THE

FLORIST'S JOURNAL,

OR

Monthly Record of the best Flowers,

FOR EACH MONTH

SUPERIOR COLOURED ENGRAVINGS.

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THE

FLORIST'S JOURNAL

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PREFACE.

AGAIN we have the pleasure of addressing our readers on the completion of another volume of the Florist's Journal, and if ever we had occasion for the expression of gratified sentiments it is now.

The principle on which the commencement of our task was founded has been the basis for this the fourth volume, and we have cheering assurance it is right. It is true we have not given place to every hollow hallucination that has been current, or condemned, or commended, aught but on the authority of our own experience or conviction. But actuated alone by an earnest desire to assist in advancing the scientific portion, and to explain or make known the best of the practical part, to reconcile theory with practice, and show how far the one may be made conducive to the well-doing of both, we have proceeded; with this, which has been and will continue our chief aim, uninterruptedly in view.

That we have not fallen far short of our intentions we have at least presumptive proof from the very flattering

remarks of many of our correspondents, and the gratifying notices of the public press. These we regard as incentives to further exertion; and with the valuable assistance of such able coadjutors as those whose names grace our pages, we have no fear for the future.

To them, and our Subscribers who have placed us in an eminent station in our own class of literature, we offer our best thanks, and, after the manner of good old times, wish them a very happy new year.

MARTYNIA FRAGRANS

THE

FLORIST'S JOURNAL.

JANUARY, 1843.

THE MARTYNIA FRAGRANS.

WITH AN ENGRAVING.

IN every collection not strictly confined to florist's flowers, the importance of annuals is paramount. No matter what may be the extent or variety found in other and more permanent plants, annuals are still indispensable: they are wanted either for intermixture to afford contrast, or for grouping by themselves; a flower garden cannot be considered furnished without a considerable portion of it being filled with them; and to the grower of limited means or space they offer his best, and, in some cases, almost only, chance of embellishment. And again, when our greenhouses are emptied of their contents for the summer season, what is there to ornament the interiors for the time the usual occupants are refreshing and regaining their vigour, or perfecting their several growths, but annuals?—the finest plant structure at such a time would convey no feeling but that of disconsolation, and no idea but vacuity if not decorated with this short-lived but exceedingly beautiful portion of the vegetable kingdom; and for this purpose our present illustration is peculiarly suited, certainly beyond comparison with any importation since the introduction of the Balsam and Cockscomb. An abundant and brilliant bloom, on a vigorous plant, possessing fine ample foliage, is produced with comparatively far less trouble than is required to grow either the one or the other of the above-mentioned plants; it requires but the simplest part of the treatment usual for half-hardy annuals.

The first and most particular point being—to sow the seed at the earliest period considered proper for such operations, in order to afford the plant the better opportunity of perfecting its seeds in the autumn. The greatest objection to be urged against it is, that unless the plant is got into a blooming state at a very early part of the summer, the seed is not properly matured before the return of short days, and the consequent absence of solar influence. To ensure this, the seed should be sown by the middle of February; or, we are inclined to believe, the autumn would be preferable, but for the difficulty that would most likely arise in keeping the plants through the winter; a gentle hotbed is all that is required to germinate the seeds, and they may either be sown in pots or on the surface of the bed. As soon as the plants are large enough to handle

surface of from two to three feet in height, and as much in circumference, with blooms at all sides. Although we recommend it to be grown under glass, because the flowering is more abundant, and the plant attains a larger size, it will also succeed if planted in the open border; here it must be allowed a sheltered situation and kept neatly fastened to sticks, as, from the large size of the leaves, it would be likely to receive injury from high winds. The flowers produced in the open air are more deeply coloured than when under the protection of glass, but are not so numerous; altogether, it is a most desirable acquisition, and a fit companion to the Balsam as a summer ornament of our greenhouses, and we doubt not will be extensively grown as such.

The Martynia is included in the natural order Pedalinæ and class Didynamia, order Angiospermia, of the Linnæan arrangement. The genus was so named in honour of John Martyn, F.R.S., Professor of Botany at Cambridge, author of several botanical works, who died in January 1768; it contains five species, four of them natives of the southern parts of America, the other being found at the Cape of Good Hope; all of them are handsome flowering plants. Our present species, *fragrans*, so named by Dr. Lindley, in relation to the odour of the flowers, is a native of Mexico, having been sent from Real del Monte to Miss Harvey, of Hayle, in Cornwall, who succeeded in raising it in 1840, and has since been made known to the Horticultural world by Messrs. Marnock and Manley, of the Hackney Nursery.

NOCTURNAL REPOSE OF PLANTS.

When we consider the repose of plants we are in some danger of confounding it with the sleep of animals, to which however it bears little or no resemblance. An animal has to find its food by what we may call mechanical exertion; it must range in quest of those substances which are suitable to its nature. In the exertion required for this there are great differences arising from the different organization of the animal, the extremes of which may be taken in the more powerful beasts of prey, and the oyster and the little polypi. The former have to fast long and watch diligently, and when they have the prey within their reach, of which they can judge as accurately by instinct as we could by measurement, they spring upon it with so much force and velocity that if they miss, their energy is exhausted and they are incapable of immediately making another effort. The oyster, again, has only to open its valves and the polypus to remain in its cell, and both have to wait for what the waters may happen to bring; yet it may be that in consequence of their peculiar organization their apparently minor efforts are as exhausting to them as the spring is to the lion or tiger. The organization is fitted to the

effort by Infinite Wisdom, and we must not take upon us to say that in a state of nature one animal has a harder task assigned it than another; they all have exertions to make in seeking their food, in preparing it for the stomach, and in digesting it; there are muscles or organs of mechanical action employed in all these operations, and after efforts these muscles need repose in order to recover their tone, so that they may act anew when circumstances render it necessary.

The repose of plants, on the other hand, is not in any degree dependent upon or brought about by any exertion upon their part. It is the result of the position and evolutions of the earth, with reference to the sun, and of the effects of these upon the atmosphere and the ground; and unless, in as far as the nature of the plant is suited to these circumstances, it is quite passive in the matter.

This nocturnal repose of plants has nothing to do with what is most incorrectly and injudiciously termed "the sleep of plants;" incorrectly, because it has no resemblance whatever to sleep in animals, the only kind of sleep that we know anything about; and injudiciously, because it gives the ignorant and unthinking a false analogy which leads them into error. What is thus called the sleep of plants is nothing but a simple adaptation of certain species or parts of them to the changes of the atmosphere. A plant stands erect or droops, closes or opens the petals of its flowers, folds its leaves over the tender buds in their axillæ, or expands them according to the state of the atmosphere. But to call one of these states "sleep" and the other its opposite, is just as absurd as it would be to say that a man is "asleep" when his great-coat is on, and awake when it is off. Such are the false analogies that are apt to warp our judgment with regard to the repose of plants, and we must understand and get rid of them in order to be in a fit condition for entering upon the subject.

The grand cause which regulates the nocturnal repose of plants is the latitude, although the local effects are much modified by local circumstances. These are, however, matters of detail, and can be known only by a careful study of the physical geography of the several regions in which plants grow. The latitude is a

general matter and requires first to be understood as a skeleton upon which the details are afterwards to be placed in order to give the body of the whole its fulness, its symmetry, its beauty, and its usefulness.

The nocturnal influences upon the plant are, the withdrawal of the solar light, whether in the direct beams of the sun or the refraction and dissipation of them by the atmosphere; a decrease of temperature, in as far as the direct beams of the sun are concerned always, and in the atmosphere according to temperature; and a diminution of evaporation generally, with the formation of dew or humidity upon the substance of the plant in many cases.

All these influences affect different plants in different ways, according to their natures, but this also is matter of detail and must be learned from an intimate knowledge of the natures of the plants themselves; in fact, there is no royal road to the principles of floriculture any more than there is to the practice, which is nothing but the application of the principles.

Excepting for the refraction, which makes the actual presence of the sun a little greater than the absence, and causes the dawn to come before sunrise and the twilight to linger after the sun has set, and both of these increase with the latitude—every region on the surface of the globe has equal times of the presence and absence of the sun in the course of the year: the influence, as regards the whole year, is greatest at the equator, and a minimum or 0 at the poles; but the variation is affected by so many circumstances, that nothing that has been proposed can be made to agree with observation, thus the hottest summer is not immediately at the equator, but near the tropics; and some countries in pretty high latitudes which have the winter intensely cold have the summer as intensely hot. Upper Canada for instance has as hot a summer as the West India islands. These circumstances must be taken into account by the florist, for there are many plants of high latitudes that no winter's cold will injure, and yet which require a stove to give them their full summer perfection.

But though the time of the sun's annual presence is nearly the same in all latitudes, the seasonal and daily distribution of

it vary very much: at the equator there are equal days and nights at all seasons; at the poles one day and night in the course of the year; and there is much variety between these limits: in the intermediate latitudes the day predominates in the summer half-year, and the night in the winter, the difference becoming greater as the latitude is higher. In the extremes of high latitude, so far as a considerable number and variety of plants are concerned, the repose extends and becomes hybernation or nearly a total suspension of vegetative action; but this is not total, for the herbaceous plants grow a little under the snow, and winter is the growing season of many of the mosses and lichens. So also in the low latitudes, and even in a considerable range of some soils and climates, there is a suspension of the action of many plants, but this does not extend to the whole any more than in the polar regions.

EDITOR.

(TO BE CONTINUED.)

WINTERING CARNATIONS.

SIR,—I am not at all displeased with the remarks your correspondent "Senex" has seen fit to make on the little article I sent you for the November number of your valuable work; on the contrary, I am gratified that it has been the means of inducing him to give us his mode of management, the more especially as the subject is one of much interest to a large class of amateurs, and the more publicity there is given to the methods employed by private growers the better opportunity we have of improving on our own or our neighbour's plans. I should not have troubled you on this occasion, but that "Senex" seems to have fallen into an error about the application of coal-ashes, which I recommended for placing the pots on when put away for the winter: it was far from my intention or meaning to advise their being afterwards mixed with the soil of the garden, or anything else, but simply as a material well calculated to drain off superfluous

water, and thus assist in keeping the plants dry, a most essential thing in wet foggy weather, and also to prevent the ingress of worms to the bottoms of the pots; this is generally admitted to be necessary, and for the purpose nothing can be more effective. Saw-dust, as recommended by "Senex," will not do either. I am such an advocate for cinders for this purpose that I never allow any to be thrown away, but preserve them constantly, and never place a plant growing in a pot out of doors without first spreading a thick layer of them for the plant to stand upon; but, after they are done with, remove them entirely.

I believe I have sufficiently explained this subject, and now must take the liberty to point out a most fatal objection to the propagation of Carnations and Picottees by cuttings, not as directed against the method employed by "Senex," than which nothing can be more simple or efficient, if it was desirable so to increase them, but against the entire system: In the first place, it is not quite certain that cuttings *do* make better plants than layers; secondly, it entails far more trouble, not to mention the great danger incurred of misplacing the names, and the consequent confusion that would ensue; and last, though of the first importance, the cuttings must be taken off in the early part of June, or they will not make sufficient root to remove before the winter. Now this very time happens, unfortunately, to be just the blooming season, and I cannot reconcile myself to the "cutting and maiming" that must necessarily take place, to say nothing of the weakening effect it has on the plants, and the consequent deteriorated bloom. These objections are not the result of reading your correspondent's letter, but they are often thought of and long since settled convictions, for it was not without the authority of some experience I at first ventured to intrude on your notice. With many apologies for thus far trespassing on your valuable pages—I am, Sir, yours,

PHILO-CARYOPHYLLUS.

THE CULTURE OF THE BALSAM.

Sir,—If you can afford space in your valuable journal for the following remarks on that indispensable flower the Balsam, (*Impatiens balsamina,*) you will oblige me, and it may benefit some of your readers. I have been requested by several friends to give them my method of cultivation, and will now refer them to the Florist's Journal, for every one must acknowledge that printed directions are better than verbal.

To grow balsams to the perfection they are capable of attaining it is necessary to sow early, say the last week in February; and here a matter of some moment arises in the choice of seed: to obtain good double flowers the seed should be saved only from such plants as produce the very best flowers; if taken indiscriminately from all that produce seed, the chances are that more than one half the produce is good for nothing; in fact, it is better to throw away every plant that does not bring fine double flowers as soon as it can be ascertained. Such selected seed should be at least two years old before it is sown, as new seed mostly makes weak straggling plants and inferior flowers; without attention to this the trouble of growing the plants is comparatively lost. The seed should be sown on a gentle hotbed, such as is usually made up for tender annuals, either in pans or upon the surface of the bed about the time before mentioned; and as soon as they have grown about an inch and a half in height, prick them into small pots, and continue them in the same frame until fit for repotting, which is usually in a fortnight Any light soil, such as rotten leaf-mould, is fit for the first and second shifting, but at each successive shift the strength of it should be increased by the addition of rich loam and rotten dung, till at the last they are placed in a compost of two thirds loam and one third old hotbed manure. The sizes of the pots should be successively 60*s*, 48*s*, 24*s*, and 16*s*, or larger if requisite; by the time they are placed in 24*s* they will require a pit to grow in, as they are then too large for a frame, but should

not by any means be taken into a house of any sort, as if more than six inches from the glass they become attenuated, and also they require a constantly moist regular heat of about 65°, and nothing suits them so well as to stand upon some description of fermenting material, in which situation they should continue till about a fortnight after the last repotting, by which time they will have attained their full growth, and bear an abundant bloom, when they may be taken to the greenhouse.

It must be understood that water is to be supplied to them liberally during the whole period of their growth and blooming; and, when the latter appears, an occasional application of liquid manure will be found very beneficial, and may be given twice a week. The above contains all the "art and mystery" of the practice of, Sir, your obliged servant,

A GARDENER.

THE CULTURE OF TROPÆOLUM TRICOLORUM.

SIR,—I offer you the following remarks on the cultivation of those beautiful climbers, Tropæolum tricolorum and brachyceras, not as an infallible and never-to-be-departed-from rule, but simply as a detail of my manner of growing them; but as I have hitherto obtained vigorously grown plants and an abundant bloom, I feel some confidence as to the results, and am not without a hope of its proving useful to the amateur, more especially your correspondent on whose behalf you request me to write. There are two things indispensably necessary to the successful culture of these plants: they are, good soil, and a good situation in which to grow them. It is very common for a writer, in describing a subject similar to the present, to say the plants require peat, or peat and loam, as the case may be; and perhaps it may be sometimes necessary to be thus brief, but here the amateur grower is often at a great loss, for these earths differ as much as any manufactured fabric; yet on the proper selection of them his greatest chance of success depends. Peat, in the common acceptation of the word, varies from the free, rich

deposit of decayed vegetable matter of Shirley and Wimbledon Commons to the stiff black bog-mould of the fens of Lincolnshire, every practical cultivator knows that, with the first, his plants would receive the required nourishment, while, with the latter kind, it would be difficult to raise anything much higher in the scale of vegetation than a moss or lichen, yet the non-professional grower, after paying a high price, often receives such stuff under the name of peat, and his plants are either starved or rotted by the application, and it is with a view to help him out of this difficulty that I make this digression. Good peat may be known by its fibrous texture, generally containing some of the larger roots of ferns, and other plants in a decaying state, and should always be full of smaller fibres together with small shining particles of sand; if it has a black and sodden appearance it should be rejected. It is more difficult to describe good loam, as it may vary much in colour and still be good; but I generally prefer a bright yellow loam, without any approach to either clay or gravel, both of them being vital objections; the quantity of sand contained in it also differs much in some localities, but it is better to have too little than too much, as it is far easier to add it than to extract it. Having said thus much on the subject of soil, I must leave the cultivator to the exercise of his own discretion in the selection. The compost required for Tropæolums is about one third of the fibry peat above described, an equal quantity of well-rotted leaf-mould, and the remaining third rich loam and fine white sand; these should be well mixed, and left rather rough, not sifted by any means. I will now proceed to the situation. While the plant is growing it requires a full admission of fresh air; the circumstance of its being generally found when in a wild state on elevated rocky places, will supply to the grower the best idea of what his plant requires most; a shelf in the greenhouse near to the glass, where air can be admitted freely, is the nearest approach to its native habitat, and here it should not be surrounded by plants, which would impede the circulation, but stand singly and alone; of course, the supply of air must be consistent with the state of the atmosphere outside of the house, for, being a Peruvian plant, it will not bear frost or

cold cutting winds; in every other respect it is constitutionally robust, and, if these two essentials can be secured, the rest is easy.

In speaking of the routine culture, I will begin with the growing season, which usually commences about the present time. The plants should not be prematurely excited, but be allowed to remain undisturbed till they show their stems above the earth in the pot; this they commonly do with the return of genial weather, sometimes a month sooner or later, and, in some instances, the bulb, if it has not been well grown the preceding season, will continue dormant above a twelvemonth; but, in ordinary circumstances, they may be expected to push in January or February, and as soon as they are observed an inch or two above the mould, repot them; in doing this remove as much of the old earth as is practicable without injuring the young rootlets, which will appear like fine silk: it is preferable to use rather small than large pots, those called "thirty-twos" are quite large enough for a moderately sized root. A good drainage of broken crocks should be used, and on them a few rough pieces of turfy peat should be laid, and then the mixture before recommended; if the bulb is small it is better to keep the crown just above the earth, but, if a large one, it may be covered about half an inch. After potting keep them moderately supplied with water; the trellis on which they are to be trained should be placed when the stems have attained about a foot in length; and, as the warm weather advances, the pots in which they are growing should be placed in large ones, and the space between them filled with moss to keep the roots moist; water must be given carefully and constantly, just sufficient to keep them cool and moist. When the flowers are produced the plants may be removed to a more shaded situation, and the same treatment continued till the bloom is over, when water should be gently withheld, and the plants returned to their former shelf, and gradually dried off for the winter; they should remain in the same earth and the same pot, till the season returns for a renewal of the foregoing mode of culture.

J. Mackensie.

HINTS TO AMATEURS.

As the present is a leisure season, it offers a good opportunity for a few remarks on several subjects of much consequence to the proper keeping of a garden, but which are too frequently passed over in the hurry of the busy period of the season. The first point to be insisted on is the proper labelling of all plants, whether growing in pots or otherwise, and no time is so fit as the present.

One of the greatest of the many intellectual pleasures derivable from plants is the knowledge of their several names, and from them by reference to their various habitats and geographical distribution; thus by the simple act of placing labels to plants a wide field of pleasurable reflection is open to the inquiring mind, which, in the generality of cases, is entirely lost where this is neglected; for although most persons have a desire to know something of the plant before them, yet it is not every one who possesses or cultivates them that is sufficiently conversant to be at all times ready to answer all questions.

This applies not only to stove or greenhouse plants but may be extended to the common trees and shrubs, and from them to the herbaceous perennial, biennial, and annual plants and flowers which constitute every garden. A much greater interest would be imparted to the commonest of shrubs if the name and, when exotic, the country of which it is a native, were written on a label and placed so as to be easily read; and this the veriest tyro may contrive to do with the aid of a friend and almost any botanical catalogue.

Another subject requiring attention, and not often attended to, relates to forcing bulbs and other flowers, roots, and plants. Most growers, however small, have their hyacinths and tulips to force, and these after potting are generally placed at once in heat considered necessary to bloom them; this is not natural: every plant that is desired to produce its flowers at an earlier period than is natural to it requires three separate stages of treatment, if we may so term it; the first to correspond with winter when the plant should be out of doors; the second, to agree with the spring, when a cold frame is necessary for it that

the change may be brought about in a gradual manner; and third, the summer heat necessary to cause it to flower: the whole of this may be done in three months, but the intermediate stage is in every case necessary. We may form an idea of the effect on vegetation if the summer was to come upon us in one week—and this effect virtually occurs with every plant so taken from the open air and placed in a temperature of some fifty or sixty degrees.

One other remark and we have done:—wherever composts are required for any purpose they should be at once made up, if not already laid together—in both cases let them be turned, chopped, and well mixed, at least once a month until wanted. The frequent turning is necessary that as much of the earth as is possible may be presented to the action of frost to sweeten and ameliorate its crude properties—which is done by the expansion of the water, when frozen, contained in the earth causing a separation of its parts—and when so pulverized the soil freely admits oxygen, which combining with the carbon of the earth forms a nutritive food for vegetation. EDITOR.

NEW PLANTS.

HEXANDRIA MONOGYNIA—*Amaryllidaceæ.*

Coburgia Versicolor. This beautiful plant is the produce of the excursions of J. Maclean, Esq. over the Peruvian Andes from Lima, though the exact place of its growth is not noticed. The tube of each flower is of a pale red colour; the limb, which is divided into six parts, is for the most part green on the outside, and on the inner or expanded side white, with a green margin. "To make the bulbs flower we ought to obtain a vigorous state of growth before Midsummer, and at that time, if bloom does not appear, place them in a hotter situation. They like strong soil, mixed with perfectly rotten and pulverised dung or leaves, the neck being kept above ground, if they are in pots." W. H. *Bot. Reg.*

OCTANDRIA MONOGYNIA—*Onagraceæ.*

Fuchsia Splendens. This species was raised from seed sent

to the Horticultural Society by Mr. Hartweg, who found it on the Totontepeque Mountain, at an elevation of 10,000 feet, and is likely, therefore, to be very hardy. The plant in habit approaches F. fulgens, but is sufficiently distinct, both in foliage and flowers; the former appear to have a crimson margin, and the flowers are shorter and more campanulate; the tube is bright red, extending on to the sepals, which are tipped with green; the petals are entirely green. To cause it to flower well, it should be grown in rather poor yet free soil, and small pots.

Bot. Reg.

[There is, we believe, another F. splendens in cultivation, of Humboldt, which may be distinguished from the above by its decidedly hoary leaves and dwarf habit. *Ed. Flor. Journal.*]

DIADELPHIA DECANDRIA—*Papilionaceæ.*

Zichya Villosa. A very pretty greenhouse climber, raised from Swan River Seeds by Mr. Standish, nurseryman of Bagshot. The flowers are produced in dense heads, of a pleasing reddish colour; the plant grows freely in a mixture of loam and sandy peat, and is well suited for training on ornamental wire-work.—*Bot. Reg.*

GYNANDRIA MONANDRIA—*Orchidaceæ.*

Grammatophyllum Multiflorum, var. Tigrinum. A very richly-marked variety of G. multiflorum; it succeeds either in a pot or suspended on a log; in the latter case it is necessary to surround the roots with sphagnum or peat, and should be liberally supplied with water.—*Bot. Reg.*

PENTANDRIA MONOGYNIA—*Convolvulaceæ.*

Pharbitis Ostrina. This extremely handsome plant was imported from Cuba about three years ago by Messrs. Loddiges, with whom it blossomed profusely for the first time in the summer of 1841. The flowers, which are a deep sanguine purple, are produced in clusters of an indefinite number; these rise from a point opposite or near to the base of the leaf-stalks. The plant is a tuberous-rooted perennial climber, usually running fifteen or twenty feet each year, and decaying back annually; it

succeeds in a warm moist stove, and should be allowed rich loamy soil and good pot-room.—*Pax. Mag. Bot.*

GYNANDRIA MONANDRIA—*Orchidaceæ.*

Miltonia Clowesii. A very fine species, somewhat like *M. candida,* the sepals and petals having broad brown blotches on a yellowish ground, but differing mostly in the lip, which is very considerably compressed in the middle; the point also is greatly attenuated. At first it is said to be perfectly white; but afterwards acquires towards the base a lovely violet and pinkish tinge. It flowers from September to December, or longer: it may be cultivated at the cool end of the stove, and requires the general treatment usual for the pseudo-bulb class of Oncidiums. It was appropriately named in compliment to J. Clowes, Esq., of Broughton Hall, near Manchester, a zealous collector and cultivator of the tribe.—*Pax. Mag. Bot.*

OCTANDRIA MONOGYNIA—*Tropæolaceæ.*

Tropæolum Azureum. At length the long-talked of blue Nasturtium has been received. It was first mentioned by Mr. Miers, in his Travels in Chili, and was also met with by Mr. Bridges many years since on the Campana de Quillota, but was first received in England in June last by Messrs. Veitch, of Exeter, from their collector, Mr. Lobb, who gathered it at a place called Cuesta Dormeda, about sixteen leagues from Valparaiso; the plant bloomed in the following September. In habit it is very slender, resembling T. brachyceras. "The flowers are altogether peculiar in form as well as colour; their five petals scarcely differ in size, radiating almost as regularly as those of a common primrose, and precisely similar in their exterior shape; they are originally of a deep violet hue, passing to whitish in the middle, and fading to a shade lighter after they have been opened a few days." The treatment it requires is that usually employed with T. tricolorum.—*Pax. Mag. Bot.*

DIDYNAMIA ANGIOSPERMIA—*Gesneraceæ.*

Gesnera Lateritia. A remarkably dwarf and compact growing species, with brick-red coloured flowers. Its nearest ally is *G. faucialis,* from which it differs in its peculiar lowness and

closeness of habit; the leaves are rounder, the flowers smaller, and the flower-stalks longer than those of *faucialis*. It was brought from Brazil eight or nine years since, and has lately been received and propagated more largely by Mr. Low, of Clapton. It requires the usual treatment for plants of this clsss, that is, a humid atmosphere and gentle bottom heat while growing, and to be kept perfectly dry while resting.—*Pax. Mag. Bot.*

POLYANDRIA MONOGYNIA—*Ternstræmiaceæ.*

Sauravja Spectabilis. A stove plant, with large handsome foliage and fragrant flowers, produced in large panicles, of a pure white with numerous yellow stamens. It was raised from seed imported from Bolivia, by Mr. Knight of the Exotic Nursery, Kings' Road, Chelsea, in 1838: only one plant was raised, which produced its first flowers about the middle of the past summer.

Bot. Mag.

DIADELPHIA DECANDRIA—*Leguminosæ.*

Bossiæa Virgata. A species from Swan River, where it was found by Mr. Drummond, who sent seeds of it to Mr. Murray, of the Glasgow Botanic Garden, where the plant flowered in June, 1842; it resembles *B. Scolopendrium* in habit and manner of flowering, but may be known from both it and *B. ensata* by its bearing leaves pretty copiously at the same time with the flowers. The Corolla is beautifully variegated with red and yellow.—*Bot. Mag.*

DIADELPHIA DECANDRIA—*Leguminosæ.*

Lathyrus Nervosus. A handsome and very desirable greenhouse plant discovered by Cameron in rocky places at Monte Video. It was introduced by Mr. Tweedie, who sent seeds from Puerto Bravo in South Brazil to the late Duke of Bedford. The plant has large and handsome blue flowers, with ample glaucous foliage, and is well suited for training upon a trellis in a pot; it will also bloom in the open border through the summer months.

Bot. Mag.

A LIST OF GREENHOUSE PLANTS.

In accordance with the wishes of several correspondents we offer a selected list of greenhouse plants; in doing so we have purposely avoided mentioning the more common kinds, except in the case of an extensive genus; from these we have made selections of such as are preferable, either for beauty or for the facility with which they may be managed; of course, additions may be made, and on this subject our best information is always at the service of our readers. In the description of the under-mentioned plants the predominant colour is given, though many of them have two or more colours or shades; but to give these minutiæ would occupy too much space. Cl. are climbers, suitable for training upon pillars or the rafters of the house; and tr. those which have a better appearance upon trellis, and should be grown in pots, in contradistinction to the first, which require to be planted in the borders of the house.

NAME.	COLOUR.	HEIGHT. FEET.	TIME AND DURATION OF BLOOMING.
Abutilon striatum	Orange	6	April—September
Anagallis Phillipsii	Blue	1	May—September.
,, elegans	Purple	1	do. do.
,, grandiflora	Red	1	do. do.
Azalea indica	in vars.	4	March—May.
Agapanthus umbellatus	Blue	3	July—August.
,, variegatus	Blue	2	do. do.
Acacia armata	Yellow	6	April—June.
,, prostata	Yellow	3	May—June.
,, Lambertiana	Purple	6	do. do.
,, pulchella	Yellow	4	do. do.
Adenandra uniflora	Pink	1	April—July.
,, umbellata	Pink	2	do. do.
Brugmansia sanguinea	Red Yellow	8	July—September.
,, suaveolens	White	15	August—do.
Bouvardia triphylla	Scarlet	2	April—November.
,, splendens	Scarlet	2	do. do.
Boronia serrulata	Red	3	June—July.
,, pinnata	Purple	2	February—May.
Burchellia capensis	Scarlet	3	May—June.
Brachysema latifolium	Crimson	3	April—July.
Bossiæa Scolopendrium	Yellow	8	May—do.
,, prostata	Yellow	0½	July—September.
Bignonia grandiflora	Orange cl.	30	July—August.
Beaufortia decussata	Scarlet	3	May—July.
Cytisus tomentosus	Yellow	1½	July—August.
,, proliferous	Yellow	2	April—May.

NAME.	COLOUR.	HEIGHT. FEET.	TIME AND DURATION OF BLOOMING.
Coronilla glauca	Yellow	3	May—September.
„ virminatus	Yellow	2	May—November.
„ argentea	Yellow	2	May—June.
Chorizema varium	Red	5	March—October.
„ ovata	Yellow	6	do. do.
„ illicifolia	Yellow	3	do. do.
Camellia japonica	in vars.		January—May.
Chrysanthemum	in vars.	3	October—Nov.
Chironia decussata	Red	1½	June—September.
Cobea scandens	Purple cl.	20	May—October.
Crowea saligna	Lilac	4	do. do.
Corea speciosa	Red	3	April—July.
„ splendens	Red and Green	3	do. do.
„ tubiflora	Red and Green	3	do. do.

(TO BE CONTINUED.)

CALENDAR FOR JANUARY.

STOVE. In this department much care is necessary at this particular season in order to avoid premature excitement. Speaking generally, stove plants do not begin their seasonal growth till next month, though there are a few which are more precocious; and to properly distinguish the two classes is now a matter of much importance, as the latter require increase of stimuli which would be exceedingly hurtful to the first; the necessary increase of fire-heat renders the retarding of such as should not break till next month rather difficult, but they should be very sparingly supplied with water; while, on the other hand, such as bloom naturally at an early season, or are forced for the same purpose, should have every encouragement. Of the latter a constant succession should be kept up by introducing a few every ten days or a fortnight. Examine the buds of forced roses as they are produced to detect the grub so destructive to them. Look to the drainage of plants in large pots.

Orchidaceæ, ferns, &c. may still be repotted and separated where desirable; fast-growing plants, intended for specimens, may also be repotted if requisite. Let the average temperature be 60 degrees.

GREENHOUSE. From the very mild weather we have hitherto experienced the cultivator may anticipate some as severe as the

preceding has been gentle, and should be prepared accordingly: a good store of mats should be at hand, to be used on any emergency; the plants themselves should be kept as dry as is consistent. Geraniums, calceolarias, and camellias should be arranged in the warmest part of the house, while ericas, epacris, &c. may be placed in the more exposed situations; chrysanthemums, china roses, and other plants in flower may be allowed a larger share of water. Keep everything about the plants perfectly clean; pick off dead and decaying leaves. Annuals potted in the autumn for early spring flowering should be encouraged to make a vigorous growth. Watch for the appearance of green-fly, and fumigate immediately. Plants forced into an early bloom will continue in perfection much longer if removed to a warm part of the house as soon as the flowers are well formed. Cacti, bulbous-rooted and other succulent plants should be kept quite dry. On fine days a little air may be admitted for an hour or two in the morning. The temperature should average 45 degrees.

Flower Garden. Preparation should be made for protecting tender plants and beds of delicate roots: for the latter the best material is dry fern, though the protection should not be used so long as it is possible to do without; those plants usually placed in beds which require covering are such as hyacinths, gladiolus, ranunculus, anemones, small plants of pansies, and Cape bulbs generally—tulips do not require it. If fern cannot be procured the next best covering are leaves; for such as the finer sorts of heartsease a common garden pot is sufficient, which may be removed every morning when not too severe. Top dress the beds of pinks. Plants and roots for forcing should be placed in a cold frame, preparatory to their being taken to the forcing house. The cultivator should now provide himself with such earths, composts, sticks, labels, and other matters as are likely to be wanted in the spring, that everything may be in readiness for the busy time approaching. A few annuals may be sown in a frame, to be transplanted early. In open weather proceed with pruning, digging, transplanting, making alterations, and other general groundwork. Dahlia seed should be sown this month. Newly-planted trees and shrubs should be secured with stakes.

THE LETTER-BOX.

A YOUNG GARDENER. Statice Dickensonii is usually treated as a stove plant: but, if placed in a greenhouse in the autumn, and continued there till the following spring, and then removed to a sunny situation in the stove, a more vigorous growth and perfect bloom will be obtained than if the plant had been subjected to an unvaried temperature. Sow your seed of brachycoma iberidifolia about the end of February, on a gentle hotbed; the treatment is that usual for half-hardy annuals: every particular relative to this pretty annual may be found at page 42 of last February number of the Florist's Journal.

We are not acquainted with the work in question, but will inquire.

S. NEWTON. We recommend the following twelve Calceolarias: *Shrubby*—Green's Prince Albert, Miss Antrobus, Victoria, King, Sultan, and Magnum Bonum; *Herbaceous*—Barns's King, Criterion, Sylph, Bride of Abydos, Madonna, and Adonis.

A CONSTANT READER. To propagate the tribe of Liliums by the scales is a very easy process: at the time when potting the old roots, which should be done in the course of the present month, remove as many scales (we use the familiar) as may be required, or can be spared from the original root, without materially injuring it; though, for every one taken off a corresponding reduction of vigour must be expected; in detaching them get them as entire as possible, and, having ready a sufficient number of small pots filled with peat and white sand in equal proportions, place three or four pieces in each pot, and cover them over with the soil; they may be afterwards kept in a cold frame, and will form blooming roots in three years.

W. S. Defer planting your Gladiolus till the end of February; they delight in a free rich soil, and should be placed about four inches deep, reckoning from the crown of the bulb to the surface of the soil; after planting cover the bed with a stratum of leaves about three inches thick.

T. Achimenes longiflora may be had of any respectable nurseryman near the metropolis, and we should think but few in the country are without it. The varieties of fuchsias are now so numerous that a selection becomes difficult: we would recommend F. Toddiana, figured in our October number; Thyne's Magnifica, Chandelerii Conspicua arborea, St. Clare, and Fulgens multiflora.

FELIX. Plant your Ranunculus in the first favorable weather that presents towards the end of February; an inch and a half is deep enough.

2

1. MINERVA. 2 DUC DE CONIGLIANEAU.

THE

FLORIST'S JOURNAL.

FEBRUARY, 1843.

THE CHRYSANTHEMUM.

WITH AN ENGRAVING OF MINERVA AND DUC DE CONIGLIANEAU.

THIS month our illustrations are taken from the popular genus Chrysanthemum, and we intend offering a few remarks on their improvement, as an inducement to Florists to take them under their especial care in a more extensive manner than is at present the case, with a view to the introduction of better forms, possessing a greater share of symmetrical regularity, and more variety and brilliancy of colouring than is now to be observed among them. Even in their present comparatively rough state they are highly popular, in fact, almost indispensable, from their peculiar merit of blooming at a season when any flower is acceptable: we say comparatively, and draw the comparison from what we certainly believe them capable of attaining.

An advance has been made in their improvement, and that to a considerable degree, as may be readily seen by an observation of the older varieties now almost extinct; and it is to promote and further the continuance of that approach to perfection that we are now anxious. One, and that a great difficulty, occurs in this family, an obstacle almost unknown with any other class of florists' flowers—seed cannot be obtained from them in our climate; this unfortunately prevents discriminate selection or anything more than a passive acquiescence with what our continental neighbours may please to forward; but an incentive may be given by the ready purchase of every improved variety—at the same time none but what are actual improvements should be bought

at any price, or the effect intended to be beneficial will be its immediately opposite, by influencing the raisers of seedlings to the production of quantity instead of quality. Every new seedling not being something superior to its predecessor should be utterly repudiated, while every encouragement should be afforded to varieties actually possessing claims to superiority—and we are not quite satisfied that those who annually make purchases of seed or seedlings that have not flowered, forward the advancement of these flowers so much as if they confined themselves to proved varieties; as in that case the continental grower finds his account in the number of plants he can raise without caring whether one of that number be worth retaining.

We are happy to observe the attention of the French florists directed to the Chrysanthemum.

We now turn to the culture of established varieties. They are best propagated by cuttings, which should be taken off about the end of April or beginning of May; selecting young healthy shoots, cut them at the base of a joint about five or six inches in length; strip the leaves from the two bottom joints, and strike them under a hand-glass, choosing a warm situation at the foot of a south wall or some similar place, preparing the soil by mixing a quantity of fine sand with it. After planting, water the cuttings copiously to settle the earth about their stems, and shade them if necessary till they are well rooted, then pot them, using small pots; the soil which best suits them is a free turfy loam enriched with about a third of thoroughly rotted dung—for the first potting this mixture should be lightened with a little sand, afterwards it is not necessary. They will require repotting three times, increasing the size of the pot at each shift. The situation selected for them to pass the summer in should have a full exposure to the sun, the roots being protected by plunging the pots in old tan or ashes, and should have plenty of water through the whole of the growing and blooming season; and as the flower buds are formed their development will be greatly assisted by the application of liquid manure once or twice a week. They should remain in this situation until the buds begin to unfold and show the petals, when a good airy part of the greenhouse should be assigned them; here they must not be crowded

or the loss of the lower foliage is the consequence. If large flowers are desired the buds may be thinned, leaving only one or two on each stem.

If very dwarf plants are wished, cuttings may be taken from the old plants a short time before they form flower heads, say the end of July: these will not rise above six or eight inches in height, and require the same treatment as recommended for striking, &c., for the larger plants. After blooming, the plants should be cut down and removed to an open shed, or be placed on their sides at the foot of a north wall there to remain through the winter; a little loose litter or a mat may be thrown over them in very severe weather and they require no further attention till the following March, at which time they may again be taken to a warmer part of the garden and water given them to forward the growth of the young shoots required to form cuttings for the succeeding season.

We are obliged to Messrs. Chandler, of Vauxhall, for the flowers from which the present figures are taken, who grow the Chrysanthemum most extensively.

The subjoined list is selected from their collection, and contains some of the best varieties.

Adventure—Fine double expanded flower—Yellow.
Arago—Petals flat, centre full—Orange and Red.
Beauty—Fine expanded flower—Blush Lilac.
Celestial—Very double—Blush.
Conductor—Full round flower—Pale Orange.
Champion—Full flower recurved—Pale Yellow.
Cassimer Perrier—Large flat flower—Purplish Crimson.
Conqueror—Fine flower early—White.
Compactum—Fine flower late—White.
Coronet—Very double broad petal—Creamy White.
Campestrina—Regular double and incurved—Dark Crimson.
Diana—Fine flower—White Rose tinge.
Defiance—Fine flower incurved—White.
Exquisite—Fine flower, broad reflex petals—White.
Elegans—Reflexed—Rosy Lilac.
Empress—Flat expanded petals—Pinkish Lilac.
Formosum—Incurved—White.
Floribundum—Quilled—Deep Pinkish Lilac.
Goliath—Large incurved—Pale Sulphur.
Gouvian St. Cir—Double—Orange and Crimson.
Gem—Broad petals—White.
Grand Napoleon—Fine form—Crimson.
Isabella—Round flower—White Rose tinge.

Insigne—Broad petals incurved—White Lilac tinge.
Invincible—Double reflexed—Cream.
Lucidum—Very fine flower incurved—White.
La Superbe—Fine double flower—Rosy Pink.
Leonora—Flat petals—Yellow Pink tinge.
Maria—Broad expanded petals—Red.
Madame Pampadour—Very double—Pink.
Magnet—Flowers produced in clusters—Yellow.
Mirabile—Broad double flower—Creamy White.
Memnon—Clustered—Pink.
Ne Plus Ultra—Very fine flower—Creamy White.
Princess Maria—Very fine flower—Light Pink.
Perfection—Incurved—Blush.
Phyllis—Flat—Lemon.
Pulcherrimum—Broad double flower—Deep Pink.
Sultana—Fine flower—Dark Crimson.
Striata—Incurved—Pink.
Triumphant—Double—White, centre Buff.
Theresa—Broad—Orange Red.
Vesta—Fine full flower—White Pinkish tinge.
Virginia—Quilled—White.

NOCTURNAL REPOSE OF PLANTS.

(CONTINUED FROM P. 6.)

It is not alone with these suspensions of vegetable action, whether occasioned by polar cold or tropical drought, that we have at present to deal, it is simply that repose which the plant enjoys in consequence of the absence of the sun and light, and this, instead of diminishing its action, may in some cases increase it, at least in so far as mere growth in the individual is concerned; and in this, though there are many modifying circumstances, there must be some relation between the length of the night and its effects upon the plants.

If the night is very short, as it is at midsummer in countries bordering on the polar circles, its effects must be very small, and if the night extends to nearly the whole twenty-four hours, as it does at midwinter in the same latitudes, the effect must be great in proportion. But we have little observation of plants in the winter of high latitudes, as their action is either suspended or they are concealed under the snow; and the action of the new season does not begin in such latitudes until the day has become equal to the night or even longer. Even in our latitudes the

weather is precarious for exposed plants up to the month of May, if we except the more common and hardy ones, which are no great favorites with the florist, and these we have to consider as having their natural day lengthened rather than shortened in our climate. There are a few, though but a very few, plants of a considerably more polar climate than our own which we cultivate, and they have too little day and too much night in the season of their active growth—the consequence is that the period of their growing is lengthened and their growing energy diminished, and they are altogether more troublesome to deal with than plants of climates more tropical than our own; but they are in general plants of little beauty, either in themselves or in their flowers, and so they are of small consequence. Our early spring is apt to start them into action, and, if they are plants which, in their native regions, are covered and protected by the snow, we can with difficulty keep them in a puny growth by all the care that we can bestow.

Nor need we range far in latitudes for proofs of this; there are some plants, not beauties, certainly, but still pretty little plants, which grow at considerable elevations upon the Scottish mountains, but we cannot get them down to low-lying and sheltered gardens, even in the same parallel of latitude. This, again, is not very much to be regretted, especially by the florist, but it affords him a useful lesson, namely, that his success and vantage lie in cultivating, for the sake of their flowers, plants of a climate more tropical than his own; for, although they may be changed in some of their characters, the chance is that they flower better.

If they are from warm countries near or within the tropics, and yet, from the elevation at which they grow, or any other circumstance, are hardy enough for growing and flowering in the open air during our summer and autumn, they are likely to become annual, though biennials, or even perennials, in their native regions. Many of those annuals which make the borders so gay in the latter part of summer and early autumn, are of this changed character; and, as we have already hinted, we are inclined to believe that the change is favorable to better and

more abundant flowering, and also to the ripening of seeds, if the flowering does not take place too late in the autumn.

Nor is this a vague opinion, founded upon mere hypothesis, for it is in accordance with a general law of the growth of plants. When plants of a character approaching to polar are carried to tropical countries, they perish if those countries have strong contrasts of drought and rain, and if they have moisture enough to sustain them at all times, they have a tendency to become evergreen, or rather evergrowing, and have little or no disposition to flower.

That the converse of this should hold true is a matter of almost necessary inference, namely, that tropical plants brought into pretty high temperate climates should lose part of their merely growing energies, become better flowerers, and have a tendency to become annuals. The plant is, as it were, thrown chiefly upon the functions of flowering, both for the immediate and the ultimate continuation of the species, and it is a general law of nature that to this its energies should be chiefly directed. This is a most important principle in Horticulture, and we may add that it is one according to which every judicious and skilful florist works, whether he may happen to be acquainted with the rationale of it or not. But it is of great importance to be acquainted with the principle, because then the practice can be easily and successfully extended to new subjects.

Bulbs form an exception, though not an absolutely complete one. Most of them are hardy enough for bearing our climate in the season of their growth and flowering, and, by taking up and drying the bulbous roots, we can give them something like a tropical climate, and by the use of well-chosen composts we can give them a tolerable approximation to a tropical soil. Even they, however, follow the general law of change of climate to some extent; they run less to stem and leaves, and more to flower, than they do in their native regions.

We shall now consider the influence of our excess of day in summer, and deficiency in winter, upon those more decidedly tropical plants which require artificial heat, and afterwards proceed to the summing up of the whole for practice. Tropical

plants, in their natural and wild state, are subjected to a certain period of exertion, if we may so term it, a period of excitement, in which the various functions of the plants are called into action, and a consumption or waste of its previously acquired energies takes place, and many plants present ocular demonstration of the very great demand made upon their systems by assuming, towards the close of this period of action, a languid or even flaccid appearance. Their energies are completely prostrated, and their state resembles that of the tiger after his spring. But immediately after this period of action occurs that of rest, and the resumption of the plant's energies, and that to an extent exactly proportionate, the two periods occupying each twelve hours, the twenty-four hours being equally divided between the day and night.

But in our stoves the plant is very differently situated in this particular; our days in summer extending to sixteen or seventeen hours, a much greater demand is made upon the plant, without a corresponding period of reaction. It is true, a semblance of vigour may be produced by copious supplies of water, but the result is only a forced and unnatural growth, anything but favorable to the safe keeping of the plant through the winter, and terminates in the certain though it may be gradual decay of the natural vigour of the plant; and if the same system of unceasing excitement is extended into the seasonal treatment, its complete destruction is the necessary consequence.

It is evident that, under these circumstances, the plant has not a proportionate time for the proper elaboration of its juices, so that to meet the extensive waste daily going on, it is forced to take up and exist on crude and improper matters, by this its tissue becomes unnaturally enlarged, and what is called unripe wood is the consequence: the great difficulties attendant on the management of plants in this state is known to too many cultivators. Hence, in our practice, it becomes as necessary to provide for the repose of plants as it is to supply them with earth or water. We might go further in urging the necessity of "rest," or a cessation of excitement, but must at present confine ourselves to the means by which it is to be attained.

We have before explained the first cause of excitement to be

solar influence, and, as a natural consequence, its absence is necessary to induce a state of rest; hence the object and reason of shading in long summer days. It is well known to gardeners that plants never grow so fast or so well as in the spring quarter of the year; this is not entirely owing to the weather being more propitious, for it is frequently more severe at that time than any other, but because at that season the plants have a pretty equal proportion of excitement and rest, or, in other words, the day and night are then nearly equal; and to continue this equality should be the aim of every cultivator, especially with tropical plants. In many cases shading is resorted to during the intense heat of the day, and as soon as it is over the shade is removed, and most likely the house closed for the night. It would be far better to allow the plants to receive the full influence of the sun till noon, or a little after, and then shade closely, continuing it on till night, and at the same time allowing the temperature of the house to fall several degrees. For, as in a state of nature the absence of solar influence is the first essential, so the attendant consequence is a diminution of the temperature of the atmosphere, and both are requisite to produce the refreshing and proper repose of plants.

EDITOR.

MODE OF PROPAGATING THE CARNATION.

SIR,—I have been a reader of your elegant and useful periodical from its commencement; and it is with sincere pleasure and satisfaction to myself (as I hope it will be to you also) I mention that I have derived much useful practical knowledge from the perusal of its pages.

I am not vain enough to imagine that this my humble mite will be any considerable addition to its fund of information. Yet as the "authority of experience" leads me to differ in opinion and practice from PHILO-CARYOPHYLLUS in cultivating the Carnation, let me, in a few words, relate what I have found to be, beyond comparison, the quickest, easiest, and most successful mode of propagating the Carnation.

Any time in August, or even September, I take a box four inches deep, and of such size and shape that a handglass will fit it tightly. Into the box I set as many pots (size 60) as it will hold, then I sift light soil into the box until the pots are well filled, and the interstices between them also, and with a fine rose watering-pot water the soil until it becomes almost a puddle. Then, without using any dibble, I press the prepared cuttings, one into the centre of each pot, then place the box on the surface of the dung of a nearly spent cucumber bed (out of which the earth has been removed), over the box I place a hand-light, and over the whole the frame-bed sash, and the work is done; for it is seldom that air or water will be required until the plants are ready to be removed into their winter quarters.

This, the routine of one box, may be extended to many, and I believe whoever will try the plan will, like me, find that the operation will not occasion a tithe of the trouble, nor occupy a tithe of the time that the usual process of layering does, while it will ensure much greater success.

As to keeping Carnations over winter, I think the mode that keeps them freest from excessive moisture and from worms will be found the best, be it what mode it may.—I am, Sir, yours,

JOHN M'DONALD.

RICCARTON; *Jan.* 7, 1843.

CARNATIONS.

SIR,—I am glad that I have stirred up what may be called a little emulative sort of argument in your correspondent, PHILO-CARYOPHYLLUS, for precisely the same reason, too, that appears to actuate himself; though he seems to have misunderstood me in a part of what I intended to communicate in December. With your permission, I will endeavour to put him right, and defend my favorite system of propagating Carnations, also try to remove from *his* mind the "fatal objection" pointed out in his January letter, by being, if possible, rather more explicit. As a private grower, I do not make *trouble* a matter of consideration; and though his objections are opposed to the

system, it is impossible for me to alter my opinion as to the superiority of plants produced from pipings. One peculiar advantage they always possess, which is, having an inch, at least, of solid stem, just above the ground, which I never knew the snails to make an attack upon, or the damp to interfere with; and in almost every instance they are so exceedingly well rooted, that, generally speaking, they will endure as much severe weather as the hardiest plant in cultivation. For layers, I cannot speak with this degree of confidence; as, *in some ungenial seasons*, where the cultivator has waited for the blooming to be over, before he has commenced his business, I have known hundreds that have never rooted at all; and it is nearly on all occasions the want of *ripeness* in the plants, that is the cause of their "*damping off*," in a moist winter. I cannot agree with Philo-Caryophyllus, that there can be more liability to misplace the names, by labelling each sort, and tying them together as you take them from the plants, at the time of piping, and numbering the pots, than must necessarily arise in keeping each sort separate, at the time the layers are taken from the stools. And with respect to "cutting and maiming," I wish him clearly to understand, that I am too much a *lover of Carnations* to use my knife in so reckless a manner as to *maim*, in cutting my pipings from the plants. I do not take *all* the shoots, and never take a very strong one; those that are rather below the middle strength always root the soonest. I generally leave the strong, outer growing shoots, for a second year's blooming in the manner I have stated in December, or laying, as the cultivator may decide upon. And I have particularly noticed and compared these plants with those that have not been subjected to the operation of a little pruning, and never, in any one instance, have I detected the slightest appearance of weakening, or other injurious effects consequent on this proceeding, either in the foliage or the bloom. I think Philo-Caryophyllus must *rather* have "fallen into error" as to the *early* part of June being "just the blooming season;" however we do not find it so 150 miles upwards, north-west of London, and the reports of floral exhibitions, I think, will fully bear me out in this remark. I should be exceedingly sorry to mislead a cultivator, and I am sure that all I have said on this

subject is from a full conviction of its being *entirely* correct: I have a long time practised and observed, and always found it so.—With kind regards, yours, &c.

SENEX.

[We should be happy to receive a word or two from our respected Correspondents, on the subject of "Run Flowers," at their leisure.—ED. F. J.]

NEW PLANTS.

MONŒCIA POLYANDRIA—*Begoniaceæ*.

Begonia Coccinea. This plant was imported by Messrs. Veitch, of Exeter, from the Organ Mountains of Brazil, where it was discovered by their collector, Mr. Lobb, in 1841: it blossomed soon after its arrival, and was exhibited at a meeting of the Horticultural Society in April, 1842. The plant was then about a foot in height: it has the usual appearance of *Begonia* in foliage and general habit, and bearing flowers of a deep rich red makes a beautiful variety in this extensive genus.—*Bot. Mag.*

GYNANDRIA MONANDRIA—*Orchideæ*.

Phajus Albus. A fine caulescent species, stated by Dr. Wallich (to whom we are indebted for its introduction) to be a native of trees on Mount Chandaghiry in Nepal, and in the neighbourhood of Silhet. It flowered in the collection at the Botanical Garden, Kew, in July, 1842: the raceme of the flowers is produced from the base of the upper leaf, and is drooping; it consists of from six to eight large delicate white flowers, slightly tinged with pale green, on the disk of the labellum are five longitudinal lines of soft erect short purple spines.—*Bot. Mag.*

DIDYNAMIA ANGIOSPERMIA—*Gesneriaceæ*.

Achimenes Multiflora. This fine free flowering stove plant is described as an annual by Mr. Gardner, who found it inhabiting dry banks in woods on the Serra de Santa Brida, and near Villa de Arayos, in the province of Goyaz, Brazil. The plants flowered first at the Royal Botanical Garden of Glasgow,

and afterwards at Kew: the season of blossoming with us occurs in the autumn, and it affords a succession of flowers for a long time. The flowers are nearly two inches long, funnel-shaped, the limb being oblique and strongly fimbriated at the margin; the colour is a deep lilac within, rather paler on the outside; the plant rises to about a foot in height, and in habit resembles *A. rosea.*—*Bot. Mag.*

POLYANDRIA MONOGYNIA—*Portulacaceæ.*

Talinum Teretifolium. A neat little herbaceous plant, inhabiting various parts of North America, from Texas as far north as Pennsylvania, trailing over naked rocks. With us it is usually treated as a greenhouse plant, but is at present rather scarce. Plants were raised from seed received from Mr. Otto, of Berlin, in the garden of the Horticultural Society, and bloomed in 1841: the flowers are of a lively purple colour, and are produced in the manner of *Portulacca*, but are smaller.—*Bot. Mag.*

HEXANDRIA MONOGYNIA—*Amaryllidaceæ.*

Stenomesson Vitellinum. A rather pretty bulbous-rooted plant from Lima, whence it was sent by J. Maclean, Esq., to the Horticultural Society, in whose garden the plant flowered in a cool stove in February, 1842. Like other amaryllidaceous plants, it requires to be kept warm and moist while growing, but cooler and drier when at rest: the flowers are bright deep yellow.—*Bot. Reg.*

GYNANDRIA MONANDRIA—*Orchidaceæ* § *Vandeæ.*

Odontoglossum Citrosmum. This splendid species was imported by George Barker, Esq., of Birmingham, from Mexico, who presented it to T. Brocklehurst, Esq., of the Fence, near Macclesfield, by whose gardener, Mr. Appleby, it was exhibited at one of the great meetings of the Horticultural Society at Chiswick in 1842. It is a strikingly beautiful plant, with the general appearance of an *Oncidium*, having large snow-white and rose-coloured flowers, exhaling a delicate smell of lemons. Dr. Lindley remarks that, "Although such plants as this seem as if they weakened the genus *Odontoglossum* on account of their similarity in habit to *Oncidium*, yet in truth they rather

confirm that genus by showing that, although the appearance of oncidium may be assumed, yet the main points of structure remain unaffected. One of the most important of these points is the partial parallelism of the base of the labellum with the column, and the presence of a pair of parallel raised plates at that part. This occurs in the original *Odontoglossum*, and runs through all the numerous species published and unpublished with which I am acquainted, and it does not occur in any *Oncidium*.

While, however, notwithstanding its habits, this *Odontoglossum Citrosmum* confirms rather than diminishes the propriety of separating *Odontoglossum* from *Oncidium*, it has a peculiarity of its own which may possibly suggest to some minds the propriety of forming it, and such plants as *O. brevifolium* and *pulchellum*, into a separate genus, characterized by the presence of a toothed wing or membrane at the back of the anther, and the similarity of these plants in habit might seem to justify the measure. In that case the generic name *Trymenium* might be taken for them. I do not, however, at present, see the necessity of regarding them as more than a section of Odontoglossum.—*Bot. Reg.*

Diadelphia Decandria—*Papilionaceæ*.

Hovea Racemulosa. A very pretty greenhouse shrub, which, although not so brilliant in colour as H. Celsi or pungens, is by no means unattractive. It is a native of the Swan River colony, whence seeds were obtained by Capt. James Mangles, R.N. It first flowered in the garden of Robert Mangles, Esq., of Sunning Hill.—*Bot. Reg.*

Van Houtte's Phlox.—*Garden variety*.

This remarkably beautiful plant was received from M. Louis van Houtte, nurseryman of Ghent. It appears to be a cross breed between P. suaveolens and P. caroliniana, having a white ground with crimson bars or stripes. No account of its origin was received with it. Mr. Mountjoy, of Ealing, exhibited last year a variety somewhat similar, also very fine. *Bot. Reg.*

GYNANDRIA MONANDRIA.—*Orchidaceæ* § *Malaxeæ.*

Dendrobium Sanguinolentum. In the flowers of this plant we have a most uncommon combination of colours—cyanic and xanthic tints in one and the same flower, the ground being a clear fawn colour, with the tips of the segments and lip stained with a deep rich violet, and also a scarlet spot in the middle of the lip. It was sent from Ceylon to his Grace the Duke of Northumberland, by Mr. Nightingale, and flowered at Sion in August last. In habit the plant resembles D. pierardi, and the flowers are as large as those of D. aggregatum.—*Bot. Reg.*

GYNANDRIA MONANDRIA—*Orchideæ.*

Cattleya Superba. This truly splendid species is a native of British Guiana, where it was discovered by Mr. Schomburgh. The flowers excel those of all other *Cattleyas* in the richness of their colouring; and, in fact, are equalled by no other known plant, unless it be *Sobralia macrantha.* It appears also to be very free flowering, as Messrs. Loddiges have had different specimens of it in various states, in bloom for several months during the last autumn. Messrs. Rollison, of Tooting, also bloomed a plant that had not been many months imported. Like other Cattleyas, it does not require much heat or moisture, a rather low temperature suiting it best.—*Pax. Mag. Bot.*

OCTANDRIA MONOGYNIA—*Rutaceæ.*

Corræa Bicolor. This variety is probably one of the best of the many hybrids now in cultivation: it appears to be the offspring of *C. pulchella* and *C. alba,* as it possesses the hue of the blossoms of both in a combined form. The lower part of the tube of its flowers is a lively and delicate crimson, which passes into a whitish tint towards the upper portion; the segments of the limb which are singularly large, are pure white within, and the prominent yellow stamens constitute a pretty relief; the habit is neat, but not remarkable.—*Pax. Mag. Bot.*

DIANDRIA MONOGYNIA—*Labiatæ.*

Salvia Bicolor. One of those ornamental objects which have been almost, if not entirely lost to British cultivators, and which

as it is too showy ever to have been disesteemed, must have passed out of cultivation from carelessness or accident. It appears to have been made known exactly fifty years ago, being marked in the catalogue as an introduction from Barbary in 1793. How long it has been neglected we have no means of knowing, but by seeds received from the north of India Mr. John Standish, nurseryman, of Bagshot, Surrey, has reintroduced to our gardens, and it will doubtless prove a very acceptable acquisition, being, as Mr. Standish informs us, quite hardy and exceedingly handsome; it grows to the height of five or more feet, and Mr. Standish describes it as throwing up a flower spike four feet high, which is covered with blossoms from the top to the bottom: it has a very vigorous and noble aspect, and when in bloom greatly resembles the much admired *Lupinus polyphyllus* if viewed from a distance: it continues blooming through the greater part of the summer, being herbaceous and hardy, with very ample foliage, and such extremely attractive flowers, as well as so abundant and so durable a display of them: it will be valuable for planting in shrubbery or other borders, or for occupying the centre of large compartments in extensive flower gardens.— *Pax. Mag. Bot.*

A LIST OF GREENHOUSE PLANTS.

(CONTINUED FROM P. 18.)

NAME.	COLOUR.	HEIGHT. FEET.	TIME AND DURATION OF BLOOMING.
Diosma cupressina	Pink	1½	June—July.
,, ericioides	White	2	March— do.
Dillwynia glabberima	Yellow	2	March—July.
Daphne odora	Purple	3	March—Dec.
Eutaxia myrtifolia	Yellow	1½	March—June.
Erythrina caffra	Scarlet	6	May—June.
,, crista galli	Scarlet tr.	10	May—July.
Erica splendens	Scarlet	2	April—September.
„ Eweriana	Pink and Green	2½	July—November.
„ grandiflora	Yellow	3	May—September.
„ tubiflora	Pink	2	April—July
„ Bowieana	White	2	August—Decemb.
„ Massonia	Red and Green	3	July—October.
„ vestita alba	White	2	July—December.

NAME.	COLOUR.		HEIGHT. FEET.	TIME AND DURATION OF BLOOMING.
Erica vestita purpurea	Purple		2	January—Dec.
„ „ coccinea	Deep Red		3	do. do.
„ Shannoniana	White & Purple		1½	June.
„ trossula	White and Pink		1½	April—May.
„ Pattersonia	Yellow		2½	March—August.
„ prægnans	Red		2	May—July.
„ mundula	Red		1	do. do.
„ grandinosa	White		1½	March—April.
„ aristata major	Scarlet		1½	do. do.
Elychrisum proliferum	Crimson		2	May—November.
„ fulgidum	Yellow		2	February—Oct.
Epacris grandiflora	Crimson		3	January—June.
„ nivalis	White		2	do. do.
„ pulchella	Pink		4	April—June.
„ purpurascens	Purple		3	January—March.
„ impressa	Crimson		4	January—June.
Glycine bituminosa	Yellow		4	April—September.
„ simensis	Blue		15	May—June.
Genista canariensis	Yellow		4	May—September.
„ bracteolata	Yellow		4	March—May.
Goodia latifolia	Yellow		3	April—July.
Gardenia radicans	White		1	March—June.
Gompholobium polymorphum	Yellow	tr.	5	March—August.
Hovea celsi	Blue		4	March—July.
Hoya carnosa	Pink	cl.	10	July—August.
„ Pottsii	Pink		10	do. do.
Hakea nitida	White		5	June—July.
Ipomea or Pharbitis Learii	Blue	cl.	40	June—September.
„ rubro cerulea	Blue		10	do. do.
Indigofera incana	Purple		2	May—July.
„ amæna	Scarlet		4	March—April.
Jasminum gracile	White		5	January—Decem.
„ odoratissimum	White		3	May—November.
„ revolutum	Yellow	cl.	12	March—October.
„ grandiflorum	White	cl.	15	June—October.
Justicia hyssopifolia	Yellow		2	March—August.
Kennedia prostrata	Scarlet	tr.	3	March—June.
„ monophylla	Blue	tr.	10	do. do.
„ Marryatti	Red	tr.	5	do. do.
„ nigricans	Deep Purple	tr.	5	do. do.
Lantana variabilis	Pink		2	April—August.
„ Sellowii	Lilac		1½	March—Sept.
„ crocea	Orange		2	do. do.
Lechenaultia formosa	Red		1½	January—Dec.
„ biloba	Blue		3	March—Nov.
Myaporum parvifolium	White		3	February—Oct.
Maurandia Barclayana	Purple	cl.	15	April—December.
Mathiola tristis	Livid		1½	May—July.
Metrosideros speciosa	Crimson		10	March—June.
„ Marginata	Pink		6	May—June.
Mirbelia dilatata	Blue		3	May—August.

