just say, suppose you take seed from the last pod in the Stock, which may be supposed to be the weakest seed on the plant, or seeds from the extremity of any pod, and try them next year. As to the soil they require, it should be rich and deep, but no dung, except it is well decomposed, as new manure is apt to breed worms, which very often injure the roots.—*J. O. Anthony, Providence Mines, near St. Ives. (Cottage Gardener.)*

REMOVING LARGE EVERGREENS.—Of late years planters of evergreens have been divided into two classes: spring planters, from February to May; and late autumn planters, who would remove all kinds of evergreens in November. But the most successful planter of evergreens in England—indeed, the best planter of them in the world—Mr. Barron, gardener to Lord Harrington, at Elvaston Castle, in Derbyshire, has proved beyond a doubt, that midsummer, or between that and the end of July, is the true season in our climate for the removal of very large specimens. He would make no more ado about removing a yew at that season that had been planted in the time of Henry VIII., than some planters would if they had to transplant ten yards of box edging round a bed of roses next Michaelmas. It is asserted by Mr. Barron's friends (for he does not write much himself), that his criterion for the proper time to remove a large evergreen, is when it ceases to make its annual growth. This may happen a few weeks earlier or later in different seasons, according to the lateness or earliness of our springs; therefore, to say that midsummer, or any given period, is preferable to a few weeks before or after it, would not be quite right. I have seen enough of plants and planting to convince me that Mr. Barron's time and criterion for this kind of planting are the true ones; and I shall go one step more—having a proof of the assertion in my pocket—and say, that when a large evergreen is so near the place where it is to be transplanted to, as that the work may be completed in a couple of hours from the time the roots are uncovered, the hotter the day and the more cloudless the sky, the more surely will the plant succeed, provided there is no screen put between it and the sun in the new situation, as has been recommended by some. But if the plant has to be removed from a distance, so that its roots and its leaves are acted on by the sun and air longer than the balance between them will hold out, the work would be more safe in cloudy or rainy weather. In either case, and in all planting of large evergreens in summer, the planting is more sure if done in water, that is, to allow an

open space for the roots to be laid out at full length; and to wash in the soil amongst them with water, by first throwing the soil on the ball of earth which accompanied the roots, and then pouring water over it to wash it down among the roots. In very hot weather, roots will suck up their full from this watering in a few hours, and fresh roots are made in a few days, from which, and the fresh soil, a plant from a poor soil may be better fed, and do better afterwards, than if it had not been removed at all. If we now suppose some unforeseen accident to have caused the roots to reject the water, and not to extend themselves by new growth for one week, why in that case death would ensue immediately.

Some six and thirty years since, the late Sir William Middleton brought a packet of seeds of the Tree-box from Box Hill, in Surrey, from which a great number of plants have been reared by Mr. Lovett, his gardener—now one of the most contented race of our old gardeners, living “in a cottage near a wood,” in the middle of the park, and although in his eightieth year, he enjoys a walk round the gardens as much as any of us, to see “all these new fancies,” as he terms the present style of gardening. Some of those box-trees which Mr. Lovett planted thirty years since on a long dry bank under large trees, now form a thick screen for a “winter garden,” from which, when we want a “box,” we can draw full-grown plants without being missed. Among other “new fancies,” we resolved last May to make a hedge of full-grown box-trees for one side of a new terrace, which was in progress under the directions of Mr. Barry, the celebrated architect. At first, it was proposed to plant this box-edge next September, as recommended by Mr. Glendinning in the *Journal of the Horticultural Society*, who removed a hedge of large hollies for the Society last September with perfect success; but, on a second consideration, I wished to prove how far Mr. Barron’s views of planting could be relied on upon a very different soil from that on which he has practised with such marked success: and as the plants were at hand, and no stint of them either, if we did fail the loss would not be felt. All this being duly considered, my worthy employers, seeing I had rather an itching for the job, gave their consent to have the hedge planted at once. The box was then in the middle of its growth, and I wished to wait until the growth was completed, which would be about the third week in June; but, owing to the arrangements of the masons and bricklayers, I must either get in the edge at once, or put it off till the middle of August. This was considered a point rather in favour of the planters, as if the box-trees should die under the operation, they would have a loophole for escape, and could say, “it was all owing to their being removed at the critical time of their annual growth.” A trench, twelve feet wide and four feet deep, was opened, the old soil removed, and a fresh supply carted in, and the trench was filled up to within eighteen inches of the top; the whole was gently stamped down as the soil was put in, so that it could settle but very little afterwards, and when the bed was ready for the plants, that is, within eighteen inches of the top, it was stamped down quite close. There were two reasons for this last pressing of the soil: the first reason, that it should

not settle, as I have just said ; and the second, that the water should not pass through it readily when the plants were watered. This would have been a very injudicious proceeding on some soils, although in our case it was necessary. The soil here is so light, that a fresh bed of it, like the one for this box-hedge, would let the water pass right through it to the bottom, without doing any good for the plants, unless it was thus compressed ; whereas some retentive soils, if this process were applied to them, would not drain at all, which would be as injurious the other way. Now, here is one of those sources of disappointment and vexation inseparable from the system of learning how to do particular things from books. We read of so and so having been performed with great success, and we think that by following the writer step by step we must also succeed in similar attempts. Here, then, is where the "practical" man has the advantage of the book man ; the book may put us on the right scent, but unless we have as much practical knowledge as will show us how far we may be justified in carrying out a set of rules under different circumstances, we may make a mess of it after all our reading. Hence the reason why I would not recommend others, under different circumstances, to follow me implicitly in the planting of large evergreens, even at any season.

To make this experiment more complete, I made it a point that none of the men engaged in the gardens should have a finger in it. I took half a dozen strong men who worked on the farm, with spades, pick-axes, and three-tined strong forks, and set them to work on Monday, the 3rd of June, and in ten days the hedge was planted, which then looked as if it had been growing there these twenty years. The first five weeks passed with only one slight shower, and the sun poured his unbroken rays on the hedge all the time ; in short everything tended to test the experiment of planting large bushes or trees at mid-summer, on light soils ; and no experiment could be more complete—not a single leaf drooped, and even the young growth went on without let or hindrance, just as if the plants had not been interfered with at all. If the same men had continued to plant large trees or bushes from that day to this, I can see no reason why a single leaf on all the plants removed should take any hurt ; and if that be so, it is surely a safe time now to remove evergreens,—not only so, but every week that passes from this day will add to the disadvantages under which removed trees must more or less be liable. The Horticultural Society of London had set a very good example, by the removal of the holly hedge in their garden early in the autumn of last year ; not but that gardeners were well aware of the fact, that such things *could* be done, but in a public place like their garden, and under the auspices of a public body, the thing was more likely to take the attention of the gardening world. The true time, however, to begin to transplant large evergreens, as I said before, is as early in July as their growth is finished for that season ; and the credit of the discovery is undoubtedly due to Mr. Barron, at Elvaston Castle ; and all that I, or, indeed, any other gardener has done in this line, is no more than picking up the crumbs from under his table.

There was nothing particular in the *modus operandi* of our pro-

ceedings in this instance ; nevertheless, as amateurs like to read about the way such things are actually performed in practice, I shall in my next letter give a detailed account of how every item of the work was carried on, and what is of more import, shall explain the reasons for every particular movement from first to last. Meantime, I would urge the great importance of the early removal of large evergreens, and now that no time be lost in preparing for immediate operation.—*D. Beaton. The Cottage Gardener.*

CLASS SHOWING AS A TEST FOR SEEDLINGS.—During the past season this mode of exhibiting many of the so-called florist flowers has been pursued, particularly with Dahlias, Carnations, Auriculas, &c., and it is an excellent test when the showing and judging is honest, and the test is properly applied, but it will mislead worse than anything if there be unfair play—that is, if the thing be not honourably conducted. For instance, if a judge act wrong, either from ignorance or design, and place a new and bad thing before an old and a good one, the public will be deceived into a belief that the new flower is an improvement on the old one, and it will lead to the disappointment which all have had to deplore more or less ; therefore, the necessity of good judges is as great as if there were stands in competition, and these judges should be the same for given periods when once elected, because they are at once made responsible for their acts, and this responsibility, presuming them to be able, insures a careful and proper award. But class showing may not be a safe test in all cases, even if the judge be able and honest, for a seedling may beat a named flower, because the named favourite is badly shown, and not because the seedling is really better ; hence the danger of trusting implicitly and entirely to the result of a class show. It is only safe when there is a series of shows, and all more or less corresponding, that they may be taken to indicate the true value of a flower. But class showing is useful in other respects ; it enables small growers to compete with success, and therefore ought to insure better flowers. Whenever a fine specimen is produced, the owner is encouraged to show it, because it is almost sure of a prize, and when the flowers are placed in classes, the young florist obtains a very useful lesson by noting what puts one flower before another ; whereas, in stands of flowers, his attention is divided between twelve, or perhaps twenty-four blooms, and the reasons are not so easily seen by the inexperienced who wish to learn. Upon the whole, then, class showing must be deemed the most useful in promoting the advancement of the science. When the best scarlet, the best lilac, the best anything, is entitled to a prize, we have only to look at and compare a single bloom ; and there is much less difficulty to judge the points on a single flower than the points in a dozen. However, there is a general desire to show stands of flowers as well as single blooms, and in this case the best plan is to allow the losing stands to be broken up, and the best blooms from each to be shown in classes. It, in the first place, gets rid of the bad stands, and in the next place retains in the classes all the good flowers ; but it is the class showing alone which gives us a notion of which are the best flowers, for ten or eleven good flowers may always take through one or two inferior ; so that the fact of a

flower being in a winning stand says but little for it, while its beating in a class is, if the award be honest, strong presumption of its superiority.

**NEW YELLOW PICOTEES.**—*Georgy* is a seedling raised in Guernsey. Yellow ground, edged with purple. It crowns remarkably well, but is slightly serrated, though when well grown this is scarcely perceptible.

*La Grandeur*.—Buffish yellow, heavily edged with dark crimson. A very attractive and bold variety.

*Le Marquis*.—Bright canary, edged with light red. A very lively and pretty sort; good form.

*L'Hussard*.—The best form and petal we have seen amongst yellow picotees; crowns well; light yellow, edged with pale rose. It is deficient in size, but, from its other qualities, would be good to seed from.

*Malay Chief* (May).—A bold variety, with good petal; yellow, heavily marked with bright red.

*Lord Gough*.—A Guernsey seedling; pod good, and the ground colour bright yellow, heavily margined with purple; distinct and good.

*Burtlett's William IV*.—The ground colour nearly orange, rather heavily marked with a rich purple. Though not very well grown, this is evidently a superior variety.

*Le Cuirassier*.—Very good form; stout petal; pale yellow, heavily edged with red.

*La Villageoise*.—Sulphur, laced with marone; rather tall in its growth; a distinct variety.

*Kossuth*.—The yellow pale, heavily edged with rose and slate colour; a very remarkable and distinct variety.

*Samuel*.—This is also different to anything we have previously seen. Ground colour canary, bleaching a good deal as the flower ages. The marking is distinct stripes of rosy purple.—*Midland Florist*.

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### IN THE FLOWER GARDEN.

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Introduce Roses, Lilacs, Violets, Lilies of the Valley, and other plants, to bring them early into bloom. 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.

### ON AMARYLLIS, &c.

MR. H. GROOM, florist, Clapham Rise, near London, has a large stock of this beautiful family, not only of the known sorts, but also a large number of recently-imported bulbs from Rio Janeiro, which, no doubt, contains many new and fine kinds. They are without names, and are consequently a speculative lot; but, as he offers them very cheap, there cannot be any risk in the purchase. From the few splendid flowers we saw, we believe they will prove much above the value he sets on them. They are very fine bulbs, and, with ordinary care, will flower well next spring. He has also a large stock of seedlings, from which he expects some novelties in the way of hybrids. For any person with room and convenience these would be worth purchasing, if he is disposed to part with them before they flower. He has also an immense stock of all the varieties of *Lilium lancifolium*, and a beautiful race of seedlings from all the varieties, many of them with larger and darker flowers than *L. lancifolium rubrum*, and others, again, nearly white, with the beautiful carmine spot. When we visited his establishment, he was preparing, with much care, his vast bed for his unrivalled collection of Tulips. Of these, as well as *Ranunculuses*, *Anemonies*, &c., he abounds. From present arrangements, we perceive he is extensively preparing for an All Nations' Exhibition in 1851.

### FUCHSIA SPECTABILIS AND OTHER SORTS.

BY D. KIDD, GARDENER, GARNSTONE PARK, HEREFORD.

Few, if any, have succeeded satisfactorily with respect to the management of this fine *Fuchsia*. Some of our best plant-men complain that they cannot grow it. Messrs. Veitch have never brought it to anything like perfection. Many might therefore be led to believe that it is uncultivable; but I have found the reverse to be the fact. My plant measures six feet six inches in height, nine feet three inches in circumference, and has been in flower, more or less, since the middle of June.

she says, 'Pick out the small plants, Sir;' I said, 'Madam, why do you wish to have the small ones?' 'Because,' said she, 'there is a better chance of getting double flowers from small plants.' This mode of selecting plants may be best in some sort of Stocks, but for the sort I have there is no necessity. Some people (and it is a favourite notion among most people) imagine that if you tie a single Stock to a double there is a greater chance of having double ones; but I would as soon tie it to the leg of a stool as to a double one, for the chance I should have of double ones. If a bee alights on a double Stock, it will not tarry there a moment, there is nothing there for it. It may be deemed huge presumption in me to suggest to a master in the floral department, but I would just say, suppose you take seed from the last pod in the Stock, which may be supposed to be the weakest seed on the plant, or seeds from the extremity of any pod, and try them next year. As to the soil they require, it should be rich and deep, but no dung, except it is well decomposed, as new manure is apt to breed worms, which very often injure the roots.—*J. O. Anthony, Providence Mines, near St. Ives. (Cottage Gardener.)*

REMOVING LARGE EVERGREENS.—Of late years planters of evergreens have been divided into two classes: spring planters, from February to May; and late autumn planters, who would remove all kinds of evergreens in November. But the most successful planter of evergreens in England—indeed, the best planter of them in the world—Mr. Barron, gardener to Lord Harrington, at Elvaston Castle, in Derbyshire, has proved beyond a doubt, that midsummer, or between that and the end of July, is the true season in our climate for the removal of very large specimens. He would make no more ado about removing a yew at that season that had been planted in the time of Henry VIII., than some planters would if they had to transplant ten yards of box edging round a bed of roses next Michaelmas. It is asserted by Mr. Barron's friends (for he does not write much himself), that his criterion for the proper time to remove a large evergreen, is when it ceases to make its annual growth. This may happen a few weeks earlier or later in different seasons, according to the lateness or earliness of our springs; therefore, to say that midsummer, or any given period, is preferable to a few weeks before or after it, would not be quite right. I have seen enough of plants and planting to convince me that Mr. Barron's time and criterion for this kind of planting are the true ones; and I shall go one step more—having a proof of the assertion in my pocket—and say, that when a large evergreen is so near the place where it is to be transplanted to, as that the work may be completed in a couple of hours from the time the roots are uncovered, the hotter the day and the more cloudless the sky, the more surely will the plant succeed, provided there is no screen put between it and the sun in the new situation, as has been recommended by some. But if the plant has to be removed from a distance, so that its roots and its leaves are acted on by the sun and air longer than the balance between them will hold out, the work would be more safe in cloudy or rainy weather. In either case, and in all planting of large evergreens in summer, the planting is more sure if done in water, that is, to allow an

open space for the roots to be laid out at full length; and to wash in the soil amongst them with water, by first throwing the soil on the ball of earth which accompanied the roots, and then pouring water over it to wash it down among the roots. In very hot weather, roots will suck up their full from this watering in a few hours, and fresh roots are made in a few days, from which, and the fresh soil, a plant from a poor soil may be better fed, and do better afterwards, than if it had not been removed at all. If we now suppose some unforeseen accident to have caused the roots to reject the water, and not to extend themselves by new growth for one week, why in that case death would ensue immediately.

Some six and thirty years since, the late Sir William Middleton brought a packet of seeds of the 'Tree-box from Box Hill, in Surrey, from which a great number of plants have been reared by Mr. Lovett, his gardener—now one of the most contented race of our old gardeners, living "in a cottage near a wood," in the middle of the park, and although in his eightieth year, he enjoys a walk round the gardens as much as any of us, to see "all these new fancies," as he terms the present style of gardening. Some of those box-trees which Mr. Lovett planted thirty years since on a long dry bank under large trees, now form a thick screen for a "winter garden," from which, when we want a "box," we can draw full-grown plants without being missed. Among other "new fancies," we resolved last May to make a hedge of full-grown box-trees for one side of a new terrace, which was in progress under the directions of Mr. Barry, the celebrated architect. At first, it was proposed to plant this box-edge next September, as recommended by Mr. Glendinning in the *Journal of the Horticultural Society*, who removed a hedge of large hollies for the Society last September with perfect success: but, on a second consideration, I wished to prove how far Mr. Barron's views of planting could be relied on upon a very different soil from that on which he has practised with such marked success: and as the plants were at hand, and no stint of them either, if we did fail the loss would not be felt. All this being duly considered, my worthy employers, seeing I had rather an itching for the job, gave their consent to have the hedge planted at once. The box was then in the middle of its growth, and I wished to wait until the growth was completed, which would be about the third week in June; but, owing to the arrangements of the masons and bricklayers, I must either get in the edge at once, or put it off till the middle of August. This was considered a point rather in favour of the planters, as if the box-trees should die under the operation, they would have a loophole for escape, and could say, "it was all owing to their being removed at the critical time of their annual growth." A trench, twelve feet wide and four feet deep, was opened, the old soil removed, and a fresh supply carted in, and the trench was filled up to within eighteen inches of the top; the whole was gently stamped down as the soil was put in, so that it could settle but very little afterwards, and when the bed was ready for the plants, that is, within eighteen inches of the top, it was stamped down quite close. There were two reasons for this last pressing of the soil: the first reason, that it should

not settle, as I have just said ; and the second, that the water should not pass through it readily when the plants were watered. This would have been a very injudicious proceeding on some soils, although in our case it was necessary. The soil here is so light, that a fresh bed of it, like the one for this box-hedge, would let the water pass right through it to the bottom, without doing any good for the plants, unless it was thus compressed ; whereas some retentive soils, if this process were applied to them, would not drain at all, which would be as injurious the other way. Now, here is one of those sources of disappointment and vexation inseparable from the system of learning how to do particular things from books. We read of so and so having been performed with great success, and we think that by following the writer step by step we must also succeed in similar attempts. Here, then, is where the "practical" man has the advantage of the book man ; the book may put us on the right scent, but unless we have as much practical knowledge as will show us how far we may be justified in carrying out a set of rules under different circumstances, we may make a mess of it after all our reading. Hence the reason why I would not recommend others, under different circumstances, to follow me implicitly in the planting of large evergreens, even at any season.

