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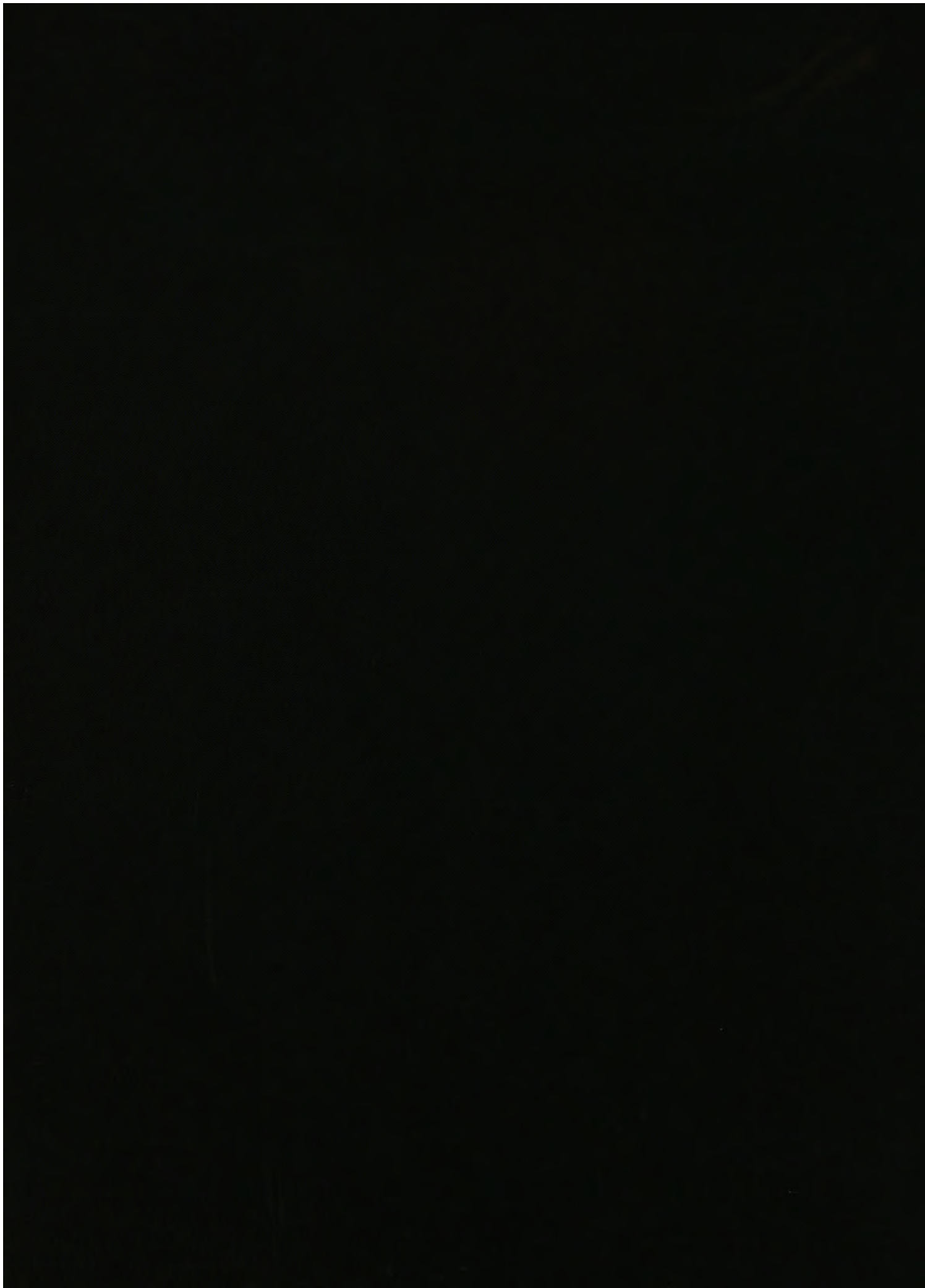
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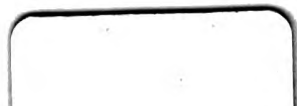


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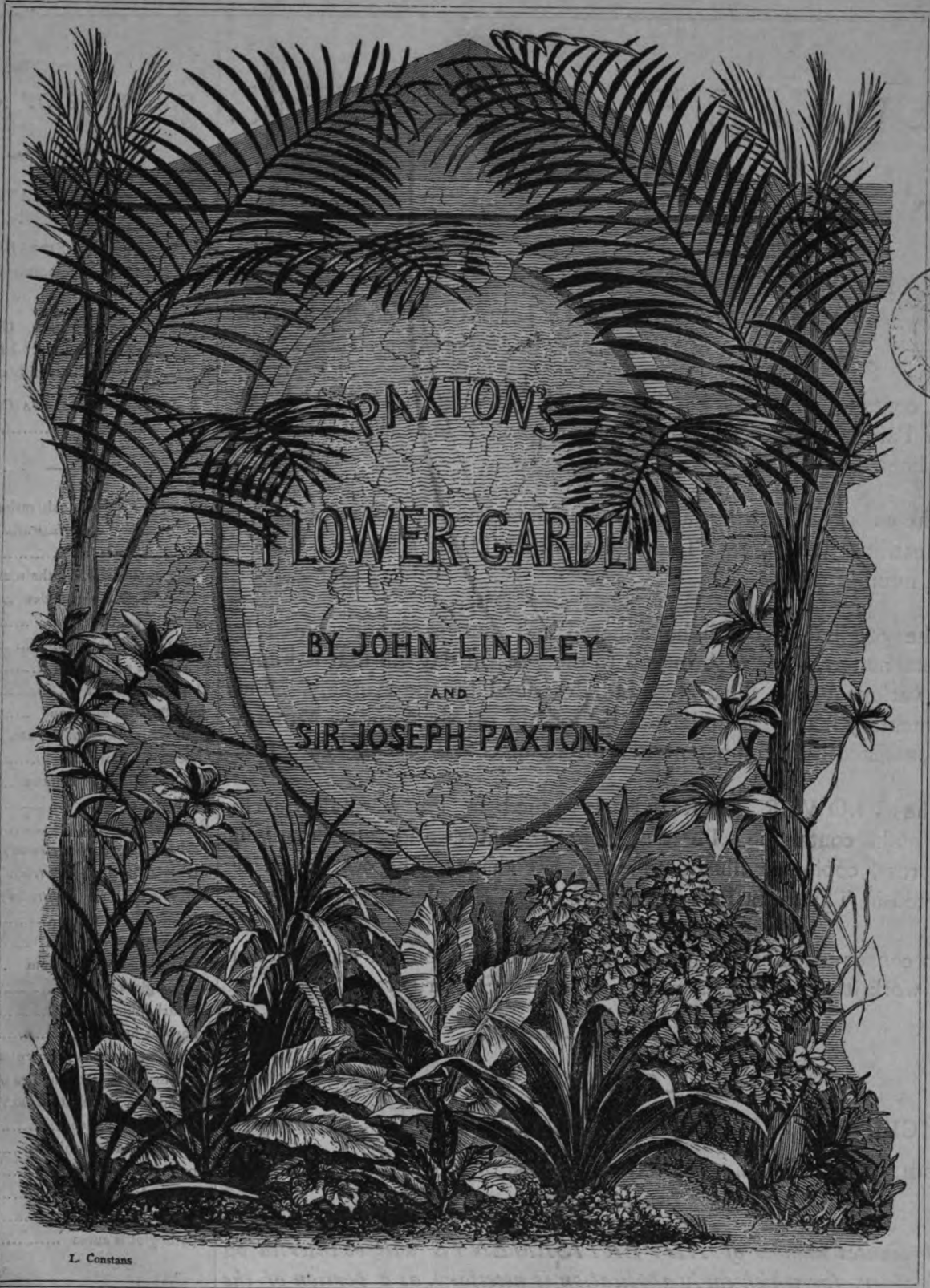


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No. 1

PUBLISHED MONTHLY

PRICE 2s. 6d.



L. Constance

LONDON: "VILLA GARDENER" OFFICE, SALISBURY SQUARE, FLEET STREET
SIMPKIN, MARSHALL, AND CO., STATIONERS COURT; JOHN MENZIES AND CO., EDINBURGH.

1918.d.19

LINDLEY AND PAXTON'S FLOWER GARDEN.

THE
FLOWER GARDEN.

BY
SIR JOSEPH PAXTON AND DR LINDLEY.



RE-ISSUE of this very beautiful work, the joint production of Sir JOSEPH PAXTON and Dr LINDLEY, which has for some years been out of print, is now in course of publication.

It contains copies of all the original Drawings by the celebrated Flower Painter, MDLLE. L. CONSTANS, the whole being carefully coloured by the hand.

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The original text will be adhered to; but is supplemented by additional matter, so as to bring up to the present day all that is known of the various Plants illustrated and described by the Authors. This supplementary matter is under the Editorship of Mr ANDREW MURRAY, F.L.S., assisted by a competent staff of botanists and practical gardeners.

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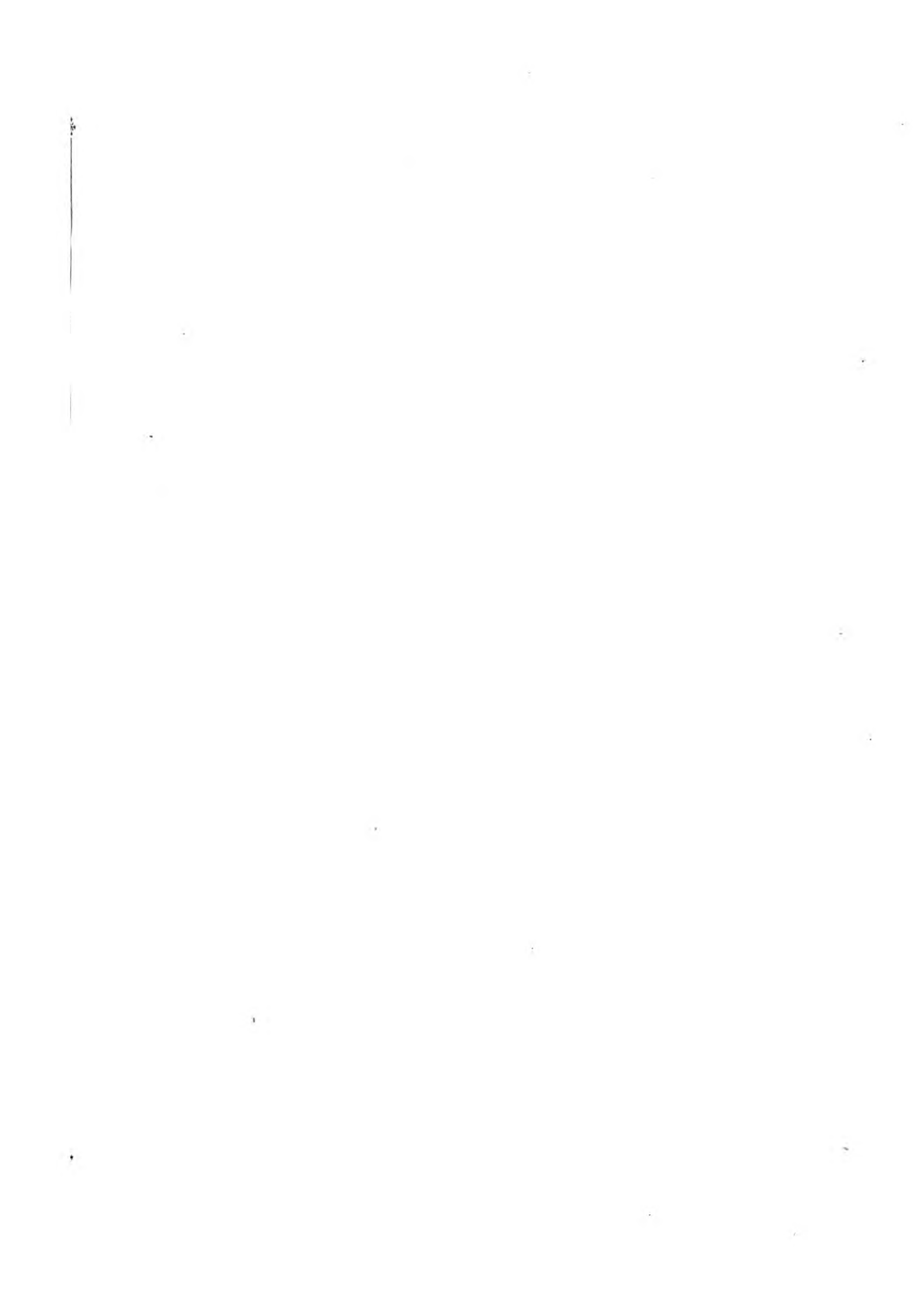
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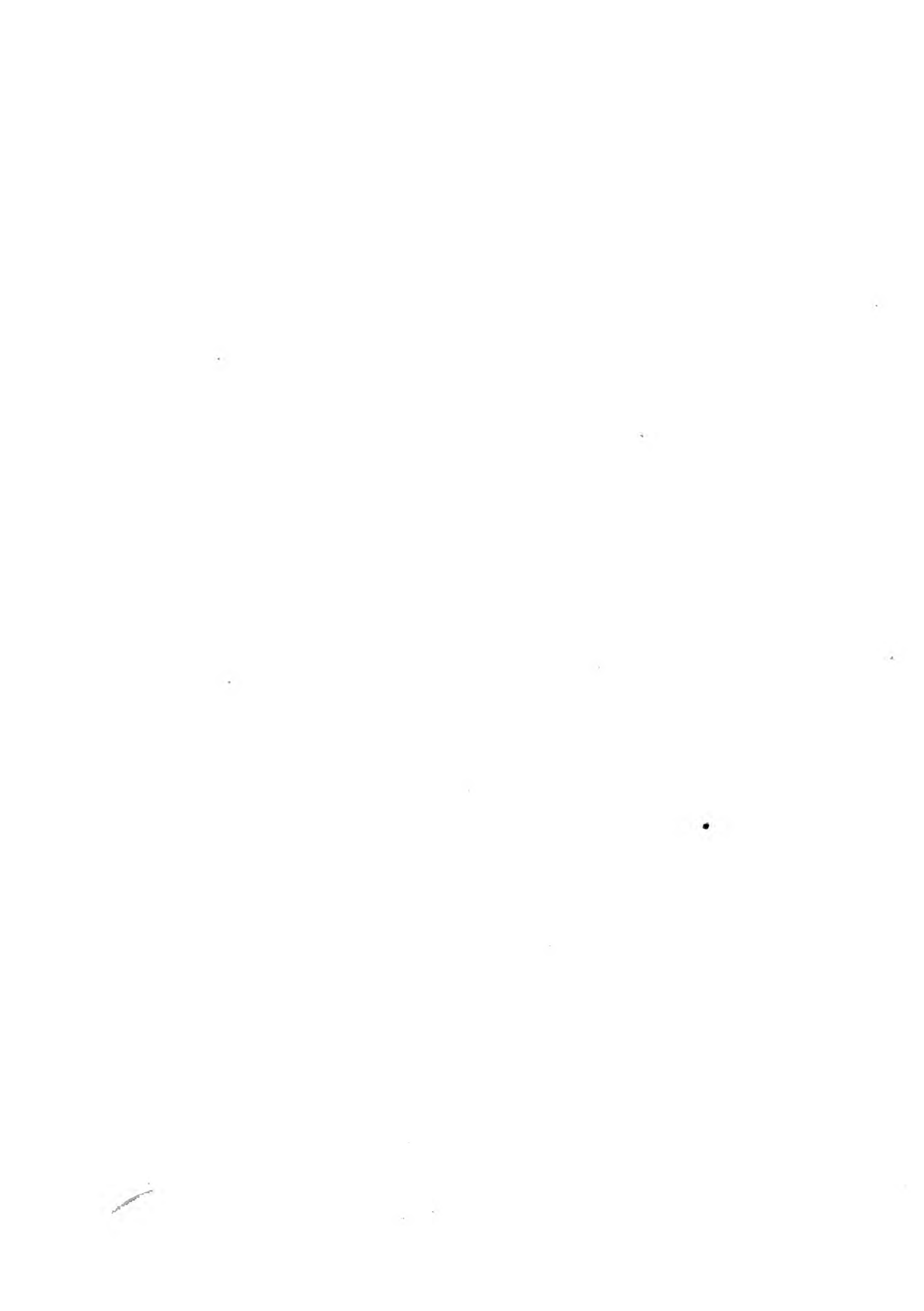
CONTENTS OF NO

COLOURED PLATES.

- Plate
1. DRUMMOND'S SIDE-SADDLE FLOWER (*Sarracenia Drummondii*)
 2. THE GLITTERING GLASS BEARING TRUMPET-FLOWER (*Adenocalymma nitidum*)
 3. WALKER'S CATTLEYA (*Cattleya Walkeriana*)

- List of Cattleyas in cultivation ..
- Aristolochia picta* (illustrated)
- Oncidium hastatum*
- Echinocactus rhodophthalmus*
- Valeradia plumbaginoides*
- Metrosideros tomentosa*
- Ophelia corymbosa*
- Fritallaria pallidiflora*
- Mertensia sibirica*
- Anæctochilus lobbianus*
- Berberis japonica* (illustrated)
- Galeottia Beaumontii*
- Trichocentrum tenuiflorum*
- Pholidota clypeata*
- Berberis Wallichiana*
- Berberis loxensis* (illustrated)
- Berberis Darwinii* (illustrated)
- Berberis tinctoria* (illustrated)
- Blandfordia flammea*
- Cheirostylis marmorata*
- Helianthemum scoparium*
- Calboa globosa*
- Pentarhaphia cubensis*
- Pharbitis limbata*
- Spiræa decumbens* (illustrated)
- Grammanthes Gentianoides* (illus.
- Calandrinia umbellata* (illustrated)
- Trichoglottis pallens*
- Microsperma bartoniodes*
- Spathodea speciosa*
- Odontoglossum rubescens*
- Pentstemon cordifolius*
- Spathoglottis aurea*







[PLATE 1.]

DRUMMOND'S SIDE-SADDLE FLOWER.

(SARRACENIA DRUMMONDII.)

A Stove Marsh Plant from FLORIDA, belonging to the Natural Order of SARRACENIADS.

Specific Character.

<p><i>DRUMMOND'S SIDE-SADDLE FLOWER.</i>—Pitchers long, straight, dilated upwards, angular, tapering much to the base; furnished with a sharp projecting rib in front, with an undulating inflexed roundish blade, which is covered with long hairs in the inside. Flowers purple.</p>	<p><i>SARRACENIA DRUMMONDII</i>; aecidiis strictis angulatis extus glabris basi angustatis apice dilatatis, anticè in costam angustam rectam productis, laminà subrotundà undulatà crispà apiculatà intus hirsutà, flore fusco-purpureo.</p>
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Sarracenia Drummondii. Croom's *Observations on the genus Sarracenia*, No. 3, with a plate, in the *Annals of the Lyceum of Natural History of New York*, vol. 4.

VISITORS to Chatsworth, in the summer and autumn of last year, were scarcely more surprised at the glorious aspect of the Victoria Lily, than at the exquisite beauty of the plant now represented, many large specimens of which decorated a neighbouring stove among rare Orchids of the richest hues and the most interesting forms.

It was, we believe, originally introduced by the late Mr. Drummond, who met with it in Florida, near the town of Appalachicola. It has since been found abundantly, by Dr. Chapman, on the western borders of the river of the same name, below Ocheesee. It, therefore, inhabits the swamps of a region, which, during summer, experiences a tropical heat, as is in some measure indicated by the presence of Orchidaceous Epiphytes, such as *Epidendrum Magnoliæ* and *tampense*.

The pitchers of this plant are from eighteen inches to two and a half feet long, perfectly erect and straight, with very much the form of a postman's horn. Their colour is of the most vivid green, except at the upper expanded end, where they are brilliantly variegated with white, red, and green. The rim of the orifice of the pitchers is slightly folded back, from the front towards the back, where it expands into a broad roundish arched cover, much undulated and crisped. In the inside this cover is clothed with long hairs, which partially disappear towards the entrance of the pitcher, at which point there is a considerable exudation of sweet viscid matter, apparently secreted by the hairs which exist there. The flower is of a dingy purple colour, roundish, about two and a half inches in diameter, with five blunt acuminate sepals, five obovate inflexed petals, and a pale green dilated five-angled membranous stigma, which is nearly as long as the flower itself; each angle is divided into

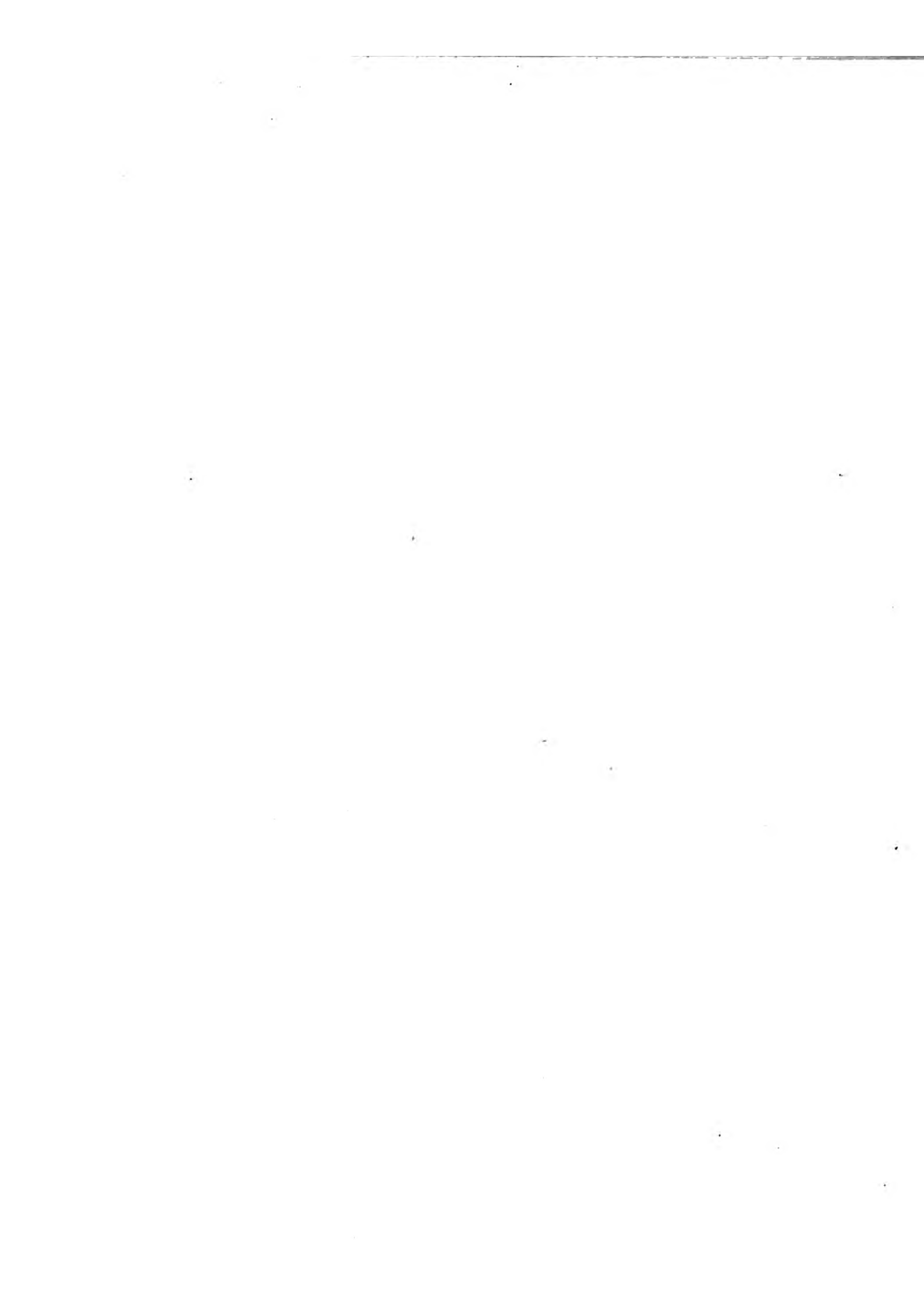
two short lobes, beneath which, in a fold, lies the real stigmatic surface. These flowers have little beauty, and are by no means the object of the gardener's care.

The so-called pitchers are in reality the leaves of this plant, in a very singular condition; the pitcher itself being the leafstalk, and the cover its blade. By what mode of development this kind of structure is produced has never yet been conclusively shown. It has been thought that the pitcher is formed by the folding together, in its earliest infancy, of the two sides of a flat leafstalk, the line of which union is indicated by a firm elevated rib, which proceeds from the base to the opening of the pitcher, as if to stiffen and sustain it; but this is not certain, and it is more probable that the pitcher is the result of a hollowing process, coeval with the first growth of the pitcher itself, and analogous to that which produces the hip of the rose, or the cup at the bottom of the calyx of *Eschscholtzia*, or the cups that appear accidentally upon cabbage leaves.

If the exact nature of the pitcher is thus undecided, we are still further from a knowledge of the use for which so singular an apparatus is destined. To the common idea, that nature intended it to hold water, arise these objections: that water is not found in the pitcher except after rains or heavy dews, and that plants which grow naturally in bogs can hardly require any unusual apparatus for supplying them with water. Others think that the pitcher is a contrivance for detaining insects in captivity till they perish and decay, the putrefaction of these creatures conducing to the nutrition of the plant. But there is no apparent reason why the Side-saddle flower should require this sort of special nutriment more than its neighbours in the same bogs, which have no pitchers. This, however, is certain, that if the pitchers were intended for fly-traps, they could hardly have been more ingeniously contrived. It is the honey of the mouth of the pitcher that tempts the insects to their destruction; and, accordingly, they are found in abundance at the bottom. In the plant now before us we count, in the month of February, about a dozen, two of which are wasps; and Mr. Croom says, that he found in one of his a large butterfly, (*Papilio Turnus*). Reversed hairs keep them there without hope of escape. As the sides of the pitchers consist of very lax cellular tissue, containing large cavities in every direction, and as starch grains in abundance escape from the sides when wounded, it is a question whether this starch, converted into sugar by the vital force of the pitcher, may not serve to sweeten the water in which the imprisoned insects meet a miserable end?