NAME	COLOUR.	HEIGHT. FEET.	TIME AND DURATION OF BLOOMING.
Mandevillea suaveolens	White cl.	20	June—August.
Nerium splendens	Pink	7	June—October.
„ album	White	7	do. do.
Neriembergia intermedia	Lilac	2	do. do.
„ calycina	White	2	do. do.
Oxalis Emmersonii	Yellow	½	August—Novemb.
„ Bowieana	Pink	1	May—August.
„ tricolor	White and Red	½	August—Dec.
Polygala grandiflora	Purple	6	May—August.
„ cordifolia	Purple	4	March—October.
„ oppositifolia	Red	3	May—August.
Pimelea rosea	Rose	2	March—Sept.
„ spectabilis	Pink	2	April—August.
„ decussata	Rose	2	March—Sept.
Primula sinensis	in vars.	1	January—Dec.
Pittosporum Tobira	White	6	March—August.
Pultænea obcordata	Yellow	2	May—July.
„ biloba	Yellow	2	April—May.
„ stricta	Yellow	3	do. do.
Passiflora cerulea racemosa	Purple cl.	30	June—October.
Roella ciliata	Light Purple	1	June—September.
Salvia fulgens	Scarlet	3	May—September.
„ splendens	Scarlet	4	do. do.
„ patens	Blue	4	do. do.
„ pseudo coccinea	Red	5	March—Nov.
Thunbergia alata	Buff tr.	5	May—September.
„ „ alba	White tr.	5	do. do.
„ aurantia	Orange tr.	6	do. do.
Tropæolum tricolorum	Red tr.	4	May—August.
„ azureum	Blue tr.	4	May—November.
„ brachyceras	Yellow tr.	4	May—September.
Witsenia corymbosa	Blue	2	March—April.

CALENDAR FOR FEBRUARY.

Stove. It will be necessary to watch the plants here with much attention this month, as the seasonal growth of some will be now commencing, while others will remain dormant till next month. As soon as a plant shows signs of growing, it should be repotted if requisite, or if not let it be top-dressed with the same kind of soil in which it is growing, and the supply of water to such may be gradually increased; those which still remain without growing should be watered sparingly, as there is more real danger to be apprehended from a premature start than from any backwardness. Most of the amaryllidaceous plants will be now advancing to a blooming state; every encouragement should

be given them; place them in the lightest part of the house, and water them regularly. Climbers will now require frequent attention; as they grow, thin out superfluous shoots, and tie those left in their proper places; allow none to attain a rambling growth. Much depends on the proper stopping, thinning, and shortening growing shoots at this time; where bushiness is desired it is frequently necessary, and many plants produce but a scanty bloom without it. Pruning, in general, is better done by the removal of small shoots, or the points of them, than by taking off large branches, so that it is attended to as often as is required. The destruction of insects should be strictly attended to. A little air may be admitted on favorable opportunities; the average temperature should be continued at 65 degrees, it may vary 5 degrees either way.

Greenhouse. In this department every plant should be thoroughly examined, to ascertain how far they are in a fit state to meet the increasing demands that will shortly be made upon them; all that require it should be at once repotted; sour incrustations, if any, should be removed from the borders of the house, or from large boxes or pots, and fresh earth supplied. See that the drainage of every plant is perfect. Geraniums, Fuchsias, Calceolarias, &c., all require repotting, and the growing shoots of the first-mentioned should be frequently stopped. Verbenas should be forwarded, that the points of the young wood may be taken off and struck, to form plants for turning into the open borders for the summer. Forced flowers from the Stove should be brought here while in bloom, and others from the Frames removed to their places. Camellias require to be liberally supplied with water; a light part of the house should be allowed them. Green fly must be watched for, as they increase very fast at this season; as soon as any are discovered fumigate with tobacco strongly, and repeat it next day, observing to have the plants quite dry when it is done; the second attack is generally too much for them. Give air on every fine day, if it is only for an hour, and, as the weather becomes warmer, it should be increased as much as possible. All half-hardy plants required for bedding out should be forwarded for propagation. Autumn

sown seeds that have been kept here through the winter, should be repotted, and allowed rather more water, keeping them near the glass; the temperature of the house should be about 45 degrees, it may rise a little in the day.

Flower Garden. The first thing to be attended to here is preparing dung, or other fermenting materials, for forming hot-beds on which to raise tender seeds, strike cuttings, &c.; the dung should be laid together to heat till it is quite sweet, that is, till the first violent heat is over, it will then be more regular, gentle, and last longer: as soon as the beds are ready, which should be soon after the middle of the month, spread over them a coating of light rich earth, and sow seeds of tender and half-hardy annuals, for transplanting to the open borders in April and May. Seeds of Balsams, Cockscombs, Schyzanthus, Rhodanthe, Lisianthus, and other tender annuals of similar habits, should be sown in pots, and half plunged in a gentle hotbed. Dahlias from which it is desired to propagate largely, may be laid upon the surface of a hotbed from which the first rank steam has passed; for this purpose, however, a tan-bed in a forcing-house is the best. It will not be necessary to begin with the general collection till next month. In these beds the propagation of half-hardy plants should be commenced as soon as cuttings can be procured. Ranunculus and Anemonies should be planted about the middle of the month. As many persons still adhere to the old destructive method of planting them with a dibble, we again mention that the best and proper method is to remove the entire surface of the bed to the depth of an inch and a half, rake it perfectly smooth and level, and then place the roots in their respective places, distributing the various colours in a judicious manner, and pressing the roots firmly into the earth; then return the earth taken out, and finish by roughly raking it level. It is best to put a layer of leaves of about three or four inches in thickness, as soon as the bed is planted; this protects them from frost, and, becoming decayed by the summer, serves them as a mulching to keep the roots moist. By the end of the month Roses may be pruned with safety; at the same time top-dress Auriculas; if any appear sickly, it is probably owing

to bad drainage, and the earth has become sour, this should be entirely removed, the roots washed quite clean, and a few of the longest may be cut back, as also the bottom of the stem if it appears dead, or is too long, then repot the plant into good fresh earth, and return it to its place. Nail and tie up climbers. Continue to protect tender plants and shrubs standing in the open border, but at every favorable opportunity uncover them, to prevent their becoming drawn. Finish digging the beds and borders with all possible expedition, and, as soon as favorable weather occurs, proceed with pruning and transplanting all trees and shrubs that require it. Frequently roll the lawns and gravel, in order to get them firm after the frost, and, where necessary, old turf should be levelled, or fresh laid. Continue to protect plants in frames; every encouragement should be given them to induce a vigorous start.

THE LETTER-BOX.

RUSTICUS complains of the ravages made on his herbaceous plants and trees by rabbits and hares. To protect the latter is easy: our method is to mix tar and cart-grease in equal quantities, and smear it on the stems of the trees just as high as they can reach. The use of the grease is to prevent the tar hardening, and so injuring the trees. In equal quantities no danger need be apprehended. For the plants we know of no preventive but a close wire fence; we have tried tarred string, but without effect.

S. R. In potting Gesnerias and Gloxinias shake all the old earth from them, trim off the dead roots, and keep the crown of the bulb above the surface of the earth, which should be a mixture of peat and leaf mould, in equal quantities, with about a third light loam, and the same proportion of fine white sand.

A LADY, who wishes for a few Ornamental Annuals of easy culture, should procure Nemophilla insignis and atomaria; Clarkia pulchella and P. alba; Goodetia rubicunda, rosea alba, and Lindleyana; Lupinus Cruikshankii, and nanus; Calendrinia speciosa; Campanula Lorei, Calleopsis Drummondii and atrosanguinea, Erysimum Perouskianum; Escholtzia compacta, Hibiscus Africanus, Sphenogyne speciosa, and Malope grandiflora; all of which will be sure to succeed if sown about the middle of March, in the open border, taking care to sow them not more than half an inch deep.

DUKE OF WELLINGTON.

THE

FLORIST'S JOURNAL.

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DAHLIAS.

WITH AN ENGRAVING OF "DUKE OF WELLINGTON."

CONCERNING the culture of the Dahlia so much has been written that it is now needless to say anything on the subject. I think a few remarks, on the selection of sorts, for those amateurs who cultivate them for competition at shows, and also those who value these beautiful flowers for the garden alone, will be appreciated as information that may guide their choice.

It is a fact now getting generally known, that many varieties which are grown truly fine in the country are utterly worthless in the neighbourhood of large towns, more particularly manufacturing districts, such as London, Birmingham, Manchester,&c. I shall at once proceed to give a few instances. Thus, Lady Cooper, Rival Sussex, Conqueror of the Plain, Marquis of Lansdowne, Bedford Surprise, Hudson's Princess Royal, Marchioness of Exeter, Glory of Plymouth, Conqueror of the World, Euclid, Queen, Widnall; Beauty of the Plain, Duchess of Richmond, and Rouge et Noir, are generally what are called *hard-eyed* varieties, and are very seldom found good near towns, whereas they will be found the most frequent among the winning stands shown by country growers: Conqueror of the Plain was an exception last season, no one appearing able to show it. Again, such sorts as Eclipse, Catleugh; Burnham Hero, Attila, Bridesmaid, Lady Harland, Majestic, Widnall; Stanly Jones; Prince of Wales, Dods; Prince Albert, Adams; Regina, Sir F. Johnstone Hellier; Tournament, Catleugh; Argo, Andrew

Hofer, Fanny Keynes; Le Grand Baudine, Maria, Wheeler; Maid of Bath, Pickwick, Phenomenon (occasionally), Springfield Rival (occasionally), Yellow Climax (occasionally), Bloomsbury, Lees; Coronal, Hope, Hylas, are most adapted for those amateurs who grow within confined and smoky districts. Many of this latter class are considered by country growers as unfit to cultivate, on account of their showing their disk, or eye, too quickly. This, it must be remembered, is caused in most instances, by their strong growth, and also accounts for the preference given by them for the more double varieties.

I have omitted to mention many sorts that may be said to come between the denominations of *hard* and *soft* eyes, as it often happens that growers but moderately distant from town can produce fine blooms from both classes. It is therefore evident that some judgment, founded on practice, is requisite to enable the amateur to select those sorts most adapted to his locality, yet if the above be attended to, much disappointment will be avoided by those who too often find their hopes vanish when too late to remedy the evil. Another matter of importance is also necessary to the town grower, viz., *size*. I advise, that if any doubts exist as to the capability of producing moderately sized blooms, those sorts that usually grow large be preferred. Such flowers as Ruby, Twyford Perfection, Exquisite, and Metella, are mostly too small for the purpose; yet in providing for size, do not let the most important object be overlooked, viz., form.

In closing this brief article, I may mention that as gardens near towns are limited, attention should be paid to those sorts possessing constant and free flowering habits; for if the first is indispensable to success, the latter is necessary when grown as an ornament for the garden only, while if the flowers are so profuse as to lessen the size of the bloom, recourse can be had to disbudding.

If these few remarks are thought acceptable to any of your readers, and are considered worthy a place in your work, they are quite at your service, as some return for the many useful articles often perused with advantage by your obedient servant,

F. S.

PLANT STRUCTURES.

The proper erection of structures for the preservation or culture of plants is a matter of such importance, that it requires some consideration and explanation: many obvious blunders are frequently committed, and the most disastrous consequences occur through a want of knowledge of the right principles on which such structures should be erected, and this is a subject intimately affecting every one connected with horticulture,—whatever the relation, the effect whether injurious or beneficial, according to the principle employed, soon evinces itself, and is observable from the common garden-frame to the most costly stove.

Erections for the conservation of plants are of several grades, and vary, or should do so, in their appliances and means, according to the nature and character of the plants they are intended to protect, and these, in a general collection, being natives of widely distant countries of the most opposite geological characters, require also distinct methods of management, one point in which, of the first consequence, is their relative position to the sun's rays. It is always necessary that we imitate, as closely as practicable, the natural position of plants in their artificial management, for the chances of success lessen as we depart from this rule, and, in a collection in no way uncommon, we may have plants from very many parallels; some from situations exposed to the immediate and direct influence of the sun, without any intervening shade to ward off or reduce its intensity; others, again, from the deepest recesses of woods or umbrageous thickets, the power of light varying, in each case, with the latitudinal line. How, then, can we reconcile to any correct principle the appearance of a range of plant houses constructed for various plants, all of which, as it too often occurs, are of the same size and the same inclination? or how can we reasonably expect successful operations to be carried on under such circumstances? Light, in passing through the glazed roof of a plant-house, becomes refracted and decomposed—that is, each ray is bent more or less, according to the angle presented by

the surface of the glass; and the nearer the inclination of the roof is to the horizon, so much more the light is refracted, and the more decomposition takes place—a nearly flat roof throwing the light obliquely on the back wall of the house, and not allowing it to descend to the stage or pit in the centre of the house till it is reflected back from the wall. On the other hand, a sharp pitch will allow it to fall in almost direct rays upon the plants in the body of the house; so that it may be readily inferred that the inclination of the roof is of much consequence, and should be arranged to accord with the character of the plants to be grown under it, the angle being such as to allow them to receive the light in direct lines, at the time of their greatest perfection. Thus, for such collections as are usual to greenhouses, being of a miscellaneous character, many of them blooming at an early period in spring, and again in the autumn, an angle of 45 degrees is best suited, in order to catch the sun's rays while that body is yet low in the horizon; and most of the plants being removed to the open air during the summer months, they do not suffer from over-heating at that time; but if the house is devoted to either Geraniums or Ericas, a lower inclination is required. Their blooming season occurring at a later period, an angle of 40°, considering the ground line as the base, is better for them. If the erection is designed for Cacti, the slope of the roof cannot well be too sharp, as they delight in a flood of strong light. On the contrary, for Orchidaceous plants, and those of similar habit, a less inclination, say of about 35°, is fully sufficient.

The form of the roof, also, affects the plants growing under it to a considerable extent, as it is more or less capable of admitting light, and maintaining an equable temperature,—the old "lean-to" roofs are fast giving way to the span and curvilinear. In our estimation nothing equals a short span roof, no higher than is positively necessary to afford head room to the plants under it, and this plan admits of very superior ventilation. A curved roof has a light and pleasing appearance, but is generally deficient in this latter requisite—and if one point be more important than another it is the admission of air—a blaze of light and a free current of atmospheric air being equally necessary and required at the same time. And in a due provision for ven-

tilation rests a great share of the superiority of modern over the old erections still to be occasionally met with, with ceiled roofs, and large brick piers between the front sashes. A greenhouse, to be perfect in this particular, should be so constructed as to allow a free and full admission on all sides, so necessary in summer. And it may happen, in winter, that the wind blows briskly from one quarter for the space of a week; if that also happens to be the south, or south-west, no air can be admitted till it ceases, unless there are ventilators on the north side. Some may say that when it is necessary to shut the front sashes it is time to close all round, but our experience speaks to the contrary. A proper supply of pure air is as essential to the health of the plants as the soil they grow in. Another subject here presents itself, of much consequence, yet seldom attended to; we advert to draining. There is always a great quantity of surplus moisture falling from the roots after watering—from syringing—from the perspiration of the plants, and from other causes, in every place of the kind,—which, if not carried off, must stagnate, and render the atmosphere of the house impure, causing mildew, fogging, &c. An inattention to this we believe to be the fertile cause of failure in many establishments; an evil so easily obviated surely requires only pointing out to be remedied. Every house should have a drain crossing it lengthwise, with two or three trap gratings, to prevent the ingress of unpleasant effluvia and cold air.

The situation of shelves, stages, &c., must depend entirely on the description and number of plants to be grown. And here we may remark, it is greatly to be wished that in the erection of structures of this kind, the practical gardener should be more frequently consulted. The assistance of an architect may be necessary to ensure the proper completion of the work, but it is the gardener alone who can know anything of the working of the house when finished. He, having passed a life in studying the subject, must be the best judge of what is desirable, and what should be avoided. A building may be pleasing to the eye, and in accordance with the finest taste, but that does not always ensure its efficiency to the desired end.

We may be expected to say something of the site, but in the

majority of cases this is the result of necessity rather than choice; but where the latter can be exercised, select rather the side of an elevated spot than the valley at its foot. It is a mistake to suppose a hollow must be warmer than the side of a hill. The aspect must be determined by the kind of plant the erection is intended for. Stoves and greenhouses, for general collections, should face a little to the westward of the south; a house for succulents immediately to the south. If intended for ericaceous plants, a span-roofed house with glass on all sides, standing east and west, is most proper. If for ferns, &c., one facing the westward only will be found to succeed. The consideration of which is always best left to some person practically conversant with the plants intended to be grown. EDITOR.

ON STRELITZIA REGINÆ.

SIR,—I entertain an idea that one of the most useful ends to be gained from a work like yours is the removal of difficulties which stand in the way of those who are admirers and would be cultivators of plants, but from the apparent insurmountable obstacle presented to them, in the difficulty of growing such and such plants. There are many who possess a greenhouse, and have also the convenience of frames, yet content themselves with growing nothing better or higher in the scale of vegetation than Geraniums, Fuchsias, and such common plants, that may be collected at any market, or may be found in the collection of the smallest dealer; not that I would withhold from these flowers the award due to their respective merits, they are very beautiful; but what I wish to advocate is the introduction among such collections of the more rare and beautiful productions of the vegetable kingdom. There are many plants now too generally confined to the stove that would certainly succeed as well or better in a greenhouse, and among the number is the truly splendid subject of this paper. There are, too, persons who, on the mention of such plants, say at once, "Oh, they are stove plants, and their culture is 'difficult,' we shall not succeed with them." Now this impression is erroneous and injurious;

the conclusion is arrived at without the necessary and proper data—they have not tried.

Nothing can be easier than reconciling plants to this change of temperature, so that it is not extreme. As you showed us in the last Number of the Journal, it preinduces a flowering state, which is the primary object in the cultivation of plants. The Strelitzia is rather an old but not the less valuable plant, a native of the Cape of Good Hope, and why it should ever have been deemed necessary to give it stove treatment, I am at a loss to divine, especially as Ericas, coming from the same place and found quite as far inland, have always been considered greenhouse plants; but I suppose it is owing to the mistaken kindness of our forefathers, and the general love of following the good old methods; however, the day is not far distant, when every cultivator, before he commences with a new plant, will make himself thoroughly acquainted with its native character—the only true mode of arriving at the proper treatment: but to return from this digression. My mode of growing the Strelitzia Reginæ, which I think the finest of the eight species, is very simple, being very little different from that usually employed with Cacti. In the spring, about the present time, the plants are repotted into large pots, as they delight in plenty of root-room; the soil is composed of peat roughly broken, and rich loam, well incorporated with sufficient sand, to give the whole a free texture. After potting, a sunny shelf is selected for them, and they are liberally supplied with water; they usually commence growing by the middle of April, and by the middle of May the flowers are produced, lasting from then till July, and a more beautiful object is not conceivable; the rich lemon, contrasted with the purple, and the bright green of the ample foliage, forms a most lovely object for "the eye to rest upon." A single leaf on one plant last season measured four feet in length and twenty inches across. While the plants are in flower, the stigma should be dusted with the farina, that impregnation may be effected in order to obtain seed, as they are slow of propagation by suckers; with this simple precaution, ripe seed may always be had. After the growth is over, which is usually by the middle of August, the plants must be suffered to

become much drier, and should be placed directly in the sun to ripen, and for the winter treatment, it is only necessary to keep them as dry as possible; with this seasonal treatment, the plants are always ready to break vigorously upon the first application of excitement. There are several other plants of the same description that will bear the change equally well, and in some instances to greater advantage, of which I will send you occasional short notes.

T. Barnes.

EXPERIMENTS WITH ARTIFICIAL MANURES.

By Mr. J. Rogers,
Gardener to — Johnson, Esq., Wood Hall, Essex.

Dear Sir,—The following experiments I forward you, as they may be useful in guiding the operations of some of your readers; they were all made in the spring and summer of last year:

1st. *With Bone-dust.* Applied to Balsams on the second shifting, in the proportion of one tenth of the soil used, with much effect; at the third shift it was repeated with the same good effect, in the same proportion, and when the plants were placed in the blooming pots, none was added, as the soil was full, the dust appearing nearly as fresh as when first used. The result of this was very satisfactory.

Applied to Geraniums with some little benefit, which I think may be attributed more to the increased drainage than any other cause; the proportion in this case was about one twentieth.

Applied to Ericas and Epacrises, in the same proportion as for Geraniums; the effect was soon seen: the plants assumed a brown colour, looked burnt, the leaves fell off, and they would have ultimately died, if suffered to remain in it, and it was with difficulty they were recovered.

Upon Oranges it was highly serviceable; the leaves in this case were larger, of a dark glossy green, and a vigorous growth resulted: here the proportion used was one tenth of the whole.

2d. *With Guana.* Applied in a dry state with the soil at

the time of potting in very small quantities; it caused nothing but destruction wherever used. As liquid manure it was serviceable on oranges, and some cacti appeared to relish it much. Geraniums and Cinerarias it completely burned up.

3d. *With Nitrate of Soda.* For these experiments, half an ounce of nitrate was dissolved in a tub, holding nine gallons of water; and the solution was applied the same in all cases—twice a week.

On Geraniums, the effect produced was more deeply-coloured flowers, but the plants did not appear to benefit by it. On Statice puberula and Dickensonii the effect was very great, a fine vigorous growth resulting.

Applied to Kennedias without any visible alteration. On Thunbergias the result was varied; to some it proved beneficial, producing enormous leaves, while with others, under the same circumstances, no difference was discernible. Some of this mixture was used to water some small Cedars standing on the lawn, and all it was applied to died; but on the grass surrounding them it was wonderful to witness the effect, every blade being of a deep green, while other parts were completely burned up by the power of the sun.

I have used gas-water to destroy worms on lawns, and find it a very excellent remedy. J. R.

ON THE JASMINE.

By Sylva.

The Jasmine has been from time immemorial a reigning favorite wherever it has been known; in oriental poetry it is held as the symbol of the purest chastity and virgin love; and in colder climates, even where the idea partakes more of the *materiel* than in those sunny regions, it has formed the theme of many an early "soft inspiration." The Jasminium officinale has been with us a favorite wall-shrub from beyond all record. The earliest accounts we have of it is from Gerarde, in 1597, who says it was then in common use for covering walls and arbours with. The various species form with us highly orna-

mental subjects for every situation in which flowers are grown, as they may be selected for the open air, even to the bleakest spots, the greenhouse or conservatory, and the stove. The number of species grown in British collections exceeds twenty; the most part producing handsome white flowers of the richest fragrance; the finest is J. sambac, a native of the East Indies, a very beautiful plant when grown in a stove, it also succeeds well in a greenhouse if allowed a warm situation. This plant was first introduced and grown in the Hampton Court Gardens, but from some cause was lost soon after. It was then known in Europe only at the gardens of the Grand Duke of Tuscany at Pisa, where, we are informed by Evelyn, (Memoirs, &c. by Bray,) a guard was placed over the plant that no cuttings might be purloined; from this circumstance a very pretty tale has been manufactured, which relates that the gardener being attached to a beautiful peasant of the neighbourhood, but obliged to defer the completion of their happiness from pecuniary reasons, contrived to escape the vigilance of the guard, and gathered a sprig of this much prized jasmine as a present to his mistress; the young girl wishing to preserve this love-token, stuck it in the earth, where it soon emitted roots; and by certain judicious hints given by her lover, it soon became the means of securing them all they wished, hence, too, the origin of this flower being a chosen bridal present. The plant was not grown in England again till the year 1730, when it was sent to Miller, of the Botanic Gardens at Chelsea. It is now found in all good collections. It grows best in a fresh turfy loam, and should be pruned back freely every autumn; the Mandevillia suaveolens was first imported under the name of Chilian jasmine, to which it bears a very close affinity. J. grandiflorum and J. azoricum are two very fine sorts; they are propagated by grafting on the stocks of the common white jasmine; they are usually imported from the continent, along with orange trees, &c., Genoa supplying a great quantity. They may be grown in pots, and are very suitable plants for window culture, as they may be turned out of doors when not blooming, and do not require much protection during winter. The soil for these should be a good, sound, turfy loam; they require large pots and a good drainage. Care should

be taken to remove all shoots that may arise below the union of the graft. They also succeed admirably planted against a warm wall; the flowers here are larger and more numerous than when grown in pots. When planted, a good sized hole should be made, and a stratum of rough stones laid in to drain the soil, which should be loam from a common or pasture, with some old leaf-mould, or hotbed dung. The plants may be pruned back pretty close when planted, and watered whenever the weather is dry, during the first summer. They must be covered with mats as soon as the winter approaches, giving them air on fine days. They shoot again the following April, and if in a favorable situation, bloom profusely the second summer after planting. J. revolutum is another very handsome species, with yellow flowers; it, like the last mentioned, may be grown in pots, or planted out; the only difference in the treatment of any moment is that the shoots must not be shortened, as the flowers are produced on the extremity of the new wood; these may be propagated by layers. Treated similar to layers of carnations, they strike very readily. J. odoratissimum and J. gracilis are both very delicately beautiful species; they succeed best planted in the bed of a greenhouse or conservatory, and should be allowed a warm situation and frequently syringed during summer, or they are very liable to the attacks of the red spider. The soil most suitable for them is a mixture of loam and leaf mould, and they should not be pruned more than can be avoided. J. furticans and J. humile are old inhabitants of our gardens, being hardy evergreen shrubs, with yellow flowers. There are several other species, besides a few varieties, but from those mentioned a selection might be made.

NEW PLANTS.

OCTANDRIA MONOGYNIA—*Rutaceæ*.

Acronychia Cunninghami. A handsome evergreen shrub, bearing fragrant white flowers, having much of the appearance and scent of orange flowers. It is a native of Moreton Bay, New Holland, from whence it was sent by Mr. Allan Cunningham to

the Royal Gardens at Kew. It requires the ordinary treatment of greenhouse plants, and blossoms in the months of May and June.—*Bot. Mag.*

DIDYNAMIA ANGIOSPERMIA—*Gesneriaceæ.*

Gesneria Polyantha. This is another beautiful addition to the already splendid genus Gesneria, for which we are indebted to Mr. Lobb, Messrs. Veitch's indefatigable collector, who discovered it on the Organ mountains of Brazil. It is a tall growing species, with ample foliage, one leaf measuring, exclusive of the petiole, a foot in length and nine inches broad. The flowers are two inches long, of a rich scarlet, the mouth having yellow rays. They are copiously produced, on panicles, and are drooping. The first flowers were produced in August, 1842, at the Mount Radford Nursery, Exeter.—*Bot. Mag.*

DIADELPHIA DECANDRIA—*Leguminosæ.*

Lathyrus Pubescens. This everlasting pea was introduced by Mr. Tweedie from Buenos Ayres. It appears to have an extensive range on the South American coast. The general habit of the plant resembles *L. nervosus:* the flowers are large, of a purplish blue, and are produced in May. Hitherto the plants have been kept in a greenhouse, but it seems probable that it will be found hardy enough to withstand our winters in the open air.—*Bot. Mag.*

PENTANDRIA DIGYNIA—*Apocyneæ.*

Echites Hirsuta. This plant, though less beautiful than *E. splendens,* is yet a very handsome plant, bearing its delicate yellow and rose coloured flowers, of a large size, in the month of September. It is another of Mr. Lobb's additions to our stove plants, and, like other echites, is well suited for twining round low pillars, or the bottom of the rafters of the house. The flowers are borne on close racemes; they are spreading, funnel-shaped, each being about two inches across; the limb is of a pale yellow or primrose colour, and the tube delicately tinted with rose.

Bot. Mag.

OCTANDRIA MONOGYNIA—*Onagrariæ.*

Fuchsia Alpestris. This species of fuchsia was found by Mr. Gardner growing in moist, bushy, rocky places on the

Organ mountains, at an elevation of above five thousand feet from the level of the sea. A plant which he brought home alive bloomed last season, in the Glasgow Botanic Garden. In habit the plant approaches *F. integrifolia*, but differs in having narrower leaves, smaller and paler flowers. In its native place the plant has a rambling, subscandent habit, the branches being sometimes from twelve to twenty feet long. The flowers are about an inch in length, the calyx a bright red, petals deep purple. From the elevation at which it grows it is probable the plant will succeed best in the greenhouse.—*Bot. Mag.*

GYNANDRIA MONANDRIA—*Orchidaceæ.*

Comparettia Rosea. An interesting little epiphyte, with but few small sessile leaves. The racemes of flowers are drooping, and consist of from five to ten rich rose-coloured flowers, of great beauty. It is a native of the Spanish Main, from whence it was obtained by Messrs. Loddiges, with whom it has flowered for the last two years.

They should always be grown on logs of wood, in preference to being kept in pots, because they are of too slender a nature to be subjected to the chance of decay, which will exist in the latter case. It is also necessary that they be securely fastened to the log that supports them, by means of thin wire passed round them and the log, in such a manner as not to injure them, which is best prevented by placing a little moss beneath it; this moss will also encourage them to develop more and stronger roots. The plant blooms for several months during the summer. The genus was named after Andreas Comparetti, a professor at Padua, and an eminent writer on vegetable physiology.—*Pax. Mag. Bot.*

POLYADELPHIA POLYANDRIA—*Loasaceæ.*

Scyphanthus Elegans. This plant was, it seems, introduced to England from Chili, in the year 1824, and from inattention to the preservation of its seeds, or from other causes, was soon afterwards lost to this country. Among some recent importations, however, from the same quarter, it has again made its appearance. The plant is an annual, with the habit of Loasa, usually running to the height of three or four feet; its flowers are large, of a very lively yellow tint, and are copiously produced. It

flowered at the same time last summer with Mr. Green, gardener to Sir E. Antrobus, Bart. Cheam, and with Mr. Low, of the Clapton Nursery. At the former place it was planted against a south wall, over which it extended its branches seven or eight feet, and constituted an exceedingly pleasing summer covering. At Mr. Low's it was grown in pots, but while some of the plants were kept in a greenhouse others were placed in the open air, and both classes flowered with the greatest profusion from the beginning of August to the middle of October. It is stated to be perfectly hardy, but may be easily raised in the frames with other tender annuals.—*Pax. Mag. Bot.*

DIDYNAMIA ANGIOSPERMIA—*Gesneriaceæ.*

Columnea Splendens. This extremely handsome plant appears to have been collected at Brazil, and sent to the continent of Europe, where it was known by the name of *Nematanthus Guilleminiana*, and from whence it was received by Messrs. Rollison, of Tooting, with whom it flowered last autumn. In England it passes under the title of both *Columnea grandiflora* and *C. splendens.* The plant is naturally a pendent shrub; all the lower part of the branches is covered with a nearly white smooth bark, and this in contrast with the very intense green of the younger and upper portions has a good effect. The foliage is thick and fleshy, something like that of *Hoya carnosa*, but more elegant in figure, and of a particularly lively verdure. The blossoms are produced from the axils of the leaves, and depend from exceedingly long peduncles; one, and sometimes two or three flowers accompany each leaf. The number, duration, and frequent succession of these flowers is quite remarkable. Their colour is a superb deep scarlet, and they are spotted on the inside of the limb with dark, blood-coloured spots; each flower is from two to three inches long. A mixture of very turfy loam and decayed leaf mould, or of turfy heath mould and moss well incorporated, will be found to suit it, and the plant should be allowed a shaded part of a warm stove, or the orchidaceous house.—*Pax. Mag. Bot.*

DIDYNAMIA ANGIOSPERMIA—*Scrophulariaceæ.*

Paulownia Imperialis. This highly ornamental tree is now getting into very general cultivation, and it well deserves it.

With a drawing which was made last year in the Garden of Plants at Paris, Mr. Paxton has the following remarks on its culture: "In planting it out it should be placed in a dry and somewhat open position, and a prepared loamy soil, the latter being shallow and well drained. Perhaps it will be advisable to cover it partially for the first two or three years, especially if the weather should have been unfavorable to the ripening of its wood, and it may be afterwards left quite unsheltered. In covering it at all, however, provision should be made for giving it a great deal of air, and indeed for opening it altogether, on those days when no danger from frost exists. Above all things, the roots should be kept as dry as practicable in winter, that the plant may not begin growing too early in spring.

Pax. Mag. Bot.

ICOSANDRIA MONOGYNIA—*Myrtaceæ.*

Hypocalymma Robustum. This is one of those beautiful little myrtaceous plants peculiar to the south-west coast of New Holland, and which may be easily mistaken for small almond or peach bushes; so much are the flowers like them, and so seldom do we find bright rosy blossoms among the myrtles. It is a native of the Swan River Colony, and has been raised by Messrs. Lucombe, Pince, & Co., of Exeter. It is a greenhouse plant, and requires to be potted in a compost consisting of loam and heath mould, with a small portion of silver sand. Water should be given freely during the summer, and plenty of air at all times, except during frost. It may be propagated by cuttings in the ordinary way.—*Bot. Reg.*

GYNANDRIA MONANDRIA—*Orchideæ.*

Catasetum planiceps. A native of the Spanish Main, whence it was introduced by Messrs. Loddiges, with whom it flowered in June, 1841. This species resembles C. maculatum, C. tridentatum, and semiapertum in habit, but differs from the second in its serrated lip; from the first and last in its lip not having its edges incurved; and from all in the singular truncate form of this helmet-shaped organ. Cultivation the same as for other catasetums.—*Bot. Reg.*

HEXANDRIA MONOGYNIA—*Liliaceæ.*

Lilium testaceum. Said to be a Japanese species, and although very inferior in point of beauty to L. speciosum, Thunbergianum, and their varieties, is a plant that well deserves to be cultivated. It is a handsome frame or half-hardy bulb, growing best when planted out in a cold pit, when the bulbs can be kept dry during winter. It should be planted in the pit in autumn, or very early in spring, and when once established should not be afterwards disturbed, for all these plants suffer injury by removal, in consequence of the loss of their tender perennial fibres, and by the bulbs becoming dry. Whether planted or potted the bulbs should be placed rather deep, because they make fibres above the bulb as well as below it; and when they must be shifted it should be done while they are dormant. The greatest care should be taken during the operation of turning them out of the pots and removing the crocks from among the roots, without shaking off too much of the soil. They should then be fresh potted in a mixture of sandy peat, loam and a small portion of well-rotted dung, or leaf-mould, with ample drainage. They should afterwards be kept dry till they begin to grow, when water should be given, but rather sparingly at first. Much damage is done to fresh-potted bulbs, by keeping them damp directly after fresh potting, while in a state of rest.

The plant grows from one to four feet high, according to the strength or size of the bulbs, and flowers from July to September, according to the manner in which it is treated.—*Bot. Reg.*

CALENDAR FOR MARCH.

STOVE. Such an extremely favorable season as the last is of very rare occurrence, as from the great power and long continuance of solar influence through the autumnal months every facility was afforded the previous summer's growth to ripen in a healthy manner, and we have passed through the winter without feeling, to any extent, the much dreaded attacks of frost or very cold weather, so that but little fire heat has been necessary,

thus lessening the chances of the weakening effects of premature excitement; and now the cultivator, with every chance on his side, has only to give his plants proper and timely encouragement, to cause them to break with vigour. Continue to repot wherever necessary; pay strict attention to the drainage, especially of those plants standing in large pots. If any orchidaceous plants require to be shifted, or it is desired to increase them, let them be attended to at once. Amaryllis, Hæmanthus, and other Cape bulbs, should be liberally watered, allowing them a warm and light situation; as they expand their flowers remove them to the greenhouse, where the blooms will remain in perfection much longer, afterwards they should be brought back to complete their growth. The present is a good time to repot Crinums, Gesnerias, Gloxinias, Achimenes, and such roots should be repotted and started into growth. Succulents should be repotted and encouraged. Propagation may be effected now with less trouble than at any other time; give air on fine days for an hour or two in the morning, but close the house early, which will preclude the necessity of using fire heat. The syringe may again be used with beneficial effect.

Greenhouse. Complete the repotting of soft wooded plants as expeditiously as possible. The subject of greatest importance this month is the proper admission of air and the supply of water; if the first is attended to, it will avert the danger attendant on any excess of the latter; growing plants cannot have too much air, a free current should be admitted every day, unless cold-cutting winds or frost prevail. With respect to watering, plants that are newly potted, have a good drainage, and are growing freely, such will require it every day in moderate quantities; but for the generality of hard-wooded plants that have not yet commenced their seasonal action, a much less proportion will be sufficient; Cacti and all succulents that require it should be repotted and placed in the most sunny part of the house, and water may be given them whenever they are dry. Camellias that have done flowering may be repotted; but it must be done before they begin to grow, or they had better be

left till the autumn. New earth should be laid to the roots of climbers and other plants standing in the borders of the house. Use the knife freely upon all straggling growths; clean the leaves of oranges, &c., and repot or topdress and prune them as they require it. Pelargoniums will now be growing rapidly, constant attention should be paid to stopping the shoots, as this induces a shrubby habit and abundant bloom. Watch for the appearance of insects, and take measures to destroy them at once. Occasionally the leaves of fast growing plants may be syringed to free them from dust, &c.; this should always be done early in the day that the sun may dry them before nightfall.

Flower Garden. In this department the cultivator will this month have his hands full; so much requires doing, and everything at the same time. Seed sowing must be strictly attended to, as the beauty of the garden depends so much on the forwarding of annuals and other plants for turning out; those sown last month should be potted and repotted as often as their roots fill the space afforded; continue to sow for succession. It is needless and also impossible to enumerate every kind singly; but as a general rule it may be safely followed that those described as hardy may be sown, where they are to remain, any time before the middle of April; those called half-hardy may either be sown at once on heat for early blowing, or left till the end of the month, and then sow them in their intended places; and from that time till the end of April may be allowed for successional sowings, but tender annuals should all be sown at once and immediately. Proceed with the propagation of Dahlias; as soon as the shoots have made three joints, or are about as many inches in height, take them off close at the old root, and strike them singly in small pots. Seedlings should be potted off when they have made two leaves. Auricula, Picottee, Polyanthus, and Pink seed should be sown directly, if not already done; the first may be placed on a light shelf in the greenhouse, the other will do, if sown in pans and covered with a handglass. The mature plants of each of these beautiful flowers require much at-

tention this month. Auriculas having been topdressed last month, may now be expected to progress rapidly; a situation where they will receive the earliest morning sun should be chosen for them, let them be kept regularly moist, avoiding any excess, only watering each as it requires; if warm gentle showers occur, the plants may be suffered to receive them with much benefit, taking care to protect them at night whenever the weather is severe. Picottees and Carnations should be placed in the blooming pots by the end of the month; in doing this it is better not to sift the mould too fine; if roughly screened, or thrown into a heap and broken with a spade, it will be quite sufficient. Polyanthus growing in pots should have a top-dressing of rich loam and well-decayed dung, an occasional watering with liquid manure will greatly assist them. The beds of Pinks should now be top-dressed, and every encouragement given the plants; a gentle watering with lime water will drive out the worms and enrich the soil. Roses that are desired to bloom late should be pruned close back. In the pits and frames containing half-hardy plants, every means of encouraging an early and vigorous growth should be attended to; give plenty of air on every favorable occasion, but cover closely at night. Continue to propagate, till sufficient stock is obtained; those cuttings that have stood the winter in store pots should be separately potted. Verbena, Penstemon, Phlox, Mimulus, and such seeds, should be sown on gentle heat, and the plants forwarded as much as possible. The planting of deciduous trees and shrubs should be brought to a close as soon as possible, and that of evergreens may commence. The beds and borders of the flower garden may be well stirred with a Dutch hoe, but do not rake them yet. Grass and gravel should be frequently rolled; mowing should begin with the first growth of the grass, as it is then much easier to keep down than if left later.

THE LETTER-BOX.

A SUBSCRIBER FROM THE COMMENCEMENT, who wishes for twenty good heaths, cannot do better than procure any of the undermentioned: Erica ampullacea and vittata, E. aitoniana, E. ardens, E. aristata and major, E. Bowieana, E. cerinthoides major, E. Cliffordiana, E. elegans, E. grandinosa, E. Hartnelli, E. Irbyana, E. Linnæoides, E. Massonia, E. mundula, E. princeps, E. retorta, E. tricolor superba, E. ventricosa superba, E. trossula alba, E. vernix, E. vestita alba and vestita coccinea. On the south side of London we may mention Messrs. FAIRBAIRN, and on the west Mr. HENDERSON: the prices we cannot give. It is our intention to give an Illustration of this beautiful plant in our next Number.

A YOUNG GARDENER. Seed of Primula sinensis should be sown directly, in pans, using very light rich earth, and barely covering the seed. Place the pans in a gentle hotbed frame, if at hand; if not, a warm shelf in the greenhouse will do for it, and also Martynia, though the hotbed is best. Nitre is useful to destroy wireworms, grubs, &c., but must be used cautiously, especially if plants are standing on the ground. When we recommended you to use traps (which we are glad to hear succeeded) it was more than probable, although not mentioned in your note, that your ground was then planted, and had we told you to use nitre it would have been more destructive than the wireworms, for it will destroy all roots that it may come in immediate contact with. If your ground is now empty, and will continue so for a fortnight, you may sow it over with nitre; and if you will let us know the quantity used, and the result, we shall esteem it a favour.

SUBSCRIBER, LOUTH. Your Cacti should now be repotted. The soil most proper is a mixture of good sound loam and leaf mould, or thoroughly rotten manure, in equal quantities, and well mixed with about a third of the whole of white sand. In potting be sure to secure good drainage, and as the plants commence growing, which will be very soon, allow them to have a good supply of water, which may be continued till their seasonal growth is made. The situation most proper for them, from the present time till October next, is one under the immediate influence of the sun, as they require all that can be given them.

J. WOODVILLE. For heating your propagating house and orchidaceous stove, we cannot recommend anything better than Stevenson's boiler. Their last improved contains an inner as well as outer cylinder, one of which we are now using, and for neatness, economy, and effectiveness, is, in our opinion, unequalled.

ERICA'S.

1. MAMMOSA, 2. EWERIANA, 3. VAR PRINCEPS, 4. LONGIPEDUNCULATA.

THE

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ERICAS.

WITH AN ENGRAVING.

WE have on former occasions adverted to this interesting genus, but it is so extensive, varied, and withal so exceedingly beautiful, as to fully justify a return to the subject. Subjoined is the treatment pursued by our respected friend, Mr. Fairbairn, who has held the direction of a most extensive collection for a long period, namely, that of Messrs. Fairbairn, of Clapham, which leaves us but little to say on the subject of general culture. It has been said, over and again, that the cultivation of Ericas is difficult; how far this is correct may be deduced from the following article. We believe there is no more difficulty to be apprehended with these plants than with a collection of pelargoniums, only the manipulation requires rather more delicacy in the execution, and a close attention to minor details, such as the choice of earth, watering, shading, &c.

There is peculiar interest attached to Ericas, from their readiness to produce new forms and colours by means of cross impregnation. Several splendid flowers have resulted already from this, but very much more may still be done. The variety of habit and form is sufficiently large to allow the most judicious selection to be made with facility; what, for instance, could be more desirable than a combination of the habit of E. mundula with the size or colour of aristata, or the abundant bloom of grandinosa appearing on a plant with flowers such as Bowieana? It may be urged that it is next to impossible to effect crosses be-

tween certain species, because some are winter flowerers and others bloom in summer; but even this may be overcome by a little management. There is nothing ephemeral about an erica; it will continue in flower for a long time, and by getting the early flowerers a little earlier, and the late ones still later, they may be brought to bloom at the same period. The contrary method is generally pursued, and without success, because the operation of crossing, in that case, usually happens towards the end of summer, and the seed has not time to ripen before the approach of winter. On the other hand, if it is effected early in spring, there is every chance of its reaching a full maturity. We have lately succeeded in obtaining a cross between Epiphyllum truncatus and E. Ackermannia (the one usually blowing at midsummer and the other in midwinter) by pursuing this course.

EDITOR.

DEAR SIR,—As you wished me to offer a few hints on the Cultivation of Heaths, I have complied with your request to the best of my abilities, hoping these remarks may overcome the general idea of their being so difficult to cultivate, that few individuals attempt to grow this beautiful tribe.

The soil for these plants to flourish in is perhaps the first thing to be mentioned, for if they have not a proper soil, the best care and attention will be of no avail; I shall therefore recommend the peat from Addington Park and Wimbledon Common, to be used in equal parts mixed with silver sand, in proportion of one fifth, chopped up all together, (the reason I prefer chopping it up together is because the sand then unites with the turf more than when merely mixed by the hand.) The time for fresh potting heaths depends entirely on the kinds, as they flower at different times; the spring (March or April) is the best season for such as bloom in the autumn and those that bloom in spring, as soon as they have done flowering and begin to grow.

In potting, be careful to secure a perfect drainage, with broken crocks, by placing one large one over the hole and a number of small ones besides, according to the size of the pot, and over the crocks some of the turfy peat, using a few small pebble stones round the ball of the plant, pressing the fresh mould as

firm as possible; and give the plants a watering sufficient to moisten the mould through; and if the weather is hot shade them for a few days or a week.

Winter treatment. Remove the plants into the greenhouse or pit the latter end of September, place them as near the glass as possible; keep them moderately moist but not wet; give them air on every opportunity, (and by no means overheat the greenhouse;) keep it averaging at 50 of the thermometer; those that are in pits must be protected from frost, by covering with mats and dry straw; be careful not to water over the heads of the plants, keeping them rather dry of the two in severe frost.

Summer treatment. Those that have been standing near the glass all the winter will require, in May, moving to a cooler situation. If the plants are small, I would recommend a frame placed on bricks, facing the north, so as to have a current of air passing under the frame, and place the plants on tiles, or anything, to prevent the worms getting in the pots. By this plan they will require only shading when the sun is extremely hot. If the plants are large, a partial shady situation must be found, but by no means under large trees, for the heaths to catch the drip. If a situation like that I have stated cannot be obtained, I would recommend a temporary stage to be erected, so as to shade on the side the sun has influence, but by no means to cover over the top, or the plants will become drawn and weak. If mildew appear at any time, shake a little sulphur over the foliage.

The above remarks are only intended for those who have hitherto considered these plants difficult to cultivate.

E. F. Fairbairn.

The following list will be found to contain some of the best kinds in cultivation:

Aristata major.
Shannonii.
,, major.
Eximia.
Jasminiflora alba.
,, rubra.
Jasminoides.
Hartnellii.

Tricolor.
„ elegans.
„ superba.
Dumosa.
Impressa.
Leeiana.
Chlorantha.
Suaveolens.
Mundula.
Dilecta.
Daphneoides.
Humea.
Infundibuliformis.
Springellii.
Tortuliflora.
Ampullacea.
„ rubra.
„ vittata.
Ampullaceoides.
Elegans.
Aitonia.
Irbyana.
Jacksonii.
Hendersonii.
Templeii.
Princess.
Depressa.
Mitulæflora bicolor.
Accuminata.
Carrinata.
Massonii.
Gemmifera.
Macnabiana.
Wesphalingea.
Parmentieria.
„ rosea.
Fastigeata lutescens.
Ventricosa superba.
„ carnea.
„ stellata.
„ rosea.
„ tricolor.
„ breviflora.
„ coccinea.
„ „ minor.
„ tenuiflora.
Retorta.
„ major.
Lawrenceiana.
Rienziana.
Glauca.
Vestita alba.
„ coccinea.
„ rosea.
„ purpurea.
Echiiflora rosea.
„ carnea.
„ purpurea.
Eweriana superba.
„ pilosa.
„ coccinea.
Perspicua major.
„ nana.
Coventryana.
Ferruginea.
Obbata.
Jubata.
Bowieana.
Intermedia.
Rollisonii.
Decliffordia.
Tenuiflora.
Lawsonia.
Droseroides.
Savillœa.
Odora rosea.
Vernix.
„ coccinea.
„ ovata.
Ardens.
Lambertia.
„ rosea.
Pattersonia monstrosa.
Moschata.
„ denticulata.
Dickensoniana.
Mirabilis.
Accuminata longiflora.
Pyramidalis.
Ampullacea major.
Bergiana.

Our Illustrations were taken from the collection of Messrs. Rollisson, of Tooting, Surrey.

ON ORCHIDEÆ.

Now that general attention is directed so strongly to orchidaceous plants, it becomes necessary that every cultivator should know something of them in a natural position, that he may have a principle on which to found his operations. Geographically considered, they have a most extensive range, yet a peculiar feature marks all their favorite haunts. To enter on anything like a detail of the varied situations, and affective circumstances under which they are found, would extend this paper too far. But a mention of some of the places in which they are most abundant may be useful to the beginner, as a reference from which he may consult other and more extended accounts.

The essential agents in the production and continuance of Orchideæ appear to be great warmth and moisture; there is no place in which they abound more than where it is hot and damp, even to saturation. Still there are some (and by no means inconspicuous) species that are found to succeed better in a comparatively low temperature, and, with a judicious application of moisture, attain a robust habit in a temperature but little higher than that of a common greenhouse; such plants are mostly from elevated districts. Of the two necessary agents mentioned, moisture certainly exhibits the greatest effect on them, and in the proper appliance and withholding of which rest the entire art of their cultivation, for these plants will bear an increase or diminution of temperature better than an ill-timed alteration in the supply of moisture.

In Mexico, whence some of our finest varieties have been introduced, the temperature ranges from 60 to 70°, and is exceedingly damp in low lying lands; in such places they abound in vast quantities. They are also found in the Philippine Islands, Spanish Main, Bombay, and Silhet, and grow vigorously at Calcutta during the wet season, but the seasonal occurrence of drought nearly destroys them. In Nepaul, and the range of the Nepaulese hills, they are found extensively; and in Java, Sumatra, Essequibo, and Gurruckpore; also in the Isle of France, where the temperature varies from 78 to 84°. They are likewise in the Bahamas, Cuba, Columbia, and on the continent of India; and are numerous along the Martaban rivers, where the moisture

is very great at certain seasons. They are found in Georgia Pernambuco, Ceara, Uringay, and French Guiana, but not so abundantly as in the Malayan islands, where the temperature attains from 75 to 80°, and is damp to excess. Brazil abounds with them, possessing, as it does, an atmosphere of heat and moisture. In Madagascar they are plentiful; here the temperature reaches from 80 to 84°, with a corresponding amount of humidity. In Grenada and Peru they are also found, the thermometer indicating 60 to nearly 70°; but in equally high latitudes in Africa they do not exist, as the heat is very great, and dew but seldom falls,—the want of moisture being fatal to them.

On the other hand, in Sierra Leone, where the vapours rise in great quantities, so much so as to be inimical to European constitutions, the Orchideæ again abound,—as also in South America, in the gorges of the Andes, and in Guatemala, where the average temperature is 65°, with plenty of moisture. They are found, too, in Trinidad, Demerara, and Rio Janeiro. They are met with in the savannahs of Jamaica, usually growing on the ebony (Brya ebernus) and other lofty trees. In Bengal, Surinam, Venezuela, Algoa Bay, Ragabasa, Chittagong, and Penang, they are scarce; but in some parts of China they are valuable as well as numerous. Japan produces a few, between Osacco and Jedo; there are some also in Havanna, Madeira, Totola, the Organ Mountains, and the Society Islands in the South Seas. They are found in the swampy parts of the woods of Malacca, growing upon the tamarind (Tamarindus indicus); also in the Cicar Mountains, the islands of Ternate, Martinico, and New Zealand, but not in such quantity as in Manilla, Ceylon, Singapoor, Xalopa,—and in the West Indian islands, growing on the calabash trees (Crescentia cucurbitina). There are also a few in Hispaniola, Delagoa Bay, and Monte Video; also in St. Vincent, and New Caledonia. As all those places in which they flourish abound in heat and moisture, it is evident that to these elements we must look for the means by which we may cultivate this singular class of plants.

Light undoubtedly exercises great influence on plants, as on all creative matter, but over this we have little control, nor is it of so much consequence;—as these plants differ so materially from most others in the formation of their roots, being of a fleshy

substance, and not of a fibrous nature, as is the prevailing form of the roots of the generality of known plants, they do not derive their nourishment from a mixture of soils, and in an exclusion of light, but entirely from atmospheric moisture, and without it speedily perish. But if heat and moisture be combined with a due proportion of air they grow vigorously and flower abundantly. Yet it must not be supposed that as they have an excess of humidity in their natural position, the same may be applied without caution or regulation, when in an artificial state. Nothing is more injurious to them than stagnant water, and it not unfrequently occurs that plants are condemned, while the principal fault rests with the drainage. This part of the cultivation will be more fully entered on when I come to the treatment of each particular species.

To grow Orchideæ to the perfection they are capable of attaining, it is necessary to have two houses; some requiring a very high temperature, while others, on the contrary, assume a weak aspect if kept too hot. It is also necessary, in order to afford them their required season of rest, to perfect the embryo buds; and when in bloom the flowers last longer and their fragrance is greater in a low temperature. There are some which require to be grown quick to make bulbs of sufficient strength to produce flowers, particularly the genus Schomburgia, and several others, so that if one house be kept for the Indian species at a mean temperature of 70° without sun-heat in the summer, allowing it to fall from the beginning of December to the latter end of February (i. e. during the resting season) to 60°, the reduction of the temperature will cause them to break stronger when it is again raised.

The other house would be most proper for the Mexican and Guatemalan species, as they are found growing stronger in a low temperature; and if kept in summer, or while growing, at about 60 or 65°, without sun-heat, and in winter lowered to 54 or 58°, an abundant bloom and vigorous growth would result, proper attention being paid in both cases to the supply of air and water while growing. Of the first, sufficient should be admitted to prevent mouldiness and rotting; of the latter, so much as will secure a constantly moist and genial atmosphere; this is to be applied not solely by watering, but by steaming, &c., and the most proper time for its application is at night, as it is then

they receive it when in their natural state. The quantity must be regulated by the heat employed, reducing the one with the other, as when the plants are resting they scarcely require any.

I will now give a description of a number of them,—the treatment and the temperature they require.

1. *Ærides odoratum.* So named from the delightful fragrance of its flowers. This genus does best in a basket, in a mixture of rotten wood and moss, and suspended in a temperature of 75°; the leaves are bright green, and the sepals and petals are white, stained at the apex with purplish pink; the labellum is three-lobed, the two side lobes are white and the middle lobe narrow, of a pinkish colour; the spur of the labellum is pale pink.—*Native of India.*

2. *Ærides odoratum major.* This is similar to the first species, but of stronger growth, and also larger flowers; it is called by some persons, *Æ. cornutum.*—*Native of India.*

3. *Ærides odoratum album.* This is a variety of the first species, the flowers are white and fragrant; succeeds well on a log.—*Native of India.*

4. *Ærides affine.* (Derived from allied, or kindred.) The habit of this plant is different to the others, being more erect; the leaves are crisp, long, narrow, and of a bright green; the flowers are of a dull reddish brown.—*Native of India.*

5. *Ærides Brookii.* Now changed to *Æ. crispum*, from the stiffness of its leaves; they are from six to nine inches long, and from one to two inches broad, dark green. It is a strong-growing plant, and handsome in its flowers, which are produced on the two year old stems, as with all this genus, and proceed from a spike or raceme, bearing from twenty to thirty flowers at a time. The ground colour is white, speckled and stained with purplish lilac.—*Native of Brazil* (I believe).

6. *Ærides quinquevulnerum.* So named from the branching of the roots. It is one of the finest of the genus; its leaves are long and narrow, of a bright green; the sepals and petals are pale green, almost white, and slightly speckled or stained near the apex with purple; labellum three-lobed, the two side lobes are pinkish, spotted with purple; the middle one is crimson, and the spur of the labellum is rather darker than the sepals.—*Native of Manilla.*

JOHN HENSHALL, K—Y.

(*To be continued.*)

IMPROVEMENT IN GARDEN POTS.

We remark with much satisfaction that some of our contemporaries have touched upon this subject lately, because when public attention is directed in a proper manner to an existing evil, improvement is soon effected. Every person engaged in the cultivation of plants, is aware of the great influence of good or bad pots on the roots of plants, and that a great defect does exist in the manner of draining those in general use; so that any method professing to improve this important point should receive the support of those interested, until it again can be improved.

Mr. Paxton, in the last Number of his Magazine of Botany, has suggested that six or seven holes be made in the bottom of each pot (the number to be regulated by the size of the pot), in preference to the single hole now in general use. These additional apertures would greatly assist the drainage, and also admit a more perfect circulation of air through the earth contained in the pots. This alone is of sufficient importance, from the beneficial effect it must have on the soil in preserving it in a sweet and proper state, to insure the application wherever known. And that the roots may receive the influence of the sun, so necessary to the proper development of both flowers and fruit, it is advised that the pots be made wider and more shallow than is their present form. And as a further means of facilitating the drainage, it is proposed that the pots should be furnished with feet, by continuing the sides of the pot about an inch below the bottom, this rim to be divided into segments. The object of this is to elevate the bottom of the pot from the stage on which it stands, so as to allow all superfluous water to pass off at once. The value of this will be seen immediately, by every one conversant with the subject; and this latter idea has been caught at, as we perceive from another source, and actually *patented*, by a Mr. Hunt, of Pimlico.

Now as we are always anxious that the proper reward of merit should be assigned to its legitimate possessor, and desirous also that the interests of Horticulture be kept free from the trammels arising from sordid reasons—in short, wishing every cultivator to enjoy the advantage of this improvement—we have taken the trouble to turn over the leaves of our second volume,

and find this identical kind of pot described and recommended in the Calendar for September of that year (1841). And even then we did not assume the merit of originating it, as we knew it to have been in use for years before among the Dutch, and the most intelligent English gardeners. We had some made at the time mentioned, and found them productive of all the promised advantages. Only one objection could by any possibility be urged against them, which was, those having separate feet were liable, when standing on an open or trellis stage, to be thrown down by one or more of the feet slipping between the battens. This may be easily obviated, by continuing the rim entirely round the pot, for such as are required to stand on this description of stage, which, from its being open, will not prevent the escape of water. But for such as are placed on slate, or other close shelves, or which stand on the floor of the house, it is necessary that the rim be divided as before described. We shall close this short notice, by earnestly recommending every one growing plants in pots to order his next supply to be made in this manner, and that, too, by the nearest potter.—Ed.

PREPARATION OF COMPOSTS.

One of the principal features of the gardener's business is forming suitable composts for the various plants which he cultivates whether for use or ornament; various plants affect different climates, situations, and different descriptions of soil, some plants are natives of mountains where he air is pure, and the soil dry and light, others are found in valleys where moisture is abundant, and the soil is rich and deep; and others again are seen in the alluvial soil of the river, or on the surface of the irriguous marsh. Plants from all these localities are put under the care of the gardener, and as his garden may neither be on the hill or in the vale, much less in a morass, yet it is his duty to notice the different characters of the soils on those situations, so that he may furnish each tribe of his collection with that kind of soil which from observation appears to be most natural to it; and as he perhaps in many cases may not be able to procure the particular kind of earth in which they naturally grew, he must use his own judgment in compounding for his various plants a compost which will be as much like their natural bed as possible; and when we consider that most plants are perfectly

tractable under the hand of art, a very near approach may be made to give them what is most congenial to them in the new station or circumstances to which they have been transferred.

The florist, whether as a cultivator of hardy or exotic plants, requires to be very particular in forming his composts. Experience, it is true, is our guide on these matters, and the design of this communication is to give some account of what practical botanists and gardeners have discovered and recommended on the subject of composts. It may be necessary to remark in the first place, that the food of plants exists chiefly in air and earth in the form of gas: this has been detected by chemists; the chief is carbonic acid gas, and though this chemical body be imperceptible to the sight, we have learned by experience in what substances it is generally found; those substances are called manures, and are either vegetable or animal matter in a state of decomposition, and are well known to every cultivator. In forming composts, however, it is not only their nutritive quality which is to be attended to, but the consistence of the materials composing them. The roots of plants are differently constituted: some are extremely attenuated, others gross and substantial; some require a dense compacted bed to establish themselves in, others one that is porous and loose. It appears that air in the soil is as necessary to the roots as water, both of which are made of those gases on which the plants live, and without which they would die. In order that the cultivator may have every kind of earth and other matters required for forming his composts, his mould-yard should be furnished with heaps of the following materials: namely, loam dug from the surface of an old meadow; turf stripped off a dry common where heath grows naturally; white or light-coloured sand; leaf-mould dust from the bottom of old faggot-piles; decayed dung from old hotbeds, together with the dung and droppings of all domestic animals.

There being different departments in gardens, as the tropical stove or hothouse, the conservatory and greenhouse, the plants in these are generally grown in the same description of compost, which, with some exceptions, answers pretty well for the whole. I shall first give the general composts, and then speak of the tribes requiring peculiar soils. For the generality of hothouse plants a mixture of loam and peat earth is best; the mixture should be broken as fine as possible with the spade, but not sifted, for the lumps of turf give freedom to the roots as well as a free passage

to air and water. Orchidaceous plants are treated with turfy moor earth only; but the epiphytes only require to be placed in moss in a basket, and hung up in a warm moist atmosphere, from which they draw the chief part of their nourishment; the cactæ thrive best in sand and loam or brick rubbish. As loam is the basis of almost all composts, it should be more or less in quantity, as the plants are more or less of vigorous growth. For hothouse bulbs, one half rich light turfy loam, and the other half made of thoroughly rotten dung, leaf-mould, and white sand; a compost for greenhouse plants, is formed of one half light turfy sandy loam, and the other moor earth; some few, such as protea, like a rich loam; and others, such as pimelia, affect sandy moor earth; camellias thrive best in a light yellow loam with a little moor earth. Ericas and all plants similar in habit thrive best in very sandy peat mixed with a little sandy loam; this soil will suit azaleas, rhododendrons, and such like.

Geraniums are grown best in soil composed of very rotten dung and fresh light loom in equal parts, the richer the soil the stronger they grow. The flower gardener has recourse to many sorts of composts for his favorite bed-stage and border flowers; the requisites of flower-beds and composts are depth, pliability and necessary richness; the practice of trenching the sites of flower-beds to the depth of three or four feet is found to be of great service to the plants, not that the roots can descend so low, but because the bed should be quickly drained after much rain, and that in dry weather the roots may run as deep as they have a tendency to go; the orange, whether planted in the border or in boxes, requires the best and richest loam mixed with well-decayed stable or cowhouse dung, three parts of the former with one part of the latter, well mixed together. The dahlia requires fresh loam and rotten dung renewed annually, and the pansy any light fresh soil; a compost for the carnation is formed of fresh maiden loam, rotten or old hotbed dung and sand are the other ingredients: the proportions are three barrowfuls of loam, two ditto of rotten dung, and one ditto of river sand; these put together in September, and turned previous to the potting season, is all the preparation necessary. High-coloured bizarres require two thirds sandy loam, and one third well rotted stable dung; scarlet, rose, and purple flakes require equal parts of rotten dung and maiden loam; the picottee and pink are much the same as the carnation as regards soil, &c.

That flowers may have every encouragement from the texture of the compost, it is prepared by being sifted till it is free from stones, &c.; it should not be liable to knead in working, nor run together under heavy rain; by adding sand, it is made porous so as to receive, and as readily discharge any excess of water as well as allow the penetration of atmospheric influence. The high fertilities of the compost intended for flowers is one of the principal provisions to be made for their prosperity; every ingredient should be present, and every quality added which successful practice has sanctioned. The luxuriance of the plants depends on the suitableness and temperament of the compost, and the depth of the tints of the flowers depends on the rich qualities contained in it; compost for a tulip bed is made as follows: viz., three barrowfuls of rich meadow loam, one ditto of fine leaf-mould, one ditto of old and perfectly rotten dung, and half a barrowful of sea-sand; these matters should be collected and thoroughly incorporated several months before the compost is wanted, turned from time to time, kept in a shady place and from too much rain.

Compost for a hyacinth bed should consist of four barrowfuls of fresh maiden sandy loam, one ditto of well-rotted cow dung, two ditto of leaf-mould, two ditto of river sand, and to these add one barrowful of desiccated night-soil well mixed together: this composition is said to retain its virtues for three years, but it is well to add a new portion annually. The polyanthus narcissus and most hardy bulbs succeed in the same compost as that recommended for the hyacinth. The anemone requires a rich loam, such as absorbs and retains an agreeable degree of moisture without repletion or deficiency. The garden ranunculus requires the same kind of soil as the anemone, and if a little heavier, so much the better. The auricula is treated with rich and various composts, most of which has been found in turn to answer the purpose equally well, but a sound mixture for general purposes may be made of one fourth fresh yellow loam, one fourth peat, and one half of manure from an old hotbed, with a small quantity of silver sand. The polyanthus does not require so rich a compost as the auricula; the principal part should be fresh sandy loam mixed with a little well-rotted old hotbed dung and leaf-mould.