To make this experiment more complete, I made it a point that none of the men engaged in the gardens should have a finger in it. I took half a dozen strong men who worked on the farm, with spades, pick-axes, and three-tined strong forks, and set them to work on Monday, the 3rd of June, and in ten days the hedge was planted, which then looked as if it had been growing there these twenty years. The first five weeks passed with only one slight shower, and the sun poured his unbroken rays on the hedge all the time ; in short everything tended to test the experiment of planting large bushes or trees at mid-summer, on light soils ; and no experiment could be more complete—not a single leaf drooped, and even the young growth went on without let or hindrance, just as if the plants had not been interfered with at all. If the same men had continued to plant large trees or bushes from that day to this, I can see no reason why a single leaf on all the plants removed should take any hurt ; and if that be so, it is surely a safe time now to remove evergreens,—not only so, but every week that passes from this day will add to the disadvantages under which removed trees must more or less be liable. The Horticultural Society of London had set a very good example, by the removal of the holly hedge in their garden early in the autumn of last year ; not but that gardeners were well aware of the fact, that such things *could* be done, but in a public place like their garden, and under the auspices of a public body, the thing was more likely to take the attention of the gardening world. The true time, however, to begin to transplant large evergreens, as I said before, is as early in July as their growth is finished for that season ; and the credit of the discovery is undoubtedly due to Mr. Barron, at Elvaston Castle ; and all that I, or, indeed, any other gardener has done in this line, is no more than picking up the crumbs from under his table.

There was nothing particular in the *modus operandi* of our pro-

ceedings in this instance, nevertheless, as amateurs like to read about the way such things are actually performed in practice, I shall in my next letter give a detailed account of how every item of the work was carried on, and what is of more import, shall explain the reasons for every particular movement from first to last. Meantime, I would urge the great importance of the early removal of large evergreens, and now that no time be lost in preparing for immediate operation.—*D. Beaton. The Cottage Gardener.*

CLASS SHOWING AS A TEST FOR SEEDLINGS.—During the past season this mode of exhibiting many of the so-called florist flowers has been pursued, particularly with Dahlias, Carnations, Auriculas, &c., and it is an excellent test when the showing and judging is honest, and the test is properly applied, but it will mislead worse than anything if there be unfair play—that is, if the thing be not honourably conducted. For instance, if a judge act wrong, either from ignorance or design, and place a new and bad thing before an old and a good one, the public will be deceived into a belief that the new flower is an improvement on the old one, and it will lead to the disappointment which all have had to deplore more or less; therefore, the necessity of good judges is as great as if there were stands in competition, and these judges should be the same for given periods when once elected, because they are at once made responsible for their acts, and this responsibility, presuming them to be able, insures a careful and proper award. But class showing may not be a safe test in all cases, even if the judge be able and honest, for a seedling may beat a named flower, because the named favourite is badly shown, and not because the seedling is really better; hence the danger of trusting implicitly and entirely to the result of a class show. It is only safe when there is a series of shows, and all more or less corresponding, that they may be taken to indicate the true value of a flower. But class showing is useful in other respects; it enables small growers to compete with success, and therefore ought to insure better flowers. Whenever a fine specimen is produced, the owner is encouraged to show it, because it is almost sure of a prize, and when the flowers are placed in classes, the young florist obtains a very useful lesson by noting what puts one flower before another; whereas, in stands of flowers, his attention is divided between twelve, or perhaps twenty-four blooms, and the reasons are not so easily seen by the inexperienced who wish to learn. Upon the whole, then, class showing must be deemed the most useful in promoting the advancement of the science. When the best scarlet, the best lilac, the best anything, is entitled to a prize, we have only to look at and compare a single bloom; and there is much less difficulty to judge the points on a single flower than the points in a dozen. However, there is a general desire to show stands of flowers as well as single blooms, and in this case the best plan is to allow the losing stands to be broken up, and the best blooms from each to be shown in classes. It, in the first place, gets rid of the bad stands, and in the next place retains in the classes all the good flowers; but it is the class showing alone which gives us a notion of which are the best flowers, for ten or eleven good flowers may always take through one or two inferior; so that the fact of a

flower being in a winning stand says but little for it, while its beating in a class is, if the award be honest, strong presumption of its superiority.

**NEW YELLOW PICOTEES.**—*Georgy* is a seedling raised in Guernsey. Yellow ground, edged with purple. It crowns remarkably well, but is slightly serrated, though when well grown this is scarcely perceptible.

*La Grandeur*.—Buffish yellow, heavily edged with dark crimson. A very attractive and bold variety.

*Le Marquis*.—Bright canary, edged with light red. A very lively and pretty sort; good form.

*L'Hussard*.—The best form and petal we have seen amongst yellow picotees; crowns well; light yellow, edged with pale rose. It is deficient in size, but, from its other qualities, would be good to seed from.

*Malay Chief* (May).—A bold variety, with good petal; yellow, heavily marked with bright red.

*Lord Gough*.—A Guernsey seedling; pod good, and the ground colour bright yellow, heavily margined with purple; distinct and good.

*Bartlett's William IV*.—The ground colour nearly orange, rather heavily marked with a rich purple. Though not very well grown, this is evidently a superior variety.

*Le Cuirassier*.—Very good form; stout petal; pale yellow, heavily edged with red.

*La Villageoise*.—Sulphur, laced with marone; rather tall in its growth; a distinct variety.

*Kossuth*.—The yellow pale, heavily edged with rose and slate colour; a very remarkable and distinct variety.

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### ON AMARYLLIS, &c.

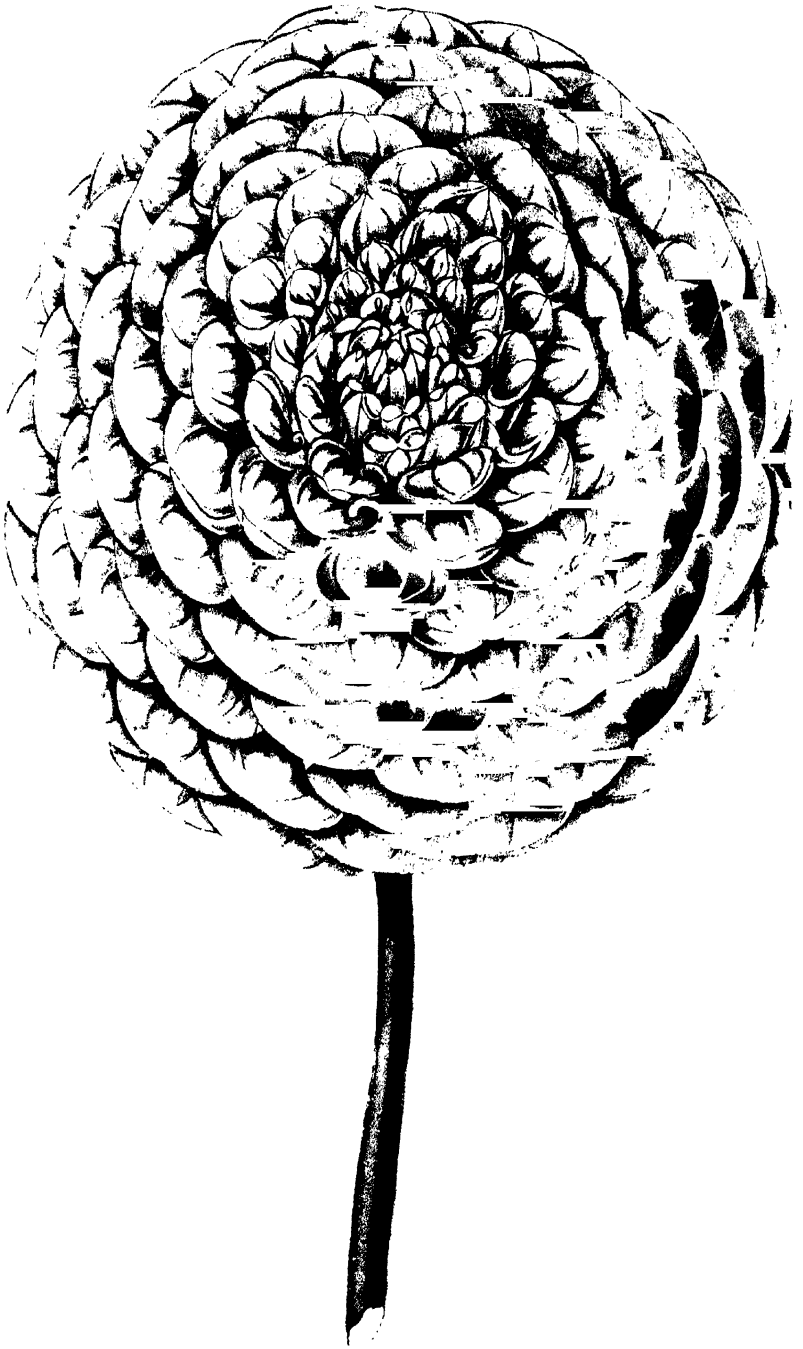
MR. H. GROOM, florist, Clapham Rise, near London, has a large stock of this beautiful family, not only of the known sorts, but also a large number of recently-imported bulbs from Rio Janeiro, which, I doubt, contains many new and fine kinds. They are without name and are consequently a speculative lot; but, as he offers them very cheap, there cannot be any risk in the purchase. From the few splendid flowers we saw, we believe they will prove much above the value he sets on them. They are very fine bulbs, and, with ordinary care, will flower well next spring. He has also a large stock of seedlings, from which he expects some novelties in the way of hybrid. For any person with room and convenience these would be worth purchasing, if he is disposed to part with them before they flower. He has also an immense stock of all the varieties of *Lilium lancifolium* and a beautiful race of seedlings from all the varieties, many of them with larger and darker flowers than *L. lancifolium rubrum*, and others again, nearly white, with the beautiful carmine spot. When we visited his establishment, he was preparing, with much care, his vast bed of his unrivalled collection of Tulips. Of these, as well as *Ranunculose Anemonies*, &c., he abounds. From present arrangements, we perceive he is extensively preparing for an All Nations' Exhibition in 1851.

### FUCHSIA SPECTABILIS AND OTHER SORTS.

BY D. KIDD, GARDENER, GARNSTONE PARK, HEREFORD.

Few, if any, have succeeded satisfactorily with respect to the management of this fine Fuchsia. Some of our best plant-men complain that they cannot grow it. Messrs. Veitch have never brought it to anything like perfection. Many might therefore be led to believe that it is uncultivable; but I have found the reverse to be the fact. My plant measures six feet six inches in height, nine feet three inches in circumference, and has been in flower, more or less, since the middle of June







### EDWARDS'S MRS. HANSARD DAHLIA.

**I**N our October Number we gave a descriptive list of all the best new Seedling Dahlias which had come under our notice at the London and other exhibitions during the past season. Amongst them we gave prominence to the variety we here figure as standing, in our opinion, pre-eminently above all the others, and at the various exhibitions it attracted the admiration of all who saw the lovely flowers.

It was raised by John Edwards, Esq., of Wace Cottage, Holloway, from whom it has been obtained by the Metropolitan Union, who purpose sending it out the next season. It ought to form one of every collection, and of every stand of Fancy Dahlias the next year.

Mr. Edwards having raised the variety, we solicited the favour of his giving any particulars relative to its origin, properties, &c., and the following remarks have been obligingly sent us:—

“There can be little doubt that the past season was one of the longest and most successful in the memory of the ‘oldest inhabitant,’ commencing as it did in earnest about the middle of August, nor was the warfare closed until we were far advanced in October, a period of full two months. The flowers have been of fair average quality, with perhaps a larger call on them for exhibitions than previously customary. It must be fairly admitted that the greatest unanimity and kindness amongst exhibitors has been manifest, nor has there been the least monopoly; the forward to-day have met with defeat on the morrow, but bearing the same with true florist’s philosophy.

“While the number of amateur exhibitors has been largely on the increase, I am at a loss to account for the apparent falling-off amongst the dealers. That as many amateurs follow Dahlia growing as ever was very evident at the last *South London Show*, at which *splendid meeting* my only regret was that of the DAHLIA PRIZE IMPROVEMENT FUND being neglected; at least one-half *less* prizes were awarded than

might otherwise have been the case, and with justice too, for such a *monstre meeting* was indeed a *glorious sight*. I hope that for 1851 a general and ample fund may be formed, and that once again we may at least rally round our well-tried Royal South London Floricultural Society.

“Of novelties there have been quite an average number shown, and insufficient profusion for persons desirous of purchasing for next season’s growth being enabled to form an opinion of the merits of the flowers then exhibited. For myself, I add, ‘give me the opinion of some successful *growers* and *showers* of whose integrity, judgment, and taste we have had ample evidence by the style of their productions;’ this, I say, is the only PRIVATE OPINION worth recording.

“I shall be but little surprised if, after such a protracted season, in 1852 a larger number of seedlings will be exhibited than usual; from all accounts the stock of seed likely to be harvested will be immense. At this writing (October 25th) my plants are in as vigorous a state of bloom and growth as at any time during the season, and with fine noble seed-pods ‘thick as blackberries.’

“Being favoured with an intimation that my Seedling Fancy Dahlia ‘Mrs. Hansard’ was to form the illustration for the December CABINET, the following remarks on its ‘*birth, parentage, and education,*’ may not prove unacceptable. In 1848 I saved one pod of seed from Yellow Standard (Keynes); the produce in 1849 was eleven plants, and if variety really be charming I succeeded most certainly. The eleven plants all bloomed the same season: one was a semi-double white self; a second was a fancy pale yellow tipped white, with petals too long; a third was a purple flower, in every way similar to Samuel Girling (Girling’s), which chanced to be growing very near, and proved so by comparison, and shared the same end, viz., was destroyed. There were also two yellow selfs, but of less merit than their parent; then a yellow with mottled red edges; and, with the variety now figured, completed the batch, and the latter was the only one saved. It is the property of the Metropolitan Union, and christened ‘Mrs. Hansard’ in compliment to the head of that firm. That its constancy has been tolerably well tested the following will demonstrate—two hundred blooms have been shown here, there, and everywhere; and moreover, on several occasions, from the seven plants I grew at Holloway, from twenty to thirty superb blooms might have been cut at the same time. It is of robust habit, and will bear ‘well growing’ admirably; the large blooms being quite free from coarseness, and the smaller fit for the choicest six. Perhaps one bloom produced at the Highgate Show was *par excellence* the bloom of the year, and I must confess to have felt a little proud to hear it pronounced the best bloom of the exhibition. I never saw a petal that was not fairly and distinctly tipped. The yellow is rich, bright, and dense, and the white pure, with but a trifle of protection.”

First-class certificates were awarded at—Cremorne Gardens, Stoke Newington, Halesstead, South London, Leamington, Shacklewell, Norwich, and Highgate, Grecian Saloon, and Slough.

Also EXTRA PRIZES at Cremorne, Leamington, South London, Shacklewell, Norwich, and Highgate.

RHODODENDRON JASMINIFLORUM—THE JESSAMINE-  
FLOWERED.

This singular, neat, and very handsome-flowering Rhododendron, was discovered upon Mount Ophir, in Malacca, at an elevation of five thousand feet, by Mr. Thomas Lobb, collector to Messrs. Veitch of Exeter, in whose establishment it bloomed the past summer. A plant was exhibited in bloom at the Chiswick Gardens last May, and was universally admired. It is a neat shrub, the plant shown being near two feet high, the heads of the flowers terminal. Each having numerous blossoms. It flowers very freely. Like all the tribe, it deserves to be grown wherever practicable.

Hitherto, we are told, it has been grown in the greenhouse, but we think, from its apparent habit, that it will grow in the open air in warm situations. It continues to bloom much later than our usual Rhododendron season, Messrs. Veitch having plants in bloom in October.

By cross impregnation of this species with others of our finest kinds, no doubt we shall soon have a singularly distinct section of beautiful, hardy Rhododendrons, which will form a valuable acquisition to our gardens.

We visited the exhibition of American plants in the garden of the Royal Botanic Society, Regent's Park, held the past season, and the following superb kinds of Rhododendrons were selected as best. All are well deserving a place in every shrubbery. They were in the collections of the respective nurserymen whose names are given:—

Mr. JOHN WATERER, of Bagshot.

*R. Bamatten*, very large, the flowers being four inches across, distinct.

*R. Delicatissimum*, white, tipped with lilac, first-rate.

*R. Eckerstianum*, delicate pink, or French white; the flowers fringed, and very abundant.

*R. Gloriosum*, pale lilac, very large.

*R. Hyacinthiflorum*, rosy-lilac, or purple, double, and very distinct.

*R. Leopardii*, very distinct and late, large and good, purple, with brown spots.

*R. Lyonense*, pink, very pretty.

*R. Macranthum*, bright rose, shaded to the edge.

*R. Maculosum*, white, tipped with pale lilac, greenish blotch.

*R. Nivaticum*, the best of the whites as to colour, but deficient in form, free.

*R. Princeps*, pinkish-lilac.

*R. Roseum elegans*, very profuse.

*R. Vestitum coccineum*, rosy-scarlet, nicely marked.

Mr. HOSEA WATERER, Knap-hill.

*R. Atrosanguineum*, crimson, fine form, late, and very good.

*R. Augustus*, purple, distinctly marked with green, fine form, and truss.

*R. Cælestinum*, a blueish-lilac self-coloured variety, of good form.



- R. Constantine*, purple, distinctly marked.  
*R. Fastuosum flore pleno*, pale lilac.  
*R. Guido*, transparent rose, fine form.  
*R. Jackmanii*, rosy-puce, very dark spots.  
*R. Murillo*, very dark purple, fine form.  
*R. Poussin*, dark reddish-purple.  
*R. Purpureum grandiflorum*, very distinct.  
*R. Rembrandt*, deep transparent rose, shaded to the edge, very superior.  
*R. Vandyke*, a lively self-coloured rose.

Messrs. STANDISH and NOBLE, Bagshot.

- R. Album elegans*, white, with green spots, good form.  
*R. Blandyanum*, deep rose, nearly scarlet, tolerable form.  
*R. Candidum*, fine white, faintly tipped with lilac.  
*R. Catawbiense flore pleno*, a double light purple variety.  
*R. Elegans*, rose colour, distinct, and very dwarf.  
*R. Erectum*, deep rose, good.  
*R. Maid of Athens*, delicate pink, nice form.  
*R. Miss Agnes Loudon*, rose, tipped with salmon, tolerable form.  
*R. Mrs. Loudon*, pinkish salmon, nicely spotted, deficient in form, but conspicuous.  
*R. Pictum*, white, with a dark spot, pretty.  
*R. Pulchellum*, dark purple, tipped.  
*R. Sabrina*, pale pink, delicately marked on the throat.

Mr. BAKER, Bagshot.

- R. Delicatum*, fine white, with deep spots, very free.  
*R. Grandiflorum maculatum*, rose pink, fine spots, large.  
*R. Ignescens*, deep rose pink, nearly scarlet.  
*R. Mammoth*, rosy-lilac, good form.

## NOTES ON NEW OR RARE PLANTS.

*ACANTHOLIMON GLUMACEUM* (Syn., *Statice Ararati*).—A dwarf perennial herbaceous plant, a native of Armenia. It has been in the gardens about London the last five years, and classed with the Alpines; perfectly hardy. The foliage is somewhat like the common Thrift. The flowers are produced in spikes of about two inches long, each blossom nearly half an inch across, a rich rose colour. It is a very pretty ornamental plant when grown in masses, or in edging for a border: also on a rockwork. (Figured in *Mag. of Botany*.)

*ALLIUM ACUMINATUM*.—This handsome-flowering Onion was sent from California by Mr. Hartweg to the Horticultural Society, and last spring it bloomed in the greenhouse in the Chiswick garden. The flower-stem rises about a foot high, and the flowers are produced in

loose umbels, having from ten to twenty blossoms in each. A single blossom is about three-quarters of an inch across, each petal being white and tipped with rosy-crimson. (Figured in *Paxton's Flower Garden*.)