The manner in which the North American Side-saddle flowers are grown at Chatsworth is explained in the following memorandum, which is applicable to the more common species as well as to that which is the immediate object of the present article:—

The stove is decidedly the most suitable place for these species making and maturing their growth, at which time they require much warmth and moisture. A temperature of from 80° to 100°, with plenty of water at the roots, and syringing three times a day, from March till September, we have found to suit them the best. During their season of rest, a greenhouse would probably answer the ends of cultivation better than the stove; at all events, the plants should be kept in a dry cool atmosphere, from 40° to 60°, not higher. The best time for potting is January, and the best material for that purpose is silver sand and Sphagnum, well mixed with a portion of peat and potsherds, broken quite small. It is important to have plenty of drainage, and no fear need be entertained of excess in this particular. It has been customary at Chatsworth to place the pots in saucers which have been kept full of water during the whole of the summer season. We do not, however, attach any importance to this practice. The plants will thrive equally well without saucers. Pitchers are usually formed in October, and continue perfect for three months. The number of pitchers on an individual plant of *S. Drummondii* varies from fourteen to twenty-three. We have measured individual pitchers of this species, and find the maximum length two feet three inches, and the maximum girth at the top, six inches. Flowers usually open in March and April. By removing the flower-buds as they appear, the succeeding pitchers become much finer.





L. Constan. Ferr. & Loh.

[PLATE 2.]

THE GLITTERING GLAND-BEARING TRUMPET-FLOWER.

(ADENOCALYMMA NITIDUM.)

A Stove Plant, from BRAZIL, belonging to the Natural Order of BIGNONIADS

Specific Character.

THE GLITTERING GLAND-BEARING TRUMPET-FLOWER.—A smooth climber. Leaves on rather long stalks, mostly in threes, or in pairs with an intermediate simple tendril, the leaflets on short stalks, (the middle one longest,) elliptical-oblong. Racemes axillary, or nearly terminal, shorter than the leaves, velvety. Bracts, oblong or linear, as long as the calyx, glandular below the point. Calyx with five short teeth, velvety, irregularly glandular, sometimes slit on one side. Corolla rather velvety.

ADENOCALYMMA NITIDUM; scandens, glabrum, foliis longiusculè petiolatis plerisque trifoliolatis, aut bifoliolatis cirrho simplici intermedio, foliolis brevius petiolatis, (impari longius) oblongis glabris, racemis multifloris foliis brevioribus axillaribus terminalibusque, bracteis oblongis linearibusque apice glandulosis calyci æqualibus, calyce 5-dentato nunc fissis irregularitèr glandulosis, corollâ subvelutinâ.

Adenocalymma nitidum : Martius in *De Candolle's Prodrômus*, vol. 9, p. 200.

WE received a specimen of this very pretty climber from Messrs. Knight and Perry of the King's Road, in the beginning of February. They obtained it, about five years since, from Mr. Makoy of Liège, under the name of *Fridericia Gulielma*, which belongs to a totally different plant, belonging, however, to the same natural order.

It is found wild in the Empire of Brazil, in various places, of which Mons. Alphonse De Candolle gives the following enumeration. "Thickets and dry places, near Rio Janeiro; on the Corcovado mountain, near the Mandioc farm; in the province of Bahia, near Maracas." We also possess it from a more inland station, but without any precise locality. It is said to vary much in appearance, unless, indeed, more than one distinct species is comprehended under the same name. Professor von Martius has a plant called *Adenocalymma sepiarium*, which is said to be one of the supposed varieties.

That which is in cultivation is a thin-leaved, smooth, climbing plant, with a yellowish tint. The leaflets grow in pairs, with a simple tendril between them; or else in threes without an intermediate tendril; they are shining on each side, from three to five inches long, and of an oblong figure with a sharp tapering point; when in threes, the central one has a much longer stalk than the others. The flowers grow in clusters, which in the plant before us are not more than an inch and a half long, supporting seven blossoms, but in the wild specimens they sometimes occur as many as thirty on a

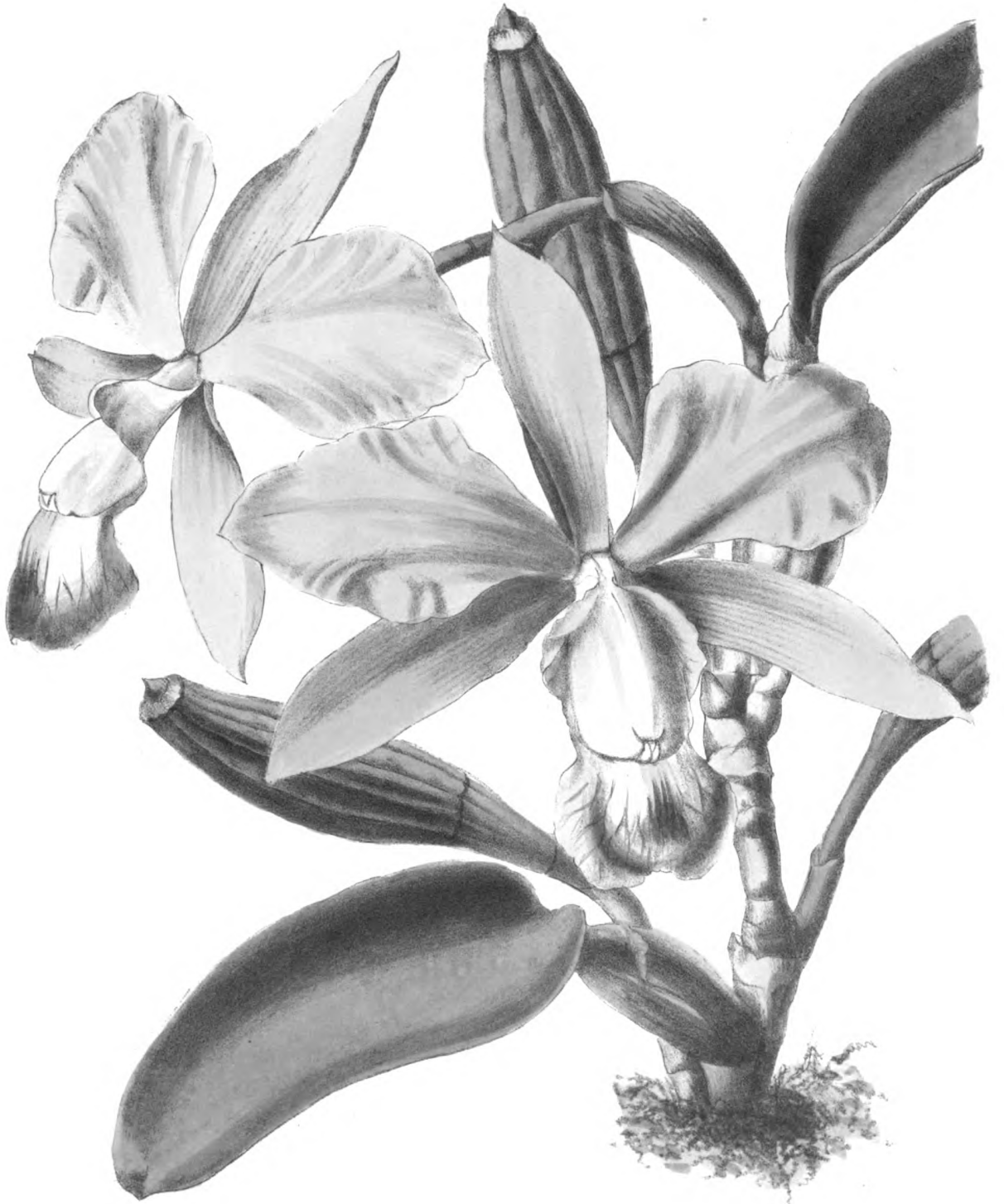
raceme full five inches long; only a part of them, however, are open at a time. The bracts are velvety, narrow, and placed close to the calyx; they have usually a small shining gland or two below their point. In like manner the calyx, which is also velvety, has several glands of the same kind dispersed irregularly below its five short teeth; it is also often slit down one side. The corolla, which is fully two inches long, is of a thick leathery texture, deep yellow, contracted at the base into a narrow tube as long as the calyx, and enlarged upwards into a somewhat curved trumpet, divided at the edge into 5 nearly equal blunt spreading lobes. The stamens are didynamous, arising from a throat covered with thick short hairs; the fifth stamen is a very short hooked body.

The remarkable glands which appear on the bracts and calyx constitute one of the most striking peculiarities of this genus, and have given rise to its scientific name (*αδην* a gland, and *καλυμμα* a covering) which we have translated at the head of this article. Mons. De Candolle writes the word *Adenocalymna*, which is evidently wrong. What the use or nature of such glands may be, is unknown. They have a definite form, although an indefinite position; they are quite destitute of the short hairs which clothe the neighbouring parts, and they evidently secrete some fluid, as is shown by their moist surface. They are therefore glands in the proper sense of the word, as limited by Professor Schleiden.

The Glandular Trumpet-flowers are confined to tropical America, where they scramble over trees and decorate the scenery with their bunches of yellow, pink, or orange-coloured flowers. Professor De. Candolle admits nineteen species; among which are some of the most beautiful of Brazilian climbers, often opening thirteen or fourteen large trumpet-shaped blossoms before one begins to fade. To gardeners they would be invaluable, and should be diligently sought for in the provinces of Para, Bahia, Piahy, and even of Rio itself, whence the species now figured appears to have been brought to Europe. Another very handsome species, the *Adenocalymma longiracemosum*, was introduced by M. de Jonghe of Brussels, and is probably to be found in gardens.

The best way of growing this has not been ascertained. Messrs. Knight and Co. state that, having appeared "a shy flowerer," it has not received the attention it was entitled to, so that they are unable to offer any advice for its culture founded on practice, but they surmise that the treatment most congenial to it, would be to afford it dry stove temperature, and to place it cut in a large tub. It roots freely in a mixture of half light loam, quarter peat, quarter leaf mould. They doubt whether it will be a good plant for pot culture, seeing that they have so grown it ever since they possessed it, and have only induced it to produce the flowers communicated on the present occasion.

For ourselves we would suggest that the unwillingness of the plant to flower, will be overcome by a high temperature applied to the soil—perhaps 84°; and a rest of three or four months. There is no natural indisposition in these climbers to produce their flowers, but they are unable to do so in our stoves from want of that stimulus which nature so abundantly supplies in their native woods. Upon this point the remarks on *Aristolochia picta*, of which a wood-cut will be found at the commencement of our "Gleanings, &c.," may be advantageously consulted. It should also be remembered that in the places where such plants exist little manure accumulates, except that formed by the ever decaying foliage and fallen wood which strews the earth of the tropical forest; what manure does exist is chiefly supplied by birds.



Chamaelirium luteum (L.) Benth.



[PLATE 3.]

WALKER'S CATTLEYA.

(CATTLEYA WALKERIANA.)

A Stove Epiphyte, from BRAZIL, belonging to the Natural Order of ORCHIDS.

Specific Character.

WALKER'S CATTLEYA.—Stems oval, stalked, each having one leaf. Leaves oblong, thick, concave. Flower-stalks 1-2-flowered, with a small spathe-like bract. Petals oval, wavy, membranous, twice as wide as the Sepals. Lip smooth, naked, with short lateral roundish lobes, and the middle lobe rounded and two-lobed. Column broad, thick, rounded off at the upper end.

CATTLEYA WALKERIANA; caulibus ovalibus stipitatis monophyllis, foliis oblongis coriaceis concavis, pedunculis 1-2-floris, bractea parva spathacea, petalis ovalibus undulatis membranaceis sepalis duplo latioribus, labelli plani calvi lobis lateralibus brevibus rotundatis intermedio cuneato bilobo rotundato, columnâ latâ crassâ apice rotundatâ.

Cattleya Walkeriana, Gardner, in the London Journal of Botany, vol. 2, p. 662: aliàs C. bulbosa, Bot. Register, 1847, t. 42.

FOR the opportunity of figuring this beautiful flower in really fine condition we have to express our obligation to C. B. Warner, Esq., in whose collection, at Hoddesdon, it has lately blossomed. In the *Botanical Register* a small specimen was published some years since, from Mr. Rucker's garden, under the name of *Cattleya bulbosa*, its identity with what the late Mr. Gardner had previously called Walker's *Cattleya* not having been suspected. Mr. Rucker's plant had, however, a much more richly coloured lip than this, and must have been a distinct variety.

According to Gardner it inhabits the country beyond the diamond district of Brazil, where it was found by Mr. Edward Walker, his assistant, on the stem of a tree overhanging a small stream which falls into the Rio San Francisco.

The stems are club-shaped and furrowed, each having one leathery, concave, blunt leaf, which is by no means wider at the base than apex; when young or ill-grown they are short and oblong, in which state they gave rise to the name *C. bulbosa*, now cancelled. The flowers grow singly, or in pairs, from within a short, narrow, reddish spathe, and are full five inches in diameter, fragrant, and bright, but not deep, rose colour. The sepals are oblong, acute, and membranous. The petals are broad, oblong, acute, slightly wavy, but not lobed. The lip, which is a richer rose than the other parts, is small, roundish at the end, and emarginate, with two narrow, erect, lateral lobes, which fold over the lower part only of the column. The column itself is very broad, fleshy, rounded, with no lobes or notches such as are found in *C. pumila*.

Perhaps the nearest relation of this plant is with *C. superba*, from which, however, its dwarf habit and incomplete lip readily distinguish it.

All known species of this beautiful genus are so highly deserving cultivation that an enumeration of those which are at present grown seems desirable, especially since the list published some years since in the *Botanical Register*, now requires many important additions. The arrangement there proposed seems, however, to answer all the purposes of the cultivator as well as of the botanist, and is therefore followed in the following catalogue:—

CATTLEYA.

SECTION I.—*Lip rolled round the Column.*SECTION II.—*Lip flat, not rolled round the Column, and without lateral lobes.*

SECTION I.

* Sepals of the same texture as the Petals, the lateral ones being nearly straight.

1. *C. superba*, *Lindl. Sertum Orchid.*, t. 22; aliàs *C. Schomburgkii*, *Lodd. Cat.*, aliàs *Cymbidium violaceum*, *Humboldt and Kunth.*—Demerara.—Flowers deep rose-coloured, fragrant, with a deep crimson lip.
2. *C. elegans*, *Morren, Annales de Gand*, t. 185.—St. Catharine's, in Brazil.—Flowers large, rose-coloured, with a deep purple-violet lip. Very like *C. superba*, except in colour, but the leaves are represented as being much narrower, and the lip is said not to have either wrinkled veins or callosities. Unknown to us except from Professor Morren's figure made from a Belgian specimen in the possession of M. Alexander Verschaffelt.
3. *C. Skinneri*, *Bateman, Orch. Mex. et Guatemal.*, t. 13.—Guatemala.—Flowers deep rich rose colour, with a crimson lip.
4. *C. Walkeriana*, *Gardner, in Lond. Journ. Bot.*, vol. ii. p. 662; aliàs *C. bulbosa*, *Lindl. in Bot. Register*, 1847, t. 42.—Brazil.—Sweet-scented, dwarf, with large rose-coloured flowers.
5. *C. pumila*, *Hooker, in Bot. Mag.*, t. 3656; *Bot. Reg.*, 1844, t. 5; aliàs *C. marginata*, aliàs *C. Pinellii* of Gardens.—Brazil.—A dwarf species with a lobed column, deep rose-coloured flowers, and a rich crimson crisp lip, often edged with white. In *C. Pinellii*, the flowers are much paler.
6. *C. maxima*, *Lindl. Gen. et Sp. Orch.*, No. 4; *Bot. Reg.*, 1846, t. 1.—Guayaquil and Colombia.—Flowers bright rose, with convex petals, and a lip richly variegated with dark crimson veins traced upon a pallid ground.
7. *C. labiata*, *Lindl. Collect. Bot.*, t. 33; *Bot. Reg.*, t. 1859; *Bot. Mag.*, t. 3988; aliàs *C. Mossia*, *Bot. Mag.*, t. 3669; *Bot. Reg.* 1840, t. 58.—Tropical America.—The two forms to which the above names have been applied, differ in little except colour. In *C. labiata*, the lip is stained with one deep uniform tint of crimson; in *C. Mossia*, it is richly variegated with crimson veins upon a yellowish ground. The first is from swamps in Brazil, the latter is from the Caraccas, where it grows at an elevation of three thousand feet above the sea, sporting into many charming modifications of colour.

There is a *C. quadricolor* in the possession of Mr. Rucker, with which we are not sufficiently acquainted to say how it differs from the last.

8. *C. Lemoniana*, *Lindl. in Bot. Reg.*, 1846, t. 35.—Brazil.—Flowers pale pink, whole coloured.

9. *C. lobata*.—Brazil.—Flowers deep rich rose, whole coloured. Of this, which is in the possession of Mr. Loddiges, we shall take an early opportunity of giving some account.

10. *C. crispa*, *Lindl. in Bot. Reg.*, t. 1172; *Bot. Mag.*, t. 3910.—Brazil.—Flowers white, crisp, with a rich crimson stain in the middle of the lip.

11. *C. citrina*, *Lindl. Gen. et Sp. Orch.*, No. 8; *Bot. Mag.*, t. 3742; aliàs *C. Karwinskii*, *Martius Choix*, p. 15, t. 10.—Mexico.—Flowers bright yellow.

** Sepals somewhat herbaceous, or more coriaceous than the Petals, the lateral Sepals manifestly falcate.

12. *C. Loddigesii*, *Lindl. Collect. Bot.*, t. 37; aliàs *C. intermedia*, *Graham, in Bot. Mag.*, t. 2851; aliàs *C. vestalis*, *Hoffmansegg. Bot. Zeitung*, 1. 831; aliàs *C. Papeiansiana*, *Morren, Ann. Gand*, p. 57; aliàs *C. candida* of gardens.—Brazil, in marshes.—The original, *C. Loddigesii*, has pale purple flowers; in *C. intermedia* or *candida*, they are nearly white.

13. *C. Harrisoniana*, *Bateman, in Bot. Reg.*, sub t. 1919.—Brazil.—Flowers lilac, the lip with a deep blotch.

14. *C. maritima*, *Lindl. in Bot. Reg.*, sub t. 1919.—Brazil.—Unknown in gardens; probably not distinct from *C. Loddigesii*.

15. *C. Aremborgii*, *Scheidweiler, in Garten-Zeitung*, 1843, p. 109.—Brazil.—Unknown to English botanists. Flowers large, lilac, sweet-scented.

16. *C. Forbesii*, *Lindl. Bot. Reg.*, t. 953.—Brazil.—Flowers greenish yellow.

17. *C. guttata*, *Lindl. Bot. Reg.*, t. 1406; aliàs *C. elatior*,

- Lindl. Orch., No. 9 ; aliàs *C. sphenophora*, Morren, in Ann. Gand, t. 175.—Brazil.—Flowers greenish yellow, beautifully spotted with crimson.
18. *C. granulosa*, Lindl. in Bot. Reg., 1842, t. 1 ; and 1845, t. 59.—Brazil, Paräiba.—Flowers, large olive-coloured, with a long white and yellow or crimson lip. Not from Guatemala, as at first reported ; an error corrected by Mr. Hanbury.

SECTION II.

19. *C. Aelandiæ*, Lindl. in Bot. Reg., 1840, t. 48.—Brazil.

—A magnificent little plant with large chocolate flowers variegated with yellow, and a rich rose-coloured lip.

20. *C. bicolor*, Lindl. in Bot. Reg., sub t. 1919.—Brazil.—Flowers tawny, with a bright purple labellum. Sometimes has eight or ten flowers in a raceme.

The *Cattleya* (?) *domingensis* of the *Genera and Species of Orchidaceous Plants* is a *Lælia*, and perhaps the same as *L. Lindenii*, a charming plant from Cuba, which we saw lately in the fine collection of Orchids formed by M. Pescatore, at his beautiful seat at Celle St. Cloud, near Paris.

The manner in which the specimen now represented was cultivated is thus described by Mr. Warner's gardener, B. S. Williams, who is one of our best growers of Orchids :—

“This fine species of *Cattleya* blooms twice a year, (February and June,) on the young growth ; its blossoms last five or six weeks in perfection, which is a much longer time than any of the other *Cattleyas* ; they seldom flower longer than three or four weeks at a time ; it is also very sweet-scented and will perfume a whole house. It succeeds best on a block of wood surrounded by a little Sphagnum, and it should have a good supply of heat and moisture in the growing season, but after it has made its growth it should be kept rather dry and may be placed in a much cooler house, say about 60° ; it should only have just sufficient water to keep the bulbs from shriveling too much. The plant should be fastened to the block with copper wire and suspended from the roof in a place where there is plenty of light, but not too much sun.

“No doubt exists that *Cattleyas* rank among our finest Orchids. Their flowers are large and beautiful. In their native countries adhering as they do to the projecting arms of living trees or the prostrate trunks of dead ones, they flourish and are dormant alternately with the seasons ; at times they are subject to the saturating effects of long continued rains, and again they are dried up by months of warm weather. Almost all Orchid growers cultivate their *Cattleyas* in the coolest Orchid house, but I grow them in the hottest house I have, along with the East Indian *Aërides*, *Saccolabes*, and *Dendrobis*. I find that they succeed much better in the hottest house, in which they make fine strong bulbs and good foliage, and always flower strongly and vigorously. It is considered that some species are difficult to bloom, such as *Superba* and *Pumila*, two of the finest of *Cattleyas* ; but I experience no difficulty in flowering all the kinds here every year, and some of them twice a-year. *Loddigesii* flowers twice a-year—in July, and again in September, producing thirty and forty flowers at a time ; *Crispa*, a beautiful species, brings forth about sixty blooms at a time ; and *Mossiæ*, another fine thing, fourteen flowers. *Labiata*, one of the finest of *Cattleyas*, is a very free bloomer, and so is *Skinneri*. *Loddigesii*, *Intermedia*, *Guttata*, and *Candida*, are also all good sorts and free bloomers.

“In cultivating *Cattleyas*, the method I follow is to give them a good supply of heat while they are growing ; but not too much water at the roots ; about twice a week when they are in vigorous growth will be quite enough ; for *Cattleyas* are not very thirsty plants, and by giving them too much water the bulbs are apt to rot. After they have made their growths they should be well rested, by keeping them rather dry. During their dormant season only just sufficient water should be given them to keep their bulbs from shriveling. I give them a good season of rest, which makes them grow more strongly and flower more freely, their blooming season being from November to the latter end of February ; and during this time I keep them in a temperature of about 60° or 62° by night, and

65° by day. After the resting season is over I raise the temperature from 65° to 70° by night, and from 70° to 75° by day, and during sun-heat the temperature may be allowed to rise still more; 85° to 90° will do no injury, but air should be given to prevent the heat rising too high, and also to dry the house once a day; but do not permit cold air to circulate among the plants. The air on entering, should be warmed by being caused to pass over the hot-water pipes.

“I grow all the varieties of *Cattleya* in pots except *Walkeriana*, which, as I have stated, I grow on a block; all the kinds may be grown on blocks with moss, but I find they succeed best in pots, in fibrous peat and broken potsherds mixed together. The peat should be broken into pieces about the size of a hen's egg. The most material point to be attended to in potting is that the pots should be well drained; this may be effected by placing a small pot in the bottom of the other and filling the latter half full of potsherds, and then placing a little moss over them to prevent the superincumbent peat from getting down and stopping the drainage. If this is not attended to, the water will stagnate, the soil sodden, and the plants will become sickly, a condition from which they seldom recover. Pot about two or three inches above the rim of the pot, and use a few small pegs to keep the peat firmly round the plant. When you re-pot remove all the old soil from the roots, if it can be done without injuring them, and water the plants sparingly afterwards.

“*Cattleyas* are propagated by division; always choose a young bulb having a fresh bud at its base from the outside of the plant.