Weybridge. THOMAS WILSON.

VISITS TO NURSERIES.

MESSRS. CHANDLER, VAUXHALL.

THE extensive collection of Camellias at this place are now (March 20) in beautiful bloom; the order with which the plants are arranged, and the immense number of flowers, exhibiting every shade of red and white, produce on first entering the house a most striking effect. Nor is this interest at all lessened on a closer examination; many fine flowers are now in perfection, and others continue to unfold their beauties daily. Among those we noticed, as blooming particularly fine, were several plants of Woodsii, rich rosy pink and fine bold flower, well filled up. Elegans similar to the first in colour, though not so full a flower. Albertus, a new variety, very large and full, the colour is a very pale rose, approaching to white, with carmine stripes. Forbsii, a regular and well-shaped variety, with substantial petals; the colour is a very clear white. Fimbriata, another white flower; the petals are fringed, and the colour very clear. Donckelaeri, very large semidouble flower; colour red and white, finely mottled. Colvillii, white streaked, and mottled with rose. Coronata, curious reflexed flower, beautiful blush. Minuta, a pretty little carmine, cupped petal and full flower. Lady Hume's Blush is here blowing finely; a small pinkish buff, very regular. Gillesiana, fine deep red, mottled with white. Large plants of Imbricata and Althæiflora, profusely set with blooms and opening buds; the latter, a brilliant red, is very striking, and although an old variety, is worthy a place in every collection. At the back of the house are large plants of the Waratah, Anemoneflora, old double red and striped, and other kinds, completely filling the house with their fine flowers.

That very handsome little flower Nitida, which attracted so much attention last season, is not yet in bloom, being a late variety; the plants, however, are well set with buds. On the walls surrounding the nursery, are several fine, large, and healthy plants of C. pompone and Althæiflora, which Mr. Chandler mentioned as having been in beautiful bloom six weeks since, but owing to the frost which occurred at that time, the expanded blossoms fell, and the remaining buds have not since opened, though all look healthy; these plants, or trees we may term them, have no protection at all beyond what is afforded by the

wall they are fastened to; and if we remember rightly, the aspect is not what we should suppose to be the most favorable, being to the northward of the west. In a conversation with the same gentleman on covering walls generally with Camellias, he said he thought they would succeed in almost any situation providing the border in which they are planted be well drained, and the plants placed out either immediately before they begin to grow, or as soon as the wood is well formed, so as to allow them sufficient time to ripen it before the approach of winter; some little protection would perhaps be necessary the first and second winter. The border in which the plants here grow seems to be a light rich earth, without any preparation; and no difference is perceivable in the health or vigour of these and those grown in the house, the latter of course enjoying every attention.—Ed.

CALENDAR FOR APRIL.

Stove. Much attention must be devoted to the climbers in this department for the next two months; they will require to be kept regularly thinned, stopped, and laid in their respective places; those growing in pots and intended to train upon wire frames, such as Manettias, Thunbergias, &c., will mostly require repotting again this month; for these plants the compost should always be formed as light as possible; a great proportion of leaf-mould should be used for them, this induces a rapid and vigorous growth. In another part of this Number are some remarks on pots; in no instance are such required more particularly than with the plants under consideration. As everything in this department will be advancing with rapidity this month, care must be taken that nothing is checked in the first development of its shoots; increase the supply of water—generally, as a rule, we may mention those plants which require the greatest amount of drought, during the winter season, to cause them to flower, now require a larger supply of water. Orchidaceous plants must have particular attention; the most important point is preserving a moist atmosphere, this is best done by steaming, the syringe being hardly safe till quite the end of the month; the average temperature for them should be gradually raised, to agree with the increase of moisture. Gesneraceous plants require a liberal

supply of water; they are improved by syringing once a day over the whole herb, until they begin to blow. Should the weather prove mild, but very little fire heat will be necessary; the thermometer may be allowed to rise 70° in the day, when air may be given, closing again at about 65° for the evening; and this should be lowered to 60° by the morning; growing plants must still be repotted as they require it; the increase of insects must be guarded against by the means we have repeatedly mentioned; the best *preventive* is the syringe, which should be freely used on all plants not in a blooming state in a general collection.

Greenhouse. The period of reaction is now pretty generally established throughout the whole vegetable kingdom, and as everything is now growing, the cultivator has nothing to do but to keep them at it. Let every plant receive its proper supply of nourishment, whether from earth or water, at the moment it requires it; nothing should flag even for an hour. Geraniums, Cinerarias, &c. should occupy a light and airy part of the house; to grow the first in a round bushy manner, they should be frequently turned, that all sides may receive the light. Calceolarias should be placed in their blooming pots, if not already done; the growing shoots and flower stems must be neatly supported with sticks, observing always to train them in the most natural position. Cacti and other succulents should be placed where they can receive a flood of light; these plants cannot have too much water at this season. A more shaded situation will better suit growing Camellias; the flowers of those still in bloom will last much longer if slightly defended from the sun, as also Azaleas, &c. Continue to propagate Anagallis, Heliotropium, Penstemon, Verbenas, and other plants required for planting in the open border. Some of the more common and hardier kinds may be removed to a cold pit or frame by the end of the month, to afford room for those remaining. If there are any blank places in the borders of the house, they should be filled now. If any of the plants in pots appear to have defective drainage, or what is a usual consequence, there are worms in the pots, turn them out and repot them at once. Abundance of air should be admitted every fine day; and the plants will be improved in health and appearance by being syringed every other day. Continue to repot whenever necessary.

FLOWER GARDEN. Among the first and most beautiful spring flowers is the Auricula, which reaches perfection this month, and at no season does it require more attention than the fortnight previous to the expansion of its flowers; the least neglect proving fatal to a fine bloom; and from the variable state of the weather, generally in April, the florist's anxiety and cares cease not but with the blooming; they require plenty of air to give strength to the rising stem; green-edged flowers cannot be bloomed too gradually; these the sun should never reach after the pips are full-sized; selfs also should be kept back as much as possible, as most of them are early flowerers and last but a short time; if manure water is used it should be very sparingly, but keep the plants constantly moist with pure soft water; protect them from frost, cold winds and rain.

Picottees and Carnations, if not potted last month, should be done without delay; stand them where they will receive the benefit of sun and air, and be protected from cutting winds. It is sometimes recommended to shelter tulips with an awning at this season; this we are of opinion is unnecessary and hurtful, as tending to draw them up weakly; if protection is at all necessary this month, it is only on frosty nights succeeding wet days, at any other time tulips should have all the weather. Cuttings of Dahlias may still be taken, those already struck should be potted singly in small pots, and gradually inured to the open air. Keep Chrysanthemums well watered, that the shoots may grow strong; their propagation had better be deferred till next month. Sow more Annuals, both tender and hardy, for succession; those which were sown last month for pot culture should be encouraged by repotting; bottom heat, &c. as they require it. See that plants for bedding out, and which are now in small pots, do not want for water; some of the hardiest may be planted out by the end of the month. The beds and borders of the flower garden should now wear a neat appearance; alterations and planting should be finished without delay. Mow and roll the grass frequently; this if attended to in the beginning of the season, saves much labour, and causes a much finer sward. Gravel walks should be turned and dressed, hedges clipped, and all ground work finished, that it may not interfere with the business of furnishing the beds next month.

NEW PLANTS.

PENTANDRIA MONOGYNIA—*Apocynaceæ.*

Echitis Splendens. This is another of Messrs. Veitch's introductions, having been found by their collector Mr. Lobb, in a very elevated situation on the Organ Mountains of Brazil.

All the beautiful species of *echites*, and indeed, most of our stove climbers seem to be eclipsed by this very splendid plant. Its habit is very luxuriant, and the leaves are of an unusual size, while the flowers which are borne in large clusters and expand one or two at a time, are exceedingly lovely, their tint being a light blush which deepens towards the margin, and in the centre, but the variations of which are so gentle and gradual as to be highly pleasing. The breadth of each blossom is from three to four inches, and the petals fall back a little, and are slightly undulated in a very graceful manner; coming from an elevated district it will probably not require so high a temperature as some stove climbers, and may possibly be found to succeed in a warm close greenhouse. From its vigorous character it does not appear suitable for growing in pots, but should be planted in a small uncovered and unshaded bed of prepared earth, and trained up the rafters of the house. A loamy soil is best for it, but a little sandy heath-mould can be added with advantage. Being deciduous it will most likely be the better for a little pruning in winter, and should be kept in state of rest from November to January.—*Pax. Mag. Bot.*

PENTANDRIA MONOGYNIA—*Campanulaceæ.*

Campanula Grandis. A finer acquisition to our half-hardy herbaceous plants, has not been made for some time, than this species of bellflower. It has all the beauty of C. pyramidalis, and is even more showy on account of the larger foliage, and the greater dimensions of the flowers; it also blooms abundantly while the plants are yet small; the flowers appear in a long terminal spike, and are usually from two and a half to three inches across. It may be either kept in a pot through the winter with the protection of a cold frame, and afterwards turned into the open border, or be cultivated altogether in a pot, and made to decorate the greenhouse. Of its native country we have no information. It was sent to England from St. Petersburgh, and has blossomed in the garden of the Horticultural Society, and in the Epsom, Tooting, and other nurseries.—*Pax. Mag. Bot.*

GYNANDRIA MONANDRIA—*Orchideæ.*

Bromheadia Palustris. A tall growing gracefully orchidaceous plant with very delicate flowers; the sepals and calyx are white, the labellum is three-lobed, the two side lobes are white externally, within streaked with purple; the middle lobe is a

bright yellow. Living plants were received from Mr. Cuming by J. D. Llewellyn, esq., with a memorandum that they were dug out of a bog in Sumatra. It was also detected by Mr. Finlayson at Singapore; Synonym *Grammatophyllum Finlaysonianum.—Bot. Mag.*

GYNANDRIA MONANDRIA—*Orchideæ.*

Brassia Wrayæ. This new species of brassia was sent to the splendid collection of G. C. Harter, esq., of Broughton New Hall, near Manchester, by G. U. Skinner, esq., from Guatemala in 1840. It flowered in October 1842, bearing its numerous flowers on a somewhat pendant raceme; the sepals and petals are yellowish green, with a few large brown blotches; the lateral sepals are about two inches long; the upper one nearly equalling the petals about an inch in length. Lip two thirds the length of the lateral sepals, the colour is yellow tinged with green, and spotted with numerous small blotches of brown.—*Bot. Mag.*

DIDYNAMIA ANGIOSPERMIA—*Bignoniaceæ.*

Tecoma Jasminiodes. A climbing shrub of humble growth, a native of Moreton Bay, on the north-eastern coast of New Holland, where it was found by the late Mr. A. Cunningham, who introduced it to the Royal Botanic Gardens of Kew, where it is treated as a greenhouse plant, and bears its lovely blossoms, milk white, with a deep rose-coloured eye, in the month of August.—*Bot. Mag.*

PENTANDRIA MONOGYNIA—*Primulaceæ.*

Androsace Lanuginosa. Seeds of this charming alpine plant were sent to J. T. Mackay, esq., from the Himalaya Mountains by Dr. Royle, and they flowered in the open air in the Dublin Botanic Garden, in August 1842, when the plants promised to be hardy. The flowers are of a delicate rose colour with a yellow eye, while the foliage and branches and young portions of the stem are densely clothed with long silky hairs. Dr. Royle speaks of it as growing about Choon; Dr. Govan found it on the Sirmore Mountains.—*Bot. Mag.*

GYNANDRIA MONANDRIA—*Orchideæ.*

Oncidium Bicallosum. This plant has so much the habit of O. Cavendishianum, as to seem a new variety of it, although in reality quite a distinct species. The flowers are fully two inches in diameter, they appear in a dwarf erect raceme, not panicle, and are of a rich yellow, with the petals and sepals bordered with crimson; the labellum has two very small lobes, and for its crest has a pair of distinct tubercles, the posterior double, the anterior three-lobed, and the two separated by a considerable space. The flowers are also slightly scented, which is not the case with O. Cavendishianum; like all these plants it requires a

humid atmosphere while growing, and partial shade from bright sunshine in summer; a night temperature of 60 degrees in winter, and 70 degrees in summer will be amply sufficient for its growth. It may be grown either in a pot in a mixture of mossy peat and potsherds, or be suspended on a billet from the roof of the house. *Bot. Reg.*

DIADELPHIA DECANDRIA—*Leguminosæ.*

Indigofera Stachyoides. Seeds of this plant were collected in Bhotan, one of the independent states in the north-east of India by W. Griffiths, esq., at the height of 4000 feet above the sea, and sent to R. A. Solly, esq., by whom they were presented to the Horticultural Society. A handsome hardy greenhouse shrub, growing readily in a rich open soil composed of sandy loam and a little leaf-mould; the plant when in good health flowers during a greater part of the summer.—*Bot. Reg.*

DECANDRIA MONOGYNIA—*Leguminosæ.*

Oxylobium Capitatum. A greenhouse shrub of some beauty, imported from Swan River by Messrs. Low, of Clapton. It requires to be subject to the same treatment as the generality of these plants, and like them requires an abundant supply of water during the growing season, which should be reduced at other times.—*Bot. Reg.*

GYNANDRIA MONANDRIA—*Orchideæ.*

Dendrobrium Rhombeum. This pretty species has much resemblance to *Aureum*, from which, however, it differs in having smaller blossoms, a labellum without serratures, and the flowers in short racemes instead of pairs. It is a native of Manilla, whence it was sent by Mr. Cuming to Messrs. Loddiges, with whom it flowered in August last.—*Bot. Reg.*

DENDROBIUM MACRANTHUM

THE

FLORIST'S JOURNAL.

MAY, 1843.

DENDROBIUM MACRANTHUM.

WITH AN ENGRAVING.

[FOR the opportunity of figuring this splendid species we are indebted to Messrs. Rollison of Tooting Nursery; and for the description and management we refer to our old and respected correspondent's subjoined letter. This plant was originally called by Dr. Lindley macrophyllum; this name, as will be seen from the description, was so far objectionable as to be altered some time after, and in the Botanic Magazine it is called Macranthum; as it is the largest flowered species yet known, we have continued it.—ED.]

A fine figure of this splendid plant is given in the present number of the Florist Journal, and I am sure that every lover of this beautiful tribe will be happy to have a few hints respecting its cultivation, and also a slight description of its general habit: although this has been done in an early number of this work, still I think that a description of the plants should attend the figure. The stems or pseudo-bulbs are pendant, thick, and rounded, the leaves alternately placed on the pseudo-bulb; they are broadly ovate at the base, and tapering towards the apex, of a bright green, and beautifully veined; the flowers are produced on the stem opposite the leaves, coming in twos and fours, but never I believe producing more in one bunch; the sepals and petals are broadly lancet-shaped, with a very long acumen or point; the sepals are of a stronger texture than the petals, and of a darker colour, the petals being transparent, and of a delicate pink; the lip is acuminate and recurved at the apex, and is covered with a mossy pubescence which gives to the flower a pretty appearance. The colour of the base of the

lip is of a dark rose or blood colour; towards the apex it becomes paler, but not so light as the petals. Before the flowers expand many of them have the appearance as if they were deformed, and as if they would not come to perfection, but when the flowers expand they become perfect in their form.

The mode of treatment which I should recommend is, to place the plant in a basket composed of oak billets, at the bottom of the basket a few large potsherds should be placed crossways, and a few should be placed upright in the basket, and over that should be placed sphagnum and a little turfy peat, so that the basket may be filled up two inches above the rim, and on that should be placed the plant, and more sphagnum should be placed around the root and neatly finished by having a few pegs placed in the moss so as to keep it firm, and from falling off; the basket then should be placed at the hottest end of the house, and the plant well watered all the growing season, so that the pseudo-bulbs may attain their full strength and length. After the plant has fully matured its pseudo-bulbs, it must then be placed at the coolest end of the house, and a very little water should be given to it until it begins to show for flower; then it ought to be sprinkled every other day until the flowers expand; great care should then be taken not to wet the flower, as that would make them decay very rapidly; if the flowers are kept dry they will last for a month or six weeks in perfection. When the plant is grown strong, I have no doubt the shoots will attain the length of four or five feet, and as the flowers are produced on more than one half its length, we should then have from two to two and a half feet of raceme. This plant is a native of Manilla, and was introduced in 1836. There is no species that has flowered in this country that has flowers resembling this in colour; it is quite a novelty in dendrobium, as the prevailing colour is either yellow, orange, or white, with the exception of a very few species, which are either lilac and white or purple and white.

Dendrobium is derived from dendron, a tree, and bio, to live, found growing on trees; the specific name, Macrophyllum, implies large leaved. In the Botanical Magazine it is called macranthum; in allusion to the size of the flowers, macranthum is the most proper name, as it is the largest flowered species that we are acquainted with, but not the largest leaved.

P. N. Don.

EUPHORBIA JACQUINIFLORA.

This beautiful plant is increased by cuttings taken off in March, and planted in light, rich, sandy soil, plunging the pots in a strong hot-bed. I have two methods of culture for this plant. First, when low, bushy plants are wanted, take strong cuttings of well-ripened wood, six inches long, and plant five in a small thumb-pot, having first placed a little moss at the bottom, filling up the pot with pure white sand, plunging in a good hot-bed; in the course of two or three days I water copiously. When the plants have made shoots three or four inches long, select the two strongest shoots on each cutting, rubbing off all the others. As soon as the two shoots have become firm I cut them back to three eyes each, which causes them to form beautiful bushy plants, taking care to nip off the ends of all straggling shoots till September, when the points are all taken off. The plants are repotted, as the roots appear through the bottom, in a very rich, light soil, removing them to the back bed of the stove, giving water in abundance; by this method bushy plants with drooping, slender branches are obtained. When the plants have done flowering water is withheld for a week or ten days, when the plants are pruned back to two eyes on each original shoot, and placed in a cool greenhouse or shed. I find if the pruning is delayed, that the eyes at the end of the shoots break first, which causes the long and straggling plants so often seen in collections, whereas, if pruned immediately, the plants are not exhausted. When it is wanted to excite the plants for the following winter, plunge them in bottom heat and supply water, by this method flowers are produced from October to February.

Second method. Take the strongest cuttings that can be got, cut them in lengths each containing four eyes, plant them singly in thumb-pots in rich, light soil, leaving two eyes above the soil; plunge in a good hot-bed, supplying water. When the shoots have attained one inch in length rub off the weakest, when twelve or fourteen inches long remove to the greenhouse to harden; care must be taken not to break the roots, which will be found, on removal, to have run through the bottom of the pot. Repot them in No. 24, using a good portion of ground bones in

the compost; train them singly to sticks. They will not flower much the first season; in April following cut down to two eyes, select the strongest shoot, repotting, supplying plenty of water. Keep them in a warm greenhouse, and with proper management they will be about four feet long and three quarters of an inch in circumference. These plants will flower from February to May, when the plants are cut down to one foot high and plunged in the stove, will flower again from the end of August to November, the plants are then thrown away. By this method the largest flowers are obtained, often in clusters of six or eight at the axis of each leaf from a foot above the pot.

Millhaven. J. FORBES.

REMARKS ON THE CONSTRUCTION AND FURNISHING CONSERVATORY WALLS.

THE growth and preservation of tender plants in the open air has long engaged the attention of horticulturists, and with varied success. To acclimatize an exotic has ever been the highest and nicest point in gardening operations, so many and such opposite obstacles are to be surmounted; yet what will not perseverance guided by sound principles overcome? It is true there are some plants that appear to be beyond our control in this matter, and that, too, without any assignable reason; but this only makes apparent the small amount of knowledge we possess of the laws which govern vegetable organization, for notwithstanding all our boasted advance, we are yet far, very far, from understanding the causes of many of the most simple phenomena which occur daily before us; this, however, should only instigate us to renewed and stronger efforts to obtain the necessary knowledge. We have already several instances of the successful result of what was probably only the chance of trial and failure; but still of sufficient importance to induce the experimentalist to make further trials: as a familiar instance we mention the Aucuba, which originally was considered and treated as a greenhouse plant, but is now found growing luxuriantly in every situation. How much we may be justified in expecting, as we become more and more acquainted with the governing

causes which affect the vitality of vegetation, we will not pretend to determine.

To inure an exotic to the rigours and changes of our seasons requires some considerable time and preparation; it is not reasonable to suppose a plant can in one or two years so change its constitutional habit as to withstand uninjured either the one or the other, for it may be that the periods of excitement and rest natural to it are directly opposed to our seasons; so that to affect this, the first and most material alteration in the character of the plant, time is the principal agent. In most cases it may be forwarded a good deal by employing a medium position for the first exposure, that is such a situation in which only part of the severities may be felt; and it is this which creates the value of conservatory walls: standing out in this manner, with properly constructed screens and other means of protection, the plant enjoys through the growing season an abundant supply of food; and if managed so as to be allowed the necessary time to elaborate and mature its acquired secretions, there will be but little danger of its receiving any material damage through the winter season. The construction of these walls must be determined in a great measure by the description of plants intended to place against them. For many of the finer sorts of greenhouse plants it is necessary that flues be added, and indeed a glazed front; but as this is an expensive erection, and we are not now writing for those who can employ an architect, we will reduce the scale of our ideas, and suppose a wall to be standing, rather an unsightly object perhaps, and which it is desirable to cover; we will suppose also that Camellias form a principal part of the subjects intended to plant against it, (if deciduous shrubs are used it will be much easier;) the situation should be one facing to the south-east or the south-west, either of which is preferable to due south. The first proceeding will be to prepare the border: the natural earth, unless very good, should be removed to the depth of about two feet and a half, a third of the excavation should be filled up with stones and brick rubbish, to drain off superfluous moisture; this is the most important part of the whole, for if the bed is not thoroughly cleared of any excess of moisture, all other endeavours will fail. On these stones a thin turf may be laid all over, to prevent the earth falling between them. A mixture of loam

and peat, with all the turf-sticks, &c. contained in it, should be well chopped with the spade and mixed with some rich garden mould; this will form a compost to fill up the remaining space, and in which almost any plant will thrive. The most proper time for placing the plants in this their new situation is the present month, May; our reasons for considering it best is that danger from frost being past, the new wood will have more time to become matured before the approach of winter. With Camellias, however, it is necessary that the young shoots be pretty firm, or they are liable to receive a check which it is difficult to get them over. Immediately after planting, the whole bed should be well watered; but it is preferable to defer the nailing and training until the plants have taken a little hold, after which they should be extended as far as possible, and pruned rather thin, that the new branches may have the full influence of sun and air.

The means of protection to be used through the winter should be of the simplest construction possible. A light wooden rail, fastened to the top of the wall, from which slanting pieces depend, to the ground, at a distance of about four feet from each other, and the lower end projecting about the same from the foot of the wall, will be all the framework necessary; on which a piece or pieces of flexible canvass may run by means of lines and pulleys, so as to allow of its being rolled up or down easily. The use of continuing the covering so far from the base of the wall is to retain about the plants the radiated heat given off from the surface of the earth beneath the canvass.

With this simple contrivance, which may be removed entirely in summer, very many fine plants may be grown to a greater luxuriance than is often seen when completely under glass. In the management of these walls it must be particularly observed to avoid anything like an early excitement; in the early spring months we frequently have a few hours of hot sunshine, succeeded by cutting winds or frost, these changes are more injurious to the plants than the severest continued weather, from the action of the sun causing a reaction in the system of the plant, which, ever ready to recommence its seasonal activity, pushes its sap in a very short time to the extremities of the shoots, and there, on the succession of cold to this brief impulse, it becomes coagulated or frozen, and so distends the whole tis-

sue of the plants as frequently to cause it to split; this must be carefully avoided, by refraining from exposing them to any weather likely to make them start, until a prospect is opened of its lasting. There need be no fear if the plants do not even push till April or May, but that they will then do so with much greater vigour. On the other hand, the autumnal exposure should be maintained as long as possible, suffering them to receive all the influence of the sun, that the wood may be thoroughly ripened.

With attention to these particulars success is made certain. The advantages derivable from this manner of growing plants are important, and easily made apparent, for beside the satisfaction of being able to grow handsome plants, where before only coarse climbers would succeed, or having valuable in the place of common plants, we must consider the ultimate effect produced on the constitution of the plant, and the increased probability of its being by these means induced to withstand all attacks, even without shelter; the received opinion being that all vegetation will endeavour to form its tissue in accordance with the situation and circumstances under which it is produced.

Ed.

LIST OF ORCHIDEÆ.

(*Continued from page* 68.)

7. *Æranthus Grandiflora.* So named from the largeness of its flowers. It is nearly allied to the genus *Ærides* in the appearance of the growth, except that the leaves are rather more slender; the flower-spike slender, and upwards of eighteen inches long, supporting a few flowers of a pale green colour. It succeeds best when suspended, requiring a mixture of sphagnum and turfy peat. Requires a temperature of 70°. It is not a showy flowering plant.—*Native of Mauritius.*

8. *Aspasia Epidendroides.* Large variety; so named from the flowers bearing a resemblance to that genus. This is of the pseudo-bulbous class, which of this plant are large and flat. The leaves are produced in pairs, about one foot long and an inch and a half broad, the raceme rising from the base of the young bulb producing from eight to twelve flowers, of which the sepals are brown slightly veined with green, and the petals are a pale purplish green, the column white, with a stain of purple towards

the helmet, the labellum white with a large blotch of purple in the centre. This will do well either on a block of wood or in a pot, in a mixture of sphagnum and turfy peat, in equal quantities. Delights in a temperature of 60°.—*Native of Costa Rico.*

9. *Aganisia Pulchellum.* So named from its pretty flowers. This plant is well adapted for woodwork, on account of its running habit; its bulbs are rather small and round, tapering a little to the apex; leaf-stalk two or three inches long, supporting a lanceolate ovate leaf, the flower-spike five inches long, rising from the base of the young bulb, and producing five or six handsome white flowers. This succeeds best on a lump of wood, with a little moss fastened round so that the roots may run into it, and should be liberally supplied with water in the growing season. It requires a temperature of 70°. This I would recommend in every selection on account of its beautiful flowers, as well as its rapid increasing when divided.—*Native of Demerara.*

10. *Anætochilus Setæceus.* (Derived from bristly.) This is a terrestrial Orchideæ, and destitute of bulbs, but similar in growth to *Goodyera discolor*, it is however different in the colour of the leaf, being of a very dark green, with a vein of light green along the centre, and the leaf entirely netted with brownish red marks. The growth of this plant, when in a young state, is increased much by placing a bell-glass over it; to be grown in a pot, in a mixture of sphagnum, turfy peat, and a little rotten leaves. It will do well also in a plant-stove.

11. *Angræcum Eburnium.* So named from the labellum bearing a resemblance to ivory. This plant is destitute of bulbs, and of a noble habit; its leaves are stiff and erect, from one foot to eighteen inches long, and an inch and a half broad; the apex of the leaf appears as if part had been bitten off, the flower-spike rising to one foot and upwards from the joint of the old wood; the sepals and petals are greenish white, and the labellum of a beautiful ivory colour. This should be grown in a pot, with plenty of drainage, and in a mixture of sphagnum, turfy peat, and rotten wood, in due proportion. It requires a temperature of 70°.—*Native of Madagascar.*

12. *Angræcum Bilobum.* I believe named from the leaf being at the apex two-lobed. It is a curious little plant, destitute of bulbs, and delighting to clasp its tender roots round a log of wood. Its leaves are three inches long, of a dark green, the raceme rising from the joint of the old wood, and producing a number of pure white flowers. It will do well on a log of wood, with a little moss tied round it, and requires to be liberally supplied with water when growing. The same temperature as the others.—*Native of Cape Coast.*

13. *Angræcum Cauditum.* (Derived from the tail-like appearance of its flowers.) This plant is also destitute of bulbs; the leaves are six inches long, and rather better than one inch broad, of a shining green; the roots are strong, fleshy, white, delighting to grow on a rough chump of wood, with a little moss tied round it, and should be plentifully supplied with water when growing. Temperature 70°.—*Native of Sierra Leone.*

14. *Angræcum Subulatum.* So named from the leaves being awl-shaped. It is also destitute of bulbs, but differs from any of the rest of the genus, as its growth is rather shrubby, sending forth numerous side branches. This will do well either on wood or in a pot, in a mixture of sphagnum and turfy peat, and in a temperature of 70°; it is a plant of no beauty. (The sphagnum, or water-moss, should always be well chopped before used.)—*Native of Sierra Leone.*

15. *Angræcum Distichium.* (Derived from two-ranked.) This is also destitute of bulbs, but a curious little trailing plant, entirely different from any of the rest of its genus, on account of its stem being covered with two rows of leaves, from which it takes its specific name. The flowers rise from the joints of the wood betwixt the leaves, which are numerous, and of a pure white. This will do better hanging up in a small basket made of oyster shells fastened together by wire, in a mixture of sphagnum, turfy peat, and rotten wood, in equal quantities, and in a temperature of 70°.—*Native of Sierra Leone.*

16. *Asoidium Fuscum,* or *Trichocentrum Fuscum.* (Derived from the colour of its sepals and petals.) This plant is destitute of bulbs, but much like *Oncidium pubescens* in the growth and size, except that the leaves are bright green, the raceme trailing, seldom having two flowers open at a time, but still a profuse bloomer; the sepals and petals are of a brownish colour, the labellum shell-shaped and nearly white, with small stripes. It should be elevated in a pot, on account of its drooping flowers, in a mixture of sphagnum, turfy peat, and rotten wood, in equal quantities, also in a temperature of 70°.—*Native of Brazil.*

17. *Aporum Anceps.* (Derived from two-edged-stemmed.) This is a curious plant, and does well on a log of wood; the flowers are yellowish-green. It is known also as *Dendrobium anceps.* It requires a temperature of 70°.—*Native of Bengal.*

18. *Batemannia Colleyii.* This genus is named in compliment to J. Bateman, Esq., a zealous collector and cultivator of this tribe of plants. The specific name is after Mr. Colley, who collected for the above gentleman. This is a most curious plant; the pseudo-bulbs are dark green, four inches long, and nearly an inch in diameter, of a tetrangular form; the leaves are long, and rather broad; the flowers rise up with the young shoots,

the spike or raceme bearing six or eight flowers; the sepals and petals are reddish-brown, stained at the apex with light green; the column has a reddish stripe along the inside, and also the throat of the labellum, with the apex white. The form of this flower is curious; the top sepal and petals form a half circle close round the column and labellum, the two lower sepals projecting from each other downwards. Delights in a mixture of rotten wood, turfy peat, and moss, with a temperature of 70°.—*Native of Demerara.*

19. *Barkeria Lindleyana.* This plant is very similar to *Epidendrum Skinnerii* in habit, except that the leaves are shorter, and of a reddish-green colour; the flower-spike is produced from the apex, slender, and about a foot long, supporting six or seven flowers of a rosy crimson; the labellum is nearly an inch long, and all of a breadth, with a small stain of white in the centre, near the column. It will succeed well in a basket filled with half-rotten wood, and should be liberally supplied with water when growing. It requires a temperature of 60 or 65°. This plant ought to be in every selection.—*Native of Guatemala.*

20. *Burlingtonia Candida.* So named from its white flowers. The plant is bulbous; the bulbs are two inches long and one inch broad, and rather flat; the leaves are eight inches long and better than two inches broad, of a dark green; the flowers white. It should be placed on a log, and in a temperature of 70°. This also is well worth growing.

JOHN HENSHALL, K—P—Y.

(*To be continued.*)

LITERARY NOTICE.

Horticultural Essays, being the Papers read at the Meetings of the Regent's Park Gardens Association, for mutual Instruction. Part I.

AN 8vo pamphlet of 73 pages, containing various papers which have been read at the evening meetings of the above Society, during the first half year of its existence.

These essays are the production of practical gardeners, written in their leisure hours and for the purpose of benefiting each other by that most excellent method, "mutual instruction;" this alone should be sufficient to ensure them a favorable notice, as it evinces on the part of each contributor, not only a desire to

keep pace with the general advance of horticultural knowledge, but also a regard to the condition and consequent improvement of his fellows. This is the spirit we wish to see extended among all classes of gardeners, being convinced of the impolicy of secrets of any nature, in a profession, the members of which are perhaps more dependent on each other for mutual information than any other body of men. But it is not on this consideration alone the pamphlet before us grounds its claim to notice. The articles contained in it possess intrinsic merit; they are practically useful and well written. We extract part of an article on the natural order *Tropæolaceæ*, read by Mr. D. Maher, Feb. 16th. After some remarks on the relative position of the order in the natural system, and enumerating and describing eighteen species, he proceeds:

"The geographical range of the order is very extensive: from Mexico on the north to Buenos Ayres and Chili on the south; but the tract of country from which we possess the most species is the western slopes of the Andes of Peru and Chili, where the most of them appear to flourish in rocky and bushy places, the borders of woods, &c., where the soil is commonly moist, and the weather cool during the growing period, and where during the summer the heat is powerful, so that the growth of the stronger species is checked, and the production of flowers consequently increased.

"This point should be particularly attended to in the cultivation of *T. tuberosum*, *moritzianum*, and others of similar habit, as otherwise in this moist climate the growth is so great that no flower buds are formed until too late in the autumn to expand, and thus we are disappointed with plants of great beauty. But if forward plants of this description are turned out in a poor soil and hot exposure, and kept moist in the beginning of the season, and afterwards left to the natural supply of the atmosphere, a bloom of some months' duration will be obtained, highly rewarding the cultivator for his trouble.

"*T. tuberosum* is seldom seen in flower, and is discarded by many on that account, it is however a very handsome species, and if grown according to the hints given above will not be thrown away so readily. I have known it to succeed best and flower most profusely in a pure gravel. Indeed the whole order will be benefited by care being taken that they do not grow too luxuriantly when free flowering plants are wanted.

"*Tropæoleum tricolor*, *T. brachyceras*, and no doubt also *T. azureum*, will succeed well in a good loam, rendered free but not too light with sand, leaf-mould thoroughly decayed, and a little peat. Judging from the soil adhering to imported roots

of these plants, they appear to grow naturally in a free yellowish brown loam, in which occur glittering yellow particles, I believe, of mica. Peat should be but sparingly used, or only weak plants will result. Damp must be particularly guarded against, and the freest circulation of air kept up that the weather will permit; but directions like these, and also those respecting drainage, refer with equal force to every plant we cultivate, and of course will always be properly attended to by every one wishing to arrive at anything approaching excellence. I think that when the rarer tuberous-rooted Tropæolums become sufficiently common to allow the experiment being tried, that most of them will be found much hardier than is supposed at present. Plants of Chymocarpus (Tropæolum) pentaphyllus, turned out against a sunny wall, in the course of the summer become very attractive objects, whilst the increase at the root is so great that I really wonder this fine plant is not seen in every cottager's garden. I have little hesitation in saying that most of the tuberous species will do better if planted out near a wall, than if kept in a pot; and as most of them seed freely, especially T. brachyceras, I hope that all of our members who can lend a helping hand to prove their hardiness, will not lose the opportunity of the approaching season to test them."

Mr. Maher then goes on to consider the most proper form of trellis for such as are grown in pots, but want of space obliges us to stop here.

We would strongly recommend to gardeners generally, wherever a sufficient number can be assembled, to form societies like this, tending as it does to mutual improvement, a closer examination of causes and effects, and a kindly feeling towards each other.

NEW PLANTS.

Gynandria Monandria—*Orchidaceæ*.

Lælia Acuminata. This plant, which ranks among the most delightful members of the genus Lælia, was found by Mr. Hartweg at a place called Retalulen in Guatemala. It grows there on the trunk of the calabash tree, (crescentia cujete,) on which Orchideæ are very frequently met with; it is said to form a fine corymb of eight flowers, and to be so exceedingly beautiful that the Guatemalese give it the name of Flor de Jesus. The pseudo bulbs are produced regularly and alternately, as well as with great closeness on the rachis, and are readily known by being a good deal flattened and wrinkled. The flowers are borne in an erect shape of two, three, or more blossoms; these are of a

very delicate blush tint, with the centre of the lip of a rich brownish purple. For cultivating the species, nothing is necessary but a suitable rough log of wood to support it, and it can be kept in a warm moist house during spring and summer, but should be taken to a colder one in winter, at no time however does it require a high temperature.—*Pax. Mag. Bot.*

DIADELPHIA DECANDRIA—*Leguminosæ.*

Hovea Pungens, var. Major. This is a fine greenhouse shrub, closely resembling the favorite H. pungens, but of stronger habit. It was raised by Mr. Low of Clapton, from seeds collected in the Swan River Colony, and flowered for the first time at the Clapton Nursery, in May and June 1841.—*Pax. Mag. Bot.*

PENTANDRIA MONOGYNIA—*Grossulaceæ.*

Ribes Albidum. This plant is truly described as a most interesting acquisition to the shrubbery and flower garden. It was obtained from seed in the gardens of Admiral Sir David Milne, G.C.B., at Inveresk near Musselburgh, but whether it was an accidental seedling or a hybrid we are not aware. The flowers are of a very delicate French white with a pink eye, while the plant has larger racemes of flowers than R. sanguineum, and is a more profuse bloomer. It is of the same robust habit of growth, and like that species thrives well in almost any sort of soil or situation.—*Pax. Mag. Bot.*

DECANDRIA MONOGYNIA—*Melastomaceæ.*

Pleroma Benthamianum. A fine melastomaceous plant, bearing numerous deep violet coloured flowers, a native of the Organ Mountains. It flowered in the Glasgow Botanic Garden in 1842, and unlike many of its congeners is not of very tardy growth, flowering freely at from a foot and a half to two feet high. In its native country it grows abundantly in a rather boggy soil, at an elevation of upwards of 3000 feet above the sea level.—*Bot. Mag.*

DIADELPHIA DECANDRIA—*Leguminosæ.*

Amicia Zygomeris. Found upon the Cordilleras of Mexico, near the Pacific, growing in woods and by river sides, at an elevation of from 5500 to 8000 feet. It was introduced to this country from Paris by Messrs. Rollison of the Tooting Nursery. A tall free growing shrub, with pleasing light green foliage, and showy yellow pea-shaped flowers; it flowers during the early winter months.—*Bot. Mag.*

MONADELPHIA PENTANDRIA—*Passifloreæ.*

Passiflora Actinia. This new passion flower was sent last year from the Organ Mountains of Brazil to Mr. Veitch of Exeter, by his collector Mr. Lobbs. It produced its handsome and highly fragrant blossoms first in November 1842, and again in February of the present year. The name is suggested by the

resemblance of the flower to those marine animals so common upon our rocky coasts, known by the name of sea anemone. The general character of the plant approaches that of P. alata; the petals of the flowers are a pale greenish white, the nectary or filamentous crown is composed of numerous spreading, incurved, worm-like filaments, beautifully banded with red, blue and white.—*Bot. Mag.*

SYNGENESIA FRUSTRANEA—*Compositæ.*

Senecio Calamifolius. An old inhabitant of the greenhouse of the Royal Gardens at Kew, having been introduced from the Cape by Mr. Bowie, but it seems never to have been described by any author. Few species are better marked, the leaves indeed are more like those of some mesembryanthemum than of any groundsel; it blossoms in August, and from its copious large yellow flowers has a lively appearance.—*Bot. Mag.*

GYNANDRIA MONANDRIA—*Orchidaceæ*, § *Vandeæ.*

Peristeria Humboldti. For this noble plant, which has a pendulous raceme a couple of feet long, we are indebted to John Wilmore, esq., of Oldford, near Birmingham, who imported it from Porto Cabullo, in the province of Venezuela, about three years since; it flowered for the first time in March 1842. In many respects it has the habit of P. Barkeri, but the leaves have longer footstalks. This plant appears to be the long-sought Anguloa superba of Humboldt.—*Bot. Reg.*

PENTANDRIA MONOGYNIA—*Campanulaceæ.*

Campanula Læflingia. A pretty little half-hardy annual, found wild in sandy places all over Portugal, and in the country round Mogador; it rises from six to nine inches high, copiously bearing its neat lilac-coloured flowers. The seeds should be sown either in the month of August or March, and treated as is usual with half-hardy annuals; the autumn-sown plants will flower about the end of May, those raised in spring, not before the middle of July; they continue a long time in flower.

Bog. Reg.

OCTANDRIA MONOGYNIA—*Melastomaceæ.*

Centradenia Rosea. A pretty greenhouse half-shrubby plant, introduced from Mexico by Messrs. Lucombe, Pince, and Co., of Exeter; when allowed to blossom quietly in a cool greenhouse, it forms a deep green bush studded all over with gay flesh-coloured stars. It is a soft wooded species growing a foot or so high in sandy peat, and striking readily from cuttings.

TRIANDRIA MONOGYNIA—*Tridaceæ.*

Crocus Insularus. Many bulbs of this pretty and variable crocus were sent to the learned Dean of Manchester, at Spofforth, in 1840 and 1841, by the British Consul at Bastia. The outside of the flower apears to be striped with red and yellow, the interior is pale crimson.—*Bot. Reg.*

THE LETTER-BOX.

Mr. George Wright. Lechenaultia formosa is not a difficult plant to grow; if you reduce the quantity of loam employed in your compost, and increase the sand, you will improve it. The peat should be light and full of fibre; sufficient sand should be added to make the whole mass when well mixed of a grayish colour. The plants at this season should never be allowed to become dry; water should be given every day, enough to moisten the earth thoroughly. You are quite right with the drainage, and will find some further remarks on this plant at page 163 of our Second Volume.

Dr. A. We cannot undertake to determine the special name of your Acacia by your description, graphic as it is; but as the treatment is similar for the whole genus, we advise you to repot it now, giving it a good-sized pot filled with rich turfy loam; allow it a shady place out of doors from this time till next September, observing to keep it well watered, and we promise you it will make a "noble shrub."

We have received a long letter from Mr. H. Hunt of Pimlico, on the subject of his *patent* pots; in which he accuses us of "uncourteousness" and "partiality," because in our last we asserted that garden pots of the same construction as those Mr. Hunt has *patented* was known to and had been made for us; and further, that we had published a description of the same in the Florist's Journal some eighteen months ago.

Mr. H. says it was uncourteous because we knew nothing of him, and he tells us that many eminent cultivators have patronized his pots; we are glad of it, because it shows the necessity of preserving a useful improvement to the public, whenever it can be done without infringing on private rights. For ourselves we were content to give the benefit of it to our readers, as soon as we were satisfied of its utility, and we assure him we should have attacked his *patent* before, had we been sooner aware of it; not that we are actuated by any personal motives, for, as Mr. Hunt says, we know nothing of him. But, although he tells us he sells them at a trifling advance on the price of the old ones, is not the existence of a patent a complete barrier to their use at a distance from the metropolis? We should like to ask what would be the cost of a few casts of these pots after a journey of 100 or 150 miles?

That the improvement is highly useful there cannot be a doubt; and the whole merit of the case resolves itself into this question, which Mr. H. can best answer. Is the date of patent anterior to our first notice of these pots? if it is we much wonder that he did not sooner make them known; if it is not, we suppose the same gentleman will allow we may again get them made by the

person who made the first. By the way, we would advise Mr. Hunt to look into the Journal oftener; he may find things in it he was not before aware of, and which, as we suspect in this case, would perhaps save his head and pocket too. With respect to the pans also made by Mr. H., we must here confess our ignorance; having always an aversion to pans except for seed sowing; in short holding them completely in abomination, not even allowing them to be placed near to a plant in a pot, we did not inquire, so know nothing of them.

Mr. R. WILLIAMSON. Musa Cavendishianum will suit you best, it does not require so much head room as paradisiaca, and will fruit sooner.

J. S., who inquires for a few good and cheap Verbenas, should get Melindres latifolia, dark crimson, very brilliant; Odorata rosea, bright rosy lilac, large flowers; Queen, pure white; Picta, rose colour and white centre; Nielli, deep lilac, Pulchella, and pulchella alba.

CALENDAR FOR MAY.

STOVE. A general change of situation should take place among all the plants about the end of the month, the more hardy greenhouse plants being removed to the open air; some of the strongest in this department should occupy their places, and thus afford more room to those which remain. Plants intended to form specimens should stand singly, that they may enjoy a free circulation of air; this and a moist atmosphere being vitally necessary. Our practice is to fill the house with steam from the pipes every morning, and, in addition, to syringe every plant not in bloom; afterwards admitting a good supply of air from ten or eleven o'clock until between two and three; closing thus early prevents the necessity of much fire heat, which it is always best to avoid. This is an excellent time to propagate all desirable plants; small seedling plants, cuttings, and newly-sown seed should be shaded from the hot sun. Climbing plants will require much attention to keep them in their places; they should not be tied close to whatever they are intended to cover, but be allowed to hang rather loosely, which imparts an air of much greater freedom, and the flowers are then seen to better advantage; this should be observed in training all plants, excepting, perhaps, such as are placed on small wire

frames, where, from their strictly artificial appearance, neatness, and regularity, become necessary to continue the keeping. Repot and prune whenever and wherever it is required.

GREENHOUSE. To afford space to the blooming plants here all the hardiest and more common should be removed to the pits, frames, or open air; those which are retained should be placed thinly. Geraniums, Calceolarias, Fuchsias, and other plants advancing into bloom should be kept constantly moist; some of them will require water twice a day, if the weather is warm. Supposing everything to be well drained, no danger need be apprehended from the application of water at this season. If Ericas are kept in the greenhouse through the summer, the pots must be well defended from the sun's rays by either enveloping them in moss or placing them in a pot of a larger size; many of them succeed better if kept in a cold pit or frame through the hot weather. Oranges and other plants of the same description are much benefited by frequent application of liquid manure. Continue to repot fast-growing plants as they require it; give an abundant supply of air every day, and if the weather is warm at the end of the month, a little may be left at night. Syringe the plants at least every other day, this keeps them clean and healthy; it should be done early in the day. Hard-wooded plants, such as Ericas, Epacris, &c., may be propagated with greater ease and more certainty now than at probably any other time.

FLOWER GARDEN. Though this month is generally recommended for turning out half-hardy plants, the cultivator must be guided by the weather and his locality for the exact time at which it may be done; some situations being full a fortnight earlier than others; the hardiest should be placed out first, others may be left till even the middle of June: for the most tender, always select the lightest soil that they may be better drained.

It is frequently necessary to use a slight occasional protection for the first out, for this, if the plants are small, a common garden pot may be used whelmed over them at night and removed in the day: for larger plants, a handlight or covering of thin canvass strained on a wire frame will be best, being easily removed. It will still be necessary to continue propagating for succession, for which a good supply should always be kept in

pots. Dahlias, Asters, German Stocks, and other half-hardy annuals, may be planted out as soon as the weather appears settled. Auriculas that have done blooming should be removed to their summer quarters; a shaded situation in which they can be well defended from the sun, and still enjoy plenty of air, is the sort of place they require. Keep them constantly moist with pure soft water. The flower-stems and buds of Picottees and Carnations should be thinned if numerous, reducing the number according to the desire of obtaining fine individual flowers. Those growing in pots will be benefited by an occasional watering with liquid manure. Tulips must be protected from rain and cold winds. Pansies should be propagated; the cuttings taken off now form the finest plants for autumn flowering. Roses should be frequently looked over, to detect the grub, which, if left undisturbed, will soon spread devastation among the opening buds. Beds of pinks should have a good watering with manure-water; tie the advancing flower-stems to sticks, and thin out the flower-buds, as in the case of Picottees. If the weather is dry, Ranunculas will require plenty of water. Balsams, Cockscombs, Amaranthus, and tender annuals require some care; to grow them well, they should have a regular yet gentle bottom-heat, with plenty of air and water, and to be repotted frequently; excepting Cockscombs, as these are generally esteemed for dwarfness, with large flowers, it is better to allow them to remain in small pots till they show flowers, and then place them at once in their blooming pots. Verbenas, Petunias, Heliotropes, &c., that are planted in masses, require to be frequently pegged down to the surface of the bed to prevent them being blown about and broken. We need not say how necessary neatness and order are in every department now, because it is self-apparent.

ROYAL SOUTH LONDON FLORICULTURAL SOCIETY.

THE first show for this season was held on Wednesday, April 19th, at the Horns Tavern, Kennington. The number of plants exhibited was very great, and among them were many truly splendid specimens. Mr. Bruce's collection, which obtained the Adelaide Cup, held fine specimens of Acacia diffusa, polygala grandiflora and oppositifolia; Eriostemon buxifolium, Clivea

nobilis, Gesnera Cooperi, Hovea celsi, Elichrysum humide, Dillwynia glycinifolia, Euphorbia splendens, Azalia indica alba; and Ericas Hartnelli, grandinosa, aristata major, and andromedæfolia.

Mr. Atlee's contained two very large specimens of Acacia armata, Cytisus racemosus, near twelve feet high; Azalea indica alba, and Phœnicea, Hoya carnosa, Corrœa ventricosa, Pimelea lancifolia, and Ericas fastigiata, rubricaulis, lutescens, &c. In Mr. Clark's collection was one of the finest plants of Lechenaultia formosa we ever saw; forming a complete ball of full two feet diameter, profusely set with bloom, two fine plants of Kennedia, longiracemosa and monophylla, Tropæolum jarratti, Daviesia ulicina, and saligna, with several Azalias, Ericas, &c.

Mr. Coutts had a fine plant of Chorizema cordata, Burchellia capensis, Podolobium Murrayanum, Scottia dentata, Eutaxia myrtifolia, Francisea Hopeana, with Azaleas, &c.

Among the Nurserymen's collections, which were not so numerous as on former occasions, Mr. Jackson's were remarkable for fine plants of Erica trossula, E. aristata major, E. versicolor, E. vestita purpurea and physioides.

Mr. Hally's collection contained among others, Azalea Smithii coccinea, speciosissima, macrantha, and Georgiana, Chorizema varium, Kennedya, Stirlingi; Ericas vernix coccinea, Willmoreana and Pattersonia. There were many fine plants shown as single specimens; one a Boronia pinata, from Mr. Atlee, was exceedingly fine.

The show of Auriculas was quite equal in quality though perhaps inferior in numbers to that of last season. Messrs. Dickson's Cup for Amateurs was won by J. H. Schroder, esq. with Conqueror of Europe, Taylor's Glory, Page's Champion, and Smith's Mrs. Smith. Mr. Chapman's Cup for Nurserymen was won by Mr. Dickson with Taylor's Glory, Page's Champion, and Conqueror of Europe. The best pair was shown by J. H. Schroder, esq. viz. Earl Stanhope and Hedge's Britannia. The best six by J. Chapman, esq.; they were Dickson's Apollo, Duke of Wellington, Oliver's Lovely Anne, Conqueror of Europe, Taylor's Glory, and Page's Champion. In the nurserymen's class, the best pair, Dickson's Unique and Page's Champion, by Mr. Dickson; also the best twelve by the same gentleman they were, Conqueror of Europe, Schole's Mango, Taylor's Glory,

Chapman's Sarah, Dickson's Duke of Sussex, Page's Champion, Grimes's Privateer, Laurie's Field Marshal, Dickson's Duke of Cambridge, Dickson's Earl Grey, Gordon's Champion, and a seedling.

We are obliged to pass over many other fine flowers from want of space.

LIST OF PRIZES.

For the best collection of miscellaneous plants, the Royal Adelaide Cup . . . . . Mr. Bruce.

Amateurs.

Best pair of auriculas .	J. H. Schroder, esq.
Second ditto . .	J. Chapman, esq.
Third ditto . .	Mr. Lidgard.
Best six ditto . .	J. Chapman, esq.

Silver Cup presented by Messrs. Dickson for the best 4 green, grey, white, and self-coloured . J. H. Schroder, esq.

Second Cup, being the entrance money for Mr. Chapman's cup given to nurserymen, the best three, green, grey, and white . . . . . J. H. Schroder, esq.

Gentlemen's Gardeners.

Best collection of plants .	Mr. Atlee.
Second ditto . .	Mr. Clark.
Third ditto . .	Mr. Coutts.
Best pair of auriculas .	Mr. Plant.

Nurserymen.

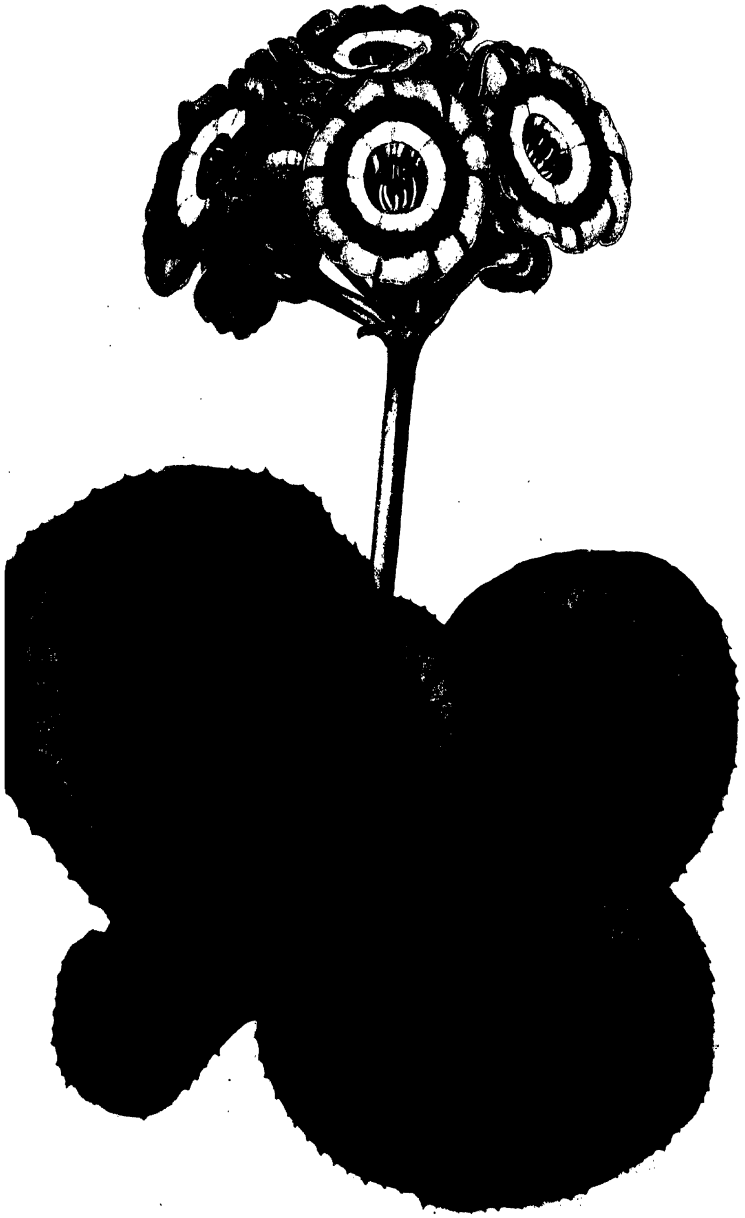
Best collection of plants .	Mr. Jackson, Kingston.
Second ditto . .	Mr. Hally, Blackheath.
Pair of auriculas . .	Mr. Dickson, Acre Lane.
Second ditto . .	Mr. Gaines, Battersea.
Best twelve ditto . .	Mr. Dickson.
Second ditto . .	Mr. Wilmer, Sunbury.

Silver Cup presented by J. Chapman, esq. for the best three, green, grey, and white . . . . . Mr. Dickson.

Twenty-four heartsease . . Mr. Thompson, Iver.

Single Specimens.

First for Azalea coccinea . .	J. Allnut, esq.
Second for Dendrobium pulchellum	Mr. Bruce.
Third for Erica aristata major .	Mr. Dickson.
Recommended, Boronia pinnata .	Mr. Atlee.
First Seedling prize for Matilda .	Mr. Dickson.



DICKSON'S MATILDA

THE

FLORIST'S JOURNAL.

JUNE, 1848.

ON THE AURICULA.

WITH AN ENGRAVING OF DICKSON'S MATILDA.

AT page 50 of our Third Volume, we entered upon a detailed account of the management of Auriculas, which makes it unnecessary to extend the present article beyond a brief outline of some of the more important points connected with them.

The improvement in this delightful spring flower within the last few years has been in a corresponding ratio to the general advance of every species of horticultural pursuits. Really good, new flowers make their appearance every season, and as a consequence the inferior kinds disappear, every cultivator finding it his true interest either to undertake the raising of seedlings himself, or to encourage their production in other hands. To such an extent has this improvement already reached that nearly one half of the old varieties, sorts that but a little time since were deemed invincibles, are now obliged to give way, and their places are filled by new and superior flowers.

It was at one time thought sufficient if a flower possessed a tube well filled by the thrum or anthers, with the paste and ground colour proportionate to each other, without any regard to the form or disposition of either. Now, however, the standard embraces all the previous qualities with the addition that the eye, paste, colour, and edge, should be relatively proportionate; the three latter to occupy each a third of the flower, without either running into or encroaching on the other; the outline of each must also be circular, not angular or starry as it is termed, it being deemed at once fatal if the paste assumes the angular form or the colour runs through the edging to the margin of the

petal. These rules and regulations may perhaps appear superfluous to those not initiated in the fancy; but the florist views them differently, by him they are regarded as the means of determining the respective merits of all new flowers, and they are also, without doubt, the active principle in the improvement of this class of plants.

Our present illustration possesses these circular properties in an eminent degree, sufficiently so to constitute it a first-rate flower; it was raised by Messrs. Dickson, of Acre lane, Brixton, who are well known to grow this and every other description of florist flowers in the most extensive and successful manner. It obtained the premier seedling prize at the South London Floricultural Society's exhibition, in April last, and was classed as a first-rate flower by the Floricultural Society of London, at one of their meetings.

We subjoin a List of the best flowers in their respective classes for the benefit of the young amateur, or those forming collections which has been kindly selected by the above-named gentlemen.

EDITOR.

Green Edged.

Booth's Freedom.
Buckley's Jolly Tar.
Dickson's Duke of Wellington.
Earl Stanhope.
Fletcher's Ne Plus Ultra.
Franklin's Belloni.
Gordon'sChampion of England
Hedge's Britannia.
Howard's Lord Nelson.
Hudson's Apollo.
Laurie's Glory of Cheshunt.
Lee's Colonel Taylor.
Metcalf's Lancashire Hero.
Page's Champion.
Defiance.
Waterloo.
Pearson's Badajos.
Pollitt's Highland Boy.
Smith's Waterloo.
Stretches's Emperor Alexander
Warris's Prince Blucher.
Yates's Lord Collingwood.

Grey Edged.

Dickson's Unique.
Fletcher's Mary Ann.
Grimes's Privateer.
Hey's Lovely Ann.
Kenyon's Ringleader.
Oliver's Lovely Ann.
Chapman's Brixton Hope.
Smith's Bermondsey Beauty.
Britannia.
Sir Edward Knatchbull.
Syke's Complete.
Waterhouse's Conqueror of Europe.

White Edged.

Hughes' Pillar of Beauty.
Clegg's Crucifix.
Popplewell's Conqueror.
Pott's Regulator.
Taylor's Favorite.
Glory.
Incomparable.
Wood's Delight.

Selfs.

Netherwood's Othello.
Smith's Mrs. Smith.
Schole's Cardinal de Fleury.
Ned Lud.
Dickson's Apollo.

ON THE CULTURE OF GESNERIA ZEBRINA.

Sir,—As this lovely plant is likely to be in the hands of many for the first time this season, a few observations on its cultivation may not be unacceptable. The general management of it does not materially differ from that of other Gesneras, except that I would recommend a rather stronger soil; a compost of turfy loam of a free texture, well-rotted leaf-mould, and light fibry peat, in equal quantities, with sufficient sand to keep the whole open, that the roots and water may freely percolate through it, is most proper. In potting these plants, it is too frequently the practice to retain a considerable portion of the old earth in which the plant has been kept through the winter, merely rubbing off the outside of the ball; this is decidedly wrong, because the earth, after having supported the plant for six months, and after that being thoroughly dried, in order to preserve the roots while resting, cannot reasonably be supposed to retain any nourishment. Yet it is into this the first-formed roots of the season will have to make way, and on it to depend for their first supply of food, before they can reach the outer stratum of new earth; meanwhile they are starving. I would therefore advise that the whole of the old earth, in which the plant has been kept through the winter, be removed when it is repotted for starting; and it is always preferable to put them into the pots they are intended to bloom in at the first shifting, as the roots are frequently injured by removal from one pot to another;

this should be done about the middle of March, and the pots plunged in a bark-bed or forcing-frame with a gentle bottom heat; the bulbs soon begin to grow, when plenty of water should be given, and by the end of April, when the sun usually attains great power, it will be advisable to shade them slightly, which should be continued through the summer.

If they are grown in a stove, a back shelf, rather shaded, will be the best situation for them during the hot weather, though I greatly prefer either a pit or a frame, as the plant then assumes a more robust habit; and this naturally induces an abundant bloom, though on this head little danger can be incurred from either method, as the plant is by nature so exceedingly prolific of flowers; still, by the management in frames, the quantity and closeness of the foliage is increased, and therefore I think it most desirable. With the simple attention to watering, the plant will begin to flower in September, and continue to do so for the following three months; after which it should be allowed to become dry, lessening the supply of water gradually, that the full development of its imbrication may not be checked. While the plant is blooming, the lightest and warmest part of the house should be allotted it, and at this dull season of the year it is worthy of the best situation that can be found. I may observe that though this plant, and, indeed, nearly the whole of the genus, are natives of the margins of woods, yet they require, when under artificial treatment, a free and full supply of air or they become attenuated.

Another matter of some moment is to observe in watering to avoid wetting the foliage, if it is ever necessary to give it them while the sun is shining, for the water will accumulate upon the leaves, and then acting as a focus to the rays of the sun will be the means of burning the foliage.

By attention to these simple directions, the happiest results will occur, and one of the finest of stove plants will be produced. Most of the bulbous-rooted species of Gesneria thrive exceedingly with this treatment, only that in forming the compost for them a smaller portion of loam should be given, and the proportion of peat increased.

J. SAUNDERS.

PRIZE ESSAY.

On the Culture of Roses in Pots. By Mr. T. Moore. (*Read April 20th, at an Evening Meeting of the Regent's Park Gardeners' Association.*)

By modern botanists, the genus Rosa has been divided into 10 sections, which are called Feroces, *Lind.*; Bracteatæ; Cinnamomeæ, *Lind.*; Pimpinellifoliæ, *Lind.*; Centifoliæ, *Lind.*; Villosæ; Rubiginosæ, *Lind.*; Caninæ, *Lind.*; Systylæ, *Lind.*; and Banksiæ, *Lind.*

§ 1. Feroces; these are distinguished by their branches being clothed with a permanent tomentum, and also with numerous prickles and bristles, and by their perfectly smooth, naked fruit. The species included are of little interest, producing an inconsiderable number of single flowers; they cannot, therefore, be recommended for pot culture.

§ 2. Bracteatæ. These plants are chiefly distinguishable from the preceding by the wooliness of their fruit and by their usually shining leaves; they have, also, the prickles situated in pairs beneath the stipules. Rosa microphylla, and R. bracteata (*the Macartney rose*) are included in this section.

§ 3. Cinnamomeæ consists of plants of compact and erect habit; they may be known by their long lanceolate leaflets, which are without glands; and by their small, round, red fruit. The common Cinnamon rose is the type of those included in this section.