**ALMEIDEA RUBRA.** RED-FLOWERED.—A branching shrub from Brazil, belonging to the Pentandria class of flowers. It grows a yard high. The leaves are about the size of those of a Peach-tree. The flowers are borne in terminal panicles. Each blossom, five-petalled, is about an inch across, of a rosy-red colour. A pretty stove plant. It blooms in autumn, in the Royal Gardens of Kew. (Figured in *Bot. Mag.*, 4548.)

**ASTRAPCEA VISCOSA.**—A noble plant, or tree, which was received at the Kew Gardens in 1823 from Madagascar. It is now in the collection in the great stove, and is twenty feet high. The flowers are produced in snowball-like heads, white with a rich crimson eye. Each blossom is about an inch across. (Figured in *Bot. Mag.*, 4344.)

**BEGONIA INGRAMII.**—A considerable number of Hybridized Seedlings has been raised at the Royal Gardens, Frogmore, near Windsor. This beautiful delicate variety is a seedling from *B. fuchsioides* impregnated with *B. nitida*. The flowers are borne in large branching drooping panicles, of a delicate light rose colour. Each blossom an inch across. Mr. Ingram, jun., has raised several others, quite distinct in character, but equally handsome. The entire tribe of Begonias have delicately handsome flowers, charming for bouquets in winter and early spring. There ought to be one in every stove or warm greenhouse. The present variety is figured in *Mag. of Botany*.

**CARNATIONS.**—Emperor (Scarlet Bizarre), raised by J. L. Puxley, Esq., Tenby, Wales. A large well-marked flower, of excellent colours. Jenny Lind (Puxley's), Crimson Bizarre. A very true marked flower, of first-rate excellence, and medium size. Duke of Devonshire (Barringer's), Scarlet Flake. A very true marked flower, the scarlet rich, and the ground pure. Medium size. A fine variety. (Figured in *Mag. of Botany*.)

**COLOCHORTUS PALLIDUS.**—A native of Mexico, cultivated in the Belgian nurseries. It is a dwarf, grassy-leaved plant. The flowers are borne in loose umbels, of a dull brown colour, with a dark spot at the base of each petal. Each flower is an inch and a half across.

**CORDYLINAE SIEBOLDII, VAR. MACULATA** (Syn. *Dracæna Sieboldii*)—Dr. Siebold introduced this handsome plant from Java to M. L. Van Houtte's establishment, where it has recently bloomed. It is a shrubby plant, growing three or more feet high. The leaves are thick, large, a deep green, prettily dappled with a lighter colour. The flowers are produced in a terminal panicle, of a yellowish-white.

**CYANOTUS VITTATA** (Syn., *Tradescantis zebrina*).—A herbaceous trailing plant. It flourishes either in the stove, greenhouse, or by the side of a sitting-room window. It grows rapidly: the stems are purple; the leaves at the under side are purple, and the upper side deep green

with two silver-coloured stripes lengthways on each. The flowers are purple, neat and pretty. The striped foliage, with its various colours, has a very pretty appearance. It is a nice plant for hanging down inside a window.

**CYPRIPEDIUM GUTTATUM.**—This pretty flowering species is figured in Van Houtte's *Flore*. The flowers are of a yellowish-white ground, marked and blotched with crimson and red. Very beautiful. Cultivated by M. L. Van Houtte.

**DELPHINIUM MAGNIFICUM.**—The flowers are double, very large, and of the richest azure blue. Ought to be in every flower-garden. *D. japonicum.*—The flowers are single, very large, with a white Bee centre. A robust grower, and very handsome; should be in every garden. *D. grandiflora major.*—The spike of double rich blue flowers will rise six feet high; a noble variety. *D. pumila elegans.*—The flowers are double, deep purple, the spike only about a foot high. A very pretty variety.

**DENDROBIUM TRANSPARENS.**—A native of Nepal. Recently Messrs. Veitch received it from their collector, who discovered it at Myrong (or Wood), on the Garrow Hills, at an elevation of 5300 feet. The flowers are very transparent, of a pale pink stained with crimson. Sepals are narrow; petals broader; labellum broadest. Each blossom is about three inches across. A very neat Orchideous plant. (Figured in *Paxton's Flower Garden*.)

**ECHITES FRANCISCEA, VAR. SULPHUREIS.**—A native of Brazil. It is a stove creeping plant, but grows freely when trained to a wire trellis, or against a pillar, back wall, &c. The flowers are produced in a large racemous head. Each blossom is an inch and a half across, of a pale sulphur with a rose-coloured centre. (Figured in *Bot. Mag.* 4547.)

**FRANCISCEA EXIMIA.**—A native of Brazil, growing in *shady* forests. It was obtained from thence by M. de Jonghe of Brussels, in 1847. It is a somewhat erect-growing shrub, very much the habit of *F. latifolia*. The flowers are produced in cymous heads, of two to four in each. A separate blossom is about three inches across, of a deep violet colour. It blooms very freely, a plant two and a-half feet high bearing two hundred flowers in a season. The Francisceas are fine plants for winter and early spring blooming. They flourish in a compost of equal parts of turfy loam, fibry peat, and leaf mould, with a free drainage. Some of them have flowers deliciously fragrant. They deserve to be grown wherever practicable. (Figured in *Mag. of Botany*.)

**FRANCISCEA LATIFOLIA.**—This is an excellent plant for winter bloom, in fact it will bloom all the year. The shrub grows freely, beautiful green foliage, flowers two and a-half inches across; when first open they are of pretty light blue, and change to white. The blossoms thus contrasted have a very pretty effect. It ought to be grown in every warm greenhouse, stove, or sitting room.

**FREZIERA THEOIDES. TEA-LEAVED.**—A small tree, or shrub, a native of Jamaica. In the stoves of this country it grows about a yard

high. Mr. Wilson, Curator of the Botanic Garden, Jamaica, sent a plant to the Royal Gardens of Kew, where it has recently bloomed. The flowers are produced at the axils of the leaves, drooping. Each blossom is an inch and a-half across, of a creamy-white. It is a very neat plant, much like the well-known *Ardisia crenulata*. (Figured in *Bot. Mag.*, 4546.)

*GLADIOLUS NATALENSIS*, VAR. *WILLMOREANUS*.—A handsome hybrid raised by Mr. Cole, gardener to J. Willmore, Esq., of Oldford, near Birmingham. It was raised between *G. gandavensis* and *G. floribundus*. The flowers are of a creamy-white, the three upper divisions of each blossom is streaked with delicate rosy-purple. They are large, and borne in a long spike. Mr. Cole has been successful in raising some other beautiful distinct varieties; two of them, very superb, are named *Oldfordiensis*, and *Rosea-purpureus*.

*GLOXINIAS*.—Five new handsome varieties are figured in Van Houtte's *Flore*. 1. Dr. Lindley, white ground, tube tinged with rose and blue; very pretty. 2. Reine des Belges, white ground, with the tube tinged with rose; very neat. 3. Madame Aglae Adanson, a pretty pale-flesh or pink ground, with a dark crimson rim inside the throat. 4. M. G. Hodgeveen, ground colour blue with a white rim around the edge of the flower, and a white bar along the lower part of the tube; very distinct and pretty. 5. Princesse de Lamballe, a brilliant red with a white bar along the lower part of the inside of the tube; very splendid. They are fine additions to this charming family.

*HOYA CAMPANULATA*. BELL-FLOWERED.—A native of Java, where it grows in copses in the mountainous districts. It is a twining shrub, producing its flowers in a large capitate drooping umbel. Each blossom is about an inch across, fleshy, buff-coloured, slightly bell-shaped. It is a very interesting species, and contrasts very prettily with the several other species which we now possess. Messrs. Veitch imported it. (Figured in the *Bot. Mag.*, 4545.)

*LAPAGERIA ROSEA*.—Recently we figured this beautiful flowering plant. It has bloomed in several collections in this country during the past season, and proves a highly interesting and valuable acquisition.

*NYMPHÆA MICRANTHA*.—The Earl of Derby obtained this very pretty Water Lily from the river Gambia. The flowers are white, not so large as our common Water Lily. It requires to be grown in a warm stove.

*PIMELEA MACROCEPHALA*. LARGE-HEADED.—This noble species was imported from the Swan River colony by Messrs. Lucombe, Pince, and Co., of Exeter. It is a neat growing shrub, from two to three feet high. The leaves are glabrous, and glaucous, large. The flowers are of a pale rose colour, in heads which are two inches and a-half across. The plant blooms very freely, and deserves to be in every greenhouse. Like all the *Pimeleas*, it flourishes in turfy peat soil mixed with a little good loam, well drained. (Figured in *Bot. Mag.* 4543.)

*ROGIERA AMÆNA* (Syn., *Rondeletia thyrsoides*).—A native of Guatemala. Its general appearance is like a *Laurustinus*, the flowers, too,

in such-sized corymbose heads, but being bright rose-coloured, with a yellow throat. Each blossom is about half an inch across. It requires to be grown in the stove, and deserves to be in every one. Mr. Van Houtte possesses this and three other new species, viz., *R. elegans*, *Menechma*, and *Roetzlii*. Each is handsome, and all are valuable acquisitions, their large heads of pretty red, rose, or pink flowers, contrasting handsomely with the *Rondeletias* we possess.

*ROSA PIMPRENELLE MARBRE D'ENGHEIN*.—A handsome Rose, which is figured in M. Van Houtte's *Flore*, which was raised by the late M. Louis Parmentier. It is of the same class as the Persian Yellow *Harrisonii*, &c. The flowers are semi-double, a pretty cream colour marbled with lively red. A very handsome variety.

*TACSONIA MANICATA*.—This is a magnificent flowering climber, a native of Peru, where Mr. Hartweg states it grows in hedges near the city of Loxa. There it forms a rambling climber; the leaves are grey, three lobed. The plant was introduced into this country by the Horticultural Society. A plant of it grown in the conservatory of A. F. Slade, Esq., of Chiselhurst, in Kent, where it has bloomed beautifully. Mr. Ansell, the gardener, states, that if it has plenty of room it soon becomes *loaded* with flowers. The blossoms are of the richest scarlet colour; each being nearly four inches across. It is one of the finest greenhouse creepers, unrivalled for a brilliant display when in profuse bloom. (Figured in *Paxton's Flower Garden*.)

*TACSONIA PINNATISTIPULA*.—A dozen years ago we had the privilege of visiting the beautiful garden of Mrs. Marryatt, of Wimbledon, near London, and in the large, high conservatory, a plant of this *Tacsonia* was flourishing in an extraordinary manner. It was trained near to the glass roof, and so as to extend entirely over the whole house. The younger branches and shoots were allowed to hang down, and they bore a profusion of lovely rose-coloured Passion-like flowers. There are persons who have stated they have found difficulties in cultivating it successfully. Allow it, as at the above-named place, to have plenty of root room, and space to spread its head in, and it will flourish and bloom to admiration. It is well deserving cultivation. Equally, or more so, is *T. princeps*, and *T. grandis*, very showy, and less vigorous in growth. Mr. Benton has found out that the *T. pinnatistipula* being grafted upon a *P. mollissima*, it induces it to bloom freely. The plant at Wimbledon was allowed to grow at its natural length, appeared not to be pruned at all, but had a summer disbudding of its young shoots. This we think is peculiar in its success.

## THE GLADIOLUS.

IN our Notes on New or Rare Plants we have remarked upon some beautiful hybrids raised by Mr. Cole, at Oldford, near Birmingham. He has given in the *Magazine of Botany* lengthened particulars on hybridizing and the culture of the Gladioli. The following is an extract, which we insert, hoping it will tend to promote the culture of these

handsome plants, and encourage attempts in raising still more improved varieties.

“What a magnificent appearance is presented by a group of *Gladiolus gandavensis*, occupying the back ground of an American bed, a clump on the lawn, or a place in the shrubby border, during the months of September and October—a season when flowers are much wanted. *Gladiolus oppositiflorus* is also equally beautiful in its way, producing a spike of white blossoms eighteen inches long, and also blooming in autumn, when such an object has a very commanding appearance. The *Gladioli* have an extra claim on our attention, from being perfectly hardy; I allude now to the *natalensis* section, comprising the two above named, and a few other varieties equally beautiful, such as *vernalis*, *spicatus*, *polystachius*, *pyramidalis*, and *ramosus*, the last-named being very desirable from its dwarf habit. The new varieties above alluded to are hybrids of the same class, raised here, and are crosses between *G. gandavensis* and *floribundus*, seeds having been saved from each, and mutually crossed. It may be well to remark the advantage which would result, if all who interest themselves in hybridizing, particularly when they are working on the first or second crosses—which, generally speaking, produce seedlings with but little variation in colour or markings, the difference being generally in the size of bloom and intensity of colour—would note the same, and report thereon; for such information laid before the public would greatly advance the objects of the hybridist, much time being frequently lost in travelling over ground already explored.

“These few remarks on what is particularly wanted in this interesting tribe, recall to mind an opinion of the late lamented Dean of Manchester, who held that the *cardinalis* section would not cross with the *natalensis* section; hence his idea of subdividing them. I freely grant the difficulty, but am far from thinking it impossible to effect such a cross; which, if it could be obtained, would be productive of all that could be desired, by giving us a class of intermediate flowers that would bloom later than the *cardinalis* family, and earlier than the *gandavensis* varieties. Another grand object would also be achieved, by imparting a hardier constitution to the *cardinalis* section, by this means destroying the tendency to early growth, which is a point of great importance; the fact of their moving for growth so early as November rendering them particularly liable to suffer injury if they are planted out at that season; and hence the absolute necessity, if this tendency is to be overruled, of obtaining crosses with some of the hardy kinds. The introduction of the colour and markings of the *cardinalis* varieties would also be a grand point; imagine the colour and marking of *Gladiolus Prince Albert*, or *formosissimus*, in a raceme of erect flowers, like those of *gandavensis* or *floribundus*! What could be a more splendid object!

“I admit there are many obstacles to prevent the accomplishment of this much-to-be-desired feature, still I think it is to be done, and would suggest that the difference of constitution should be taken into consideration. The fact of their coming from opposite parts of the Cape; and, again, elevation may have something to do with their freedom of seeding. Their general character is decidedly favourable, there

being no distinctive difference between them to constitute what is generally accepted as an obstacle to the production of crosses; consequently it must be attributable to some peculiarity we are not acquainted with. Therefore I argue the necessity of looking to the habitat and locality of each plant and the probable influence it would have on them. Lastly, I would suggest the experiment—which, by the by, would be rather tedious—of taking, say three varieties of each kind—the more distinct the varieties, and the nearer the alliance, the better—and seeding them together, crossing the offspring of the six varieties with each other. Thus a series of years would be occupied before the feature would be obtained, but I think that the most feasible way of setting about to obtain it; and I believe it would be brought about by gradually imparting the constitution of the opposite parent to each other's offspring.

“The cultivation of this tribe is very simple. They require a good friable loam, with an admixture of leaf mould, placing a layer of cow manure at the bottom of the bed. The natalensis varieties should be planted in March, about four inches deep, and nine inches apart in and between the rows. The early flowering kinds are best protected in pots in a cold frame during the winter months, and planted out in the spring; for their growing so early as November renders them liable to suffer injury from the severity of the winter if they are planted out at that season; hence it is advisable to pot them in the autumn, and store them in a cold frame, merely protecting them from frost.

“I would strongly recommend grouping these plants, and in doing this, would recommend the late flowering kinds to be planted in the following way:—*Gandavensis splendens* in the centre; a row of *floribundus* around it; followed by the orange variety of *gandavensis polystachius*, and *Colvillii superba*; filling up the margin, two or three rows deep, with *ramosus*, this being the most dwarf variety of this division of the family. This arrangement would be productive of contrast of colour, and they would be graduated in height. The early flowering kinds would have a beautiful effect planted in the following way:—*Insignis* central; *La Princess* around it; followed by *formosissimus*, *princeps*, and *Rex rubrorum*; completing the bed, two or three rows deep, with *Virgin Queen*. The bloom of *Gladioli* here this season has been truly grand; and I am sure that if they were to be planted in masses, instead of being isolated, as is too frequently the case, they would be much more highly esteemed. The fact of their being expensive may prevent many persons from growing them; but this, I doubt not, will be soon overruled when they are brought into general favour.

“In raising seedlings in an ordinary way, I should recommend sowing the seed early in the spring, in a cold frame, say about March, protecting the frame from frost and keeping it shut up for a fortnight or three weeks; in the meantime withhold water, there being sufficient humidity in the soil at that season to advance the early stages of the development of the seed; this caution is of importance at this critical period, after which, however, water may be given as circumstances may require. The frame must be kept close, giving air by degrees as the season advances, and stimulating them with heat as much as possible,

consistent with the natural habits of the plant, in order to make the bulbs as large as possible the first season ; this will be the means of inducing them to bloom in two years from the seed, which is a desideratum. If they are planted the second season in a frame, and slightly excited in the spring, the frame being afterwards taken away, and the little wants of the plants—as water, &c.—attended to, many of them will unfold their beauties in the course of the autumn.”

One of the most interesting enjoyments in floriculture is experienced in raising improved varieties of flowers. No doubt Mr. Cole feels amply rewarded for the attention he gave to it. During last summer Mr. Plant, of Cheadle, brought us about a dozen large spikes of the most beautiful Gladioli we ever saw. They were hybrids he had raised, and although he has been experimenting with this class of flowers for many years, he feels ample satisfaction with his progeny. We trust many of our readers will still more eagerly pursue this delightful recreation.

## ON INCREASING THE CAMELLIA.

BY MR. WILLIAM HAYNES, FLOWER GARDENER.

THIS is an universally admired tribe of plants, and I think either large or small ones ought to be in every greenhouse, conservatory, or sitting room. One great acquisition is, that having obtained a favourite it is readily increased, and may be managed by the amateur quite as readily as by the nurseryman. The methods are by inarching, grafting, or budding. As the precise mode of operation is not generally known, I give the particulars of the course I have adopted most successfully with each of the above methods.

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.

**GRAFTING.**—Side-grafting (as before mentioned) resembles whip or tongue-grafting, but differs in being performed on the side of the stock without being headed down. Having fixed on those branches where shoots are wanted to furnish the head or any part of the plant, then slope off the bark and a little of the wood, and cut the lower ends of the scions to fit the part as near as possible; then pin them to the branch, and secure them with bass, and clay them over as any other sort of grafting.

**INARCHING, OR GRAFTING BY APPROACH.**—Perform this any time from the beginning of February to the end of March; fix the pot containing the stock securely, then cut with a sharp knife a thin piece from the side, about two inches long; make a small notch downwards, at the top of this, and prepare the branch to be inarched after the same manner, but make the slit upwards. Fit the tongue of this branch into the notch of the stock, join the rind of one to that of the other, tie them well together with matting, rub on a little clay to keep out the air, and they will be united in a month or six weeks; when joined, loosen the bandages, but do not remove them until some time after the scions are separated from the parent plant.

**BY LAYERS.**—A branch of one-year old wood may be laid in a pot, or otherwise, as most convenient, any time from the middle of August until the beginning of March. With a sharp knife make an incision half way through the wood, and half an inch long on the under side of the branch, just below a good bud; slightly twist the branch so as to lodge the tongue or cut-part on the soil, peg it down, and cover it with mould.