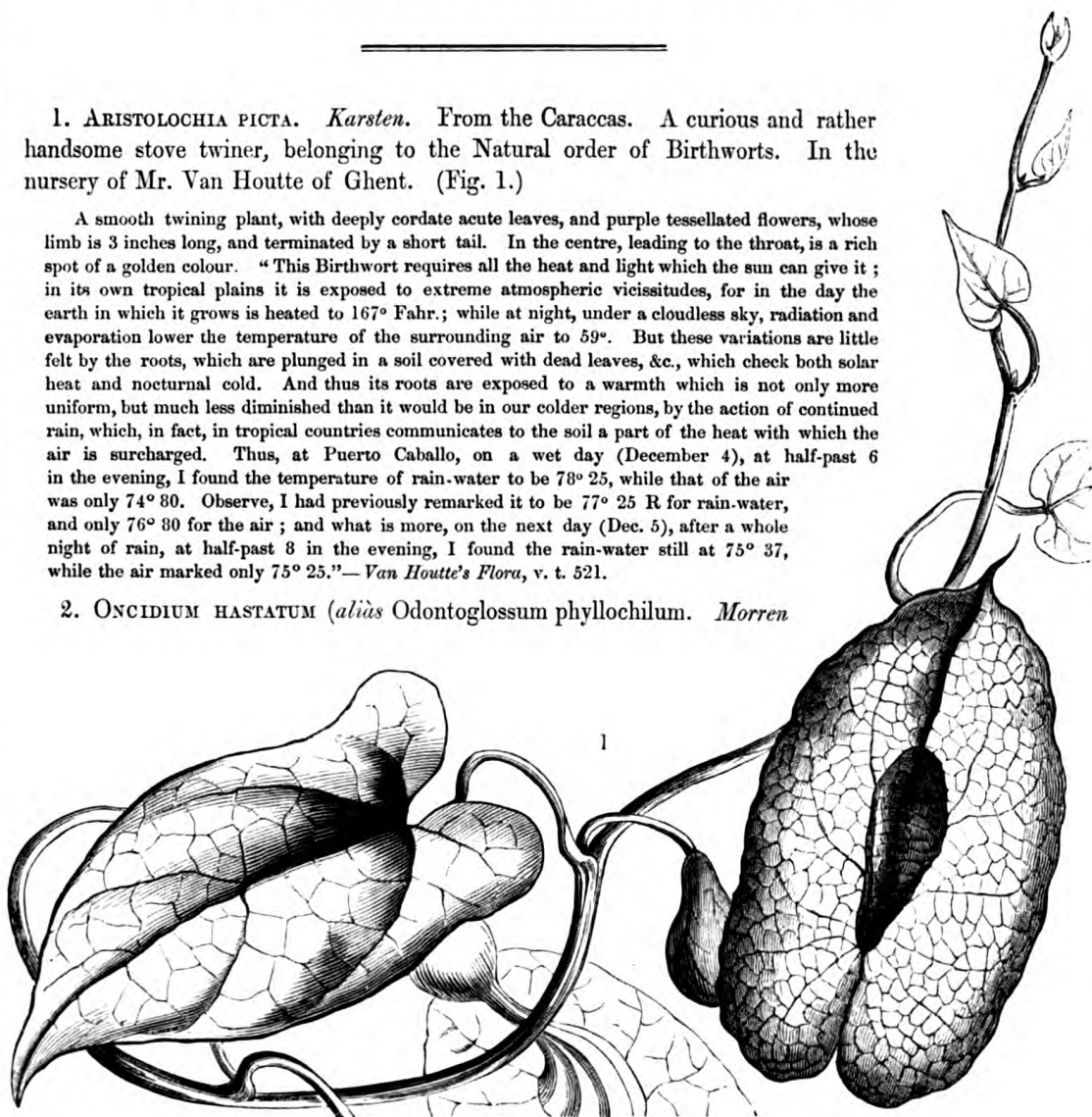
“They should be kept perfectly clear of insects by sponging them with clean water; they are very subject to the white scale.”

GLEANINGS AND ORIGINAL MEMORANDA.

1. *ARISTOLOCHIA PICTA*. *Karsten*. From the Caraccas. A curious and rather handsome stove twiner, belonging to the Natural order of Birthworts. In the nursery of Mr. Van Houtte of Ghent. (Fig. 1.)

A smooth twining plant, with deeply cordate acute leaves, and purple tessellated flowers, whose limb is 3 inches long, and terminated by a short tail. In the centre, leading to the throat, is a rich spot of a golden colour. "This Birthwort requires all the heat and light which the sun can give it; in its own tropical plains it is exposed to extreme atmospheric vicissitudes, for in the day the earth in which it grows is heated to 167° Fahr.; while at night, under a cloudless sky, radiation and evaporation lower the temperature of the surrounding air to 59°. But these variations are little felt by the roots, which are plunged in a soil covered with dead leaves, &c., which check both solar heat and nocturnal cold. And thus its roots are exposed to a warmth which is not only more uniform, but much less diminished than it would be in our colder regions, by the action of continued rain, which, in fact, in tropical countries communicates to the soil a part of the heat with which the air is surcharged. Thus, at Puerto Caballo, on a wet day (December 4), at half-past 6 in the evening, I found the temperature of rain-water to be 78° 25, while that of the air was only 74° 30. Observe, I had previously remarked it to be 77° 25 R for rain-water, and only 76° 30 for the air; and what is more, on the next day (Dec. 5), after a whole night of rain, at half-past 8 in the evening, I found the rain-water still at 75° 37, while the air marked only 75° 25."—*Van Houtte's Flora*, v. t. 521.

2. *ONCIDIUM HASTATUM* (*aliàs* *Odontoglossum phyllochilum*). *Morren*



in *Ann. Gand.*, t. 271). An orchid from N. Grenada, with large handsome variegated flowers, and a white lip sometimes tinged with green. An old inhabitant of English gardens.

It does not appear that this was published before Professor Morren gave it the name here quoted; but it has long been known in the gardens of this country under the name of *Oncidium hastatum*. It is a true *Oncidium*, its column being short and protuberant at the base, and forming an obtuse angle with the lip. In point of value it is about equal to the *Oncidium* (*Cyrtorchilum*) *maculatum*.

3. *ECHINOCACTUS RHODOPHTHALMUS*. *Hooker*. A Mexican Hedgehog Cactus, with an oblong stem, and handsome red flowers appearing in August.

Received from Mr. Staines, who procured it from the neighbourhood of San Luis de Potosi, in Mexico. In its flourishing state it is extremely handsome, the deep red of the base of the petals forming a ring, as it were, round the densely-clustered stamens and bright yellow rays of the stigma, adding much to the beauty of the blossom. Mr. Smith gives the following account of the manner in which such plants are managed by him at Kew:—"At Tab. 4417, we have said that *Cactææ* are almost indifferent as to the kind of soil they are grown in, provided it is not retentive of moisture. The present very pretty species will thrive in a mixture of light loam and leaf-mould, containing a small quantity of lime-rubbish nodules, the latter being for the purpose of keeping the mould from becoming close and compact, a condition not suitable to the soft and tender roots of the plant. If cultivated in a pot, it must be well drained; the pot being nearly half filled with broken potsherds, and the upper layer so placed as to cover the interstices, in order to prevent the mould from mixing with the drainage. During winter, Mexican *Cactææ* do not require much artificial heat: several species are, indeed, known to bear with impunity a few degrees of frost. Where they can be cultivated by themselves, we recommend that the plants and atmosphere of the house should be kept in a dry state during winter, artificial heat being given only during a long continuance of damp cold weather or in severe frost; but at no time during winter needs the temperature of the house to exceed 50° at night. In sunny days in spring the house should be kept close, in order that the plants may receive the full benefit of the heat of the sun's rays. As the summer-heat increases air should be admitted, and occasionally the plants should be freely watered, and in hot weather daily syringed over-head."—*Botanical Magazine*, t. 4486.

4. *VALORADIA PLUMBAGINOIDES*. *Boissier*.—*Botanical Magazine*, t. 4487.

This is an aliàs of the now common *Plumbago Larpentæ*, which is thought by Boissier not to belong to *Plumbago*. We see very little, however, to characterise a genus in the differences pointed out, and agree with Sir W. Hooker, in thinking that if a new genus is really necessary, the plant ought to bear the older name of *Ceratostigma*.

5. *METROSIDEROS TOMENTOSA*. *Achille Richard*. A New Zealand Greenhouse shrub of much beauty, flowering in the summer months. Blossoms rich crimson. One of the order of Myrtle Blooms (*Myrtaceæ*).

"It inhabits," says Mr. Allan Cunningham (by whom it was introduced to the Royal Gardens of Kew), "usually the rocky sea-coast and shores of the Bay of Islands, where it is called by the natives *Pohutu-Kawa*, and is readily distinguished among other plants by the brilliancy and abundance of its flowers, enlivening the shores of the northern island with its blossoms in December. With us in the greenhouse it has attained the height of six feet, and attracted attention by its copious, compact, but spreading ramification, and the abundance and beauty of its evergreen foliage. Its blossoming this year (for the first time) was probably encouraged by planting it out, by way of experiment, in the spring, in a sheltered part of the woods of the Pleasure-ground, in a soil of rich vegetable leaf-mould. During the summer, almost every branchlet was terminated by the vivid scarlet blossoms, and it became a conspicuous object at a distance. In its native country it is described as making its first appearance on other trees, as an epiphyte. By its strong and rapid growth it soon envelopes the parent tree, its woody roots descending till they reach the ground, and there spreading to a great extent, while the main roots, by their numbers and interlacings, ultimately become so combined that they form a trunk of a singular appearance and sometimes of an immense size. The original tree dies, and its decaying trunk becomes food for the parasite; the latter in this respect resembling the fig-trees of the tropics or the ivy of this country. It is also said to form a tree without the aid of others. With us it grows luxuriantly if planted in light loam and kept in a cool greenhouse, and forms a handsome evergreen bush. The figure here represented was made from an individual that had become too large for our greenhouse accommodation. As it afforded the opportunity of testing the degree of cold it would bear, a sheltered situation amongst trees was selected, where it was planted in May 1849. During the summer it flowered profusely, presenting a very striking appearance for an out-door shrub, and continued to flourish till the first frosts; but we observe with regret, that this fine shrub will not live in the open air where the thermometer falls a few degrees below the freezing point."—*Botanical Magazine*, t. 4488.

6. *OPHELIA CORYMBOSA*. *Grisebach*. A half-hardy annual from the Neilgherries, belonging to the order of Gentianworts.

Of little moment. Stem a foot high, branched. Flowers pale purple, with a white eye, in corymbs. Requires peat.—*Botanical Magazine*, t. 4489.

7. FRITILLARIA PALLIDIFLORA. Schrenk.
Garden of Dorpat. Natural order, Lily-

Resembling in habit *Fr. lutea* and *latifolia*.
Houtte's Flora, v. 518, c.

8. MERTENSIA SIBIRICA. G.
perennial. Flowers blue.
Houtte of Ghent. Natural

The glaucous leaves and beau-
earliest spring Easily multiplied
Houtte's Flora, v. 518, c. Appa-

9. ANÆCTOCHI-
Planchon. A terres-
in *Van Houtte's*
appears to be in no
from *Anæctochilus*

10. BERBERIS
aliàs *Ilex japonica*,
Mahonia japonica,
Berberis Beallii,
nificent evergreen
pinnated leaves, im-
north of China, by
and Co. Has not
England. At fig. 2 is
per part of the leaves

A live plant has
Messrs. Standish and

From Songaria. Flowers yellow. In the
worts.

Hardy in Livonia, under a covering of leaves.—*Van*

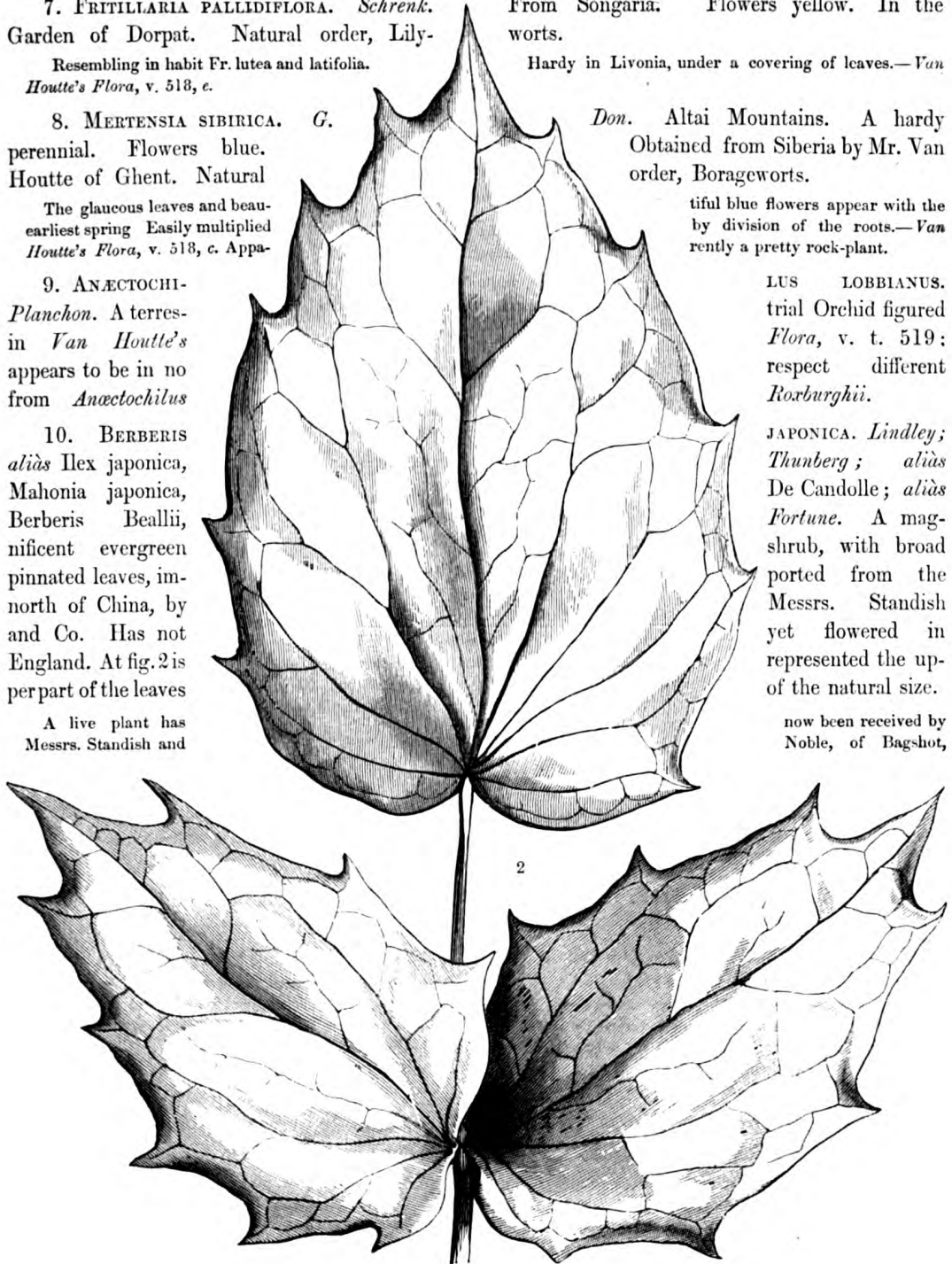
Don. Altai Mountains. A hardy
Obtained from Siberia by Mr. Van
order, Borageworts.

tiful blue flowers appear with the
by division of the roots.—*Van*
rently a pretty rock-plant.

LUS LOBBIANUS.
trial Orchid figured
Flora, v. t. 519:
respect different
Roxburghii.

JAPONICA. *Lindley*;
Thunberg; *aliàs*
De Candolle; *aliàs*
Fortune. A mag-
shrub, with broad
ported from the
Messrs. Standish
yet flowered in
represented the up-
of the natural size.

now been received by
Noble, of Bagshot,



from Mr. Fortune, who informs them that it grows from 100 to 150 miles north of Shanghae, and that it is the most gigantic of the Berberies. A leaf, which has been sent me by Mr. Standish, is nearly 15 inches long, and of a stout leathery texture; it originally had four pairs of leaflets, and the usual terminal one; the lower pair has dropped off: the other lateral leaflets are sessile, slightly cordate, about $3\frac{1}{2}$ inches long, with from 3 to 4 strong spiny teeth on each side, and a very stiff triangular point; the terminal leaflet is 5 inches long, and very deeply cordate, with 5 coarse, spiny teeth on each side. This is certainly the finest of the genus, and if hardy it will be the noblest evergreen bush in Europe. There is, however, but one plant of it at present in cultivation, so that its habits are unascertained.—*Journ. Hort. Soc.*, Vol. v., p. 20.

11. GALEOTTIA BEAUMONTII. *Lindley*; (aliàs *Stenia Beaumontii*. *A. Rich. in Cat. Pescator*, 1849, p. 36.) From Brazil, having been obtained from Bahia by M. Morel, of Paris. An uninteresting stove orchidaceous epiphyte, with the habit of a *Maxillaria*. Flowers two on a stalk, dull green and brown, with a pale lilac lip. Introduced by Mons. Morel.

G. Beaumontii: pseudobulbis oblongis 2-phyllis, foliis lineari-oblongis aveniis, pedunculo radicali erecto 2-floro floribus haud resupinatis, labelli trilobi laciniâ intermediâ lineari apice deflexâ subulatâ lateralibus truncatis margine anteriore setaceolaceris supra epichilium continuis.

This has flowered in the Garden of Plants at Paris, in the great collection of M. Pescatore, and with M. Morel, in all which places we have seen it. That it is a *Galeottia* there is no doubt; an obscure genus founded by M. Achille Richard upon a Mexican plant unknown in gardens; and which may possibly be found not distinct from *Batemannia*. The only difference, indeed, which we see in the present instance is, that this *Galeottia* has a large ovate gland and short caudicle, while *Batemannia* has a large ovate gland and no caudicle.

12. TRICHOCENTRUM TENUIFLORUM. *Lindley*. From Bahia. An obscure stove epiphyte, flowering in January. Flowers small, dingy brown, and white. Natural Order, Orchids. Introduced by M. Morel, of Paris.

T. tenuiflorum: foliis . . . , sepalis linearibus acutis, petalis conformibus obtusis, labello obovato emarginato subulato basi angustato lamellis basim totam occupantibus, columnæ alis semicordatis acutis.

This little plant is of only Botanical interest. It differs from all the known species of the genus in the narrow sepals and petals of its small flowers, and in its almost linear obovate lip with a pair of plates occupying the whole of the base.

The following are the other known species of this genus, none of which deserve the notice of cultivators:—

- | | |
|---|--|
| 1. <i>T. fuscum</i> . <i>Lindl. in Bot. Reg.</i> 1951. | 4. <i>T. recurvum</i> . <i>Lindl. in Bot. Reg.</i> , 1843, misc. 17. |
| 2. <i>T. maculatum</i> . <i>Lindl. Orch. Lindenianæ</i> , No. 127. | 5. <i>T. candidum</i> . <i>Lindl. in Bot. Reg.</i> , 1843, misc. 18. |
| 3. <i>T. pulchrum</i> . <i>Pöppig, N. Gen. & Sp.</i> , pl. ii., t. 115. | 6. <i>T. iridifolium</i> . <i>Lindl. in Bot. Reg.</i> , 1843, misc. 178. |

13. PHOLIDOTA CLYPEATA. *Lindley*. Imported by Messrs. Low and Co. from Borneo. An unimportant stove epiphyte, belonging to the order of Orchids. Flowers dirty white.

I have only seen the flowers, which resemble those of *P. imbricata*, but stand in a spike not more than three inches long. The column is very like a three-lobed petal, bordered with brown, and gives the flower the appearance of having two opposite lips. Mr. Kenrick states that the pseudo-bulbs are "about 2 inches long, with a dark-green leaf."—*Journ. Hort. Soc.*, Vol. v., p. 37.

14. BERBERIS WALLICHIANA. *Decandolle*; (aliàs *B. macrophylla of the Gardens*; aliàs *B. atrovirens, G. Don*.) A hardy evergreen bush from the mountains of tropical Asia. Imported by Messrs. Veitch. Has not yet flowered in England.

An evergreen of most beautiful aspect, with brown branches, a very dark green dense foliage, and long, slender, 3-parted spines. The leaves grow in clusters, are about 3 or 4 inches long, with a sharp, prickly point, and numerous fine serratures, ending in a straight point on each side; on the upper side they are a rich bright green, turning to a claret colour in the autumn, and remarkably netted: on the under side they are pale green and shining. With Messrs. Veitch it has stood through three winters without shelter, and is now 4 or 5 feet high. Naturally it is said to grow 10 feet high.—*Journ. Hort. Soc.*, Vol. v., p. 4.

15. BERBERIS LOXENSIS. *Bentham*. A hardy or half-hardy evergreen shrub, imported by Messrs. Veitch and Co., from Peru. Has not yet flowered in England. (Fig. 3.)

It has small palmated spines, and very shining, blunt, obovate, bright green leaves, of nearly the same colour on both sides; they seem to have in all cases a spiny point, and very often several teeth at the sides. The flowers are unusually small, and stand erect in paniced racemes on a long peduncle quite clear of the leaves. Its hardiness is uncertain; but its beautiful foliage makes it worth some protection if necessary.—*Journ. Hort. Soc.*, Vol. v., p. 7.

16. *BERBERIS DARWINII*. *Hooker*. From Chiloe and Patagonia. A hardy evergreen bush, of great beauty, imported by Messrs. Veitch. Flowers not yet produced in England. (Fig. 4.)

An evergreen shrub 3 to 5 feet high, of extraordinary beauty, conspicuous for its ferruginous shoots, by which it is at once recognised. The leaves are of the deepest green, shining as if polished, not more than $\frac{3}{4}$ inch long, pale green, with the principal veins conspicuous on the under side, with three large spiny teeth at the end, and about one (or two) more on each side near the middle. Although small, the leaves are placed so near together that the branches themselves are concealed. The flowers are in erect racemes, and of a deep orange yellow. Mr. Veitch informs me that this plant appears to be decidedly hardy: as is probable, considering that it grows naturally near the summer limits of snow upon its native mountains.—*Journ. Hort. Soc.*, Vol. v., p. 6.

17. *BERBERIS TINCTORIA*. *Leschenault*. An Indian sub-evergreen shrub, apparently hardy. Has not yet flowered in England. (Fig. 5.)

The plants in gardens are slender, brown-wooded shrubs, with small slender spines, usually 3-parted. The leaves are thin, not shining, dull green above, glaucous beneath, oblong, blunt, with a spiny point, but scarcely spiny-toothed, except on the seedling plant. The flowers have not hitherto appeared. They are represented by Dr. Wight as standing erect in loose racemes scarcely longer than the leaves, and succeeded by an abundance of dull red fruit.—*Journ. Hort. Soc.*, Vol. v., p. 13. At the lower part of fig. 5 are represented the early leaves of this species, which are cordate and long-stalked, and quite different from the later leaves.



18. *BLANDFORDIA FLAMMEA*. *Lindley*. From New Holland. A beautiful greenhouse perennial, flowering in October. Flowers $2\frac{1}{2}$ inches long, vivid orange scarlet. Introduced by Messrs. Low and Co. Natural order, Lilyworts (Liliacæ).

This, which is perhaps the finest of the Blandfordias, in a vigorous state is full 4 feet high, and bears 5 or 6 flowers at the end of its graceful stem. The plant which flowered with Messrs. Low, was an unhealthy offset, little more than 6 inches high. The leaves are narrow and stiff; the flowers about $3\frac{1}{2}$ inches long, $1\frac{1}{2}$ inch across the mouth, of the most vivid orange scarlet, with a broad edge of clear yellow. It is even handsomer than *B. intermedia* and *marginata*.—*Journ. Hort. Soc.*, Vol. v., p. 32.

19. *CHEIROSTYLIS MARMORATA*. *Lindley*; (*aliàs* *Dossinia marmorata*, *Morren*). From Borneo? A pretty herbaceous stove plant, belonging to the natural order of Orchids, flowering in September. Flowers white. Introduced by Mr. Hugh Low.

The leaves are of a deep reddish olive-green, with a velvety surface, and are traversed by fine golden veins, which disappear to a great extent when the leaves become old. It is far less beautiful than *Anæctochilus setaceus* or *Monochilus regius*. The flowers are white, with a reddish calyx, in a long, dark, purple, downy raceme. Although destitute of striking beauty, they well repay a minute examination, being covered with pellucid glands, and frosted, as it were, over all the inner surface. Requires damp heat, and a mixture of three parts chopped sphagnum and one-third well-decayed leaf-mould. Increased by the creeping stems.—*Journ. Hort. Soc.*, Vol. v., p. 79.

20. *HELIANTHEMUM SCOPARIUM*. *Nuttall*. From California. A small hardy shrubby rock-plant, belonging to the natural order of Rock Roses or Cistacæ, flowering in September. Flowers yellow. Introduced by the Horticultural Society.

A small prostrate shrub, with wiry branches and linear leaves. The flowers, which are small and bright yellow, grow in twos and threes at the end of the branches on naked pedicels about half an inch long. A hardy little shrub, requiring the same treatment as *Cistuses*. A very nice species for rock-work, on which it thrives in the full glare of the sun.—*Journ. Hort. Soc.*, Vol. v., p. 79.

21. *CALBOA GLOBOSA*. *Lindley*; (*aliàs* *Morenoa globosa*, *Llave*; *aliàs* *Quamoclit globosa*, *Bentham*.) A Mexican greenhouse twining perennial, of the natural order of Bindweeds. Flowers $2\frac{1}{2}$ inches long, scarlet. Flowers in September.

A rambling perennial, smooth in every part. Leaves thin, on long stalks extremely variable in form; some cordate and acuminate; others sagittate; others completely hastate, with the lobes all narrow, and the lower ones deeply angular. The flowers grow in naked umbels, on a peduncle 9 or 10 inches long; the pedicels are from $1\frac{1}{2}$ to 4 inches long. Each sepal has a long subulate process at the back. The corolla is $2\frac{1}{2}$ inches long, deep rich red, with a curved cylindrical tube, and a campanulate erect limb, divided into 5 erect rounded wavy lobes. This is a strong half woody climber, growing freely in any good rich soil composed of loam and sandy peat. It is easily increased by cuttings of the young shoots, and requires to be kept rather dry in a cool part of the stove during the winter, but should be grown in a cool airy part of the greenhouse during summer, where it will flower from August to October. Although a fine species, it is only fit for growing where there is plenty of room for its tops to spread. It will not flower in a pot, but must be planted in the open ground.—*Journ. Hort. Soc.*, Vol. v., p. 83. *With a figure.*

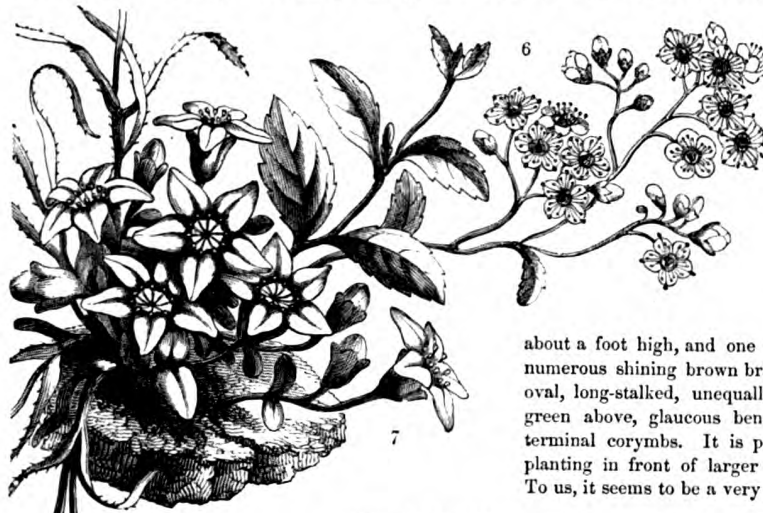
22. *PENTARHAPHIA CUBENSIS*. *Decaisne*. A tender shrub from Cuba, belonging to the order of Gesnerads. Flowers tubular, scarlet, appearing in the summer, handsome.