§ 4. Pimpinellifoliæ. These, though differing in habit from the preceding, are yet closely allied to them in artificial character; the greater number of leaflets, the flowers universally without bracteas, and the total absence of stipular prickles, are the chief points of distinction. In this section are included Rosa spinosissima (*the Scotch rose*), and R. sulphurea (*the double yellow rose*).

§ 5. Centifoliæ. These are readily distinguishable from the preceding sections by their thickened disc, and divided or compound sepals; and from the following, by their being setigerous, that is, bearing setæ or bristles along the branches. In this section are comprehended Rosa Damascena (*the Damask rose*), with its varieties, including those known as "perpetuals;" R.

centifolia (*the Provence or Cabbage rose*), with its varieties, including the "mossy" and "pompone" roses; and R. gallica (*the French or officinal rose*), with its varieties, among which is included one known as R. Gallica, var. parviflora (*the Burgundy rose*).

§ 6. VILLOSÆ. These are most readily known by the straightness of their prickles and the diverging serratures of the leaves; the root-suckers, also, are erect. Rosa alba (*the white rose*), with its varieties, the celestial, maiden's blush, &c., are included in this section.

§ 7. RUBIGINOSÆ. These plants may be known by the numerous glands on the lower surface of their leaves, the inequality of their prickles, and their arched root-suckers. Rosa lutea (*the yellow Eglantine rose, or Austrian briar*), and R. rubiginosa (*the Eglantine, or sweet briar*), are here included.

§ 8. CANINÆ. The plants in this section are distinguished by their equal hooked prickles, their ovate, mostly glandless, leaves, their deciduous sepals, and their arched root-suckers. It comprehends some of the most beautiful of roses, such as Rosa indica (*the China rose*), and its numerous varieties, including the Noisettes; R. semperflorens (*the everflowering rose*); and R. Lawrenceana, the parent of the beautiful little fairy roses.

§ 9. SYSTYLÆ. These are similar to the preceding in general habits, the most obvious distinctive marks being that the styles adhere into an elongated column, and the stipules are adnate. Rosa arventis (*the field rose*), with its varieties; the Ayrshire roses; R. sempervirens (*the evergreen rose*); R. moschata (*the musk rose*); and R. multiflora (*the many-flowered rose*), with its varieties; R. (m.) Grevillei (*the seven sisters' rose*); and R. (m.) Boursaltii (*the Boursalt rose*), are included here.

§ 10. BANKSIANÆ. These may be known by their long graceful branches, their drooping flowers, and their usually ternate shining leaves; their deciduous, subulate, or very narrow stipules afford also a mark of distinction. Rosa sinica (*the trifoliate China rose*), and R. Banksia (*the Banksian rose*), which is one of the most handsome of all roses, are included here.

The object of the present paper being to treat on the culture of these plants in pots, the remarks it contains will be most readily intelligible, by selecting a few of the kind as illustrative

examples, to the treatment of some of which, that of the others may be assimilated. In order to carry out this arrangement I will make choice of the Provence rose, the China rose, the Banksian rose, and the Scotch rose, as examples.

The Provence rose is commonly grown in pots for the purpose of forcing, and in this particular it is not likely to be surpassed; as, however, it forms no part of the present subject to enter upon the "forcing" of roses, I must just remark that the course of treatment I shall endeavour to detail is not marked out with any direct reference to that object.

To cultivate these roses in pots, so as to produce the greatest profusion of blossom, there must be a degree of attention paid to their wants, equal to that bestowed on the favorite and highly-prized plants; it is not, therefore, enough to dig up any one or two-year old plant, and cramp its root into a convenient sized pot, and then, placing it in favorable circumstances, to suppose that enough care can be bestowed on it. It *must* be grown *from its infancy* in a pot; and thus be brought, by natural steps, into a course of growth adapted to the object in view. It must ever be borne in mind that a course of treatment, if it be that which is calculated to bring the plants to their greatest degree of perfection, will be such as may be *repeated* without exhausting their energies, so as to render them less vigorous or less beautiful in the succeeding season.

I would, therefore, propose to take well-rooted layers in the autumn, and to place them in small pots, in a compost of sandy loam and leaf-mould, in the proportion of two parts of the former to one of the latter; the pots should be as small as the roots of the plants would conveniently allow, so as to admit of as much increase as possible during their subsequent growth. They should be pruned to about three good eyes, and be plunged in a *dry cold frame*, in sawdust, ashes, or any similar material, until the following spring. About the month of March they shqld be repotted into pots at least two sizes larger than those in which they were previously placed, using a similar compost. A common frame, where they can enjoy an abundance of light, is the most desirable structure for them; and here their growth should be encouraged as much as possible, so as to enable them to become fully matured before winter; this would certainly be the result in such a situation, for they would form a strong and early growth; and this would become well maturated, under the in-

fluence of the light and heat of the sun during summer. It must be remembered that I do not now speak of their being crowded into a dark and shaded corner during any of this time, as though they were regarded to be mere common place shrubs, which would thrive under any treatment; on the contrary, I am rather considering that the operations I have hinted at, as well as the manifold others of routine practice, such as watering, destroying insects, plunging, &c. are really attended to, just as they would be in the case of a new Pelargonium, a Calceolaria, or any other favorite. It cannot reasonably be expected that Roses will rank among these as specimens of culture, unless they are also permitted to rank with them as objects of care and attention; and if this care and attention be bestowed, they are calculated far to surpass them.

(*To be continued.*)

LIST OF ORCHIDEÆ.

(*Continued from page* 90.)

21. *Burlingtonia Rigida.* (Derived from the stiffness of its leaves.) Plant bulbous, inclosed between two leaflets, with a single leaf on the apex of the bulb four inches long and better than one inch broad, crisp, and rather a lanceolate form; from the base of the bulb rises a stem one foot long, and producing a plant at the apex. It should be placed on a large block of wood, or in a round basket made of bark, so that it may be curled round its outside; and as its growth is rapid, it should be placed in a dry and cool part of the house when at rest, as it is subject to making fresh shoots instead of flower spikes. When growing, it requires a temperature of 70 to 80°.—*Native of Brazil.*

22. *Burlingtonia Maculatum.* Plant small; its flowers are produced singly and are much spotted, (from which it takes its name.) It does well on a chump of wood, with the same treatment and temperature as the other.—*Native of Brazil.*

23. *Burlingtonia Venustum.* This plant is of a very dark green, its leaves are long and narrow, and its flowers are exceedingly handsome. It requires the same treatment as the others. The whole of this genus should be in every collection. —*Native of Brazil.*

24. *Brassia Verrucosa.* (Derived from its labellum being warted.) Plant robust in growth, bulbs four inches long and two inches thick, tapering a little to the apex; leaves in pairs, sixteen inches long and two inches broad, raceme pendant, pro-

ducing a number of flowers, greenish, white, and spotted, and labellum warted where the spots are. This will thrive either on a chump of wood or in a pot, in a mixture of sphagnum, turfy peat and rotten wood, and in a temperature of 65°. Worthy of a place in every collection.—*Native of Mexico.*

25. *Brassia Lanceanum.* Plant bulbous, about four inches long and nearly two inches broad, leaves nearly one foot long; raceme rising from the base of the bulb. Flowers yellow, spotted with brown, and very fragrant. This species should be potted in a mixture of turfy peat, sphagnum moss, and rotten wood; it being of a very tender habit, it should be placed in the hottest and dampest parts of the house. A temperature of 70° suits it.—*Native of Surinam.*

26. *Brassia Caudatum.* This plant has nearly the same habit as the last, and will thrive in the same treatment and temperature.—*Native of Guiana.*

27. *Brassivola Glauca.* (Derived from the colour of its leaves.) This plant is quite different to any of the rest of its genus on account of its producing bulbs nearly three inches long, and round leaves, broad, flat, and fleshy. It should be grown in a pot, with a mixture of turfy peat, sphagnum, and rotten leaves, in equal quantities; also in a temperature of 65°. —*Native of Mexico.*

28. *Brassivola Nodosa.* (Derived from knotted.) Plant destitute of bulbs; leaves rush-like, drooping, from one to two feet long; flowers single, sepals and petals greenish-white, labellum white. It should be placed in a basket, in a mixture of sphagnum, turfy peat, and rotten wood; requires an abundant supply of water when growing, and a temperature of 70°.—*Native of Brazil.*

29. *Cattleya Intermedia.* Stem bulbous, six inches long, surmounted by slender leaves, in pairs, three inches long. Flower-stalk smooth, sepals and petals delicate light rose, column rose colour, streaked with purple, labellum paler than the sepals. Should be potted in a mixture of sphagnum, turfy peat, and rotten wood; succeeds in a temperature of 65°. With this for an average, they will both grow stronger and produce finer flowers than if kept in a higher temperature.—*Native of Rio Janeiro.*

30. *Cattleya Loddigesii.* (Named after Messrs. Loddiges, most successful cultivators of this tribe.) Plant similar in habit to the above. The sepals and petals are a rich rose colour, tinged with blueish-purple, and slightly spotted with dark purple; the labellum is lighter on the outside, but within is marked with yellow and purple. This requires the same treatment and temperature as the others.—*Native of Brazil.*

31. *Cattleya Labiata.* (Derived from a flower having a lip.) Stem bulbous, broad and rather flat, leaves single, seven inches long and three broad, rather crisp; flower-spike smooth, rising from a spathe from the apex of the young shoot, as with all the species. Sepals and petals a delicate rose colour, and rather curled; the labellum on the outside is rose colour, and the inside is blotched and striped with deep carmine, the edges are tinged with purple and fringed. This requires also pot culture the same as the rest, and should be elevated above the pot, so as to give a good drainage.—*Native of Brazil.*

32. *Cattleya Labiata, var. Atro-purpurea.* Plant much similar to the above species, being only a variety of the other; but the labellum is very much darker. The same treatment and temperature as for the others do for this.—*Native of La Guayra.*

33. *Cattleya Mossiæ.* (Named in compliment to Mrs. Moss of Liverpool.) This plant much resembles *C. labiata* in growth, and the flowers are somewhat similar; but the colour and fringing is a little different, the bulbs are rather rounder, and the leaves longer and narrower. This requires pot culture also, in the same temperature as given for the others.—*Native of Brazil.*

34. *Cattleya Harrisonii.* (Named after — Harrison, Esq. of Liverpool.) Plant tall, stem nearly twenty inches long, and slender; leaves in pairs, nearly oval; flower-spike producing three to four flowers of a pinkish lilac; the labellum has a dash of yellow in it. This requires the same treatment and temperature as the others.—*Native of Brazil.*

35. *Cattleya Harrisonii alba.* Plant much similar to its parent in growth, but not quite so tall; its flowers are very pretty, being of a whitish colour, tinged slightly with blue; the labellum has also a dash of yellow on it. The same treatment and temperature as the others.—*I believe a Native of the Organ Mountains.*

36. *Cattleya Guttata.* (Derived from being spotted.) Plant strong and tall, growing from two feet to nearly three feet high; leaves in pairs, large, broad, and crisp; flower-spike producing a great number of flowers, sometimes upwards of eighteen at once; the sepals and petals are yellowish-green, spotted with dark red; the labellum is white in the throat, but towards the apex it deepens to a purple. The same treatment and temperature as the others.—*Native of Brazil.*

37. *Cattleya Guttata, var. Russellianum.* Plant not so strong growing as the former, nor does it produce so many flowers, which are also smaller; the sepals and petals are green, spotted with brownish-purple, rather small; the labellum is

narrow, and of a deepish pink purple. This requires the same treatment as the others.—*Native of the Organ Mountains of Brazil.*

38. *Cattleya Crispa.* (Derived from its flowers being curled.) Plant bulbous, from three to four inches long, producing a leaf at its apex which is long and narrow, the flower-spike producing five to six flowers; the sepals and petals are white, and the latter much curled; the labellum is white on the outside, but within is purple, and the margin much curled. This, too, requires the same treatment and temperature as the others.—*Native of Brazil.*

39. *Cattleya Skinnerii.* (Named after Mr. Skinner, a successful collector in Gautemala and Mexico.) Plant bulbous, nine inches high, with nearly round leaves in pairs, six inches long and three inches broad; flower-spike producing three to four flowers, and very handsome, of a beautiful violet-purple; the labellum rosy-purple, and the throat nearly white. The same treatment as the others.—*Native of Mexico.*

JOHN HENSHALL, K—P—Y.

(*To be continued.*)

VISITS TO NURSERIES.

MR. GROOM'S, CLAPHAM RISE.

THE day appointed for the private view of the Tulips here was Saturday the 6th, but never was a more unfavorable afternoon fixed upon; it proved a continuous rain for nearly the whole day, so that but little company could have been present. We saw them a few days later; the principal bed was in very fair order, though the early growth which nearly all the Tulips in this neighbourhood made, being followed by late frosts, have militated much against the production of good blooms. We noticed several fine flowers in each class, though the Bizards certainly had the advantage, particularly Catafalque, Dickson's Duke of Wellington, Garrick, Nourri Effendi, Fabius, Pompe Funebre, and Marshal Soult. In the Byblœmens were Victoria Regina, Louis Seize, Violet Alexander, Claude, Michael Angelo, and Queen Adelaide; and in that beautiful class, the Roses, we may mention, Claudiana, Bacchus, Catalini, the true Lac, Brulante eclatante, Ponceau très blanc, and Comte de

Vergennes. The Liliums, especially L. speciosum and its varieties, are looking remarkably healthy; both those under protection and others planted out, a fine bloom may be confidently anticipated from them.

Messrs. Dickson's, Acre Lane, Brixton.

Tulips. Here is a very handsome selection of the best of both old and modern flowers. The plants contained in the show-bed had a more healthy appearance than many we have seen this season, though even here, the effects of late frosts are still visible in the form of cramped petals, the earlier flowers are of course falling in for the greatest share. Among the Bizards we noticed Dickson's Duke of Wellington, very fine; Lawrence's Sheet Anchor, and a flower broke by Messrs. Dickson in a very similar strain; Polyphemus; Strong's King; Greig's Osiris; Solon; Cromwell; and Lucullus, a fine flower.

In the Byblœmens were Piles's Winifred, Louis XVI., Violet Quarto, Bijou d'Amateurs, Holmes's King, Euphrasia, Director General, Wakeling's Mazeppa, and Sir E. Knatchbull; and among Roses we may mention Catalini, Claudiana, La Tendresse, Cerise belle forme, and Rosa blanca, also Triumph Royale, and Minerva.

NEW PLANTS.

Gynandria Monandria—*Orchidaceæ*, § *Vandeæ*.

Oncidium Microchilum. This, although not a very splendid plant, is far from being undeserving of notice. Its very glaucous flower-stem, the snow-white lip, and crimson petals, lying as it were in the middle of dusky-brown sepals, produce a singular and pleasing effect.

It was introduced some years ago from Guatemala by G. U. Skinner, Esq.; speaking of it he says, "The O. microchilum I first found on the top of the 'Cuesta' of Paentezuelas, some thirteen leagues from Guatemala, and sent it to Mr. Bateman in 1838. It was growing on a bare rock, with a quantity of dead leaves and grasses about its bulbs, and its roots woven into the interstices of the rock and mould about it, very much exposed to the sun, except during the middle of the day, when a ledge of rock seemed to afford it a little shade; I afterwards

found it in great abundance on the rocky banks of the river Michatayal. The temperature generally of the above habitats is 68 to 70°, and from being exposed, cold at night.—*Bot. Reg.*

RHODODENDRON ROLLISSONII.—*Garden variety.*

In many respects, this very striking plant so much resembles Rhododendron nobile, the Ceylon variety of R. arboreum, especially in its deep-red flowers and the closeness with which they are arranged, that we supposed it must be it. But upon comparing it with wild specimens from Ceylon, we find that the Rhododendron of that island has leaves silvery underneath, while in this plant they are rusty. It is therefore clear that R. Rollissonii has had some other origin, but what that origin was we do not know. It is among the handsomest of the crowd of varieties called hybrids.

This variety is rather more tender, and requires a warmer situation than the old R. arboreum. It grows freely in a mixture of sandy peat and loam; the plants after flowering should be kept in a warm pit and rather close, to encourage the growth of the young shoots; afterwards they may be placed out of doors during the summer, and the pots should have a top dressing of cow-dung and plenty of water.—*Bot. Reg.*

PENTANDRIA MONOGYNIA—*Boraginaceæ.*

Echium Petræum. This is a beautiful herbaceous plant, a native of rocks in Dalmatia, where we believe it was first discovered by General Baron V. Welden; it flowered beautifully in a cool greenhouse in the gardens of the Horticultural Society in May; at that time it was the gayest little plant possible, with its neat clean leaves, stiff stems, about nine inches high, and pale blue flowers, which are pink before they open. It succeeds best in a mixture of sandy loam and rough peat that is rather poor; it must be kept in a dry airy situation, where there is plenty of light, at all times, but particularly during winter.—*Bot. Reg.*

DIDYNAMIA ANGIOSPERMIA.—*Gesneriaceæ.*

Achimenes Grandiflora. A figure of this fine plant is given in Curtis's Botanical Magazine, from a drawing prepared and sent by M. Van Houtte of Ghent. It would seem to vie with A. longiflora in the size and beauty of its flowers. Their colour is much more verging to red, and the leaves are rusty coloured below. It was discovered by Schiede and Deppe in Mexico, growing in shady places, near the Hacienda de la Laguna in Barranza de Toselos.—*Bot. Mag.*

GYNANDRIA MONANDRIA—*Orchideæ.*

Dendrobium Crumenatum. A native of various isles in the Malay Archipelago, recommending itself for cultivation by the

pure white of its blossoms and their delicious fragrance. Blume, indeed, says that the flowers vary from white to pink, but of the latter hue we have never seen them. Flowered at Kew in April 1842.—*Bot. Mag.*

DECANDRIA TRIGYNIA.—*Malphigiaceæ.*

Stigmaphyllum Heterophyllum. A showy handsome climber, with bright yellow flowers and ample foliage. It was raised by Mr. Veitch from seeds sent from Buenos Ayres by Mr. Tweedie. It is a ready flowerer, and promises to be worthy of cultivation in every stove or warm greenhouse, making a beautiful object if trained against trelliswork. At Exeter it flowered in December, 1842.—*Bot. Mag.*

PENTANDRIA MONOGYNIA—*Lobeliaceæ.*

Siphocampylos Longepedunculatus. This is another fine Siphocampylos, for which our stoves are indebted to Mr. Gardner, who sent home seeds from the Organ Mountains of Brazil. The length of the peduncule appears to be highly variable, for whereas the native specimens sent home by Mr. Gardner exhibit them as long or even longer than the leaves, in our flowering plant, raised from his seeds, they are scarcely more than half the length of the leaf. The stems are long, and trailing rather than climbing, and should be fastened to wire trellis. The flowers are large, being about three inches in length, the tube contracted near the base, enlarged upwards, curved, dark purplish-red, the segments yellow.—*Bot. Mag.*

GYNANDRIA MONANDRIA—*Orchideæ.*

Catasetum Viridi-flavum. Every district of tropical South America seems to afford a Catasetum different from what is found in other places. The present, quite unlike in the general appearance of its flowers to any other known to us, is yet with difficulty to be distinguished in words. It was discovered by Mr. Barclay (while employed as government botanist on the Pacific side of South America in H. M. surveying ship Sulphur) in Central America, and sent thence to the Royal Botanic Gardens of Kew, where it flowered in the summer of 1842. The pseudo-bulbs and foliage are of the usual character of Catasetum; the flower-spike rises from the base of the bulb, and consists of seven or eight large flowers, of a uniform yellowish green.—*Bot. Mag.*

PENTANDRIA MONOGYNIA.—*Campanulaceæ.*

Lobelia Erinus, var. grandiflora. There is hardly a prettier or more interesting object in the whole range of easily-cultivated flowers of a dwarf habit than the old and well-known *Lobelia erinus.* But the variety now represented is a yet more enchanting little plant, in consequence of its flowers being larger, and

therefore more specious, than those of the original species, and on this account it has a far more brilliant appearance when in bloom. In all other respects it agrees with erinus.

It appears to have originated with Mr. Frazer, nurseryman, of Leyton, Essex; but whether it is an accidental variety, produced casually or by good culture, or whether the seed was imported from the Cape, which is the native locality of *L. erinus*, is not ascertained.—*Pax. Mag. Bot.*

Medinilla Erythrophylla. For the introduction of this handsome shrub, our cultivators are indebted to his Grace the Duke of Devonshire, whose collector, Mr. J. Gibson, found it on the Khoseea hills, which constitute a part of the Himalayan range in the East Indies, and brought it to Chatsworth in 1837. Its chief characteristics are an extreme healthiness of aspect, very ample and finely-formed foliage, an abundant production of flowers, a considerable robustness of habit, and a capacity of thriving well in either a stove or a greenhouse. The blossoms are borne about the months of June or July, and last a very long time. They appear in clusters on the lower and naked portions of the stem or branches, and are not much unlike that of the Peach, but less spreading or cup-shaped. When young, the leaves have a reddish tinge, from which the specific name is derived; afterwards they become purely though pale green. It is a plant of easy culture, growing freely in a mixture of turfy loam and heath mould, with some pieces of broken free stone or potsherds interspersed throughout the soil.—*Pax. Mag. Bot.*

CALENDAR FOR JUNE.

Stove. It will now be necessary to remove some of the more hardy plants from this department, in order to afford room for the more valuable kinds, as every encouragement should be given them at this time, so that a vigorous and well-regulated growth may result; prune out all deceased parts, and frequently stop the shoots of fast-growing plants; much attention must be paid to watering, many plants require it twice a day; let the paths of the house also be saturated with water every morning and again at night. Thin out, stop, and tie climbers as they require it. Specimen plants may be still repotted if necessary. Palms and some species of Scitaminæ may be separated and repotted. A thin canvass awning, to roll over the roof of the house, will be highly beneficial to the plants; for Orchideæ and plants of a similar character it is indispensable. Give a good supply of air

on fine days, and close the house early in the afternoon so as to retain a good strong sunheat.

GREENHOUSE. Most of the plants here may now be safely trusted out of doors, and be benefited by two months' exposure to the open air, but we strongly repudiate the practice of placing them in the most sequestered part of the garden, as is too often the case; let them contribute to the embellishment of the flower garden,—it is an old and exploded notion that they will not bear the sun,—not the slightest injury need be apprehended from this source, if the plants receive a proper supply of water, and the roots of the smaller kinds, such as Ericaceous plants, are protected with moss from the direct influence of the sun. The vacant spaces in the house should be filled with Balsams and other tender annuals, a slight awning over this house also will be beneficial, so as to protect plants in bloom. Geraniums should be cut down as they go out of flower, and the cuttings struck, to afford a supply of young plants for the next season. Epiphyllums, and indeed most of the tall growing Cacti, should be placed out of doors as soon as they have made their seasonal growth; cuttings may be taken of all desirable plants towards the end of the month, a rather limited supply of air may be left at night.

FLOWER GARDEN. Much of the ultimate beauty of the flower garden will depend on the exertions of this month, and much practical tact is necessary to secure a proportionate and well-regulated bloom, some of the plants in beds will require pegging down, others to be neatly fastened to sticks, and the major part a judicious thinning. Top dress Picottees and Carnations, attend to disbudding, and see that the pods open regularly; the same attention will be necessary with Pinks, if the calyx splits on one side, tie it neatly round with bass, and it will be assisted by gently opening the opposite side. Finish planting out Dahlias, and stake those advancing. Auriculas require to be kept constantly moist, and in a shaded situation. Take up Tulips, Crocuses, Hyacinths, &c. Propagate Pansies for the autumn flowering. Ranunculus require plenty of water if the weather is at all dry. Cuttings of Chrysanthemums may still be put in; repot those already struck. Sow biennial and perennial seeds. Keep the flower beds full, for which purpose it is always necessary to have a store of plants in pots.

FLORICULTURAL INTELLIGENCE.

HORTICULTURAL SOCIETY. The Society's first show for the season took place at Chiswick on Saturday the 13th.

Some of the Plants were very fine, and in excellent order for exhibition, though the number of new or very scarce plants was limited. The Orchideæ were, as usual, splendid; though on the whole there appeared a deficiency, when compared with the May show of last year.

In Mr. Goode's collection of Plants were fine plants of Euphorbia splendens, Polygala oppositifolia, Ixora coccinea, Gesnera Suttonii, Olerodendron hastatum, Pimelea incana, Zichya inophyla, Chorizema Henchmanii and Dicksonii, Melastoma purpurea, Azalea macranthum, &c. In his collection of Orchidea was a very large plant of Dendrobium cupreum, a plant of Stanhopia tigrina and Cyrtopodium Andersonii.

Mr. Mylam's collection were beautifully bloomed, particularly Acanthophipium bicolor, Vanda Roxburghii, Cattleya Mossæ, C. intermedia, and Oncidium pulchellum.

The following Prizes were awarded:

Large Collection of Miscellaneous Plants, (50 *to* 60.)

1st Gold Knightian Medal	Mr. Goode, gardener to Mrs. Lawrence, Ealing Park.
2d Gold Banksian ditto	Mr. Frazer, N. Leyton.

Small Collection, (20.)

1st Gold Banksian	Mr. Green, gardener to Sir E. Antrobus, Cheam.
2d Silver Gilt	Mr. Hunt, gardener to Miss Traill, Bromley.

Collections of 6 *ditto.*

1st Silver Gilt	Mr. Bruce, Lower Tooting.
2d Large Silver	Mr. Pawley, N. Bromley.
Silver Knightian	Mr. Clarke, gard. to T. Smith, esq.
Ditto	Mr. Hogan, gard. to H. Pownall, esq.
Ditto	Mr. Clark, gard. to — Black, esq.

Collection of Climbers.

1st Gold Banksian	Mr. Goode.
2d Silver Gilt	Mr. Clarke, gard. to T. Smith, esq.

Orchidaceous Plants.

1st Gold Knightian	Mr. Goode.
2d Gold Banksian	Mr. Mylam, gard. to S. Rucker, esq.
3d Silver Gilt	Mr. Hunt.

Single Specimens.

Silver Gilt	— Barker, esq. for Peresteria Humboldtii.
Large Silver	Mr. Gunner, for Dendrobium densiflorum.
Silver Knightian	—Barker, esq. for Cycnoches pentadactylon.

Pelargoniums, 12 new varieties, in 24 sized pots.

Gold Banksian . . Mr. Beck, Isleworth.
Large Silver . . Mr. Bell, Chelsea College.
Silver Gilt . . Mr. Catleugh, N. Chelsea.
Large Silver . . Mr. Gaines, N. Battersea.

Pelargoniums in 12 s. ditto.

Silver Gilt . . . Mr. Cock, Chiswick.
Large Silver . . Mr. Bell.
Silver Knightian . . Mr. Watts, gard. to E. Snell, esq.
.. Banksian . . Mr. Bromley, gard. to Miss Anderson.
.. Gilt . . Mr. Catleugh, N.
Large Silver . . Mr. Gaines, N.

Collection of 6 in 8 s. ditto.

Silver Banksian . . Mr. Cockburn, g. to E. Mansfield, esq.

Herbaceous Calceolarias.

Large Silver . . Mr. Stanley, gard. to H. Berens, esq.
Silver Knightian . . Mr. Green.
.. Banksian . . Mr. Beck.
.. Knightian . . Mr. Catleugh, N.

Shrubby Calceolarias.

Large Silver . . Mr. Beck.
Silver Knightian . . Mr. Gaines, N.
.. Banksian . . Mr. Catleugh, N.

Collection of 12 Fuchias.

Silver Knightian . . Mr. Catleugh, N.

Specimen Plants.

Silver Gilt . Mr. Goode for Pimelea spectabilis.
.. . Mr. Falconer for Lechenaultia grandiflora.
.. . Messrs. Pince and Co. for Cyrtoceres reflexum.
Large Silver . Messrs. Pince and Co. for Achimenes grandiflora.
.. . Messrs. Veitch for Eriostemon buxifolium.
Silver Knightn. Messrs. Smith for Rhododendron chrysolectrum.
.. Mr. Goode for Tropœolum azureum.

The Silver Banksian Medal was awarded to the following:

Mr. Goode for Gloxinia macrophylla.
Mr. Green for Siphocampylos betulæfolius.
Mr. Goode for Begonia coccinea.
Messrs. Smith for Rhododendron decorum.

The Certificate of Merit to the following:

Mr. Green for Manettia bicolor.
Mr. Hayes, gardener to — Hanson, esq., for Aotus lanigera.
Mr. Kyle for Bossiæ distichya.
Mr. Wood, of Croydon, for a collection of Alpines.
Mr. Beck for Seedling Pelargonium, Susannah.
Mr. Beck for ditto Zanzummin.
Mr. Standish, of Bagshot, for Seedling Calceolaria, Surprise.

Mr. Standish for Seedling Calceolaria, Duchess of Gloucester.
M. Jones, gard. to Sir M. Disney, Bart., for Azalea indica alba.
Mr. Gaines, N. for a collection of Ixias.
Mr. Curtis, gardener to — Allnut, esq., for Erica depressa.

Collection of 25 *Roses grown in pots.*

Silver Gilt	Mr. Milne.
Large Silver	Mr. Beck.
Silver Gilt	Messrs. Lane, N. Berkhampstead.
Large Silver	M. Catleugh, N.

Collection of 50 *Bunches.*

Silver Banksian	Messrs. Lane.

Collection of Ericas, 20 *varieties.*

Gold Banksian	Mr. Goode.

Collection of 6 *Ericas.*

Silver Gilt	Mr. Hunt.
Large Silver	Mr. Green.
..	Mr. Brazier, gard. to W. H. Story, esq.
Silver Knightian	Mr. Bruce.
Large Silver	Mr. Dawson, N.

Greenhouse Azaleas.

Gold Banksian	Mr. Green.
Silver Gilt	Mr. Falconer.
Large Silver	Mr. Smith.

Tall Cacti.

Silver Knightian	Mr. Clarke, gard. to W. Blake, esq.
..	Mr. Goode.

Miscellaneous Subjects.

Silver Banksian	Mr. Hardie for Doryanthes excelsa.
..	Messrs. Lucombe, Pince, and Co. for Acrophyllum venosum.

Royal South London Floricultural Society. The second show of this Society took place on Wednesday the 17th, at the Horns Tavern, Kennington.

The day was very unpropitious, and the attendance consequently thin. Some good plants were shown; among them we noticed, in a collection shown by Mr. Bruce, fine plants of Ixora coccinea, Boronia pinnata, Elichrysum humile, Azalea Gledstanii, &c. In that of Mr. Wilson, gardener to — Gelliat, esq., were Boronia serrulata, Pimelea rosea, Epacris pulchella, Chorizema illicifolia, and Henchmanii, Erica heteronema, Fabiana imbricata, &c. In Mr. Hamp's collection we noticed Manettia cordata, Gloxinia rubra, G. maxima, G. candida and G. speciosa, Stylidium fasiculatum, Epacris grandiflora, Corea speciosa, and an Ipomea Horsfallia, a plant very difficult to bloom while in a young state.

Mr. Bruce's collection of Ericas contained Cavendishianum, Grandinosa, Ventricosa alba, perspicua, and mirabilis.

Mr. Catleugh's 12 Geraniums were Ovid, Lady Mayoress, Lord Mayor, Selina, Joan of Arc, Erectum, Jewess, Victory, Comte de Paris, Sylph, Coronation, and Jubilee.

Mr. Lawrence's stand of Tulips held Polyphemus, Aglaura, Lawrence's Patty, Fabius, Holmes's King, Captain White, Madame Vestris, Violet imperial, Rose brilliante, Franciscus primus, Junius Brutus, and Catalini.

The following Prizes were awarded:

Collection of Plants, 24 pots.

1st. Large Silver Medal . Mr. Wilson, gard. to — Gelliat, esq.
2d. Middle ditto . Mr. Hamp, gard. to T. Thorne, esq.

Collectton of 6 species.

Large Silver . . Mr. Bruce.

Nurserymen.

Recommended . Messrs. Fairbairn, Clapham.

Collection of Orchidaceous Plants.

Large Silver . . Mr. Bruce.

Collection of Ericas.

Large Silver . . Mr. Bruce.

Specimen Plants.

Small Silver . . Mr. Curtis for Erica depressa.
Middle ditto . . Mr. Bruce for Pimelea spectabilis.
Recommended . . Mr. Cox for Crinum amabile.
Ditto . . Mr. Bruce for Elichrysum pulchellum.

12 *Pelargoniums.*

Large Silver . . Mr. Catleugh.

Tulips—Amateurs.

1st. Large Silver . Mr. Townley.
2d. Middle ditto . Mr. Clark.

Nurserymen.

1st. Large Silver . Mr. Lawrence, Hampton.
Recommended . . Mr. Brown, Slough.
Ditto for a Seedling . Mr. Brown.

Pansies—Amateurs.

1st. Middle Silver . Mr. Edmonds.
2d. Small ditto . Mr. Munro.

Gentlemen's Gardeners.

Middle Silver . . Mr. Parsons.

Nurserymen.

1st. Middle Silver . Mr. Brown.
2d. Small ditto . Mr. Henbrey.

A fine Seedling of Mr. Cook's, named Delight, was recommended.

THE

FLORIST'S JOURNAL.

JULY, 1843.

CAMELLIA JAPONICA.

WITH A FIGURE OF HALLY'S SEEDLING—PULCHELLA ROSEA.

WE have on previous occasions urged on the attention of our readers the probability of acclimatizing this noble shrub, and we now revert to the subject, feeling convinced from successful instances we might quote, at Vauxhall, Tooting, Bicton, Hatfield, and other places, that there is nothing difficult in the way of those who wish to ornament their grounds with this splendid plant.

In all the instances that have come under our observation, the plants have been placed out while young, having been previously raised and grown to a certain size under glass. Now it is pretty generally allowed that plants form their tissue in accordance with affecting circumstances under which they are placed; that is, if subject to a considerable amount of heat, the same plants form wood of a loose open texture, or as it is technically named "soft," and a degree of laxity pervades their several parts, which under a lower and dryer temperature would have been close and hard, and consequently better adapted to withstand any attacks from cold, the action of which on the juices of plants we have before explained to be the disruption of the vessels containing it by the expansion of the fluids. It will then be clearly evident that plants whose tissue, wood, fibre, or by whatever name it may be called, is harder or toughened by induration to a low temperature, will be in a better condition to meet this strain than those can be, which have been subject to a greater heat and more excitement.

This idea seems to have met the attention of our continental

brethren, and they have acted on it. To show the result, and the estimation in which this flower is held by them, we subjoin the following interesting communication, translated from an article in the Avranches Journal, which has been kindly sent to us by a friend:

"Of all shrubs cultivated for the ornament of greenhouses, there is none superior to the camellia, whether we look to its smooth and evergreen foliage, or to its flowers always rich and numerous. This precious plant, that in our days is met with in the planthouse of every amateur, which is during winter the most graceful ornament of the saloons of the rich, whose white, carnation or purple flower, rests so becomingly on the head of that beauty which it makes more beautiful, *was unknown fifty years ago.* It was about the end of the last century that it was introduced into Europe by Father Kamell, from whom it derives its name. About thirty years ago, upon its appearance in Paris, it at once became the favorite of royalty, of the great proprietors, and of all the florists of the capital and provinces. As an illustration of the care since bestowed upon its cultivation, we may mention that, according to the horticultural statistics of Maine et Loire, of 1842, there are nearly 500 garden varieties of it; about fifteen years ago there were scarcely thirty or thirty-five.

"The plant of which we speak is a native of China and Japan, where it is cultivated with great zeal, although it grows spontaneously, and to an height of twelve or fifteen feet; with us it is only a low shrub, but, docile to the hands of skilful horticulturists, no doubt when become indigenous and freed from the shackles of the hothouse, it will raise itself, if not to the height it does in its native country, at least to such an elevation as will make it the king of our ornamental shrubs.

"Stimulated by an artificial heat, the camellia flourishes with us from December to April, three months before the time fixed for it by nature; its hastened bloom no doubt lessens the beauty it would possess were its growth left free, but let us not be ungrateful, it is still very precious, since alone it suffices to make us forget the mourning, and so to speak, the state of death that nature is in at this period of the year. In Japan and China, it blossoms from April to October.

"To render suited to our climate a shrub on which the eye always reposes with pleasure, and which improved by naturalization, and in strength and vigour will delight us for nine consecutive months, by its soft foliage and brilliant flowers, is assuredly to deserve well of horticulture; it is to add to the joys of every year a sight lovely and gay in our groves and parterres.

"M. Bataille is about to resolve the problem of the naturalization of the camellia in our country, going openly and boldly

to his end he has trusted to the open earth, not a plant raised in a hothouse, but seeds which he has gathered himself. There was perhaps some rashness on his part, but happily his attempt is on the eve of complete success. He can show eleven fine plants, of which many are in bud and about to put forth their flowers.

"The late M. Dubuisson, about twenty years ago, exposed to the influence of our climate a strong plant of single flower, the first perhaps which was seen at Avranches. This Camellia grew under this, to us novel, culture, and soon displayed flowers that produced seeds, which in time arrived at full maturity. But these seeds being treated as exotics, and having an artificial heat to cause germination, the plants were scarcely more robust than was their parent.

"About seven years ago M. Bataille placed in autumn a number of grains in the open earth. In the following spring, impatient to know if these had not rotted, he searched for some of them, and found them in a satisfactory state. They were swelled, and had already the radicle pushed from its envelope, and directed downwards to obtain the necessary sustenance for the growth of the young plant, which gave evidence of its existence by displaying its first fibres. The plants which sprung from this first sowing during the summer acquired strength and height; the following winter a slight cover was placed over them, in the spring they were found in perfect preservation, and at length last year one of them flowered for the first time.

"This year M. Bataille will be more fortunate, the greater part of his eleven plants are in bud, and their blossoms ought soon to appear; till then we must wait to judge of their merit.

"The writer gives other instances of the apparently successful attempt of cultivating the Camellia in the open air."

Our Illustration is another seedling raised by our respected friend Mr. Hally, nurseryman of Blackheath. It possesses a fine vigorous habit, is decidedly novel in colour, and has a greater regularity than is observable in many of the cultivated sorts.—EDITOR.

PRIZE ESSAY.

On the Culture of Roses in Pots. By Mr. T. MOORE. (*Read April 20th, at an Evening Meeting of the Regent's Park Gardeners' Association.*)

(*Continued from page* 104.)

THE plants under this treatment will have formed three or more vigorous shoots, each of which, just before they cease

growing, should be partially cut through, at a length sufficient to leave about three prominent buds on each shoot; and in the autumn, when they are perfectly at rest, and about to be placed in the cold frame for another winter, they should be completely severed at this point; their winter treatment would comprise nothing beyond the ordinary routine, the most important point being that they should be kept inactive by withholding water from them as much as possible. In spring they should be taken out, the balls of each slightly reduced, without destroying the fibres, and then repotted into pots larger than before, and in a similar rich loamy compost. A close frame or pit is suitable for their growth, where they may have the advantage of a free exposure to light, and enjoy a degree of temperature gradually progressing from 40 to 50° and 55° by day, with a decrease of at least 5° during the night; this adjustment of temperature will admit of considerable variation, and may be regulated either to accelerate or retard their period of blooming, without submitting them to what is usually considered to be implied by the term "forcing."

During this period of development, they would require a due and constant supply of water, and they will be benefited by an *occasional* application of very much diluted liquid manure; they ought also to be frequently syringed, and every attention should be paid to arrest the progress and increase of insects, which will certainly make their appearance, and may be as certainly destroyed by the timely application of any of the common and well-known remedies. Probably they would require some artificial support to their branches, the exact nature of which will, however, be best left to the taste and judgment of the cultivator. The most important point to be regarded (if one important and indispensable requisite can be said to be more important than another), is to maintain a pure atmosphere in conjunction with the increased temperature, without submitting the plants to the influx of large bodies of raw cold air; and another point which claims especial attention, is to afford the plants some kind of shading when in bloom, with a view to prevent the blossoms from falling so rapidly as they otherwise would do.

By following this course of treatment, the cultivator might expect to be rewarded by the healthy appearance, and abundant blooming of his plants. I say he might expect this, because it

is the course of treatment which experience teaches us is most likely to result thus; but as of all other professions, horticulture is the most uncertain as to its results, so in this individual instance, some inaccuracy in the adaptation of the means to the circumstances of the case may cause a failure which can scarcely be said to inculpate the operator. I should recommend a similar mode of treatment also to those kinds included in §§ 1, 3, 5, and 6.

China roses are much more likely to become generally cultivated in pots than those we have been considering, on account of their greater degree of tractability, and the profusion and succession in which they produce their blossoms; unlike the last, their habit will admit of their being grown into compact and permanent bushes of considerable size, and when such is the case, if they are at all in a healthy state, an abundance of bloom will be an accompanying characteristic of the group.

If grown on their own roots, it is preferable to raise them from cuttings rather than from layers, as by this means, in consequence of a more equal balance between the roots and the branches, a more regularly progressive development is the result. The soil in which they thrive most freely is a mixture of turfy loam and peat; indeed, when in a young state, I have known them to succeed best in a compost of turfy peat with only a small portion of sand intermixed. They require to be kept close in a slightly raised temperature when quite young, in order to induce them to make a free growth; without this attention, especially if potted early in spring or in the autumn, they are very apt to die off immediately on being removed from the cutting pot. Of the subsequent treatment of the plants during the remainder of their infant stages, I need say but little; they require the same care in watering, potting, and routine culture, which all plants in the purely artificial position of a garden pot imperatively demand, and for a neglect of which no justifiable reason can be adduced on the part of the cultivator, unless, indeed, it be that his attention is taxed beyond his powers or the means under his command.

As far as regards pruning and training, these plants offer some difference from those already noticed; when young they should be *continually stopped*, to induce a permanently bushy habit; after a season's growth they would only require a few of

the principal branches to be entirely cut out, and the remainder left without any shortening or cutting in; this will admit a circulation of air among them, and tend to promote a well-developed and rigid growth, and a consequent profusion of blossoms. When in growth, during the summer, they should not be cut in, excepting it may be that an occasional luxuriant shoot may require reducing within limitable extent; they will continue blooming and developing in succession for several months. They will not require for the most part any artificial support to their branches, as their habit will be sufficiently rigid to bear up their blossoms, and the graceful laxity in which they will be disposed will be infinitely preferable in point of taste to the appearance of a legion of stakes, with which by far the greater number of specimen plants are garrisoned in.

With these, and those treated of under the next head, the one-shift practice may be successfully adopted. It is not desirable here to enter into a consideration of the merits or demerits of this practice, it will be sufficient for us to know that it has some advantage, provided proper subsequent treatment is afforded; whilst, on the other hand, if this is neglected, and the plants are incautiously managed, it is possible that it may produce very unsatisfactory results. The plants included in §§ 2 and 8, with some of the dwarfer kinds in §§ 9 and 10, I should recommend as being adapted for this mode of treatment or some modification of it.

We come now to the treatment of the Banksian rose, which was chosen as being a type of a considerable number of its congeners with respect to cultivation. The method of propagation already recommended for China roses I would strongly urge in this case also; and what has been there stated with regard to their subsequent management, applies equally to these also. Instead, however, of training these into compact bushes, I would recommend them to be grown vigorously in the early part of summer, and then, after being well matured, to be trained at full length around a cylindrical or pillar trellis. In order to carry out this principle to its fullest capability, two sets of plants should be cultivated and bloomed alternately, the one being pushed into rapid and vigorous development as early in the season as possible, in order to mature the shoots before winter; the other having been so treated in the preceding season, to be

managed with entire reference to the development of blossoms, without regard to the formation of woody branches; this alternation being kept up, strong blooming plants will be the result. Probably it might be possible to do this with one set of plants, and to secure a good bloom from them annually; but where the labour incurred by the other plan would not be regarded as an obstacle, it would doubtless be followed by the most marked results. A yellow or white Banksian rose treated thus, and successfully bloomed, would form a most splendid object; and that it may be so bloomed I do not entertain the least doubt, as it is of free growth, bears an increase of temperature well, and is not chargeable with producing a paucity of flowers; the chief requisite towards ensuring success is to grow the plants into substantial specimens, before a *profusion* of blossoms is *expected* from them. Plants of these kinds, worked on a stock about three feet in height, and the branches allowed to hang gracefully dependent on all sides, would perhaps form still handsomer and more ornamental objects.

Associated with these both in treatment and also in the mode of training would be all those kinds included in §§ 9 and 10.

The Scotch rose, which I have chosen to illustrate the culture of one section of this genus, is held in very general esteem on account of its profuseness of blooming, its peculiarly neat and pleasing habit, and its pretty foliage. There is little doubt that it would form an equally pleasing and interesting subject for pot culture, were it not that its blossoms are of short duration even when expanded in their natural atmosphere, and would probably be still more fugacious in the increased temperature and more confined atmosphere, to which a course of cultivation in pots would almost necessarily subject them. The abundance in which they are produced would, however, compensate in some degree for this defect, and as this consideration may induce some to give them a trial, it will justify me in noticing their management.

To cultivate them successfully, I would take young healthy plants and place them in small pots, using a compost similar to that recommended for the Provence rose, and assimilating the general features of their treatment, to that already detailed when treating of that kind. With regard to pruning, however, I would adopt a somewhat different course, with a view of con-

firming and accelerating their naturally compact and bushy habit; in order to effect this I would continually pinch off the points of the young growing shoots, leaving about three or four leaves on each; and this would be continued during their whole season of growth until they were become large and compact bushes. The whole course of pruning would be carried on on this principle and with this view. In other points of treatment they may be associated with those previously alluded to. With them I would class the whole of those included in §§ 4 and 7, excepting perhaps the double yellow rose, and this, from its peculiar habit and the difficulty of blooming it by any artificial course or treatment, I should scarcely consider as being at all adapted to pot culture; if it were attempted, I would recommend a course somewhat similar to that already laid down for the Banksian rose.

Having thus far confined my remarks to the several individual sections, I will now endeavour to notice a few of the general features of the treatment I would recommend.

In the compost which I have already briefly noticed, it will be seen that I have not recommended the application of any solid manures. It is not because roses are plants which do not require a rich soil, or which do not thrive upon the addition of manuring substances, that I have hitherto omitted to notice them, but rather because I would prefer to supply manure in a liquid state, and as such I would seek to give it a prominent mention, not, however, with the view of recommending a copious application, but rather to caution and guard those into whose hands these remarks may fall, not to indulge too lavishly in applying it, but only at considerable intervals, and then only in small quantities. If plants in pots are kept supplied with good fresh compost, either by frequent shiftings or by placing them at once into a considerable mass, the decomposition of the matters contained in it will supply them with all the food requisite to a healthy and vigorous development; and it is only when the plants are sufficiently supplied with light to elaborate the food taken up by the roots, that a considerable supply may be safely indulged in. It may form matter of experiment whether animal, vegetable, or mineral manures are best suited to the plants in question; or whether a substance combining each of these, would possess still more fertilizing properties than either of them

in a separate state; liquid manure, consisting of the drainings of dunghills, or formed from animal excrement or decayed hotbed manure, has been proved to be very beneficial; nitrate of soda has also been strongly recommended, and may be best applied in a liquid form; in these cases (especially in the latter) the utmost caution is necessary not to use it too strong, as many plants have been found to suffer severely by inattention to this important point. These stimulating fluids should moreover be always used in a very diluted state, and in this state they may be applied to strong and vigorous plants once in two or three applications; but to more delicate ones, and to all at an earlier period of their existence, they must be much more cautiously and very sparingly applied and only at considerable intervals. It cannot be too strongly insisted upon in the culture of all plants under any circumstances, that if supplied with a greater amount of food than is really necessary, not only will the action of the manuring substances be impeded, but a positive injury to the vital functions will be the result, just as the animal stomach becomes disordered and impaired by being overloaded with food, and the richer the quality of this food, the more injurious will be that result. To plants in pots, this consideration is of infinite importance, an excess of food applied to them has not an equal chance of draining away or of being diffused in the surrounding medium, and consequently the roots are forced into excesses which under the increased temperature and refracted light of a plant-house, lead to more than ordinarily injurious results.

The elucidation of the culture of these plants in pots involves a consideration of climate, and in this particular there is ample scope for variation of treatment. It is no part of the present inquiry, as I have already observed, to enter into what is regarded as the "forcing" of roses, that is to say, the production of them out of their natural season; but it is nevertheless necessary to provide them some protection, and at least "a local habitation," if they are to be bloomed in that perfection which throughout this paper I have been anticipating. The most suitable structure then which could be devised would be a small pit, facing the south-east, just large enough to admit of a path at the back in the inside, and heated by means of a branch from some contiguous hot-water apparatus; the plants would occupy a platform between this pathway and the front of the pit; and

thus whilst every convenience would be afforded for paying them the attention they might require, they would also enjoy a full share of that most indispensable requisite to healthful vegetation, that real essential, light. During their winter, (that is when they are at rest,) they would require only to be kept safe from injury by frost, and consequently would not need the application of artificial heat; but when the period of their development arrives, an increase of temperature becomes necessary; this, however, as in all similar cases, should be progressive, so that the health and constitutional strength of the plants may not be weakened by sudden and unnecessary excitement; a degree of temperature, ranging at first at about 40° and rising gradually to 55° by day, when the blooms are about to expand, would be such as I should adopt, but above every other consideration as regards the temperature, I would require that the heat during the night should be not less than 5° below the average of that of the day.

Plants can only exercise their functions of respiration, digestion, and assimilation, under the influence of light, at least it is only by the assistance of this agent that they can go on satisfactorily; now the application of heat has the effect of compelling plants to exercise these vital functions, and therefore to force them into a state of action without the aid of the most essential requisite, by maintaining a high temperature whilst they are enveloped in darkness, is to violate all that we know of the very nature and principles of their existence; and I am sure I cannot use stronger language than this to convince every one (if at least my argument is a correct one) that it is a most injudicious and injurious course to pursue, and what in this sense applies to the use of heat, applies equally to that of moisture.

With regard, then, to moisture, for to this we next direct our attention, much depends on the season, the state of the weather, and the temperature maintained. In winter when light is deficient, the nights long and chilling, the days gloomy and cheerless, too little can scarcely be made use of, provided that enough is given to maintain vitality. As the spring advances and more power is gained by the sun —the source of light and heat; as the days lengthen and the purer atmosphere transmits more readily the influence of that glorious luminary, so will an increased pro-

portion of moisture be required by the vegetable structure; frequent syringings also become necessary, not less to remove and dislodge insects than to clean away from the breathing apparatus of the plants any incumbrance which may have been deposited on it, and thus tend to impair its action; the moisture of the atmosphere should be maintained by sprinkling the heated pipes frequently, and by the aid of "evaporating troughs" placed on them. The application of moisture at the root should be *sufficiently bountiful* to render soluble the food contained in the soil, and thus suitable to be taken up by the spongeoles or feeding apparatus of the plants; but it should, at the same time, be *sufficiently limited* to prevent the medium in which that food is embodied, from becoming soured or soddened.

Provided that attention is paid to keep the atmosphere free of extraneous impurities, it cannot be maintained in too calm a state at the time of the development of the leaf buds and during the earlier stages of growth; the young shoots of roses are very succulent and, together with the blossoms, are very delicate and tender, and are therefore liable to become seriously injured by exposure to a current of cold air; this injury should be particularly guarded against and avoided, by keeping the house closed as far as may be practicable. Mr. Knight has somewhere stated his belief, founded on his own observations, that it is by no means necessary to change the body of air in a hothouse, by admitting cold air largely by opening the sashes, provided the internal atmosphere was kept free from impurities which might arise from the soil or other causes; a sufficient change of air, he believed, would take place in a house kept closed, at least when any considerable difference existed between the external and internal temperature, through the various openings and creaks, which, though scarcely discernible, are known to exist numerously enough in all plant structures. This opinion is strongly confirmed by the success which has attended a recent adaptation of the principle by Mr. Ward; and perhaps one of Mr. Ward's cases might be turned to a less appropriate or pleasing use than to the sheltering of a "little forest of roses." To this I may add the testimony of Mr. Rivers (who is no mean authority on matters connected with roses), and he has very lately stated his conviction that the *healthiness*, the *fragrance*, and the beauty of his partially-forced roses, resulted more particularly from

his invariable practice of keeping his pit, in which they were grown, quite closed.

It has been sometimes recommended, I think by Mr. Salisbury, to invert the plants between two trestles in the autumn and until they are quite at rest, with a view to the storing up in the branches of the elaborated sap, which would otherwise descend to the roots; the benefit arising from this practice may, I think, be referred to the more complete state of rest, to which the plants, in such a situation, are forced to yield, and in consequence of which their excitability is increased. There can be no doubt that wherever plants are submitted to a higher temperature than is usual to them at an early season of the year it is one of the most essential points towards ensuring precocity to take care that they are excited annually in the same order and rotation.

It would be desirable to say a few words respecting the propriety of working roses when intended for pot culture, and also to notice the kind of stock which is best suited to this purpose; but here opinions vary, and perhaps the subject can only be satisfactorily decided on by actual experiment. That the delicate kinds of roses are best when worked upon a more vigorous stem seems to be generally admitted; but what kind of rose should be used as a stock is not so clearly evident. Many years ago Mr. Rivers recommended Rosa canina (*the dog-rose*), one of our English species, for the purpose, and this opinion he still holds; whilst, on the other hand, Mr. Beaton says, "never use the dog-rose stock for forcing." The dog-rose is easily procurable, of vigorous growth, and easily excitable, and therefore seems to be in some degree at least approximating to the kind of stock required; and the same might be said of others of our English species. Others recommend Rosa damascena (*the damask rose*), on account, as it is said, of it not being liable to throw up suckers. These are perhaps all surpassed for this purpose by Rosa Banksia (*the Banksian rose*), which, in addition to its easily excitable nature, and its freeness of growth, possesses the quality of being abundantly furnished with fibrous roots; and therefore it seems to be best of all adapted to cater for a supply of food for its "adopted head." There is no reason why it should not be sufficiently abundant at least to supply stocks for pot roses, as it produces abundance of cut-

tings, and strikes freely with a little warmth. I would therefore suggest its very general adoption in this character, in addition to the numerous others it so honorably bears.

There remains yet a topic which it is desirable not to lose sight of altogether: I refer to the root-pruning of roses in pots; and there is no plant which bears a judicious application of this feature in cultivation better than the subject before us. I would therefore recommend its annual adoption with such plants as may have attained considerable size. This should be performed before the plants are excited in the spring, removing a portion of the least fibrous roots, and shortening the others; this, with a corresponding reduction of the branches, will have a salutary effect, and prevent the plants from attaining to an unmanageable size. I would not, however, recommend it with any other object in view.

To sum up the foregoing in few words, I would recommend to begin invariably with young plants; to afford them every legitimate inducement to grow freely; to adopt two distinct methods of pruning as specified; the one to continually stop the young shoots, the other to encourage them to their full length; to apply manuring substances and moisture sparingly, when light is deficient, and more abundantly when it is abounding; to make the application of heat equally depending on the absence or presence, the deficiency or abundance of light; in fact, to treat them as though the cultivator was really sensible that they were organized beings, whose vitality depended on a supply of food properly digested, and whose increase depended on a due performance of the no less important functions of inspiration, respiration, and assimilation.

To conceive a Banksian rose covered with myriads of its enchanting blooms; a China rose bowing beneath the profuseness of its fragrant blossoms; a moss rose crowned with clusters of its noble blossoms, some blazing with beauty, and others scarcely willing to burst from their mossy envelope as though they would teach mankind to value beauty most, where modesty strives most to conceal it; these are pictures which would induce every ardent lover of Flora's kingdom and of Flora's queen thus to treat his plants; and thus treating them the picture of his fancy will become realized, and his labours will be abundantly repaid.

LIST OF ORCHIDEÆ.

(*Continued from page* 107.)

40. *Cattleya Perrinii.* Stem bulbous, six inches long, and one inch broad, and rather flattish leaves sometimes in pairs, but mostly single, one foot long and two inches broad, with its apex obtuse; its flowers are mostly produced in twos and threes, of a beautiful violet colour, and tinged in the labellum with purple, rather tapering towards the apex. This requires pot culture in a mixture of sphagnum, turfy peat, and rotten wood, and in a temperature of 65°; this plant also bears the name of Lælia Perrinii; is worthy of cultivation.—*Native of Brazil.*

41. *Cattleya Superba.* Stem bulbous, six inches long, nearly round and swelled a little towards the summit; leaves in pairs four inches long and two broad; the flowers are the richest in colour of any of this genus. Requires the same treatment and temperature as the others, and should be in every selection.—*Native of Guiana.*

42. *Cattleya Bicolor.* Stem bulbous, eight inches long, and round leaves in pairs four inches long and nearly ovate; its flowers are two coloured, and worthy a place in every selection. The same treatment and temperature as the others. To grow this genus to perfection, they should be placed in the most airy part of the house, and should be well elevated above the pot so as to insure a good drainage, and particular care should be paid in watering them, as they do not require a great amount either of heat or moisture.—*Native of Brazil.*

43. *Comperettia Rosea.* This is an elegant little species destitute of bulbs; its leaves are nearly four inches long, of a purplish green; the flowers are borne on a drooping scape, and are of a beautiful rosy crimson. It requires hanging up in a basket in a mixture of sphagnum and rotten wood, well chopped together, in a temperature of 70°; this is also worthy of cultivation.—*Native of Trinidad.*

44. *Comperettia Coccinea.* This is an elegant little species, and much similar to the other; requiring the same treatment and temperature.—*Native of Brazil.*

45. *Camerotis Purpurea.* This is an elegant plant of the Vandæ tribe; the stem is upright, sending out its leaves alternately up the stem; the leaves are long and narrow; the raceme drooping, and producing a great number of handsome purplish flowers. It should be placed on a rough chump of wood, with a little moss fastened round it, and also in a temperature of 70°; it should be liberally supplied with water when growing.—*Native of India.*

46. *Cirrhopetalum Nutans.* (Derived from nodding.) Plant bulbous, bulbs small, leaves single, two inches long and nearly oval, of a dark green. Requires growing on a lump of wood, with a liberal supply of water when growing in a temperature of 65 to 70°.—*Native of the Philippines.*

47. *Cirrhopetalum Fimbriatum.* (Derived from the flowers being fringed.) Plant bulbous, bulbs half an inch long, leaves single, two inches long and half an inch broad, fleshy and of a shining green. This, requires a lump of wood with the same temperature as the other.—*Native of Bombay.*

48. *Cirrhopetalum Cummingii.* Plant bulbous, bulbs half an inch long; leaves single, three inches long and better than one inch broad; flower-spike slender, and producing a number of curious flowers at its summit. This will do either on wood, or in a pot hanging up, in a mixture of sphagnum and turfy peat, also in the same temperature.—*Native of Panay.*

49. *Cirrhopetalum Thouarsii.* Plant bulbous, bulbs nearly one inch long, and half as broad; leaves single, four inches long and two broad. This requires pot cultivation, being of a rather stronger habit, in a mixture of sphagnum turfy peat, and the same temperature as the others.—*Native of Manilla.*

50. *Cyrtochilum Hastatum.* (Derived from halbert-shape.) Plant bulbous, bulbs four inches long and two inches broad, and rather flattish; leaves single, one foot long, and better than two inches broad; flower-spike rising from the base of the bulb five to six feet, and producing upwards of ninety flowers. This requires pot culture in a mixture of sphagnum, turfy peat, and rotten wood, also in a temperature of 65 to 70°; it also goes under the name of Odontoglossum hastatum.—*Native of Oaxaca.*

51. *Cyrtochilum Flavescens.* (Derived from the paleness of its flowers.) Plant bulbous, bulbs six inches long and better than one broad; pale yellow leaves in pairs, one foot long and two inches broad; flower spike rising from the base of the bulb, the sepals and petals straw colour, column rose colour, labellum straw yellow, spotted with a few longitudinal lines or spots. This requires the same treatment and temperature as the other, except that it should be placed in the dampest part of the house.—*Native of Mexico.*

52. *Cyrtochilum Bictoniensis.* Plant bulbous, bulbs five inches long and better than two inches thick; leaves in pairs, eighteen inches long and one inch broad; flower spike rising from the base of the bulb. This also requires the same treatment and temperature as the others; it is also known as Odontoglossum Bictoniensis.—I believe a *Native of Oaxaca.*

53. *Cyrtochilum Filipes.* Plant bulbous, bulbs three inches

long and two inches thick; leaves eighteen inches long and half an inch broad; flower spike three feet long, and slender, producing five or six flowers of a yellowish colour, the sepals and petals blotched with brown. This I consider should have been placed with the genus Oncidium, as the only difference is in the labellum being narrower at the base, where it forms an acute angle with the column, instead of an obtuse angle. This requires the same treatment and temperature as the others.—*Native of Guatemala.*

54. *Cyrtochilum Maculatum.* Plant bulbous, bulbs from two to four inches long, waved and tapering towards the summit; leaves in pairs upwards of one foot long; flowers, sepals, and petals greenish yellow, beautifully blotched with dark crimson, labellum pale sulphur colour. The same treatment and temperature as the others.—*Native of Brazil.*

55. *Cyrtochilum Maculatum, var.* This is one of the loveliest of its genus; the growth is similar to its parent species, but the flowers are larger and handsomer; the sepals and petals are of a greenish ground, blotched with dark brown; column white, with its helmet yellow, labellum white with a few small pale stripes of brown on the breast, and greenish towards the apex.—*Native of Guatemala.*

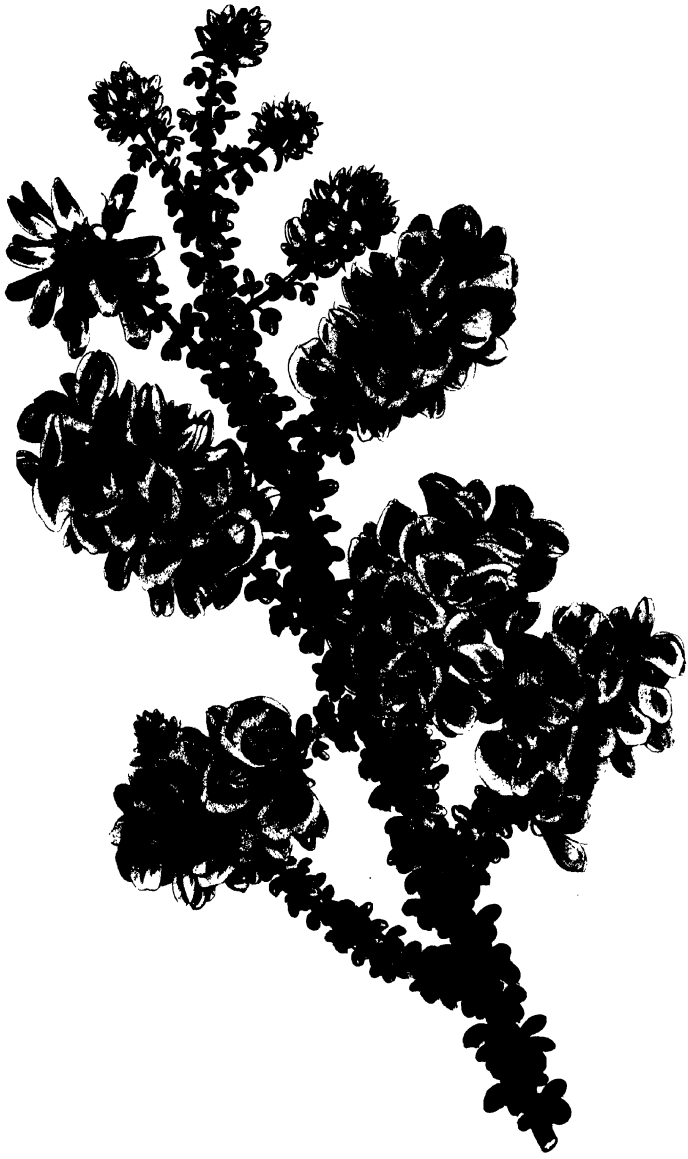
56. *Cœlogyne Cristatum.* (Derived from the labellum having a tuft or crest.) Plant pseudo-bulbous, of an angular shape; leaves in pairs, when they become old of a lanceolate form; the raceme pendant produced from the young bulbs; flowers of a pure white, with a fine fringe of yellow in the centre of the labellum, and very fragrant. This requires pot culture in a mixture of sphagnum, turfy peat, and rotten leaves, also in a temperature of 70°. It should be in every selection.—*Native of India.*

57. *Cœlogyne Flacida.* (Derived from the raceme drooping.) Plant bulbous, bulbs nearly four inches long; leaves sometimes in pairs, raceme drooping eight or ten inches long; sepals and petals snow white, labellum white blotched with yellow at the base of the middle of the lobe, and at the base of the middle of the disc. This also requires the same treatment and temperature as the other, and should be in every collection.—*Native of India.*

58. *Cœlogyne Gardneriana.* Plant bulbous, bulbs eight inches long and one inch thick, tapering a little towards the summit; leaves in pairs, one foot long and a little lanceolate; flowers produced from a large pendant raceme. This requires the same treatment and temperature as the others; it also should be in every collection.—*Native of India.*

JOHN HENSHALL, K—P—Y.