**BUDDING.**—This is performed any time from the beginning of October to the end of November, the wood having just become perfected, and the season being cool. The manner of doing it is similar to what is done with the Rose. When the buds are inserted, the pots are plunged up to the rim in a bark bed of gentle heat. This induces the sap to rise, and the buds soon adhere to the stock. I have adopted this method of treatment for several years, and seldom have a failure, so very certain is the operation to succeed.

Whilst treating upon propagation, it may not be amiss to add a remark or two upon my mode of culture, which has not been exceeded by any I have seen elsewhere, and I recommend the following attention be paid to each particular.

**SOIL.**—The best soil for Camellias is one part heath mould, one part well-sifted leaf mould, and two parts brown loam from a pasture; if leaf mould cannot be had, use very rotten dung, and mix a small portion; break the loam and heath mould fine in preference to sifting it.

**POTTING.**—Always make it a rule to pot each plant immediately after it has done flowering, and before it begins to grow. If the roots are not matted, merely turn out the plants and replace them in larger pots; but if matted, break the mass of roots carefully with the hand, and never follow the destructive practice of paring with a knife; lay plenty of potsherd at the bottom of the pots, and with a flat stick work the soil round the sides of the ball.

**HEAT.**—Place the plants, when potted, in a heat not exceeding 75 degrees by day and 60 by night, until they have formed their young shoots; then immediately increase the temperature 10 degrees, to assist in perfecting their flower buds, which will occupy about a month; afterwards expose them gradually to the air, and lower the temperature, to prepare them for their summer treatment: *i. e.*, any time from the beginning to the end of June, place the plants out of doors, either under a north wall, or other shelter, where they will get no sun except in the morning and evening, and where they are well sheltered from the wind; the increase of heat mentioned above to be given whilst the shoots are young and tender ensures abundance of blossom buds.

**WATERING.**—When the plants are potted, and during the whole time they are subjected to a high temperature, syringe or sprinkle with a rose watering-pot, over the leaves every morning or evening in fine weather, and give a plentiful supply of water at the roots.

**SHADING.**—From the middle of March to the end of September Camellias are unable to endure a full exposure to the mid-day rays of the sun, which invariably cause the leaves to blotch and become yellow; always, therefore, throw a net or other slight shade over the glass in sunny weather, from 10 till 3 or 4 o'clock.

**WORMS.**—Whilst the plants are out of doors, worms will occasionally effect an entrance into the pots, unless the pots are placed on a prepared floor, or piece of slate be put under each; to effectually prevent damage, water with clear lime-water at the roots.

**HOUSING.**—In the first week in October take the plants into the greenhouse, or other cool place. As you wish them to come into flower, remove successively into temperature of 60 or 65 degrees. When the buds are near expanding, keep the heat regular, or the buds will fall without opening; when expanded, remove to any light, cool place, and the flowers will continue a long time.

## PROPAGATION OF THE DWARF CLASS OF RHODODENDRONS.

BY A NORTH BRITON.

No doubt many of the readers of this Magazine are aware of the great difficulty there generally exists of increasing this class of Rhododendrons. I particularly refer to *R. hirsutum*, *R. ferrugineum*, *R. dauricum*, and many hybrids of similar habit. The usual process by layers is very uncertain, and very slow in its process of rooting and growth. It occurred to me that a much quicker and far more successful mode of operation would be effected by striking cuttings. I tried it, and it more than realized my expectations, far surpassing in growth either plants raised from seed or layering. Whilst such will only grow perhaps an inch the first year, I have had numbers grow nine inches in the same time.

The following is the mode of practice invariably pursued; and the result has always been so satisfactory, that it was never found necessary

to change it. About the middle, or towards the latter end of July, the summer shoots of the plants above named begin to ripen; at this time the cuttings must be taken. If taken earlier, they almost always damp; if delayed until the shoots become hard, the process of rooting is extremely slow, if roots are ever protruded. The terminal shoots of the branches are generally rejected, as being too long and unmanageable; the side shoots of about two inches in length are preferred. The pots are prepared in the usual manner as for heath cuttings: that is, they are nearly half-filled with drainage of broken pots, over which is placed a small portion of the fibrous part of peat earth; the remaining part of the pot is half-filled with finely sifted peat, mixed with about one-third of white sand; and on the top, sand of finely pounded white freestone, firmly pressed down; the pot is then watered, the cuttings are prepared and inserted about an inch into the sand. The pot is watered a second time, to settle the sand about the cuttings. When the leaves are dry, they are covered with a bell-glass, and placed in a house with a temperature of from 60 to 70 degrees. The after-management of the cuttings is merely to keep them moist by watering round the outside of the bell-glass, or by introducing the spout of a very small watering-pan amongst the cuttings, so as not to wet their leaves, and to shade them from the direct rays of the sun. The shade ought to be placed over them about 9 in the morning, and removed by 4 in the afternoon. In cloudy days no shade is necessary. I never found it requisite, as in the case of more tender cuttings, to wipe the moisture from the inside of the bell-glass, although I believe it might be beneficial.

The cuttings may be expected to strike in about three months or more, according to the state of the wood at the time when they were put in; but the swelling of the terminal and axillary buds is a sure index to the rooting of the plants. At this period they are removed from the heat, and placed on a shelf in the greenhouse; and at the same time air is admitted, by placing a small piece of broken pot under the edge of the bell-glass, afterwards removing it altogether. In the spring of the following year, when the plants show a disposition to grow, they are transplanted into separate pots, and kept in a cold frame, rather close than otherwise, during the summer. Towards the close of the season, or in the spring of another year, they are planted in the open ground.

## RAISING TULIPS.

BY AN EXTENSIVE AMATEUR CULTIVATOR.

It is with much pleasure I am able to state, that during the last two years there has been a considerable advance in cultivating this unrivalled race of floral beauties. In order to ascertain this fact, I resolved last spring to apply to the secretaries of all the principal societies in five counties only, which should have tulips shown at their exhibitions, to take a minute of the quantity of flowers which should be placed in competition upon the tables. Upon receiving the returns, I find that

of flowers possessing such merit there were 6774. This speaks volumes for the increasing taste in favour of this charming tribe of flowers: and such is the impetus given, that I anticipate a much greater advance the coming season.

My feeble efforts shall be exerted to accomplish this object, in which I doubt not, from what I witnessed at the exhibitions I attended, I shall have the co-operation of my brother florists. Attention to one particular should *now* be given, it being the planting season; that is, sell at *low prices*, and thus put possession within the power of the many.

I have been much delighted in attempts to raise seedlings, and satisfactory success has followed; and desirous to encourage many others to similar pursuit, I have drawn up the following particulars of my practice.

I live in a rather northern county, and found it difficult in some seasons to obtain RIPE SEED, an excess of moisture in the seed-vessel causing mildew and rotting the seeds. To obviate this injury, I adopted the following method, and for seven years it has fully succeeded.

As soon as the petals fell off I procured a piece of wood two inches broad and four inches long, and at one end I made a niche with a saw upwards of one inch deep, sufficient to hold firmly a square of glass six inches by four or five, and at the other end cut a hole about three-quarters of an inch square. I then put a carnation stick through the square hole, and stuck it down near the bulb, and let the square of glass be within two inches of the top of the pericarpium, which prevented the wet from lodging in it. This is easily done by having holes bored in the stick every two inches, through which a nail or piece of wire can be inserted to prevent the glass from touching the seed-vessel. I then got a piece of metallic wire and fastened the stem to the stick to prevent it from moving from the centre of the glass, and examined each from time to time. As the stem will generally grow two or more inches, when it is the case I raise the glass so as to be the prescribed height. By following out this plan I was enabled to ripen a considerable number of pods from very valuable and first-rate varieties, without losing one.

The best time for sowing seed is the first week in February, in pots, which I find much better than sowing it the first week in January, as stated by me in a former article. The pots must be placed in a cold frame until the middle or latter end of April, and then plunged in soil and placed in a good situation in the open garden. By attending to this, the practitioner will find that his hopes will not be blighted, and in due time he may be able to enjoy the satisfaction of having seedling breeders.

## CULTURE OF RHODANTHE MANGLESII.

BY A FLOWER GARDENER.

I BEG to call the attention of your readers to the beautiful *Rhodanthe Manglesii*, an annual which is generally classed among the tender ones, and on that account does not arrive at the perfection it otherwise would.

I have at present (Sept. 6th, 1850) a plant in bloom, on which there are upwards of seventy-six blossoms, which in the heat of the day all expand at once, and from its beautiful pink colour is very showy in the front part of the border. I raised some plants under glass, and kept them in the same place when in bloom. This year I raised them in the same manner, but turned them out into the open border in May, where I have found them quite as hardy as most other annuals.

[Some time back we grew the *Rhodanthe* and *Leptosiphon densiflorus* in pots for spring ornament, which succeeded admirably: we recommend the plan to our readers. The method practised was to sow the seed in autumn, and keep the plants in a dry cool frame or cool greenhouse through winter; and in April, May, June, and July they bloomed profusely in the greenhouse, and were highly ornamental. Since then the plan has been adopted in two of the London nurseries with very great success. This summer we saw numerous pots of plants, near two feet high, quite a mass of bloom. With our correspondent, we strongly recommend the culture of the *Rhodanthe* both in pots and open borders, and equally so the *Leptosiphon*, which, when sown in autumn and bloomed in pots in the greenhouse or conservatory, or a room window, is so superior in the size and beauty of their blossoms to what is usual in the open bed as scarcely to be known to be the same plant.—CONDUCTOR.]

## ON THE CULTURE OF SALPIGLOSSISES.

BY MR. WILLIAM TAYLOR, OF ROSS.

FOR the information of such of your readers as may be desirous of cultivating this *singularly beautiful* family of plants, I send you an account of a method I have practised with perfect success.

Early in March I sow the seed, covering it about one-eighth of an inch, in wide-mouthed and hollow pots, well drained, in a compost of light yellow loam and heath mould in equal parts, adding about one-sixth of fine white sand, and place them on a shelf close to the glass in the stove (a cucumber bed might do, but on account of the damp there, I prefer the stove), watering with a fine syringe, so as to keep the soil just moist. As soon as they have four leaves each, I pot them into sixties, one in each, in the same compost, only adding a little fine vegetable mould, taking care to drain well with broken pots about the size of peas. I place them again on the shelf before mentioned, shading them until they can bear the light without flagging.

As the plants advance in growth they are potted into larger pots four times. I flower them in pots about six inches wide, and eight deep. To cause them to flower strong, I remove them after the third potting into a cold frame, facing the south, and on all fine days expose them, by drawing off the lights, to the full air and sun. This makes them grow stiff and bushy. When the greenhouse plants are removed into their summer situation, I give the *Salpiglossises* their last potting, and take them into the greenhouse, giving every day plenty of air, and I find they flower much finer for the previous exposure.

*Salpiglossis* will grow and flower in the garden in a satisfactory manner, provided they are planted out from the pots about the 1st of June, in rich dry soil, and a sheltered situation; but in my opinion, and my success bears me out, the situation to show them to the greatest advantage, is in the greenhouse amongst Cockscombs, Balsams, *Triverania coccinea*, and some species of *Gloxinia*. There they will flower admirably, and with proper management produce seed in abundance.

I usually sow a little seed in September, for the purpose of having a few early flowering plants. They require to be kept through the winter in the stove, close to the glass, in small pots, and then managed as to soil, potting, &c., as the spring-sown plants, and they flower finely in April, May, and June.

I think, too, rich soil very injurious: the plants often take the pet, and die off by the roots, in it. I have frequently seen plants with fine healthy leaves and flowers, dying gradually upwards. I cannot account for this disease, excepting by the soil being too rich.

To be certain to procure seed from *Salpiglossis atropurpurea* and *Barclayana*, it is necessary to impregnate them artificially; whilst *picta*, *straminea*, and their varieties, seed freely without any care. Upon examination, however, this apparently strange circumstance may be easily accounted for: the pistil in those species is considerably elongated, and the stigma on its summit is of a curious boat-like shape; and as the flowers stand quite erect, the pollen falls to the ground without effecting its office, unless by chance some friendly insect assist in the business, which, whatever it may do in their native situation, is not to be expected in our greenhouses.

By impregnating with different sorts, I find they sport into various and beautiful shades of colour and size; and I have no doubt many sorts will run one into another, which satisfies me that most of the kinds now ranking as species, will have to be reduced to mere varieties.

## TENDER PLANTS AFFECTED BY FROST.

BY SENEX.

AMATEUR cultivators of tender plants, especially those who have but little of glass protection, are liable to the casualty of injury from frost, and as some of my brother cultivators may not be aware of an antidote to such misfortune, I forward the following particulars, trusting they may be of service; and as winter is approaching, an early insertion is requested.

HEAT, or CALORIC, exists in two states, viz., latent and perceptible; when any two substances of different temperature come in contact with each other, the temperature of the one is raised, and that of the other is lowered, until the two substances become equal, and if they are of equal density, the temperature will be a mean one—this is provided that neither of these substances undergo a change from solid to fluid, or from fluid to gaseous. In this case a great quantity of perceptible heat will be consumed, and converted into latent heat; and if the change is from gaseous to fluid, or from fluid to solid, perceptible heat will be produced

from the giving off of the latent. Thus, if equal weights of ice at 32, and water at 172, be mixed together, the whole of the ice will be melted, but the temperature of the mixture will be 32, so that 140 degrees are lost, or converted into latent heat.

If a tender plant that will not bear the frost, a *Pelargonium* for instance, be exposed to an atmosphere of 32, or exactly the freezing point, it will not be injured, but if the temperature sink below that point, say 28, under ordinary circumstances, when the least circulation of air is, the juices of the plant will be frozen, and it will be injured by the application of perceptible heat, in its rising from 28 to 32; but if the temperature when at 28 is raised by the freezing of water, when the act of freezing, by giving off latent heat, raises the temperature to the freezing point, the plant is uninjured. It follows, therefore, that the application of water should commence before there is any alteration in the temperature of the surrounding atmosphere, that is, in a morning before the sun rises, or before a fire is put on, and continued until the temperature is raised to the freezing point; but if the temperature of a greenhouse should be sunk to 28, and a slight syringing of water applied, only sufficient to raise the temperature, by the congelation of its particles, to 30, a great injury will be sustained; if left to rise afterwards by perceptible heat to 32, as the agitation which will have taken place amongst the plants will have more effectually frozen their juices. The water which is used should not be much, if any, above the freezing point, or as cold as can be procured, so that the temperature of the plant should rise from 28 to 32, not by the application of a warmer substance so much as the converting of latent into perceptible heat. It is also of very great consequence that the leaves or no part of the plant should be moved when in a frozen state, as the cellular tissue, of which they are in a great measure composed, being of a very delicate texture, each cellule being filled with watery juice, which becomes frozen, the least bending of that part of the plant would rupture the membrane, which are only (and in many cases not quite) elastic enough to allow of the expansion of the water by freezing; it is therefore obvious that, instead of the water being laid on by a heavy rose, as I have sometimes seen, it should be done with a very fine syringe, like a shower of dew.

## GRAFTING THE CAMELLIA.

BY A LONDON NURSERYMAN.

IN a recent Number of this Magazine there is an article on Grafting, and reference is made to the Camellia. Now for *successful results* the particulars of practice are not sufficiently given. Having a very extensive stock, and increasing an immense number each year by grafting, I forward the following remarks, which, if properly attended to, success in every case is certain.

I beg to observe, that in GRAFTING the juices of the stock should be moving; therefore, every plant of the single red, which is to be grafted, should immediately be placed in a frame or moist stove, where the heat, by fire or dung, is not under sixty degrees, and be there retained till the

leaf-buds evidently enlarge. Small plants, ten or twelve inches high, with good heads and healthy foliage, and having main stems about one-fourth of an inch broad at the surface of the soil, are adapted to operation.

The *double* varieties which are to furnish the grafts ought to be excited also, till the buds become in the proper condition.

If old plants be selected, the graft must be chosen from among the upright and strongest shoots, for the great object is to obtain *one terminal* growing bud at the apex of the *last year's wood*, which approaches most nearly in breadth to that of the stock.

It will appear from what has been said, that a strong young Camellia, with a single, straight stem, must supply the best bud; for not only will it be most vigorous and juicy, but, by being cut back to a certain extent, will be made to send forth two or more lateral shoots, low on the stem, which will become the first branches of a well formed head.

When the bud chosen has grown half an inch long, showing its imbricated integuments, it is to be cut off with about an inch of the ripened wood. The *stock* is then to be cut over to within two inches of the soil, and both it and the wood of the scion are to be correctly pared by a very sharp knife, till the two surfaces match perfectly to the extent of an inch or more. Care must be taken not to intrude upon the base of the growing bud.

The adaptation being perfected, the parts are to be fitted to each other, bound tightly, and secured with strong soft bass, made quite pliable by soaking it in water.

The surfaces are then to be entirely covered with good grafting wax, worked up and rendered quite soft by the hand.

Thus the operation will be finished, and so complete is the success which attends it, that by a skilful operator not one graft will fail to grow.

But *this success depends almost entirely upon the total exclusion of air*; and this must be effected by inverting a cylindrical glass vessel (a common bell-glass will do extremely well) over the plant, pressing the rim firmly into the earth, removing it as seldom as possible. No bottom heat is admissible; but a steady temperature of sixty degrees will promote the junction of the scion with the stock. In the excitable condition of a bold, swelling bud, growth will soon be apparent, provided the stock be active. But if the inserted scion be poor and weak, it is possible that it may not be able to receive the rising sap, and thus both members will perish. Amateur cultivators may easily increase their stock by such attention.

## SHOWY FLOWERING PLANTS NOW IN BLOOM IN THE GREENHOUSES AT THE ROYAL GARDENS OF KEW.

*PIMELEA NEIPPERGIANA*.—The flowers are white, each blossom nearly an inch long, and the fine dense heads near three inches across. It is a profuse bloomer, and the foliage glaucous and neat. *Pelargonium*



*Unique*.—This is a fine variety for bedding; its rich purple velvet flowers are beautiful. Plants grown in pots in summer had been cut in about the end of July or early in August, which induced the pushing of new shoots. A number of plants so treated have been placed in the greenhouses, and are now in fine bloom; they appear likely to bloom through the winter. The same method has been adopted with some of the scarlet Geraniums (so called), which are in fine bloom. *Tetralochea verticillata*, a very neat-growing plant, and bearing a profusion of its beautiful violet saucer-shaped flowers. *Acacia platyptera*, with deep yellow globe flowers. *A. undulata*, with bright yellow globe flowers.—These pretty plants being now in profuse bloom, and likely to continue for months, are valuable for winter ornaments, and are fragrant too. *Fuchsia serratifolia*.—Numerous fine specimens of this very handsome flowering species are most beautiful. Every greenhouse, conservatory and sitting-room ought to have plants in them, which would be ornamental through winter. *Indigofera juncea*, rush-leaved. A profuse bloomer, its beautiful rose-coloured, pea-shaped, flowers in long racemes, produce a pretty effect. *Sollya angustifolia*.—A neat narrow-leaved plant, bearing a profusion of fine blue, bell-shaped flowers. *Hernandria paucens*.—A neat plant, blooming freely. The flowers are blue, with darker streaks. In form like a short bell-shaped Pentstemon flower. *Muraltia* (*Polygala*) *mixta*.—Its long spikes of pretty rose and white flowers produce a nice effect, it will bloom all winter, as also will *M. paucens*, bearing spikes of blue flowers. *Fuchsia corymbiflora alba*.—Several plants in profuse bloom, and its fine drooping heads of flowers, white tube and scarlet corolla, produced a charming effect. It is a fine variety for winter blooming, well meriting cultivation.