A shrub with a compact habit, and dark-green, convex, ever-green leaves, obovate, crenated near the point, and netted on the under-side with green veins on a pale ground. The flowers grow singly in the axils of the leaves, on cinnamon-brown stalks an inch long. The corolla is about the same length; tubular, curved and rich scarlet, with a projecting style. The calyx consists of five straight, narrow, sharp lobes, not unlike five brown needles, whence the generic name has arisen; requires a temperature intermediate between the greenhouse and stove; easily increased by cuttings, and grows freely in loam, peat, and leaf-mould.—*Journ. Hort. Soc.*, Vol. v., p. 86. *With a figure.*

23. *PHARBITIS LIMBATA*. *Lindley*. A tender, or half-hardy annual, from Java; imported by Messrs. Rollissons. Flowers very handsome, violet edged with white. Blossoms in the autumn; belongs to the Bindweed order.

This appears to be an annual, and has much the appearance of *Pharbitis Nil*, from which it principally differs in the great length of its sepals, their excessive hispidity, and the shortness of the flower-stalk. The flowers, equal in size to the old *Convolvulus major*, but less spreading at the mouth, are of an intense violet, edged with pure white, and have a beautiful appearance.—*Journ. Hort. Soc.*, Vol. v., p. 33.

24. SPIRÆA DECUMBENS. Koch. (aliàs *S. flexuosa*, Reichenbach, not Fischer; aliàs *S. adiantifolia*, of Belgian Gardens). A hardy European shrub of the Rosaceous order, with weak twining stems, and clusters of white flowers with a rose-coloured eye. In the Belgian gardens. (Fig. 6.)



This species is a native of the mountains of the Frioul, where it was found by Schiede. It is at present little known, although its graceful habit and abundant sweet white flowers give a claim to the attention of amateurs. It forms a bush

about a foot high, and one and a half foot wide, tufted, with numerous shining brown branches. The leaves are obovate or oval, long-stalked, unequally serrated, entire near the base, green above, glaucous beneath. The flowers are in little terminal corymbs. It is perfectly hardy, and is suitable for planting in front of larger shrubs.—*Annales de Gand*, t. 262. To us, it seems to be a very pretty rock-plant.

25. GRAMMANTHES GENTIANOIDES. De Candolle. A native of the Cape of Good Hope, and a half-hardy annual. Flowers salmon colour, in hemispherical clusters. Natural order, Gentianworts. (Fig. 7.)

Stems a few inches high, white and brittle. Leaves oblong, blunt, succulent. Flowers numerous, about as large as a sixpence, 5-parted, salmon-coloured, with a pallid stain at the base of the lobes, and a greenish stain somewhat in the form of the letter V. It is rather pretty in a greenhouse, but is not suited for the open air, where it soon rots, even when elevated on rockwork.—Figured in *Van Houtte's Flora*, Oct. 1849, t. 518.



26. CALANDRINIA UMBELLATA. De Candolle. A native of Chili, belonging to the natural order of Purslanes. A very pretty half-hardy annual, with deep rose-coloured flowers growing in clusters opening only under a bright sun. (Fig. 8.)

Stems fleshy, somewhat branched. Leaves very narrow, acute, hairy, those on the stem and next the root alike in form and equally succulent. The flowers when open are about as large as a sixpence, with very round petals; they grow in many-flowered umbels, and expand in succession during the whole summer. Professor Morren speaks thus of its management in Belgium. Naturally an annual, the seeds are sown in sandy land early in the spring; this is best done where they have to stand, because such delicate plants do not bear well the operation of pricking out. A soil composed of sand, mixed with decayed vegetable matter, especially rotten leaves, is what suits it best. In order to have large fine flowers, it is as well to give the plants a good watering once or twice during the summer with Guano water. In Belgium the seeds begin to ripen by July. It also makes a very nice pot plant for sitting rooms.—

Figured in the *Annales de Gand*, t. 268. We believe this to be one of Messrs. Veitch's many importations, and quite concur with Professor Morren in saying that it is not so much known as it deserves to be, especially in gardens where beauty is in greater esteem than rarity.

27. TRICHOGLOTTIS PALLENS. Lindley. A stove Orchid from Manilla, bloomed in November at Chatsworth. Flowers green and white, of little interest.

A dwarf erect plant, with oblong distichous leaves, and a lateral flower or two, not quite 2 inches in diameter, pale

delicate green, with delicate brownish spots and a white lip. The latter organ was oblong, with a white, shaggy crest on the upper side, and a pair of short, yellowish scimitar-shaped segments standing erect near the base; within these were a pair of forked callosities, one placed before the other in the centre, but no sac or pouch was found between them. The plant is of little beauty, but of considerable botanical interest.—*Journ. Hort. Soc.*, Vol. v., p. 34.

28. *MICROSPERMA BARTONIOIDES*. *Walpers* (alias *Eucnide bartonioides*, *Zuccarini*). A Loasid from Mexico. Introduced by Mr. Charlwood. A handsome hardy annual, with large bright yellow glittering flowers; the stems are covered with stiffish hairs.

Stems about a foot long, flexuose, succulent, subtranslucent. Leaves ovate-acute, lobed, and serrated. Flower-stalks long, one-flowered, terminal. Petals ovate, or rather obovate, slightly serrated, sulphur-yellow, paler, almost white, beneath. Stamens very long, in five monadelphous fascicles. Its soft, succulent nature, makes it liable to be injured by heavy rain and wind.—*Botanical Magazine*, t. 4491.

29. *SPATHODEA SPECIOSA*. *Brongniart*. Of uncertain origin—supposed African. A magnificent stove tree, belonging to the Bignoniads, with close panicles of very large pink, trumpet-shaped flowers, stained with crimson. Flowers in the spring.

When this beautiful species blossomed at Ghent, it was about 4 feet high. The panicle appeared at the end of the stem, which was covered with pinnated leaves, seated in threes, each being furnished with oblong-lanceolate, acuminate, serrated, shining leaflets. The corolla is about $2\frac{1}{2}$ inches long, and is protruded from an oblong blunt calyx, which opens on one side to let it pass, at the same time dividing into 2 triangular teeth at the back. Cultivated in a mixture of decayed leaves and rotten dung, mixed with one-third peat and one-third loam; it is represented to be difficult to strike. According to Prof. Morren, it was originally received at Ghent from England—*Annales de Gand*, t. 260.

30. *ODONTOGLOSSUM RUBESCENS*. *Lindley*. From Nicaragua, imported by Mr. Skinner. A very handsome Orchid, with fine blush flowers spotted with crimson. Flowers in November.

A charming species, belonging to the beautiful white-lipped section of the genus, and remarkable among them for its flowers being suffused with a tender blush colour. The sepals are very straight and sharp-pointed, richly spotted with crimson. The petals have similar spots near their base; the lip is spotless, crisp, and cordate, but not ciliated.—*Journ. Hort. Soc.*, Vol. v., p. 35.

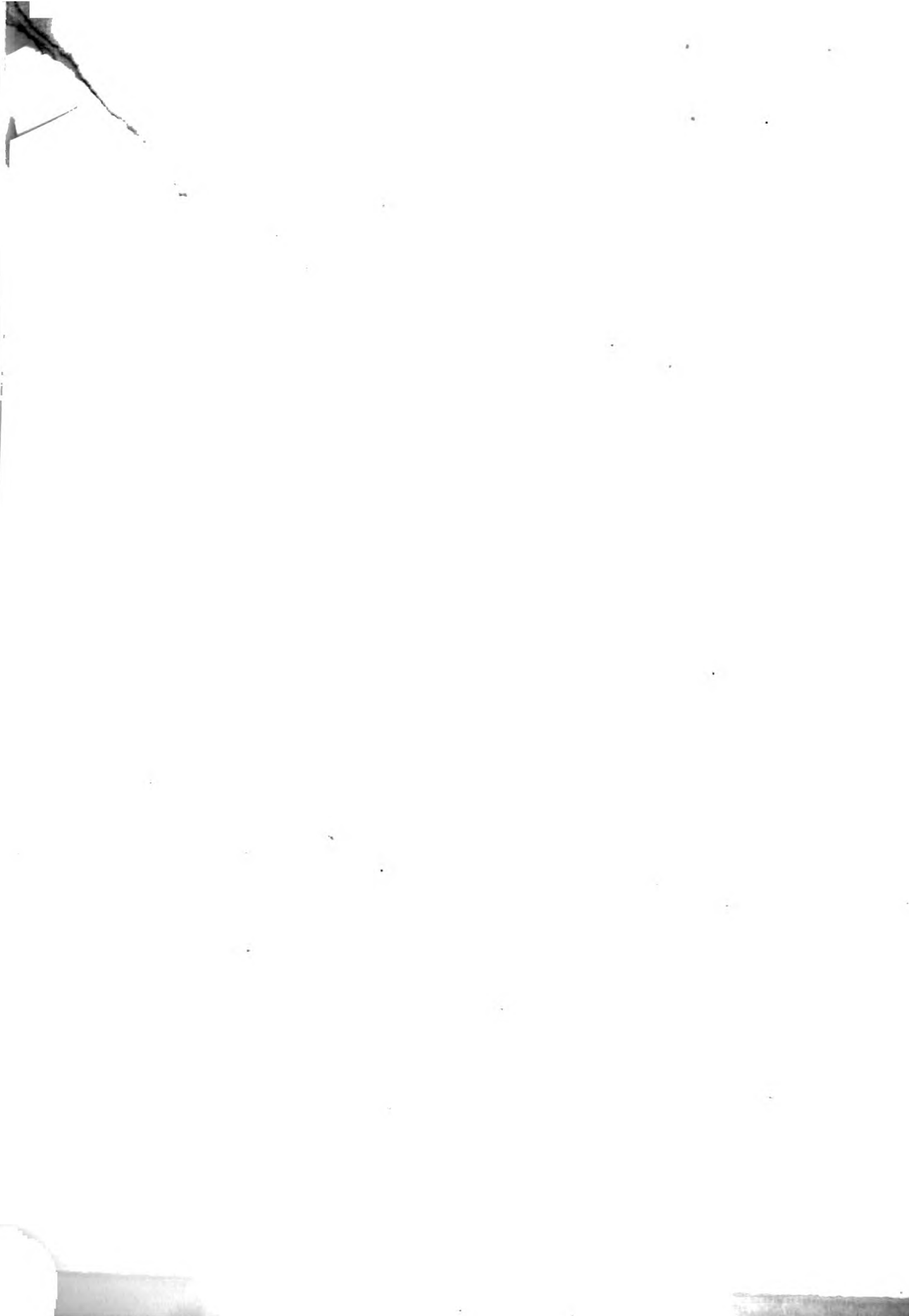
31. *PENTSTEMON CORDIFOLIUS*. *Bentham*. A hardy shrub, of the order of Linariads. Flowers rich dull red, in long bunches, rather handsome. From California; flowers in the summer and autumn.

A downy-stemmed half-shrubby plant, with a trailing or spreading habit, so that it is well suited to hang down over stones or rocks. Leaves dark-green, shining, cordate, serrate, slightly downy. Flowers in one-sided, narrow, leafy panicles, which sometimes measure more than a foot in length. The branches of the panicle are hairy, and bear each from three to five flowers when the plants are vigorous. Calyx covered with glandular hairs; corolla not quite an inch and a half long, rich dull red; the tube almost cylindrical; the upper lip straight, nearly flat, slightly two-lobed; the lower three-parted, spreading at right angles to the upper. Hardy, grows in any good rich garden soil, and easily increases by seeds or cuttings. It flowers freely, one year from seeds, and lasts in flower from June to October. It is a very desirable plant.—*Journ. Hort. Soc.*, Vol. v., p. 87. *With a figure.*

32. *SPATHOGLOTTIS AUREA*. *Lindley*. From Malacca. A pretty terrestrial stove plant, belonging to the natural order of Orchids, flowering in November. Flowers yellow. Introduced by Messrs. Veitch and Son.

Rather handsome, with narrow leaves like those of a Phaius, and a scape 2 feet high, bearing at the very end about half a dozen large golden-yellow flowers, with a few dull sanguine spots on the lip. Mr. T. Lobb found it on Mount Ophir, near the beautiful *Nepenthes sanguinea*. According to a memorandum by the late Mr. Griffith, it inhabits rocks on Mount Ophir, at places called Goonong, Toondook, and Laydang.—*Journ. Hort. Soc.*, Vol. v., p. 34.





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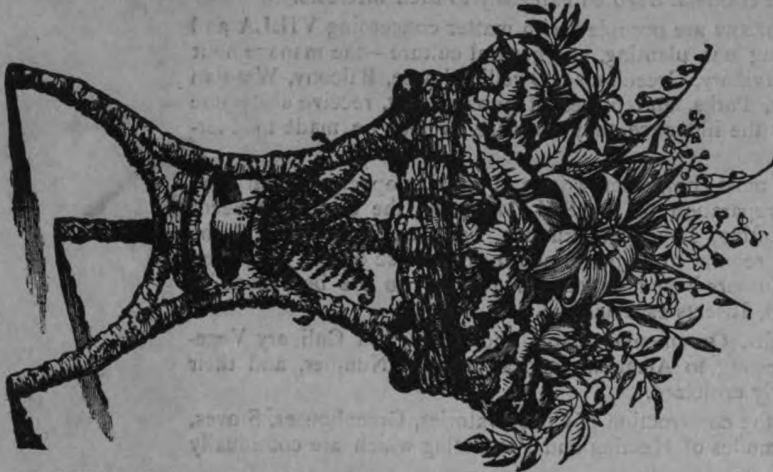
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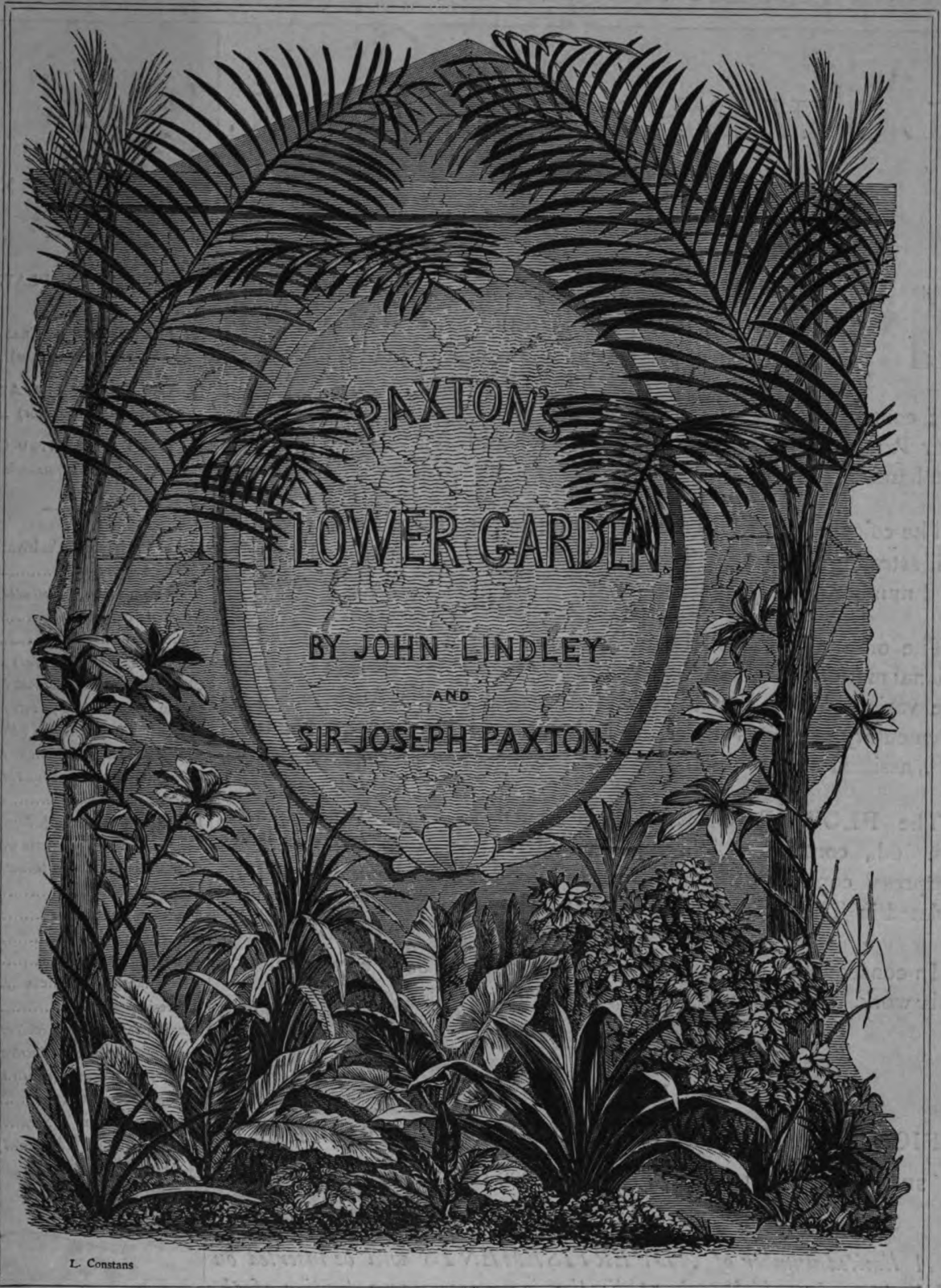
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CONTENTS OF M

COLOURED PLAT

Plate

- 4. THE TOOTHED CEAN (Ceanothus dentatus).
- 5. THE CHANGEABLE AD (Adamia versicolor).
- 6. THE PURPLE-LIPPED C (Oncidium hæmatochi

List of Oncidiums in cultivati

- Calanthe sylvatica
- Angræcum virens (illustrated) ..
- Passiflora belottii
- Metrosideros florida
- Echites peltata (illustrated) ..
- Clematis indivisa (illustrated) ..
- Linum grandiflorum (illustrat
- Eriocnema marmoratum (illu
- Eriocnema æneum
- Oncidium serratum (illustrate
- Calceolaria flexuosa
- Lardizabala biternata (illustra
- Tropæolum Deckerianum (ill
- Gonolobus Martianus (illustra
- Maranta ornata
- Chorozema cordatum
- Berberis undulata
- Erica elegantissima
- Æschynanthus Javanicus
- Theresia persica
- Stanhopea cirrhata (illustrate
- Stanhopea ecornuta (illustrate
- Stanhopea tricornis (illustrate
- Acineta chrysantha
- Cuphea purpurea
- Warrea candida (illustrated)

D. III.

S.

35

35

35

37

37

41

41

42

42

42

43

43

44

44

44

44

45

45

45

45

46

46

46

47

47

48

48

45



[PLATE 4.]

THE TOOTHED CEANOTHE.

(CEANOTHUS DENTATUS.)

A half-hardy Evergreen Shrub, from CALIFORNIA, belonging to the Natural Order of RHAMNADS.

Specific Character.

THE TOOTHED CEANOTHE.—A branched evergreen bush, closely coated with ferruginous hairs. Leaves small, oblong, rounded at each end, or almost cordate, coarsely toothed, and revolute at the edge, where they are furnished with distinct slightly stalked glands; smooth, shining, and deep green on the upper side. Flowers in terminal, stalked, roundish or oblong thyrses or umbels.

CEANOTHUS DENTATUS.—Frutex ramosus, tomentosus, sempervirens; ramis ferrugineis; foliis parvis penniveniis oblongis utrinque rotundatis v. cordatis grossè dentatis revolutis margine glandulosi: supra lucidis atroviridibus glabris, thyrsis umbellisve oblongis rotundisque pedunculatis, pedicellis calycibusque glaberrimis.

Ceanothus dentatus: Torrey and Gray, *Flora of North America*, vol. 1., p. 263.

DURING Douglas's last journey in California, this plant was first met with, but where is unknown. From specimens communicated to Drs. Torrey and Gray by the Horticultural Society, it was described by those authors. From Californian seeds, procured for the same Society by the Collector Hartweg, it has now been raised in the Society's Garden, whence it has been also extensively distributed among the Fellows. The plant which produced the specimen here represented flowered in February last in Her Majesty's Garden at Frogmore, under the care of Mr. Ingram.

It is a small bush, covered all over with rusty down, except upon the upper side of the leaves. In the cultivated plant the branches are five or six inches long, but in the wild specimens they are not more than a third of that length. The leaves are deep green, shining, wavy, strongly toothed, and rolled back at the edge, quite blunt, and somewhat heart-shaped at the base, on short stalks, furnished with a pair of triangular scale-like stipules. On the edge of the leaves appear many oblong fleshy stalked glands, which in the beginning are pale green, afterwards become yellow, and finally acquire a deep brown colour. To their presence is due a heavy, unpleasant, but slight odour, which is perceptible when the plant is touched; they afford an excellent specific character, but have been overlooked by Messrs. Torrey and Gray. The flowers are bright blue, bordering on violet, and are produced in stalked heads, which are sometimes racemes, sometimes thyrses, and even almost umbels. The authors of the *Flora of N. America* called them white, assuming such to be the case from the appearance of the dried specimens.

Like all the Californian plants, this naturally endures a hot dry summer, by which its wood is kept short-jointed, and is thoroughly ripened, so as to be enabled to support the severe winters to which it is exposed. It then, also, is loaded with clusters of flowers, twice as long as those here represented, and must become far more beautiful than it now is. Hitherto it has been kept in greenhouses or damp pits, where it has been exposed to none of its natural conditions. Mr. Ingram's specimens are from a spring forcing house.

Not having yet acquired its natural condition, there is a difficulty in judging of its capability of bearing an English winter. All that we at present know about it is that it lives uninjured under a glass frame facing the North, without any aid from artificial heat. We also know that other small-leaved Ceanothes have sustained no injury in exposed places, even though unsheltered, provided the sun has not shone upon them. In the meanwhile it will be desirable to treat this as a frame plant, or to force it with Lilacs, and such things; for which purpose the blue of its flowers, a colour so rare, and so greatly wanted in gardens, renders it peculiarly valuable.

The two uncoloured figures on either side of our plate represent magnified views of the upper and under side of a leaf.





[PLATE 5.]

THE CHANGEABLE ADAMIA.

(ADAMIA VERSICOLOR.)

A Greenhouse Shrub, from CHINA, belonging to the Natural Order of HYDRANGEADS.

Specific Character.

THE CHANGEABLE ADAMIA.—Leaves oblong-lanceolate, sharply toothed, entire at the base and narrowed into the stalk, covered with down on the ribs. Panicle pyramidal, downy. Branchlets in cymes. Flowers in seven parts, with about twenty stamens.

ADAMIA VERSICOLOR; foliis oblongo-lanceolatis acutè serratis basi integris in petiolum angustatis subtùs in costas pubescentibus, paniculâ pyramidali pubescente, armulis cymosis, floribus heptameris icosandris.

Adamia versicolor: *Fortune in Journal of the Horticultural Society*, vol. 1, p. 293.

A PLANT which had been brought from China by Mr. Fortune and which flowered in the garden of the Horticultural Society in September, 1846, furnished the materials for the accompanying figure. It had been found by him in Hong Kong, growing in ravines about half-way up the granitic mountains of that Island.

It forms a bush with the habit of an *Hydrangea*, to which genus it is naturally related. The stems and branches are downy; the leaves grow in opposite pairs, are oblong-lanceolate, serrated, sharp-pointed, somewhat convex, with a red midrib, which as well as the other ribs is slightly downy. The flowers appear in pyramidal downy panicles. In the bud state the corolla is pure white; more advanced it assumes a violet and ultramarine tint; at a later period it becomes a clear delicate blue, and upon opening it forms a handsome violet star of six or seven points, inclosing about twenty deep violet stamens, in the centre of which are found five bright blue styles. Thus there is found in the same panicle, at the same time, an infinite variety of tints of clear blue and violet, as well as pure white, the effect of which is extremely pleasing. It is understood that the flowers are succeeded by porcelain-blue berries: but they have not appeared as yet in this country.