(*To be continued.*)



GENISTA ATLEENA

THE GENISTA.

WITH AN ENGRAVING OF G. ATLEEANA.

The Genista is an old and generally favorite genus, well deserving the little attention requisite to grow it; contributing so largely as it does to the embellishment both of the conservatory and the flower garden, in the early spring months.

There are many species common to the whole of Europe, which thrive in the open air with us, and produce an abundant display of their pleasing bright yellow blossoms, at a time when every flower is valuable, however humble. The best of this class is perhaps *G. triquetra*; grown either as a low shrub on its own bottom, or grafted on the Laburnum as a stock to form standards. In this way it is exceedingly graceful, and should occupy a place on every lawn or flower garden.

But our attention is now more immediately directed to the tender kinds, that is, those which ornament the greenhouse or conservatory; these too are all early flowerers, and the colour of their flowers is also yellow. Our first importation was G. canariensis, so far back as 1656, since which time it has ever held a prominent situation in all collections. G. rodophna and racemosa are of later introduction, and are considered superior in some respects.

It is rather surprising when we consider the great number of years we have been in possession of this genus, and remarking too how prolific it is of seed, that we have not had a greater number of improved varieties acquired, so small an amount of trouble being required in their management.

The subject of our present figure is the result of attention to this particular. It was raised about four years ago by Mr. Atlee, gardener to H. Beaujoy, esq. of Lambeth, from seeds of, we believe, G. canariensis. It, peculiar characteristics are a dense habit, without being formal, and large copiously produced flowers. The superiority it possesses over its parent is obvious in the size of the flowers, and more particularly the racemes, which are considerably longer than even G. rodophna, and in relation to the latter it has all the advantage of the close compact habit which distinguishes that plant, without its objectionable lumpish figure. It will probably rise to a height of eight or ten feet or even more: the original plant is now about half that height, without any appearance of nakedness, but rising in a neat pyramidal form.

Messrs. Fairbairn, of Clapham, who grow this class of plants extensively, have purchased the stock of Mr. Atlee, and are now sending out plants of it.

We may perhaps be expected to say something on the cultivation of the Genista. Certainly no plants succeed better with the same amount of attention. They are peculiarly suited to the amateur's collection, requiring only a well-ventilated greenhouse, which they alone would render quite gay from the end of February till the beginning of May.

They delight in a mixture of peat or heath mould and turfy loam; and if allowed sufficient pot-room grow vigorously, forming handsome plants in two or three years from the cuttings, and are not so particular as to situation in the house as some other and less specious plants. Of course the usual attention must be paid as to watering, thinning, and repotting in due season. They are much benefited by being placed in the open air with other greenhouse plants during the summer months, selecting a situation where they may be slightly shaded in the middle of the day, without being under the drip of trees. No collection should be without several plants of the Genista, the Camellia, and the Azalea, the three blooming at about the same time, and affording a rich and pleasing contrast.

LITERARY NOTICE.

Rendle's Tank System of Communicating Heat.
London: Longman and Co.

We were obliged very unwillingly to defer our notice of this treatise in our last number from want of space, as we have looked very anxiously for its appearance; entertaining a conviction of the utility of the system, we think it only requires its advantages to be understood to ensure its adoption for every purpose to which fermenting materials have hitherto been applied.

It is written by Mr. W. E. Rendle of Plymouth, the ingenious inventor of this mode of applying hot water to the purposes of bottom heat. He explains the construction, fitting-up, and working of the tanks, and also points out some of the advantages arising from their use, but in our opinion he himself is not aware of them all. We have had two in constant use for the last five or six months and find them most effective. They may be constructed of wood, slates, bricks, iron, &c. To explain it more thoroughly, we will suppose a forcing-house with a pit in

the middle to be heated with a tank, which would then occupy the floor of the pit, and should be about six or eight inches deep, with a partition running from the end next the boiler to within a foot of the opposite end of the tank; a flow or supply pipe is carried from the boiler into the tank on one side of the partition and a return pipe on the opposite; the tank may be covered and plunging material put over it to suit the purposes of the cultivator. When put in action there is a rapid circulation of the water, giving off a fine moist heat most congenial to the growth of plants; and if the size of the tank is proportionate to that of the house there will be sufficient surface heat to prevent the necessity of pipes of any description. The great advantage lies in the large body of water applied, which from circulating attains a uniform temperature and retains its heat for a long period, insomuch that for a purpose that would require a fire constantly to acquire the desired heat from water circulating in pipes, by this method it would be attained with one hour's fireing in the morning and two at night. Thus the saving in fuel and time is very considerable, nor is the difference in fitting up of less consequence. And, as facts are always to be preferred to mere opinions, we will mention one instance; a house, for which the estimate for heating with a saddle boiler and pipes was £65, was heated by this method and one of Stevenson's boilers for £19; nor will the gardener have reason to regret the rejection. In short, we cordially recommend the treatise to the notice of all who are about to erect new or have old or defective apparatus for the supply of heat.

NEW PLANTS.

GYNANDRIA MONANDRIA—*Orchidaceæ.*

Cymbidium Devonianum. This very beautiful addition to the genus Cymbidium, was found by Mr. Gibson on the Khoseea hills in India, and introduced to Chatsworth in 1837. It bloomed there in the months of March and April of the present year. Mr. Gibson gathered it from the trunks of decayed trees, or from cavities in those old specimens which had become filled with vegetable mould. In England it grows very freely on any half-decomposed block of wood suspended in the orchidaceous house and kept in a shady moist place at a good distance from the glass.

The species has roundish pseudo-bulbs, and throws from them fine racemes of bloom, from a foot to eighteen inches in length, which hang down after the manner of *C. aloifolium.* It is not much unlike the latter plant in the hue of its sepals and petals, which appear to be of a brownish cream colour, but the lip, which is the most conspicuous feature, is of a beautiful purplish crimson tint, and very rich.—*Pax. Mag. Bot.*

DIDYNAMIA ANGIOSPERMIA.—*Labiatæ.*

Scutellaria Splendens. A scarlet flowering species, first bloomed by Messrs. Henderson, Pine-apple Place, in the autumn of 1841, and continued the entire season of 1842. It is a dwarf and compact-growing plant, apparently of an evergreen herbaceous or subshrubby habit, and sending up numerous stems, from the tops of which the spikes of flowers proceed; these are of rather loose elegant character, and the individual blossoms though somewhat small, are of so splendid a deep scarlet tint, that the plant is rendered attractive from this circumstance. It will probably succeed in a warm greenhouse, and is benefited by frequent stopping. Said to be a native of Mexico.—*Pax. Mag. Bot.*

MONADELPHIA DECANDRIA.—*Leguminosæ.*

Hovea Splendens. Was raised in the nursery of Mr. Knight, Kings Road, Chelsea, from seeds collected in the Swan-river Colony, and presented to Mr. Knight by Captain Mangles, R.N. Its general characteristics bear a considerable resemblance to the best of all hoveas, *H. celsii.* On a more attentive inspection however, and a comparison of the two plants they are materially different. The leaves of this plant are closer, more ovate, a little inclined to be cordate at the base, stipulate, having a strong mucrone at the end, and deep green on the upper side. The flowers appear always to come in pairs, and the branches seem altogether weaker than those of *H. celsii.*

This as well as all other hoveas requires to be more frequently stopped at the points than is the general practice, in other respects the usual treatment is sufficient.—*Pax. Mag. Bot.*

DIDYNAMIA ANGIOSPERMIA.—*Gesneriaceæ.*

Nematanthus Longipes. The Royal Botanic Gardens of Kew are indebted to Messrs. Rollison, of Tooting, for the possession of this truly beautiful plant. It seems to have been introduced from Brazil to Paris, and probably by the late M. Guillemin, to the Jardin des Plants, whence it was sent to Messrs. Rollison by Mr. Neumann of that establishment.

It is a soft-wooded half-shrubby climber, with handsome foliage, from the axils of the leaves, the long slender peduncles hang down, apparently drooping with the weight of the large richly-coloured scarlet flowers. The plant succeeds well in the moist heat of an orchidaceous house, and makes a most handsome appearance if trained to a wire trellis. It has been found by Mr. Gardener in woods of the Corcovado, Brazil.—*Bot. Mag.*

MONADELPHIA POLYANDRIA.—*Ternstremiaceæ.*

Polyspora Axillaris. A camellia-like plant, with pale cream coloured flowers. It was sent by Mr. Makoy, of Liege, to the Botanic Gardens, Kew, where it flowered in November 1842;

said to be a native of Pulo Penang, and is found in China, though probably cultivated there.—*Bot. Mag.*

PENTANDRIA MONOGYNIA—*Solaneæ.*

Cestrum Vividiflorum. Seeds of this plant were transmitted by Mr. Tweedie from the woods of St. Janvier, and the eastern side of the Cordillera in Tucuman, in 1836, to Mr. Moore of the Glasgow Botanic Gardens, when flowering plants were produced last year. Mr. Moore observes that, "though the flowers (being a pale green,) are not very showy, they are produced very abundantly, and the plant appears to be of easy culture in cool stove, flowering when about eighteen inches or two feet in height. I should therefore say, seeing how deliciously fragrant its flowers are at night, (less however in the day,) that it possesses sufficient merit to render it rather a general favorite in collections." It flowers in the autumn and early winter.—*Bot. Mag.*

TETANDRIA MONOGYNIA.—*Proteaceæ.*

Lomatia Illicifolia. Apparently a very variable species, and of extensive locality in Australia. It is an ornamental plant both in its copious evergreen foliage, and in its long compound spikes of yellowish-white flowers, which are plentifully produced in August; with us it thrives well in a peaty or heath soil, simply protected with a frame.—*Bot. Mag.*

THE LETTER-BOX.

RUS.—Procure Gesneria fancyalis, G. Suttonii, G. splendens, and G. zebrina these four are truly splendid, and will suit you well.

R. T.—The Pelargoniums sent are only middling; the lower petal of most of them is too narrow. Nos. 4 and 7 are the best, though the blotch in 4 is confused, running through to the edge; the colour of 7 is pleasing and somewhat novel, yet the form of the flower is imperfect.

A CONSTANT READER.—We shall be happy to meet your wishes as early as possible, but are fearful it will not be for some months; in the mean time, if we can render you any verbal assistance in your choice, it shall be done cheerfully.

EPIPHYTE.—You cannot do better than carefully peruse our respected correspondent Mr. John Henshall's descriptive list of Orchideæ, or the previous papers on the same subject, by Mr. Don; each notice only the best, and they are so accurately described, that you cannot err.

CALENDAR FOR JULY.

STOVE. The cultivator's attention must now be chiefly directed towards maintaining a due proportion of moisture in the atmosphere of this department; the supply of sun heat is now at its maximum, therefore to meet the demands made on the plants by it, they must be liberally supplied with the other grand stimulant, water. Let every plant that is not flowering be gently syringed early in the morning and again in the evening of every day; in addition, frequently saturate the paths of the house, and see that all are duly supplied with water at the roots.

Bulbous-rooted plants that have completed their growth should be dried off, and afterwards to do it the more effectually, turn the pots in which they were growing bottom upwards, by placing the top of it on the top of another empty pot; in this manner let them stand on a shelf exposed to the sun for a month or longer.

If there are any plants yet requiring a shift let it be done at once; climbing plants require regular attention, or they soon become an entangled, confused mass, from which it is scarcely possible to recover them. Propagation may now be successfully done.

The temperature of the house may be allowed to rise as high as 75° in the day, though from 65° to 70° is better for an average, where it may be easily maintained by regulating the supply of air, and with the use of an awning; 60° is sufficient for the night.

GREENHOUSE. All the large and more hardy plants should now be placed out of doors, and those which remain should be equally distributed throughout the house, the object being to furnish them with a larger supply of air, so that, though a sufficient supply of balsams and other tender annuals may be brought in to render the house gay, yet they must not be crowded, or they are again reduced to the same supply they received before any were removed. We mention this, because many, from a desire to fill their houses with flowers, lose sight of the intended benefit to those which are retained. Plants in small pots, and those which have fine fibrous roots will be better if placed pot and all into one of a larger size, to defend the roots from the sun; this is a good method with ericaceous plants in all situations through the summer, unless they have been recently shifted, when it is not requisite. The syringe may be freely used on camellias, oranges, and other plants not in flower. Water everything growing freely, some will require it twice a day; give all the air possible through the day, and about half the quantity at night, unless high winds occur.

FLOWER GARDEN. Much practical tact is required this month and onwards, to keep up the flower beds and borders;

plenty of reserve plants should be always at hand to fill the places of those going out of flower, nothing should be allowed to remain where high keeping is pretended to, after it has ceased to be ornamental. Verbenas and other creeping plants require to be frequently pegged down to their respective places. Dahlias and other tall plants must be carefully and constantly secured to their sticks. Carnations and picottees are now arriving at perfection; tie the buds just before they burst, and if they do not open regularly, split the calyx equally on all sides with a small knife; protect them from rain, winds, and sun; begin layering about the middle of the month. Pinks, if not already done, should be increased by pipings; if seed is required, tear off the decaying calyx to prevent earwigs secreting in them.

Take up tulips, ranunculus, and other bulbous-rooted plants as soon as the foliage decays. Auriculas and polyanthus require all the air that can be given to them; keep them constantly moist and shaded from the sun and heavy rains, though they may be allowed to receive gentle showers. Repot chrysanthemums as they require it, give them plenty of water and occasionally a little liquid manure.

Prick out perennials and biennials sown last month and sow more if wanted; water all newly-planted flowers; thin out the successional sowings; the general routine of mowing, sweeping, raking, &c. will require increased attention this month.

FLORICULTURAL INTELLIGENCE.

Horticultural Society of London. The Horticultural fetes at Chiswick are proverbial for the fortunate occurrence of fine weather whenever they happen. The second show of the season, June 17, was of the usual kind, a beautiful day and a most magnificent exhibition. It was certainly one of the most brilliant, to say the least of it, we ever witnessed. The plants were in fine order, and presented a scene of splendour of which British Gardeners may well be proud. The two large collections exhibited by Mr. Green, gardener to Sir E. Antrobus, and Mr. Goode, gardener to Mrs. Lawrence, were awarded equal prizes. In that of Mr. Green's we noticed a very fine plant of the new Siphocampylus betulæfolius beautifully bloomed, also Leschenaultia biloba, Calanthe veratrifolia, Ixora coccinea, Hibbertia Cunninghamii, Borronia serrulata, Eutaxia pungens, and Azaleas Danielsiana, Gledstanesii, lateritia, and indica variegata.

In Mr. Goode's collection were remarkable plants of Stephanotus floribundus, Leschenaultia Baxterii, and a variety of L. biloba called grandiflora, Pavetta caffra, three good specimens of Pimelea rosea, Acacia alata and pulchella, Erythrina cristagalli and chorizema varium.

The plants comprising the smaller collection were individually splendid specimens: Mr. Hunt's held a capital Boronia serrulata, dense and well bloomed; a fine Ixora coccinea, a very large Oncidium flexuosum, Dendrobium nobile, a fine Leschenaultia formosa and Pimelea decussata. The collections of Mr. Falconer, gardener to A. Palmer, esq., and Mr. Bruce, gardener to B. Miller, esq., were also equal. Polygala cordifolia, Oncidium altissimum, and Ixora coccinea were in Mr. Falconer's, and Aphelexis humilis, Coleonema gracilis, Oncidium flexuosum, and a fine Epiphyllum speciosum grafted on E. speciosissimus, were from Mr. Bruce.

The show of Orchidaceæ was gorgeous; there were probably more than 200 of them altogether. We can only enumerate a few of the most remarkable. A splendid plant of the fragrant and beautiful Aerides odoratum, with about 30 spikes of flowers, was shown by Mr. Mylam, gardener to S. Rucker, esq. Oncidium Lanceanum was shown in fine style by Messrs. Veitch and Sons, Exeter. Mr. Brewster, gardener to Mr. Wray, had a beautiful plant of Barkeria spectabilis. Mr. Hunt exhibited a handsome plant of the white lipped variety of Epidendrum macrochilum. Mr. Edmonds had Peresteria pendula; Mormodes luxatum from Mr. Insleay, gardener to G. Barker; and Phalænopsis amabilis from F. G. Cox, esq. These comprise most of the single specimens. In Mr. Mylam's collection were Saccolabium præmorsum and guttatum, Phalænopsis amabilis, Oncidium ampliatum, Aerides affine, Oncidium pubes, O. leuchochilon, Coryanthes maculata, Vanda teres, Maxillaria purpurea, Epidendrum primulinum, E. alatum, E. cinnabarinum, E macrochilum roseum and a new one in the way of alatum, Peristeria Humboldtii, Stanhopea Barkerii, Brassia Wrayæ, Cycnoches chlorochilon, Aerides odoratum, Zygopetalum cochleatum, and Maxillaria cristata.

There were several collections of Heaths; the one most remarkable was from Messrs. Veitch, being 21 varieties of E. ventricosa; the finest were Tarinda and Magniflora. Mr. Goode had a collection containing E. Cavendishianum, vestita coccinea, perspicua, p. nana intermedia fragrans, inflata, gemmifera Westphalingia, and the little gnaphalioides.

But one collection of Climbing Plants was exhibited; it was from Mr. Goode, and contained Tropæolum edule, T. pentaphyllum, Stigmaphyllum ciliatum, Ipomœa tyrianthina, Echites suberecta, Hardenbergia monophylla, Aristolochia ciliosa, Manettia bicolor, and Clitoria ternata.

The Specimen Plants were numerous and fine; the more scarce were Siphocampylos betulæfolius, from Messrs. Veitch; Orzothamnus thyrsoides, Luxembergia ciliosa, from the same gentlemen. Nepenthes ampullacea, from M. Mylum, Achimenes multiflora, from Mr. Smith, of the Royal Gardens Kew; a species of

Lathyrus with reddish flowers, from Messrs. Lee of Hammersmith; and Martynia fragrans, from Messrs. Beck & Henderson.

The Pelargoniums were somewhat improved since the last meeting; the sorts exhibited were nearly the same. There were seedlings; among them we noticed Phæon, a flower of Mr. Wholmes, gr. to E. Foster, esq., Princess Alice, from C. P. Lyne, esq , Defiance, from Lucombe Pince & Co., and Chandler's Admirable. In Herbaceous Calceolarias (in 6s) there was no competition in the amateurs class. Mr. Dobson's collection were Wholmes's Queen Adelaide, Madonna, Maid of Hanover, Speciosissima, Prince of Wales, and Laura. Mr. Catleugh's (n.) were Standishii, Selina, Gazelle, Maria, Willmoreana, Golgonda. The Shrubby Calceolarias were exhibited in 5 collections: Mr. Dobson's were Coppersmith, Hambro, Scarlet, Gem, Spectabilis, Lady of the Lake, Alice; Mr. Gaines' were Favourite, Sunbeam, Incomparable, Attila, Una, Magniflora.

Ranunculus were exhibited by Messrs. Tyso and Messrs. Lockhart; the latter stand contained: Sir J. Graham, Lady Sondes, Pirate, Numa, Sully, Lord Byron, Pearl, Mary Stuart, Hebe, Memorial, Magillan, Constantia, No Proxy, Blenheim, Brightness, Pling, Waterman, Sappho, Omega, Harlequin, Minstrel, Parody, Vanguard, Europa, Mars, Lady Barrington, Masterpiece, Nydia, General Gibbs and Parasina.

List of Prizes. Gold Knightian Medal, Mr. Greene, for 40 Stove and Greenhouse Plants; Mr. J. Goode for the same; Mr. Paxton for Exotic Orchidaceæ; Mr. Mylam for the same.

Gold Banksian Medal. Mr. Dobson for 12 Pelargoniums (24s); Mr. Catleugh for the same; Mr. J. Goode for 20 Cape Heaths; Messrs. Lane 25 Roses in pots; Mr. J. Goode for Exotic Orchidaceæ; Messrs. Lucombe, Pince, and Co., 21 seedling Heaths; Messrs. Rollison for Exotic Orchidaceæ.

Silver Gilt Medal. Mr. Gaines for 12 Pelargoniums (24s); Mr. Parker for 12 ditto (12s); Mr. Catleugh ditto (12s); Mr. Redding 40 Stove and Greenhouse Plants; Mr. Pawley for 20 ditto; Mr. Hunt for 6 ditto; the same for 6 Cape Heaths; Mr. Goode for Stove and Greenhouse Climbers; Mr. Green for 20 Cape Heaths; Mr Brazier for 6 ditto; Mr. J. Smith for Achimenes multiflora; Mr. Mylam for Nepenthes ampullacea, and another for Aerides odoratum; Mr. Brewster for Barkeria spectabilis; Mr. Insleay for Exotic Orchidaceæ.

Large Silver Medal. Mr. Gaines for 12 Pelargoniums (12s.); Mr. Hunt ditto; Mr. Brown for 6 ditto (in 8s); Mr. Dobson for 6 Shrubby Calceolarias; to the same for 6 Herbaceous ditto; Messrs. Lane for 12 Fuchsias; Mr. Falconer for 6 Stove and Greenhouse Plants; Mr. Bruce ditto; Messrs. Lucombe, Pince and Co. for Statice macrophyllum; to the same for Luxembergia ciliosa; Mr. Redding for Acrophyllum venosum; Mr. Smith for Luxembergia ciliosa; Mr. Jackson (n.) 20 Cape Heaths;

Mr. Frazer ditto; Mr. Clarke for 6 ditto; Mr. Falconer for Cacti; Mr. Milne for 50 Roses, cut; Messrs. Paul ditto; Messrs. Veitch for Oncidium lanceanum.

Silver Knightian Medal. Mr. Hunt for 12 Pelargoniums; Mr. Catleugh for 6 Herbaceous Calceolarias; to the same for 6 Shrubby ditto; Mr. Stanley ditto; Mr. Trevors for 24 Pinks; Mr. Norman ditto; Mr. Catleugh for 12 Fuchsias; E. Foster, esq. for seedling Pelargonium, Phæon; Mr. Clarke for 6 Stove and Greenhouse Plants; Mr. J. Green for Stigmaphyllum ciliatum; Mr. Dawson for Erica pulverulenta; Messrs. Beck and Co. for Martynia fragrans; Mr. Pawley for 6 Cape Heaths; Mr. Bruce ditto; to the same for Cacti; A. Rowland for 50 Roses, cut; Mr. Cobbet ditto; Messrs. Lucombe and Pince for Vanda teres; F. G. Cox, esq. for Phalænopsis amabilis; Mr. Poole for Pimelea decussata; Messrs. Lockhart for Ranunculus; Mr. Brazier for 8 Hybrid Heaths.

Silver Banksian. Mr. Bell for 6 Pelargoniums (12s); Mr. Gaines for 6 Herbaceous Calceolarias; Mr. Neville for 24 Pinks; Mr. Henbrey for ditto; E. Foster, esq. seedling Pelargonium, (Duke of Devonshire;) to the same for another, (Robustum); Mr. Frazer for 6 Stove and Greenhouse Plants; Mr. Brazier for Erica splendens; Mr. Lee for Aquilegia Skinnerii, Messrs. Lucombe & Pince for Siphocampylos betulæfolius; the same for Ozothamnes thyrsoides; Messrs. Rollison for Kalmia latifolia buxifolia; Mr. Dennis 50 Roses; Mr. Lane do.; Mr. Insleay for Mormodes luxatum; Messrs. Tyso for Ranunculus; Mr. Baile for Scarlet Pelargonium; Mr. Salta for Erica tricolor; Mr. Mountjoy for Stylidium fasiculatum; Mr. Frazer for grandiflora.

Certificate of Merit. Mr. Ingram for a Pelargonium (*Corinthian*); Mr. Standish for a seedling Calceolaria (*Illuminator*); Mr. Neville for ditto Pink (*Brilliant*); Mr. Piper for ditto Cineraria (*Princess Royal*); Mr. Lyne for ditto Pelargonium (*Princess Alice*); Messrs. Lee for Lathyrus; Lucombe and Pince for Gompholobium polymorphum; Mr. Goode for Elichrysum retortum; the same for Gloxinia maxima alba; Mr. Edmonds for Peresteria pendula; Mr. Hopgood for Sollya linearis; Mr. Trevers for Ranunculus; Mr. Bruce for Aphelexis sisimoides; Mr. Hunt for Oncidium michrochilum.

Royal Botanic Society of London. This society held their first garden exposition, May 24, in the Society's grounds, Inner Circle, Regent's Park. The early part of the day was very unpropitious, but it fortunately cleared off in time for the numerous visitors to enjoy the rich treat provided.

The show of plants was grand, quite equal to, if not surpassing, any of the best meetings at Chiswick. We have not room for any lengthened remarks, but cannot omit noticing a splendid

plant of Chorizema cordifolium in Mr. Goode's collection, as also C. Henchmannii, Anthocereis littorea, Gesneria lateritia, Acrophyllum venosum, sent by Mr. Greene. Among the Ericas were capital plants of E. propendens from Mr. Pawley, E. Cavendishianum from Mr. Goode; also a beautiful little plant of E. ventricosa coccinea minor; from Mr. Greene, E. splendens, E. vestita alba, E. suaveolens and E. Beaumontiana. In Mr. Atlee's collection there was a fine plant of E. mundula completely covered with its neat flowers; but perhaps the finest plant ever exhibited in this class was E. ventricosa superba from Mr. May, gardener to E. Goodhart, esq.

A very fine collection of shrubby Calceolarias in slate tubs, from Mr. Beck, contained Climax, Luna, Bleda, Lady of the Lake, Standishii, King, Madonna, Lady Douglas, Agnes, Maid of honour, Standish's Beauty and Bertha. The Pelargoniums were numerous and very fine; in the collection from Mr. Dobson, gardener to E. Beck, esq. were Queen of Fairies, Erectum, Matilda, Admiral, Cleopatra and Susanna; in that from Mr. Bell, Chelsea Hospital, were Nymph, Sylph, Camilla, Mrs. Stirling, Enchantress, and Lord Mayor. Mr. Catleugh's collection consisted of Lord Chancellor, Luna, Emma, Dido, Favorite, Matilda, Grand Monarch, Duchess of Sutherland, Madeline, Flash, Symmetry, and Eclipse. Mr. Gaines's were Euterpe, Impericles, Nymph, Queen of Beauties, Vanguard, Caroline, Sylph, Candidate, Prince of Wales, Amaranth, Rising Sun and Princess Royal. A great number of others were exhibited which we have not space to particularize.

List of Prizes.

Collections of 50 Stove and Greenhouse Plants: 1st, value 15*l.*, Mr. Goode, gr. to Miss Lawrence; 2d, value 10*l.*, Mr. Greene, gr. to Sir E. Antrobus; 3d, 5*l.*, Mr. Hunt, gr. to Mrs. Trail; extra 3*l.* Mr. Frazer, n.

Collections of 25 ditto: 1st, 7*l.*, Mr. Pawley; 2d, 3*l.* 10*s.*, Mr. G. Clarke, gr. to W. Smith, esq.; 3d, 2*l.* 10*s.*, Mr. Atlee, gr. to H. Beaufoy, esq.; 4th, 1*l.*, Mr. Redding, gr. to Mrs. Marryatt

Collections of 9 ditto: 1st, 3*l.*, Mr. Clarke, gr. to W. Block, esq.; 2d, 2*l.*, Mr. Jackson, n.

Collections of 6 Stove and Greenhouse Climbers: 1st, 4*l.*, Mr. Pawley; 2d, 2*l.* 10*s.*, Mr. G. Clarke.

Collection of 9 tall Cacti; 1st, 3*l.* 10*s.*, Mr. Clarke, gr. to W. Block, esq.; 2d, 1*l.* 15*s.*, Mr. Cockburn, gr. to Earl Mansfield.

Collections of 9 Fuchsias (distinct): 1st, 1*l.* 5*s.*, Messrs. Lane, n.; 2d, 1*l.*, Mr. Pawley.

Collection of 6 scarlet Pelargoniums: 1st, 1*l.* 10*s.*, Mr. Baile, n.

Collection of 6 Roses in pots: 1st, 2*l.*, Messrs. Lane.

Large collection of Roses, cut blooms: 1st, 1*l.* 10*s.*, Messrs. Lane.

Collection of 12 British Ferns: 2d, 1*l.*, Mr. G. Turner, gr. to the Hon. and Rev. Robert Wilson.

Collection of Agricultural Grasses: 1st, 1*l.*, Mr. W. Turner, gr. to Mrs. Holloway.

Collection of 12 Pelargoniums (in 24 pots), nurserymen: 1st, 7*l.*, Mr. Catleugh; 2d, 4*l.*, Mr. Gaines.

Collection of 6 do. (in 24s), amateurs: 1st, 3*l.* Mr. J. Dobson, gr. to W. Beck, esq.; 2d, 1*l.* 5*s.*, Mr. E. Bell.

Collection of 12 do. (24s), nurserymen: 1st, 4*l.*, Mr. Catleugh; 2d, 1*l.* 10*s.*, Mr. Gaines.

Collection of 6 (in 24s), amateurs: 1st. 3*l.*, Mr. Watt, gr. to E. Shell, esq., and Mr. Hunt, gr. to Miss Trail, equal; 2d, 1*l.* 5*s.*, Mr. Bell; extra 10*s.*, Mr. Slowe, gr. to W. R. Baker, esq.

Collection of 4 do. (in 8 pots): 1st, 2*l.* 10*s.*, Mr. Hunt; 2d, 1*l.* 10*s.*, Mr. E. Bell; 3d, 1*l.*, Mr. Cockburn.

Mr. Cock of Chiswick did not enter for competition.

Collection of 6 Herbaceous Calceolarias: 1st, 2*l.*, Mr. Dobson; 2d, 1*l.*, Mr. Catleugh.

Collection of 6 shrubby ditto: 1st, 2*l.*, M. Gaines; 2d, Mr. Dobson.

Seedling Pelargoniums: 1st, 1*l.* 10*s.*, Mr. Dobson for Zanzummin; 2d, 1*l.*, Mr. Dobson for Theresa, Mr. Dobson for Susanna, M. Wholmes, gardener to E. Foster, esq., for Zanzummin, Mr. Wholmes for Hybla.

Collection of Seedling Calceolarias: 1st, 1*l.*, Mr. Greene for Georgiana, Rosa magniflora, Imperial and Ignea grandiflora; 2d, 10*s.*, Mr. Standish, n., Bagshot, for Bagshot Beauty, Princess Mary, Surprise and Duchess of Gloucester.

Seedling Cineraria: 1st, 10*s.*, Messrs. Lane for Compacta.

New or rare Ornamental Plants: 2d, 2*l.* 10*s.*, Mr. Forrest for Statice macrophylea; 3d, 1*l.* 1*s.* Mr. Greene for Manettia bicolor; 4th, 1*l.* Mr. Hayes for Aotus lanigera.

Ornamental Specimen Plants: 1st, 1*l.* 10*s.*, Mr. May for Erica aristata major; 2d, 1*l.* J. Alnutt, esq., for Erica depressa; 3d, 10*s.* Mr. Clarke for Hardenbergia pregnans; extra 10*s.*, Mr. May for Erica ventricosa.

Collection of 5 Orchidaceous Plants: 1st, 7*l.* Mr. Hunt; 2d, 3*l.* 10*s.*, Mr. Redding; Single specimen: 2d, 2*l.* Mr. Greaves for Oncidium pumilum.

Collection of 20 Cape Heaths: 2d, 3*l*, Mr. Jackson, n.

Collection of 15 ditto: 1st, 7*l.* Mr. May.

Collection of 6 ditto: 1st, 3*l.* 10*s.*, Mr. Brazier, gr. to—Story, esq.; 2d, 2*l.* Mr. Green; 3d, 1*l.* Mr. Hunt; extra 10*s.*, Mr. Brazier.

Collection of 18 Azaleas; 2d, 2*l.* 10*s.*, Mr. Gaines.

The following exhibitions, some of which were very beautiful, but for which the Society did not offer prizes, were also contri-

buted by Mr. Dobson, a miscellaneous collection; Mr. Wood, a collection of Alpine plants; Mr. Burney, a large collection of globe Cacti; Mr. Ivery and Mr. Henderson, collections of cinerarias; Mr. Greene, a seedling Azalea, and three seedling Cacti; Mr. Mitchell, Mr. Bragg, the Hon. and Rev. R. Wilson, Messrs. Lane, and Mr. Thomson, boxes of Pansies; Mr. Brown, a stand of Tulips; Mr. Rivers, cut flowers of Rhododendrons and Azaleas.

ROYAL SOUTH LONDON FLORICULTURAL SOCIETY. The third show for this season was held on Tuesday, 13th of June, at the Zoological Gardens.

The day was thoroughly miserable, a continued rain falling the whole of it. Yet the show under all circumstances was a good one, and those who came to see it were those who *do* love flowers; certainly nothing short of an ardent admiration could have brought any one there in such weather.

The show of Plants was quite equal to the average: the Geraniums were the best we have seen this season, particularly six from Lady Paget. Mr. Gaines's were in fine order, and his Calceolarias were splendid. Mr. Cox's collection of four Orchidaceous plants were very superior, they were Vanda multiflora, Cattleya intermedia, Oncidium papilio, and Gongora maculata, specimen from the same gentleman, of Phalænopsis amabilis, had been fine, but was then somewhat spotted with decay or damp. Another specimen from Mr. Bruce, of Oncidium flexuosum, was in good style. The show of florists' flowers was rather limited, owing to the backwardness of the season.

A fine collection of roses was shown by Mr. Dennis of Chelsea, and others by Messrs. Younge and Bruce; of Seedlings there was not many. Mr. Neville's Hurricane Pink is a very large full flower; and will be useful. A seedling Pansy from Mr. Cook, we noticed as very good, it is called Dulcina.

The following is a list of the prizes:

Amateurs.

For a collection of Miscellaneous Plants, 12 pots, J. H. Schroder, esq. For Pelargoniums, 6 varieties; 1st, Lady Paget; 2d, Mr. Edmonds. For Calceolarias, 6 varieties, Mr. Edmonds. For Pinks, 12 varieties, Mr. Trevers. For Ranunculus; 1st, Mr. Trevers; 2d, Mr. Burrup. For Heartsease; 1st, Mr. Edmonds; 2d, Mr. Fyffe; 3d, Mr. Bridges. For Cut Flowers, Mr. Rawlings.

Gentlemen's Gardeners.

Collection of Miscellaneous Plants, 24 pots: 1st, Mr. G. Younge; 2d, Mr. Wilson. Calceolarias, 8 varieties: 1st, Mr. Welsh; 2d, Mr. Bourne. Pelargoniums: 1st, Mr. Bell; 2d, Mr. Wilson. Heartsease: 1st, Mr. Welsh; 2d, Mr. Parsons. Roses, 18 varieties, in bunches, Mr. Welsh. Cockscombs, 12:

1st, Mr. Bruce; 2d, Mr. Parsons. Cut Flowers and Ericas, Mr. Bruce.

Nurserymen, &c.

Collection of Miscellaneous Plants, 24 pots: 1st, Mr. Hally; 2d, Messrs. Fairbairn. Ericas, 12 varieties, Mr. Hally. Calceolarias, Mr. Gaines. Geraniums: 1st, Mr. Gaines; 2d, Mr. King. Ranunculus, 24 varieties: 1st, Mr. Tyso; 2d, Messrs. Lockhart. Roses, Mr. Dennis. Pinks, 12 varieties, Mr. Norman. Heartsease, 36 varieties: 1st, Mr. Pamplin; 2d, Mr. Cooke.

Open to all Classes.

Specimen Plant of any genus: 1st, Mr. Cox for Phalænopsis amabilis; 2d, Mr. Bruce for Oncidium flexuosum. For 6 specimens, Orchideous plants excluded, Mr. Bruce. Orchideous plants, 4 varieties, Mr. Cox. For a seedling Heartsease, Mr. Edmonds. For the best 12 Alpine and Rock plants, Mr. Wood.

KENT AND CANTERBURY FLORAL AND FLORICULTURAL SOCIETY.—Thursday, June 8, 1843. This Show passed off in the best manner possible; the exhibitors were more numerous than usual, and the very fine specimens of culture, as well as the rare plants which were present, proved that the taste for flowers and skill in their growth are rapidly increasing. Among the plants most deserving of notice were two collections of Succulents, from J. G. Shepherd, esq. The same gentlemen also sent some beautiful Gloxinias and a new Achimenes (imported from Belgium), A. Gesbrightii, with white flowers shaded with purple and spotted in the throat, the leaves are also red beneath and very rough above, much more so than A. pedunculata, to which species it seems nearly related. The Rev. W. Brockman sent the new Campanula grandis, a new Calceolaria, and a finely-grown plant of Fuchsia corymbiflora; from Mrs. Webb, an extensive collection, including Amaryllis vittata, a collection of Ericæ and Pelargoniums; Denne Denne, esq., sent a fine collection of Fuchsias, one of which was covered with flowers and completely hid the pot, also several varieties of Rhododendrons, Azaleas, and Kalmias; from G. Buckley esq., a well-grown Elychrysum spectabile, a small Erica odora rosea, and a fine basket of cut flowers. Mrs. Grayling exhibited an interesting collection of named Grasses and Carices found growing in this vicinity.

Mr. Alderman Masters exhibited his Seedling Perlargonium, the Archbishop of Canterbury, one of the best formed flowers we ever saw; some Fuchsias grown on the one-shift system, among which were Brockmannii, Monypennii, and Magnifica. Among the Orchideæ, a fine Oncidium flexuosum, with darker flowers than the common kind; Gongora maculata fulgens, Oncidium luridum, Cattleya Forbesii, and Cyrtochilum filipes;

also a magnificent Palm, Caryata urens, native of the East Indies; in Ceylon, a kind of brown sugar, called Jaggory, is made of the sweet liquor which the tree produces; the buds are also eaten; they have a flavour like walnuts or almonds.

The Mayor, Mr. Alderman Masters, and Mr. Parrinton, were judges.

Best collection of Cacti and Echino-cacti: (C. monstrosus, corrugatus, Mam. angustissima, Echino-gibbosus, E. tubiflorus, E. bonenus, E. ottoris, E. Eyresii rubra, E. sesseliflorus, E. mammulosus—J. G. Shepherd, esq.

Best collection of Succulents, not Cacti or Echino-cacti: Mammilaria accurva, M. acanthophlema, M. macrophylla, M. Wildii, M. abrodanthe, M. quadrispinis, M. olivacea, M. corrifera, Cereus robustus, C. cœrulescens, E. glaucescens, Opuntia polyanthus, Glochidiata, Melocactus, (species)—J. G. Shepherd esq.

Best 2 American Plants—G. Buckley, esq.

Best Rose in pot, (Malton)—Mr. Parrinton.

Second best. Yellow China—Denne Denne, esq.

Best 3 Stove Plants: Ceropegia elegans, Passiflora Phœnicea, Euphorbia splendens—J. G. Shepherd, esq.

Best Single Plant: Thunbergia alata—J. G. Shepherd, esq.

Best Collection of Greenhouse Plants, not less than 6 species: not Ericas, Geranium, Fuchsia, Calceolaria or Cactus, (Pimelia decussata, Metrosideros floribunda, Drosina capilata, Polygala grandiflora, Clematis bicolor, Grevillea manglesii)—J. Godfrey, esq.

Second ditto: Sollya heterophylla, Pimelia decussata, Metrosideros floribunda, Polygala cordifolia, Bouvardia tryphylla, Southerlandia frutescens—F. Sankey, esq.

Second Collection of Greenhouse Plants, not less than 4 species: (Elichrysum spectabilis, Metrosideros floribunda, Diosma ericoides, Elichrysum fasciculata alba—G. Buckley, esq.

Second ditto—D. Denne, esq.

Best 2 Greenhouse Plants of separate sorts: (Campanula grandis, Achimenes longiflora—The Rev. W. Brockman.

Second ditto—J. G. Shepherd, esq.

Best 6 Pelargoniums: Matilda, Beauty, Alicia, Victory, Corona, Prince Albert—The Rev. C. Oxenden.

Second ditto—Mr. Parrinton.

Best 3 ditto: King, Jewess, Alexandria—The Rev. C. Oxenden.

Second ditto—D. Denne, esq.

Best 2 ditto: Jewess, Chef d'œuvre—The Rev. C. Oxenden.

Second ditto: Foster's Alicia, Jewess—J. Rutter, esq.

Best Seedling Pelargonium—J. Rutter, esq.

Best 2 Fuchsias: Corymbiflora, and Youellii—The Rev. W. Brockman.

Second ditto—J. Godfrey, esq.

Best new Fuchsia, 1843: F. Brockmannii—The Rev. W. Brockman.

Best 3 Cape Heaths: Orara rosea, Ventricosa superba, Translucens—G. Buckley, esq.

Second ditto: E. linnoides, E. hybrida, E. ventricosa superba—The Rev. W. Brockman.

Second 4 Calceolarias: Cervicosa, Rosa, Bridesmaid, the Bride—The Rev. W. Brockman.

Second ditto—T. Dorman, esq.

Best 3 ditto: Chancellor, Antiquary, King—J. Godfrey, esq.

Second ditto—T. Dorman, esq.

Best 2 Cacti in flower: Ackermannii, major and minor—J. Godfrey, esq.

Second ditto: Jenkinsonii—Mr. Parrinton.

Extra.

Stove Plants: Achimenes longifolia, A. Gesbrightii, Gloxinia maxima, G. cœrulescens, G. Priestii, Sinningia guttata—J. G. Shepherd, esq.

2 Fuchsias, for growth—D. Denne, esq.

Cut Flowers.

Best basket of Greenhouse Flowers—G. Buckley, esq.

Best nosegay of ditto—Rev. W. Brockman.

Second ditto—J. Rutter, esq.

Best 12 Ranunculus—F. Sankey, esq.

Second ditto—J. Cates, esq.

Best 12 double Anemones—ditto.

Best 12 Cut Roses—Mrs. Webb.

Second ditto—ditto.

Best 6 tea scented China Roses—Rev. G. P. Marsh.

Best 12 Pansies: Attila, Imogene, Vivid, Great Western, Dark Perfection, Miss Stainforth, Peter Dick, Sulphurea elegans, delicata, Cook's Perfection, Queen of Whites, Curion—Rev. C. Oxenden.

Second ditto: Eclipse, Imogene, Amulet, Royal Standard, Jewess, Duchess of Richmond, Peter Dick, Sulphurea elegans, Regulator, Triumph, Duke of Cornwall, Paul Pry—ditto.

Best 6 Iris of 3 varieties—J. G. Shepherd, esq.

Best collection of American Plants, not less than 6 varieties: Rhododendron maximum, R. album, R. Cata biense, R. punctatum, Azalea calendulacea, A. multiflora coccinea, A. tormentosia, A. glauca scabra, Kalmia latifolia, K. augustifolia rubra, Vaccinium fuscatum, V. venustum, Andromeda Catesbœi, A. axillaris—D. Denne, esq.

Best Bouquet of Miscellaneous Flowers, not Greenhouse—Rev. G. P. Marsh.

Best Floral Device—ditto.

Second ditto—J. Cates, esq.

Best Collection of Indigenous Plants—The Earl of Winchelsea.

Second ditto—Lady Montresor.

THE

FLORIST'S JOURNAL.

AUGUST, 1843.

PELARGONIUMS.

LYNE'S CELESTIAL AND LYNE'S REDWORTH.

OUR illustrations for this Number are furnished by Mr. W. E. Rendle, nurseryman, of Plymouth, and the accompanying descriptions are from the same gentleman, who, we perceive, has the disposal of the entire stock of seedlings raised by that eminently successful cultivator of this class of plants, P. E. Lyne, Esq., of Lipson, near Plymouth.

LYNE'S CELESTIAL. This beautiful variety was raised by P. E. Lyne, Esq., of Plymouth. It has been exhibited at the principal shows in the West of England, and has been successful in obtaining the two principal prizes offered in the West for seedlings. It gained the gold medal at Plymouth, May, 1843, and the seedling prize at Torquay, June 22, 1843. It is a very free bloomer, and large trusser, and can be recommended as a superior show variety.

LYNE'S REDWORTH has also been exhibited at the principal shows in the West of England, and has gained for itself the "golden opinion" of all who have seen it. It is a very rich and striking variety, and ought to be in every good collection of Geraniums. The flowers are extra-sized, and it is a very fine trusser. W. E. R.

HINTS TO AMATEURS.

SIR,—Allow me, through your means, to offer a few hints to amateur growers on the subject of seed-sowing. I intend to

advert particularly to those kinds which require to be sown in the autumn.

There are many who delight in a garden, and, from a desire to see it well filled with flowering plants, save all the seed it produces, and annually purchase more, but too frequently reserve it all till the spring before any is trusted to the earth; when, if the weather happens to be unfavourable, the season backward, or any little accident occurs to prevent an early sowing, the summer is half wasted before a flower is produced: the exclamation, "How vexing!" frequently escapes, — but there the matter rests. Now all this may be entirely avoided by autumnal sowing: nor is the operation confined to a few kinds; as many, or indeed most, of the hardy annuals grow stronger, and produce a more abundant and beautiful bloom, when sown before the winter, than those which are kept till February or March. But as general remarks or directions are sometimes misunderstood, I subjoin a list of such as will certainly succeed under this treatment.

There is nothing particular or different from the ordinary mode of sowing seed to be observed, only that the ground where they are to be placed should be previously dug or otherwise prepared, to avoid the necessity of disturbing the plants after their appearance above ground; for, though they will bear with impunity all the severity of the winter, if left unmolested, yet to be transplanted or disturbed in any way is fatal to them. Any time from the end of the present month till the beginning of October may be chosen for sowing. My practice is, as the early flowers are cleared off to sow others in their places; observing to label each sort, that it may be found when digging the beds for winter.

Another purpose to which autumn-sown annuals are well suited is for ornamenting the greenhouse or sitting-rooms through the winter, and early spring months: for this, such kinds as Nemophila, Collinsia, Mignonette, are usually selected; they require to be sown early in this month in the open border, and afterwards potted and kept in a cold frame, or sheltered situation, till it is necessary to take them into the house: the only after-point of consequence is to allow them plenty of air, and a situation near the glass, to prevent their becoming drawn. Thus, with comparatively little trouble, a beautiful assortment of

flowers may be had in the dullest part of the year, from Christmas up to March or April.

There are several others, also, that are properly treated as greenhouse plants, which are raised from seeds, either for the purpose of increase, or with a view to obtaining new varieties: these are all better to be sown in the autumn. With such plants as the Pelargonium, a whole season is usually lost if the sowing is deferred till the spring. Fuchsias, Cinerarias, Calceolarias, and a host of others, will bloom the following season if sown early in autumn: but if continued in their papers till the spring, it is frequently necessary to keep them over the following winter before the blossoms are produced. One of the plants most particularly benefitted by this treatment is the Schizanthus. This attains a luxuriance seldom seen if sown before the winter and the plants are kept in a light airy place. It may, perhaps, be urged as an objection that, by this method, much space would be required in the greenhouse at a time when it can be least spared; but, on the other hand, it is not always necessary to pot off the whole of the plants: if the seed be sown in wide pans, many of them may remain in them till the spring, and thus occupy but little room. In sowing these, and other biennial seeds of a similar character, a light and tolerably rich soil should be used: leaf-mould may form the basis of the compost for all kinds of seeds, excepting Cape and New Holland kinds; for these peat should be given, always observing to lighten the mixture, be it what it may, with about a third of the whole of silver sand. It is also most important that the seeds are but slightly covered: in order to avoid burying them too deeply the surface of the soil should be pressed flat, the seed then strewed evenly over it, and covered, certainly not thicker than a sixpence. The after-management consists in keeping them moderately moist; and they will be the better if potted singly before the winter: but, as I before observed, if space cannot be afforded them, they may remain until the end of February. I should have remarked before, these kinds should be sown as soon as ripe.

A GARDENER.

A few Annuals that will stand the Winter in the open Border.

Nemophila — all the varieties succeed well.
Mignonette will do anywhere.
Clarkia pulchella, in sheltered situations.
Collinsia, almost anywhere.
Prismatocarpus Speculum, anywhere.
Hawkweed, any situation, if not too wet.
Phlox Drummondii, in tolerable seasons.
Limnanthes Douglasii.
Clintonia pulchella, ditto, does better than any other way.
Sweet Scabious.
Nolana.
Centaurea Americana.
Convolvulus minor.
Kaulfussia amelloides.
Erysimum Perowskianum.
Lavatera.
Eutoca viscida, and
E. Menziesii.
Godetia bifrons, and
G. rosea alba.

LIST OF ORCHIDEÆ.

(*Continued from page* 136.)

59. *Calanthe furcatum.* (Derived from the flowers being forked.) Plant evergreen, and much similar to Phaius grandiflorus in growth, but not quite so strong, the flower-spike rising up with the young shoots; and when well grown, it often produces two from one shoot, three feet long, with a numerous quantity of beautiful white flowers placed (verticillated) round the stem. This genus being terrestrial, they should be grown in a mixture of sphagnum, turfy peat, and a little loam, in a temperature of 65°. — *Native of Manilla.*

60. *Calanthe veratrifolia.* (Derived from veratrum-leaved.) Plant much similar to the above; its flowers are also white. It ought to be in every collection, on account of the graceful appearance it has when in flower. The same treatment and temperature as the latter. — *Native of the East Indies.*

61. *Calanthe discolor.* (Derived from its flowers being two-coloured.) Plant evergreen and dwarf: its leaves are one foot long, and three inches broad, the flower-spike rising up with the young shoots one foot high, with its flowers placed alternately up the stem; sepals and petals brown; labellum pinkish white. The same treatment as the others, with a little lower temperature. — *Native of Japan.*

62. *Cyrtopodium punctatum.* (Derived from being spotted.) Plant from two to three feet long, of swollen bulbous stems;

leaves placed alternately up them; the flower-spike rising up with the young shoots from the base of the stem six feet long and upwards; sepals and petals spotted with brownish red, the former more spotted than the latter; the wings of the labellum turning up towards the column, spotted in the centre, and blotched at the margin; labellum paler than the wings. This plant, I believe, in its native country, produces a flower-spike fourteen feet long and upwards, with 400 to 500 flowers on it. It requires plenty of pot-room, and a mixture of sphagnum, turfy loam, and a few rotten leaves, with an abundant supply of water when growing, and a temperature of 65 to 70°. — *Native of Brazil.*

63. *Cyrtopodium speciosissimum.* (Derived from its showy flowers.) Stems from two to three feet long, with the leaves placed alternately up them. The former are more slender, and the latter narrower than the above species; the flower-spike three feet long. Succeeds with the same treatment and temperature, only adding a little more rotten leaves. — *I believe, a native of Brazil.*

64. *Cyrtopodium cupreum.* (Derived from the colour of its flowers.) Stem bulbous, two feet long, and much swollen; leaves alternately up the stem; flower-spike rising the same way as the other; flowers a copper colour: requiring the same treatment and temperature as the others. — *Native of Brazil.*

65. *Cyrtopodium Andersonii.* Stem bulbous, nearly three feet long; leaves alternately up the stem; flower-spike rising the same way as the others, three to five feet long, much branched; flowers a fine yellow. The same treatment as the others, and a temperature of 65 to 70°. — *Native of West India.*

66. *Cirrhæa Loddigesii.* Plant pseudo-bulbous; bulbs two to three inches long; leaves single, from one foot to eighteen inches long; raceme drooping, and producing a great number of curious flowers. It requires a mixture of sphagnum, turfy peat, and rotten wood; and a temperature of 70 to 75°. — *Native of Brazil.*

67. *Cirrhæa tristis.* Plant pseudo-bulbous; bulbs broad and waved; leaves single, upwards of one foot long, and tapering to an acute point; raceme drooping. This requires a high elevation above the pot, and a mixture of sphagnum, turfy peat, and rotten wood; and a temperature of 75°. — *Native of Xalapa.*

68. *Cirrhæa picta.* Plant pseudo-bulbous; bulbs better than one inch long, and rather broad, grooved or waved; leaves single, nine inches long, and nearly three inches broad raceme

drooping. The same treatment and temperature as the others. — *Native of Brazil.*

69. *Cirrhæa Warreana.* Plant pseudo-bulbous; bulbs nearly two inches broad, and tapering a little towards the summit; leaves single, one foot long, and better than two inches broad; raceme drooping, and coming from the base of the bulb. This genus includes fourteen species; and all of them require the same treatment, and ought, by all means, to be well elevated above the pot, in order to preserve the racemes from too much damp when young, as many flowers are lost by not attending in time to this important point; and it also secures a good drainage, as they do not require much water at their roots, but like a moist atmosphere and shady situation. — *Native of Brazil.*

70. *Chysis aurea.* (Derived from the colour of its flowers.) Stem bulbous, two to three feet long, and round, much swollen in the middle; leaves mostly in fours, placed at the summit of the stem, with smaller leaflets alternating up the stem; flowers in racemes, of a yellow colour. It requires hanging up, in a mixture of sphagnum, turfy peat, and rotten wood, and a liberal supply of water when growing; also in a temperature of 70 to 75°. — *Native of Venezuela.*

71. *Chysis lævis.* Plant much similar to the former, except that the bulbous stems are shorter and thicker, and the leaves are more undulated: it also flowers in racemes, and requires hanging up, and in a mixture of sphagnum and turfy peat, in a temperature of 70 to 75°. — *I believe, a native of Mexico.*

72. *Chysis bractescens.* Plant much similar to the latter in growth, but different in the colour of its flowers. It also requires the same treatment as the others. This genus comprises only three species, which all vary in the colour of their flowers, and require hanging up in a pot on account of their pendent habit; and a plentiful supply of water while growing should be given them: they seldom bear dividing on account of their tender habit. — *Native of Mexico.*

73. *Dendrobium amœnum.* (Derived from its pleasing flowers.) Stem slender and drooping, nearly three feet long; leaves alternately along the stem; the flowers proceed from the joints; sepals and petals white, with a stain of pale purple at the apex; labellum same colour, with a blotch of greenish yellow near the throat. This requires hanging up, in a mixture of sphagnum, rotten wood, and a little turfy peat, in a temperature of 70 to 75°. — *Native of India.*

74. *Dendrobium sulcatum.* (Derived from the bulbs being furrowed.) Stem bulbous, nearly eighteen inches long, rather flat, and much furrowed; leaves in threes, about six inches long,

rather lanceolate, and placed near the summit of the bulb; flowers rising from a raceme from the joint under the leaf, and producing twenty to forty flowers of a buffish yellow, with a blotch in the inside; and requires the same treatment and temperature, and also water while growing, as the other. — *Native of India.*

JOHN HENSHALL, K—P—Y.

To be continued.

LIST OF NEW PLANTS.

MONŒCIA POLYANDRIA. — *Begoniaceæ.*

Begonia acuminata. The various species of Begonia have not been valued by horticulturists in general, according to their merits. As stove-plants, few families present a greater variety of colour and form in their foliage than they do: they are easily increased, ready flowerers, and the blossoms are highly beautiful. A collection of various species grouped together, as is now the case in the royal gardens of Kew, is at all seasons of the year attractive; and from among this group the present one, though far, indeed, from being the handsomest, is selected. It was introduced to this establishment by Sir Joseph Banks, from Jamaica, in 1790. The flowers are greenish white, the foliage rather small and pointed. — *Bot. Mag.*

DECANDRIA MONOGYNIA. — *Melastomaceæ.*

Osbeckia chinensis. A very lively plant, with spreading branches, dark-coloured copious foliage, and bearing abundance of flowers in the spring months: when kept in a moist warm stove they are of a pale-purplish hue. It is believed to have been introduced by Messrs. Colvill, of Chelsea, somewhere about 1820. — *Bot. Mag.*

GYNANDRIA MONANDRIA. — *Orchideæ.*

Megaclinium maximum. One of the many strange features of the vegetable kingdom, for which the orchideous family is so remarkable. In the species of this genus the rachis, or stalk, immediately bearing the flowers is broad, flat, and sword-shaped, and upon each side of this the very singular blossoms are inserted; and the appearance of these flowers is more like little tadpoles than any production of the vegetable world: they are yellow-green, spotted with blood-coloured spots. The present kind was, as we are informed by Dr. Lindley, first collected by Smeathman, in Sierra Leone. With us its flowering season is June and July. — *Bot. Mag.*

GYNANDRIA MONANDRIA.—*Orchideæ.*

Mormodes luxatum. The genus Mormodes has so entirely the habit of Catasetum, that we have no means of distinguishing those two genera except when in flower. At that time Mormodes presents some peculiarities, of so strange a nature, that if they were not found constant in several species we should be tempted to regard them as monstrosities. In particular, the column, instead of being straight, and standing erect in the centre of the flower, is bent over to one side, just as if it had been subject to violence. There is also a great irregularity of direction and proportion in the parts which surround the column: nowhere are these singularities so strongly marked as in this species, whose sepals and petals, instead of standing in an obviously alternate position with respect to each other, are so completely broken up and twisted out of their places that they can hardly be recognised, and the whole floral apparatus is as it were dislocated. For example: of the three sepals, the back one is placed almost opposite one of the petals; the other petal is shifted to one side, so as to stand half behind the first; and the lip, instead of being stationed exactly between the two petals and two lateral sepals, turns its back to the left-hand sepal, and its face to the right-hand petal: and then the column is bent to the left as well as the lip, though not to the same degree, so that even these two organs are not, as they usually are, opposite each other. — *Bot. Reg.*

DODECANDRIA MONOGYNIA. — *Portulaceæ.*

Portulaca splendens. We presume this to be a mere variety of P. Thellusonii; but if so, it is one of singular beauty. Its origin is, however, unknown to us, Seeds of it were purchased of Mr. Charlwood, in Covent Garden, for the Horticultural Society; and in their garden it flowered in the autumn of 1842. It is a charming tender annual, about a foot high, with an abundant supply of its large red flowers from July to September. — *Bot. Reg.*

Lycaste plana. A Bolivian plant, imported by Messrs. Loddiges, with whom it flowered in October last. It is conspicuous for the large size of its leaves, and is, in fact, very near L. macrophylla, from which it differs in the petals being quite even, not undulated, and in the lateral sepals being much more exactly oblong, added to which is a greater degree of bluntness on the tubercle of the lip. The beauty of the flowers of L. plana is far greater than in L. macrophylla, which wants the rich red-wine colour, and the pleasing contrast of pure white in the inner portions of the flower before us. — *Bot. Reg.*

GYNANDRIA MONANDRIA.—*Orchideæ.*

Dendrobium cucumerinum. A native of New Holland, whence it was sent to Messrs. Loddiges from Mr. W. MacLeay. It very much resembles a heap of little cucumbers, whence the name has been derived. These bodies are apparently leaves, terminating the short articulated stems; but they require further examination, for they may be of the nature of pseudo-bulbs. The flowers appear from the base of the cucumbers in threes; they are dirty white, with long narrow sepals and petals, striped with pink, and a three-lobed lip, whose middle division is crisped very much, and five wavy elevated ridges along its middle. — *Bot. Reg.*

GYNANDRIA MONANDRIA. — *Orchideæ.*

Epidendrum Schomburgkii. A fine bulbous-stemmed species, with large bunches of red flowers. It was introduced by Mr. Schomburgk, from British Guiana, a few years back, and sent to Messrs. Loddiges. — *Pax. Mag. Bot.*

DIDYNAMIA GYMNOSPERMIA. — *Labiatæ.*

Scutellaria japonica. Is a pleasing little plant, growing only four or five inches in height, of a partially trailing character, and bearing a profusion of showy blue flowers throughout the whole of the summer. The plant is half hardy, and from its habit well suited for planting in masses in the summer flower-garden. — *Pax. Mag. Bot.*

DECANDRIA MONOGYNIA.—*Leguminosæ.*

Chorozema spartioides. A very showy species, with large bright yellow and red flowers: it has a trailing habit. It was raised several years since from New Holland seeds. — *Pax. Mag. Bot.*

TO CORRESPONDENTS.

S. D. — Continue your Cacti in a warm part of the greenhouse for a fortnight or three weeks longer, after which remove them to the open air for about the same period; this will ripen the wood, and prepare them for the winter. The seed of C. speciosissima should be sown about the beginning of February, in shallow pans, filled with sandy loam and leaf-mould: place them on a sunny shelf, and keep them just moist; they will soon vegetate.

A READER. — Gradually withhold the water from your Tropæolum. As it is turning yellow, it is evident it has ceased to

grow, and should be dried off for the winter: do not shake it out of the pot before the spring.

F. MASON, Cambridge. — You may hybridize your Fuchsias so long as you can obtain flowers to do it; but remove all seed from the plants that is not crossed. We should introduce some kind with a blue corolla to each cross, as this description of flower is wanting, and offers the best chance of novelty. It is generally found that the hybrid partakes most of the character of the seed-bearing plant.

A SUBSCRIBER, Stamford, may procure plants suitable for his newly-forming American borders of any respectable nurseryman. Had we the planting of new beds of this description, instead of sending fifteen miles for peat-earth, we should drain them well, as a primary step, and then lay on a good coating of leaf-mould, or other decayed vegetable matter, to the depth of a foot or more, according to the nature of the soil, and thoroughly incorporate it with natural earth of the place: this would be less expensive, and answer the end equally as well.

ENQUIRER. — We have heard conflicting opinions as to whether the colour of Gloxinia rubra can be imparted to an hybrid raised from it or not. We cannot determine it now, but shall be able shortly, as we have several plants from G. rubra, impregnated with G. Youngii, just coming into blossom. We have heard of a cross being effected between Gloxinia and Achimenes.

A SUBSCRIBER, Marlow. — We must refer you to page 201. of our third volume for the culture of Achimenes; and to page 156 of the same for the treatment of Thunbergias.

HORTUS.—Your seedling Fuchsia will not do after such kinds as Smith's Queen Victoria and Exoniensis: it is pretty, but too small.

J. T. — Transfer all your Pansies to the borders; they are good for nothing else.

CALENDAR FOR AUGUST.