**CORRÆAS**.—Several of these very handsome flowering plants were just beginning to bloom freely, and will continue till next May, or longer. Their beautiful tubular-shaped flowers of various colour, have a pretty appearance. Every greenhouse should have a collection of them. *Roellia ciliata*.—Several fine specimens were in full bloom, and the large bell-shaped flowers of a light blue, and dark velvet rim inside, have a handsome appearance, more especially as the foliage is very small, and the flowers large. *Epacris grandiflora*, with red and white tip flowers. *E. albidus compacta*, pure waxy white, large; bell-shaped flowers borne in profusion. *E. autumnalis*, one inch long, red with lilac tip; very pretty; and *E. elegantissima*, tube deep red, with pink tip; very pretty. These fine Epacrises were very ornamental and valuable at this season. *Franciscea latifolia*, with numerous large flowers, violet and white, had a beautiful appearance. This plant is very valuable for winter bloom, as also is *F. floribunda*, a dwarfer plant, blooming profusely; the flowers of a violet colour. The flowers of both are fragrant. *Gardenia radicans* and *G. florida*, plants which had been forced a little, were in full bloom, and shed their delicious fragrance delightfully. *Gesneria zebrina*.—Some fine plants had been forced a little, and now coming into bloom; they will be highly ornamental all winter. *Gesneria seamanii* was also in fine bloom, with spikes of flowers 2 feet long. *Eranthemum pulchellum*, with its lovely

blue flowers, was beautiful. The last five kinds were in the stove. *Salvia pulchella*, with brilliant scarlet flowers, is a valuable winter plant; the leads require stopping in summer, to have the plant bushy, and in this state it is highly beautiful. Every greenhouse should contain it. *Leschenaultia formosa*.—Some fine specimens were in full bloom, their rich crimson flowers having a fine effect. The following *Ericas*, now in bloom, appear likely to flower for months. *E. rubens*, reddish-lilac; *E. mammosa pallida*, French-lilac colour; *E. tenella*, bright purple, and red tip; *E. mammosa major*, long spikes of drooping flowers—a pretty pink colour; *E. lanceolata*, rosy-flesh; *E. Boweiana*, white, long, pretty; *E. vestita major carnea*, pretty flesh colour, in long spikes; *E. Westcottia*, purple with white tip. *E. colorans*, white, neat, in long spikes. These are valuable blooming at this period. Chinese Primroses, of sorts, abounded in fine bloom, and produced a gay effect. We give the above list of plants, with a view to assist our readers in forming a collection of good autumn and winter blooming plants.

## BRIEF REMARKS.

TO PRESERVE TENDER BEDDING PLANTS IN WINTER.—Growth of such plants is not then required, only preservation. A pit with walls constructed of turf, or peat, half a yard thick, over which a wooden framework is fixed, will answer admirably where there is not the convenience of a greenhouse or brick-pit. The covering may be of wood, three-quarters of an inch thick, or with a thick cover of asphalt, &c. A sunk pit at the foot of a south-aspected wall also answers perfectly.

It is of importance to success, that the shoots of succulent plants, as *Geraniums*, be well ripened; if not, when the plants are first taken up it is of advantage to dry them for a few days in the sun: this will check their vigour, and at the same time dress off all the superfluous large leaves. These attentions tend to mature the soft shoots, such being the likely ones to be affected by frost or damp. These preparatives being done, let the soil in which they are to be planted be dry, and in this they may be placed closely, no water being required. All possible air, so as to keep frost out, must be given, and wet especially kept from the plants. Better keep the plants in darkness for many successive days than admit damp; the plants will not suffer from a want of light for that period. As spring is approached, so let the plants be gradually hardened. Hundreds of plants may thus be preserved in a very small space.—*A Practitioner.*

FAIRY RINGS.—Fairy Rings are considered by J. M. F. Dovaston, Esq., to originate in electricity. "When a column of electric fluid affects the earth, either ascending or descending, it scorches the ground all round its edges, where there is plenty of oxygen in contact with it; and leaves the centre unscathed, where the oxygen is either expelled or destroyed; so fertilizes the extremity. The consequence is that the first year's grass is destroyed, and the ring appears bare and brown; but the second year, the grass re-springs with highly increased vigour

and verdure, together with the fungi, whose seeds are so brought into vegetation, that without this exciting cause might have slept inert for centuries."—*Mag. Nat. Hist.*

**COMPOST FOR CARNATIONS.**—To two-thirds of yellowish turfy loam add one-third of *old rotten* cow-dung, or stable-yard dung, and these being well mixed up together, give a liberal sprinkling of drift or sharp sand. With good drainage and such a compost the plants, with due attention, will grow most vigorously. The mud from a pond, &c. laid out and become properly dry, has been found to suit this class of plants most admirably. An addition of well-rotted dung is required.—*An extensive Exhibitor.*

**POTENTILLAS.**—Last autumn I procured the following *Potentillas*, and had them planted so as to fill a nice-sized round bed; the most vigorous growers at the centre, and gradually declined to the outer row. The bottom was properly drained, and the soil is a fresh loam tolerably well enriched with leaf mould and rotten dung. They grew admirably, and bloomed most profuse; certainly nothing could appear prettier than the bed was for many months, each successive day displaying its new beauties. I watered the bed occasionally during the dry season, and nothing more was required but having the branches supported by small sticks, and the bed was wholly covered. The plants are now in fine bloom (November 6th), and likely to continue. The sorts I grow are—*Atrosanguinea*, very dark crimson; *Bainesii*, scarlet with a yellow centre; *Brilliant*, fine red; *Floribunda bicolor*, scarlet and velvet; *Formosum*, rich rose; *Fulva*, mottled red and lemon; *Garnerianum*, lively lemon and rosy-red spot at the base of each petal; *Grandiflora*, crimson-scarlet; *Hopwoodiana*, white and cream-colour, shaded with rose; *Incomparable*, rich crimson, very large; *Insignis*, rich yellow; *Mackayana*, bright crimson; *M'Nabbiana*, vivid scarlet; *Mayana*; *O'Brienii*, orange; *Maculata*, lemon and red with numerous dark spots; *Menziesii*, rich crimson; *Pensoni*, fine crimson-red; *Pennsylvanica*, yellow; *Obscura*; *Plantii*, scarlet with yellow centre; *Russelliana*, dark crimson; *Thomasa*, bright yellow. The bed was in an open situation, and the plants did not draw up weakly, but were robust, and bloomed in profusion.—*A Country Clergyman.*

**CULTURE OF CAPE BULBS.**—Lately, I observed, a correspondent asked for particulars relative to the culture of Cape Bulbs in the open ground, such as *Ixia*, *Sparaxis*, *Watsonia*, and of the *Gladiolus*, &c. I have grown them extensively for many years in the following manner with great success.

I have a south-aspected brick wall on the north side of a flower garden, and a broad border extends in front fifty yards long and three broad. The wall is covered with the finest kinds of training plants. A gravel walk is in front, and half the width of the border is devoted to the culture of *Ixias*, *Sparaxis*, *Gladiolus*, &c. I have the tallest at the back, and the lowest (*Ixias*) at the front, next the walk. When in bloom nothing has a more delightful appearance. The border is well drained, which is essential to success, and the excess of wet is carried off by the walk drain. The compost is formed of yellow turfy loam, turfy peat, and well-rotted leaf mould, in equal parts. I plant them

the first week in November, the larger bulbs deepest, and the *Ixias* are covered about five or six inches. The border has a gentle slope to the front. About the end of November I cover the bed over with half-rotted leaf mould six inches deep, which saves the bulbs from injury by frost. This covering is removed early in March. If the weather be dry in spring I give a liberal watering (soft water from a pond), as much as will sink a foot deep, and repeat if dry weather continue long. When the flowering period is over I do not water, but allow the foliage to die, and the bulbs are taken up in due course. I have half of this long bed re-planted each autumn, and the bulbs in the other part have remained unmolested for the last two years. These plants bloom more vigorous than those I replant each season. And I am of opinion that if the bed be in a warm, sheltered situation, have it well drained, and the bulbs planted deep, as above described, they flourish much better by not being disturbed. At all events, once in five years would be sufficient.—*Capensis*.

AMERICAN ALOE.—The *Agave Americana* rarely blossoms in this country, but a friend of mine who has just returned from New Spain informs me that in the north of that country he saw immense numbers of the brown, withered flower stems, strong and thick as a Larch Fir of thirty years growth, and from thirty to forty feet high, with its withered blooming branches, and withered golden-yellow flowers, spreading like a vast candelabrum. Plantations of them are made, and in the valleys they grow most luxuriantly. One acre of ground will contain a thousand plants. A proprietor who has (as is the case) from thirty to forty thousand is a very rich person. In some districts vast plains are covered with such plantations as far as the eye can reach. The juice or sap (commonly called the honey from its abundant sweetness) is collected and taken as a most delicious beverage. It is of an agreeable bitter-sweet flavour, and undergoing due fermentation is prepared. This vinous liquor somewhat resembles our cider, and being extensively sold is a valuable commodity. This juice, or sap, is only afforded when the flowering stem is about to appear, so that particular attention is given at that period so as to obtain the juice. The quantity which a plant will supply is enormous, each being calculated to yield one hundred and fifty bottles, which is worth about thirty shillings of English money.

In good soil and situation the *Agave* blossoms at the age of five years; in medium soil, eight years; in poor soil and exposed plains it is usually from fifteen to eighteen years. The juice is obtained by cutting through the bunch of central leaves, from which the flower-stem is about to burst forth. The side leaves are turned up and tied together, and in this cleft the sap which was destined to form and nourish the gigantic flower-stem is deposited; and this vegetable fountain continues to flow for three months, and may be tapped three times a day. After this process the top dies and suckers issue forth, and with them new plantations are made.—*A Subscriber*.

FUCHSIA SPECTABILIS.—Having noticed in the November Number of the FLORICULTURAL CABINET an Article headed *Fuchsia spectabilis*, and other sorts, by Mr. D. Kidd, gardener at Garnstone Park, Hereford, I

was struck with reading an account of so fine a specimen as the one he named, I not having been very far behind in producing good specimens of most of our favourite varieties. As regards the spectabilis, I with most others, have failed. If Mr. Kidd, would favour us in an early Number of the CABINET with the mode of treatment he has pursued to obtain so fine a plant, he will bestow a great favour on me and many other readers of that most valuable work.—*A Ten Years' Subscriber.*

[Immediately we applied to Mr. Kidd, who referred us to the particulars he had lately sent for insertion in the *Gardener's Chronicle*, at the request of Dr. Lindley, and gave us permission to state the particulars here, if sufficient information was contained in the account. If more was necessary, Mr. Kidd most kindly promised to give us the total, for which we thank him.—CONDUCTOR.]

“*Fuchsia spectabilis.*—In answer to many applications that have been made to me, I beg to state that I experience no difficulty in growing this Fuchsia to any size I please. The points to be guarded against are fire-heat and over-much sun, both of which it dislikes. The soil which I use for it is one-half turfy loam, the other half crushed bones, old mushroom dung, and soot. I give the last shift just before the plants are arranged out of doors in spring. They then occupy an east aspect, where they receive the morning sun till 10 or 11 o'clock, and afterwards stand in half shade the remainder of the day. I apply the same treatment to all other kinds of Fuchsias. Many may be inclined to ask, how I winter such large plants as I produce? I answer that I throw them all away, and raise young stock every spring. Observe, however, that *F. spectabilis* makes a splendid winter plant for the conservatory, when not exposed too much to the rays of the sun.—*D. Kidd, Nov. 20.*”

ROSE GIRDLE.—We have been favoured through Mr. Hamilton, seed-man, of Cheapside, with a few of the registered Rose Girdles, and we think them well worth recommending to our readers.

It is a zinc band, having a nut and screw to hold it, and made of sufficient width that the name of the plant which it secures may be painted or written thereon, thereby serving the double purpose of a label; for although the name Rose Girdle has been adopted, it is an efficient label, and equally beneficial for supporting all standards to their stakes. It is one of the most useful and simple articles we have had introduced for gardening purposes, and the low price at which it is sold is certain to ensure for it an extensive sale. Mr. Hamilton, we see, advertises it at 1s. 6d. per dozen.

TO GET RID OF WORMS IN A LAWN, &c.—I shall be greatly obliged if some reader would favour me with the best method of getting rid of worms, which I find so destructive to a grass lawn. Some individuals have advised an application of salt, others lime, whilst again salt water has been stated as best of all. I want an effectual remedy, but not one that will destroy the grass. An early answer will very much oblige.—

W. P.

[Get some gas-tar, dilute it with water, and give a good soaking of it. Some gas-tar is much stronger than others; you had best try what proportion can be applied without injury to the grass, on a piece of

spare grass land. Having given time to ascertain its effects, use it in due proportion. This will answer your purpose.—CONDUCTOR.]

**MAKING ROSE-TREES IN SIX WEEKS.**—In the *Cottage Gardener*, Mr. Beaton gives the following particulars relative to this subject: “A gentleman, who had recently been in Scotland, had seen the successful results of accomplishing the above, and which was done as follows: ‘Any time, or soon after midsummer, fix on a strong shoot of last year’s growth, and when you find it getting hard near the bottom, put in the knife just under a bud, and slit it up just as you would a carnation for layering, put in a wedge to keep the slit open, and tie a ball of green moss around it, and the work is done. The tongue immediately pushes roots into the moss, and in six weeks it is fit to be cut off below the moss, and be potted, &c.’”

**SHOW PELARGONIUMS.**—Mr. Beck, a very successful exhibitor at the Great Metropolitan Shows, states, that the following varieties were shown in his successful collections, viz.: Blanche 3 times, Rosamond 3, Gustavus 2, Mont Blanc 7, Rosalind 4, Gulielma 4, Cuyp 6, Painter 5, Star 5, Emily 4, Delicatissima 2, Emelia 2, Governor 4, Centurion 3, Sarah 3, and Cavalier often.

**FLOWERS IN COVENT GARDEN MARKET.**—At nearly the close of November, we find a vast profusion of cut flowers made up into bouquets, &c, and comprising the following kinds, viz.: *Bignonia venusta*, *Stephanotus floribundus*, *Euphorbia splendens*, *Cactus truncatus*, *Cactus truncatus purpureus*, Chinese Primroses (double white, double red, and the single ones), numerous varieties of Camellias, Cinerarias, *Luculia gratissima*, *Daphne odora*, *Begonia manicata*, *Epacris grandiflora*, *Heliotropes*, Yellow Roses, *Pimeleas*, *Corræas*, *Alonsoas*, *Lotus jacobæus*, *Coronilla glauca*, numerous *Chrysanthemums*, *Salvias*, *Geraniums*, *Gardenias*, *Jasminum* (white and yellow), *Ericas*, Indian Azaleas of sorts, &c. [We give this list that our readers may know what kinds of flowers they might have at this period of the year. Besides what we enumerate, there were abundance of the Sweet Violets, and other common out-door flowers.]

**CLASS SHOWING IN FLORISTS’ FLOWERS.**—We fancy that no greater benefit can be devised or practised in connexion with floricultural pursuits than class showing, and we respectfully submit to our amateur patrons the urgent necessity that exists for extending their influence in support of the same. Wherever respectable florists meet, and honourable men congregate, there, we would suggest, let class showing be the first consideration. To the real lovers of good flowers it affords the most intense pleasure; it is the only test of relative perfection, and the true guide to judicious selection as regards varieties for future cultivation. It is by no means a case of unfrequent occurrence in stand showing of Carnations and Picotees, to witness, out of twenty-six blooms that have obtained a first prize, several flowers that in class showing could never have been placed at all. We admit that among the others they looked showy, and even pretty, yet intrinsically valueless. We do not wish for a moment to deteriorate the extreme propriety of stand showing at all large exhibitions, where, from the very magnitude of the arrangements so requisite in such extensive affairs, class showing would be

little less than an impossibility; but we are only anxious to show the utility of the latter as regards the well-being of floriculture as a science. While perfection is desired in any particular class of flowers, its gradual attainment must be a subject of intense interest to all concerned; and where, we ask, can its progress be followed with such precision as in carefully observing a flower's merits or defects when placed bloom against bloom with the best in its class? The eye is not diverted from the contemplation of its every beauty by other attractions, or blinded to its defects by witnessing them in a greater degree evident among their opponents' collections. Comparative perfection is the pivot on which success must turn; every point is canvassed, every property is discussed; the very fact of the argument being maintained at all is a self-creative evidence of its extreme propriety; ignorance could not support it, or indifference originate it. We may, therefore, fairly claim for our system ability and anxiety; the first in producing desirable introductions, the second in an earnest wish to equal them. Flowers raised, grown, and shown under such circumstances, become as a matter of course the gems of their class; they have been put to the proof, and take their stand as deservedly first-rate varieties. We feel assured all our amateur friends will think with us, that the more of such flowers we see the better. Encourage class-showing, and fine flowers will be ensured for their stand exhibition—the brightest ornaments in our grand metropolitan shows.—J. D.

**RHODODENDRON MAXIMUM.**—During my wanderings in America I only met with it once; it was in a valley in the Virginia mountains; it there forms an immense and splendid grove; the road winds through it for a considerable distance. While in it, it was with difficulty a glimpse of the sky could be seen through the dense foliage. It was mixed with *Kalmia latifolia*. I am afraid to hazard an opinion of their height, or the size of their stems; yet I might venture to guess them to be about thirty feet in height, and many of the stems as large as a man's thigh. I supposed them to be the variety mentioned by Pursh, which he calls *Maximum Purpureum*, he says: "It grows to an immense size; its stem is often found eighteen inches and more in diameter, and the foliage triple the size of any other species."—T. B.

[What is more beautiful than a pleasure garden of American Rhododendrons, &c., at all seasons admirable.]

**DOUBLE-FLOWERED PELARGONIUM.**—I have observed several notices recently made about these flowers existing at certain places. I have seen three varieties, but one which I received from a lady residing at Ramsey, in the Isle of Man, is very much the best. It is of the class usually termed Scarlet Geraniums, and the flowers were of a pretty rose-pink. It is well worth obtaining, and I think would be a useful acquisition to the bedding plants. It is well worth applying to a friend in the island for it.—*Clericus*.

**HOW TO APPLY SULPHUR EFFECTUALLY.**—In order to prevent the appearance of the mildew-scurge upon *Boronias*, *Ericas*, and, in fact, all choice greenhouse plants, mix the sulphur with soft water, and so apply it; but in order to avoid its unsightly appearance, add as much of ivory black as will make it of a good hard grey colour. This mix-

ture, if used sufficiently thick, so as to pass through the rose of a common garden syringe, and thrown over the entire collection once, twice, or thrice a-year, as the case may be, will be sufficient to prevent that, which is better than to cure. For this I am indebted to a gentleman of Berlin; and having tried it successfully for some years, I can with confidence recommend it to others. This, in my opinion, confirms what Homunculus says, viz.: "It is more effectual, more cheap, more clean, and, to my mind, ten times more practicable than using it in a dry state."—*Joseph Goode.*

MELON CACTUS, CLOTH OF GOLD ROSE, &c.—F. a subscriber, will feel extremely obliged by some cultivator giving some instructions, through the medium of this Magazine, for the treatment likely to produce flowers on the Melon Cactus. F. has two plants of it, a young and old one; both grow well, and look healthy, but never blossom: different temperatures have been tried without success. With regard, also, to the Cloth of Gold Rose, F. has been greatly disappointed, having had a plant for three years growing vigorously, but which has not produced a flower during that time. The aspect is a sheltered one. soil shallow, and it is never pruned. Directions respecting it will confer an especial favour.