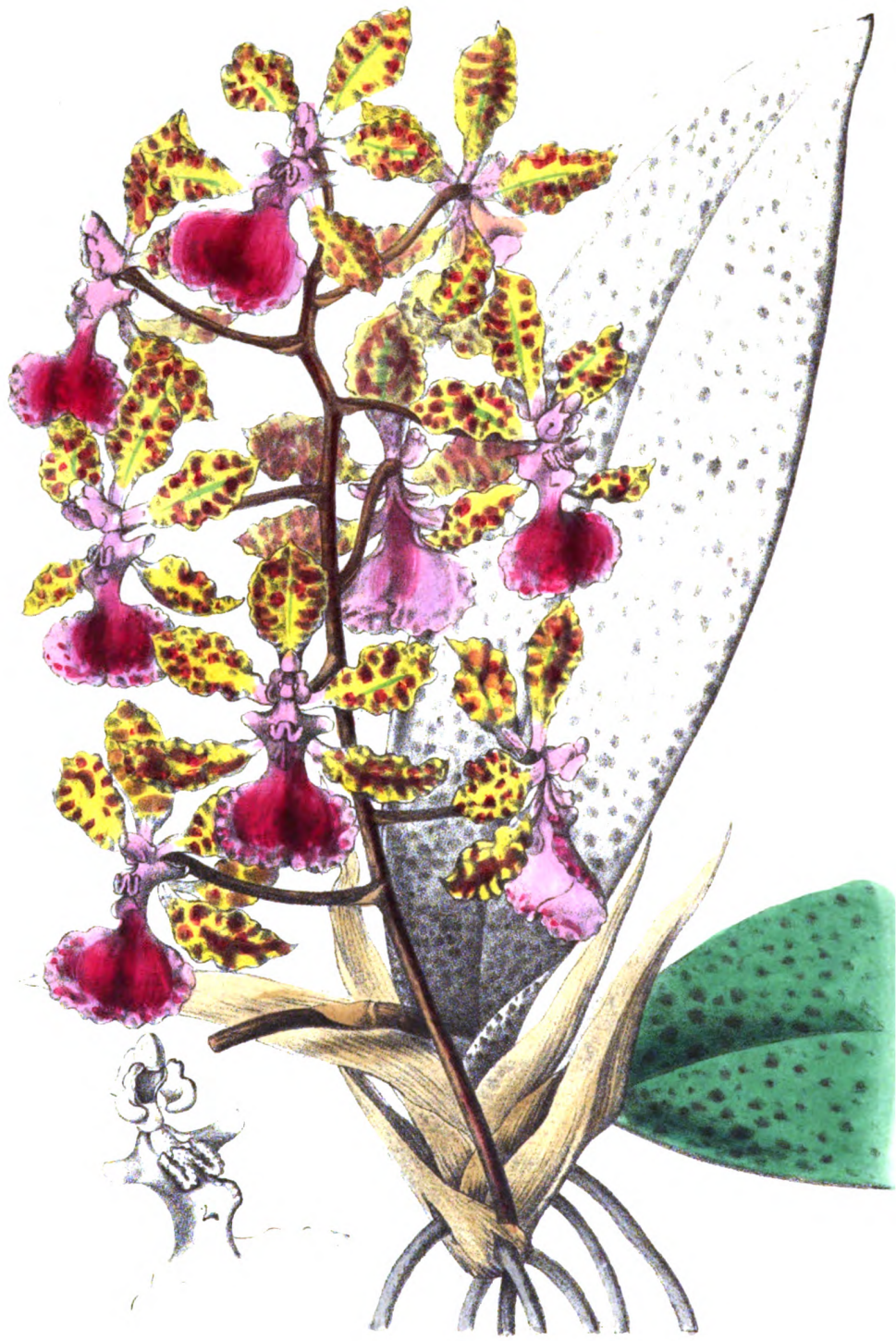
In fact, since the plant which flowered under Mr. Fortune's care in September, 1846, and which is here represented, no specimen of any beauty has appeared, and an idea has been entertained that the species is not worth cultivation because there has not yet been skill enough to manage it properly. What its precise treatment should be must be left to the determination of experiment. It is, however, to be inferred from what is known of Hong Kong, that the plant requires the climate of the tropics

while growing, and that of Devonshire when at rest. In the rocky ravines of Hong Kong, it is deluged with torrents of water, and forced by a vehement heat into luxuriant growth; at that time it must become exposed to as much as 120° of direct sunheat, while ripening its wood; and afterwards it must endure a temperature of 40° until the rains and heats return, and once more force it into vigour. All this must be done with an abundance of air, for in its natural station it is continually exposed to violent gusts and storms of wind, which struggle with a burning sun. Manure, properly so called, it can have little or none; but must depend for its food upon what the air can bring it, and upon such saline matters as may be yielded to water by the decomposition of the granitic soil.

We should add, that the accompanying figure hardly does justice to the plant itself, the panicle of flowers, copied by our artist, having been in reality nearly a foot in diameter.

Another species, the skyblue *Adamia* (*A. cyanea*), is in cultivation, and has been figured in the Botanical Magazine. But it is far inferior to this in beauty; the flowers being whole-coloured, a bad violet, and not half the size. It would, however, redeem its character if it could be made to form its berries, which Dr. Wallich describes as appearing on the open rocky mountains of Nepal, in great profusion, of a deep blue colour, and rendering the plant "an object of great elegance."

It was to that species, named *cyanea* because of its blueness, that the denomination *Adamia* was first given by Dr. Wallich, in commemoration of the eminent services rendered to Indian science by his friend John Adam, Esq, formerly President of the Supreme Council of Calcutta. We have before us two more species of the same genus, one of which found in Java, by Mr. Lobb, is probably the *Cyanitis sylvatica* of Reinwardt, and must be more than a rival to the present plant. We believe, however, it never reached England alive.



T. Constanti Brax & Lath.





[PLATE 6.]

THE PURPLE-LIPPED ONCID.

(ONCIDIUM HÆMATOCHILUM.)

A Stove Epiphyte, from NEW GRENADA, belonging to the Natural Order of ORCHIDS.

Specific Character.

THE PURPLE-LIPPED ONCID.—(Sect. *Plurituberculata*.)

Bulbless. Leaves oblong, flat, thick, sharp-pointed, spotted, growing singly. Racemes compact, stiff. Sepals distinct, and the petals all of similar form, spathulate, wavy; lip roundish, with auricles at the base; the crest scarcely evident at the base, wavy in front like the letter W, thence raised into an eminence, with a toothlet on each side. Wings of the column rounded, curved downwards, somewhat lobed.

ONCIDIUM HÆMATOCHILUM; (sect. *Plurituberculata*)
ebulbe, foliis oblongis planis coriaceis acutis maculatis
solitariis, racemis densis rigidis, sepalis liberis petalisque
conformibus spathulatis undulatis, labello subrotundo
basi auriculato, cristâ basi obsoletâ antice flexuosâ (literam
W referente), inde in jugum productâ denticulo utrinque;
columnæ alis rotundatis decurvis sublobatis.

THE accompanying drawing was made in September, 1847, from a plant in the possession of Messrs. Loddiges, and we believe it is found in their list under the provisional name of *O. luridum purpuratum*. They had imported it from New Grenada; but it does not occur among any dried collections which we have examined from that country.

In foliage it resembles the Carthagenæ Oncid (*O. carthaginense*) and its allies; the leaves being hard, stiff, dull green, spotted with brown, and destitute of any evident pseudo-bulb. The flowers, too, grow in the same manner, but they are very different in details of structure, as well as in colour and size. The sepals and petals are a warm greenish yellow, strongly blotched with rich chestnut-brown. The lip, on the other hand, is of the richest crimson, except near the base, where it fades into bright rose-colour. The crest, by the minute peculiarity of which Oncids are often most certainly known, resembles the letter W, having in the rear a short, flattish, narrow space, and in front a well-defined projection, with a small tooth on each side.

By these circumstances it is readily distinguished from the neighbouring species, in none of which such an arrangement occurs, varied as are the forms assumed by the tubercles of their crest. In all the varieties of the Carthagenæ Oncid there is, for instance, a pair of strong warts in place of the small teeth, one on each side of the anterior elevation, and the W-like body is divided into two distinct Vs. In the sanguine Oncid the two posterior tubercles are more oblong, projecting with a furrow along the middle. In Professor Morren's new Rosette Oncid (*O. cosymbephorum*), nearly allied to this, there is quite a bunch of tubercles at the base of the lip.

Among Oncids this purple-lipped kind is one of the best, being inferior to none except Lance's. The contrast between the crimson of its lip, the greenish-yellow ground-colour of the petals, and their rich cinnamon spots, is of rare occurrence, and produces a charming effect.

Every one who has studied the genus *Oncidium*, or endeavoured to ascertain the names of his species, must have felt the task to be one of extreme difficulty, in some measure owing to the want of any sufficiently precise classification of the genus. What was sufficient when the number of species was small, became useless as they increased in number; and that which succeeded has proved insufficient in its turn. We have therefore endeavoured, upon a full review of the subject, to effect such a classification as may meet the exigencies of the case, now that the discovery of new species has much slackened, and that the main forms are probably ascertained.

In the first place, it is necessary to eliminate all those singular and little known species, of which *O. serratum* figured in another page, and Mr. Bateman's *O. microchilum* may be taken as examples. These have very distinct stalks to their sepals, and a lip so much smaller than the other parts, as in some cases nearly to escape observation. They constitute the true *Cyrtochilums* of Humboldt, but have nothing to separate them generically from *Oncidium*.

In all the other species the lip is the largest part of the flower.

Of these some have the leaves placed with their edges vertically, or "equitant;" others have the leaves tapering, like an onion; and the remainder have the ordinary flat leaves.

Among the herd of flat-leaved species some have the side sepals united, more or less, so as sometimes to give the flowers the appearance of having only four divisions instead of five; others, on the contrary, have five divisions, unmistakably distinct. The first may be called *Tetrapetalous*, the second *Pentapetalous*, as we formerly proposed.

Some of the Tetrapetalous series have the true petals considerably larger than the sepals. In others, sepals and petals are of the same size.

Among the Pentapetalous set some have the lip entire, although in most it is distinctly eared. Some have it narrowest, some broadest at the base. For the separation of the narrow-based ear-lipped species into groups, there seems to be nothing more useful than the modifications of the crest. In one group the crest is a hairy cushion; in a second, it consists of a very few (not more than four) tubercles; in a third, the number of tubercles is greater; in a fourth, they are surrounded by minute warts.

In this way a dozen well-defined groups are obtained, under which about 150 species, of which the principal part are in gardens, may be readily arranged.

The fine species now figured belongs to the section having a pentapetalous structure with many tubercles on its crest. The remainder of the section is as follows:—

- | | |
|---|---|
| <p>1. <i>O. suave</i>, <i>Lindl. in Bot. Reg.</i>, 1843. <i>misc.</i> 22.—Mexico.—
Like <i>O. reflexum</i>, but the flowers are much smaller.
Sepals and petals chocolate colour tipped with yellow;
lip yellow with a cinnamon-brown middle. Has a slight
agreeable odour.</p> | <p>Guatemala.—Leaves grassy. Flowers small, yellow
and olive coloured; not worth cultivation.</p> |
| <p>2. <i>O. Suttoni</i>, <i>Bateman, in Bot. Reg.</i>, 1847. <i>misc.</i> 8.—</p> | <p>3. <i>O. tenue</i>, <i>Lindl. in Journ. Hort. Soc.</i> iii. p. 76 <i>ic.</i>—
Guatemala.—A species of little beauty, resembling
<i>O. suave</i>. Flowers small, yellow, mottled with dull
brown.</p> |

4. *O. pentadactylon*, *Lindl. in Ann. Nat. Hist.*, xv.—Peru.—Flowers small, in a large panicle—often altogether abortive; not in cultivation, nor worth it.
5. *O. maizæfolium*, *Lindl. in Orchid. Linden*. No. 78.—New Grenada.—A mountain plant. Flowers bright yellow, spotted with red. Not in cultivation.
6. *O. ramosum*, *Lindl. in Bot. Reg.*, sub. fol. 1920. aliàs *O. Batemannianum*, Knowles and Westcott, *Floral Cabinet*, 3. 183. t. 137.—Brazil.—A fine species, with gay pale yellow flowers in a branched panicle as much as five feet high.
7. *O. retusum*, *Lindl. in Bot. Reg.*, sub t. 1920.—Peru.—A beautiful species, with deep chestnut and yellow flowers, and a yellow lip.
8. *O. oblongatum*, *Lindl. in Bot. Reg.*, 1844, misc. 11.—Mexico.—Like *O. reflexum*, but with coloured pseudobulbs and a speckled stem. Flowers very yellow, large, and handsome.
9. *O. Barkeri*, *Lindl. in Bot. Reg.*, 1841, misc. 174. *Sertum Orchid.*, t. 18.—Mexico.—A very handsome plant, with large yellow flowers with rich brown spots on the sepals and petals. Raceme simple.
10. *O. unguiculatum*, *Lindl. in Journ. Hort. Soc.*, i. 303, ic.—Mexico.—Near *O. Barkeri*, but stem erect, and branched, lip longer and narrower, and tubercles of the crest narrower. Lip bright yellow; sepals and petals yellow, speckled with brown. Very handsome.
11. *O. Pelicanum*, *Martius, Bot. Reg.*, misc. 216., 1847, t. 70.—Mexico.—Very like *O. reflexum*, from which it differs in the tubercles being smooth, not downy, and the lateral lobes of the lip smaller in proportion to the intermediate segment.
12. *O. reflexum*, *Lindl. in Bot. Reg.*, sub. t. 1920.—Mexico.—A branched species, in the way of *O. altissimum*, but smaller. Flowers yellow, spotted with brown, except the lip.
13. *O. nebulosum*, *Lindl. in Bot. Reg.*, 1841, misc. 175; aliàs *O. Geertianum*, Morren in *Ann. Gand.* 1848, Feb.—Guatemala.—Flowers large, pale yellow, with faint spots of brown.
14. *O. citrinum*, *Lindl. in Bot. Reg.*, t. 1758.—Trinidad.—Flowers bright yellow, with faint traces only of greenish blotches.
15. *O. leucochilum*, *Bateman Orch. Mexic.*, t. 1; aliàs *O. digitatum*, *Lindl. in Benth. plant. Hartweg*. p. 94.—Mexico and Guatemala.—A charming species, with greenish flowers speckled with crimson, and a white lip fading to yellow.
16. *O. sphacelatum*, *Lindl. in Bot. Reg.*, 1842, t. 30.—Mexico and Guatemala.—A fine handsome and branching species with yellow flowers spotted with rich brown.
- There are two varieties, of which the large flowered alone deserves cultivation.
17. *O. altissimum*, *Swartz, Bot. Reg.*, t. 1851.—West Indies.—Flowering stems sometimes 10-13 feet long. Flowers yellow and brown; inferior to many others, notwithstanding its long panicles, which, however produce a striking effect when they have room to develop.
18. *O. Baueri*, *Lindl. Gen. and Sp. Orch.* 200., *Bot. Reg.* t. 1651.—Panama and Tropical America.—Much like the last, but the panicle more compound, and the column-wings truncate.
19. *O. ensatum*, *Lindl. in Bot. Reg.*, 1842, misc. 15.—Guatemala.—Also very like the last, but the leaves straight, long, and stiff, like sword-blades.
20. *O. pictum*, *Humb. Bonpl. and Kunth, nov. gen. and sp. i.*, t. 81.—Popayan.—Like *O. altissimum*, but the panicle is more compact, the flowers larger and more yellow, and the edge of the leaf-sheaths very wavy.
21. *O. sanguineum*, *Lindl. Sertum*, t. 27; aliàs *O. Huntianum*. *B. Mag.*, t. 3806; aliàs *O. roseum*, *Lodd.*; aliàs *O. Henchmanni*, *Lodd.*—La Guayra—A very variable plant near *O. Carthaginense*. Flowers small, blotched with crimson upon a straw-coloured ground.
22. *O. hæmatochilum*.—Of this plate.
23. *O. cosymbeporum*, *Morren, Annales de Gand.* t. 275—? —Flowers very pretty, bright rose colour, spotted with crimson and tipped with yellow. Lip cinnamon brown.
24. *O. carthaginense*, *Swartz*, aliàs *Epidendrum guttatum* *Linn.*; aliàs *O. luridum*, *Bot. Reg.* t. 727; aliàs *O. intermedium*, *Floral Cabinet*, t. 60.—West Indies and tropical America—Another very variable plant, usually having dull olive brown speckled flowers; but in the variety called *guttatum* they are rich brown and yellow, and very handsome. Other varieties are also known.
25. *O. Lanceanum*, *Lindl. in Bot. Reg.*, t. 1887.—Surinam.—The finest of the section, with large deep brown speckled flowers and a rich violet lip. Fragrant as Vanilla.
26. *O. Cavendishianum*, *Bateman Orch. Mex.*, t. 3; aliàs *O. pachyphyllum*, *Bot. Mag.* t. 3807.—Guatemala.—Leaves thick, fleshy, erect. Flowers large, bright yellow.
27. *O. bicallosum*, *Lindl. in Bot. Reg.*, t. 12, 1843.—Guatemala.—Very like the last, but flowers larger, slightly scented, with two great tubercles on its lip, besides smaller ones.
28. *O. cultratum*, *Lindl. in Ann. Nat. Hist.*, xv.—Popayan.—A small, dwarf species, with not more than ten flowers in the panicle. Not in cultivation.

To this enumeration of the species in the Plurituberculate Section it may be useful to add a tabular view of the whole arrangement proposed in the beginning of this article.

I MICROCHILA. Labellum nanum. I. CYRTOCHILUM H.B.K.

II Macrochila. Labellum dilatatum.

A. Folia equitantia. II. EQUITANTIA.

B. Folia teretia. III. TERETIFOLIA.

C. Folia plana.

- | | | | |
|----|------------------------------|---------------------------|----------------------------|
| 1. | IV. TETRAPETALA MACROPETALA. | Sepala lateralia connata. | Petala multo majora. |
| 2. | V. TETRAPETALA MICROPETALA. | Sepala lateralia connata. | Petala sepalis subæqualia. |
| 3. | VI. PENTAPETALA MACROPETALA. | Sepala lateralia libera. | Petala multo majora. |
| 4. | Pentapetala micropetala. | Sepala lateralia libera. | Petala sepalis subæqualia. |

* labellum indivisum; (v. apice tantum lobatum; VII. INTEGRILABIA.
* * labellum auriculatum trilobum

= basi angustius, v. lobo terminali subæquali.

a. Cristâ pulvinatâ s. villosâ.

VIII. PULVINATA.

b. Cristâ tuberculatâ (nec pulvinatâ)

+ tuberculis 2—4.

IX. PAUCITUBERCVLATA.

+ + tuberculis 5—10, segregatis.

X. PLURITUBERCVLATA.

+ + + tuberculis 5—10, verrucisq. circumstantibus.

XI. VERRUCO-TUBERCVLATA.

= basi manifestè latius.

XII. BASILATA.

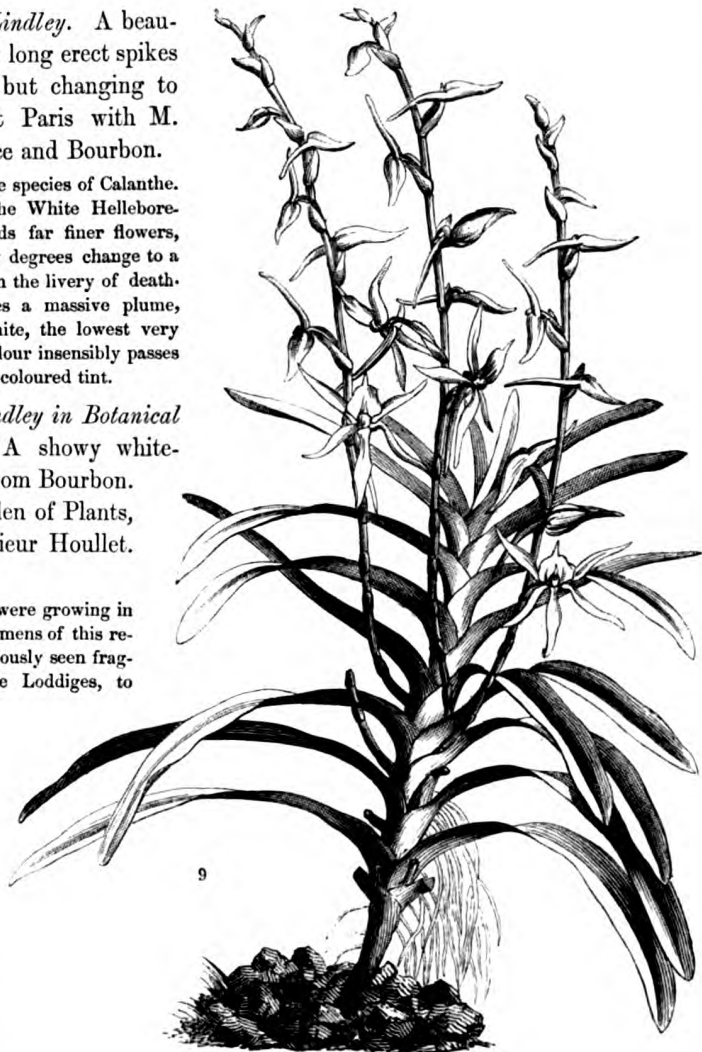
GLEANINGS AND ORIGINAL MEMORANDA.

33. *CALANTHE SYLVATICA*. *Lindley*. A beautiful terrestrial Stove Orchid, with long erect spikes of large flowers, at first white, but changing to bright yellow. Has flowered at Paris with M. Pescatore, from the Isles of France and Bourbon.

This is the most beautiful of all the species of *Calanthe*. To the foliage and general habit of the White Hellebore-leaved (*Calanthe veratrifolia*), it adds far finer flowers, which are at first pure white, but by degrees change to a clear bright yellow, very different from the livery of death. Thus, each spike of flowers resembles a massive plume, the upper part of which is snow-white, the lowest very yellow, while in the middle the one colour insensibly passes into the other through a tender cream-coloured tint.

34. *ANGRÆCUM VIRENS*. *Lindley in Botanical Register*, 1847, under t. 19. A showy white-flowered orchidaceous epiphyte, from Bourbon. Blossomed in January in the Garden of Plants, at Paris, under the care of Monsieur Houlet. (Figs. 9 & 10).

In the Garden of Plants, at Paris, were growing in January last two or three fine specimens of this remarkable plant, of which we had previously seen fragments only from the late Mr. George Loddiges, to whom it was said to have been sent from Serampore. The plants in question were as large as a full-grown Ivory Angurek (*Angræcum eburneum*); but their leaves were so flaccid and glaucous, as to render it evident that they belonged to some other species. From among them rose up several stately spikes of large unexpanded flowers, conspicuous for the dark-brown scales which supported them, the whole plant having the appearance represented in the accompanying fig. 9. Each spike was about two feet long.



At the time we saw them they were unexpanded, and led to hopes that they might show the species to be the little known superb Angurek of Dupetit Thouars (*Angraecum superbum*), the specimens having undoubtedly been received from Bourbon. Upon opening, they however proved to be what is now represented, each flower being of the size and form represented at figure 10. The sepals and petals, and the spur of the lip are greenish, and the lip itself, although white, is nevertheless conspicuously tinged with green in the middle; not, however, to such a degree as in the plant which flowered with Mr. Loddiges, and which gave rise to the name which this plant bears. It is, however, a noble-looking plant, richly deserving a place among even the most select collections.

It may be useful to mention in this place, that the French collections contain some Bourbon and Isle of France Orchids, quite unknown among us. In addition to the subject of the last memorandum (No. 33), we observed the curious *Habenaria citrina*, *Eulophia scripta*, a showy species, *Bolbophyllum nutans*, and some other rarities, in the collection of M. Pescatore.

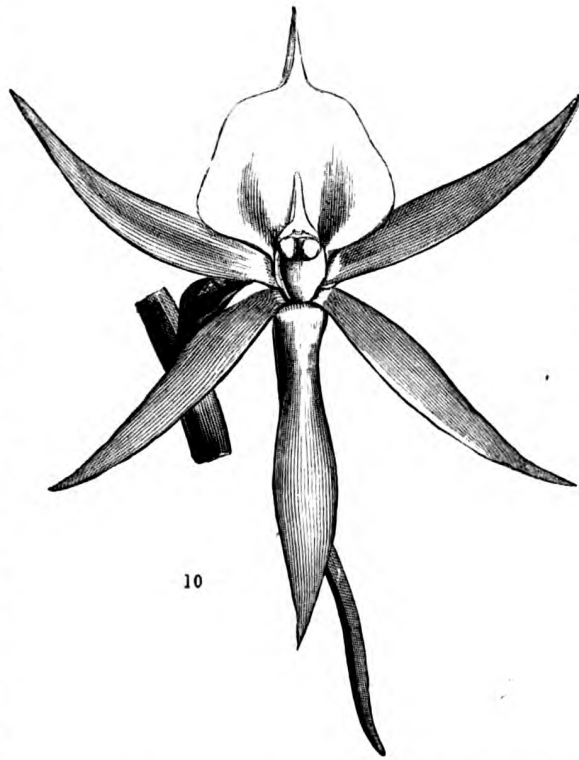
35. *PASSIFLORA BELOTTII*, of the French Gardens. A hybrid stove plant of uncertain origin; apparently between *P. cærulea* and *quadrangularis*. Introduced by Messrs. Knight and Perry.

A robust shrub. large, glabrous, deeply acuminate, or ovate. Flowers large and coloured, tinged with light rose colour; rays with indistinct purple

36. *METROSIDE* (*aliàs* *Melaleuca flo-*
Leptospermum scan-
beautiful greenhouse
son flowers, belong-
Myrtleblooms (*Myr-*
to the Royal Bo-
from New Zealand.

A shrub, about 5
glabrous, forming a
every now and then
branches, which indi-
cable circumstances it
Leaves opposite, 1 inch
leathery, slightly glossy,
nerved on both sides;
beneath, where also the
than on the upper side,
naked eye. Corymbs
Petals orbicular, con-
longer than the calycine

rous, at first involute,
times as long as the petals, red. A fine glossy-leaved evergreen shrub, forming a handsome bush, having much resemblance to the Myrtle. Although a native of New Zealand, the climate of which is said to be similar to that of Great Britain, yet we find it not sufficiently hardy to bear the open air in this country, during the low temperature of some of our winters, especially such as are sometimes experienced in the eastern and midland districts. The climate of the coasts of Devon and Cornwall, and the south and west of Ireland would probably be suitable for the plant in the open air. Its habit shows it to love moisture, and although with us it grows freely, treated as a greenhouse plant, in a pot or tub in loam, yet in its own country it assumes a very different habit, being epiphytal, climbing up and extending itself on trees to a great height, becoming fixed by its aerial roots and branches, which interlace with the trees on which it grows, forming dense leafy masses, similar to Ivy in this country, but of a much gayer appearance when in flower. We find it disposed to throw out roots on the main branches; it therefore readily increases by cuttings treated in the usual way.—*Botanical Magazine*, t. 4471. We doubt, however, whether the plant thus described is the real *M. florida*, or *Raka-pika* of New Zealand, said to have obovate leaves, and yellowish petals somewhat cut. It looks very like a smooth state of *Metrosideros robusta*, the Rata of the New Zealanders.