STOVE. As we have the prospect of a wet autumn before us, it will be well for the cultivator to be early prepared for housing all his plants, pots, earth-sticks, &c.; should be prepared for shifting and dressing, and principally see that alterations and repairs are completed. This work is too frequently driven off till the last moment; and the consequence is that the plants are

either allowed to remain out, subject to the evil effects of the autumnal rains, or they are crowded into one house while another is being finished, and the work is done in an irregular manner.

During this month Gesneraceous plants exhibit their greatest splendour; they require a liberal supply of moisture, and should be placed in a shaded part of the house. Climbers, also, are at their best. Keep them regulated in a free, natural manner. Much may be done by shifting and otherwise encouraging such plants as appear disposed to form another growth, though care is necessary not to continue it too far into the approaching dark weather; on the other hand, those which have completed their seasonal advance should be allowed to sink gradually into their hybernatory state: of this latter class, bulbous-rooted plants and Cacti are usually the first to cease growing. Several Orchideæ, also, assume the resting state this month. Water should be gradually withheld as soon as it is apparent they have done growing, as it is most important that they are not excited to a second growth at this advanced period. Cut down plants that have done flowering; and any re-potting that may be necessary had better be done at once. Seeds of stove-plants generally succeed if sown this month. Cuttings may still be taken with every chance of success. Regulate the temperature of the house the same as for last month.

Greenhouse. Geraniums should be headed back in the early part of the month; and re-pot them at the same time. The pots they are placed in for the winter should be somewhat smaller than those in which they have bloomed: the cuttings will strike readily now if planted in a shaded border and covered with a hand-glass. Fuchsias, and indeed all soft-wooded plants, may be increased in the same manner with the greatest facility at this season. The various kinds of Cacti usually grown in the greenhouse will be much benefitted by being placed in the open air for three or four weeks, selecting for them the most sunny spot of the garden: this ripens their new stems, and greatly assists the formation of flower-buds for next year. The re-potting of such plants as require it should be proceeded with immediately after those in the stove are completed. It must be understood, we do not recommend anything like a general re-potting, but only to such as, from having been placed in large

pots to bloom, and are now done, require to have their roots reduced, or are otherwise absolutely in need of it; for the effect of new soil on some plants would only tend to start them into an ill-timed growth. Increase may still be made either by cuttings or seeds; the latter usually do better if sown this month than at any other period. The annuals here will require to be kept free from decaying flowers and leaves: a good soaking with liquid manure once a week will greatly assist them. A few hardy annuals, such as Mignonette, Ten-week Stocks, Nemophila, Collinsia, &c., should be sown to bloom through the winter. Keep every thing clean, and continue to give plenty of air both day and night.

Flower-Garden. The first thing requiring attention here is the re-potting Auriculas; this should be done in the first week in this month. Use perfectly clean or new pots, and well drain them. A sound compost may be made with leaf-mould, well-rotted cow-dung, and loam, in equal quantities, adding a little river-sand to keep it open. In potting, remove decaying leaves and roots. If any of the plants have stems which are too long, the bottom end may be taken off, observing to leave sufficient roots for the support of the plant. Keep the neck or first tier of leaves just above the soil. After potting they may be returned where they have stood through the summer, for a fortnight, but should be placed in frames by the end of the month, the lights of which must be kept off so long as the fine weather lasts.

Dahlias require constant attention to staking, tying, and thinning. Layers of picotees and carnations may be taken off and potted as soon as they are struck. Cuttings of pinks and pansies may be bedded out, also, as soon as rooted. China roses and their hybrids may still be propagated by cuttings; also hardy biennial and perennial plants for the borders. Chrysanthemums require plenty of water: the strong plants should be re-potted, and the points of all should be again pinched off, in order to keep them bushy. Continue to fill vacant places in the flower-beds.

In collecting seed of annuals and other choice flowers, be particular to do it when perfectly dry, and not until perfectly ripe.

The roots of ranunculus, tulips, &c. should be occasionally

looked over: if any appear damp, bring them into the sun for an hour or two each day until they are well dried. Hedges of box, privet, &c. should be clipped close for the winter.

Composts, for carnations and other plants, should be got together as early as convenient.

The more choice kinds of greenhouse plants standing in the open air should be protected from heavy rains and wind, and their re-potting and dressing forwarded as fast as possible: it is best done some time before they are returned to the house. Keep the flower-beds neat by frequent raking, and the walks and grass well rolled.

FLORICULTURAL INTELLIGENCE.

Royal Botanic Society of London. The second exhibition of this society took place in the Regent's Park, June 28th. The weather was somewhat unfavourable, though much better than on the day of the preceding show. The attendance both of exhibitors and visitors was more numerous than before; the excellent arrangements of the society affording every encouragement to the one, and accommodation and facility to the other. The plants were of the usual splendid description, many of them the same or similar to those we have before particularised either here or at Chiswick; we therefore pass over them to the Orchideæ, of which there were many very fine varieties, particularly Peristeria pendula, Oncidium Lanceanum, Cirrhæa tristis, Coryanthes macrantha, and Epidendrum pastoris, in Mr. Mylam's collection, who had also a separate specimen of Aerides affine, very beautiful, and a magnificent plant of Nepenthes distillatoria, eight feet high. In the collection of Mr. Goode were nice plants of Huntleya violacea, Stanhopea tigrina, a pale small-flowered variety of Barkeria spectabilis, and a large Dendrobium cupreum, trained to a circular frame six feet high. Mr. Appleby, gardener to T. Brocklehurst, esq., had Brassia viscosa, Vanda teres, Oncidium divaricatum and roseum, and a fine specimen of Saccolabium guttatum. A small collection from F. Cox, esq., contained Cirrhæa viridi-purpurea, Cattleya Harrisoniæ, Oncidium luridum guttatum, and Stanhopea tigrina. The Pelargoniums were in better order than we have seen them before this season. Mr. Dobson's six were, Lunar Evening Star, Leonora, Erectum, Meteor, and Cleopatra.

The Nurserymen's 1st prize for 12 was awarded to Mr. Gaines, for Lady Cotton Shepherd, Orange Perfection, Gigantic,

Commodore, Royal Adelaide, Lady Prudhoe, Euterpe, Madelina, Cotherstone, Jubilee, Augusta, and Rising Sun.

There were no prizes awarded to the seedlings.

The Calceolarias exhibited were excellent. Of shrubby kinds, Mr. Barnes had Standishii, Valentine, Landmark, Perfection, Virgin Queen, and Incomparable. Of herbaceous kinds, with which he was also first, Mr. B. had Glowworm, Model of Perfection, Princess Royal, Lady Sale, Gazelle, and Delicatissima.

Roses were plentiful and fine; as also Ranunculus, and a stand of English Iris, exhibited by Messrs. Lockhart, attracted much attention.

The Fuchsias were numerous, but contained nothing new. Perhaps the best was a nicely-grown plant of Formosa elegans, from Mr. Brazier, gardener to W. H. Storey, Esq. Two fine seedlings were exhibited by Mr. Smith, of Dalston: one called Queen Victoria, a very large pale pinkish flower, with a rich purplish corolla, bids fair to eclipse many of the new ones; the other, Incarnata, a similar flower to the other, but with a red corolla, is very good.

The following prizes were awarded: —

For collections of 50 Stove and Greenhouse Plants: 1st, Mr. Barnes, gr. to G. Norman, esq., 15*l.*; 3d, Mr. Pawley, 5*l.*

For 25 Miscellaneous Plants: Mr. Hunt, gr. to Miss Trail, 7*l.*; 2d, Mr. Green, 5*l.*; 3d, Mr. Frazer, 2*l.* 10*s.*; 4th, Mr. Cockburn, 1*l.*

For 9 ditto: 1st, Mr. G. Clarke, 3*l.*; 2d, Mr. May, 2*l.*

For 6 Stove and Greenhouse Climbers: 3d, Mr. Pawley, 1*l.*

For 9 distinct Fuchsias: 1st, Messrs. Lane, 1*l.* 10*s.*; 2d, Mr. Gaines, 1*l.*; extra, Mr. Catleugh, 10*s.*

For a collection of scarlet Pelargoniums: 1st, Mr. Baile, 1*l.* 10*s.*

For 150 varieties of Roses: 1st, Messrs. Lane, 3*l.*; 2d, Mr. Rivers, 2*l.* 10*s.*; 3d, Messrs. Paul, 2*l.*; 4th, Mr. Hooker, 1*l.* 10*s.*

For 50 varieties of Roses, cut blooms (Amateurs' Class): 1st, Mr. Betteridge, Abingdon, 1*l.* 10*s.*; 2d, Mr. Keir, 1*l.*

For 12 varieties of Moss Roses: 1st, Mr. Rivers, 1*l.* 10*s.*; 2d, Messrs. Lane, 1*l.*; extra, Messrs. Paul and Son, 10*s.*

For 6 Roses in pots (equal prizes): Messrs. Paul and Son, 1*l.*; Messrs. Lane and Son, 1*l.*

For Seedling Fuchsias: 1st, Mr. Smith, Dalston, for Queen Victoria, 1*l.*; 2d, Mr. Smith, for Incarnata, 10*s.*

For Seedling Roses: 1st, Mr. Hooker, 1*l.*

For a collection of British Ferns: 1st, Mr. Wood, 2*l.* 10*s.*

For named collections of Agricultural Grasses: 1st, Mr. Moore, 1*l.*; extra, Mr. Coates, 10*s.*

For 12 Pelargoniums (in 24*s.*): 1st, Mr. Gaines, 7*l.*; 2d, Mr. Catleugh, 4*l.*

For 6 ditto (amateurs): 1st, Mr. Dobson, 3*l.*; 2d, Mr. Stains, Hoxton, 1*l.* 5*s.*

For 12 ditto (in 12*s.*): 1st, Mr. Catleugh, 4*l.*, 2d, Mr. Gaines, 1*l.* 15*s.*

For 6 ditto (in 12*s.*), amateurs: 1st, Mr. Bell, 3*l.*; 2d, Mr. Bourne, 1*l.* 5*s.*; extra, Mr. Hunt, 1*l.*

For 4 ditto (in 8*s.*): 1st, Mr. Hunt, 2*l.* 10*s.*; 2d, Mr. Bourne, 1*l.* 10*s.*

For 6 Herbaceous Calceolarias: 1st, Mr. Barnes, 2*l.*; 2d, Mr. Catleugh, 1*l.*

For 6 Shrubby ditto: 1st, Mr. Barnes, 2*l.*; 2d, Mr. Gaines, 1*l.*

For Seedling ditto (equal prizes): Mr. Standish, for Illuminator, 10*s.*; Mr. Green, for Majestic, 10*s.*

For a Seedling Cineraria: Mr. Piper, Princess Royal, 10*s.*

For Single Specimens (new): 1st, Mr. Mylam, for Nepenthes distillatoria, 3*l.* 10*s.*; 2d, Mr. Barnes, for Erica Massonii, 2*l.* 10*s.*; 3d, Mr. Green, for Stigmaphyllum ciliatum, 1*l.* 10*s.*; 4th, Mr. Hunt, for Manettia bicolor, 1*l.*

For Miscellaneous specimens: 1st, Mr. G. Clarke, for Pimelea decussata, 1*l.* 10*s.*; 2d, Mr. Appleby, 1*l.*; 3d, Mr. Mountjoy, for Gloxinia maxima alba, 10*s.*

For collections of Orchidaceous Plants: 1st, Mr. Mylam, 7*l.*; 2d, Mr. Goode, 5*l.*; extra, Mr. Appleby, 2*l.* 10*s.*; extra, F. G. Cox, esq., 2*l.* 10*s.*

For Single Specimen ditto: 1st, Mr. Appleby, for Saccolabium guttatum, 3*l.* 10*s.*; 2d, Mr. Mylam, for Aerides affine, 2*l.*

For 20 Cape Heaths: 2d, Mr. Jackson, 3*l.*

For 15 ditto: 1st, Mr. May, 7*l.*; 2d, Mr. Brazier, 3*l.* 10*s.*

For 6 ditto: 1st, Mr. Barnes, 3*l.* 10*s.*; 2d, Mr. G. Clarke, 2*l.*

For 12 species of Statice: 2d, Mr. Wood, 1*l.*

Extra Prizes given for Subjects not included in the Schedule.

For a collection of English Iris, Messrs. Lockhart, 1*l.*

For ditto of Ranunculus: 1st, Mr. Aust, 1*l.*; 2d, Mr. Alexander, 15*s.*

For ditto of Pinks: 1st, Messrs. Norman, 1*l.*; 2d, Mr. T. Brown, Slough, 15*s.*

Horticultural Society. The third and last show for the season took place at Chiswick, on Wednesday, July 12th. The display of plants was numerically deficient as compared with the exhibitions of May and June: only one collection of forty, and one of twenty plants, were exhibited.

Mr. Goode was the principal exhibitor in this class. In his collection were fine plants of Mirbelia dilatata, Clerodendron

squamatum, Stephanotis floribundus, Statice arborea, Erythrina Crista-galli, &c.

Mr. Green had a small collection: in it, besides other things, were Calanthe veratrifolia, Siphocampylos betulæfolius, Nematanthus longipes, Stigmaphyllum ciliatum, and Ardisia crenulata.

In the collections of six there were four competitors. Mr. Clarke, gardener at Shirly Park, had splendid plants of Lilium speciosum punctatum, Roella ciliata, Pimelea decussata, Polygala oppositifolia, Philibertia grandiflora, and Dracophyllum gracile.

The Orchideæ were in every way excellent. Mr. Mylam had Oncidium ampliatum, O. leucochilon, O. luridum guttatum; Maxillaria vitellina, stapelioides, and macrophylla; Cirrhæa obtusa, Warreana, squalens, and tristis; Aerides affine and quinquevulnerum; Epidendrum aloifolium, Grahami, and a new species; Phaius albus, Brassia brachiata, Broughtonia sanguinea, Zygopetalon rostratum, Angræcum caudatum, and Cymbidium sp.

In Mr. Goode's collection, besides others, were Barkeria spectabilis, very pale and small, Coryanthes macrantha, Cycnoches ventricosa, Peristeria cerina, Gongora maculata, Trichopilia tortilis, Stanhopea Wardii, S. grandiflora and oculata, Huntleya violacea, and several Oncidiums.

The cut Roses were numerous and fine. In Mr. Rivers's stands were: GALLICA, Julie, Kean, Letitia, Pharericus, Boula de Nanteuil; ALBA, Felicité, Sophie de Marsilly, La Seduisante; DAMASK, Madam Hardie, Duke of Cambridge; HYBRID CHINA, Comtesse de Lacepede, Chenodelle; HYBRID PERPETUAL, William Jesse, Aubernon, Duchess of Sutherland; BOURBON, Queen, Splendens; HYBRID BOURBON, Charles Duval, Great Western, Paul Perras; TEA SCENTED, Mansais and Eliza Sauvage.

The Pelargoniums and Fuchsias were in about average numbers and of the usual quality. A seedling Pelargonium, named Psyche, from Mr. Wholmes, gardener to E. Foster, Esq., of Clewer, was awarded a certificate. The flower is large, of good form, dark upper petals, with a margin of rose, white centre, lower petals pink and rather veiny. Several other seedlings from the same place attracted much attention from their extraordinary colour and size, but they were deficient in form.

Six stands of Picotees and Carnations were exhibited in excellent order, considering the very unfavourable season. Mr. Norman's stand of Carnations held Wallis's Bonny Bess, Jacques Georgina, Wood's William the Fourth, Strong's Duke of York, Ely's Colonel Wainman, Mansley's Shakspeare, Lady Chetwyn, Hogg's Colonel of the Blues, Holmes's Count Paulini,

The following Prizes were awarded.

Gold Knightian Medal. Mr. Goode for 40 Stove and Greenhouse Plants; Mr. Mylam for Exotic Orchidaceæ.

Gold Banksian Medal. Mr. Goode for 6 Exotic Orchidaceæ; Mr. R. Stains for Pelargoniums; Mr. Green for 20 Stove and Greenhouse Plants; Mr. Goode for 20 Cape Heaths; Mr. Jackson (n) for the same.

Silver Gilt Medal. Mr. W. Cock for 12 new Pelargoniums; Mr. Gaines for the same; Mr. Catleugh for the same; Mr. Fraser for 6 Stove and Greenhouse Plants; Mr. G. Clarke for the same; Mr. Goode for Medinilla erythrophylla; Mr. G. Clarke for 6 Cape Heaths; Mr. Dawson for the same; Messrs. Rollisson for Exotic Orchidaceæ; Mr. Falconer for Renanthera coccinea.

Large Silver Medal. Mr. Dobson for 12 new Pelargoniums; Mr. Gaines for the same; Mr. Catleugh for 12 old ditto; Mr. Smith, for 24 Carnations; Mr. Norman for the same; Messrs. Norman for 24 Picotees; G. Edmonds, Esq. for the same; Mr. Gaine's for 12 Fuchsias; Mr. Pawley for 6 Plants; Mr. Bruce for the same; Mr. Goode for Limonia spectabilis; Messrs. Veitch for Rondeletia longiflora; Mr. Green for 6 Cape Heaths; Mr. Pawley for the same; A. Rowland, Esq. for 25 Roses in pots; Mr. Betteridge for 50 cut Roses; Mr. Lane for the same; Mr. Carton for Exotic Orchidaceæ; Mr. Mylam for Miltonia spectabilis.

Silver Knightian Medal. Mr. Parker for 12 old Pelargoniums; Mr. Wilmer for 24 Carnations; the same for 24 Picotees; T. Barnard, Esq. for the same; Mr. Brown for 24 Pinks; Messrs. Lane for 12 Fuchsias; Messrs. Smith for the same; Mr. Fraser for the same; Messrs. Veitch for a new Canavalia; to the same for Echites atropurpurea; Mr. Mountjoy for Lilium excelsum; Mr. Goode for Nematanthus longipes; Mr. Milne for 12 Moss Roses; Mr. Rivers for the same; Messrs. Lane for the same;

Mr. Milne for 50 Roses; Mr. Rivers for the same; Mr. Hooker for the same; Mr. Buttery for 25 Roses; Mr. Edmonds for Exotic Orchidaceæ; Mr. Mountjoy for 12 Lilium eximium; Messrs. Rollisson for Erica pulverulenta; Mr. Frazer for Crowea saligna; Mr. Clarke for Lechenaultia formosa.

Silver Banksian Medal. Mr. Dobson for 6 Herbaceous Calceolarias; Mr. Gaines for 6 Shrubby ditto; Mr. Catleugh for 12 Fuchsias; Messrs. Brown and Attwell for 24 Pinks; Messrs. Veitch for Alstrœmeria nemorosa; to the same for Gesnera polyantha; Mr. Dodd for Barringtonia speciosa; Messrs. Lucombe and Pince for Boronia viminea; Mr. Best for Schizanthus candidus; A. Rowland, Esq. for 12 Moss Roses; Mr. Hooker for the same; Mr. Keir for 50 Roses; Messrs. Paul for the same; Mr. Cobbett for the same; Mr. Collison for 25 Roses; Mr. Lang for the same; Mr. Falconer for Lechenaultia formosa; Mr. Goode for Clerodendron squamatum; Messrs. Black and Co. for Scyphanthus elegans; Mr. Clarke for Pimelea decussata.

Certificate of Merit. Mr. Wholmes for a Seedling Pelargonium (Psyche); Messrs. Lucombe and Pince for a Seedling Fuchsia (Exoniensis); G. Edmonds, Esq. for a Seedling Picotee (Ada); Messrs. Black and Gore for a new variety of Clintonia; Mr. Pawley for Scyphanthus elegans; Mr. Dobson for Achimenes Rosea; Mr. Cobbett for 12 Moss Roses; Mr. Cripps for 50 Roses; Mr. Burnett for 25 Roses; Mr. Jackson for 12 Gloxinias; Mr. Hayes for Sollya linearis; Mr. Bruce for Erica viridiflora; Mr. Lane for Gloxinia Menziesii.

Nottingham Floral and Horticultural Society. — The Ranunculus, Geranium, Rose, Pansy, and Pink Show of this Society (being the second exhibition of the season) took place on Wednesday, the 21st June, at the Assembly Rooms, Low Pavement; the company was very numerous, and of the first distinction. The stages were arranged on each of the sides and ends, as well as down the centre of the room; and although the Society had more than doubled the extent of accommodation, yet the room literally teemed with contributions from G. Walker, Esq., F. Wright, Esq., Colonel Wildman, A. Lowe, Esq., William Cartledge, Esq., Mr. Pearson, Mr. Frettingham, &c. The mention of the names of these gentlemen is a sufficient guarantee that all their contributions possessed enough of merit to warrant their display, and therefore relieves us from the necessity of entering minutely on their several distinguishing peculiarities. But, among the mass of living beauty which enriched the room, we shall not be accused of invidiousness if we briefly notice the magnificent collection of orchideous plants, forwarded by G. Walker, Esq., amongst which was a fine plant of Dendrobium cupreum. The Geraniums exhibited by the

same gentleman likewise deserve especial notice; besides other interesting productions of the greenhouse, which evinced Mr. Walker's consummate skill, and unsparing love of floriculture.

A fine collection of stove and greenhouse plants, from F. Wright, Esq. (to whose unwearied exertions the Society is not a little indebted), and the Geraniums from William Cartledge, Esq., were greatly admired.

There was a splendid collection of Roses from Mr. Pearson, who was a large contributor and very successful competitor on the occasion. From his well-stored houses and nursery he had supplied a fine collection of Geraniums, an excellent specimen of the Kalmia latifolia, a beautiful array of greenhouse plants, and a magnificent ornamental collection of flowering plants, as well as two pans of fine Pansies, one of which was composed of twenty blooms of his unrivalled seedling, Black Prince.

Mr. Frettingham forwarded a large collection of American plants, as well as some excellent Geraniums.

The Rose-growers were greatly disappointed, as, in consequence of the lateness of the season, they were not in flower: and we heard one gentleman state, that he was only able to cut nine blooms out of upwards of five hundred plants! The successful competitors will be found specified in our list of prizes.

Ranunculuses.

The best pan of eight blooms, Mr. F. Wood.—Naxara, Madaline, Julius, Lady Norreys, George the Fourth, Voctonox, Purpurea striata, and Nomare.

Second pan of eight blooms, Mr. S. Moore.—Eclipse, Mungo Park, Bienfait, Bishop Von Lima, Seedling, Mr. Welsh, Thracia, Socrates.

Third pan of eight blooms, Mr. Taylor. — Condorcet, Seedling, Socrates, Orissa, La Singulaire, Sulphurea, La Temeraire, Unknown.

The best Self (Aurora), and Dark (Naxara), Mr. S. Moore. Striped, Mr. Taylor. Edged (Pactolus), Mr. F. Wood. 2d ditto (Ten-pounder), and Spot (Sphervia), Mr. S. Moore. 2d ditto (Lady Norreys), and Purple (Variat), Mr. F. Wood. Collection, Mr. Frettingham. 2d ditto, and Seedling (edged), Mr. S. Moore.

Roses.

Best dealer's collection of summer roses, Mr. Pearson.

Ditto autumnal roses, Mr. Pearson.

Best amateur's pan of twelve blooms, Mr. J. Robinson. — Velours Episcopal, Brennus, Armosa, Duke of Devonshire, Baquet, Princess Augusta, Lilac Queen, Aspasie, Catel, Berlise, Belle Parabere, Iolande Fontaine.

Best amateur's pan of nine blooms, Mr. S. R. P. Shilton. —

Duke of Devonshire (Hybrid China), Queen of the Bourbons, Ninon de l'Enclos, Desgaches (Bourbons), Rubens, Caroline de Berri, Nemesis (China), Painted Lady (Damask), L'Honneur de Montmorency (French).

Best amateur's pan of six blooms, Mr. J. Taylor. — Velours Episcopal, Lilac Queen, Ne-plus-ultra, Catel, Fulgens, Tuscany.

The best Provence (Belle Adele), Moss (Pompone), French (Berlise), Hybrid China (Belle Parabere), Damask (Marguerite), Sweet Briar (Palustris), Austrian Briar (Harrisonii), Boursault (Gracilis), Damask Perpetual (Antinous), Hybrid Perpetual (Madame Laffay), Bourbon (Bouquet de Flore), China (Cramoisie Superieure) China (Tea-scented — Reine de Bassora), Miniature (De Meux), and Noisette (Ne-plus-ultra), Mr. J. Pearson.

Pinks.

Best pan of six blooms, Mr. J. Taylor. — Duke of Devonshire (two blooms), two seedlings, Prudens, Tyrian.

Second pan of six blooms, Mr. J. Robinson. — Aggravation (two blooms), George the Fourth, Snow-ball, two seedlings.

Best dark pair (Aggravation) — Mr. J. Robinson.

Best red pair (George the Fourth) — Mr. J. Robinson.

Pansies.

Best dealer's pan of twenty blooms, Mr. Pearson. — Comet, Magrath, Milton, Aristides, Collingwood, Zelica, Agnes, Sulphurea elegans, Adela, Sobieski, St. George, seedling, Chevalier, Black Prince, De Buch, Elizabeth, seedling, Eclipse, Sir Walter Scott, Rosalind.

Best amateur's pan of twenty blooms, Mr. J. Nevill. — Jehu, Jewess, Delicata, Eclipse, Rival Yellow, Imogene, Black Prince, Coronation, Dr. Johnson, Canary, ten seedlings.

Second amateur's pan of twenty blooms, Mr. Gibson. — Eclipse, Triumphant, Jewess, Sylph, Jehu, Coronation, Mrs. Thesiger, seedling, Jane Shore, Mary, Prince Albert, Conqueror, Imogene, Emperor, two seedlings, Chimpanzee, Black Knight, seedling, Sable Monarch.

Best amateur's pan of fifteen blooms, Mr. S. R. P. Shilton. — Adonis, and fourteen seedlings.

Seedlings. — Two prizes only were awarded by the judges, each of them Selfs: one a claret, with purple and white eye; the other a puce, with black, blue, and orange eye. — Mr. S. R. P. Shilton.

Extra prize. — A pan of twenty blooms (Black Prince). — Mr. Peason.

STANHOPEA OCULATA VAR

THE

FLORIST'S JOURNAL.

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ON STANHOPEA.

WITH AN ENGRAVING OF S. OCULATA.

IN the proper management of orchideous plants, the system of alternate rest and excitement requires to be carried to its fullest extent, especially with those kinds which produce their flowers at one season and form new parts at another. Continual excitement causes a continual growth in the plant, which is quite incompatible with the formation of flower-buds, and their subsequent expansion; or, in other words, such plants cannot and do not produce flowers and pseudo-bulbs, or stems and leaves, at the same time. This is a truism with respect to Orchideæ, but it is one which cannot be too forcibly impressed on the cultivator's mind.

In order to carry this management out most efficiently, it is generally considered necessary to have two houses: the one to suit the growing period should be kept at a high temperature, and with a degree of moisture approaching the point of saturation; the other, for the resting and blooming season, requires a temperature much lower, and a corresponding decrease of humidity. This difference is indisputably necessary where perfection is desired, or a quantity grown, though much may be done in a single house, if of sufficient extent to allow a difference of from five to ten degrees in the temperature, by removing the plants, as occasion requires, from the cool to the warm, and *vice versâ*.

The cultivator must also possess an acute observation and much practical tact, acquired only by experience, to enable him to determine exactly when to apply the exciting causes, and

when to withhold them: for if continued but a short time after the completion of the first growth, the plant commences a second, and consequently does not bloom; and on the other hand, if it is withheld beyond the proper period, the plant languishes, becomes sickly, and finally dies. With no genus is this of more importance, or the effects sooner visible, than with the one under consideration. The Stanhopea usually begins growing about the latter end of July or the beginning of August, when they should be well supplied with moisture, and be placed in a warm, perhaps the warmest, situation in the growing-house. Moisture, in our opinion, is better supplied in the form of steam or vapour than to be poured into the earth in which they are placed; for these plants, unlike some other genera, form but few roots, and those are small, so that it appears most probable that the leaves are the absorbents and conductors of the requisite food.

Another point in which we differ from some cultivators is, in the time at which the moisture should be administered. It is a very general practice to syringe and steam Orchideæ early in the morning; but a very slight observation of the economy of nature will make apparent the time at which plants in an indigenous state receive the greatest amount of this description of moisture, — it is in the evening; and in tropical countries to a much greater extent than with us: in fact, it is on the night dews that vegetation in such situations mainly depend; and we therefore prefer the evening as the most proper time for the application of water, whether it be in the form of exhalations or in any other manner.

The whole of this genus throws its flower-stem from the base of the pseudo-bulb downwards; so that they should be placed in open baskets composed of billets of wood, with interstices between each billet of about two inches: the basket should be shallow, to allow the flower-stems to protrude a sufficient distance to show the flowers to advantage; or a stout branch of oak, having three or more prongs, forms an excellent receptacle for plants of this description: whatever is the form of the basket, or the manner of growing, sufficient space should be allowed to serve the plant for several years, as they do not succeed if frequently shifted; indeed, they seldom flower at all until well established. The soil in which they delight is peat,

full of fibre and fern-roots: this should be broken roughly, and mixed with an equal quantity of sphagnum, or white moss, cut small. In placing the plant in the earth, care should be taken to keep the base of the bulbs a little elevated above the surface of the soil, to allow all superfluous moisture to pass off, as if it happens to lodge near them, it is generally fatal; and in filling the basket, the earth should be disposed in a loose open manner, for if it becomes compressed the flower-stems frequently rot before they can reach the outside. The most proper season for re-shifting is the commencement of the growing period; they may then be placed in the warm-house, and will attach themselves firmly the first season. Suspended from the roof of the house is the most appropriate position for them, as from the downward inclination of the flowers they are not seen when standing on a stage or below the level of the eye.

About a month or six weeks is usually occupied in the completion of the new pseudo-bulbs; after which the plants should be removed to a cooler situation, either in the house devoted to this purpose; or if this is not at hand, a common greenhouse is preferable to continuing them in the same temperature. This removal should not take place till the bulbs are full grown and quite firm, nor should it be delayed after. If the generality of the collection can be managed so as to have them resting at the same time, it will be a very great advantage where only one house is used for Orchideæ; and this may perhaps be accomplished by removing the early ones for a short time until the remaining portion are fit also for resting: and as this will happen in the early part of autumn, almost any protection will be sufficient; even a cold frame may then be used to advantage: and as the flowering of the ensuing season depends entirely on the thorough ripening of the current year's growth, the plants may be allowed to receive the full influence of the sun, and every means resorted to to accomplish this object.

The Stanhopea has a wide geographical range over nearly the whole of the South American continent and the adjacent islands, where it is sometimes found clinging to the trunks of old trees, on the margins of forests, and also in crevices of rocks and craggy promontaries, generally overhanging a stream or other damp place, affecting those spots where the finer description of debris and decaying vegetable matter collect.

For our illustration we are again indebted to Messrs. Rollisson, of Tooting. The plant from which our figure was taken last month had at that time four spikes, each bearing from eight to twelve flowers. Our draughtsman, Mr. Holden, who is perhaps without a rival in pourtraying orchideous flowers, has succeeded with this in his wonted manner.

CULTIVATION OF THE NEAPOLITAN VIOLET.

Sir, — As I frequently derive much benefit from the perusal of your elegant and useful work, in return I offer you my little contribution. The Neapolitan violet is a universal favourite, but a difficulty is sometimes complained of in its cultivation. The subjoined is my manner of treating it.

In May, after the flowering season is over, I sift some light soil over the plants to the depth of two inches; by this means the runners very readily take root. I take care to keep as much of the foliage of the plants above the surface as possible. In this situation they remain exposed to the weather about six weeks, when I take up the old plants, from which a sufficient quantity of the best rooted runners are selected to make my flowering plants for the ensuing season. I then choose some shady situation, and find they will do better under the shade of trees freely exposed on all sides to the air, than on a north border under a wall. I mark out the bed, and remove the soil four inches deep, filling it to the original level with decayed leaves, over which I put the soil previously taken out. The runners are then planted in rows, seven inches distant, and four inches apart in the rows, and a good watering given them; which will require to be freely supplied during the summer, otherwise the bed, being a little elevated, will soon become dry. Let them remain in this situation until the middle of September, by which time they will have become strong plants. You can then take them up with good balls without any difficulty, as they will be well rooted in the leaf mould. Plant them in a frame, in rows, nine inches apart, and six inches in the row, and two inches from the glass; then well water them and keep the lights on, and shade if the sun shines out, for about a week; by which time the plants will begin to root again, when they may be freely exposed to the air. By

this method I have a profusion of very fine blooms, from October until May. All the attention they require in the winter is protection from severe frost, all the air possible being given them in fine weather. The compost to use in the frame is, two parts turfy loam, one part leaf mould.

Cheltenham. J. GREEN.

ON THE AGENCY AND FUNCTIONS OF LEAVES.

WE are asked by a correspondent, Why are the greater proportion of exotic plants evergreen, and what is the cause of certain others being deciduous? This question embraces a wide range of botanic theory, and to explain it we must endeavour to show the agency and functions of leaves, in so far as they are connected with this phenomenon.

Physiologists are pretty well agreed in considering the functions of leaves to be in several respects very nearly assimilated to those of the lungs of animals: in the latter the blood is there distributed and spread out, as it were, through the very thin membranes composing these organs, to the action of the fresh air taken in by the act of breathing — the object being to supply an opportunity for parting with a quantity of carbonic acid gas with which the blood, in its then crude state, is loaded, and also for obtaining a portion of pure oxygen derived from the atmosphere.

A material difference, however, exists between the two, arising from their different positions. The animal lungs perform all their offices in the dark, while those of the vegetable are alternately in the light and darkness. Hence the assimilation by leaves differs by day and night. In the day, or when subject to the influence of light, leaves, or rather the sap which is distributed over the upper surface of the leaf immediately beneath the epidermis or thin transparent covering of the same, gives off a considerable portion of the fluid matter it is composed of, and at the same time the oxygen contained in the carbonic acid gas previously taken in by the roots and also by the leaves themselves when in the dark: but, though the oxygen is given off, the carbon remains; and this, with the lessened amount of water by evaporation, reduces the sap to a

sort of pulp. This pulp, like the animal blood, is destined to supply fresh materials for the increase of the body of which it forms part. Here exists the difference: the animal is constantly consuming oxygen, and giving off carbon, while the vegetable, on the contrary, in bright sun-light, parts with a large proportion of pure air or oxygen and assimilates the contrary gas; thus rendering the atmosphere more pure and fit for man's use. Were it not for this wise provision, it is more than probable that thickly wooded countries would be uninhabitable; as during the night the action of leaves upon the atmosphere is the same as that of the animal lungs, namely, a consuming or inspiration of oxygen and an expiration of carbonic acid, though in a less degree than that of the first.

The pulp before mentioned is contained in minute tubes or cells; and Sennebier explains the causes of green being the predominant colour in the foliage of vegetables in this way. The sap tubes or cells being yellow, and the pulp itself, from the residue of carbon contained in it, of a dark blue, produce between them the green colour of the leaves and young shoots; and it is with the nature of this pulp the chief portion of our present question rests.

It has been correctly ascertained by various experiments, that the quantity of oxygen given off depends entirely on the intensity of light to which the leaves are subject; an increase of the one being followed by an increase of the other in a corresponding ratio; and in like manner the amount of evaporation is determined by the amount of surrounding heat: so that it appears evident that plants in a tropical climate must, from affecting circumstances, as the stronger light and more intense power of the sun than we experience in our more temperate latitudes, lose a much larger proportion of aqueous matter; the pulp, therefore, is rendered thicker; and, to afford it a passage, the vessels are by gradual distensions made larger and stronger, and are not so soon obstructed. This, it must be observed, is brought on by very gradual enlargements; and the same cause which operates thus on the sap increases also, in thickness and strength, the outer covering of the whole leaf: and it is from this cause that our oaks, and other deciduous plants, assume the character of evergreens when transplanted to a tropical climate.

The cause of the fall of the leaf is, the disruption of the sap vessels at the base of the leaves, by the thickening of the pulp by frequent accumulations in its passage to and from the leaf. To say that the fall of the foliage is attributable to cold is not exactly correct, though it may possibly affect it by increasing the rigidity of the tubes before-mentioned. But there are many trees which throw their leaves while the weather is still comparatively warm: it must therefore depend more properly on the obstruction of the sap vessels; for if a branch is cut off in summer while the leaves are still in health and performing their several offices, it certainly kills them; but they do not drop off. So that we may conclude that as it is the presence of solar influence, by increasing the substance of vegetable fibre and its elasticity, which induces them to assume an evergreen character, so it is its absence by increasing the density of the fluid matter and the rigidness of the fibre which causes that of deciduousness.—Ed.

GARDENERS' BENEVOLENT ASSOCIATIONS.

In the subjoined paper we deviate a little from our usual course of confining our remarks to things directly connected with the management of plants and flowers, for, in considering the practice of Horticulture, we are led to think of those who pursue it professionally. Gardeners, as a body, are as respectable as they are numerous; and though we find less of pauperism among them than any other body of equal number, it does not follow that they are better paid (the average is unfortunately the reverse); but their respectability may be said to arise from the enlightening, invigorating, and moralising pursuit they follow. Still there are always many who from sickness, infirmity, or other casual misfortune, are reduced to feel the bitter pang of poverty; and our present object is to touch the philanthropy of those who, more fortunate than many of their fellow-men, are enjoying the good things of this life. To those who are suffering what we can but faintly describe, words are but as wind, and mere pity an idle remark; they require something more substantial.

That we are sufficiently numerous as a body to provide assistance for every deserving but unfortunate member of the profession, without his becoming subject to the stigma so universally attached to the recipient of parochial relief, there cannot for a moment be a doubt; and it only requires unanimity of purpose, an immediate resolve on the part of every individual capable of contributing to do something, and a proper vehicle through which it may be judiciously distributed, to disseminate happiness where little short of misery is now found.

The Gardeners' Benevolent Society has, for some years, been silently working much good; and we rejoice to see it arresting the attention of the rich and the noble. Long may it continue to do so! but it is not fit that gardeners should apathetically leave it to others to do the good work: let them but unite, and a very small contribution will be found sufficient to work wonders.

The bright example held out by the Licensed Victuallers', the Butchers', and various other institutions, should not be entirely thrown aside, but let us "do likewise."

The Benevolent Fund is kept up by voluntary contributions of a guinea per annum; and it has now, we believe, eight persons—old and indigent gardeners and their wives or widows—entirely supported by it. This Society was formed for the permanent support of such members of the profession as from age or other infirmity were rendered incapable of pursuing their vocation, and redounds much to the honour of the founder. Another Society, in unison with the first, has lately been formed for the temporary relief of gardeners in distress. The endeavours of the Society have been most ably and laudably seconded by the editor of the *Gardener's Gazette*, and, throwing aside all differences of opinion, we would have all parties unite in forwarding the interests of so desirable an institution; the object of the Society being to afford temporary assistance in the shape of small sums, the residue, if any, going to the Benevolent Fund. The following remarks, taken from the *Gazette*, will show most forcibly the importance and probable benefit resulting from such a fund.

"There are no charities in this kingdom that do more good than those which stretch forth a helping hand to persons in temporary difficulty. How many thousands have, for want of very trifling aid, been permanently ruined, and their families

scattered and pauperised! How much acute suffering would the comparatively paltry sum of forty shillings, in many a case, have prevented! Nay, are there not instances in which the prompt help of a few shillings would prevent weeks and months of misery and privation? Then what class of charities can be more useful, or find more opportunities of doing good? and among what class of men can be found so many cases of temporary distress for the exercise of so benevolent a calling? We anticipate the very best results; we foresee that in the hands of a vigilant committee very small means will confer large benefits, and we can safely appeal to men of all opinions on behalf of so good, so great, and so beneficial an establishment. And what is the description of persons who are looked to for support. First, the gardeners themselves; and, for men whose means are so limited, the subscriptions should be low: on this account we approve of its being fixed at five shillings per annum. It is within the means of every gardener in a situation, while it cannot be beneath the notice of the wealthy who are inclined to set an example by paying the same, or to give of their abundance, and increase it."

The first General Meeting was held at the Crown and Anchor Tavern, Strand, on Monday the 28th of last month; and it is proposed that the future meetings take place on the second and fourth Tuesdays of every month.

We leave it now in the hands of those most immediately concerned, and trust this appeal will not be altogether without its fruits.—Ed.

LIST OF

(*Continued from page* 159.)

75. *Dendrobium cupreum.* (Derived from the colour of its flowers.) Stem bulbous. Flowers copper-coloured, veined with a reddish tinge, and the labellum has two reddish brown blotches on the inside. This plant requires a mixture of sphagnum, rotten wood, and turfy peat, and plenty of water while growing, with a temperature of 75°.—*Native of India.*

76. *Dendrobium moschatum.* (Derived from its flowers being musk-scented). Stem robust, growing from six to nine feet

long, with its leaves placed alternately up them. Flowers produced from the joints of the stem, near the summit, on a pendent raceme, from eight to twelve in number; sepals and petals of an oblong obtuse form, spreading; of an orange colour, faintly striped with cream colour; labellum slipper-shaped, slightly hairy on the outside, and same colour as the sepals and petals, the inside richly feathered with crimson. This plant requires plenty of pot room, an abundant supply of water when growing, and a mixture of sphagnum, turfy peat, and rotten wood, with a temperature of 75°.—*Native of India.*

77. *Dendrobium calceolariæ.* (Derived from *calceolus*, a slipper.) Plant much similar to D. moschatum in growth; but the flowers are of a paler colour, and the labellum more slipper-shaped. It requires the same treatment and temperature as the other. — *Native of India.*

78. *Dendrobium moniliforme.* (Derived from the swelling of its joints.) Stem bulbous, one foot and a half long, of a shining pale green, with swelled tumid joints; veins conspicuous both in the stem and the leaves, particularly the base of the leaf where it embraces the stem; leaves ovate, lanceolate, obtuse. Flowers from the joints of the stem, from two to four on a short stem; sepals and petals white, tinged towards the apex with fine pink; labellum white, tinged at the apex with pinkish purple. This requires the same treatment and temperature as the others, and should be in every collection. — *Native of India.*

79. *Dendrobium nobile.* A beautiful species with bulbous stems, two feet and a half long, of a shining green; leaves alternate ovate, lanceolate, and rather obtuse. It flowers on two-years-old wood, from two to four on a short stem rising from the upper joints; sepals and petals white, stained with pink at the apex; labellum white, with its throat stained with dark rich plum colour, with the apex pink. This also requires the same treatment and temperature as the others, but should be checked from water as soon as it has made its growth, or else it will make a second, and not flower so fine. — *Native of India.*

80. *Dendrobium cærulescens.* Another beautiful species, much similar to the above, except that the leaves are rather longer and narrower. The sepals and petals are bluish purple, but they grow lighter with age, and the labellum also. It requires the same treatment and temperature as the others. — *Native of India.*

81. *Dendrobium cærulescens pulcherrimum.* One of the most beautiful of the whole genus, with bulbous stems one foot to sixteen inches long; leaves alternate, and much similar to

D. cærulescens in growth, but the stems are rather of a paler colour, and its flowers are much finer. It also requires the same treatment and temperature as D. cærulescens. — *Native of India.*

82. *Dendrobium Wallichianum.* Another variety of the former species. Its growth is similar, but the flowers are rather smaller, and of a darker colour. It requires the same treatment and temperature. — *Native of India.*

83. *Dendrobium crispatum.* (Derived from the flowers being crisped and curled.) Stem bulbous, eight inches long; leaves alternate. Flowers rather small; sepals and petals greenish yellow; column white; labellum pinkish at the base, and a stain of green at the apex. This species requires hanging up, a good drainage, and but a moderate supply of water when growing. — *I believe, a native of India.*

84. *Dendrobium Pierardi.* Stem drooping, from three to four feet long; leaves nearly three inches long, placed alternately. Flowers produced in twos and threes, but mostly in twos at the joints, contrary side to the leaves; the sepals and petals are pinkish white; the throat of the labellum, where it surrounds the column, striped a little with purple at the base, and the remaining part sulphur colour. This requires hanging up, with the same treatment and temperature as the others. — *Native of India.*

85. *Dendrobium Pierardi var. latifolium.* Stem drooping, from three to four feet long; leaves four inches long and two inches broad. Flowers both larger and of a brighter colour. The same treatment and temperature as the others.—*Native of India.*

86. *Dendrobium chrysanthum.* Stem drooping, from two to three feet long, of a shining green; leaves three inches long. Flowers in pairs, of a deep golden yellow, with the inside of the labellum marked with dark red. This species requires hanging up, with a liberal supply of water while growing, and the same temperature as the others. — *Native of India.*

87. *Dendrobium fimbriatum.* Stem drooping, two to three feet long, leaves alternate. Flowers of a deep rich orange colour; sepals and petals the same, the latter waved and slightly fringed; labellum undivided, hollow, and fringed. This also requires hanging up, with a liberal supply of water when growing. — *Native of India.*

88. *Dendrobium speciosum.* Stem bulbous, ten inches long, round and thick; leaves in threes and fours, placed at the summit of the bulb. Flowers of a pale yellow. This is often

found rather difficult to flower, on account of it being generally grown in too high a temperature. It requires a lower temperature compared with others, and an abundant supply of water while growing. — *Native of New Holland.*

89. *Dendrobium bicolor.* Plant with bulbous stem, one foot to eighteen inches long; leaves alternate, of an ovate lanceolate form, ending in an acute point. Flowers two-coloured, from which it takes its name. It requires the same treatment and temperature as the former ones. — *Native of India.*

90. *Dendrobium stuposum.* Plant with slender bulbous stems; leaves alternate. Flowers rising from the joints of the one-year-old stems. It requires hanging up either in a basket with turfy peat and sphagnum, or on a lump of turf; with a temperature of 70° to 75°. — *Native of India.*

91. *Dendrobium Cambridgeanum.* Stem bulbous, one foot and a half long, with swelled tumid joints; leaves alternate, ovate lanceolate. Flowers produced from the joints, of a fine deep yellow, with a deep rich dark blotch on the inside of the labellum; its flowers are much similar to D. chrysanthum, but its growth is different. It also requires hanging up, with the same treatment and temperature as the others. — *Native of India.*

92. *Dendrobium Jenkinsii.* This is a beautiful little plant of the pseudo-bulbous kind; its bulbs are one inch long, and four-angled; leaves single, two inches long and half an inch broad, and rather thick. This species should be grown on a chump of wood, with a little sphagnum fastened round it, and kept constantly damp while growing; with a temperature of 70° to 75°. — *Native of India.*

JOHN HENSHALL, K—P—Y.

(*To be continued.*)

LIST OF NEW PLANTS.

GYNANDRIA MONANDRIA. — *Orchidaceæ.*

Clowesia rosea. A beautiful dwarf orchideous plant, resembling a catasetum in habit. The stems (bulbous) are from 2½ to 4 inches long; the inflorescence proceeds from their base, and consists of five or six, probably more, erect, delicate, white flowers, tinged with pink. They are remarkable for having their petals and the end of their lip broken up at the margin into

numerous delicate glandular fringes, which give them a very rich and beautiful appearance.

It is a native of Brazil, and first flowered at Broughton Hall, near Manchester, with the Rev. Mr. Clowes, a zealous cultivator of Orchidaceæ, after whom it is named. — *Bot. Reg.*

DIADELPHIA DECANDBIA. — *Leguminosæ.*

Cytisus Weldenii. This is the true Dalmatian laburnum. It is distinguished from the Scotch by its flowers growing in short erect racemes, and not in long drooping ones.

Although, from its similarity in foliage to the laburnum, it is liable to be confounded with that plant, yet it is in fact nearer *Cytisus sessilifolius*, of which it may be almost regarded as a gigantic form. To what size it will grow is unknown, probably eight or ten feet high, but on the Dalmatian Mountains it is said to be a bush. — *Bot. Reg.*

GYNANDRIA MONANDRIA. — *Orchidaceæ.*

Renanthera matutina. A very small-flowering species, yet bearing a great number of crimson and yellow spotted flowers, on erect racemes. It was first found in Java, and afterwards by Mr. Cuming in the Philippines. It first flowered at Chatsworth, in December, 1842. — *Bot. Reg.*

PENTANDRIA MONOGYNIA. — *Cinchonaceæ.*

Rondeletia longiflora. A shrub of great beauty, introduced by Messrs. Veitch and Son of Exeter, from South Brazil, and particularly well suited to greenhouse cultivation. It resembles the old Bouvardia triphylla in its habit (but the flowers are a pleasing blue), and it may be managed in the same manner. — *Bot. Reg.*

ICOSANDRIA POLYGYNIA. — *Rosaceæ.*

Rosa Brunonii. A native of Nepal and Kamaon, whence it has been sent by Dr. Wallich to the Royal Gardens of Kew, where, planted against a wall facing the west, it proves perfectly hardy, and in the summer months makes a handsome appearance, with its large corymbs of from 20 to 30 white or slightly cream-coloured, single, fragrant flowers; which, in age, assume another tint, being then singularly spotted with dingy purple. The plant is of spreading habit; and probably, if suffered to grow naturally, would be a climber. — *Bot. Mag.*

DIANDRIA MONOGYNIA. — *Acanthaceæ.*

Eranthemum montanum. A very beautiful flowering shrub, a native of the Circar Mountains. It is also found in the Madras peninsula, and in Ceylon. It is allied to *E. strictum*, but

abundantly distinct, in the very different bracteas, larger size, in the colour of the flowers, which are crimson lilac, and the much longer tube.

It flowers copiously in the stove in April and May. — *Bot. Mag.*

POLYGAMIA MONŒCIA. — *Leguminosæ.*

Acacia dentifera. A new and very graceful species of Acacia, from the Swan River, with unusually long racemes of flowers, longer than the leaves, of a full yellow, and highly fragrant. The seeds were received from Mr. Drummond. The flowering season of the plant, in an airy greenhouse, is March and April. — *Bot. Mag.*

Rhododendron fragrans. This plant is probably a hybrid between R. catawbiense and some of the hardy fragrant-flowered Azaleas. It was raised accidentally in the nursery of Messrs. Chandler and Son, at Vauxhall, twenty-five or thirty years ago. It forms a very compact dwarf shrub, decidedly evergreen, with small and dense foliage, and numerous clusters of pretty pale pinkish lilac blossoms, in which there is a variety of delicate tints, approaching to white in the centre. It is a free flowerer, and possesses an agreeable odour. It has quite the habit of a Rhododendron, and looks like a small close-growing pale-flowered variety of R. ponticum, with the leaves a little wrinkled, and destitute of much glossiness. — *Paxt. Mag. Bot.*

Labichea bipunctata. A neat and rather showy greenhouse shrub, the flowers of which remind us, in their form, size, and colour, of Euthales macrophyllus, a handsome Swan River herbaceous plant of recent introduction. Seeds of it were imported by Mr. Low of Clapton, from the Swan River colony, two or three years ago, and the plants have flowered repeatedly in the Clapton Nursery. The plant possesses much of the upright tall habit of Hovea Celsii, when that species is left unpruned. The flowers are borne in a kind of short raceme from the axils of the leaves, and are not at all inclined to be terminal. — *Paxt. Mag. Bot.*

CALENDAR FOR SEPTEMBER.

STOVE. Proceed with the repotting, pruning, tying, and general arrangement necessary to prepare the plants for the winter; and, having properly settled them in their respective places, preparation should be made, by admitting the greatest amount of light and air compatible with the proper temperature

of the house, to bring them into a well-ripened and mature state, in order to lessen the danger of rotting, damping, and premature growth, through the winter. Many plants cease growing at this season, and remain dormant until the spring; such as these are better kept in the old soil in which they have been growing, for if taken out of it they frequently shrivel, and become completely dried up; roots which have been so treated rot on the first application of moisture. Have a careful eye on orchidaceous plants, that they do not receive too much water when they have done growing.

Frequently examine the bottoms of all the pots, to ascertain if every plant is well drained: large pots standing on a flat stage should be elevated an inch, to allow the water to pass off freely. Climbers intended to flower early next season should be pruned close back now. Avoid too much moisture in the house, as a dry atmosphere now will enable the plants to bear a lower one by and by; still, should fire heat become necessary at the end of the month, an occasional sprinkling on the paths must also be applied. The summer temperature should be still kept up.

GREENHOUSE. Here, too, repotting and other preparations should be forwarded with all expedition. Alterations and repairs should be completed by the middle of the month, so that not a single plant of the least value be left out later than the end of the month, as we may now expect either wet or cold weather; both of which, as we have before explained, are equally injurious, A dry atmosphere and plenty of air should be kept in the house; and, as the plants are brought in, be particularly careful to free them from insects: one of the worst is the red spider, with which greenhouse plants in the open air are very likely to be infested. We would rather spend a whole day in washing and picking the leaves of a plant which had them, than allow it to be placed in the house while one remained, as they spread so fast, that it is almost impossible to eradicate them when once established. Cacti should be placed in the lightest part of the house, not, as they are too frequently seen, under the stages, on back shelves, or any other out of the way place.

FLOWER-GARDEN. Auriculas should be in their winter quarters by the end of the month. Remove decaying leaves, give them plenty of air, and water them rather sparingly.

Dahlias are now rewarding the grower for his pains, but his trouble is not over; unless they are kept constantly secured to their stakes, an hour's wind may destroy them all. The blooms are a favourite object of attack to earwigs; and, though various means have been devised to prevent their depredations, we believe there is nothing better than placing traps, and constantly killing them. Flowers intended for exhibition should be protected from their first opening in small boxes, made to fit on to the stakes, with a movable glass slide in front; the small opening in the bottom, through which the stem of the flower passes, should be filled with wool dipped in oil; this effectually prevents the ingress of insects, and keeps off rain, sun, &c. If fine flowers are desired, the buds should be thinned, and some strong-growing kinds are the better for a liberal pruning: if the weather is dry, rotten leaves, or other mulch, should be laid round the stems. See that all are correctly named.

Layers of Picotees and Carnations should be taken off as soon as they are well rooted. Place two or three in a 48 pot, using a rather light soil, and place them ready for removal to their standing for the winter. Keep Chrysanthemums well supplied with water: liquid manure once a week will greatly assist them. Prepare beds for planting Tulips, Hyacinths, Anemones, and Iris. Hyacinths, &c., for early forcing, should be potted by the middle of the month. Plants for bedding out next season should be got up and potted, and frames and other places intended for their preservation through the winter got ready for their reception: if these are not large enough to admit a stage, a thick stratum of ashes should be laid on the bottom, on which the pots may be placed. One of the best means of preserving half-hardy plants is afforded by a pit, the sides being built of turf or sods from a meadow, cut about a foot wide: these placed closely and firmly together, and secured by a few stakes driven through them into the ground, and the top covered with common garden lights, are quite equal to a greenhouse.

Pot off the annuals sown last month, and sow a few more. Rhodanthe and Lisianthus succeed now. China Roses strike freely now. Transplanting of trees and shrubs may commence at the end of the month.

LETTER-BOX.

R. M. S. — The propagation of Cacti is performed in this manner:—The cuttings, when taken off, are laid to dry for about a fortnight; they are then potted in light sandy loam and leaf-mould. They require to be kept barely moist till rooted. When potted off, the soil should be loam, leaf-mould, and old mortar, in about equal quantities.

H. L. — Petunias seed freely in the open air, and succeed better treated as half-hardy annuals. The seed should be sown early in March, and the plants placed in the open border in the end of May. New varieties are thus obtained.

K. D. — We can recommend the following six Pelargoniums: Warrior, Life-Guardsman, Comte de Paris, Elise superbe, Diadematum rubescens, Climax.

Amicus. — Greenhouse plants require an average temperature of 45° during the winter. The house being light and airy is a great advantage; but you do not state what means you have of obtaining artificial heat when required. This should be provided for. A covering of mats suffices, if the plants are not very delicate.

FLORICULTURAL INTELLIGENCE.

Royal South London Floricultural Society. The best July show that has ever been held took place on Tuesday, July 25. at the Zoological Gardens, where there were more Carnations and Picotees staged than perhaps were ever seen together before. The judges' duty was arduous enough, for there must have been forty or fifty stands. The victor of the day was Mr. Edmunds of the Wandsworth Road, who took the Society's gold medal for Picotees; and, but for the accidental dropping of a petal, was in for Messrs. Dickson's silver cup also. The Rev. Mr. Mathews of Oxford, who had the next best stand, was placed first, although the flowers were rather inferior in growth. Messrs. Paul and Son had a most beautiful collection of Roses, amongst which were the following pretty varieties: Gallica, Nouvelle Provins, Nero, Reine, D'Aguesseau; Moss, Blush, Bath White, Celina, Eclatante; Alba, Félicité, Parmentier, La Séduisante, Sophie de Bavarie; Damask Perpetual, D'Angers, La Mienne, Bernard, Emilie Duval, Antinous; Hybrid Perpetual, Mrs. Elliot, Duchess of Sutherland, Madame Laffay, Aubernon, Comte de Paris; Hybrid China, Charles Duval, General Allard, Blanchfleur, Lord John Russell, William Jesse, Great Western, Madame Plantier; Noisette, La Vic-

torieuse, Miss Glegg, Euphrosyne; CHINA, Archduc Charles, Madame Bureau, Mrs. Bosanquet, Madame Breon; BOURBON, Armosa, Proserpine, Augustine Lelieur, Ceres, Edward Defosse, and Hennequin; TEA-SCENTED, Elisa Sauvage, Nina, Aurore, Pactolus, Barbot, and Bougère.

The cut flowers were very splendid, and occupied one entire side of the long tent. Many of the collections were very choice.

The show of plants was excellent, and the large collections of Fuchsias afforded a fine opportunity of examining the claims of this class of flowers. Cockscombs, Balsams, Lilies, Heaths, and Geraniums, abounded; and, upon the whole, the exhibition was finer and more interesting than any that have preceded.

The following is a list of the prizes: —

Class I. *Amateurs.*

For 12 varieties of Heartsease: 1st, Mr. Edmonds; 2d, Mr. Bragg.

For 12 varieties of Roses, in bunches: 1st, Mr. Bragg; 2d, Mr. Cox.

For Cut Flowers: 1st, Mr. Carty; 2d, Mr. Townley.

For 12 Picotees, white grounds: 1st, Mr. Edmonds; 2d, Mr. Newhall; 3d, Mr. Burrup; 4th, Mr. Allway.

For 12 Carnations: 1st, Mr. Newhall; 2d, Mr. Dowler; 3d, Mr. Wildman.

For a collection of Miscellaneous Plants, 12 pots: 1st, Mr. Townley; 2d, Mr. Cox; extra, Mr. Schroder.

For 6 varieties of Fuchsias: 1st, Mr. Bragg.

Class II. *Gentlemen's Gardeners.*

For a collection of Miscellaneous Plants, 24 pots: 1st, Mr. Bruce; 2d, Mr. G. Young; 3d, Mr. Wilson; 4th, Mr. Hamp.

For 24 Heartseases: 1st, Mr. G. Young.

For 8 Calceolarias: 1st, Mr. Parsons; 2d, Mr. Mason.

For Cut Flowers: 1st, Mr. Bruce; 2d, Mr. Parsons.

For 12 Cockscombs: 1st, Mr. Scorer.

For 12 Balsams: 1st, Mr. Doran.

For 12 Carnations: 1st, Mr. Embleton; 2d, Mr. Smith.

For 12 Picotees: 1st, Mr. Welsh; 2d, Mr. Embleton.

Class III. *Nurserymen, &c.*

For 36 Miscellaneous Plants: 1st, Mr. Jackson; 2d, Mr. Halley; 3d, Mr. Fairbairn.

For 36 varieties of Heartsease: 1st, Mr. Henbrey.

For 12 Pelargoniums: Mr. Catleugh.

For 12 Ericas: 1st, Mr. Jackson; 2d, Mr. Fairbairn.

For Roses: Mr. Paul.

For Cut Flowers: 1st, Mr. Fairbairn; 2d, Mr. Chapman.

For 12 Carnations: 1st, Mr. Norman; 2d, Mr. Orson; 3d, Mr. Hughes.

For 12 Picotees: 1st, Mr. Norman; 2d, Mr. Franklin; 3d, Mr. Orson.

Open to all Classes.

For Orchidaceous Plants, 4 specimens: Mr. Cox.

For a specimen Plant: 1st, Mr. Dawson; 2d, Mr. Cox; 3d, Mr. Jackson.

For Seedling Picotee: Mr. Mathews.

For Seedling Carnation: Mr. Wildman.

For Honey in Glass in the Comb: Mr. Edgerton.

Extra Prizes, offered by Mr. Denyer to Amateurs.

For the 12 best Roses, single trusses: Mr. Mathews.

For ditto to Gentlemen's gardeners: 1st, Mr. Pawsey; 2d, Mr. G. Young.

For 12 Picotees: 1st, Mr. Mathews; 2d, Mr. Edmonds.

For the best Bizarre Carnation: Mr. Norman.

For the best Flake ditto: Mr. Norman.

For the best Light-edged Picotee: Mr. Franklin.

For the best Heavy ditto: Mr. Norman.

For the best collection of Cut Indigenous Plants in Flower, and name and place of growth: Mr. Riddle.

For the 12 best Picotees; silver cup, value 5 guineas, presented by Messrs. Dickson: Mr. Mathews.

Nottingham Floral and Horticultural Society.—The third meeting of this Society was held at the Assembly Rooms, on Wednesday the 2d instant, for the exhibition of Carnations; Stove, Greenhouse, and Herbaceous Plants; Ericas and Hardy Shrubs; and, considering the late unpropitious weather, we were agreeably surprised to see so admirable a display of plants and flowers.

Of all the flowers that adorn the garden — whether they charm the eye by their beauty of form or richness of colour, or regale the sense of smelling by their fragrance — none can excel our old favourite, the Carnation, the unrivalled merits of which are canonised in the immortal verse of Shakspeare: —

"The fairest flowers o' the season
Are our Carnations and streak'd Gilliflowers."

The Orchideous and Stove Plants forwarded by George Walker, Esq., and F. Wright, Esq., attracted great attention; and we cannot let this opportunity pass without noticing the great improvement in this part of the exhibition. We trust that the Society will receive every assistance from the gentlemen of the neighbourhood, as these tender, but most beautiful plants, cannot be conveyed any great distance.

The Greenhouse Plants, which were unusually abundant for this season of the year, were contributed by G. Walker, Esq., F. Wright, Esq., A. Lowe, Esq., and Mr. Pearson.

Among the Flowers, a pan of Roses, from Mr. Pearson's was greatly admired, as well as his pan of Pansies, in which a white one, called Zelica, was considered very beautiful.

Carnations.

First pan, Mr. Pearson.—Gameboy, Lord Brougham, Marquess of Granby, Lady Flora, Beauty of Woodhouse, Mrs. Horner, Victoria, Nulli Secundus, Lady Hinchinbrook.

Second pan, Mr. U. G. Pickering.—Clark's London, Hepworth's Hector, Toone's Ringleader, Ely's Lady Ely, Princess Charlotte, Derby Willow, Brown's Lovely Ann, Jackson's Delight, Ely's Grace Darling.

Third pan, Mr. F. Wood.—Hepworth's Brilliant, Puxley's Prince Albert, Hufton's Foxhunter, Mansley's Euclid, Elliott's Duchess of Sutherland, Kirkland's Duchess of Gloucester, Robinson's Duke of Wellington, John's Prince Albert, Wilmer's Elizabeth.

Scarlet Bizarres.—1. Martin's Splendid, Mr. Pickering; 2. Ely's Jolly Dragoon, Mr. Taylor.