STRIKING THE ORANGE, LEMON, AND CITRON, BY CUTTINGS.—My mode of increasing the Orange, Lemon, and Citron, for many years with great success may be of service to some of your readers; I therefore send it for insertion. It is from single eyes with a leaf attached to it; I immerse the eye in the mould about half an inch deep, and they begin to make roots very soon, sending up a strong shoot at the same time. I have struck fifty to a hundred in a large sized pot, and scarce one of them failed, and of course a plant on its own bottom is preferable to a plant introduced on another stock. When potted, they should be watered liberally, and introduced into dung heat and shaded. I find they strike most readily in a cucumber bed, the pots plunged to their rims. The compost I generally use is rich loam and rotten dung, the pots well drained, and about three inches of soot at the bottom of the pot.—*A Nobleman's Gardener.*

WATERING POT-PLANTS IN WINTER.—An excess soon destroys them. And if, on the other hand, you allow the soil to be *so dry* that the delicate parts of the roots cannot *absorb moisture* from it, the proper supply of food is withheld, and the plant suffers in proportion to the time it is so treated, and soon dies. At each watering give sufficient to moisten *all* the soil, and only give a repetition just before it would arrive at a dry state.—*Sarah Jane.*

CINERARIAS.—The following treatment with these lovely flowering plants succeeds most admirably.

Plants *now* in three or four-inch (diameter) pots should immediately be removed into five or six-inch ones. Use free drainage, and have a rich compost of good prepared turfy loam, old rotted cow-dung, with a little of leaf mould and silver sand. When the plants push shoots stop the leads; this will cause lateral ones to push: as they do, thin away the weak ones, and leave four well-placed ones, and give them every encouragement to promote vigour. When the pots become filled



with roots repot into eight or ten-inch pots, using the same kind of materials for compost, but having a larger proportion of loam; as in spring more moisture is required, the loam will in proportion retain more. Fumigate the plants if green-fly appear, readily done with the new fumigator. (See advertisement.) Always have the plants placed as near the glass as convenient; the plants are bushy in proportion. During winter and spring these are charming ornaments for either the greenhouse or sitting-room. Their beauty and fragrance are very cheering.—*Lucy Ann.*

**STANDARD CAMELLIAS.**—Last spring I saw half-a-dozen beautiful formed Standard Camellias. Stocks of the single red had been divested of their side shoots, and at four feet high they had been inarched. Three of the plants had only one variety each, whilst the other three stocks had had the leading shoots stopped, and year-old side shoots being obtained three were retained on each plant, and one distinct kind had been inarched to each side shoot, so that the three plants had nine kinds upon them; and as attention had been given in selecting those kinds which were the most opposite in colours, they produced a charming effect. The nice straight clear stems, and fine, almost globular heads, in profuse bloom, were highly attractive. They were placed in a greenhouse, and amongst a collection of plants, but the heads, with about half of the stems of each, was seen above the general stock of other plants.—*The Hon. J. C. W.*

**PELARGONIUMS.**—The following varieties were exhibited at the London Shows during the past season, and were in the winning stands the times stated. Pearl, 22; Forget-me-Not, 19; Negress (Garth's), 18; Gulielma, 18; Centurion, 16; Orion, 14; Rosamond, 14; Star, 10; Salamander, 9; Mont Blanc, 9; Armada, 7; Ariel, 7; Norah, 6; Victory, 6; Gustavus, 5; Cassandra, 5.

**CYCLAMEN EUROPEUM.**—I shall be much obliged if some reader will inform me what is the best method of cultivating the Cyclamen Europeum. I have tried various ways of keeping them through the winter, but without success. I wish to be favoured with the *whole management* of them.—C. M.

**AMHERSTIA NOBILIS.**—If, as we suppose, it must be conceded that the Victoria Regina is the most splendid flowering *herbaceous* plant yet known to us, we may with equal justice say that the Amherstia nobilis is the most superb *arborescent* plant. Dr. Falconer writes to Sir W. J. Hooker from the East India Company's Botanic Garden (May 1850), "Our Amherstia has been in great glory this year, and after a sad tendency to decay, I have brought the tree back to the highest promise of vigour by a treatment I believe unknown to English gardening. There were, I suppose, upwards of 500 racemes of flowers upon it (each blossom is                  across) six weeks ago, and abundance of young leaves in the green, and bronze colour, slate, all at the same time. Three pods set upon it, one of which has ripened. The new mode of treatment is to sink vertical pipes of bamboo (hollow) canes four and a-half feet long, in three rings (or circles), extending nearly as far as the extremities of the roots, and filling them with water at the night. The pipes are left open, and the double purpose is served of

giving moisture below among the roots without caking the surface, and aerating the roots and subsoil. The effect has been marvellous upon the *Amberstia*." It has bloomed most profusely.

**ON PLANT POTTING.**—The organic part of plants generally amounts to about nine-tenths of their whole bulk; and as this matter is chiefly produced from, and through the influence of, atmospheric air and water, and these being largely extracted by their roots as well as by their leaves, it points to the propriety of having the soil in a condition to allow an unimpeded access of these gases to the roots of plants. For some years I have used nothing but turfy loam for the various purposes of potting, suiting it to different plants by the addition of charcoal, pebbles, and sand,—being guided in the proportion of these latter substances by the nature of the roots and general habit of growth; and as by the judicious application of manure-water, when and where requisite, I obtain, through simple means, all the advantages that can be derived by the use of the various mixtures recommended under the name of composts, I therefore look upon these, in many cases, minute proportionals of different soils and manures, as being altogether unnecessary. There is by far too little importance attached to the aëration of soils; by bringing them in contact with air both the mineral and vegetable ingredients are decomposed, their latent powers of action drawn out, and rendered directly available for the purposes of vegetation. Hence the advantages of trenching and subsoiling, the freezing and pulverizing of soils; and though it is impossible, in the present state of knowledge, to trace all the operations of the various agents that are daily producing changes in the animal, vegetable, and mineral systems, we know that in the absence of air and moisture, substances may remain unchanged; but under their combined influence, the most imperishable must ultimately succumb. In collecting soil for potting, I prefer turves cut from a dry pasture, secured in dry weather, and piled in a heap until wanted for use. If these have been procured from soil of a retentive, adhesive nature, it can be corrected by the addition of sand, charcoal, &c. Charcoal is both a chemical and a mechanical agent. Its value as a manure is derived from its property of absorbing moisture and various gases—particularly ammonia. A celebrated chemist says: "Charcoal is capable of being used with advantage in abstracting the ammoniacal and other salts, which gives its value to the liquid of farm-yards. Experiment has shown that when filtered through a bed of charcoal the liquid escapes without colour, and almost without taste, while the charcoal is itself converted into fertilizing manure." Such is the theory of its action; and its practical efficacy has been sufficiently proved to rank it as a valuable ingredient in soils. The heap should be frequently turned over, to expose every part of it to the influence of the weather, and preserve it in a healthy state; and that it may be of easy access during winter, it should be kept under cover, and always used in as rough a state as the size of the pots will conveniently allow. In the first place, the pots should be thoroughly clean and dry; and as complete and efficient drainage is indispensable, the material used for this purpose should be in quantity corresponding to the size of the pot.

*Broken pots, or crocks, as they are generally termed, are most in use ; but charcoal, bones, bricks—broken up—or small stones, will answer this purpose equally as well. When the pots are large, a good system is to invert a small pot in the bottom, filling the space between it and the side of the pot with the drainage. A plant should not be potted when it is very dry, nor when soaked with wet. If in the former case, it is very likely to remain so, as the water will pass through the fresh soil without penetrating into the old ball of earth ; and if in the latter state, it is not in a very good condition to be surrounded with an additional layer of earth. When the roots are thickly interwoven they should be carefully disengaged, that they may be spread out into the fresh soil ; but in shifting young, healthy, growing plants with the roots just reaching the side of the pot, they should not be disturbed, as it is important to preserve the smaller fibres, upon whose action the health of the plants chiefly depends. In cases when the plant is unhealthy and the roots in unfavourable soil, or in repotting deciduous plants that have been kept in a state of rest during winter, the ball of earth should be broken up and nearly all shaken out, that the young roots may at once enter the fresh soil. It is also necessary to examine the stem, in order to guard against deep planting. The ordinary advice—“ Never plant deeper than before,” is well enough, provided it was not deep planted before. But this is too frequently the case to be passed over in this way ; and when plants are raised from cuttings, they must necessarily be deeper planted when young than is consistent with their future welfare ; the soil should be cleared away until the base of the stem is level with the surface. I have seen valuable plants lost through neglect in this respect, even after they had attained considerable size. It is necessary, especially in potting hard-wooded plants, to make the soil moderately firm. It should not, however, be rammed, but rather fitted in, spreading the roots into the fresh soil, finishing off with a level surface, and leaving sufficient space for watering.—*Horticulturist.**

**THE PLEASURES OF GARDENING.**—We know not one fancy, one recreation, so unalloyed in all its points as the cultivation of a garden. It seems to afford, in common with all the rest of the fancies, the full enjoyment common to all, and to have a large balance in its favour. The miser over his treasure gloats not more completely upon his money than the gardener does upon his choice fruit, flowers, and vegetables. The picture-collector is not prouder of his paintings than the florist is of his Tulips ; nor does the owner of the ancient gems of art point them out with more satisfaction than the gardener shows his best named flowers. If the owner of a gallery of pictures has his Rubens, his Leonardo da Vinci, his Paul Potter, so has the owner of a bed of Tulips. The florist combines in his single garden as many fancies as would occupy half the population, and delights in all of them. What if the conchologist boasts of his collection of shells? He can only look at them in one state ; there they are, always alike, no change ; only a few people can see them at once, and not one in a thousand, though they may be pleased with the beauty, can estimate the rarity of them. The antiquarian pores over his coins in solitude ;

he boasts, perhaps, that this crown, that guinea, or the other medal, are the only known ones in existence; but can he increase them? Can he oblige a single friend with an offset? Will it ever be better? but, if another be found like it, will it not be worse? What has he rare that the florist may not in his own estimation equal? The Tulip-grower would say, "What coin have you got equal to my fine Louis XVI.?" And no possessor of the only coin of a kind prizes himself more upon his treasure than a florist does in twenty different flowers of twenty different families. The lover of the garden is a general collector, and a creator of new beauties into the bargain; he sows his seed with pleasure, he watches the progress of his plants with interest, he looks for their opening flowers or swelling fruits with anxiety; and if his hopes are crowned by one solitary plant, fruit, or flower, better than his present stock, he is repaid for all his trouble, labour, and watchfulness: if not, he begins again, nothing daunted, saying to himself, "Bad luck now, better another time." Is there any fruit eats so sweet as that from our own garden? Does not every day develop some new claim to our attention? Every new visitor in the form of a flower, or fruit, or vegetable, is a welcome one. A man does not go into his garden, as he must into a gallery of pictures, a cabinet of coins, or a museum of natural history, to see the same things in the same places time after time: he finds something new every day: his beds of Tulips and Ranunculuses, his collections of Picotees, Carnations, and Pinks, his Pansies, Dahlias, Auriculas, Polyanthus, and other flowers, come in, one after the other, to reward him for his recreation; for, though there be much exertion occasionally required, he will not call it labour. His vegetables and his fruit repay him for the trouble and expense he incurs; and, after all, there is one sweetener to all his cares, one refreshing reward for all his anxieties, one circumstance that gives an additional relish to all he personally enjoys, and it is this,—he has not to seek a connoisseur to participate in his happiness, for ask whom he may to see his establishment, all the classes of society are delighted with a well-kept garden. It delights all the senses: its fragrance, its brilliancy, its usefulness, all speak to us in language not to be misunderstood upon the numerous pleasures and duties which are inseparable. But there is one point of which we must not lose sight; it is the facility with which every class of society can accommodate his gardening to his means, and yet excel as far as he goes; one cottager, with scarcely more ground outside his house than his house covers, can be king above his neighbours for the growth of Stocks; another prides himself upon his double Larkspurs; a third will allow none to surpass him in Pinks; a fourth will shine in Pansies; and so, according to the means at his disposal, the owner of a garden may be ambitious, successful, and happy.—*Thomas Miller.*

AN ECONOMICAL GREENHOUSE AND PROPAGATING HOUSE.—The summer of 1849 was to me the commencement of a new era. I had read of beautiful beds of Scarlet Geraniums; the richness and splendour of the Verbena and the Petunia, the Heliotrope and the Cuphea, also came under my notice; and by dint of begging—very common with amateur florists—by the end of July I found myself possessed of some

hundreds of plants, all vying with each other in gratifying my senses. Let me confess that, amidst all my joy in possessing this store—greatly heightened by the praise I received from my friends—there was in my mind a hidden sorrow. These must all perish, thought I, before the blast of the wintry winds. I talked the matter over with my wife. We read in your book how slight a covering might preserve them. We longed for a greenhouse, but the expense seemed so great. I could get nothing built under 20*l* or 30*l*. I began to consider whether I could not manage to raise something by my own hands. I meditated and calculated, and having entered deeply into the design, I found, by examination, that the materials were not so very costly, if I could find time to use them. I did not doubt my ability to form a habitation for my favourites, if the materials were within my reach. Many times of an evening I drew out plans suitable for my garden, marked out the position of the building, and went to bed to dream of the preservation of my plants. Surely, where there is a will there is a way! One fine evening a friend, used to bricks and mortar, heard my longings for a greenhouse, and, willing to gratify my wish, offered to lay the foundation. He had seen my plan, we had even marked out the dimensions; and about my premises lay, as luck would have it, some 300 bricks and a moderate supply of mortar. We went to bed, and my friend rose early. At six o'clock I walked down the garden, where I found the foundation dug out, and nine inches of brickwork already laid. Eighteen inches of wall were raised that morning, and there the work stayed. The foundation measured eleven feet by seven; and our plan was that the front should be four feet high altogether, rising to seven feet at the back. How the plates (I began to learn builders' terms now)—how these were laid, all unplanned; how the frames were rabbeted, and the glazing accomplished (upwards of 150 feet of glass all puttied in by myself), and the whole painted inside and out, and a nice sliding sash in the roof, and a swinging one in the front, and a little narrow door in one corner—how these were all done it seems now quite a mystery; yet before the middle of September I could shut the door of my little building and say, "Here is a home for my tender nurslings!" A wide shelf in the front, and a stage leaning against the back, completed my furnishings; and I counted room for 250 pots, or more, of 60s and 48s. The beginning of October warned us that the time was come when the plants must be housed; carefully we took them from the ground, potted them, shaded them for some days under your directions, and when they were removed to their winter quarters, few showed any signs of decay. None can know, but by experience, the inward joy I felt at the result of a little industry. My house had cost me less than 5*l*.

At length the frost came, and my next thought was, how to keep him out. I matted the top; being low this was not difficult; but still my thermometer told me that I was too cold within. I determined to find a stove, and after some consideration I purchased one at Cadman's, Newgate-street, for 18*s*., and a sack of fuel for 5*s*.; this, with the exception of a slight smell, answered the purpose admirably, as it would keep a-light, by management, for twelve hours easily, but the fuel was

expensive. When this prepared fuel was gone, I procured some charcoal dust, almost useless in commerce, and having sifted the very fine away, I charged my stove with this. To my great pleasure this burned quite as well as the more expensive coal, with little, if any, more smell, and cost me next to nothing. Now, then, I saw my plants in safety, and henceforward I entertained no fear; five shillings more than covered the expense of all the winter months, and many times the fire continued untouched for twenty-four hours. I never lost a single plant all the winter. One drawback there was, especially if my plants had been in delicate flower, namely, there was more dust than I could have wished; but my object was to preserve my plants, and in this I succeeded to my utmost wish.

Winter now yielded as much pleasure in gardening almost as summer. Every morning my wife and I visited our greenhouse, and inquired diligently of each, almost daily, how they fared. The Geraniums continued in full leaf, the Petunias continued to flower, the Verbenas mildewed a little, our Phloxes also continued in bloom, and every day almost some flower would greet our eyes. Thus the greater part of the winter passed, and about February we found our Geraniums making way. Then came the idea given us of striking cuttings of Verbenas and Petunias for bedding out in spring. This we managed in a way peculiar, I think, to ourselves, and which I think worthy of recording. When I purchased my stove, I had an iron pan made to fit the top, so that when I wished I could take away the usual cover or lid, by which aperture the stove is fed, and substitute as a cover my iron pan, holding water to create a moisture; this was about five inches deep and fourteen inches square. We filled this for about three inches with broken charcoal and gravel, and above this one inch of pure sand, and having well watered it and prepared eighty-one cuttings of Verbenas about two inches long, we placed them in the sand in nine rows. They looked like a little forest. The stove gave out its heat to the house, and generated sufficient heat to the sand, so that in ten days I found my pretty little slips starting freely at the top. I scarcely dared to disturb one; however, about the twelfth day I ventured to look at one of the most healthy, and judge of my surprise to find that the roots had shot out on all sides, three-quarters of an inch long in some of them. No time was lost. Some small 60's were prepared with common garden mould, four of the cuttings placed in each, carefully shaded and kept comfortably warm until they grew to six and eight-inch plants, and at length when May appeared, took their place in a neat bed, heart-shape—for this was very near my heart—and soon produced such a grand and dazzling appearance as almost to intoxicate me with delight. This was my first effort, and from that moment to this when I write, August 31, they have never failed to obtain the admiration of my friends; nay more, my neighbour, a gardener of some experience, paid me the compliment of saying, "You beat me at Verbenas."—*Cottage Gardener*.

NEW DAHLIAS.—To those we described in our Number for October, we add the following:—

*The Dahlia King*.—A rich crimson; of fine form, good outline,

well up in the centre. We only saw one flower, which was of medium size; but we are informed by a celebrated judge, it is all that can be desired.

*Barmaid*.—White, with the centre somewhat green, but the form is excellent.

*Kingfisher*.—Good form, large size; salmon-red and white. A fancy flower.

*Baltic*.—A deep gold colour, but deficient in shape.

*Mrs. Palmer*.—A dull orange, well up in the centre, good petal; but the flower is flat.

In addition to what we have particularized, the following were exhibited; and a friend, on whose judgment we can depend, states, in the *Midland Florist*, they are too good to be thrown away quietly, and yet too bad to do anybody credit, at a great price. Those who order must throw the onus upon the persons recommending them:—

Carminate, Ambassador, Wonder, Country Gentleman, Le Grand, Mary, Lady Craven, Colonel Bacon, Minerva, John Weeden, Rosalind, Mr. Clayton, Lady of the Lake, Lady Cathcart, Masterpiece, Prince Arthur, Lovely, Miss Hayle, Coquette, Nonsuch, Tricolor, Pretty, Miss Hawtrey, Duchess of Sutherland, Victory, California, Lady Watson, Barraud, Stonehenge, Novelty, Rosebud, New Standard, Beauty of the Grove, Sir Robert Peel.

The following he rejects wholly: Pretty Polly, Beauty of Chelsea, Criterion, Maid of Lodi, Mr. Neville, Admiral Napier, Miss Farmer, Julian, Queen of the Fairies, Napoleon.

GREEN FLY.—Priscilla writes: "I have a number of *Cinerarias* just coming into bloom in my greenhouse, and the green fly has attacked them, and spread, too, to a number of *Geraniums*. What is the best remedy?" [A strong tobacco-smoking of the house: and, when the operation is over, burn a lot of sweet-smelling herbs, or seeds, open the sashes and doors, and the smell of tobacco will not be left. A good syringing with soft water is beneficial afterwards.]