Stems round. Leaves three-lobed, the lobes acuminate, entire. Flowers large and showy; sepals flesh-green; petals delicate of the coronet blue, transverse bars.—*Gard. Botany*.

ROS FLORIDA. *Smith*.
rinda, *Forster*; *aliàs*
dens, *Forster*). A
shrub, with rich crim-
ing to the order of
taceæ. Introduced
tanic Gardens, Kew,
Flowers in May.

feet high, everywhere
compact mass, but
sending out spreading
cate that under favour-
would be scandent.
or 1½ inch long,
distinctly and closely
dark-green above, pale
dotting is more distinct
but not visible to the
terminal, almost sessile.
cave, red, deciduous,
lobes. Stamens nume-
then spreading, four

37. *ECHITES PELTATA*. *Vellozo*. A fine climbing stove plant of the order of Dogbanes, (*Apocynaceae*), imported from Brazil by Mons. H. Galeotti, and flowered with M. Van Houtte of Ghent. Leaves large, thick, massive. Flowers large, bright yellow, clustered. (Fig. 11.)

A native of hedges near Rio Janeiro, where it grows to a considerable length. Leaves broad, rounded at the end, but with a point there, when young, covered with rusty down; when full grown, 5 to 6 inches long, and $3\frac{1}{2}$ to $7\frac{1}{4}$ broad. The flowers grow in clusters of six or eight, with short downy stalks. The corolla, which is a clear bright—but not dark—yellow, is rather more than 2 inches long, twice contracted in the tube, and with five very much imbricated, broad somewhat crisp segments; the tube is white (but is coloured yellow in the plate). It requires a damp stove, strong loam mixed with white sand, and a thorough drainage.—*Van Houtte's Flore*, t. 390.

38. *CLEMATIS INDIVISA*; *variety lobata*, *Hooker*. A beautiful greenhouse climbing plant from New Zealand. Flowers large, pure white, with crimson anthers. Flowers in April. (Fig. 12.)

In its native country it quite festoons the trees with its dense foliage and large panicles of flowers. A climber, with ternate leaves, and firm, leathery leaflets, slightly downy, and coarsely lobed, or almost pinnatifid. The panicles are often a foot long; those in gardens have only hitherto produced small flowers, which measure full $2\frac{1}{2}$ inches across; whether fragrant or not is not stated.—*Botanical Magazine*, t. 4398.

39. *LINUM GRANDIFLORUM*. *Desfontaines*. A hardy annual from Algiers, with brilliant crimson flowers. In the French Gardens, flowers from July to October. (Fig. 13.)

A glaucous erect annual, branching upwards. Ordinary leaves narrow, obtuse, closely packed; those of the stem ovate, acute, or acuminate, with some delicate fringes on the edge. Flowers of the colour of *Portulaca Gilliesii*, more than an inch across, with five whitish spaces in the eye. It flowers abundantly and in succession, and, being a dwarf plant, it answers remarkably well for borders.—*Revue Horticole*, vol. ii., p. 404.

40. *ERIOCNEMA MARMORATUM*. *Naudin*. A soft, herbaceous, stemless, stove-plant, from Brazil, belonging to the Melastomads. Leaves green, striped with white. Flowers rose-coloured, produced with Mons. Morel of Paris. (Fig. 14.)

Possibly only an annual. Stem very short, fleshy, resembling a tuber. Leaves



hairy, oval, 5-ribbed, stalked, oblong, heart-shaped, on the upper side bright green, beautifully marked with brown stains and broken streaks of white, on the under side rich purple. Flowering branches or scapes about 5 inches high, terminated by a bent short spike of rich rose-coloured blossoms, about as large as in *Cyclamen coum*, with five petals.—*Revue Horticole*, vol. ii., p. 381, fig. 20.

41. *ERIOCNEMA* plant, also from Brazil, of the last, except that colour. Also with *M.*

Flowers somewhat larger scarpoid, as in a Forget-me-velvety. Leaves greenish with quite a metallic lustre. They are grown in continually shaded and damp. cies seem to demand the leaved sylvan Orchids from saures, *Anoëtochiles*, and the

42. *ONCIDIUM SERRA-* striking, orchidaceous, half-ru. Flowers large, brown-low, produced with *M. Pesca-* Rather more than twice the

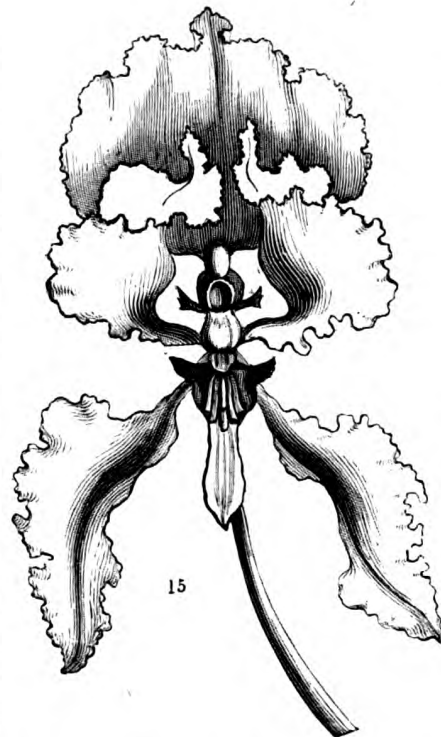
Till we received a flower *Pescatore*, it was only known old Spanish drawing, sent from and preserved in Sir Wm. plant has oblong, smooth, terete broad sword-shaped leaves at below the pseudo-bulbs. The partly twining, with five or six from four to six flowers near have the very singular form which is about twice as large as they are represented in the Spanish drawing above alluded to, and perhaps four times as large as they were with *M. Pescatore*. The colour is said to be cinnamon-brown in Peru, with bright yellow tips to the upper divisions. In the fresh flower they had the colour of *Oncidium luridum*, only brighter; but the yellow on the upper half of the delicately fringed and crisped petals was clear and brilliant. If flowered in the summer, the species would no doubt be much finer: as it is, we must regard it as one of the most remarkable of the short-lipped *Oncids*.

43. *CALCEOLARIA FLEXUOSA*. *Ruiz and Pavon*. A greenhouse shrub, belonging to the *Linariads*. Introduced by Messrs. Veitch and Co. Flowers yellow. From Peru.

Stems hairy, flexuose. Leaves cordate, ovate, much wrinkled, coarsely crenate, whitish beneath, with numerous hairs. Flowers yellow, in large terminal panicles. Corolla with a broadly ovate slipper, not longer than the leafy calyx. Probably a fine plant for large beds.—*Gardeners' Magazine of Botany*. We should doubt its value as an ornamental species; its habit is coarse; the corolla is quite overpowered by a great leafy calyx; its habit is evidently that of a prostrate, not erect, plant, and we may observe, that in a wild state its flowers become so small, and the foliage so shabby, as to render it in that state a mere weed. Cultivation may, however, improve it. We trust that Messrs. Veitch have also raised Lobb's No. 344, the finest *Calceolaria* yet known.

44. *LARDIZABALA BITERNATA*. *Ruiz et Pavon*. A hardy evergreen climbing shrub from Chili, belonging to the order of *Lardizabalads*. Leaves in threes, prickly at the edge. Flowers dark purple, in close drooping racemes, appearing in December. Introduced by Messrs. Veitch and Co. (Fig. 18.)

A climbing shrub, with terete, twisted branches. Leaves, especially in the flowering branches, generally simple, ternate, but sometimes bi and triternate; leaflets rather thick, evergreen, ovate, here and there almost spinously twisted,



ÆNEUM. *Naudin*. A stove- with much the appearance the leaves are deep bronze *Morel*.

than in the last, and perfectly not. Scape shorter, and more brown, almost black, shining. These two plants are very de-peat, but require to be kept —*Revue Horticole*. The spe- same treatment as the gay- the tropics, such as the *Phy-* like.

TUM. *Lindley*. A very twining epiphyte from Pe- ish-olive, and brilliant yellow- cator of Paris. (Fig. 15.) natural size.

of this curious species from *M.* to us from a rude copy of an Peru by the late Mr. Mathews, *Hooker's Herbarium*. The pseudo-bulbs, each having two the point, and several others flower-stem was nine feet long, lateral branches, each carrying the extremity. These flowers shown in the annexed figure,



dark green above, paler and reticulated beneath. Flowers in close drooping spikes, of numerous, rather large, deep purplish chocolate-coloured flowers. The calyx of the male of six rhombic-ovate, spreading, fleshy, nearly equal sepals. Petals six, spreading, lanceolate, or almost subulate, white, mealy, membranaceous. Stamens six, united into a column and bearing six spreading, oblong, slightly incurved, apiculated, two-celled anthers, opening at the back. A native of woods in the south of Chili, and perfectly hardy. A plant in this garden (Kew) has withstood the cold of the last three winters without injury, and Mr. Veitch reports that in his nursery there is a specimen 12 feet high, growing against a wall. It is a beautiful evergreen creeper, with dark green foliage, and well adapted for covering high walls. It is a rapid grower, and apparently not particular as to situation; but from its habit, we infer that shady places suit it best. —*Botanical Magazine*, t. 4501.

45. *TROPÆOLUM DECKERIANUM*. *Moritz*. A downy, handsome, twining, greenhouse perennial, with blue, green, and scarlet flowers. Apparently very pretty. Introduced from Venezuela to the Botanic Garden, Berlin. (Fig. 16.)

Roots fibrous. Stems grey, downy, climbing and rooting; with blunt, peltate, sinuated ovate leaves. The flowers, which grow singly have a scarlet spur 2 inches long, tipped with green; green hairy sepals; five intensely blue, wedge-shaped, toothed, short petals; and stamens of the same colour. It may be grown out of doors in summer, or may be kept in a pot and trained like other small species of the genus. Propagated by cuttings, or by seeds. *Van Houtte's Flore des Serres*, t. 490. A very great acquisition, remarkable for the singular intermixture of green, scarlet, and blue in its flowers.

46. *GONOLOBUS MARTIANUS*. *Hooker*. (*alias* *Fischeria Martiana*, *Decaisne*.) A Brazilian stove twiner belonging to the *Asclepiads*, with many-flowered umbels of greenish-white flowers, possessing little beauty. Flowers at Kew in May and June. (Fig. 17.)

Climbing, much branched; branches densely clothed with spreading hairs, which become reddish in drying. Leaves oblong-ovate, hairy on both sides, almost velvety, mucronate, cordate, with a deep but closed sinus. Flowers in many-flowered umbels with hairy pedicels, white, with a deep-green radiating ring at the base; lobes spreading, ovate-rotundate-obtuse, longitudinally plaited in the middle. A soft-wooded plant, of rapid and extensive growth, well adapted to cover trellis-work, pillars, &c. Where it is required to cover a great space, it should be planted in a mixture of loam and peat, about eighteen inches in depth, and well drained. It may also be grown in a pot, and trained up the rafters of the house, or on a wire trellis fixed to the pot; and by occasionally stopping the leading shoots it may be made to flower abundantly.—*Bot. Mag.* t. 4472.



47. *MARANTA*? *ORNATA*. *Linden*. Var. 1. *ALBO-LINEATA*; var. 2. *ROSEO-LINEATA*. Two charming stove plants from Columbia, introduced by M. Linden. Flowers unknown. Leaves rich deep green, striped in one variety with clear white, in another with clear pink.

Until these have flowered their real genus cannot be satisfactorily determined. In the meanwhile, their foliage forms a most beautiful object among other vegetation; their green is of the rich deep tone of *Calathea zebrina*, while their stems and under side have the same rich stain of purple. In addition, they are brilliantly banded by well defined oblique streaks, of a clear delicate pink colour in one variety, and of yellowish white in the other. They require a rich well-worked, mixed soil, frequent watering while growing, a shady place in the stove, and a diligent care to keep "scales" off them. Easily propagated by division.—*Van Houtte's Flore*, tt. 413 and 414. Both these exquisite plants were exhibited before the Horticultural Society at one of their meetings at Chiswick in 1849, on which occasion they received a medal. !!!

48. *CHOROZEMA CORDATUM*. *Lindley*. (*alias* *C. flava*, *Henfrey*.) A yellow variety of this well-known little greenhouse shrub has been imported by Messrs. Henderson, of the Wellington Nursery, and published in the *Gardeners' Magazine of Botany* as a new species. Except colour, which is variable in its wild state, there is nothing essential by which it can be distinguished.

49. *BERBERIS UNDULATA*. *Lindley*. An evergreen shrub, apparently hardy, imported by Messrs. Veitch and Son, from the mountains of Peru, where it grows at the elevation of 12,000 feet. Has not yet flowered in this country.

In a young state, as now with Messrs. Veitch, this has slender branches, and weak palmated spines. The leaves are dull green, scarcely glaucous, oblong, tapering to the base, remarkably wavy, and furnished with a few spiny distinct teeth, without any distinct trace of netted veins. The flowers have not yet appeared. In a wild state, it is a stout stiff bush, with 3-parted or 5-parted spines, sometimes as much as $1\frac{1}{2}$ inch long. The leaves are thick, narrower than in the cultivated plant, but still preserve their undulated appearance. The flowers appear in small, roundish, nearly sessile racemes, which are scarcely so long as the leaves.—*Journ. Hort. Soc.*, Vol. v. p. 7.

50. *ERICA ELEGANTISSIMA*. *Gardeners' Magazine of Botany*. A pretty hybrid, said to have been raised between *E. hiemalis* and *E. Hartnelli*. Flowers tubular, deep rose, with a white flat border.

51. *ÆSCHYNANTHUS JAVANICUS*. *Hort*. A most beautiful stove epiphyte introduced by Messrs. Rollisson, from Java, with close racemes of bright red ascending flowers, each more than 2 inches long, with a starry yellow throat. Belongs to the order of Gesnerads.

At first sight this bears much resemblance to the *Æ. pulcher*. The plant is more compact, the leaves smaller, the flowers all over down as well as the pedicels, the calyx truly cylindrical (not swollen below), the limb spreading, the corolla more slender and graceful, the stamens exserted. Leaves opposite, oval or ovate, sometimes approaching to oblong, between coriaceous and fleshy, obscurely angular and toothed, the veins sunk in the substance of the leaf. Corymbs terminal, of many large, handsome, richly-coloured flowers. Calyx large, greatly wider than the tube of the corolla it includes, downy, dark green, red-brown above; the tube cylindrical, faintly striated, the five lobes of the limb spreading horizontally. Corolla bright red, about thrice the length of the limb, the tube slender, funnel-shaped, downy, laterally compressed, with a prominence under the throat, mouth oblique, limb of four nearly equal, spreading, large ovate lobes, the upper one notched, the rest entire and streaked and blotched with yellow. Stamens all exserted, especially the upper ones.—*Botanical Magazine*, t. 4503.

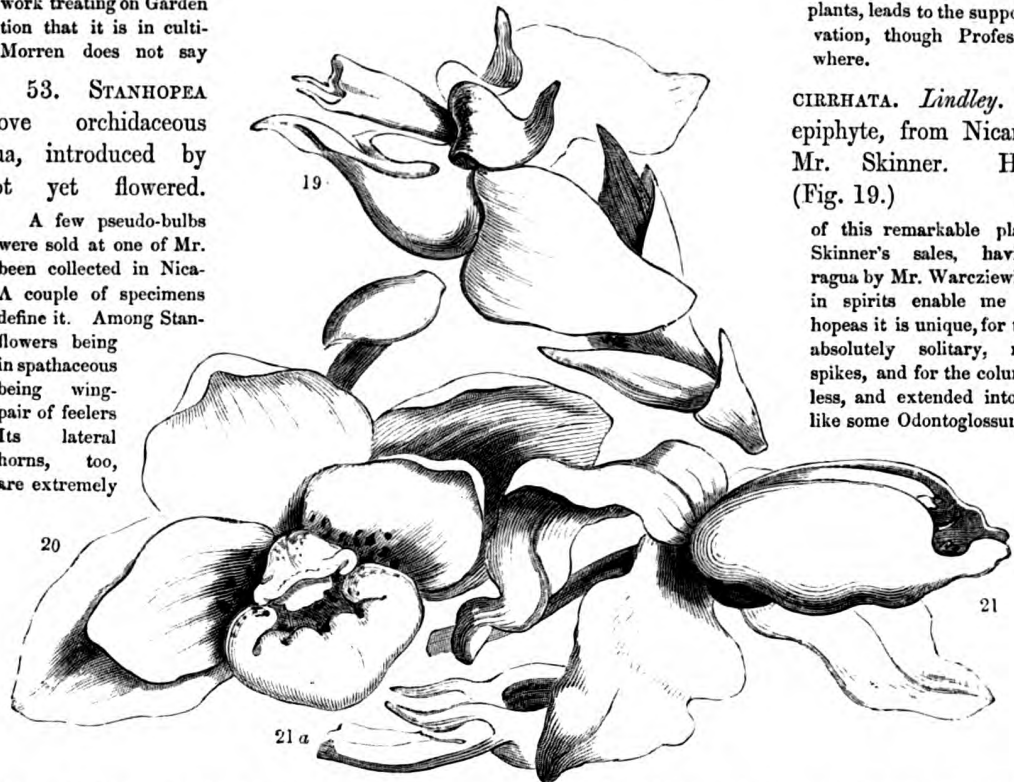
52. *THERESIA PERSICA*. *C. Koch*. A hardy Liliaceous plant from Mount Ararat, where it is found at the elevation of 4000 feet. It is said to have the flowers of the same form as in *Fritillaria*, but the habit of a Lily.

This is described as having a bell-shaped, hexapetaloid flower, with oblong coloured sepals, provided with a nectariferous cavity in the inside; six hypogynous stamens included within the flower; oval anthers, deeply pierced below to receive the filament; a 5-celled, many-seeded, 5-angular, columnar ovary; with a linear, entire style, and a scarcely distinguishable stigma. The bulbs are said to be like those of the Crown Imperial. It does not appear from the *Annales de Gand*, whence this account is taken, whether the plant is in the Belgian gardens or not; its presence in a

work treating on Garden
tion that it is in culti-
Morren does not say

53. *STANHOPEA*
stove orchidaceous
gua, introduced by
not yet flowered.

A few pseudo-bulbs
were sold at one of Mr.
been collected in Nica-
A couple of specimens
define it. Among Stan-
flowers being
in spathaceous
being wing-
pair of feelers
Its lateral
horns, too,
are extremely



plants, leads to the supposi-
tion, though Professor
where.

CIRRHATA. *Lindley*. A
epiphyte, from Nicara-
Mr. Skinner. Has
(Fig. 19.)

of this remarkable plant
Skinner's sales, having
ragua by Mr. Warczewitz.
in spirits enable me to
hopes it is unique, for the
absolutely solitary, not
spikes, and for the column
less, and extended into a
like some *Odontoglossums*.

short and fleshy. Its colours are unknown, but it does not promise to be a showy species of much horticultural interest.
—*Journ. Hort. Soc.*, Vol. v. p. 37.

54. *STANHOPEA ECORNUTA*. *C. Lemaire*. A stove orchidaceous epiphyte, from Central America, whence it was sent to Mr. Van Houtte by Mr. Warczewitz. Flowers white, with the base of the lip yellow. (Fig. 20).

This extremely curious plant differs from all the previously known *Stanhopeas*, in having a lip wholly free from horns, and without any break in its middle. It may be regarded as a species with the hypochil (or lower half of the lip) alone present. This body is described as being "ovate, obsolete triangular at the end, very short. It has much the form of a slipper, extremely fleshy, of a very bright yellow-orange colour, passing towards the point into pure white, and mottled on its sides with handsome purple blotches. Four little tumours, two near the articulation with the column, and two near the point, indicate four abortive horns." The flowers are otherwise pure white, with a few purple spots near the base of the petals, which are short, firm, concave, and not reflexed, as in most other *Stanhopeas*. "The column is very short, very fleshy, compressed, rounded above, winged at the sides, channelled in front." "The flowers, which grow in pairs, are about $4\frac{1}{4}$ inches across, and have very short bracts."—*Van Houtte's Flore*, t. 181. Can it be a monster of *Stanhopea tricornis*?

55. *STANHOPEA TRICORNIS*. *Lindley*. An orchidaceous epiphyte, from Western Peru; plants of which were dispersed at one of Mr. Skinner's sales. Has not yet flowered. (Fig. 21.)

A very curious thing. The figure of the lip is most remarkable, there being a third horn at the base of the middle lobe of the lip in addition to the two always present at the side. In a figure sent home by Mr. Warczewitz the petals are represented to be pink and the rest of the flower white; the petals moreover are very fleshy, firm, and apparently incapable of rolling back as in the rest of the genus.—*Journ. of Hort. Soc.* iv. Fig. 21 a represents a portion of the lip.

56. *ACINETA CHRYSANTHA*. *Lindley*. (*alias* *Neippergia chrysantha*, *Morren*.) A stove epiphyte, supposed to be from Mexico, exhibited at Ghent, by M. Auguste Mechelynck, in September, 1849.

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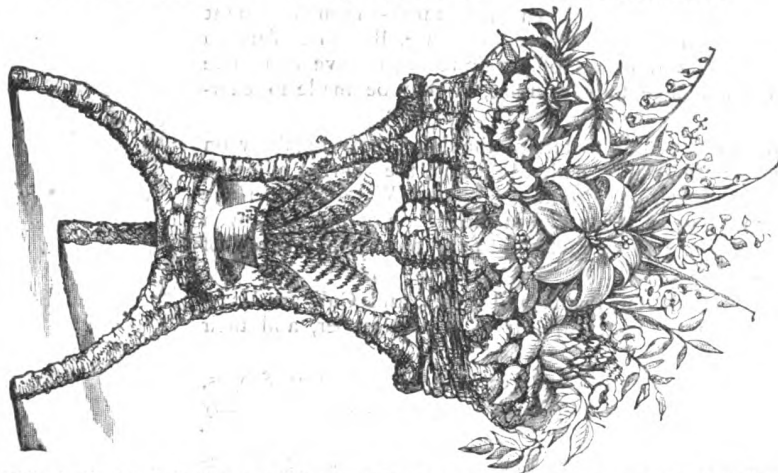
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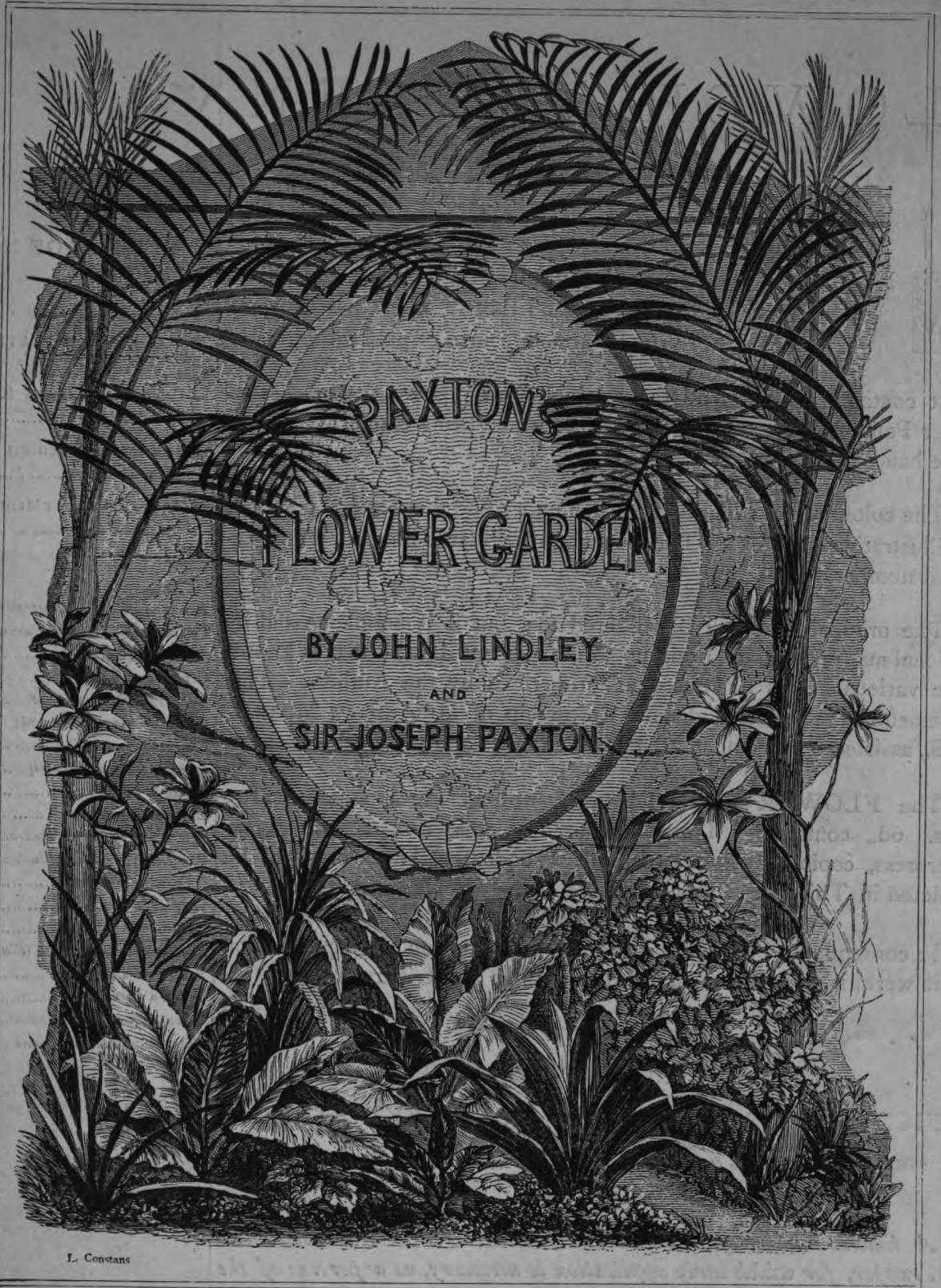
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CONTENTS OF N

COLOURED PLAT

Plate
10 DAMPIER'S CLIANTH (C
thus Dampieri
11 THE SWEET TRICHOPILO
chopilia suavis)
12 THE MAGNIFICENT MEDIC
Medinilla magnifica) ...