Crimson Bizarres.—1. Wood's William IV., Mr. Taylor; 2. Cartwright's Rainbow, Mr. Pickering; 3. E. Mundy, Esq., Mr. Pearson.

Scarlet Flakes.—1. Simpson's Marquess of Granby, Mr. Pickering; 2. Rob Roy, Mr. Taylor; 3. Ringleader, Mr. Pearson.

Purple Flakes.—1. Mango, Mr. Taylor; 2. Knott's Alfred the Great, Mr. Pickering; 3. Beauty of Woodhouse, Mr. Pearson.

Rose Flakes.—1. Unknown, Mr. Taylor; 2. Barringer's Apollo, Mr. Pickering.

Heavy-edged Red Picotee.—1. Derby Willow, Mr. Pickering; 2. Robinson's Will Scarlet, Mr. Robinson; 3. Derby Willow, Mr. Taylor.

Light-edged Red Picotee.—1. Robinson's Duke of Wellington, Mr. Robinson; 2. Wheeler's Queen Victoria, Mr. Pickering; 3. Sharp's Wellington, Mr. Pearson.

Heavy-edged Purple Picotee.—1. Boothman's Victoria, Mr. Taylor; 2. Hufton's Nehemiah, Mr. Pickering; 3. Monarch, Mr. Pearson.

Light-edged Purple Picotee.—1. Nulli Secundus, Mr. Pearson; 2. John's Prince Albert, Mr. Wood; 3. Robinson's Nottingham Hero, Mr. Robinson.

(*To be continued.*)

THE

FLORIST'S JOURNAL.

OCTOBER, 1843.

ON THE GENUS MIMULUS.

WITH AN ENGRAVING OF SEEDLING VARIETIES OF M. CARDINALIS.

FLORICULTURE, like other arts, requires that from time to time new subjects should be brought under the notice of those who delight in the pursuit ; and, that the interest which conduces to the love of the science may not flag, it becomes the duty of all who wish it well, to produce, if possible, or promote, when produced, these new impulses.

It would be a pleasing task had we space here to take a retrospective view of the advances made by Horticulture, and so of the general cause of civilisation, on the introduction of each of the several popular favourites of florists at the present day. It would be a thoughtless undertaking to pretend to number the admirers, nay the enthusiastic supporters of Floriculture which the Dahlia, the Carnation, the Geranium, or the Fuchsia, has been the means of adding to the list of Flora's votaries.

But it may happen, and that from natural causes, that the interest excited by these several beauties may decline, either individually or collectively, or, as with other things, different tastes may require other and more varied subjects on which to lavish their spare moments and attention ; and hence the necessity of constantly endeavouring to obtain these new impulsive subjects — for, by a strange fatality, though we are constantly aiming at perfection in these objects of our especial care, we no sooner arrive within reach of the ideal image than the interest ceases, and we leave the object of our former attention,

and turn with avidity to some newer and less perfect form: this is doubtless the effect of that flattering sentiment "creative power."

We have been induced to select our present illustration in consequence of an idea we entertain from its neat habit, its generally manageable character, and its already beautiful flowers, that it will ere long become a reigning favourite. In short we anticipate that a very few years will see this genus occupying the place so long and so well filled by Calceolaria, the original species of which, as is well known, are miserably diminutive things, with nothing to recommend them beyond their colour; but we have seen with them what may be done by judicious management and perseverance. Now with the Mimulus how different is the beginning: we have a handsome, free-growing plant producing an abundance of flowers of almost every hue, between a pale rose-colour and the richest crimson, including orange. It is only in the form of the flower that any alteration is required or at all desirable; at present they collapse, and much of their beauty is lost by this form. The point to be gained is an expanded flat surface with sufficient size in the petals individually to fill the spaces which occur when the flower in its present form is pressed out horizontally: how long it will require to obtain this description of form must depend on the attention they may command. The manner of doing it will be that which has been so successfully pursued with all other florist's flowers, viz. sowing the seed of only the best varieties and preserving only the most promising of the seedlings; from the ease with which these may be obtained, and the little trouble they incur, we should say that almost every cultivator of the smallest pretensions might easily manage from fifty to a hundred annually; these may be planted in a bed to prove, and only the very best preserved to bloom another season: to the flower-gardener they are invaluable for this purpose, and when seen as we saw the bed from which our figures were taken, are sufficient to arrest the attention of the most indifferent.

We are indebted to our friend Mr. E. Hamp, gardener to T. Thorne, Esq. of South Lambeth, for the opportunity of bringing them under the notice of our readers, and also for his subjoined treatment. We have confined our remarks in this paper chiefly to M. cardinalis, but it must be remembered the

genus contains some other species that have long been favourites with the general flower-gardener, and it will be for the cultivator to determine how far these may be useful in improving the future races by means of cross-impregnation ; as, for instance, if it were desired to impart a shrubby habit, might it not be done by the assistance of M. glutinosus, or are we sanguine in imagining that the scent, modified perhaps, of M. moschatus can be mingled with the fine flowers of cardinalis; this is, however, only speculation, yet we mention it that those interested may see some of the advantages likely to follow the adoption of these flowers. In conclusion we beg cordially to recommend them to the notice of every one possessing a garden, more particularly to those who have only a small suburban slip, and are anxious to grow only the prettiest and most easily cultivated. A common garden frame and attention to Mr. Hamp's excellent article will insure success.— Ed.

ON THE CULTURE OF THE MIMULUS.

In laying before the readers of your very useful Journal a brief notice of the Mimulus, I do so without any presumption that I know more about it than my brother gardeners; but, as all your readers may not be equally acquainted with its easy cultivation, I venture to offer these remarks, in the hope that it may draw their attention to this beautiful tribe of plants. Judicious impregnation has done much for the Mimulus as well as for many other plants; but I think a great deal more may be effected by attempting to improve their form and increase their size. Their brilliant colours, I think, can scarcely be exceeded, although perhaps still more varied.

It is not too late to put in cuttings, but it should now be done as early as possible in the following manner: — Place half a dozen or more round a 48-sized pot, filled with the following compost. Two thirds leaf mould or any very light soil, one third friable loam with plenty of sand, taking care to well drain the pots. They should then be plunged in a gentle heat, and when rooted, which will be in about three weeks or a month, they may then be potted off singly, one plant in a

60-sized pot; or they may stand in the cutting-pots until the first week in March, to be then potted off, and in these last pots they may remain until the first week in May, when they may be planted out in clumps or on the borders, as may be required. If specimens are desired in pots for adorning the greenhouse or conservatory during summer and autumn, they should be shifted the first week in March, from the 60-sized pot into 32's; adding more loam and a portion of well-rotted dung. These will again require shifting in May into 12-sized pots, and in these they may be left to bloom. They will require, while growing, an abundant supply of water, and occasionally some liquid manure.

If plants are to be raised from seed, it should be sown the last week in February or the first week in March, in pots or pans of very light soil, and placed in gentle heat where it will soon germinate. When all up, they should be taken out of heat, and placed under a cold frame, or on a greenhouse shelf to harden a little before potting off. Their treatment may then be in all respects the same as that recommended for cuttings.

If these observations should, in the smallest degree, be the means of bringing this charming tribe of plants into more general cultivation, with a view to their improvement, the object of the writer will be gained.

South Lambeth. E. A. H.

ON THE NORTH-INDIAN SPECIES OF IMPATIENS AS BORDER PLANTS.

THERE are scarcely any plants of recent introduction which can at all compare with many of the Indian Balsams for floricultural purposes, when they are placed in appropriate situations. Added to a very considerable degree of gaiety, and a floral structure of no ordinary curiosity, they possess a form and habitude which, I think, may be regarded as at once pleasing and majestic; the whole forming a *coup-d'œil* of imposing beauty. Nor is the curious property of irritability possessed by the seed-vessels to be regarded as unworthy of notice; it is,

in fact, a peculiarity calculated especially to engage the attention of the fair sex; and I would venture to assert, that many a delicate admirer of floral beauties, whose eye had been attracted by the beauty of these plants, has been momentarily startled by the unceremonious discharge of a volley of—*seeds*. In the instance before us, this irritability is lodged in the valves of the fruit, which, when ripe, separate on the slightest touch, and spring back with great elasticity. It may be thus explained:—the tissue of the valves of which the seed-vessel is composed consists of cellules that diminish in size very gradually from the exterior to the internal surface; the fluids contained in the external cells are the most dense, and, by a process of endosmose, they gradually empty the inner cells, and distend themselves; in consequence of this, the external tissue is disposed to expand, and the internal to contract, as soon as anything occurs to destroy the force that keeps them straight; and this at last does occur by the disarticulation of the valves, the peduncle, and the axis: a sudden spontaneous movement follows, and each valve rapidly rolls itself inwards, and with such force that the seeds are ejected to a considerable distance. Dutrochet, an extremely acute physiologist, has proved that it is possible to invert this phenomenon by producing exosmose: in order to effect this he placed fresh valves of Impatiens into sugar and water (a fluid denser than that contained in the valves), and this gradually emptied the external tissue, and, after rendering the valves straight, ultimately curved them backwards.

The species of Impatiens more immediately under our notice were, when first introduced, most generally cultivated in pots, in the same manner and situations as the common balsam. In such situations they are extremely beautiful, and deserving of very extensive cultivation; in short, there is something so peculiarly interesting in the form of their floral parts, and in their profusion and elegant distribution, that I would even prefer them to the more commonly cultivated garden balsam. Beautiful and valuable as they undoubtedly are in such situations, these high qualities are increased in a tenfold degree by the facility with which they may be cultivated in the open ground: here they attain a vigour and robustness which marks it as a situation peculiarly appropriate to them; and it is in this sense

most especially that we may regard their introduction as a boon to those engaged in floricultural pursuits.

To attempt any minute directions for their cultivation would be to suppose your readers to be ignorant of the first principles of cultivating plants. I will, therefore, only remark, that they succeed best when planted in situations where the soil is comparatively *cool* and *moist* during summer; and that they are best (that is, it is most convenient) when they are raised among other half-hardy annuals, and transplanted to the situations chosen for them. Their success will be, *cæteris paribus*, in proportion to the care bestowed on them. I have seen them thriving equally in shaded situations (not *under* trees), and in exposed places where sufficient moisture has been present to the roots. In peaty soil they succeed admirably; but I have known them equally fine in poor stony soil, planted in an angle of north and west aspected ten feet walls, *provided* they were well supplied with moisture at the roots. Water I should therefore regard as the most essential requisite in their cultivation, and this should be supplied abundantly and effectively, rather than frequently.

The hardiness of these plants, I speak more particularly now of I. glanduligera, is not, I think, generally known, nor should I have been prepared to believe them capable of enduring so great a degree of cold had I not witnessed it. Late in the autumn of last year, a goodly array of self-sown seedlings made their appearance in a spot of ground where a few large plants had been growing during the summer; some of the plants were taken up and potted, with a view to protect them, in a cold frame; others, which were left, continued unharmed during the winter months, and more appeared early in the spring. It became subsequently necessary to remove these plants, so that they cannot now be referred to as living witnesses; but the fact is in itself interesting, and it is worthy the attention of those who possess the plant to renew the trial, with a view to ascertain what degree of cold it will sustain. The past winter not having been a severe one, it may happen that the same will not occur again.

The size attained by these plants, which varies from three to eight feet in height, and about the same in diameter, renders it quite necessary to exercise some discretion in the selection of a

situation appropriate to them. One of the most suitable positions would be as single specimens planted out on a lawn, or in a select parterre, where, from the beautiful regularity in the distribution of their lateral branches, they would form very elegant objects. It would be necessary, however, that the situation should be a sheltered one, or the plants would be quite spoiled by strong winds, it being impossible to tie up the lateral branches without destroying the symmetry in which they are naturally arranged, and thus striking a fatal blow to their effect in an ornamental point of view.

The species which are best adapted to this mode of growth are, I. macrochila and I. glanduligera. I. candida is said to be in a trifling degree more delicate; but I have not had an opportunity of noticing it in this character. I. rosea is a small pink-flowered species; and I. tricornis, a yellow-flowered, small-growing kind, is perhaps the least ornamental of those which are in the hands of cultivators.

It may not, perhaps, be altogether out of place here briefly to notice our native species, which, although they are not generally cultivated, are in many respects deserving of attention. They cannot claim to rank amongst the Indian species we have been noticing, as regards their abstract beauty; but they are, nevertheless, elegant in their habit, and the colour of their flowers would make them a pleasing contrast with the red-flowered kinds: they possess equally with them those irritable properties, which, doubtless, from their curiosity, procure them some admirers. I. Noli me tangere (the common Touch me not) has large pale-yellow flowers, with faint markings of red about the throat, and is said to grow plentifully in some parts of Yorkshire and Westmoreland, and also in Wales. The other species, I. fulva, which has been regarded as an American plant, can scarcely with justice be denied a place in our British Flora: it differs from the preceding in having smaller flowers, which are thickly dotted with very conspicuous crimson spots; and by the union of these two colours that peculiar shade or hue is produced which has led to the adoption of the specific name. I have gathered it plentifully on the banks of the river Wey, in the neighbourhood of Guildford in Surrey, and it is stated to grow also near several of its tributary streams; but beyond this it has no recorded habitat that I am aware of. The

chief botanical difference between these two species consists in the former having the lateral petals of the flower larger than the nectariferous one, whilst in fulva, it is smaller; in the former also the curvature of the spur is expansive, whilst in the latter it is closely recurved; in their foliage they differ slightly,— I. Noli me tangere having the leaves narrow, ovate, with a squarish base, and serrated at the margin; in I. fulva they are more broadly ovate, tapering to the base, and toothed at the edges with reflected glands. The two species have probably been very frequently confounded.

T. MOORE.

Royal Botanic Gardens, Regent's Park, Sept. 9th.

LIST OF ORCHIDEÆ.

(*Continued from page* 184.)

93. *Dendrobium linguæforme.* (Derived from the leaves being tongue-shaped.) A curious little plant destitute of bulbs. Its leaves are nearly one inch long and fleshy, and are produced from a slender trailing stem. This will do well on a chump of wood, with a little moss fastened round it. It requires a liberal supply of water when growing, and a lower temperature compared with others. — *Native of New Holland.*

94. *Dendrobium formosum.* A beautiful and rare plant, with bulbous stems, one foot long. Leaves three inches long, and one inch broad, placed alternately up the stem. Flowers produced from the summit of the stem, in clusters, large and of a pure white, with the petals broader than the sepals. The labellum has a longitudinal mark of brownish-yellow proceeding from the base of the column to its centre. This plant should, in all cases, be hung up in a mixture of sphagnum, rotten wood, and some small lumps of turfy peat, and have plenty of water while in its growing state, with a temperature of 70°. — *Native of India.*

95. *Dendrobium aggregatum.* (Derived from the flower consisting of a number of smaller flowers collected into one head by means of some part common to them all.) Plant pseudo-bulbous, with bulbs from three to five inches long, much furrowed. Leaves single, rising from the summit of the bulb, crisp and upright, three inches long, and of a dark green.

The raceme rising from the joint in the middle of the bulb, and producing from twelve to eighteen flowers of a pale yellow, with a darker orange-yellow blotch in the labellum. This requires hanging in a basket, and the same treatment and temperature as the last. — *Native of India.*

96. *Dendrobium pulchellum.* — A beautiful plant with bulbous stems, transparent, from four to nine inches long. Leaves alternate. Flowers rising in twos and threes from the joints of the stems; sepals, white, tipped with yellowish-green; the petals are delicately marked with rose colour, and the labellum beautifully fringed and blotched with bright orange-red in the centre. This species will do either on a block of wood or in a basket; but, in either case, it should be well syringed morning and night while growing. The same temperature will do for this as for the others. — *Native of Sylhet.*

97. *Dendrobium pulchellum var. purpureum.* This species is but a mere variety of the last; its growth is stronger, and the flowers are of a purplish colour. It also requires the same treatment and temperature as the last. — *Native of Rajabassa.*

98. *Dendrobium denudans.* A small plant with bulbous stems, one foot long, and slender. Leaves alternate. Flowers in clusters from the joints, of a white colour. It requires to be placed on a log of wood, with a little moss fastened round it, and water given it freely when growing. Also in a temperature of 70°. — *Native of India.*

99. *Dendrobium discolor.* A plant with tall bulbous stems, from two to four feet long, swollen near the base. Leaves alternate, tapering rather sharply to the apex. This species is not one of the most showy-flowered plants. It is known also as D. undulatum. It requires pot culture, and rather a higher temperature during its growth, with a liberal supply of water. — *Native of Java.*

100. *Dendrobium Gibsonianum.* A plant with tall, slender, bulbous stems, nearly two feet long. Leaves alternate, and rather long and narrow. Flowers produced from a short raceme; of a yellow colour, with a stain of blood colour in the labellum. This plant also requires hanging; and during its growth it should have a high temperature, and a more sparing supply of water than in most cases, as it is a shy-growing species. — *Native of India.*

101. *Dendrobium longicorne.* (Derived from its being horned.) Plant with bulbous stems nearly one foot long, and covered with small brown hairs. Its leaves are alternate, and it produces small white handsome flowers. Requires hanging

up, with the same treatment and temperature as recommended for most others. — *Native of India.*

102. *Dendrobium crumenatum.* A tall, slender plant with bulbous stems, much swollen near the base, in resemblance a pseudo-bulb. Its leaves are placed alternately above the swollen part. Flowers a pure white, finely scented, produced from the joints of the upper part of the stem, in twos and threes, and lasting but seldom above one day. It will do in a pot, but succeeds best on a log of wood in an inclined position, as it is often found growing in its native country in that way. It requires the same treatment and temperature as most others. — *Native of Manilla.*

103. *Dendrobium Devonianum.* A most beautiful slender plant, with bulbous stems, nearly one foot long. Leaves alternate. Flowers produced on a short raceme; sepals and petals white, tipped with purple at the apex; labellum large and much expanded, white, with two large blotches of yellow on each side of the throat, fringed and stained at the apex with purple. This species should be hung up in a basket, as it is of a very tender growth, and carefully watered when wanted. — *Native of India.*

104. *Dendrobium alpestre.* A beautiful little plant with bulbous stems, three inches long, and nearly transparent. Leaves alternate. Flowers produced in a short spike from the summit of the stem, from five to nine in number, of a pale white, with the throat of the labellum finely marked with purple. This species should always be grown on a log of wood, with a little moss fastened round it, so that its roots may run into it, and be well watered when in its growing state. It requires a temperature of 70°. — *Native of the Himalaya Mountains.*

105. *Dendrobium macrostachyum.* This species produces long, slender, drooping stems; its leaves are rather narrow and alternate, and its growth is much similar to that of D. cucullatum. Flowers are produced in twos and threes, mostly the latter; the sepals and petals are a greenish white, and the labellum tinged with pink. It should be hung up, and it will grow with nearly any treatment, provided the temperature is the same as for most others. — *Native of Ceylon.*

106. *Dendrobium bicameratum.* — Plant with slender bulbous stems; leaves alternate; growth much similar to that of D. stuposum. Flowers rising from a short spike from the joints of the stem, of a pale white. It requires hanging up, with the same treatment and temperature as the other dwarf-growing sorts. — *I believe, a native of India.*

JOHN HENSHALL, K—P—Y.

(To be continued.)

LIST OF NEW PLANTS.

GYNANDRIA MONANDRIA. — *Orchidaceæ.*

Stanhopea Martiana var. bicolor. A native of Mexico, discovered by Baron Karwinski in 1827, and afterwards by M. Galeotti. It is one of the most distinct and magnificent species of the genus, and in the magnitude of its blossoms is second only to S. tigrina. The sepals are straw-coloured or almost white, faintly and sparingly marked with clusters of little vinous dots; the petals appear transparent white, with large spots of intense crimson; the lip is also a clear ivory white, except a slight discoloration at the base. The horns are of great size and strength, and taper into a kind of tendril; besides which they are exactly parallel with the epichilium, the form of which is almost linear, the two edges being as nearly as possible parallel with each other, and not a great deal broader than the column, —a mark by which the species is immediately recognised. Messrs. Rollison have lately flowered it, and believe they obtained it from Mexico. — *Bot. Reg.*

DIANDRIA MONOGYNIA. — *Scrophulariaceæ.*

Schizanthus candidus. A tender annual, having pinnatifid leaves, with linear, entire, rather wavy segments. The flowers are pure white, without a stain of any other colour; their lower lip has the middle lobe divided into two acuminate flat segments, and the two lateral ones setaceous and shorter; the upper lobe is two-lobed. It was found wild near Coquimbo by Mr. Bridges, whose No. 1356 it is. — *Bot. Reg.*

POLYGAMIA MONŒCIA. — *Leguminosæ.*

Acacia spectabilis. Among 340 species of Acacia enumerated by Mr. Bentham this is one of the finest, and it certainly is the very handsomest we have seen from New South Wales, beautiful as many of them are. It is a native of Wellington Valley and other places on the east coast of New Holland, where it was found by the late Mr. A. Cunningham and by Mr. Frazer. For its introduction to this country we are indebted to H. B. Lott, Esq., who presented it to Messrs. Lucombe, Pince & Co. of Exeter. It belongs to the same section of the genus as A. discolor and dealbata; but is probably more decidedly a greenhouse plant than they are, for it comes from the country to the north of Sydney, and therefore naturally inhabits warmer latitudes. From both it is known by its broad, smooth, glaucous leaflets. — *Bot. Reg.*

PENTANDRIA MONOGYNIA. — *Rutaceæ.*

Erythrochiton Brasiliensis. This is one of those fragrant

trees of the tropics whose foliage is filled with a sweet volatile oil like that of the orange, and whose aromatic tonic bark is valuable as a remedy for the fevers of such countries. It is said to form a small tree, at the most ten feet high, with the habit of a Theophrasta, the stem being altogether unbranched, and the long leathery leaves collected at its end. From amongst them rises a long three-cornered flower-stalk, at the end of which are a few large white flowers, conspicuous for their fine red calyxes. It inhabits close shady places in the virgin woods of Brazil. — *Bot. Reg.*

HEXANDRIA MONOGYNIA. — *Liliaceæ.*

Scilla Peruviana var. discolor. That the Peruvian Squill does not grow in Peru is well known, the name having been applied by Linnæus in consequence of some erroneous statements of Clusius or Morison. Neither is it found in India, as one of its old synonyms would lead us to suppose. Its real country is Portugal, about Cintra, according to Brotero; Algiers, where Desfontaines found it in corn-fields; Tripoli, on hill sides, according to Dellacella; Corsica, near S. Bonifacio, where Seraphini found it; clayey hills in Sicily, as we learn from Gussone, and even the sterile hills outside the gate Degli Angioli of Genoa, as we are assured by Viviani. The present plant was sent from Algiers to the Hon. and Very Rev. the Dean of Manchester, and therefore agrees in its native country with S. peruviana. Nor does it appear to possess any thing to distinguish it from that species except in the colour of the flowers, which are neither white nor bright blue, as in the previously known states of S. peruviana, but a dirty pale fawn colour. It is no doubt as hardy as the Peruvian Squill, and, though not so handsome, is still worthy a place in a bulb garden. — *Bot. Reg.*

ICOSANDRIA MONOGYNIA. — *Myrtaceæ.*

Eucalyptus splanchnicarpon. A noble timber tree from King George's Sound, where it was discovered by Mr. Cunningham, who speaks of it in his Herbarium as attaining a girth of 12 to 16 feet. It possesses fine ample foliage, of a brighter tint than most of the genus. The flowers are among the largest of the genus, in size and colour much resembling those of Angophora cordifolia. — *Bot. Mag.*

SYNGENESIA NECESSARIA. — *Compositæ.*

Othonna tuberosa. A plant little known in our gardens, we believe, yet not unworthy of cultivation. It appears to have been introduced from the Cape to the Royal Gardens of Kew in 1774, by Mr. Masson, and then lost to this country. Tubers,

however, were again sent to the same establishment by Mr. Anderer in 1842: these produced their showy yellow flowers in August of the same year. The general appearance of the plant approaches that of a Cyclamen, having solitary terminal flowers somewhat like a single marigold. — *Bot. Mag.*

ICOSANDRIA MONOGYNIA. — *Cacteæ.*

Rhipsalis brachiata. This new species of Rhipsalis was received by Mr. Moore at the Glasnevin Botanic Garden from Mr. Tweedie at Buenos Ayres; and it produced its flowers with that able cultivator in the month of March, 1843. The plant appears to be more branching than R. salicornoides; the flowers are rather large for the genus, pale greenish yellow, terminal upon divaricated articulations on the lower part of the stem. — *Bot. Mag.*

DECANDRIA MONOGYNIA. — *Leguminosæ.*

Gastrolobium acutum. A handsome greenhouse shrub, flowering in the greenhouse in the month of March. It was raised from seeds sent from the Swan River by Mr. James Drummond to the Royal Botanic Gardens of Kew in 1842. Its red and deep yellow (pea-shaped) flowers and its glossy ternate leaves make a very pretty appearance at that early season of the year. — *Bot. Mag.*

GYNANDRIA MONANDRIA. — *Orchidaceæ.*

Barkeria spectabilis. For the introduction of this species, which is one of the most lovely of Orchidaceæ, cultivators are indebted to G. U. Skinner, Esq. It forms a tuft of cylindrical stems, of about four or five inches high, each of which bears two fleshy, lanceolate-acute leaves separated from each other by intervals of about an inch. The raceme rises out of some brown dry sheaths, and in the plants that have flowered bears about six most lovely nodding blossoms; but, according to Mr. Skinner, it varies in length from three inches to a foot, producing as many as twelve flowers in a raceme. The expanded flowers are nearly three and a half inches wide, their colour is a bright lilac, the labellum is white at the base and in the middle, lilac at the edge and point, and richly marked with small blood-red spots: along its middle, below the column, are five purple lines, which pass into three elevated colourless ridges, beyond the place where the anther touches the lip. It is with Cattleyas and such beautiful plants that this charming species is worthy to be arranged. Mr. J. Brewster, gardener to Mrs. Wray, of Oakfield, near Cheltenham, where the plant has been bloomed beautifully, says, "The plant was imported from Guatemala in July, 1841, when it immediately began to grow, and late in autumn it showed flower-scapes; but the season was too far

advanced to bring them to perfection. It then remained dormant and lost all its leaves till March, 1842, when it again commenced growing, and expanded its first flowers on the 12th of June. These were shown at Chiswick in July, and continued perfect for five weeks. The temperature in which the plant was grown was never above 65°, when it could be kept under by giving air freely, while in winter it often fell below 40°. Indeed, my only object was to keep out frost, and I invariably gave a little whenever it could be done with safety. In the summer the windows and doors of the Orchidaceous house are open every day; and I am of opinion that the Orchidaceæ of Guatemala cannot be kept too cool at that time, for the more air I give, the better they grow. I always, however, keep the house damp." — *Paxt. Mag. Bot.*

TO CORRESPONDENTS.

We perfectly agree with the remark of our correspondent Mr. John Battersby, that "it is desirable that persons connected with horticulture should possess a knowledge of the plants of their own country": with us it is a favourite study, and we shall be happy to meet the wishes of our subscribers by giving an article on the subject occasionally. To figure them would be departing from the original plan of our work, — that is, if they occupied the place of other flowers, — though we may be tempted to incur the additional expense of an extra plate, if it is desired by the subscribers to the Journal; in short, we wish to make it exactly what they wish, and will spare neither pains nor expense to attain our object, and we shall always feel obliged for remarks of this nature, as we are then placed in a better position to judge of what is desired. Sowerby's work is useful, though we should say Baxter's is the best on the subject that has yet appeared in the English language: it is finished, and we are not aware of any other about to be commenced; however, Mr. B. shall have our best assistance.

T. S. — Place your Auriculas in a common garden frame, having a false bottom elevated on bricks; let it face the south, and give them plenty of air, by keeping the lights off, so long as the weather continues fine, and afterwards on every favourable opportunity.

A Friend. — We must refer you to p. 201. of our third Vol. for the management of Achimenes; they are all beautiful.

A Subscriber, Torpoint. — Brachycome iberidifolia appears to have disappointed many this season, and this is not of un-

frequent occurrence with new seeds. The first year of letting out, as it is called, every seedsman is anxious to procure the new thing for his customers, and there is a demand for the seed; consequently every bit is saved, good and bad together, and this is not corrected till the plant has got into more hands; of course some one must have a portion of the good seed.

An Amateur. — The grafting of Roses on the Geranium is utter nonsense.

A Subscriber, Forest Hill. — Your Amaryllis revoluta should be potted immediately, using any rich soil: loam, leaf-mould, and rotten dung, is the best: keep it in the greenhouse and water it moderately. It will probably throw up a flower stem directly. The Nerine, if in a thoroughly sound state, may be kept till the spring; or, if it appears desirable, pot it at once; only observe to keep it sparingly watered through the winter. The greenhouse for this also will be best. You keep the frost out of the house by some means, of course; let us know how they look in January, and we will give you further particulars.

CALENDAR FOR OCTOBER.

Stove. The latter part of the past summer has been uncommonly favourable to the cultivator of plants as well as to those who attend to the production of the other branches of the vegetable kingdom: continued warm and dry weather has given an opportunity of properly maturing the growth of the previous wet weather, and all sorts of plants may now be reasonably supposed to be in a most promising state to encounter the several adverse circumstances they may happen to be subjected to in the ensuing winter. The proper application of water is now the most important point to be mentioned; no more should be given than appears actually necessary to the existence of the plant; if this is duly attended to at the present time it will save much future trouble; of course the quantity administered must be regulated by the character of the plant; one, for instance, which is still growing will require more than another whose growth is completed. Soft-wooded, exogenous plants may be allowed a larger quantity than those of the same division whose tissue is firmer. On the other hand endogenous plants, such as Cacti, Palmæ, Orchideæ, &c., require less than any others: the variation in the supply will, however, depend on the

skill of the cultivator; all we can do is to mention general rules. Air should be supplied on every favourable occasion. It is probable that fire heat will become necessary before the month is out; use it but sparingly at first; the average temperature should be about 60°, allowing it to fall from 5° to 10° at night.

GREENHOUSE. Our previous remarks on watering apply with still more force here; it is better to err on the safe side, by giving too little than too much, as the plants (with a few exceptions) may be more easily recovered in the former case than when suffering from excess; the exceptions are Camellias, whose flower-buds fall if the roots are not liberally supplied with moisture, Chrysanthemums coming into blossom, and consequently in an active state, and Ericas, which, from the extreme delicacy of the fibrous roots, will not bear drought; with the latter, however, a medium course must be adopted, as too much moisture, either in the soil or the atmosphere, is followed by as disastrous consequences as in the reverse; they require also an abundant supply of air, in order to maintain them in a healthy and verdant condition. By the middle of the month every plant of the least value should be in its place for the winter. Fuchsias may be shaken out of the earth in which they have been growing, and, where room is scarce, stowed away in a dry shed, covering them with sufficient dry litter to protect them from frost, or they may be again potted into small pots, and kept dry through the winter. Salvias, Pentstemons and several others of similar habit, may be preserved in the same manner. To keep Geraniums bushy they should be frequently turned round, that all sides may enjoy the advantage of the light. Seedlings and young plants should be placed near to the glass to prevent their becoming drawn. Climbers should be pruned back if they are wished to flower early next season; others, intended for late flowering, had better remain unpruned till the spring.

FLOWER-GARDEN. The beds and parts of borders from which summer flowers have been removed should be dug and prepared for spring flowers. It is always desirable to plant these early in the autumn, especially Iris, Crocus, Hyacinths, Narcissus, &c. Such as these may be got in as soon as vacant ground can be found for them. A few Ranunculuses and Anemones may also be planted, though we prefer the spring for the finer sorts. Tigridias, Gladiolus, &c., should be taken up.

Dahlias now engross a good share of the cultivator's attention: keep them tied out, and thin the shoots when necessary. A little tan or half-rotten leaves spread round the base of the stems will preserve the roots from the effects of the early frosts. Pot roots may be dried off. China Roses should be removed to the frames for wintering. Stocks, Mignionette, Violets, and annuals in frames, will require plenty of air. Auriculas, Picotees, Carnations, &c., should be placed in their respective winter quarters without delay: they must have all the air possible. Lilacs, Rhododendrons, Kalmias, Roses, &c., should be prepared for forcing. Continue to pot Hyacinths, Tulips, Narcissi, and other bulbs for forcing; these should be placed out of doors for three weeks or a month, according to the time it is desirous to have them in flower, covering them entirely, about six inches thick, with old tan or half-rotten leaves. Prune and plant deciduous trees, as soon as the leaves are off; plant Box edges.

The lawns and gravel-walks should be frequently rolled, and the falling leaves collected to be used for composts when rotten.

FLORICULTURAL INTELLIGENCE.

NOTTINGHAM FLORAL AND HORTICULTURAL SOCIETY, Aug. 2.— *Continued from page* 192.

Pansies.— First dealer's pan of 20 blooms, Mr. Pearson.— Milton, Elizabeth, Zelica, Agnes, Magrath, Aristides, Black Prince, Sir Walter Scott, Comet, Sobieski (all Pearson's seedlings), King's Sulphurea, Elegans, and 9 seedlings.

First amateur's pan of 20 blooms, Mr. Neville. — Jewess, Jehu, Miss Stainforth, Emily (Nevill's), Cream, Rival Yellow, Anne, Larpent, Delicata, Dr. Johnson, Black Diamond, and 9 seedlings.

First amateur's pan of 15 blooms, Mr. S. R. P. Shilton. — Black Prince, and 14 seedlings.

First amateur's pan of 10 blooms, A. Lowe, Esq. — Clara, Black Prince, Milton, Mulberry, Miss Hoare, Lady of the Lake, White's Ann, Mrs. Walter, Yellow Perfection, Diana (Lowe's).

Seedlings (first class flowers). — Yellow-edged, Mr. Pearson; White-edged, Mr. Pearson; Self (puce, with purple and white eye), Mr. S. R. P. Shilton.

The best miscellaneous collection of cut flowers, Mr. Pearson.

The best collection of annuals, Mr. S. R. P. Shilton. — Cal-

liopsis Drummondii, Hibiscus Richardsonii, Kaulfussia amelloïdes, French Marigolds, Phlox Drummondii, Rhodanthe Manglesii, Schizanthus venustus and Hookerii, Schizopetalon Walkerii, Clarkia alba and grandiflora, Erysimum Peroffskianum, Gilia splendens and tricolor alba, Lupinus nanus, Iberus umbellata, Platystemon californicus.

The best dealer's collection of Roses, Mr. Pearson.

The best amateur's ditto, F. Wright, Esq.; second ditto, George Walker, Esq.

The best pan of 20 blooms, Mr. S. R. P. Shilton.

The best 6 Herbaceous blooms, Mr. S. R. P. Shilton. — Phlox omniflora alba, Potentilla Hopwoodiana and pedata, Pentstemon gentianoïdes coccineus, and 2 seedlings.

The best 6 Stocks, Mr. S. R. P. Shilton.

The best collection of Dianthus, Mr. S. R. P. Shilton.

The best pan of Dahlias, Mr. Spencer. — Bridesmaid, Prince Albert, Countess of Pembroke, Pickwick, Frederick the Great, Lewisham Rival, Oriental Pearl, Seedling, Conservative, Beauty of the Plain, Westbury Rival, Miss Abbott.

Plants. — The best Stove Plant (Gloriosa superba), F. Wright, Esq.; second best (Russelia juncea), G. Walker, Esq.

Orchideous Stove Plant (Gongora maculata), G. Walker, Esq.; second best, Zygopetalon maxillare, G. Walker, Esq.

Greenhouse Plant (Philibertia grandiflora), G. Walker, Esq.; second best (Alstrœmeria aurea), F. Wright, Esq.

Cactus speciosissima, G. Walker, Esq.

Calceolaria rugosa, Mr. S. Wright.

Erica eximia, F. Wright, Esq.; second best (tricolor), F. Wright, Esq.

Herbaceous Plants, F. Wright, Esq. — Second best, Mr. Pearson: Phlox brillante and Brucei, Aconitum grandiflora, Gentiana septemfida, Liatris elegans, Œnothera splendens.

Balsam Bizarre, G. Walker, Esq.; second best, A. Lowe, Esq.

Collection of Verbenas, Mr. Pearson.

Miscellaneous collection, Mr. S. Wright; second best, Mr. Spencer.

Collection of Fuchsias, A. Lowe, Esq. — Venus victrix, tricolor, formosa elegans, Ricartonii, Granada, Brewsterii, Devonia, racemiflora, sanguinea, grandis, mirabilis, insignis, Youellii, Standishii, Chandlerii, fulgens, corymbiflora, Moneypennii, Thomsonii.

Fuchsia (tricolor), G. Walker, Esq.; second best (formosa elegans), A. Lowe, Esq.

Cockscomb, G. Walker, Esq.; second best, G. Walker, Esq.

Lilium lancifolium punctatum, Mr. Pearson; second best (Lilium eximium), Mr. Pearson.

Rhodanthe Manglesii, G. Walker, Esq.

Cintonia pulchella, Mr. S. R. P. Shilton.
Orange Tree, in bearing state (Myrtle-leaved), A. Lowe, Esq.
Globe Amaranthus, G. Walker, Esq.
Geranium tricolor, F. Wright, Esq.
Campanula Barlerii, Mr. Pearson.
Collection of Greenhouse Plants, A. Lowe, Esq. — Thunbergia alata, speciosa, and alba, Lantana aculeata, Balsams Bizarre and double-flaked, Achimenes longiflora, Rochea falcata, Dianthus superbus, Verbenas, Alicia, Queen of May, Herne, and Fireflair. Gloxinia alba and speciosa, Geum speciosum and Swainsonia astragalifolia.

Honorary Prize. — A miscellaneous collection, Mr. Lee. [In consequence of Mr. Lee being appointed one of the judges, he could not exhibit for competition.]

THANET FLORICULTURAL AND HORTICULTURAL SOCIETY.— August 6th. — J. A. Warre, Esq., one of the Vice-Presidents, distributed the prizes, the competition for which was larger than on any previous occasion. The prizes were as follows:—

Plants. — Best 12 (a Silver Cup, value 5*l.*): Clematis florida Sieboldii, Maurandya Barclayana, Verbena Charlwoodii, V. Queen, Mahernia pulchella, Loasa aurantiaca, Thunbergia aurantiaca, Salvia patens, Heliotropium peruvianum, Dolichos lignosus, Verbena splendens, and Fuchsia magnifica, T. N. Harris, Esq.; second ditto: Pelargonium Alexandrina, P. Firebrand, Lound's Perfection, P. Victory, 4 Acaciæ lophanthæ, Fuchsia fulgens, F. conica, F. insignis, F. grandiflora maxima, Mrs. Alexander.

Best 6 plants: Fuchsia globosa, F. fulgens, Maurandya semperflorens, Datura arborea, Scarlet Siconium, and Acacia lophantha, L. C. Humfrey, Esq.; second-best ditto: Fuchsia Venus victrix, Æschynanthus grandiflora, Calceolaria, Fuchsia Chandlerii, F. globosa, Campanula nana, D. Hooper, Esq.

Best single specimen: Aloe, Capt. Isacke; second-best ditto: Abutilon striata, the Rev. C. Lenny.

Best 6 geraniums: Corinna, Lound's Perfection, Climax, 2 Victory, Guardsman, W. Tomson, Esq.; best three ditto: Admiral, Comte de Paris, Eliza sup., Mrs. Alexander; second-best three ditto: Guardsman, Orange Boven, Firebrand, T. N. Harris, Esq.; best one ditto, Victory, T. N. Harris, Esq.; best three scarlet ditto, J. Slater, Esq.

Best three Cacti: Ackermanii, Jenkinsonia, speciosa, Mr. Cramp.

Best three Balsams, L. C. Humfrey, Esq.; second-best three ditto, L. C. Humfrey, Esq.

Best three Cockscombs, L. C. Humfrey, Esq.; second-best three ditto, L. C. Humfrey, Esq.

Best climbing plant: Thunbergia aurantiaca, T. N. Harris, Esq.

Best three Fuchsias (Youellii, conspicua, and fulgens), T. N. Harris, Esq.; second-best three ditto (Venus victrix, racemiflora, Dalstoniæ), T. N. Harris, Esq.; best one ditto, William Tomson, Esq.

Best Hoya, L. C. Humfrey, Esq.

Best four Verbenas (Charlwoodii, picta, splendens, and Burleyana), T. N. Harris, Esq.; second-best four ditto (ignea, Charlwoodii, Burleyana, and Queen), T. N. Harris, Esq.

Best three pinks, Mr. Silk; second-best three ditto, Mr. Silk.

Cut Flowers. — Best 6 Geraniums, Captain Isacke; second-best ditto, Captain Isacke.

Best 12 Pansies, the Rev. J. G. Hodgson; second-best ditto, Captain Isacke.

Best 6 Roses, the Rev. J. G. Hodgson; second-best ditto, Rev. J. G. Hodgson.

Best 12 Perennials: Verbena Prince of Wales, Anchusa verrucosa, English Iris, Geum chilense, Double White Campanula, Potentilla atrosanguinea, Salvia patens, Petunia gens, Potentilla prostrata, Pentstemon gentianoïdes, Catananche bicolor, and Potentilla Hopwoodiana, Hon. Mrs. Hodgson.

Best 12 Annuals, Hon. Mrs. Hodgson; second-best ditto, J. Slater, Esq.

Best 6 Sweet Williams, Mrs. Alexander.

Best 6 German Stocks, the Rev. J. G. Hodgson.

Best bouquet of forced and hardy flowers, Sir R. Burton; second-best ditto, Col. Clarke.

Best bouquet of hardy flowers only, Sir R. Burton; second-best ditto, Miss Hinchcliffe.

Best floral device — gothic window — an ornament value *2l. 2s.*, Mr. G. Hodgson; second-best ditto — gothic window — an ornament value *1l. 1s.*, Lady Burton.

Extra. — For 6 plants, Pelargonium Guardsman, P. Firebrand, P. Enchantress, P. Victory, P. Orange boven, and Scarlet Siconium, T. N. Harris, Esq.

A Wardian Case, the Rev. C. Lenny.

A Pyramid (a device in this shape, composed of annual plants growing in the soil) Lieutenant Wells.

The prizes were awarded by Mr. James Judge and Mr. Algernon Masters.

THE

FLORIST'S JOURNAL.

NOVEMBER, 1843.

ON SPARAXIS.

WITH AN ENGRAVING OF SPARAXIS PULCHELLA, S. PURPUREA, S. PICTA.

THE seedling Sparaxis, engravings of which we have this month presented to our readers, were raised by Mr. Wm. E. Rendle, of the Union Road Nursery, Plymouth. They are distinct and desirable varieties, forming a rich addition to this lovely tribe of Cape plants, which are not cultivated in this country to the extent they deserve, the fact being accounted for by their culture not being properly understood, nor their beauties fully appreciated. Mr. Rendle being an extensive and successful grower of these plants, we have solicited his mode of culture, which he has kindly given us.

"For many years past I have been an ardent admirer of Ixia and Sparaxis, two very interesting and beautiful genera, and, having cultivated each successfully, find that a similar treatment is applicable to both.

"In the south of England, and in favoured situations, they will succeed very well in the open border, but, as they are liable in severe seasons to suffer from frost and wet, care must be taken to obviate such disastrous consequences by precautionary coverings with litter, and by ample drainage. My own establishment not containing a soil naturally well adapted for their growth and developement, I am obliged to have recourse to an artificial one; prepared with one third good turfy loam, one third river sand, and one third peat, leaf mould, and rotten manure, all well mixed and incorporated, but not broken fine, laying this 18

inches thick on a well-prepared drainage in a sheltered situation with a south aspect. The month of November is by some considered the best time for planting; but I prefer the middle of October, as, after that period, no advantage is gained by allowing them to remain above ground. I make drills three inches deep across the beds already prepared, wherein I plant the bulbs three inches asunder, covering them with sand, and raking the beds, even when the work is completed. In my nursery I have devoted a nine-light frame to this class of plants, with compost as described, by which I am enabled to protect with glass, when circumstances may dictate its necessity. Of course if glass is not at hand, mats or other covering can be employed.

"I also grow a great quantity in pots, the soil used being similar to that already described, with a good and efficient drainage. They are placed in a cold frame, where they are allowed to remain during the winter months, but on the approach of spring can be removed to the greenhouse or conservatory. Before blooming they must receive a good supply of water, but after flowering, only a moderate quantity should be given, when they may be placed in the open air until such time as the bulbs have received the returning sap from the leaves, when they should be taken up and placed in paper bags in a dry situation, till the next planting season arrives.

"Sparaxis and Ixia are readily increased by offsets, which are produced in abundance. If an amateur wishes to succeed, with the least expense, he should pay every attention to the growth of offsets, as by them he will be enabled to maintain a good supply of blooming bulbs.

"I plant the offsets in deep seed-pans, about an inch below the soil, where they are allowed to remain for at least two years; if any of the bulbs seem disposed to send up flower stems, they are immediately taken off, thereby retaining strength to the bulb, which would have been exhausted in the production of a premature blossom. On this point many persons have failed, and consequently given up their cultivation, on account of the presumed difficulty of maintaining strong-blossoming bulbs. When procured from the nurseries, they are bloomed, and produce offsets; with this effort the bulbs are deteriorated in size and strength, and consequently not blooming so well as the preceding season, they are, with the whole tribe, discarded

as not worth cultivation: but, if the offsets are encouraged year after year, a regular succession of strong-blooming bulbs will be maintained.

"The Sparaxis and Ixia produce seed abundantly, and by hybridising new varieties are obtained; but several years intervene before the seedling bulb acquires strength to bloom. They are cultivated to great perfection in Guernsey and Jersey, where they flourish admirably in the open border, without the least protection.

"WILLIAM E. RENDLE, F. H. S.

"*Plymouth.*"

ON THE CULTIVATION OF MANETTIA BICOLOR.

As many of the readers of your valuable and interesting Journal may this season be in possession of Manettia bicolor for the first time, I presume a few remarks on its culture may be acceptable: at the same time some mention of that beautiful species M. cordata may not be out of place. I regret to find it, like many other good old plants, becoming lost in the confusion caused by so many new introductions; not that I would decry the laudable spirit of research which is so fast extending, but deeply lament when a good plant is overlooked in favour of something which perhaps may possess only the charm of novelty to recommend it. Most gardeners are acquainted with the lovely crimson nodding flowers of Manettia cordata. or grandiflora, sufficiently beautiful, when well managed, to make it as fine an ornament to the stove as Thunbergia aurantiaca is to the greenhouse. The plant is produced from singular articulated tubers; each joint, on being separated, will form an independent plant; if these are divided early in February, and the pieces, after being potted, are plunged into a gentle bottom heat, they will almost immediately commence growing. One of the strongest, or two or three of the smaller ones, may be selected to form specimens. A large shift suits them best, as from the fleshy nature of the roots they are liable to damage from frequent repotting. A No. 8-sized pot will be required if a large plant is desired. The wire frame on which it is to be trained

should be formed of rather close work, and attention must be paid in the outset to the training, that the plant may be made to fill the bottom well before it is allowed to reach the top of the frame. A sunny situation in the stove, or intermediate house, is indispensable; not that the plant requires a high temperature, but if placed in the shade it grows too luxuriantly to allow of its flowering well, producing a great quantity of stems and leaves, and but few blossoms.

At the close of the season, say the middle or end of September, when the beauty of the plant is leaving it, let it be gradually dried off, and the roots may be stowed away for the winter on any dry shelf.

Manettia bicolor is of still more robust habit, and it is necessary to begin early in the season with it, as the plant must be well grown before it will flower; and by this reason it usually attains a greater size than cordata. Its chief superiority consists in the very rich colour of its flowers, the bright yellow and crimson affording a beautiful contrast. Like the latter, mature plants should be dried, or allowed to sink into a state of rest for the winter; but those who did not obtain their plants till the commencement of summer will most likely have them now in full vigour. Such plants will be the better for all the encouragement they can have through the winter. They should be kept constantly growing, and will thus flower well and early in the spring. They have hitherto been chiefly propagated by cuttings, which root readily under a hand-glass on a little heat. This, too, and for the same reason assigned for cordata, requires a light situation in the house, nor is there any material difference in the treatment of either, and both will well repay the trouble bestowed on them.

The soil I find to suit them best is soft open loam and peat with a good proportion of leaf-mould, using a good drainage and sufficient sand in the compost to keep the whole mass free and open for the roots to work in.

J. GREEN.

REMARKS ON THE PROPERTIES, CULTIVATION, AND PREPARATION OF TOBACCO.

THE tobacco of commerce is prepared from the leaves of several species and varieties of Nicotiana, a genus of plants belonging to the order Solanaceæ in the natural arrangement, and to the Linnæan class Pentandria, order Monogynia. The kinds principally cultivated for this purpose are N. Tabacum, with some of its varieties, and N. macrophylla; but in the climate of England, when grown for private use, N. rustica is often substituted. The tobacco plant was first brought into Europe by the Spaniards from America about the year 1560; and was introduced into England at a subsequent period.

This popular narcotic is probably in more extensive use than any other; and its only rival is the betel of the East. From being the solace only of the Red Indians of America, it has become one of the luxuries of the rich, and almost a necessary of life for the poorer inhabitants of a great portion of the globe. "Tobacco, as used by man," says Du Tour, "gives pleasure to the savage and the philosopher, to the inhabitant of the burning desert and the frozen zone. In short, its use, either to chew, to smoke, or in powder, is universal." Its introduction into almost every country has met with determined opposition from the authorities; but at the present time, all the European sovereigns, and many others in different parts of the world, derive a considerable part of their revenue from it.

The active constituent of tobacco is supposed to be an essential oil, for by long boiling the decoction and extract of tobacco become inert; and by distillation an oil so powerful and active is obtained, that a wound from a needle dipped in it is sufficient to kill a small animal. The juice expressed is manifestly acid, and contains a great portion of albuminous matter, supermalate of lime, acetic acid, nitrate and muriate of potass, muriate of ammonia, and a red matter soluble in alcohol, and an acrid principle called narcotin, also soluble in alcohol and water.

In medicine tobacco is exhibited in various forms; when chewed it causes an increased flow of saliva, and sometimes relieves the toothach: reduced to powder, it proves an excellent errhine and sternutatory when snuffed up the nostrils.

An infusion in wine and water, in small doses, so as to act with moderation on the stomach, is powerfully diuretic, and is employed with great success in dropsy and dysuria. The infusion is applied externally for the cure of psora, tinea, and other cutaneous diseases; and forms a powerful lotion for obstinate ulcers. It is employed both in infusion and smoke in the form of clysters, in cases of obstinate constipation. The oil applied to a wound is said by Redi to be as fatal as the poison of a viper.

Tobacco is nevertheless capable of producing deleterious effects on the living body, whether taken in the stomach in substance or solution, or into the lungs in the form of smoke, or applied to abraded surfaces. The human system becomes, indeed, sooner or later, habituated to its action; and there are not wanting persons who use large quantities as a luxury without experiencing any other inconvenience than that which is invariably attached to their being unable to relinquish it, when the practice of using it becomes confirmed.

It is not, however, either in a moral or political point of view, that I propose to refer to the use of this herb. Its effects may be exhilarating to the minds of some men; and its use, like all other habits, may exercise over them an indomitable sway. To the horticulturist its use is of a different nature, and consists in its being made the vehicle of destruction to myriads of his insect enemies, which too often attack the objects of his care, and which without some remedy such as this, at once safe, certain, and easy of application, would seem almost to offer an insuperable bar to the accomplishment of his purposes.

The quantity which is often by this means in requisition in horticultural establishments, would render it an item of magnitude if procured in the way of purchase; and in consequence of this it is very frequently cultivated to an extent sufficient to furnish the requisite supply. Its cultivation, and the manner of curing and preserving the produce, becomes therefore an object of some interest; and in the remainder of this paper I propose to direct the attention of the readers of the Florist's Journal to the subject.

The plants are treated as annuals; the seeds which are most profusely produced, being sown about the beginning of April in shallow pans of common light soil, and then placed in any convenient situation, such as a vinery or hot-bed frame, where they

may be subjected to a degree of temperature somewhat elevated above the temperate point. The seeds being very minute, they may in sowing be thinly scattered over the uneven surface of the soil; and in this way, if kept shaded, they will vegetate more readily than if covered with soil. Until this process of vegetation is completed, they require only the ordinary attention required by seeds; but when they have formed two or three leaves, they may be separately potted into small pots, and then by gradual steps be exposed so as to become inured to the ordinary atmosphere; they will probably require repotting, which should be done when found to be requisite. All this treatment is very common-place, but of course on the degree of skill with which it is performed will depend much of the success.

About the latter end of May, or at least as soon as the probability of their being injured by frost is past, they may be planted out. The kind of soil best suited to them would be one of a light open texture, rather abundantly furnished with fertilising agents; the ashes of alkaline plants, such as artichokes, kidney-beans, fern, beech, buckwheat, &c. are said to be favourable manures. Where space is not an object, the plants should be planted out at about four feet apart; this will enable them to attain to a great degree of vigour in consequence of a free admission and circulation of air amongst them, as well as an exposure to the influence of that life-giving and life-sustaining principle—light. When the plants have risen to the height of two feet, they commonly begin to throw out lateral branches on which the floral organs are subsequently developed; but as this kind of development, if not repressed, would deprive the leaves, which are the most important parts, of a great portion of nutriment, it becomes a matter of necessity to take away the extremity of the shoots in order to prevent this expenditure of the energies of the plants, and thus to divert the invigorating sap to the expansion and increase of the leaves. This principle must also be subsequently kept in view, as the production of blossoms or the maturation of seeds would at any time operate directly against the increase of produce in the leaves, and tend to prevent their attaining that degree of succulency which is requisite to insure a good article when prepared. No other special care is requisite in the culture of this plant; the operations

attendant on the destruction, or rather the prevention of a crop of weeds, being of so ordinary a nature that they are not likely to be overlooked by those who are at all anxious for the welfare of their plants, and the reward of their previous attention.

The symptoms of approaching maturity in the leaves consist in their becoming corrugated, or rough and wrinkled on the surface; and when fully ripe, they appear mottled with yellow spots on the raised parts, whilst the veins and depressed portions continue to retain their usual green colour. When this state is arrived at, and there is also a prospect of fine weather, let the most mature leaves be carefully removed from the stem, and be spread out in the sun throughout the day; they will soon become so far "wilted," as the Americans express it, that they may be moved about and bent in any direction without breaking. If the weather does not happen to be favourable to this exposure, the same end must be attained by spreading or hanging them in an open shed or hovel: in either case they must be completely withered, so as to avoid the loss which would be sustained by reason of their natural brittleness of texture during any subsequent removals.

When this degree of flexibility is attained, the leaves are to be laid on a heap or heaps according to quantity; and if left thus about twenty-four hours, there will be found to have commenced a process of fermentation, technically called a "sweat:" they will then require turning, and in doing this, those which were formerly innermost should be brought to the outside of the heap, and the reverse. The longer (within limit) that they continue in this position, the deeper coloured will be the tobacco. After about three or four days they should be temporarily fastened together in pairs, and suspended across a pole or line in the same covered situation, but leaving a small interval between each pair: here they undergo another drying. In about a month they will be in a fit state to be taken down; but this should be done only in damp weather, for, under other circumstances, the loss occasioned by the breaking and crumbling of the leaves would be considerable; whereas by imbibing a portion of moisture from the atmosphere, which they readily do, such a degree of pliability is secured as to effectually prevent any serious loss. They should now be laid again in heaps, in regular order, and be pressed firmly by heavy weights; fermentation

will again commence; but if it proceed beyond a glowing warmth, the degree of pressure must be lightened, and then, the cause being removed, the fermentation will be checked. The pressure must be thus continued, more or less, for about a week; the leaves may then be stripped from the stalks, and laid away, either in boxes, or in rolls of considerable size, until wanted for use.

In this manner an article of real virtue may be secured by a comparatively small degree of trouble; and thus a considerable saving in the garden expenditure may be justifiably effected. It cannot, however, be accomplished without the necessary appliances. Of the modes of using the herb, to effect the purpose of the horticulturist, I need not add a word.

T. Moore.

Royal Botanic Garden, Regent's Park,
Oct. 12. 1843.

LIST OF ORCHIDEÆ.

(*Continued from page* 202.)

107. *Dendrobium densiflorum.* (Derived from its flowering in dense racemes.) A plant with bulbous stems, nearly one foot long and half an inch thick, of a tetrangular form. Leaves lanceolate-ovate, placed at the summit of the stem. Raceme pendent, rising from the joint underneath the leaves, eight inches long; sepals and petals pale buffish yellow; labellum fringed and of a fine deep yellow. This is a beautiful species, and requires pot cultivation in a mixture of sphagnum, rotten wood, and turfy peat in equal quantities, and a liberal supply of water while growing, with a temperature of 75°. As soon as it has made its growth, it should be placed in a lower temperature, and checked from much water. — *Native of India.*

108. *Dendrobium Paxtonianum.* A plant with bulbous stems from twelve to eighteen inches long, and round. Leaves alternately up the stem. Flowers produced from a short raceme from the joints of the stem. This species will do either in a pot or in a basket hung up, with the same treatment and temperature as the others. — *Native of India.*

109. *Dendrobium Delouseanum.* A plant with bulbous stems nearly one foot long, marked with longitudinal lines of purplish

red along the stems. Leaves alternate, of a lanceolate-acute form. This species may be easily distinguished by the lines on the stems. It should in all cases be hung up, with the same treatment and temperature as the other hanging plants. Its native country I do not know.

110. *Dendrobium amplum.* Plant pseudo-bulbous; bulbs three inches long. Leaves in pairs, four inches long, lanceolate, and placed at the summit of the bulb. Flowers produced also from the summit of the bulb, sometimes in pairs. This species should be grown on a log of wood, with a little sphagnum placed round it on account of its running habit, and freely supplied with water while growing; also a temperature of 75°. — *Native of India.*

111. *Dendrobium heterocarpon.* A plant with bulbous stems four inches long, much swollen towards the summit. Leaves in threes, four inches long and half an inch broad, placed alternately. Flowers produced from the joints. This is a beautiful little species, and should in all cases be hung up in a pot, with the same treatment and temperature as the others; it deserves a place in every selection. — *Native of India.*

112. *Dendrobium Heyneanum.* A pretty little plant with bulbous stems three inches long. Leaves alternate. Flowers a delicate colour, produced from the joints of the stem. This genus contains upwards of one hundred species, chiefly from various parts of India. These require a higher temperature than those which are natives of New Holland, nor do the latter require so much moisture; neither does this genus require a high elevation, but still they should have a free drainage; so that no stagnant water may remain at any time among their roots, as there are many tender-growing sorts that are lost by not attending to this important point in time; but water should be given freely during their growth, and a slight syringing three or four times a week: during fine weather this should be always done towards night; and as their pseudo-bulbs or stems complete their growth, water should be reduced so as to bring them into a regular dormant state; when, in order only to keep them from shrivelling, they should have a slight steaming once or twice a week, or receive a slight sprinkling of water over head, which will answer the same purpose (the temperature during the resting season will be found in the present volume, p. 67.); and when they again show signs of growth, the re-potting of those which require it should not be delayed, or the young roots are frequently broken or injured, and consequently a sudden check is given to the plant, which is highly injurious.

113. *Dendrochilum filiforme.* An interesting little pseudo-bulbous plant, with long slender leaves, and waving spikes of

pale green flowers. This genus contains three species, which all require pot cultivation in a mixture of sphagnum, turfy peat, and a little rotten wood, with a temperature of 70°.— *Native of Manilla.*

114. *Epidendrum bicornutum.* (Derived from two-horned.) A plant with bulbous stems, eight inches long, round and rather thick, of a shining green. Leaves in threes, alternate, eight inches long and one inch broad. Flower spike rising from the summit of the stem, ten inches long, and producing four to five flowers alternately at the top of the spike, one inch and a half in diameter, of a beautiful white; the labellum is spotted with small spots of purple; on its breast rises two small horns dusted with yellow, and from which it takes its name. This species will either do on a lump of turf or in a pot, in a mixture of sphagnum and turfy peat, with a liberal supply of water. It requires a temperature of 65 to 70°.— *Native of Guiana.*

115. *Epidendrum lacertinum.* (Derived from lizard-headed.) Plant with bulbous stems, seven inches long. Leaves in threes, five inches long and one inch broad, tapering to an acute point; the raceme produced from the summit of the stem. Flowers verticillated, with the footstalk four inches long; sepals and petals green; column white, with a long narrow labellum, purplish at the base, where it joins the column, and green at the apex. This species requires hanging up, with the same treatment as the other, and a temperature of 60° to 65°.—*Native of Mexico.*

116. *Epidendrum aromaticum.* A plant with pseudo-bulbs, nearly three inches long and round, tapering to the summit. Leaves in pairs, mostly one foot long and one inch broad. Flower spike from one to two feet long, a little panicled; sepals and petals one inch long, of a greenish white; column striped a little with purple; labellum same colour as the sepals, and lobed towards the base so as to cover the column. This species requires pot cultivation, with the same treatment as the others, and a temperature of 60° to 65°.— *Native of Guatemala.*

117. *Epidendrum calochilum.* This species is of the pseudo-bulbous kind, bearing erect panicles of flowers; the sepals and petals are yellowish green, and stained near the apex with a dirty purple. Labellum three-lobed; the middle lobe is waved, broad, and beautifully veined with reddish purple. This requires the same treatment and temperature as the other.— *Native of Guatemala.*

J. HENSHALL, K—P—Y.

(*To be continued.*)

THE CULTIVATION OF GLOBULAR CACTEÆ.

THIS section of the varied and grand order Nopaleæ occupies an eminent station in the vegetable kingdom, and engrosses no small share of the attention of a large proportion of the most enthusiastic of Flora's admirers — the amateur cultivator. We have before hinted our belief that the whole family of Cacti would, on strict examination, be found to constitute no more than one, or at most two genera; yet such is the love of innovation and the desire of individuals to *distinguish* themselves, that a dozen genera is scarcely sufficient to satisfy some of our *savans*. The nomenclature of the group of plants, known by the familiar appellative Cacti, is now as Ericas are, and as some other genera promise to be shortly, especially Orchideæ, a complete jumble of heterogeneous nonsense; nor do we envy the individual who attempts the righting of this Augean mass; but until it is set about, the subject will increase in difficulty, for every one, to render their remarks intelligible, must, from necessity, use the present unauthoritative and erroneous divisions called genera.