ROSES IN WINTER AND SPRING.—To bloom the China, Tea, Bourbon, and Perpetual Roses in pots, they should be treated as follows. With it I had a fine display in my greenhouse from November 1849, to May 1850. It is well deserving the attention of all who have the means to accomplish it.

Early in 1849 I informed a nurseryman Rose-grower what I wished to accomplish, and requested him to make me a selection to bloom the period above stated, and to favour me with instructions to succeed in blooming them well. He did so, and I now detail the procedure which answered so admirably. The Bourbon and China Roses are best for profusion *in winter*.

On March 7th, I obtained a stock of plants, and from them selected a portion that were to bloom freely from the beginning of December to early in April. I pruned them immediately, placed them in a cool frame, and when the buds were about bursting, I shook off the old soil, and any *old* roots I cut in to induce them to push as many fibrous roots as possible. I re-potted the plants in clean pots, in equal parts of turfy chopped loam (six months prepared), and one-year old cow-

dung, which was then in a pulverized condition. I returned them to the frame, gave all air in the day, and at the end of April I placed them on a sunny border, in a open situation, and plunged them to the rim in ashes. Here they remained till the end of July, having due attention. As the plants showed for blooming I pinched off the flower-buds. At this time I removed them to a north border behind a low hedge, plunged as before, pinching off Rose-buds. About the middle of September I cut back all the new shoots, so as to leave about three buds on each; and early in October I removed the plants into a cool frame, and occasionally watered with liquid manure. They soon pushed, and the forwardest were successively removed into my greenhouse, which is of medium temperature, and is in connexion with a sitting-room, where I had a constant bloom till May. It is essential to get the wood *well-ripened*, by exposure to the sun, and then to keep the plants cool afterwards to retard their pushing towards the end of summer.

My other portion of Roses I treated in a similar manner, but kept them *later* in spring, and introduced them into the greenhouse, so as to have them in bloom from August to the end of November. This is readily done; and as these were principally Tea and Perpetuals, their fragrance and beauty were alike acceptable.—*Clericus*.

STANDARD ROSES ON A LAWN.—I am about to plant two dozen Standard Roses along the side of a walk, but they must be upon the grass lawn. Is it essential to success that each should have a circular space without turf, or will they flourish if the roots are turfed over? An early reply will oblige—*A Beginner*.

[They will not succeed well if the roots are covered with turf; by all means have a circular (or other shape) space of four feet diameter, and that composed of a rich compost, and each following year be kept so. Turf over the roots prevents rain, air, &c., properly penetrating to them. To cover over the surface properly, we have seen a plant of the finest climbing Roses planted at one side, coiled around and over the entire surface, which blooming beautifully had a pretty and corresponding effect. The stem of the standard too was covered by a shoot coiled around, but it was prevented entering the head of the standard. A different coloured Rose from the standard was appropriated to make the contrast striking. We once saw a half globe wire-frame thus placed over the space, which was covered with Wells's White Rose in vast profusion, and the standard was a rich crimson.]

ORCHIDEOUS PLANTS.—In your notes on New or Rare Plants, frequent mention is made of the terms *Parasitical* plants and *Epiphytes*. I am persuaded many of your readers do not know the essential distinctions of them, and I forward the following for an early insertion:—

*Parasitical Plants*, that is to say, such as are either destitute of the power of pumping up their nourishment from the soil, or of elaborating it completely: or as cannot exist without absorbing the juices of other vegetables. These are found in all the preceding stations. They may be divided into, first, those which grow on the surface of others, as the *Cuscuta* and the *Mistletoe*; and, secondly, intestinal Parasites, which are developed in the interior of living plants, and pierce the epidermus (outer bark) to make their appearance outwardly, such as the *Uredo* and *Æridium*.



*Epiphytes*, or *False Parasites*, which grow upon either dead or living vegetables, without deriving any nourishment from them. This class which has often been confounded with the preceding, has two distinctly characterized divisions. The first which approaches true Parasites, comprehends cryptogamous plants, the germs of which, probably carried to their stations by the very act of vegetation, develop themselves at the period when the plant, or that part where they lie, begins to die, then feed upon the substance of the plant during its mortal throes, and fatten upon it after its decease; such are Nemasporas, and many Sphacrias; these are spurious intestinal parasites. The second comprehends those vegetables, whether cryptogamic, such as Lichens and Musci, or phanerogamous, as Epidendrums, which live upon living plants, without deriving any nutriment from them, but absorbing moisture from the surrounding atmosphere; these are superficial false parasites; many of them will grow upon rocks, dead trees, or earth.—*Clericus*.

NEW DAHLIAS SENT OUT LAST SPRING.—The following notes are inserted in *Glenny's Garden Almanac* for 1851, and Mr. Glenny adds, "They were made from two plants of a sort; one set grown on the borders of a paddock, the other in the home garden, affording a double chance of judging." They were made by a friend on whose judgment he can rely.

\* *Magnificent*.—A new colour, a fine outline. Petals close, and occasionally confused, but a great acquisition for its colour and outline.

\* *Sir F. Bathurst*.—A model, every flower good, and an average size, with all the flowers left on the plant to grow.

\* *Mrs. Seldon*.—A clear certain yellow, of good average quality, and an excellent centre; one of my plants I could have cut from any day, the other not so certain.

\* *Snow-flake*.—A bold white flower, with a first-rate centre and good outline; an acquisition in its class.

\* *Premier*.—A flower that may be always depended on for its centre, which is well up, and a good general average outline and face; petals, however, too small.

\* *Elizabeth*.—A very lovely fancy flower, amethyst and bluish-white; quite above the average of the best fancies, and the centre good from first to last.

*Beauty Supreme*.—Very beautiful, and very small; too small, I fear, but I made no effort to enlarge the growth.

\* *Lady Grenville*.—Constant and rough, a certain flower up to a certain point, and useful.

\* *Flying Dutchman*.—A very useful fancy flower, of the red and white class.

\* *Miss Crompton*.—Very useful, but the petals not covered enough to be first-rate, rather square on the side and flat on the face.

\* *Queen of Lilacs*.—A beautiful rose colour, and fine general form, but two or three more rows of petals wanted to make it first-rate.

\* *Duke of Cambridge*.—Also a rose, good general form, rather rough, but an acquisition for its boldness, without being very coarse.

*Queen of Primroses*.—Compact flower, but texture, colour, and general appearance poor. I don't like it.

\* *George Glenny*.—I could not get it to grow, so I went to Deancroft to see it. It was growing as if the only object was size. I could here have cut a hundred blooms of moderate size, for even the laterals were perfect. The quality of this flower has not been seen in the overgrown mops exhibited. It will be the most satisfactory of all that are coming out.

*Attilus* (No. 44.)—A very pretty and useful flower, well worth cultivation. It came in handy now and then, and was really useful.

*Gaiety*.—An immense flower, very gay for a border, but too coarse for any stand, if the judges go upon the properties. Neither the yellow ground bright, nor the edging good; all coarse together.

*Lady of the Isles*.—Small and pretty, when perfect, but outline not first-rate, and petals small and old-fashioned; a great part of the time semi-double.

*Scraph*.—A very clear orange, but rather the old-fashioned form, not like the Duke of Wellington, of the modern cut—a long way behind it.

*Thames Bank Hero*.—A very certain variety, but not equal to many of the flowers in its class. It is not of the modern cut: it is coarse, square on the side, and flat on the face, but still certain.

*Purity*.—Double flowers scarce, and the flower generally treacherous.

Those with a star (\*) I mean to grow, but I have no room for common old-fashioned sorts. I keep as much as I can to the models of—Wellington, Toison d'Or, Fearless, Cornwallis, Queen of the East, Princess Radzivil, Sir F. Bathurst, Yellow Standard, Scarlet Gem, and those that come nearest to them in form, though there is room to improve on these, and particularly on the face and centres.

HAMMERSMITH PANSEY SHOW.—This annual exhibition is a celebrated one; all the best flowers are there shown. Mr. Edwards took a list of the best, and comprises the following, from which an excellent selection might be made:—

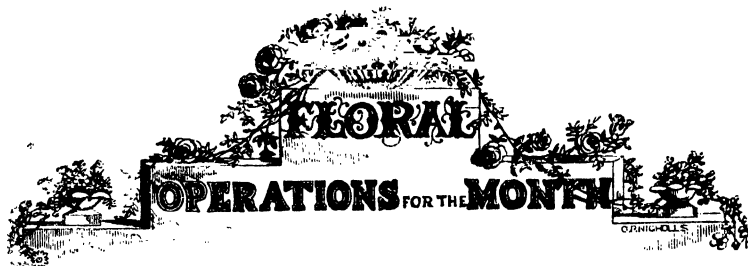
*White-ground Varieties*.—Queen of England (Fellowes), Almanzor (Le Messuriers), Helen (Hunt), Mrs. Beck (Turner), Miss Thompson (Thompson), Duchess of Rutland (Thompson), Penelope (Thompson), Caroline (Thompson), Climax (Bell), Sir R. Peel (Bragg), very fine; Princess (Turner), Ariadne (Cook), Mrs. Hamilton (Naysmith).

*Yellow or Straw-ground Varieties*.—Rubens (Turner), Constellation (Thompson), Duke of Norfolk (Bell), Addison (Turner), Inventa (Hooper), Mrs. Bragg (Bragg), Example (Turner), Bellona (Hooper), Miss Edwards (Turner), Supreme (Youell), Leader (Hooper), Lady Franklin (Thompson), Viceroy (Turner), Mrs. Beck (Turner).

*White Selfs*.—Of these there was nothing very remarkable. Snowflake (Thompson) has shape, but is rough on the edge; and White Sergeant was much mottled.

*Yellow Selfs*.—Widnall's Ophir is a good early yellow, but degenerates as the season advances; Lane's Emma.

*Dark Selfs*.—Hunt's Disraeli, Hall's Rainbow, Scotcher's Lucy Neal, Sambo.



### IN THE FLOWER GARDEN.

WHERE flower beds require to be ornamented after the summer flowers are cut off, provision must be made by dwarf kinds of evergreen shrubs in pots, such as Lauristinus, Mahonias, Box, Rhododendron, &c. Tulips, Anemones, &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 to make a show near the dwelling-house 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 overwatered. 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, Cinerarias, Cacti, Eranthemums, Scarlet Geraniums, Gardenias, Hyacinths, Crocuses, &c. (See lists in Calendars of former Numbers.)

### 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 damps.

## REVIEW.

*The Royal Water Lily of South America, and the Water Lilies of our own Land, their history and cultivation.* By GEORGE LAWSON, F.R.S., Edinburgh. James Hogg, Groombridge and Sons, London. 12mo. 108 pages.

THE contents of this very neat, handsomely got up book are interesting. Introductory Observations on the family of Water Lilies, 23 pages. The Royal Water Lily, *Victoria Regia*, 55 pages. The Great White Water Lily, *Nymphæa alba*, 16 pages. The Common Yellow Water Lily, *Nymphæa lutea*, 8 pages.

The Author has given a complete history of these noble plants, as well as a minute description of each, with judicious observations on their successful cultivation.

These particulars are detailed in a very pleasing and interesting manner, being interspersed with many striking relative subjects. The whole is very creditable to the Author, and will be interesting to every reader.

There are two coloured plates of the Royal Water Lily.

*On the Construction of Locks and Keys.* By JOHN CHUBB, Assoc. Inst. C. E. 12mo. 36 pages.

THIS is a neat little treatise on a subject which interests all who have property to protect, and to such we recommend its perusal. And from the practical benefit ourselves have derived from Mr. Chubb's locks and iron safe, we advise all who desire security for their valuables to avail themselves of these unequalled articles.

# INDEX.

## ILLUSTRATIONS.

	Page		Page
Achimenes Jauregia . . . . .	1	Chrysanthemum Renoncule . . . . .	97
Begonia Cinnabarina . . . . .	25	Dahlia, Edward's Mrs. Hansard . . . . .	289
Campona grandiflora . . . . .	243	Lapageria rosea . . . . .	122
Cheiranthus Marshallii . . . . .	268	Lisicanthus princeps . . . . .	217
Chrysanthemum minimum . . . . .	97	Oxalis elegans . . . . .	25
----- Elize Meillez . . . . .	97	Pelargonium, Tom Thumb's Bride . . . . .	145
----- La Fiancée . . . . .	97	Pentstemon azureum . . . . .	193
----- Le Jongleur . . . . .	97	Rhododendron jasminiflorum . . . . .	291
----- Madame Mirbel . . . . .	97	Rose, Geant des Batailles . . . . .	73
----- Pequillo . . . . .	97	Tropæolum Wagnerianum . . . . .	49

## ORIGINAL AND MISCELLANEOUS.

A Packet of Seed saved by an Old Gardener, review . . . . .	69	Cheiranthus Marshallii, on . . . . .	139, 148
A select Descriptive Catalogue of Plants, ditto . . . . .	166	Chiswick Fete, jottings on . . . . .	173
Acacias, remarks on . . . . .	12	Chorozemas, compost for . . . . .	224
Achimenes, ditto . . . . .	113	Chrysanthemums, a list of . . . . .	66
Allamanda Cathartica, on the . . . . .	114	----- on dwarf . . . . .	65
Aloe, American, remarks on . . . . .	311	----- on laying . . . . .	110
Alonsoas, on bedding . . . . .	131	Cineraria macrophylla, remarks on . . . . .	235
Alstromerias, cultivation of . . . . .	12, 171	Cinerarias, remarks on . . . . .	315
----- remarks on . . . . .	130	Citron and Orange, on cultivating . . . . .	235
Amaryllis, &c., ditto . . . . .	288	Corræa speciosa, ditto . . . . .	200
Amherstia nobilis . . . . .	316	Creepers, on striking . . . . .	235
American Plants, applying guano to arrangement of . . . . .	169	Crocus, &c., a bed for . . . . .	112
An Analysis of British Ferns, review . . . . .	238	Crown Imperial, propagation of . . . . .	126
Anagallis, on bedding . . . . .	131	Cupheas, on bedding . . . . .	131, 252
Anemone Japonica, ditto . . . . .	131	Curtis's Beauties of the Rose, review . . . . .	192
Auriculas, compost for . . . . .	115	Cyclamen European . . . . .	316
Autumn and Autumnal Flowers . . . . .	273	Cyclamens, query on . . . . .	235
Azalea Indica, remarks on . . . . .	67	Dahlia, fauca, the best . . . . .	35
----- treatment of . . . . .	6, 230	----- new, sent out last spring, 321, 324	321, 324
Benevolent Society, Gardeners', the . . . . .	178	----- notes on new . . . . .	4
Bignonia Jasminoides, on training . . . . .	249	----- shows of 1849 . . . . .	16
----- venusta, remarks on . . . . .	233	Dianthus refulgens, on bedding . . . . .	132
Botanic Society, exhibition of . . . . .	156	Ecceprocarpus scaber, remarks on . . . . .	101
Bouvardias, remarks on . . . . .	130	Epacris grandiflora, culture of . . . . .	199
Brachycome iberidifolia, ditto . . . . .	93	Ericas, ditto . . . . .	129
Brunsvigia Josephina, ditto . . . . .	19	Erythrina, propagation of . . . . .	127
Bulbs, grown in pots . . . . .	18	Evergreens, ditto . . . . .	189
Calceolarias, on layering . . . . .	262	----- removal of large . . . . .	281
----- remarks on . . . . .	112, 134	Exhibitions, floral, 89, 135, 151, 156, 159, 172, 205, 231, 250, 258, 261	156, 261
----- shrubby, to strike . . . . .	67	----- Tulip . . . . .	164, 202
Calystegia pubescens, on training . . . . .	249	Ferns, British . . . . .	142
Camellia, cultivation of the . . . . .	209	----- in Wardian cases . . . . .	136
----- grafting the . . . . .	306	Floricultural Society, London . . . . .	250
----- on increasing the . . . . .	299	----- Royal South	
Camellias, standard, remarks on . . . . .	316	London exhibitions 159, 172, 205, 258	258
Campanula pyramidalis, remarks on . . . . .	92	Florists flowers, Class showing in . . . . .	313
Cape bulbs, culture of . . . . .	310	Flower Gardens, designs for, No. 1 . . . . .	28
Carnations, a list of the best, 214, 256	214, 256	Flowers, a chapter of . . . . .	212
----- compost for . . . . .	310	----- in Covent Garden market . . . . .	313
----- on exhibiting . . . . .	139	----- on arranging stands of . . . . .	39
----- propagation of . . . . .	127	----- on contrasting colours of 7, 58	58
----- remarks on . . . . .	256	----- remarks on spring . . . . .	91
----- and Picotees, winter		----- schemes of . . . . .	90
treatment of . . . . .	270	Frost, tender plants affected by . . . . .	305
----- trial exhibition . . . . .	236	Fuchsia spectabilis, &c., on . . . . .	288, 311
		Fuchsias, in the open border, on . . . . .	21
		on bedding . . . . .	139