Acacia macradenia (*illustrated*)
Cephalotaxus Fortuni (*illustrated*)
Galanthus plicatus.....
Cereus Tweediei
Juniperus sphaerica (*illustrated*)
Quercus inversa (*illustrated*).....
Quercus sclerophylla (*illustrated*)
Laelia grandis (*illustrated*).....
Cyanotis vittata
Cupania Cunninghamsii
Symlocos japonica (*illustrated*)
Rhaponticum acaule (*illustrated*)
Calliandra brevipes
Galphimia glauca
Terrestrialia sylvatica
Dendrobium crepidatum (*illus.*)
Brachysema aphyllum
Isoloma breviflora.....
Clerodendron Bethuneanum.....
Tabernaemontana longiflora



V.

49

53

55

57

58

59

59

59

59

59

60

60

60

61

61

62

62

62

63

63

64

64







[PLATE 10.]

DAMPIER'S CLIANTH.

(CLIANTHUS DAMPIERI.)

A Greenhouse perennial trailer, from NEW HOLLAND, belonging to the Order of LEGUMINOUS PLANTS.

Specific Character.

DAMPIER'S CLIANTH.—Herbaceous, shaggy, decumbent. Leaflets opposite, very seldom alternate, obovate-oblong. Stipules cut or toothed. Peduncles bearing a kind of umbel at the point, shorter than the leaves. Calyx 5-cleft, with acuminate segments, and acute re-entering angles. Ovary shaggy.

CLIANTHUS DAMPIERI.—Herbaceous, villosus, decumbens; foliis oppositis rarissime alternis obovato-oblongis, stipulis laciniatis v. dentatis, pedunculis apice subumbellatis foliis brevioribus, calycibus 5-fidis laciniis acuminatis sinibus acutis, ovarii villosis.

Clianthus Dampieri, *Cunningham in Hort. Soc. Trans. II. series i. 522.* *R. Brown, in Sturt's Narrative (1849) II. 71*; *aliàs Clianthus Oxleyi, Cunningham*; *aliàs Donia speciosa, Don* (according to Brown); *aliàs Kennedyya speciosa, of Cunningham.*

THIS beautiful plant has been raised from New Holland seeds, by Messrs. Veitch of Exeter, under the name of *Kennedyya speciosa*; and received the large silver medal of the Horticultural Society when exhibited in Regent Street, in April last; an honour never conferred upon any new plants, except such as are of surpassing value as objects of cultivation.

It formed a stout decumbent herbaceous perennial, of a pallid aspect, covered with long hairs. The pinnated leaves were in about five pairs, with an odd one; the leaflets being oblong, or slightly obovate, opposite in most cases, and furnished with a pair of coarsely toothed or slashed stipules. From the axils of these leaves, and shorter than they, arise angular peduncles, having on the end four or five quasi-umbellate flowers of the most brilliant colour. Their calyx is tubular, shaggy, with five acuminate lobes, and acute re-entering angles. The standard is ovate, oblong, acuminate, bright scarlet, with a deep purple stain at the base, which is convex and shining; the keel is acuminate, scarlet, and very like that of the Crimson Clianth (*Clianthus puniceus*), as are the wings, which are also scarlet. The ovary and stamens appear not to be different from the organs belonging to the last-mentioned species.

Dr. Brown, who seems to have studied this plant, speaks of it thus in the Appendix to *Captain Sturt's Narrative of an Expedition into Central Australia* :—

“In July, 1817, Mr. Allan Cunningham, who accompanied Mr. Oxley in his first expedition into the western interior of New South Wales, found his *Clianthus Oxleyi* on the western shore of Regent's Lake, on the River Lachlan. The same plant was observed on the Gawler Range, not far from the head of Spencer's Gulf, by Mr. Eyre in 1839, and more recently by Capt. Sturt, on his Barrier Range, near the Darling. I have examined specimens from all these localities, and am satisfied that they belong to one and the same species.

“In March (not May) 1818, Mr. Cunningham, who accompanied Capt. King in his voyages of survey of the coasts of New Holland, found on one of the islands of Dampier's Archipelago, a plant which he then regarded as identical with that of Regent's Lake. This appears from the following passages of his MS. Journal :—

“‘I was not a little surprised to find *Kennedya speciosa*, (his original name for *Clianthus Oxleyi*) a plant discovered in July, 1817, on sterile bleak open flats, near Regent's Lake, on the River Lachlan, in lat. 33° 13' S., and long. 146° 40' E. It is not common; I could see only three plants, of which one was in flower. This island is the Isle Malus of the French.’ Mr. Cunningham was not then aware of the figure and description in Dampier above referred to, which, however, in his communication to the Horticultural Society in 1834, he quotes for the plant of the Isle Malus, then regarded by him as a distinct species from *Clianthus Oxleyi* of the River Lachlan. To this opinion he was probably in part led by the article ‘*Donia*, or *Clianthus*,’ in *Don's System of Gardening and Botany*, vol. II. p. 468., in which a third species of the genus is introduced, founded on a specimen in Mr. Lambert's Herbarium, said to have been discovered at Curlew River, by Capt. King. This species named *Clianthus Dampieri*, by Cunningham, he characterises as having leaves of a slightly different form, but its principal distinction is in its having racemes instead of umbels; at the same time he confidently refers to Dampier's figure and description, both of which prove the flowers to be umbellate, as he describes those of his *Clianthus Oxleyi* to be. But as the flowers in this last plant are never strictly umbellate, and as I have met with specimens in which they are rather corymbose, I have no hesitation in referring Dampier's specimen, which many years ago I examined at Oxford, as well as Cunningham's, to *Clianthus Dampieri*. This specimen, however, cannot now be found in his Herbarium, as Mr. Heward, to whom he bequeathed his collections, informs me; nor can I trace Mr. Lambert's plant, his Herbarium having been dispersed.

“Since the preceding observations were written, I have seen, in Sir William Hooker's Herbarium, two specimens of a *Clianthus*, found by Mr. Bynoe, on the north-west coast of Australia, in the voyage of the *Beagle*. These specimens, I have no doubt, are identical with Dampier's plant, and they agree both in the form of leaves and in their subumbellate inflorescence, with the plant of the Lachlan, Darling, and the Gawler Range. From the form of the half-ripe pods of one of these specimens, I am inclined to believe that this plant, at present referred to *Clianthus*, will, when its ripe pods are known, prove to be sufficiently different from the original New Zealand species, to form a distinct genus; to which, if such should be the case, the generic name *Eremocharis* may be given, as it is one of the greatest ornaments of the desert regions of the interior of Australia, as well as of the sterile islands of the north-west coast.”

It is possible that this may be intended to cover some further meaning than can be assigned to the words as they would be interpreted by ordinary readers. We can only remark that we find in

this plant no indication of a genus different from *Clianthus*; in fact, we see less to separate it from the *Clianths* than is to be found in Endlicher's *Streblorhize* (*Clianthus carneus*.) At all events, it is much to be regretted that naturalists should thoughtlessly encumber books with names of which there is no present or probable want. It is early enough to add to the chaos of Botanical nomenclature when a clear case of scientific necessity can be made out.

The plant will prove of the easiest cultivation, demanding no more care than is given to *Pelargonium*, the habits of which it probably possesses.

As the work from which the preceding remarks of Dr. Brown have been extracted is not likely to be in the hands of many of our readers, we fill a vacant space with his remarks upon two other Leguminous plants from New Holland, which this eminent botanist supposes to constitute new genera.

CLIDANTHERA.

Calyx 5-fidus. *Petala* longitudine subæqualia. *Stamina* diadelphe: *antheræ* uniformes; loculis apice confluentibus, valvula contraria ab apice ad basin separanti dehiscentes! *Ovarium* monospermum. *Stylus* subulatus. *Stigma* obtusum. *Legumen* ovatum, lenticulari-compressum, echinatum.

Herba, v. Suffrutex, *glabra, glandulosa; ramulis angulatis. Folia cum impari pinnata; foliolis oppositis, subtus glandulosis. Stipulæ parvæ, basi petioli adnatæ. Flores spicati, parvi, albicantes.*

Subgenus forsân Psoraleæ, cui habitu simile, foliis calycibusque pariter glandulosis; diversum dehiscentia insolita antherarum!

6. CLIDANTHERA *psoralioides*.

Suffrutex bipedalis in paludosis. *D. Sturt.*

Herba, vel suffrutex, erecta, bipedalis, glabriuscula. Ramuli angulati. Folia cum impari pinnata, 4-5-juga; foliola opposita, lanceolata, subtus glandulis crebris parvis manifestis, marginibus scabris. Spicæ densæ, multifloræ. *Calyx* 5-fidus, parum inæqualis, acutus, extus glandulis dense conspersus. Corolla: *Vexillum* lamina oblonga subconduplicata nec explanata, basi simplici absque auriculis; ungue abbreviato. *Alæ* vexillo paullo breviores, carinam æquantés, laminis oblongis, auriculo baseos brevi. *Carinæ petala* alis conformes. *Stamina* diadelphe, simplex et novemfidum; *antheræ* subrotundæ v. reniformes, valvula ventrali anthera dimidio minore subrotunda. *Ovarium* hispidum ovulo reniformi. *Legumen* basi calyce subemarcido cinctum, echinatum. Semen reniforme, absque strophio; integumento duplici. Embryo viridis; cotyledones obovatæ, accumbentes.

PENTADYNAMIS.

Calyx 5-fidus subæqualis. *Vexillum* explanatum, callo baseos laminæ in unguem decurrenti. *Carina* obtusa, basin versus gibba, longitudine alarum. *Stamina* diadelphe; *antheris* 5 majoribus linearibus, reliquis ovatis. *Ovarium* polyspermum. *Stylus* e basi arcuata porrectus, postice barbatus. *Legumen* compressum.

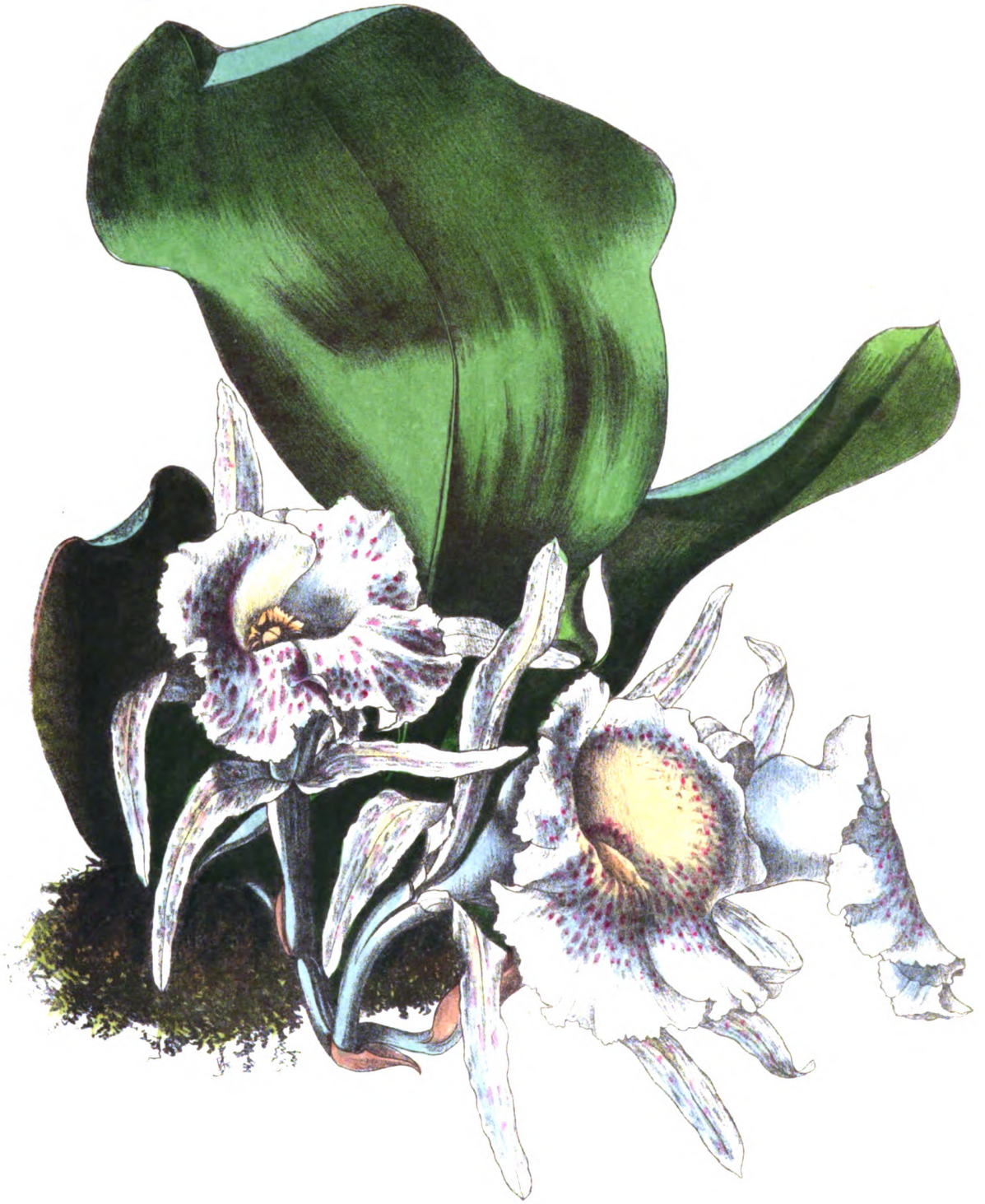
Herba (Suffrutex sec. D. Sturt), bipedalis sericeo-incana; caule angulato erecto. *Folio* ternata; foliolis sessilibus, linearibus, obtusis. *Flores* racemosi, flavi.

9. PENTADYNAMIS *incana*.

"On sand-hills with *Crotalaria Sturtii*." *D. Sturt.*

Herba erecta, ramosa, sericeo-incana. Folia alterna, ternata; petiolo elongato, teretiusculo, foliolo terminali longiore vix unciali. Racemi multiflori, erecti; pedicelli subæquantes calycem. Bracteolæ subulatæ, infra apicem pedicelli, basin calycis attingentes. Calyx 5-fidus; laciniis acutis tubum æquantibus. Corolla flava, calyce plus duplo longior. Vexillum explanatum, basi absque auriculis sed callo in unguem decurrenti ibique barbato auctum. Carina infra medium gibba pro receptione baseos styli. Stamina antheræ majores lineares, basi vel juxta basin affixæ; 5 minores ovatæ, incumbentes. Ovarium lineare, pubescens. Stigma terminale, obtusum. Legumen immaturum incanum, stylo e basi arcuata porrecto terminatum, calyce subemarcido subtensum.

In the collection of the plants of his last expedition, presented to the British Museum by Sir Thomas Mitchell, there is a plant which seems to belong to the genus *Pentadynamis*, which is probably, therefore, one of the species of *Vigna*, described by Mr. Bentham.





[PLATE 11.]

THE SWEET TRICHOPIL.

(TRICHOPILIA SUAVIS.)

A stove Epiphyte, from CENTRAL AMERICA, belonging to the Natural Order of ORCHIDS.

Specific Character.

THE SWEET TRICHOPIL.—Pseudo-bulbs thin, oblong, obcordate, one-leaved. Leaves broad, oblong, wavy, leathery, nearly sessile. Peduncles about 2-flowered. Petals linear, nearly straight. Lip very large, 3-lobed, wavy, crisp, closely rolled up at the base, suddenly inflated upwards. Hood of the column 3-lobed, with all the lobes fringed, the middle one being the narrowest.

TRICHOPILIA SUA VIS.—Pseudo-bulbis tenuibus oblongis obcordatis monophyllis, foliis latis oblongis undulatis coriaceis subsessilibus, pedunculis sub-bifloris, petalis linearibus rectiusculis, labello maximo bilobo undulato crispo basi aretè convoluto sursum abruptè ventricoso cuculli trilobi laciniis omnibus fimbriatis intermediâ angustiore.

Trichopilia suavis: *Suprà p. 44, no. 70.*

AMONG the Vandeous Orchids, that is to say among the Orchids having waxy pollen-masses on a well-defined gland, and usually with a caudicle in addition, stands conspicuous, a group which we have elsewhere named BRASSIDS, comprehending the genera *Oncidium*, *Odontoglossum*, *Brassia*, *Cymbidium*, and many more. (See *Vegetable Kingdom*, p. 181.)

It is among these genera that the genus *Trichopil* is stationed, and well defined by its four pollen-masses at the end of a long wedge-shaped caudicle, its convolute free lip, and the remarkable hood of the column, divided, in the species hitherto seen, into three unequal lobes. *Helcia*, which is nearest it, has a flat lip with a distinct fleshy hypochil, and a fringed, not hooded, anther-lid.

It is not improbable that many more *Trichopils* lurk in the forests of Central America than we have any actual knowledge of. To the Cork-screw *Trichopil* (*Tr. tortilis*), so named on account of the spiral form of the petals, a second species, from Mexico, was some years since added by Messrs. Richard and Galeotti, with narrow stem-like pseudo-bulbs, and large solitary yellow flowers, under the name of *Tr. Galeottiana*. The plant now figured forms a third; and a fourth, still unnamed, has flowered with Sir Philip Egerton.

For the opportunity of publishing a coloured plate of this, the Sweet *Trichopil*, we are indebted to R. S. Holford, Esq., whose specimens reached us a few weeks since in admirable condition. It

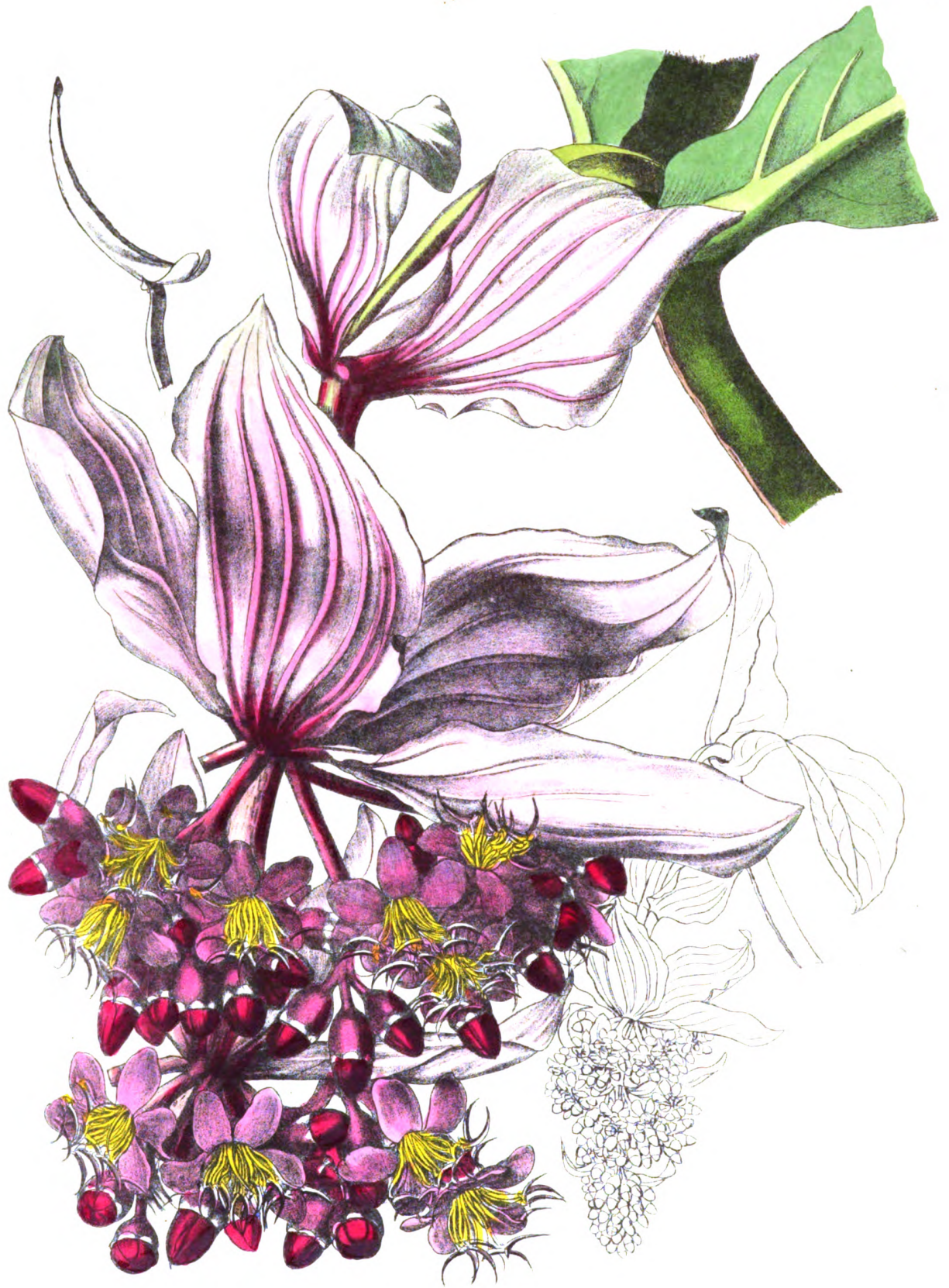
had also been flowered about the same time by Mrs. Lawrence and Mr. Loddiges. Its broad thin pseudo-bulbs and large leathery leaves will distinguish it when not in flower, and have led to the confusion of it with the large-flowered Tooth-tongue, *Odontoglossum grande*. The flowers emit the most delicate odour of Hawthorn. They are, when well grown, full five inches in diameter, delicate in texture, nearly white, with a few slight stains of red on the sepals and petals, and a great convolute lip richly spotted with clear rose, which, it seems, becomes, in the bright natural climate of the species, a rich and brilliant red.

The cultivation of the plant is exactly that of *Lycaste Skinneri*, and similar terrestrial Orchids. This has been well described in the *Journal of the Horticultural Society*, vol. v. p. 14.

“It should be recollected that no plants can exist for any very great length of time without rest, and that rest is induced in a tropical climate by drought, in the same way as low temperature in our own country suspends vital energy: therefore Orchids must be subjected to the usual seasonable changes of rest and activity. Rest is induced by withholding moisture from their roots, and partly from the air, and this state of things may be considered to represent their winter. Spring should be imitated by gradually reviving vital energy by increase of moisture, first to the atmosphere, and afterwards to the roots or soil, accompanied by a proportionate increase of temperature: this period of their growth should be very slow. Summer must be represented by a greater increase of both heat and moisture; partial shade should also be resorted to, to bring the energy of the plant into full force. And lastly, an autumn must be created to bring about maturity, by gradually reducing the quantity of both heat and moisture, until the plants are again brought to a fit state for repose. The first and last stages should be of but short duration, and require caution, otherwise much mischief may be done to the plants.

“By growing Orchids in the mean instead of the maximum of heat and moisture, they will not make such rapid growth; but they will become more robust and healthy, and be less liable to receive injury from sudden transitions, either of heat, drought, or moisture, in the atmosphere.

“The temperature of the house can only with certainty be kept regular by night, particularly in summer; therefore the fire should never raise the heat of the principal house higher than 60°, and about five degrees less should be maintained where the plants are in a less excitable state: but as the days lengthen, so the temperature may rise; yet it should if possible never range higher than 75° by night in summer; it will occasionally, however, be higher in very warm weather, and should be counteracted as much as possible by evaporation and ventilation by night, and by both as well as by shading, by day.”



Trichostema sp. (L.) Nutt.

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[PLATE 12.]

THE MAGNIFICENT MEDINILLA

(MEDINILLA MAGNIFICA.)

An evergreen stove Shrub from JAVA, belonging to the Natural Order of MELASTOMADS.

Specific Character.

THE MAGNIFICENT MEDINILLA.—An evergreen erect bush, perfectly smooth in every part, with compressed 4-winged branches, setose at the nodes. Leaves opposite, leathery, obovate-oblong, cordate, somewhat stem-clasping, suddenly pointed, triple-nerved below the middle, and with pinnate ribs at the base. Panicles terminal, long, pendulous, with whorled branches. Bracts very large, bright rose-colour, in whorls of 4, many-nerved, deciduous. Flowers decandrous.

MEDINILLA MAGNIFICA. — (Sect. *Sarcoplacuntia*) ramis compressis tetrapteris ad nodos setosis, foliis oppositis coriaceis glabris sessilibus obovato-oblongis cordatis subamplexicaulibus cuspidatis infra medium triplinerviis pone basin pinnato-costatis, paniculis terminalibus elongatis pendulis, ramis verticillatis, bracteis maximis coloratis quaternatis multinerviis deciduis, floribus decandris.

Medinilla bracteata of the Gardens, but not of Blume.