Our remarks in this paper will be chiefly on the cultivation of those sections known as Echino- and Melo-Cactus — Mamillaria, — and some of the genus Cereus. It was very general some years since (and is still too frequent) to pot these plants in a mixture, the chief part of which was brick rubbish, and to keep them continually in a dry arid atmosphere. This, it was argued, was the most natural position for plants which are natives of the warmest and driest parts of the tropics; but it was forgotten that these localities receive deluges of rain at certain intervals; and it was then not so certain as now, that we may sometimes, by the judicious application of art, arrive at results unknown or unfrequent in nature. It is undoubtedly of the first consequence that the circumstances by which plants are found affected in a state of nature should be well considered by the cultivator before he commences operating on newly-imported subjects, and the predominant ones adopted as the basis for the artificial treatment: yet it does not follow that every wild plant is found in the best possible situation for the fullest development of its parts. Taking this into account,

it becomes apparent that art may sometimes assist or even improve on nature: so with Cacti, — they are found where the smaller deposits are formed, in places seemingly sterile, and where they receive but little nourishment from rain, or other natural causes; still they exist: but it seems probable enough in theory, that if they in the same situation received a more abundant supply of aliment, that a corresponding increase in the vigour and size of the plant would result; and this, which appears probable, the practice of cultivators proves correct. In the cultivation of these plants we would retain a portion of the old system, so far as keeping them in a dry atmosphere for about eight months of the twelve can be called retaining it; but the brick rubbish we explode altogether. The soil we use for the whole of them is a mixture of peat and loam, in equal quantities, with about a third of the whole well-rotted leaf-mould and sharp sand mixed; this requires to be well broken and thoroughly incorporated. About the middle of April they should be re-potted. This is rather a delicate operation: the old earth should be gently shaken from the roots of the plants and the new pressed firmly round them, observing to keep the base of the plant a little above the rim of the pot; when finished, three or four small sticks thrust into the earth close to the sides of the plant will keep them erect and steady, until they have attained a hold by the new roots. After potting, they should be at once conveyed to a previously prepared dung bed, having what is technically termed a "sweat heat" of from 85° to 95° temperature. They require shading from strong sunshine for the first fortnight, and to be kept moderately moist; we have even gone so far in hot dry weather as to use the syringe upon them, though this might be attended with some danger in close damp weather. In this situation they should remain from three to four months, giving them air in rather small quantities every favourable opportunity; at the end of this time they will be found to have made a surprising growth, and may then be removed back to the succulent house, the stove, the greenhouse, or the windows of the sitting rooms, and may be expected to produce flowers in the course of the following month. The difference occasioned by this treatment will be apparent the first season, for from poor little starvelings, such as are too frequently seen, they will be transformed

to fine healthy and large specimens. We have thus given a brief outline of our own practice, in which there is nothing difficult, and by which fine plants may be speedily obtained. And we believe we cannot conclude this article better than with a list of a few most desirable to those about to form a collection.

Mammillaria atrata.
Andræa.
carnea.
cirrhifera.
spinis fuscis.
coronaria.
depressa.
fulvispina.
Karwinskii.
magnimamma.
quadrispina.
sphacelata.
Wildiana.
Melocactus depressus.
Grengelii.
macracanthus.
polyacanthus.
pyramidalis.
Sellowii.
Cereus affinis.
Cereus cæsius.
tenuispinus.
undatus.
Echinocactus densus.
echinatus.
Eyresii.
Gilliesii.
imbricatus.
latispinus.
Mackieanus.
montevidensis.
parvispinus.
platyacanthus.
scopa spinis albis.
subgibbosus.
tenuispinus.
tubiflorus.
Cactus corrugatus.
reductus or nobilis.
senilis.

TO CORRESPONDENTS.

Thos. Barty, Esq. — We feel flattered by your remarks on the Journal, and are glad you share in its usefulness. We are not aware of any work entirely devoted to Border Flowers, but any information you require will, by a direct question, be elicited through our pages. Your ill success with the Martynia is, unfortunately, not a single instance. The cause of these failures with new seeds is partly attributable to the cupidity of the growers, who, so long as the thing is in demand, will sell all the

seed they can collect, good and bad together, and perhaps partly owing to our not being acquainted with the best means of raising them. We also had seeds of Martynia fragrans in the spring, which have not vegetated, though they are still sound, and they have been in the earth all the summer. The subject of the latter part of your letter has engaged our attention for some time, but we were fearful of a charge of plagiarism ; however, we will see if it can be effected.

Mr. W. J. Epps.— We have an aversion to an opinion founded only on a single bloom, but if, as you say, the plant possesses a fine habit and is an abundant bloomer, the Fuchsia sent will be an acquisition. It is large without being coarse, tube proportionate and smooth; sepals broad and apparently reflexed, though somewhat crushed; carmine tipped with green. By being kept in an exposed northern-aspected situation, it is doubtless of a darker colour than may be natural to it; and we are inclined to think, if the colour of this portion of the flower is generally of a lighter shade, it must afford a better contrast to the rich violet crimson of the petals. We should like to see it when grown under more favourable circumstances.

Desire Gosset, Abbeville. — If you will explain your wishes a little more fully, we will endeavour to meet them.

Querist. — Yes, Fuchsias may be grafted with ease and certainty as soon as wood of the current year's growth can be obtained about half ripened ; we should say June and July are the best months for the operation; it is performed in the usual way.

LIST OF NEW PLANTS.

Didynamia Angiospermia.— *Gesneraceæ.*

Gloxinia digitaliflora. This beautiful and distinct species is of very recent introduction. It is no doubt of Mexican or South American origin, though we have no information as to its exact native locality.

It belongs to the caulescent part of the genus, producing stems from six to nine inches in height, with the flowers so closely arranged as almost to cluster at the top of them; from other allied species it is easily known by its short somewhat roundish and very thick leathery, yet firm and rigid foliage, which is borne in opposite pairs with scarcely any stalk, and by its particularly long and small-tubed flowers: the latter, too, have an unusually regular limb, which is of a rich purplish

crimson hue, resembling greatly the colour of the flowers of *Achimenes grandiflora.*—*Paxt. Mag. Bot.*

DIDYNAMIA ANGIOSPERMIA.—*Scrophulariaceæ.*

Antirrhinum majus var. quadricolor. An accidental variety of Snapdragon, with a neat habit and copious inflorescence, the predominant colour of which is a tawny orange, though there are three others, yellow, pale purple, and red. It has bloomed at Mr. Low's, Nurseryman, Clapton.—*Paxt. Mag. Bot.*

POLYANDRIA PENTAGYNIA.—*Ranunculaceæ.*

Aquilegia Skinneri. A very handsome species, sent to Woburn Abbey by G. W. Skinner, Esq., from Guatemala. Its prominent characteristics are the great length of the spurs in the flowers, the protrusion of the stamens, and the brilliant red colour of the lower part of the flower spurs; its general appearance is an improvement on *A. canadensis:* planted in the open border, it attains a greater size and brilliancy than when grown in pots.—*Paxt. Mag. Bot.*

MONADELPHIA TETRANDRIA.—*Dilleniaceæ.*

Candollea tetrandra. This is a greenhouse plant of no great beauty, possessing however a neat habit, and bearing plenty of dingy straw-coloured flowers. It is best suited for planting in the borders of a conservatory; it was raised from Swan River seeds.—*Bot. Reg.*

DIDYNAMIA ANGIOSPERMIA.—*Scrophulariaceæ.*

Tetranema Mexicanum, syn. *Penstemon Mexicanus.* It is a very pretty tender greenhouse plant, quite peculiar in its appearance, in consequence of its almost stemless habit, and the profusion of little corymbs of showy purple and white flowers which rise up from among the leaves on long purple scapes. It should be top-dressed in autumn, and kept rather dry in an intermediate house between a stove and a greenhouse, during winter. In spring it should be re-potted in light free soil, chiefly leaf-mould and sandy loam, and placed in a greenhouse, where it will remain in bloom the greater part of the summer.—*Bot. Reg.*

DECANDRIA PENTAGYNIA.—*Silenaceæ.*

Viscaria oculata. A beautiful hardy annual, very nearly resembling *Agrostemma Cœli Rosa*, from which it is distinguishable from having a dark eye, and the surface of the seed-vessel being rough with fine granulations. It was gathered by Mr. G. Munby on dry hills thirty miles from Algiers, and given by him to

Messrs. Backhouse, Nurserymen, of York. This pretty annual may be sown in any good rich garden soil in the open border about the end of March, in the usual way; afterwards the plants should be thinned so as to stand singly, in which state they flower longer, and produce much larger and finer blossoms. It may also be sown in the autumn, remain in pots in a cold frame through the winter, and be planted out about April; it flowers a great part of the summer and autumn. — *Bot. Reg.*

GYNANDRIA MONANDRIA. — *Orchidaceæ* § *Malaxeæ.*

Dendrobium Aqueum. Among the crowd of Indian species belonging to this large genus, or group of genera, this plant seems to be hitherto unknown to the botanists of India. With the manner of growth of *D. Pierardi,* its pale watery green flowers are quite destitute of the attractive colours of that gay species, and are entirely different in the structure of the lip, which is furnished with a large cavity, almost a pouch, at the base of the middle lobe; it is also a much stouter plant, with wavy leaves. It bloomed in November, 1842, in the collection of Messrs. Loddiges, who imported it from Bombay. — *Bot. Reg.*

CALENDAR FOR NOVEMBER.

STOVE. To the practised cultivator there is but little interest in this month's calendar, though to the beginner it will be found the commencement of the most trying portion of the whole year. The best directions may be conveyed in but few words. Avoid excess of moisture: attention to this and a well-regulated, rather low temperature will carry the plants safely and in good order through the ensuing dull weather. Among Orchideæ it is of the first consequence; and particular pains should be taken that no water be allowed to lodge in the hearts of the new shoots which will present themselves on many kinds. Such as are grown on blocks or open baskets, and are in a growing state, may receive rather a large supply, because there is less fear of a lodgement; but those which have completed their growth, and especially if standing in pots, should have no more than is just necessary to keep their bulbs from shrivelling. If not already done, climbers should be pruned in, to admit all the light possible. The syringe may now be laid by, except for particular purposes, and a small water-pot substituted. Attend constantly to the destruction

of insects; in bad weather no better employment can be found than to go over every part of each plant separately, in order to detect them before they have an opportunity of extending. The temperature for the day should be about 60°, falling at night to 55°.

GREEN-HOUSE. All we have directed for the management of the Stove applies here, though it will perhaps be found necessary to water the plants a little oftener than last month, in consequence of fire heat becoming more frequent; still it must be done with caution. Camellias that have been got forward, Chrysanthemums, and a few late-flowering Heaths, with China Roses and Primulas, will still contribute to the enlivening of this department until the introduction of forced flowers. All these must be kept moderately moist. To prevent the accumulation of too much moisture from watering and the condensing of the atmosphere, it will be necessary to admit air freely whenever the weather is at all dry, even if it be so cold as to require a fire at the same time to keep up the temperature. Cuttings recently struck, and young seedlings, should be kept close to the glass. The generality of Cacti will not require any more water until the turn of the season. This month usually affords an opportunity to thin and dress plants that in the course of the summer have got out of order. All these little jobs are better worked up now, because if deferred they require attention at a time when the cultivator's hands are full. The average temperature of the house should be 45°.

FLOWER GARDEN. The pits and frames for storing half-hardy plants, and those for forcing flowers, will require a large amount of attention. The first can scarcely be kept too dry: air should be admitted freely, and a due succession of fresh plants placed in the latter; supposing the first lot of forcing flowers, which will consist chiefly of Hyacinths, Van Tholl Tulips, Crocus, and such things, be placed in heat the last week of October or the beginning of the present month, a successional number should follow in about a fortnight, and in this lot Tournesol Tulips, Narcissus, Herbaceous Plants, &c., may be introduced. Roses will require a month in the cold frames before they can be safely brought in; the same may be said of Rhododendrons, Lilacs, and other shrubs. Bulbous-rooted plants, from the facility with

which they may be protected with leaves or mats, do not so much require it.

In the open ground in most situations the beauty of the summer is fled, and we must turn our attention to the preservation of such as may be wanted for another season. We seldom care to lift anything that has been turned out long, with a view to keeping it, always preferring young plants in the spring, excepting such plants as the Scarlet Geranium and Penstemon; the old stools of these are decidedly the best, as they at once commence blooming without the delay occasioned by young plants in attaining a sufficient maturity; these therefore should be taken up, and may be kept with Fuchsias, &c., in a dry shed secure from frost. Dahlias also should be lifted, and after being thoroughly dried stowed away for the winter. There is another plant which makes a beautiful bed in the back-ground of the flower garden, the Commelina cœlestis, which should be treated in exactly the same manner. Auriculas and Polyanthus should be kept rather dry, and the dead or decaying leaves constantly removed; these, with Picottees and Carnations, should have abundance of air in all weathers, merely protecting them from too much wet. Tulips, Hyacinths, Crocus, Narcissus, &c., should be planted for blooming in the open air, and potted for forcing without delay.

The removal of trees and shrubs, and other work connected with alterations, should be forwarded as much as possible, as it is probable the frost of next month will prevent the continuance of these operations. Grass and gravel should be frequently rolled, and the beds and borders dry and prepared for another season.

FLORICULTURAL INTELLIGENCE.

Royal South London Floricultural Society.—The last show for the season of this Society took place on Tuesday, September 19, at the Surrey Zoological Gardens. The day was every thing that could be wished, and the attendance of visitors good. This being the principal metropolitan exhibition of Dahlias, drew together a large assemblage of the fanciers of this flower. Much interest was also excited by its being the first of three shows at which the merits of the rival Whites are to be determined; Mr. Bragg, of Slough, having offered a prize for

the flower which shall be placed first at two of the three shows. It was decided in this instance in favour of Wildman's Bianca, it being affirmed by three out of five judges that Antagonist was "cross-eyed." We saw the flowers; and though we do not deny the justice of the decision, must say, that but for this accidental defect Antagonist is every way the best flower. There was an abundance of Dahlias staged, though but few of them in first-rate order; with five or six seedlings — the prize in this class was awarded to Mr. Cousins for a tolerably good but very small flower, colour crimson lilac. Among the others we noticed a fine white from Mr. Gaines, called Princess Alice, a dark red from Mr. Smith, and a similar flower from Mr. Dodds. The display of Plants was as good as we could expect from the advanced state of the season. Mr. Bruce had a fine collection, containing Curcuma Roscoeana, Crinum amabile, Achimenes longiflora and coccinea, Pancratium fragrans, Siphocampylos betulæfolius, Æschynanthus grandiflorus, Crowea saligna, Polygala grandiflora, Manettia cordata, Erica Aitoni, &c. Mr. Atlee, who was placed second, had large plants of Erica Bowiei, E. intermedia, E. Aitoni, E. vestita, coccinea, and some others, with however but very little bloom upon them. The third collection (Mr. Hamps) though composed of smaller plants, had a far larger proportion of flowers; in it were, besides many others, a good plant of Convolvulus pentanthus, Ceropegia elegans, Sinningia guttata; several Gloxinias, Achimenes grandiflora, A. coccinea, &c. For the Amateurs' class only one prize was awarded, for a collection from Mr. Cox, containing Oncidium Suttonii, O. ornithorhyncum, O. papilio; two Gongoras, Pancratium speciosum, Begonia tuberosum, &c. Among the single specimens were several fine plants in excellent order, though we are decidedly at issue with the censors, the judgment here being little short of vile, What could possess any persons at all acquainted with plants to cause them to pass over such things as Aphelandra cristata, or Gesneria zebrina, or such Ericas as were exhibited, in favour of Sollya heterophylla, Musa Cavendishii, without flowers or fruit, and Calathea zebrina? the difference in the general appearance of the plants being as great as is that of the kinds; the rejected being superior in every point. We are not aware who filled the office of judges on this occasion, but it reflects but little to their credit; and the Society will do well to use more discretion in their next nomination. We could say something about the cut flowers, the Dahlias, and the Amateurs' collection, but we leave the unpleasant subject for the present.

Mr. Cuthill exhibited a collection of Lisianthus Russelianus in splendid bloom. Fuchsias were shown by Mr. Gaines and Mr. Pawsey.

(*The List of Prizes next Month.*)

THUNBERGIA FRYERI

THE

FLORIST'S JOURNAL.

DECEMBER, 1843.

THE GENUS THUNBERGIA.

WITH AN ENGRAVING OF G. FRYERII.

THE Thunbergia is an indispensable ornament to every general collection of plants, and fortunately the species are sufficiently numerous, and exhibit so much docility in their several habits, that they may be made to contribute to the embellishment of almost every place set apart for the culture of plants — from the flower-garden to the stove. For the first, there are few plants possessing greater claims for the several purposes of covering walls, trellis, baskets, vases, &c.; and another highly appropriate situation is among root work here — planted at the base of the heap the plant appears in its most natural character; clinging to the various projections, it throws itself from one part to another so as to quickly cover the portion near it, and at the same time blooming in profusion.

For out-of-doors' culture, T. aurantiaca, T. alata, and alata alba, are most suited, and indeed it is questionable if these species, and the variety now figured, are not the finest in any situation. Every cultivator is aware what beautiful specimens they afford when well grown under glass: the only drawback is their extreme liability to be infested with red spider; this, however, may be prevented, and, under favourable circumstances, any of the genus well repay the attention they require. We now proceed to their cultivation, which we cannot explain in a better form than by mentioning each species separately, describing them as they occur.

Thunbergia fragrans. —The flowers of this species are pure

white, of the same shape and size as those of T. alata. The plant is of rather more rigid habit, and generally of longer duration. It requires to be grown in a stove to flower it well: the compost it appears to delight in is a mixture of peat and leaf-mould in equal quantities, with a proportion of a third loam and sand. It will seed occasionally: these should be sown about the beginning of March in heat; and as soon as the seed leaves are thoroughly expanded they should be placed separately in small pots, and continued in the same heat until they have filled the pots with roots; then let them be placed at once in large pots — say twelves, and the advantages of the large shift will speedily be seen. Through the whole stage of growth until the plants have attained maturity, and are beginning to bloom, they should be continued in a moist heat, and, if practicable, let them be saturated (if we may use the term) with steam every evening: this will prevent the ravages of that minute pest the red spider. Cuttings also may be struck in sand under a bell-glass in heat at the same time, and with the same treatment they make equally good plants. It will soon become evident as they grow that something is required to support them; for this we prefer a flat trellis, as it shows all the flowers at one view. They do not require a large one. This species has been longer known than any other, having been imported from the East Indies in 1796.

T. grandiflora is much the largest habited of the whole genus. The flowers are blue, and also larger than those of any other species; though not being produced so abundantly, it is not so generally esteemed. They are more campanulate in shape, and are seated on a stiff, erect footstalk. The plant is altogether of too coarse a character to render it desirable in small collections; yet where there is sufficient space it may be grown into a fine specimen. The chief difficulty rests with the insectiferous pests that seem to claim this genus as their own. The least neglect in the supply of moisture to the foliage destroys all previous care; and from the size which this plant attains, it is soon impossible to keep it in a pit where steam is most at command: however, if grown in a stove, and attention is bestowed in syringing the whole of the leaves every day while growing, it will in one season cover a circular trellis of six feet circumference. It may be readily increased by cuttings,

in the same manner as recommended for *fragrans* introduced in 1820 from the East Indies.

T. alata is a well known summer-flowering climber, and, as we have before remarked, well suited for so many purposes. The limb of the corolla is a clear buff colour, and the tube or throat (eye it is often called) a very dark purple, approaching black. The treatment suitable for this differs but little from that of *fragrans*. If it is wished to obtain fine specimens in pots, they should be treated precisely the same until they begin to bloom, when the greenhouse is the most eligible situation; or if intended for ornamenting the flower-garden, they should be kept in small pots until all danger of frost is past, and then turned into their respective places. As it is sometimes difficult to keep these plants through the winter, it should always be an object to obtain seed; and here too is another difficulty: they do not usually produce seed when unassisted, or at least to any extent, and artificial impregnation is rather a tedious operation. The most likely method of obtaining it is to remove the plants when in full bloom from the greenhouse to the open air, choosing fine, dry weather, and place them in a situation fully exposed to the sun. Here the fructification is completed. This species was brought from the East Indies in 1823.

T. alata alba.—Apparently a variety of alata, though designated a species: the limb is pure, spotless white; the tube dark purple, the same as in the previous species; habit, treatment, and appliances the same. Brought from Madagascar in 1826.

T. aurantiaca.—We well remember the "sensation" that was created when this fine plant was brought into public notice, and well deserving it is of all that was said of it. The limb of this is a bright dazzling orange colour, and the tube dark purple. Its treatment should be the same as for alata, and it may be used for the same purposes. It usually seeds more freely than any other species, and this by facilitating its propagation has been the means of distributing it wherever plants are admired. It emanated from the Epsom Nursery, and was said to be a native of Nepal.

For this and the two preceding species we would recommend that the soil contain a larger proportion of leaf-mould; say leaf-mould two thirds, peat and loam one third, with a portion of

sand according to the quality of the mixture. Let the soil be used rough, and give ample drainage.

T. Fryerii.—Our present illustration is a handsome variety of the above species. It was raised last spring from seeds of aurantiaca by Mr. Fryer, Nurseryman, of Camberwell, and is the first native variety we are aware of. This insensibly leads us to our favourite subject, viz. raising seedlings. There is not, we believe, another branch of horticulture possessed of half the interest attached to this; and we regret very much that so little attention is paid to it. Here is a plant promising nothing at all uncommon, and yet producing a variety that will convey the raiser's name to posterity as a skilful and persevering cultivator. It may be advanced that this is only a chance. What though it is no more, is it not worth the little extra trouble to gain this chance?

Mr. Fryer has also another seedling of the same colour as its parent aurantiaca, but possessing the most symmetrical outline we ever saw. It is a perfect circle, the segments of the limb overlapping to such a degree as to give the flower near the substance of two. This plant requires the same treatment as recommended for fragrans and alata. We are not quite certain if it is so hardy as the latter, but do not see any reason to the contrary.

T. coccinea.—The habit of this species is less scandent than the others. The colour of the flowers is a dull scarlet; the tube is contracted toward the throat, so as to divide the segments of the limb, which causes the outline of the flowers to resemble that of the mimulus. This plant requires a stove to arrive at perfection: it should be pruned closely back in the autumn, and be kept rather dry through the winter, giving it a good start in the spring. A damp heat is as necessary for this as the others. We are not aware of its having ever perfected seeds in this country; but it may be easily increased by cuttings. A native of Trinidad, introduced in 1823.

T. Hawtayneana.—Another blue-flowering species; but from its extremely delicate character, and from being a shy flowerer, very seldom grown. It succeeds best when planted into a hillock of mould composed chiefly of peat and leaf-mould in the midst of a moderately warm tan-bed: if grown in a pot it should be constantly plunged in a pretty brisk heat while growing.

The colour of the flowers is pale purple, resembling in shape and size the common periwinkle, but possessing more substance. It was brought from Nepal in 1826.

We have heard of two or three other species — caudata, angulata, and capensis; but not having grown them, we refrain from describing on other authority.

In conclusion, we may mention the genus is named in honour of C. P. Thunberg, F.R.S., a celebrated botanist and traveller, author of Flor. Japonica, &c., and in the Linnean system is included in the class Didynamia, order Angiospermia; and in the Natural or Jussieuean arrangement its place is in Acanthaceæ. — EDITOR.

LIST OF ORCHIDEÆ.

(*Continued from page* 223.)

118. *Epidendrum patens.* (Derived from spreading.) A plant with bulbous stems, from two to three feet long. Leaves alternately up the stem; flowering in a drooping raceme, produced from the summit of the stem, eight inches long; flowers verticillate, and of a pale-greenish white. This species is worthy a place in every collection, and should be grown in a pot in a mixture of turfy peat and sphagnum, with a good drainage, and liberally supplied with water while it is making its growth, with a temperature of 65° to 70°. — *Native of West Indies.*

119. *Epidendrum oncidioides.* (In regard of its flowers bearing the character of that genus.) A beautiful showy species, with pseudo bulbs from three to four inches long; the leaves are long and narrow, flower-stem branching from two to three feet long; flowers yellow, tinged with brown. This species also requires pot culture, but not so liberally supplied with water as in some cases. The temperature for it should be 65°. — *Native of South America.*

120. *Epidendrum fragrans.* This species I only recommend on account of the delightful fragrance it produces when in bloom, but of no peculiar beauty; plant pseudo-bulbous, and producing its flowers from a short stem on the summit of the bulbs; sepals and petals green; column rather darker, with its labellum striped with red. This requires the same treatment as

the above, with a temperature of 65° to 70°. — *Native of Jamaica.*

121. *Epidendrum fragrans var. cinnamomeum.* This species differs but little from the other, except in the flowers being more of a reddish brown. It requires the same treatment and temperature. — *Native of Jamaica.*

122. *Epidendrum armeniacum.* (Apricot flowered.) This species is not so handsome as some others. Its flowers are rather small, and produced on a pendent raceme from four to six inches long, with brownish yellow flowers. It also requires pot cultivation in a mixture of turfy peat and sphagnum, and to be liberally supplied with water while growing. Temperature 65° to 70°. — *Native of Brazil.*

123. *Epidendrum conopseum.* (Derived from the flowers bearing a resemblance to gnat.) A plant with bulbous stems rising to about four inches high; flower-stem branched, producing a large quantity of small pale greenish-yellow flowers. This species will either do on a chump of wood, or in a pot in a mixture of turfy peat, sphagnum, and rotten wood, but water rather liberally. Temperature 65°. — *Native of Georgia.*

124. *Epidendrum cinnabarinum.* Stem upright; growing from two to three feet high, and producing its leaves alternately up the stem; flower-spike rising from the summit of the stem, and producing from eight to ten flowers; sepals and petals are a bright red or cinnamon colour. Labellum 3-lobed; the outside lobes much fringed or bitten, and of an orange red. This species requires pot cultivation in a mixture of sphagnum, rotten wood, and turfy peat; and should be liberally supplied with water in its growing season. Temperature 65° to 70°. — *Native of Pernambuco.*

125. *Epidendrum viridi-purpureum.* (Derived from the colour of its flowers.) This is a curious species, and is worth growing in every collection; its flower-stem rising from two to three feet high, and producing a raceme thickly set with flowers, of which the sepals and petals are of a pale green, slightly tinged with brown; column green, tinged with purple; labellum nearly the same. It also requires the same treatment as the above, with a temperature of 65° to 70°. — *Native of Jamaica.*

126. *Epidendrum papillosum.* (Derived from papillose, pimpled or warty.) Plant pseudo-bulbous; leaves narrow; flowers produced from a scape or raceme. The sepals are of a yellowish green; column the same, but tipped with orange; labellum white, with rosy pink stripes. It affects pot culture in a mixture of sphagnum, rotten wood, and a little turfy peat; but does not

require so much water as some others. Temperature 65°. — *Native of Mexico, I believe.*

127. *Epidendrum Skinnerii.* Stem upright, growing from eight to ten inches high; leaves alternate; flower spike rising from the summit of the stem from one foot to eighteen inches high, and producing twenty or more flowers of a fine rosy crimson, with a stripe of orange-yellow in the labellum. This is a beautiful species, and should be cultivated by every lover of Orchideæ: it requires pot cultivation, with rotten wood, and very little sphagnum added to it; and water cannot be too often given to it, providing there is a good drainage, which I particularly recommend. The temperature for it should never be above 65°. — *Native of Guatemala.*

128. *Epidendrum Skinnerii minor.* This is a dwarfer variety than the other, but not so good; neither are the flowers so bright a crimson colour as the former: requires the same treatment and temperature. — *Native of Honduras.*

129. *Epidendrum macrochilum.* (Derived from the labellum being large.) Plant pseudo-bulbous; leaves in threes; scape rising a foot high from the summit of the bulb, and producing from five to six flowers; of which the sepals and petals are of a greenish brown; labellum creamy white, with a large stain of purple at the apex. This is a beautiful species, and requires hanging up in a pot in a mixture of sphagnum, turfy peat, and rotten wood, with a temperature of 65°.— *Native of Mexico.*

130. *Epidendrum macrochilum roseum.* Plant pseudo-bulbous, and much similar to the above, except that the sepals and petals are of a brownish purple, and the labellum of a fine rosy purple. It requires the same treatment and temperature as the other. — *Native of Mexico.*

131. *Epidendrum clavatum.* (Derived from being club-shaped.) Plant pseudo-bulbous; bulbs two inches long; leaves single, five inches long, and nearly one inch broad; the flowers rise up with the young shoots; sepals and petals of a greenish white, the former rather tinted with rose; labellum white and narrow. This is a tender species in its growth, and should be potted in sphagnum, rotten wood, and a little turfy peat, with a slight elevation on the pot. It seldom requires much water; but a temperature of 70°. — *Native of Demerara.*

132. *Epidendrum primulinum.* Plant pseudo-bulbous; bulbs four inches long, round, and tapering to the apex; leaves in threes, one foot long, and better than one inch broad; flower-spike, rising from the summit of the bulb, eighteen inches long; flowers of a greenish brown. This species will do exceedingly well in a mixture of rotten wood, sphagnum, and turfy peat, pro-

134. *Epidendrum pallidiflorum.* This species is not very beautiful, but still is worthy a place in every large collection: its flowers are a pale yellow colour, and produced in a bunch or corymb. The plant will succeed in a mixture of sphagnum, turfy peat, and rotten wood, with a temperature of 65° to 70°.—*Native of Brazil.*

J. HENSHALL, K—P—Y.

(*To be continued.*)

THE TANK SYSTEM OF HEATING.

WE have on several occasions lately recommended the adoption of Rendle's tanks for heating nearly every description of horticultural erections, from a conviction of their general utility, and comparatively trifling expense; and we feel gratified in being able to state that in every instance where properly adapted they have been found efficient.

We have now an opportunity kindly afforded us of describing an important improvement in their construction. A method particularly suited to pits required for early forcing, and by which the heating surface of the tank is increased to fully double its previous extent, at the same time securing a fine circulating atmospheric or surface heat. It is well known to those who have adopted the tanks for the supply of bottom heat in pits, that for obtaining and maintaining any amount of heat they are fully sufficient; yet from the warmth hitherto having to ascend to the surface through the soil or tan of the beds, it has imbibed so much of the moisture contained in the bed as to render it necessary either to admit a large proportion of air at all times by the lights, or to have one or more close pipes as a

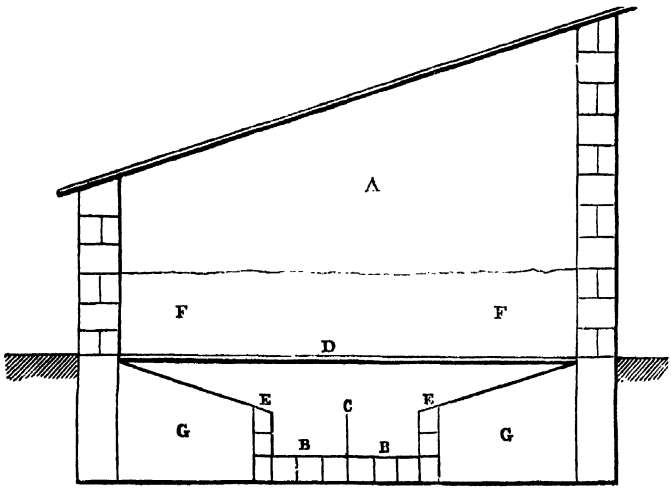
The well-known aerostatic fact of the volatility and expansiveness of rarefied air will at once explain the cause of a circulation, for this under heat will necessarily be highest at the warmest end of the tank; and here it will ascend through the opening between the end of the tank and the outer wall of the pit, to the glass, with greater velocity than at the opposite end, thus leaving a vacuum into which the cooler air immediately rushes, which in its turn will become heated, and again rise; by these alternations giving a free circulation of warm air throughout the whole pit, which will materially tend to lessen the degree of moisture generally observable on beds over tanks.

The idea originated with J. H. Schröder, Esq., of Brixton, a gentleman much attached to and a most liberal patron of horticulture, to whom we are indebted for this opportunity of making known what we consider a desideratum in the tank system.

It must be understood, though we use the term boards, when speaking of the inclined pieces from the edge of the tank to the sides of the pit, any other convenient material may be used: slate would perhaps be best, but for the false bottom, we greatly prefer wood. When the system was first brought into notice,

wood was declared to be a non-conductor, and altogether unsuited to the purpose; but we find that heat passing through it assumes a much more genial character than that given off either from slate or iron; and an inch board of good yellow deal will last longer even in such a situation than some are inclined to believe.

SECTION OF PIT,— Showing the Improvement.



A. The pit. B. The tank. C. Division in ditto.

D. False bottom of wood on which the bed is made.

E. Space left between the false bottom and the tank, so that by this means the whole bottom surface of the bed is heated *equally* at the same time. The great advantage of this plan must at once be seen; for it is obvious that if the false bottom rested immediately on the top of the tank, the tank must of necessity be the width of the bed, or an uniform heat could not be obtained throughout the bed.

F. The bed.

G. Space under the shelving-boards where the circulating heat is accumulated.

LIST OF NEW PLANTS.

MONADELPHIA POLYANDRIA.—*Sauvagesieæ.*

Luxemburgia ciliosa, syn. *Plectanthera ciliosa.* This species was first detected by Martius in the Diamond district, province of Minas Geraes, and subsequently in the year 1841, by Mr. Gardner, in moist peaty soil in open places, growing with species of *Andromeda* on the Organ Mountains at an elevation of 5000 feet. It is a truly handsome plant, both in its foliage, which is of a lively and glossy green, and in its fine corymb of flowers of a pure yellow colour. It requires a moderate stove-heat, and flowers during the summer months.—*Bot. Mag.*

DIDYNAMIA ANGIOSPERMIA.—*Acanthaceæ.*

Petalidium barlerioides, syn. *Ruellia barlerioides*, *Ruellia bracteata.* This plant inhabits the mountain regions of India, according to Dr. Roxburgh. It was found at Sheikpore and Monghyr by Dr. Hamilton, and near Deyre by Dr. Wallich, to whom the Royal Botanic Gardens at Kew are indebted for a living plant. It requires a stove-heat, and with that treatment blooms readily in a pot during the summer months, when its flowers render it ornamental: they are large, between funnel-shaped and campanulate; white with a yellow tinge in the throat. The plant forms an upright growing shrub.—*Bot. Mag.*

DIDYNAMIA ANGIOSPERMIA.—*Gesneraceæ.*

Achimenes hirsuta. This pretty plant forms another acceptable addition to the charming genus Achimenes. In habit it bears the nearest resemblance to *A. pedunculata*, and like that beautiful thing is disposed to bear little bulbs on the axils of the leaves and branches. The history of its introduction is an instructive lesson to importers of plants. How often do we find gardeners throwing away the moss and mould and fragments that remain after every foreign case of plants is examined, and the principal part of its contents removed, and how often do they thus perhaps reject the most interesting species. This Achimenes was hidden among a mass of Orchidaceous plants imported from Guatemala, and sold by auction a few months ago. Mr. Henderson, of the Pine-Apple Place Nursery accidentally detected it—and thus a plant, which must have been often sent home with fruitless care on former occasions, was brought to our gardens without any attention whatever. As has been already stated, this species has the habit of *A. pedunculata*, but is nevertheless a very different species. The leaves are

covered with coarse hairs; the flowers are much larger, not at all striped, but have a deep rose-coloured border, whose lobes are notched.—*Bot. Reg.*

HEXANDRIA MONOGYNIA.—*Amaryllidaceæ.*

Alstrœmeria lineatiflora. At last we have the pleasure of publishing the true *Alstrœmeria lineatiflora*, from Peruvian roots, presented to the Horticultural Society by J. Maclean, Esq., of Lima. It is one of the finest of its class; and although doubtless very near *A. Ligtu, peregrina*, and *pulchra*, apparently distinct from either. The flowers are pale pink, with a shade of yellow near the base of the two upper petals, and slightly marked with small crimson bands. It is a greenhouse perennial, and thrives best in a compost of one half loam, the other peat and sand; this, like many other species of Alstrœmeria produces tuberous roots in a horizontal direction, consequently it requires a large pot, which should be nearly half-filled with potsherds. In autumn the plant should be set in some airy place, where it will receive very little water, until the beginning of January, when it should be repotted: while in a growing state plenty of water should be given, and air at all times, when the weather will permit. It may be propagated abundantly from seed.—*Bot. Reg.*

GYNANDRIA MONANDRIA.— *Orchidaceæ.*

Dendrobium Ruckeri. We presume this plant to be one of Mr. Cumming's discoveries in the Philippines, although no trace of it is to be found among his dried specimens. It belongs to the same set as *D. Pierardi.* Its leaves are exactly lanceolate, very sharp-pointed, and a little disposed to curve backwards at the end. The flowers, although of a rich yellow nankeen colour, when expanded are almost white externally; the lower sepals, which are really ovate in form, are rolled back at the edge near the middle, so as to look as if contracted there; the petals and upper sepal are nearly of the same size and form, linearly-obovate, acute, and spreading; the labellum is deep orange, with a white edge and a pink outside; when spread flat it is roundish, obovate, with three rounded lobes, of which the middle one is crisp, and has a hairy ridge running along its middle; the side lobes are hairy too near the base; the flowers are deliciously sweet.—*Bot. Reg.*

GYNANDRIA MONANDRIA.— *Orchidaceæ.*

Dendrobium taurinum. This plant was imported from Manilla by Messrs. Loddiges, and flowered in the Hackney Nursery last autumn. Mr. Cumming was its discoverer and introducer.

Its aspect approximates greatly to that of the curious *D. undulatum*. But though the stems of *D. taurinum* are quite as tall, and the foliage a little similar, the former are not nearly so much swollen towards the base. The flowers are borne in noble racemes near the top of the stem; and a single raceme will have perfect flowers upon it for a month or six weeks: indeed the species blooms most immoderately. The flowers are large, of a yellowish green, or dull cream colour, beautifully margined, and tinted with purplish lilac. The lip column and twisted petals constitute a figure which has been correctly likened to a bull's head, and from which the specific name has been derived. It is cultivated like the larger kinds of Dendrobia in a moist summer heat, and a drier and cooler winter atmosphere, being potted in a mixture of rough heath-mould and potsherds. Propagation is managed by cutting off one of the stems in the winter, and potting it separately. — *Mag. Bot.*

HEXANDRIA MONOGYNIA. — *Liliaceæ.*

Lilium testaceum. Japan, which has already furnished our gardens most richly with showy flowers through the medium of Dr. Siebold, is said to be the native country of this fine lily. In point of ornamental character, it is quite worthy of being associated with the other noble kinds from the same region; and indeed comes rather near *L. Thunbergianum*, or *aurantiacum*. It appears first to have bloomed with Messrs. Rollison last season.

When well cultivated it grows three feet in height and upwards, being of a vigorous nature, and bearing as many as a dozen of its large flowers on the same plant. The blossoms are of a pale orange red hue, with darker warty dots on the inner petals. They are produced in a drooping manner, and the petals are somewhat curled back. It requires the treatment usual for other tender species. — *Paxt. Mag. Bot.*

TO CORRESPONDENTS.

JULIAN DE M. — We advise you to add the following plants to your collection for the greenhouse:—Boronia serrulata, B. pinnata, B. viminea, and B. anemonæfolia, Pimelea spectabilis, Mirbelia dilatata, and glycinifolia. Hovea Celsi and pungens; Eutaxia myrtifolia and Leschenaultia formosa and biloba.

AN ENQUIRER. — Achimenes multiflora is not an annual as

stated in the Botanical Magazine, but as much a perennial as any other known species of the genus.

Mr. S. Taylor.—Rendle's tank system or adaptations of it are becoming almost universal for all sorts of erections. It may be suited to either bottom or surface heat, and be made to afford it either dry or moist; in short, there is no description of heating for horticultural purposes to which it is not most preferable. For pits for early forcing it is entirely superseding the dirty, troublesome, and expensive mode of heating by dung linings; and the comparative cost is quite nominal. You will get the particulars for construction in his treatise. Mr. R. well deserves the gold medal he obtained for the invention. See also the article in present number.

An Amateur had better preserve his seeds from China until the beginning of February. They should be sown in light rich soil, on a gentle bottom heat.

Mr. J. Henshall on Cactæ next month.

Mr. F. Anderson, who wishes for twelve good carnations, should grow Colcutt's Brutus S. B., Martin's Splendid S. B., Twitchet's Don John S. B., Cartwright's Rainbow C. B., Ely's Hugo Meynell C. B., Puxley's Prince Albert C. B., Ely's Mango P. F., Mansley's Beauty of Woodhouse P. F., Christian's Excellent P. F., Bucknall's Ulysses S. F., Chadwick's Brilliant S. F., and Greasely's Village Maid R. F.

CALENDAR FOR DECEMBER.

Stove. The month before us admits of but few observations in the calendar. The best that can be done is only keeping the plants as they are; and so that they do not assume a retrograde movement, it is all well, any beneficial advance being out of the question until the turn of the season. The temperature of this department for some time forward will be purely artificial; and as the cold increases, so must the fire; and this will render more water necessary, but it must still be used with caution. Where the collection is of any considerable number, of whatever description it may be, there will always be a quantity of the younger, and perhaps some of the mature plants, which will evince an inclination to grow. These attempts it is better to

gently encourage than altogether repress; and if, by being allowed a good situation and a little more attention, they can be made to continue to grow slowly, it will be better for the plants than either pruning or starving them out of it. Attention should be paid to the cleansing of all the plants whenever the inclemency of the weather renders out-of-doors' operations unpleasant. Temperature from 55° to 60°.

GREENHOUSE. Chrysanthemums are now the chief ornament here, and well do they repay the little attention necessary to their growth, blooming abundantly as they do, when scarce another flower durst unfold its beauties; and if liberally supplied with water, their flowering may be prolonged until the earlier camellias are fit to occupy their places. Pelargoniums require much attention just now; a light airy situation is indispensable to a vigorous growth: the young shoots should be stopped at every second joint. Calceolarias frequently suffer at this season from the effects of damp. To prevent it plenty of air must be given them at every favourable opportunity, and the decaying leaves carefully removed. Precisely the same may be said of Ericas: a slight sprinkling of sulphur will be found beneficial to both whenever mildew appears upon them. Tropæolums are now beginning to grow. It is a great pity that cultivators so frequently neglect to stop the points of their young shoots. They are improved by it quite as much as any plant. Mignionette, nemophila, and other annuals, should receive plenty of light, or they grow weakly and do not flower fine. The late-flowering climbers may now be pruned in order to admit all the light possible. Give air every fine morning, but close the house early in the afternoon. Fire heat will be necessary frequently, and must be regulated according to the weather, bearing in mind it is as much required in wet cold weather as when freezing. Let 45° be the average temperature.

FLOWER GARDEN. This season the chrysanthemum has bloomed remarkably well in the open air, which we think is to be attributed more to the fine warm weather we experienced in August and September, having hardened the tissue of the new shoots, and given the plants a robustness they seldom attain, rather than to any thing favourable in the subsequent weather,

for the latter part of the autumn has been wet, cold, and gloomy. May not a hint be gained from this to guide us a little in future. The digging and dressing of borders, and the planting of all hardy bulbous roots, should should be expeditiously forwarded. Perennial and other herbaceous plants will bear removal still. Half-hardy trees and shrubs require some protection now. Every description of out-of-doors' work should be forwarded while the weather continues open. In the pits and frames the chief danger originates in damp, and must be guarded against by the constant admission of fresh air, whenever an hour of mild weather occurs; and the removal of dead leaves and every thing likely to create it, or impede the circulation of air: continue to forward hyacinths, tulips, and other flowers for forcing, by placing them in close frames, as others are taken to the forcing-house: roses, lilacs, &c. should also be sheltered for the same purpose. Violets in frames will require a gentle heat to obtain early flowers; a lining of fresh leaves is the best means of supplying it. Auriculas, polyanthus, carnations, and picottees should have air on all occasions.

We have much pleasure in announcing to our readers that in consequence of an arrangement we have lately entered into with the Regent's Park Gardener's Association for mutual instruction, their papers will in future appear regularly in the Florist's Journal. This addition will, we trust, meet the wishes of the many correspondents who have written to us on subjects foreign to the title of our work. The papers of the Association, embracing the entire range of horticultural pursuits, and being the production of practical men, will afford information on a variety of matter interesting and instructive to all who delight in the science. The Journal will continue in other respects exactly the same; and by these additional means we hope to extend its usefulness. The first of the series will be published in the January number, being the commencement of our next volume.

FUCHSIA'S

1. SMITH'S CICANTEA 2. SUPERBA.

ON THE FUCHSIA

WITH AN ENGRAVING OF F. GIGANTEA AND F. SUPERBA.

Our present illustrations of this popular flower bear evidence not only of the improvement effected in the flower itself, but also of the observable advance in taste of those who properly direct their attention to the raising of seedlings. It is not long since we were obliged to content ourselves with the long, narrow-tubed, coarse, St. Clair-like things, now utterly discarded from good collections. But, thanks to the energetic zeal and perseverance of the cultivators of this tribe, we may now, with ease, form a selection combining both variety of form and colouring.

The person who assumes the task of directing public taste occupies a station by no means enviable; and unless sound judgment and much discrimination direct his opinions, he will infallibly fail, and become very nearly an object of ridicule; but without the exercise of some standard for comparison, no certain rules could be had to guide in the selection or rejection of varieties; and these rules or laws, which go to constitute a standard, must chiefly emanate from one mind: much, therefore, is due to the individual who does establish a means of determining the respective merits of new flowers, for without these directing influences, we much doubt if our present vantage-ground had ever been obtained. The established criteria for Fuchsias require the plant to be of neat compact habit, with small rather than large foliage — the flowers to be produced in not less than twos and threes from the axils of the leaves, several joints from the end of the shoot — terminal clusters being altogether repudiated; the sepals and petals to be of two distinct colours, bright and rich; the larger the flowers are the finer will be the appearance of the plant when in bloom, so that they do not partake of coarseness.

With respect to cultivation, we can offer little that is not already known to cultivators, except that we think by far too much care and attention is given them through the winter. The regions from whence most of the species have been obtained are by no means remarkable for their temperate winters, as they frequently experience cold which, if not quite so

severe as with us, is sufficient to destroy the foliage and stagnate vegetation; and beside this, we know that not only nearly every species, but also their hybrid varieties, will retain their vitality through our severest winters, with but little protection, in the open borders. Bearing this in mind, it does appear to us that the greenhouse is not the best situation for them during the cold weather. Our manner of treating them is this: — As soon as the bloom is well over, cease watering, and let them stand a week or ten days in the warmest part of the garden, so that the sun may have full effect in ripening the wood; and before frost occurs, remove them to a dry shed just sufficiently close to secure them from severe frosts; here let them remain until the spring, either in the pots in which they have grown through the summer; or if space is valuable, they may be shaken out of the earth, and laid close together, covering the roots over with a mat or two: on the return of growing weather prune them back to within six inches of the base of the stem; then, after repotting, place them in a warm house, and the growth will be rapid and simultaneous, ultimately producing a well-proportioned bushy plant.

It must be understood we recommend this treatment only for mature plants; recent plants, either from seeds or cuttings, will of course require all the encouragement it is possible to give them through the dull months of the winter.

No. 1. *F. gigantea*, of our present plate, is a seedling raised last season by that most successful cultivator, Mr. J. Smith of Dalston; its beauties will be readily appreciated by every admirer of the tribe.

No. 2. *F. superba* was obtained by seed at the same time by Mr. C. Matlock, gardener at Herne House, Derbyshire. It is a decided improvement on the globose forms — a class, we think, well worthy attention. — EDITOR.

ON THE CULTURE OF DIONÆA MUSCIPULA.

I am induced to send you the following Paper from a desire to extend the knowledge of and cultivation of this most mechanically curious plant; and now that Orchideæ are gaining so much on general estimation, there will be no want of appropriate places in which it may be grown.

The *Dionæa Muscipula*, or Venus's Flytrap, is naturally an inhabitant of marshy spots in Carolina, from whence it was brought in 1788; but, notwithstanding the length of time it has been known to us, is still rather scarce, from the circumstance which operates in the case of other rare plants — its culture not being understood. The name fly-trap conveys an idea of the curious mechanical powers of the plant, which it never fails to exercise on every unfortunate delinquent that may happen to intrude within the sphere of its action. It is not necessary to enter into an anatomical digression to explain the cause of this action, or to broach the physiological question as to the object to be gained by the plant, thus imprisoning to death the unconscious insect, first tempted within its clasp by the sweet vinous liquid exuded from the epidermis of the foliage, further than briefly to mention the manner and probable actuating cause. The petiole, or leaf-stalk, is flattened, elongated, and winged, and, like the whole plant, remarkable for the number of hairy processes distributed over it: the leaf proper is nearly round when extended horizontally, but rising from the mid-rib on each side, in the form of two equal lobes, the margins of which are thickly set with strong hairs, and act in the manner of the teeth of a steel trap; these lobes, immediately a fly, or any firm substance, touches the upper surface of the leaf, close tightly together over the unfortunate victim, which hold it retains so long as the cause remains.

It has been plausibly represented that the probable object is, the furnishing the plant with ammonia arising from the decaying body of the insect.

The treatment proper for this little botanic curiosity is nearly allied to that usually adopted with the Indian class of Orchideæ.

Potted in a mixture of sphagnum and fibrous peat well mixed with a portion of charcoal distributed throughout the whole, and placed in a warm house with a liberal supply of water, but little trouble need be apprehended in its management: in potting, it should be kept an inch or two above the rim of the pot, and if the plant is small it should be covered with a bell glass until established, after which the covering may be dispensed with, for if continued too long there is some danger of the plant damping off. To propagate it, it is only necessary to take a portion of the leaves from close to the stem, and treated

as recommended for small plants it will speedily form roots; indeed a single leaf will strike and become a plant, but it is rather a slow process. There is, however, one point in its management I would particularly mention, as being of the first consequence. In by far the greater number of places where it is grown I have observed it to be constantly covered with such attention that one might be led to suppose it would not bear a breath of fresh air to come near it: this, from experience, I pronounce to be erroneous; so far from receiving injury from such a cause, the plant is as much invigorated by the admission of air in fine weather as any other plant in the same house; in short, to grow it well it is only requisite to assimilate its treatment to that of the plants grown with it in a damp stove: neither would I recommend it to be kept standing in water as is sometimes done, believing it to be, if not hurtful, at least unnecessary, it only requiring to be constantly moist and nothing more.

W. HUNT.

LITERARY NOTICES.

The *Gardener's Almanack* for 1844, by G. W. Johnson, Esq., London Company of Stationers.

Beside the usual calendarial matter of an almanack, we have, in this of Mr. Johnson's, an immense mass of information derived from a number of sources. That it is a most useful compilation we cannot for a moment withhold our consent; but we must qualify our approbation of the entire work, by a deserved compliment to the editor. We greatly prefer the original portion to any thing we can find in the extracts. The attempted synchronical arrangement of the calendar of operations is well worthy the attention it requires to carry it out; and the remarks and statistics on the subject of manures are exceedingly useful: we esteem this the best part of the work. It is well got up, and contains 96 closely printed pages.

The *Garden Almanack* and *Florist's Directory*, by G. Glenny, F. H. S., London, Groombridge, Paternoster Row.

There cannot be a greater difference in any two almanacks than exists in these, though professedly on the same subject. Much useful information is here conveyed to the amateur in a

familiar understandable sort of style. The lists both of fruit and flowers are unexceptionable, and the monthly directions good. It is especially adapted to the florist; and we have pleasure in recommending it to the notice of our friends who have not yet procured it.

FLORICULTURAL INTELLIGENCE.

ROYAL SOUTH LONDON FLORICULTURAL SOCIETY. (*Continued from page* 232.) — The following prizes were awarded:

Amateurs.

For a collection of 24 Dahlias: Gold Medal, Mr. Headley; Large Silver, Mr. Goodchild; Middle Silver, Lady Pagett; Small Silver, Mr. Procter.

For a collection of 12 ditto: Large Silver Medal, Mr. Wildman; Middle Silver, Mr. Cook; ditto, Mr. Munro; Small Silver, Mr. Golding; 3d Small ditto, Mr. Hatchman.

Gentlemen's Gardeners.

Large Silver, Mr. Bourne; Middle Silver, Mr. Parsons; ditto, Mr. Bennet; Small Silver, Mr. Smith.

Nurserymen.

Large Silver Medal, Mr. Bragg; Middle Silver, Mr. King. Collection of Dahlias, Mr. Gaines; Seedling ditto, Middle Silver, Mr. Cousins.

Collections of Plants

Amateurs. — Middle Silver Medal, Mr. Cox, 12 plants.

Gentlemen's Gardeners. — 24 plants: Gold Medal, Mr. Bruce; Large Silver, Mr. Atlee; Middle Silver, Mr. Hamp. Recommended Mr. Patterson.

Nurserymen. — Large Silver, Mr. Jackson. Collection of Roses, Middle Silver, Mr. Paul. 12 Lisianthus, Mr. Cuthill recommended.

Cut Flowers.

Amateurs. — 1st, Mr. Davis, Middle Silver; 2d, Mr. Townley, Small Silver.

Gardeners. — Large Silver, Mr. Bruce; Middle Silver, Mr. Parsons; Small Silver, Mr. Hamp.

Nurserymen. — Middle Silver, Mr. Fairbairn.

THANET FLORICULTURAL AND HORTICULTURAL SOCIETY.—September 12th.—Prizes open to all England.

Best 24 Dahlias, 7*l.*: Marquis of Lansdowne, Perpetual Grand, Le Grand Bedouin, North Star, Candidate, Grace Darling, Competition, Conservative, Mrs. Shelley, Essex Triumph, Queen of Trumps, Springfield Rival, Beauty of the Plain, Pickwick, Blue Bonnet, Phenomenon, Bedford Surprise, Andrew Hoffer, Metella, Lady Anne Murray, Admiral Stopford, Dod's Prince of Wales, Regulator, President of the West, Mr. Brown of Slough.

2d ditto, 4*l.*: Essex Triumph, Hope, Conservative, Phenomenon, President of the West, Lady Harland, Rouge et Noir, Duchess of Richmond, Conqueror of the World, Pickwick, Argo, Royal Standard, Princess Royal, Catleugh's Eclipse, Bridesmaid, Scarlet Defiance, Rival, Queen, Purple Perfection, Mrs. Shelley, Marquis of Lothian, Maid of Bath, Suffolk Hero, Lady Middleton, Mr. Philpot.

3d ditto: Bridesmaid, Perpetual Grand, Widnall's Eclipse, Marquis of Lansdowne, Jehu, Phenomenon, Lewisham Rival, Girling's Prince of Wales, Grand Tournament, Rainbow, Conqueror of the Plain, Dod's Prince of Wales, Conservative, Beauty of the Plain, Northern Beauty, Lady Harland, Maid of Bath, Springfield Purple, Bedford Surprise, Lady Middleton, Competition, President of the West, Essex Triumph, Competitor, Mr. Girling of Stowmarket.

Subscribers' Prizes.

Plants in Pots.—Best 3 Fuchsias (globosa, gracilis, Dalstoniæ), Mr. W. Tomson; second-best ditto (fulgens, fulgens multiflora Dalstoniæ), ditto.

Best 3 Salvias (patens, splendens, fulgens), L.C. Humfrey, Esq.

Best 3 Petunias (Gem, Lady Peel, Beauty), T. N. Harris, Esq.; second-best ditto (Cooper's Seedling White, 2 of Medora), Mr. W. Tomson.

Best 3 Cockscombs, Sir M. Montefiore.

Best 3 Balsams, Mrs. Alexander; second-best ditto, L. C. Humfrey, Esq.

Best 3 scarlet Geraniums, J. Slater, Esq.

Best 3 Verbenas (Stewartii, 2 not named), T. N. Harris, Esq.; second-best ditto (not named), ditto.

Best 6 miscellaneous plants (Heliotropium peruvianum, Fuchsia conspicua, Hoya carnosa, Nerium Oleander, Maurandya Barclayana); second-best ditto, Gesneria zebrina, G. splendens major, Campanula garganica, Stapelia glandulifera, Leschenaultia formosa, Fuchsia Youellii, T. N. Harris, Esq., L. C. Humfrey, Esq.; best 3 ditto (Myrtus communis, Citrus Aurantium, Salvia fulgens), Sir Richard Burton; second-best ditto, Mrs. Alexander.

Cut Flowers. — Best 12 Dahlias, a silver cup, value *5l.*, the Rev. J. G. Hodgson; second-best ditto, Mr. Hills; third-best ditto, Mr. Silk; best 6 ditto, the Rev. J. G. Hodgson; second-best ditto, Mr. Silk; third-best ditto, Captain Isacke.

Best 6 Lemon African Marigolds, the Rev. F. V. Lockwood; second-best ditto, Mr. Silk; best 12 double French ditto, John Sladden, Esq.; second-best ditto, ditto.

Best 12 double Asters, the Rev. F. V. Lockwood; second best ditto, Mr. Silver.

Best 12 Zinnias, John Sladden, Esq.; second-best ditto, ditto.

Best floral device—an ornament, value *2l. 2s.* (an embroidered chair, cushion, and carpet), Mrs. Humfrey; second-best ditto (a booth with a flower-show beneath), Mrs. George Hodgson.

Extra. — Best 6 Orange African Marigolds, Mr. Silk; second best ditto, the Rev. F. V. Lockwood.

A Seedling Dahlia of 1843 (Lady St. Maur), Mr. Brown of Slough.

A specimen plant (Lisianthus Russellianus), Mr. Cuthill, Denmark-hill, Camberwell.

An Ornamental hive of bees, Sir Richard Burton.

Nottingham Floral and Horticultural Society.— On Wednesday the 20th instant, the last show for the present season of this Society, took place at the Assembly Rooms, Nottingham, for the exhibition of Dahlias, Stove, Greenhouse, and Herbaceous Plants, Ericas, Hardy Shrubs, and specimens of all Fruit and Vegetables in season. At two o'clock, the room was opened to the public, when it was soon filled by a highly respectable and fashionable assemblage. The Dahlias were very scarce, in consequence of their having been attacked by an insect (which is general this year) called the "thrip," which entirely destroys both the shape and the colour of the flowers; those exhibited were, however, good; and showed that great care and attention must have been bestowed by the parties who produced them, more especially the first amateur's pan of 24

blooms, which was awarded by the Rev. T. M. Sutton, in which pan there was an excellent dark seedling. The beauty of the display in this department was greatly enriched by a splendid balloon, composed of several hundred Dahlia blooms, sent by Mr. Seaman as well as by other devices sent by Mr. S. R. P. Shilton, Mr. S. Wright, and Mr. Edwards.

A fine collection of Autumnal Roses, and likewise another collection of Seedling Verbenas, from Mr. Pearson's of Chilwell, were greatly admired.

The Stove, Greenhouse, and Miscellaneous Plants were, considering the lateness of the season, very good, and were from the gardens of George Walker, Esq., Francis Wright, Esq., and Alfred Lowe, Esq.

Dahlias.—First dealer's pan of 24 blooms, Mr. Edwards—Bridesmaid, Climax, Yellow Climax, Cox's Defiance, Dodd's Prince of Wales, Queen of Beauties, Phenomenon, Hudson's Princess Royal, Maria, Nicholas Nickleby, Andrew Hofer, Rouge et Noir, Metella, Duke of Cornwall, Lady Harland, Lord Sandon, Captivator, Ploughboy, Gipsy Maid, Duchess of Richmond, Indispensable, Pickwick, Windmill Hill Rival, Lewisham Rival.

Second dealer's pan of 24 blooms, Mr. J. Spencer — Regina, Westbury Rival, Prince of Wales, Princess Royal, Bedford Surprise, Evadne, Lady Harland, Lady Cooper, Exquisite, Hon. Miss Abbott, Beauty of the Plain, Bridesmaid, Pickwick, Lady Sale, Rouge et Noir, Phœnix, Lewisham Rival, Conservative, Admiral Stopford, Attila, Prince Albert, Frederick the Great, Conqueror of the World, Oriental Pearl.

First amateur's pan of 24 blooms, Rev. T. M. Sutton — President of the West, Princess Royal, America, Scarlet le Grand, Bridesmaid, Father Mathew, Fanny Keynes, Lady Baker, Seedling, Widnall's Queen, Duke of Cornwall, Mrs. Abbott, Virgin Queen, Duchess of Richmond, Lady Cooper, Prince of Wales, Optime, Nicholas Nickleby, Conductor, Pickwick, Lady Harland, Madame Wallnor, Countess of Pembroke, Mr. Stanley.

Second amateur's pan of 24 blooms, Mr. J. Nevill — Beauty of the Plain, Metella, Andrew Hofer, Argo, Bridesmaid, Ploughboy, Lord Sondes, Regina, Blush-white Seedling, Purple Seedling, Crimson Seedling, Satirist, Pickwick, Springfield Rival, Lady Middleton, Indispensable, Nicholas Nickleby, Defiance, Eclipse, Amato, Lady Dowager Cooper, President of the West, Grand Bandine, Maria.

First amateur's pan of 18 blooms, Mr. S. Wright — President of the West, Optime, Attila, Burnham Hero, Beauty of the Plain, Phenomenon, Hope, Argo, Hero of Wakefield, Maria, Rouge et Noir, Duke of Cornwall, Bridesmaid, Lewisham Rival, Widnall's Queen, Pickwick, Garrick, Princess Royal.

First amateur's pan of 12 blooms, Mr. S. R. P. Shilton — President of the West, Hudson's Princess Royal, Bridesmaid, Essex

Rival, Nicholas Nickleby, Widnall's Queen, Grace Darling, Rouge et Noir, Hero of Nottingham, Argo, Pickwick, Maria.

First amateur's pan of 6 blooms, Mr. F. Harrison (no names given to the Secretary).

Second amateur's pan of 6 blooms, Mr. Taylor (no names given to the Secretary).

Best collection, Mr. J. Nevill; second best, Mr. S. Wright.

Best seedling, Mr. F. Harrison.

Best 20 blooms of Pansies, Mr. S. R. P. Shilton (all seedlings).

Best collection of Autumnal Roses, Mr. Pearson.

Best collection of miscellaneous cut flowers, Mr. S. R. P. Shilton.

Best collection of Verbenas, Mr. Pearson.

Best device in various flowers, Mr. Edwards; second, ditto.

Best device in Dahlias (a balloon), Mr. Seaman; second, Mr. S. Wright; third, ditto.

Extra prize (a pair of circular devices, in various flowers), Mr. S. R. P. Shilton.

Plants.—Stove: Poinciana pulcherrima, G. Walker, Esq.; second, Clerodendrum squamatum, ditto.

Orchideous: Stanhopea insignis, G. Walker, Esq.; second, Zygopetalum maxillare, ditto.

Greenhouse: Allamanda cathartica, F. Wright, Esq.; second, Ipomœa sp.

Twelve Fuchsias, A. Lowe, Esq.—Grandis, Tricolor, Brewsterii, Sanguinea, Racemiflora, Devonia, Youellii, Clintonia, Chandlerii, Standishii, Mirabilis, Venus Victrix.

Erica: Archeriana, F. Wright, Esq.; second, ditto.

Herbaceous: Agapanthus umbellatus, A. Lowe, Esq.; second, Lobelia splendens, ditto.

Fuchsia: Tricolor, G. Walker, Esq.; second, Formosa elegans, A. Lowe, Esq.

Balsams: Bizarre, A. Lowe, Esq.

Cockscombs: G. Walker, Esq.

Convolvulus pentanthus: G. Walker, Esq.

Collection of Greenhouse Plants, A. Lowe, Esq.—Blood Malta Orange, Arethusa viscosa, Russellia juncea, Balsam Bizarre and Double-flaked, Gloxinia rubra, Maurandya Barclayana and alba, Hydrangea hortensis, Lantana aculeata and crocea, Seville and Myrtle-leaved Oranges, Lobelia fulgens and unidentata, Gesneria Cooperi, Seedling Petunia Godolphin, Trevirana coccinea, Thunbergia alba, alata, and speciosa, Achimenes longifolia, Primula chinensis, fimbriata, and alba, Petunia Sisiphus and Tantalus Seedlings, Black Ischia Fig.

Twelve Verbenas, A. Lowe, Esq.—Alicia, Queen of May, Herne the Hunter, Vesta, Alaric, Camilla, Meteor, Water Witch, Gipsy, Lalla Rookh, Fire-flair, Red Rover.

Apple (in a bearing state), Mr. S. Wright.

Orange (in a bearing state), A. Lowe, Esq.

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END OF THE FOURTH VOLUME.

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