	Page		Page
Garden, an invalid's . . . . .	255	Pelargoniums, show, remarks on 313,	316
Gardenias, remarks on . . . . .	18	————— to prolong blooming	181
Gardening, the pleasures of . . . . .	318	Pentstemons, on bedding . . . . .	131
Gardens, reminiscences on . . . . .	54	Phlox Drummondii, ditto . . . . .	133
Gazania pavouia, remarks on, 115,	138	Picotees, list of best . . . . .	214
Geraniums, (see also Pelargoniums,)		————— showing on cards . . . . .	183
bedding, on . . . . .	60	————— and Carnations, opinions on	31
————— on fancy . . . . .	185	————— to growers of	87
————— scarlet, on . . . . .	18, 57	Pinks, to prevent bursting . . . . .	19
Gladiolus, remarks on the . . . . .	41, 296	————— to propagate in pots . . . . .	21
Glass, remarks on coloured . . . . .	65	————— &c., opinions on . . . . .	31
Gloxinia Fyfianna, remarks on . . . . .	196	Plant petting, on . . . . .	317
Gloxinias, on the propagation of . . . . .	127	Plants, American, application of	
Grass, lawn, destroyed . . . . .	82	guano to . . . . .	181
Green-fly, on destroying . . . . .	238, 322	————— arrangement of	169
Greenhouse, an economical . . . . .	319	————— bedding, remarks on . . . . .	130
Guano, remarks on . . . . .	181	————— to peg down . . . . .	188
Hammersmith Pansey show . . . . .	325	————— in bloom in Kew Gardens . . . . .	307
Heliotropiums, on bedding . . . . .	131	————— genus and species of . . . . .	254
Hollyhocks, remarks on . . . . .	250	————— in greenhouses, to protect . . . . .	67
Horticultural Society, exhibitions		————— in pots, drainage of . . . . .	109
of . . . . .	135, 151, 231	————— on watering . . . . .	177
Hyacinth, on the wild . . . . .	84, 108	————— in rooms, cultivation of . . . . .	81
Hydrangea involucrata, flor. pl. on	234	————— New Holland, compost for	224
Hydrangeas, on bedding . . . . .	132	————— shrubby, propagation of . . . . .	225
Inga pulcherrima, remarks on . . . . .	138	————— on drying . . . . .	116
Insect-life, splendour of . . . . .	82	————— on neglected . . . . .	48
Ixias and Sparaxis on . . . . .	65	————— on potting and shifting . . . . .	138
Kew Gardens, plants in . . . . .	100	————— on training . . . . .	249
Leschenaultias, remarks on . . . . .	65	————— orchideous, remarks on . . . . .	323
Lilies, a list of hybrid . . . . .	115	————— principles of propagating . . . . .	226
Lilium Giganteum . . . . .	251	————— propagation of . . . . .	108, 126
————— lancifolium and its varieties,	93	————— to grow in windows . . . . .	133
————— longiflorum, propagation of	126	Pæonies, list of Japanese . . . . .	243
Lisianthus Russellianus, culture of	183	Pomegranate, double-flowered, on . . . . .	64
Lily, Belladonna, on the . . . . .	68	Portulacca Thellusonii, on . . . . .	18
————— of the Valley, remarks on . . . . .	253	Pot-plants, watering of, in winter . . . . .	315
Lobelias, on bedding . . . . .	131	Potentillas, remarks on . . . . .	310
Locks and Keys, on the construction		Ranunculuses, on raising . . . . .	66
of, review . . . . .	327	————— remarks on . . . . .	92
Mandevillea suaveolens, on training	249	Rhodanthe Manglesii, on . . . . .	56
Martynia lutea, remarks on . . . . .	117	————— culture of . . . . .	303
Mesembryanthemum tricolor, on		Rhododendron maximum, on . . . . .	314
bedding . . . . .	132	Rhododendrons, on pruning . . . . .	234
Melon Cactus, Cloth of Gold Rose	315	————— propagation of . . . . .	301
Metropolitan Society Dahlia show . . . . .	261	Rings, fairy . . . . .	309
Mignonette, remarks on . . . . .	222	Rochea falcata, on blooming . . . . .	212
New Holland Plants, compost for . . . . .	224	Roots, transmission of . . . . .	64
————— propagation of,	225	Rose, Cloth of Gold, on blooming . . . . .	202
Orange, Lemon, and Citron, on		girdle . . . . .	312
striking of. . . . .	315	————— on pruning the tree . . . . .	272
Oxalis Bowei, remarks on . . . . .	133	————— trees in six weeks, making of	313
————— lutea, ditto . . . . .	133	Roses, arrangement of . . . . .	279
Pansies, list of the best . . . . .	182	————— Bourbon, descriptive lists 64,	252
Pansy, perfection of the . . . . .	173	————— China, on propagating . . . . .	229
Pelargoniums, autumn blooming . . . . .	21	————— climbing, a list of . . . . .	66
————— culture of . . . . .	111	————— destruction of buds of . . . . .	24
————— double-flowered . . . . .	314	————— green centres in . . . . .	175
————— minima; a list of . . . . .	146	————— in winter and spring . . . . .	322
————— monstrous flowers of	237	————— on bedding . . . . .	131
————— on bedding . . . . .	130	————— on budding . . . . .	227
————— on late flowering . . . . .	162	————— on forcing . . . . .	229

	Page		Page
Roses, on planting . . . . .	43	Thrip, to destroy . . . . .	285
— soil suited for . . . . .	64	Tigridia pavonia and T. conchiflora, on . . . . .	64, 214
— standard, in a lawn . . . . .	323	Torenia Asiatica, on . . . . .	44
Royal Water Lily of South America, history and cultivation, review . . . . .	327	Trees, on pendulous . . . . .	240
Salpiglossis, culture of . . . . .	304	Tropæolum pentaphyllum, on . . . . .	20
Scillas, remarks on . . . . .	101	Tulip, on the . . . . .	227
Seedlings, on class showing . . . . .	284	— show, the great northern, 164, 202	
Seeds, transmission of . . . . .	64	Tulips, a list of . . . . .	62, 104
Shrubs, evergreen, layering . . . . .	44	— favourite . . . . .	182
Silene Schaftii, on bedding . . . . .	133	— on raising . . . . .	302
Slugs, &c , on destroying . . . . .	178	— on the culture of, 14, 33, 62, 104, 127, 164, 207, 247	
Solanum Jasminoides, on training . . . . .	249	Valoradia plumbaginoides, on . . . . .	27
Sphaeria Robertsii and S. Sinensis, remarks on . . . . .	200	Verbenas, culture of . . . . .	211
Stocks, double, remarks on . . . . .	280	— remarks on . . . . .	67
— for Roses . . . . .	113, 244	Veronica speciosa, on propagating . . . . .	235
Stylidium ciliare, on . . . . .	135	Victoria Regia, remarks on . . . . .	175, 176
Sulphur, how to apply, effectually . . . . .	314	Winter, to preserve tender plants in . . . . .	309
The Bee Keeper's Manual, review . . . . .	238	Woodlice, remarks on . . . . .	72, 234
Thorn, on a weeping . . . . .	116	Worms in a Lawn, to get rid of . . . . .	312

## NEW OR RARE PLANTS NOTICED.

Abutilon insignis . . . . .	193	Berberis tinctoria, Wallichiana . . . . .	78
Acacia dealbata, decurrens, eriocarpa, lancifolia, lineata, mucronata, pubescens, riceana, rotundifolia, suaveolens . . . . .	79	Bessera miniata . . . . .	266
Acantholimon glumaceum . . . . .	292	Blandfordia flammea . . . . .	28
Acanthophippium Javanicum . . . . .	50	Bolbophyllum Lobbii . . . . .	241
Achimenes Escherii . . . . .	121	Boronia tetrandra . . . . .	121
— jaureguia . . . . .	1	Brachysema aphyllum . . . . .	2
— ocellata-confuens, picta . . . . .	79	Brugmansia Knightii . . . . .	218
Adamia versicolor . . . . .	98	Bryanthus erectus . . . . .	241
Adenocalymma nitida . . . . .	75	Caccoloba macrophylla . . . . .	242
Adiantum varium . . . . .	79	Cælogyne Wallichii . . . . .	51
Aerides maculosum, var. Schreoderi . . . . .	265	Calamintha mimuloides . . . . .	266
Æschynanthus Boschyanus . . . . .	79	Calanthe masuca . . . . .	266
— Javanicus . . . . .	76	Calboa globosa . . . . .	78
Allium acuminatum . . . . .	292	Calliandra brevipes . . . . .	76
Almeidea rubra . . . . .	293	Camellia Drysdalii . . . . .	148
Amaryllis Ackramannii pulcherrima . . . . .	194	— Maria Morreni . . . . .	195
— reticulata . . . . .	121	Campanea grandiflora . . . . .	241
Amygdalus persica, flore semi-pleno . . . . .	194	Campylobotrys discolor . . . . .	218
Anemone Japonica, var. hybrida . . . . .	50	Carnations, Emperor, Jenny Lind, Duke of Devonshire . . . . .	293
Anguria Mackoyana . . . . .	2	Catasetum fimbriatum . . . . .	266
Anigozanthus tyrianthina . . . . .	99	Cattleya labiata candida . . . . .	266
Arctocalyx Endlicherianus . . . . .	217	— picta . . . . .	266
Aristolochia picta . . . . .	76	— Walkeriana . . . . .	77
Astropæa viscosa . . . . .	293	Ceanothus dentatus . . . . .	99
Azalea coccinea-superba, Iveryana, optima, ramentacea, Smithii coccinea . . . . .	148	— papillosus . . . . .	122
Begonia (new vars.) . . . . .	80	Cephalotaxus Fortunii . . . . .	77
— cinnabarina . . . . .	26	Cereus Tweediei . . . . .	77
— dipetala . . . . .	194	Cheiranthus Marshallii . . . . .	265
— Ingramii . . . . .	293	Chelone barbata coccinea . . . . .	219
Begonia æstuans . . . . .	218	Chorozema cordata . . . . .	80
— coarctata . . . . .	217	— flava . . . . .	29
— Lindeniana . . . . .	218	Chrysanthemums, novel varieties . . . . .	17, 97
Berberis Japonica, Loxensis . . . . .	79	Cinerarias ditto . . . . .	100
— lutea . . . . .	148	Clematis graveolens . . . . .	51
		Clerodendron Behneanum . . . . .	3
		Clianthus Dampieri . . . . .	149
		— formosus . . . . .	123
		Clidantha psoraloides . . . . .	149

	Page
<i>Colochortus pallidus</i> . . . . .	293
<i>Coluquonia coccinea</i> . . . . .	123
<i>Columnnea aurantiaca</i> . . . . .	195
<i>Conoclinium ianthinum</i> . . . . .	123
<i>Cordyline Sieboldii</i> , var. <i>maculati</i> . . . . .	293
<i>Corræa brilliantia</i> , <i>magnifica</i> , <i>pulchella</i> , <i>rosea</i> , <i>tricolor</i> . . . . .	80
<i>Culboea globosa</i> . . . . .	29
<i>Cuphea cinnabarina</i> . . . . .	219
— <i>ignea</i> . . . . .	195
<i>Cyanotus vittata</i> . . . . .	293
<i>Cychnoches pescatorei</i> . . . . .	266
<i>Cypripedium caudatum</i> . . . . .	123
— <i>guttatum</i> . . . . .	294
— <i>Lowii</i> . . . . .	123, 195
<i>Delphinium cheilanthum</i> , var. <i>Hendersonii</i> . . . . .	242
— <i>magnificum</i> , <i>Japonicum</i> , <i>grandiflora major</i> , <i>pumila elegans</i> . . . . .	294
<i>Dendrobium carulescens</i> . . . . .	80
— <i>Cambridgeanum</i> . . . . .	80
— <i>Kiugianum</i> . . . . .	219
— <i>transparens</i> . . . . .	135, 294
— <i>Wallichianum</i> . . . . .	80
<i>Dianthus cruentus</i> . . . . .	267
<i>Dielytra spectabilis</i> . . . . .	219
<i>Dipteracanthus spectabilis</i> . . . . .	51
<i>Eccremocarpus scaber</i> . . . . .	242
<i>Echeandra terniflora</i> . . . . .	267
<i>Echinocactus rhodopthalmus</i> . . . . .	29
<i>Echinopsis cristata</i> , var. <i>purpurea</i> . . . . .	196
<i>Echites Franciscea</i> , var. <i>Sulphureis</i> . . . . .	294
<i>Epacris coccinea</i> . . . . .	124
— <i>hyacinthiflora caudidissima</i> . . . . .	52
<i>Erica Cavendishii</i> . . . . .	80
— <i>cerinthoides major</i> , <i>grandinosa</i> . . . . .	52
— <i>laqueatus lutea</i> . . . . .	80
— <i>pellucida</i> . . . . .	80
— <i>regalis</i> . . . . .	52
— <i>Wescota</i> , <i>Willmoreana</i> . . . . .	80
<i>Eriocnema marmoratum</i> . . . . .	267
<i>Erythrina erythrostachya</i> . . . . .	267
<i>Espeletia argentea</i> . . . . .	3
<i>Eugenia Brasiliensis</i> . . . . .	219
<i>Franciscea eximea</i> . . . . .	294
— <i>latifolia</i> . . . . .	294
<i>Freziera theoides</i> . . . . .	294
<i>Fritillaria pallidiflora</i> . . . . .	77
<i>Fuchsia baccilaris</i> . . . . .	99
— <i>nigricans</i> . . . . .	124
— <i>venusta</i> . . . . .	196
<i>Galanthus plicatus</i> . . . . .	149
<i>Gastrolobium Hugelii</i> . . . . .	124
<i>Gesneria Gardnerii</i> . . . . .	3
— <i>Seemanii</i> . . . . .	99
<i>Gladiolus</i> (novel var.) . . . . .	196
— <i>Natalensis</i> , var. <i>Willmoreanus</i> . . . . .	295
<i>Gloxinias</i> , Dr. Lindley, Reine des Belges, Madame Aglae Adanson, M. G. Hodgeveen, Princesse de Lamballe . . . . .	295

	Page
<i>Gongora maculata</i> , var. <i>Jenishii</i> . . . . .	242
<i>Gordonia Javanica</i> . . . . .	267
<i>Grammanthus chloræflora</i> . . . . .	219
— <i>gentianoides</i> . . . . .	124
<i>Griffonia Liboniana</i> . . . . .	124
<i>Hakea cucullata</i> . . . . .	267
<i>Hedychium chrysoleucum</i> . . . . .	149
<i>Helianthemum scoparium</i> . . . . .	29
<i>Hoya coriacea</i> . . . . .	149
— <i>campanulata</i> . . . . .	295
— <i>ovalifolia</i> . . . . .	267
— <i>pallida</i> . . . . .	268
— <i>purpureo-fusca</i> . . . . .	149
<i>Hypocyrtia gracilis</i> . . . . .	220
<i>Ilex cornuta</i> . . . . .	124
— <i>microcarpa</i> . . . . .	124
<i>Ixora barbata</i> . . . . .	124
— <i>laxiflora</i> . . . . .	3
— <i>salicifolia</i> . . . . .	196
<i>Lagetta lintearia</i> . . . . .	77
<i>Lantana delicatissima</i> . . . . .	220
<i>Lapageria rosea</i> . . . . .	121, 295
<i>Lardizabala biternata</i> . . . . .	78
<i>Libocedrus Chilensis</i> . . . . .	125
— <i>tetragona</i> . . . . .	125
<i>Lilium Wallichianum</i> . . . . .	268
<i>Lobelia magnificent</i> . . . . .	220
— <i>ramosa</i> . . . . .	220
<i>Lisianthus princeps</i> . . . . .	217
<i>Luvunga scandens</i> . . . . .	196
<i>Lycaste chrysoptera</i> . . . . .	268
<i>Macleanea cordata</i> . . . . .	29
<i>Malesherbia thyrsoiflora</i> . . . . .	268
<i>Medinella magnifica</i> . . . . .	149
— <i>Sieboldiana</i> . . . . .	268
<i>Metrosideros buxifolia</i> . . . . .	150
— <i>tomentosa</i> . . . . .	30
<i>Microsperma Bartonoides</i> . . . . .	30
<i>Mimulus aurantia superba</i> . . . . .	150
— <i>rubinus</i> . . . . .	150
<i>Moussonia elegans</i> . . . . .	268
<i>Nerium Tangleii</i> . . . . .	220
<i>Nuttallii cerasiformis</i> . . . . .	125
<i>Nymphæa micrantha</i> . . . . .	242, 295
<i>Odontoglossum Cervantesii</i> . . . . .	198
— <i>nævium</i> . . . . .	220
<i>Oncidium hæmatochilum</i> . . . . .	99
— <i>sessile</i> . . . . .	242
— <i>trilinguæ</i> . . . . .	125
<i>Ophelia corymbosa</i> . . . . .	30
<i>Opuntia Salmiana</i> . . . . .	269
<i>Oxalis elegans</i> . . . . .	25
<i>Pæonia Moutan</i> , var. <i>Salmonea</i> . . . . .	242
<i>Passiflora Medusæa</i> . . . . .	220
<i>Peach</i> , double white . . . . .	124
<i>Pelargonium Angolina</i> . . . . .	232
— <i>Anne</i> . . . . .	232
— <i>Bandouna</i> . . . . .	233
— <i>Bicolor</i> . . . . .	195
— <i>rosea</i> . . . . .	195
— <i>Blandfordium</i> . . . . .	195
— <i>Carabas</i> . . . . .	232



	Page		
Pelargonium, Cerise Unique . . . . .	233	Ranunculus, Cleopatra . . . . .	
— Crimson King . . . . .	233	— Equisaite . . . . .	
— Desirable . . . . .	232	— Flush . . . . .	
— Diana . . . . .	135	— Formosissima . . . . .	
— Dianthiflora . . . . .	233	— Gaiety . . . . .	
— Eclipse . . . . .	233	— Gipsy Queen . . . . .	
— Electro . . . . .	232	— Marion . . . . .	
— Enchantress . . . . .	232	— Ne plus ultra . . . . .	
— Erectum . . . . .	195	— Orator . . . . .	
— Erubescens . . . . .	233	— Prince Albert . . . . .	
— Flexuosum . . . . .	195	— Princess Royal . . . . .	
— Flower of the Day . . . . .	52	— Purity . . . . .	
— Fulgidum . . . . .	195	— Richard Cobden . . . . .	
— General Jung . . . . .	233	Rhododendron cinnamomeum	
— Gipsy King . . . . .	233	— Cunninghamii	
— Glaucifolium . . . . .	195	— formosum	
— Incomparable . . . . .	135	— Jasmini	
— Julie . . . . .	233	— Rolli	
— Mignon . . . . .	233	Rhodoieia Championi	
— Monarch . . . . .	233	Rhodothamnus Kamchaticus	
— Ocellata . . . . .	135	Rogiera amœna . . . . .	
— Oriflamme . . . . .	233	Rondeletia speciosa major . . . . .	
— Painted Pet . . . . .	232	Roupelia grata . . . . .	
— Princess Alice . . . . .	233	Rosa pimprenelle marbre d'Enghein	
— Purpurea . . . . .	135	Rose (nov. var.)	
— Reniforme . . . . .	195	— Geant des Batailles . . . . .	
— Resplendens . . . . .	233	— miniature . . . . .	
— Star . . . . .	233	Ryuchospermum Jasminoides . . . . .	
— Tom Thumb's Bride . . . . .	145	Salvia (new vars.) . . . . .	
— Zonale, var. Salmonii . . . . .	243	Siphocampylus laevigatus . . . . .	
Pentadynamis incana . . . . .	150	— lasiandrus . . . . .	
Pentstemon azureus . . . . .	150, 193	— mollis . . . . .	
— Clousii . . . . .	220	— polyphyllus . . . . .	
— cordifolius . . . . .	52	— Schlimmianus . . . . .	
— Hartwegii . . . . .	244	Spathodea laevis . . . . .	
— heterophyllus . . . . .	150	— speciosa . . . . .	
— Shepherdii . . . . .	244	Spathoglottis aurea . . . . .	
Petunia meleagris . . . . .	198	Spirea decumbens . . . . .	
Phajus grandiflorus, intermedius . . . . .	80	Stocks, new hybrid . . . . .	
Pharbitis limbata . . . . .	30	Stylidium mucronifolium . . . . .	
Picotees, Bartlett's William IV.,		Symplocis Japonica . . . . .	
Georgy, Kossuth, La Grandeur,		Tabernaemontana coronaria fl. pl.	
La Villegeuse, Le Cuirassier, Le		— longiflora . . . . .	
Marquis, L'Hussard, Lord Gough,		Tacsonia manicata . . . . .	
Malay Chief, Samiel . . . . .	285	— pinnatistipula . . . . .	
Pimelia Nebergiana . . . . .	221	Templetonia glauca . . . . .	
— macrocephala . . . . .	295	Tetratea verticellata . . . . .	
— Verschaffettii . . . . .	125	Thibaudia scabriuscula . . . . .	
Pitcairnia Jacksonii . . . . .	269	Trechoplia suavis . . . . .	
Primula auricula nigra . . . . .	151	Tropæolum Wagneriana . . . . .	
Puya Maidifolia . . . . .	269	Tulip, Dr. Horner . . . . .	
Ranunculus, Ada . . . . .	162	— (new vars.) . . . . .	
— Beauty of St. John's		Veronica formosa . . . . .	
Wood . . . . .	161	— speciosa, var. Kermesin	
— Belle Marie . . . . .	162	Viburnum plicatum . . . . .	
— Black Prince . . . . .	161	Waillesia picta . . . . .	
— Brunette . . . . .	162	Warrea Lindeniana . . . . .	
— Caliban . . . . .	162	Zauchneria Californica . . . . .	