THE genus *Medinilla*, founded originally by M. Gaudichaud, upon a shrub from the Marianne Islands, has become known in Gardens by the introduction of the Showy and the Red-leaved species (*M. speciosa* and *erythrophylla*); the former, a plant of striking beauty; the latter, much less remarkable in appearance. These two may be taken as good examples of the genus generally, some of which are among the handsomest shrubs of the Malay Archipelago, while others would be passed by without notice. Many species have been made known by Dr. Blume, and other Dutch naturalists. They seem all to inhabit the islands of Asia within the tropic, and to require a damp forest climate. Blume says that he has seen some of them climbing up the trunks of trees to the height of from 60 to 80 feet. He adds that they have a mucilaginous bark, which, stripped of its epiderm, is employed by the Malays for poultices, in dislocations and tumours, and that the subacid leaves are, in Celebes, boiled with fish.

The species now before us was imported from Java by Messrs. Veitch, and gained one of the large medals of the Horticultural Society, early in the present spring. By some error it was called *Medinilla bracteata*, a name to which it has not the slightest claim; the plant once so called by

Dr. Blume, and now before us, not being even a member of the genus, but having been separated by the learned Dutchman himself as a DACTYLIOTE. (*Museum Bot. Lugd. Bat.*, p. 18.) It is a poor insignificant thing, not worth cultivation. This, on the contrary, is one of the most noble-looking plants in India. Its massive leaves are nearly a foot long, and 4 or 5 inches broad, of a firm leathery texture, and of the richest green. From the ends of the branches hang down panicles, from 15 to 18 inches long, of rich glossy rose-coloured flowers, with purple petals and large many-ribbed bracts of the richest and clearest pink. Of the effect thus produced, the accompanying figure gives a correct, and in no degree exaggerated, illustration; it however only shows the lower part of a panicle—all that the page can be made to contain.

It is strange that so noble a form of vegetation should have escaped the acute eyes of the Dutch botanists; and yet we must conclude that it has done so, for no trace of it appears among the five or six-and-twenty species they have published. It certainly belongs to the section to which Blume gives the name of *Sarcoplacuntia*, well characterised by a short truncate calyx and fleshy placentæ; in fact is very nearly allied to the Showy Medinilla (*M. speciosa*) itself. That such a plant as this should have remained unnoticed in an island so much explored as Java, is one of the best illustrations that could be produced of the inexhaustible richness of vegetation in the Malay forests.

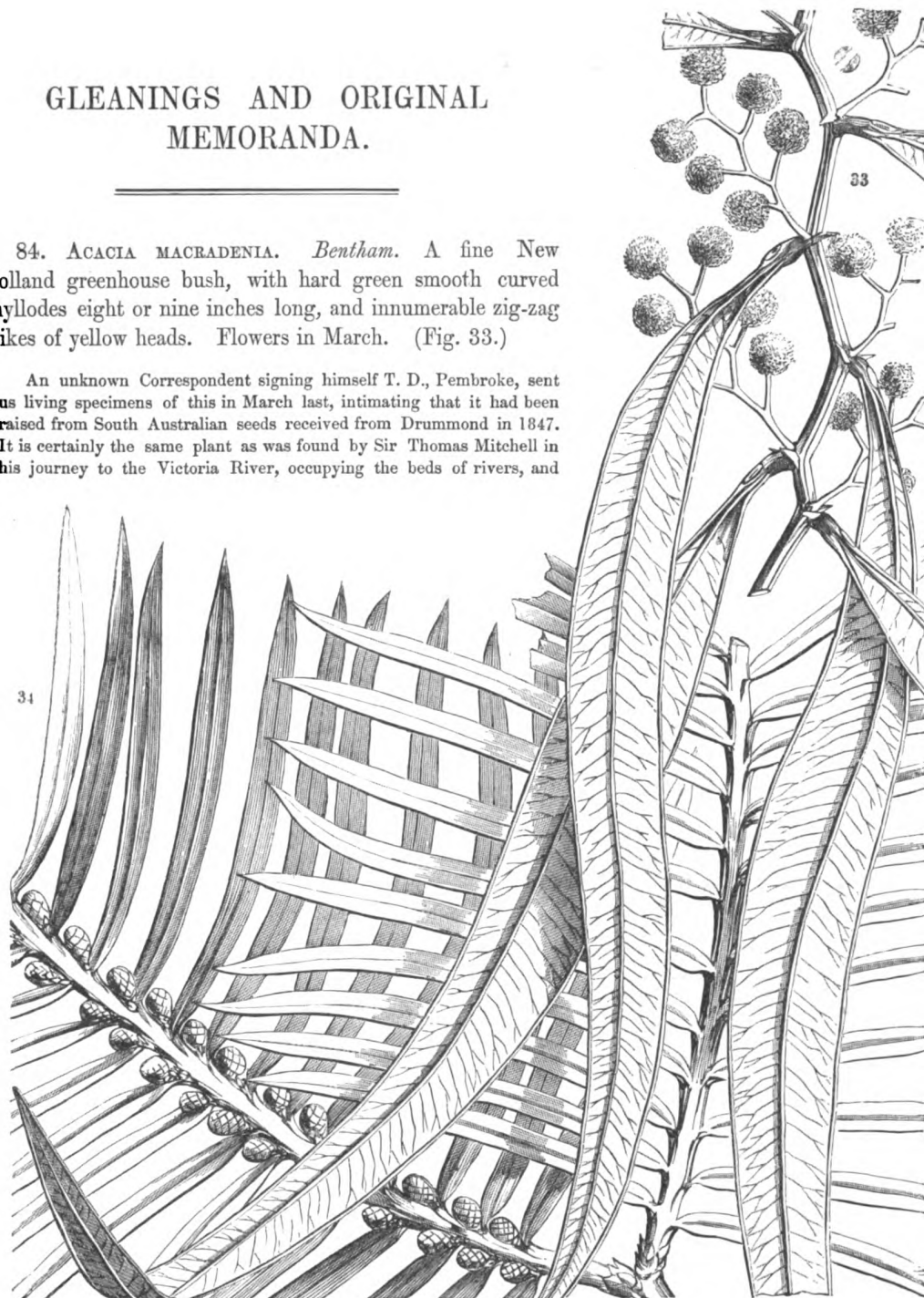
What the true cultivation of this Medinilla should be, can hardly be said to have been ascertained. Messrs. Veitch, we believe, have treated it as a hardy stove or warm green-house plant. According to Dr. Blume the species are mostly mountain plants (*Rumphia*, vol. i. pp. 11. &c.), and Reinwardt places Melastomads generally in such places. Speaking of the forests above 3000 feet in elevation above the sea, the latter author says:—"The singular Pitcher-plant here, hangs down from the lofty branches, and the broad and elegantly divided fronds of a beautiful Fern, the Dipteris, rise upon their slender stems. This elevated situation is more particularly characterised by the different kinds of laurels which here predominate. Java is especially rich in laurels, as well as in figs; these, with some Eugenias and other Myrtaceous plants, with a very large Gardenia, perpetually in flower, cover everywhere the highest spots in the mountains of India, associated with tall *Melastomas*, Rhododendrons, Magnolias filling the air with their fragrant perfume, and several sorts of oak. Intermixed with these, Orchids constantly prevail, and in great variety. It is only where the forest of laurels ceases, and the summit of the mountains becomes narrower and can no longer retain a covering of vegetable mould, when the air becomes more rarefied and colder, at an elevation of more than 7000 feet, that the appearance of the forest trees changes."—(*Journal of the Horticultural Society*, vol. iv. p. 232.)

Hence we may infer that the climate which suits the Pitcher-plant and the Java Rhododendron, will also be that adapted to the Medinilla.

GLEANINGS AND ORIGINAL
MEMORANDA.

84. ACACIA MACRADENIA. *Bentham*. A fine New Holland greenhouse bush, with hard green smooth curved phyllodes eight or nine inches long, and innumerable zig-zag spikes of yellow heads. Flowers in March. (Fig. 33.)

An unknown Correspondent signing himself T. D., Pembroke, sent us living specimens of this in March last, intimating that it had been raised from South Australian seeds received from Drummond in 1847. It is certainly the same plant as was found by Sir Thomas Mitchell in his journey to the Victoria River, occupying the beds of rivers, and



forming bushes ten or twelve feet high. It is very handsome where there is room for it, its long narrow sabre-shaped phyllodes (leaves) having a bright colour and firm texture, and bending downward gracefully from singularly flexuose branches. The inflorescence is similarly zig-zag, much shorter than the leaves, and often forms an entangled mass of branches each of which is terminated by a yellow head about as large as the seed of the Sweet Pea.

85. *CEPHALOTAXUS FORTUNI*. *Hooker*. A fine, and probably hardy coniferous shrub, with long, narrow, deep-green distichous leaves; from the north of China. Introduced by Messrs. Standish of Bagshot. (Fig. 34.)

In the absence of a well-grown plant, little or nothing can be said of this tree, save that it is stated by Mr. Fortune to grow to a height of from 40 to 60 feet. Its branches are probably spreading or drooping, obscurely streaked or furrowed, distichous, pale brown, slender. Leaves quite distichous, alternate or opposite, close together, 3 to 4 inches long, linear, tapering a little at the base, much and gradually acuminate, one-nerved, dark full green above, paler beneath. A plant in the Bagshot Nursery stood in the open air during the last winter, without being in the least injured. As it increases from cuttings as readily as the common yew, and grows freely, we may expect to see this rare tree soon become common.—*Botanical Magazine*, t. 4499.

86. *GALANTHUS PLICATUS*. *Bieberstein*. A charming hardy bulb, from the Caucasus. Flowered in the Garden of the Horticultural Society in March 1850.

This beautiful Snowdrop, although long cultivated in gardens, is hardly known to the public. There appears to be no doubt as to its specific difference from the common species, its leaves being very much broader, and, as it were, plaited, not flat, its flowers being larger, and the green on the petals far more conspicuous. In a horticultural point of view it is a much finer thing than the old Snowdrop, just as hardy, and as easily managed.—*Journ. Hort. Soc.*, Vol. v. p. 138. *With a figure.*

87. *CEREUS TWEEDIEI*. *Hooker*. An erect, round-stemmed, furrowed Cactus, covered with stiff spines, from among which arise handsome curved narrow orange tubular flowers, each almost 3 inches long. From Buenos Ayres by Messrs. Lee and Co. Flowered at Kew, in September, 1849.

About 1 foot to 1½ foot high, and 1 inch in diameter, of a very glaucous green hue, simple, but increasing readily by offsets at the base. The shape is cylindrical, very slightly tapering upwards, numbered with many, about sixteen, moderately deep furrows perfectly straight, the ridges obtuse and even (not tubercled). Spine-tufts on the ridges close together, oval, with brown wool. Spines many in each tuft, four or five stouter than the rest, white, blotched with brown; of the stout ones three or four (half to three-quarters of an inch long) are nearly erect; a solitary stout one together with the other lesser ones, which are white, generally, all point downwards. Flowers rich orange-crimson, numerous, from the side of the stem, 3 inches long, curved upwards, the mouth oblique. Calyx-tube funnel-shaped, the scales remote, subulate, oppressed, lower ones ciliated with white hairs. Petals small, scarcely longer than the teeth of the calyx, acute. Stamens lying against the upper side of the tube, and there much longer than the flower; lower ones scarcely protruded. Anthers deep purple.—*Botanical Magazine*, t. 4498. Will probably be a good breeder.

88. *JUNIPERUS SPHÆRICA*. An evergreen tree from the north of China. Introduced by Messrs. Standish and Noble. (Fig. 35.)

J. sphærico; arborea, foliis omnibus squamæformibus quadrifariis obtusis dorso foveâ circulari notatis, ramulis gracilibus tetragonis obtusis, galbulis sphaericis glaucis breviter pedunculatis.

Found in the north of China by Mr. Fortune, who describes it as a tree 30 to 50 feet in height. The young branches are four-cornered, blunt, and usually more slender than in the accompanying figure. All the leaves are minute, scaly, with a circular pit at their back. The fruit is quite round, about as large as the ball of a pocket pistol. The species differs from *J. chinensis* apparently, in not having any acicular leaves, and very decidedly in the size and form of its fruit, which is twice as large as in that species, and not at all depressed at the end, but very regularly spherical.

89. *QUERCUS INVERSA*. An evergreen Oak, from the north of China. Imported by Messrs. Standish and Noble. (Fig. 36.)

Q. inversa; sempervirens, ramis tomentosis, foliis coriaceis obovatis petiolatis cuspidatis obtusis nunc apice serratis supra glaberrimis subtus glauco-tomentosis, glandibus spicatis obovatis cupulâ brevi tomentosâ squamulosâ multo longioribus.

From specimens of this fine oak sent to Messrs. Standish and Noble by Mr. Fortune, we presume that it forms a tree with the habit of the Evergreen Oak. The leaves are deep green, covered with a short glaucous down on the underside, but quite smooth and shining on the upper; they are always contracted into a short blunt cusp at the point, where they are also sometimes serrated. The cups of the acorns are much like those of the Evergreen Oak, but the acorns are wider at the upper than at the lower end. The male flowers are produced at the ends of the same branches as carry the females, but are much more compactly arranged, forming long downy tails. The inflorescence consists of many such branches produced at the points of the shoots. The female flowers are tolerably regularly sessile in threes.

90. *QUERCUS SCLEROPHYLLA*. An evergreen Oak from the north of China, sent by Mr. Fortune to Messrs. Standish and Noble. (Fig. 37.)

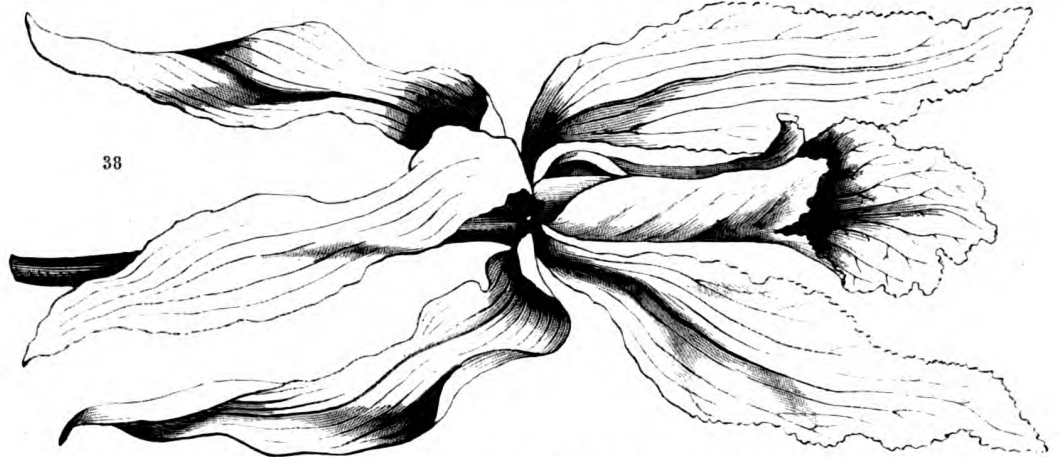
Q. sclerophylla; sempervirens, ramis glabris, foliis petiolatis coriaceis glabris acuminatis obtusis ultra medium grosse serratis supra lævibus subtus glauco-pubescentibus, glandibus spicatis pubescentibus sphericis paulo ultra cupulam protrusis, cupulis tomentosis squamis elevatis quasi tuberculatis.

A much finer oak than the last, with a very peculiar aspect. Some of the leaves are six inches long and nearly three inches broad; their texture is that of a Spanish Chestnut, but thicker; their colour rich bright green on the upper side, and glaucous with fine down on



the under side. The spikes of the fruit are 3 or 4 inches long, very compact, with small downy acorns almost enclosed within very tomentose cups, the scales of which are large, distinct, and so much elevated as almost to give the cups the appearance of being covered with soft warts. A very fine thing.

91. *LÆLIA GRANDIS*. An Orchidaceous Epiphyte, with very large nankeen-coloured flowers. A native of Bahia. Flowered in May with M. Morel, of Paris. (Fig. 38.)



L. grandis; caule clavato monophyllo, folio coriaceo basi latius pedunculo bifloro basi spathaceo longiore, floribus subhorizontalibus, sepalis lanceolatis reflexis, petalis late-lanceolatis denticulato-crispis convexis labello parallelis et paulo longioribus, labello membranaceo venoso nullo undulato trilobo: laciniis lateralibus circa columnam convolutis et multo longioribus.

The accompanying Figure, the natural size, was taken from a flower received from Mons. Morel, along with a sketch of the leaf and stem. It is a plant with all the habit of a *Cattleya*, but the pollen-masses are 8, not 4. The stem appears to narrow to the base, as in *Cattleya maxima*; the leaf is represented as being firm, stiff, and rather broader at the base than the point. The flowers grow in pairs, on a peduncle issuing from a spathe, as in the species just named. The sepals and petals are nankeen-coloured; the lip white, washed with rose at the base in the inside, with purple veins, and a pure white border. The nearest affinity of this curious thing is with the *Lælias Perrinii* et *majalis*.

92. *CYANOTIS VITTATA*. *Lindley*. (aliàs *Tradescantia zebrina*, of *Gardens*.) A trailing Mexican stove perennial belonging to the Natural Order of Spiderworts (*Commelinaceæ*.)

It has handsome striped purple and grey leaves; but its flowers are insignificant. The stems, which are much branched, lie prostrate, or hang down from the shelf on which the plant is placed, and are of a deep rich purple; the leaves have the same colour, but are striped with a greenish grey, and when fresh are exceedingly pretty; on which account the plant is a favourite for covering rough unsightly places in hothouses. The flowers are violet-coloured; they appear for a long time, one after the other, from within a couple of terminal bracts, or spathes, of which one is shaped like the ordinary leaves, except being sessile; the other is much shorter, and boat-shaped. The stamens bear a tuft of jointed hairs in the middle, protrude beyond the tube of the corolla; the anthers are transversely linear, or almost crescent-shaped, with a small cell on each horn.—*Journ. Hort. Soc.*, Vol v. p. 139.

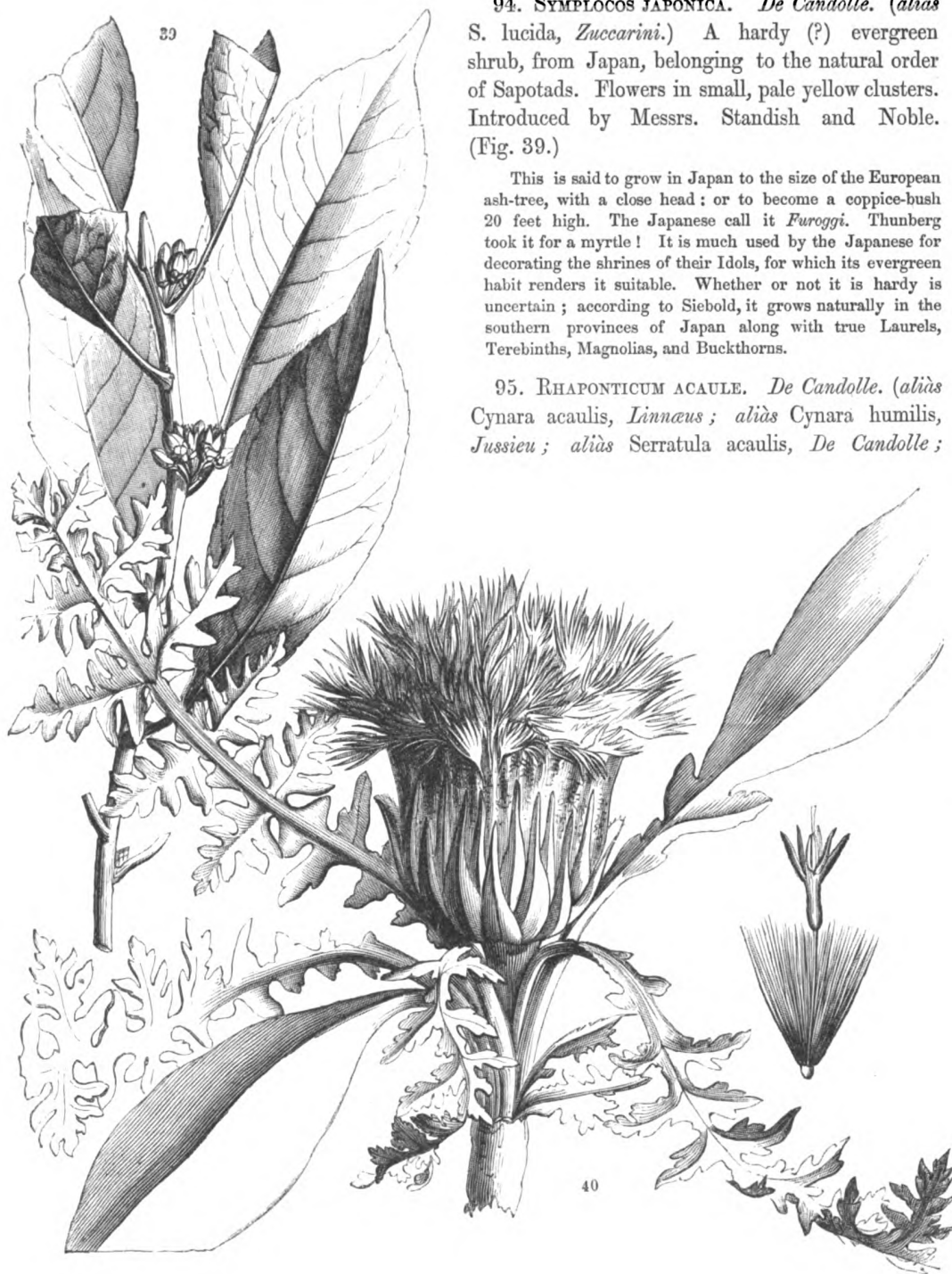
93. *CUPANIA CUNNINGHAMI*. *Hooker*. (aliàs *Stadtmannea australis*, *Cunn*.) A stove tree, belonging to the Natural order of Soapworts (*Sapindaceæ*), with panicles of small green flowers. Introduced, in 1825, to the Royal Botanic Gardens, Kew, from Australia. Flowers in the spring.

Most visitors to the great stove of the Royal Gardens, Kew, are attracted to a lofty shrub or tree among the Palms, exceeding many of them in height, with large pinnated leaves, and the young branches clothed with rusty down; it flowers in the spring, and is succeeded by large clusters of orange-coloured downy fruit. This is the plant here mentioned. It is a native of New Holland, on the north-east coast, near the tropic, and was discovered by Allan Cunningham, who speaks of it in his notes as a "tree 30—40 feet high, found in dark woods at Five Islands district, and on the banks of Hastings at Port Macquarrie, and Brisbane in Moreton Bay." It is a noble plant, with handsome foliage and fruit, but rather insignificant flowers, and of too lofty growth for ordinary cultivation.—*Botanical Magazine*, t. 4470.

94. *SYMPLOCOS JAPONICA*. *De Candolle*. (aliàs *S. lucida*, *Zuccarini*.) A hardy (?) evergreen shrub, from Japan, belonging to the natural order of Sapotads. Flowers in small, pale yellow clusters. Introduced by Messrs. Standish and Noble. (Fig. 39.)

This is said to grow in Japan to the size of the European ash-tree, with a close head; or to become a coppice-bush 20 feet high. The Japanese call it *Furoggi*. Thunberg took it for a myrtle! It is much used by the Japanese for decorating the shrines of their Idols, for which its evergreen habit renders it suitable. Whether or not it is hardy is uncertain; according to Siebold, it grows naturally in the southern provinces of Japan along with true Laurels, Terebinths, Magnolias, and Buckthorns.

95. *RHAPONTICUM ACAULE*. *De Candolle*. (aliàs *Cynara acaulis*, *Linnaeus*; aliàs *Cynara humilis*, *Jussieu*; aliàs *Serratula acaulis*, *De Candolle*;



aliàs Cestrinus carthamoides, Cassini.) A fragrant tap-rooted perennial; native of Barbary, belonging to the Cynaraceous division of Composites, and said to have been introduced in the year 1799; now lost. (Fig. 40.)

The author of a Diary of a Tour in Barbary, as quoted in the *Gardener's Chronicle*, speaks thus of the present plant:—"The air was filled with the aroma of a multitude of TOFFS, which the Bedouin children had gathered for us. I know no European flower which I could put in comparison, as regards odour, with this seemingly insignificant Thistle; and here in Tunis, where kind Nature seems to have created it in such abundance, in order to overpower the pestiferous exhalations of the town, I have become too fond of it not to say a few words about it. One or two days after our arrival in Tunis, F— brought me a very ugly flower, a sort of vegetable polypus, as it were, which had neither leaves nor stalk, nor, as I supposed, smell. For want of a stalk it was stuck on the end of a small twig. Almost offended at the imputation against my taste, implied by F—'s offering me so ugly a thing, I paid no attention to his present, but let it lie on the chimney-piece. Often, however, as I passed the spot I perceived a delicious odour, and in vain inquired where were the concealed beds of Violets or Mignonette from which it proceeded. Neither F— nor T— could give me any information on the matter. The perfume, meanwhile, grew stronger and stronger every day, and with it grew my amazement at the phenomenon. It was my despised Thistle which diffused its incomparable fragrance over the whole room. I found it limp and faded lying under a heap of newspapers; I took it up, and pulled out the pointed twig that had been thrust into its tender heart, entreated its forgiveness for having so mistaken its worth, laid it into a saucer of water, and behold, it did forgive me; for its shrivelled florets expanded themselves again, and sent forth their fragrance more abundantly than ever. It is now the season when they are in bloom, and they stretch their heads by hundreds out of the earth; for they grow so close to the ground that one must actually dig them out, to get the flower entire. The exquisite perfume of this Thistle is universally acknowledged, for many fragrant essences are prepared from it." This is evidently the plant described by Desfontaines, under the name of *Cynara acaulis*, and we reproduce his figure of it, in the hope that it will lead to its re-introduction. He says that it is called *TAFGA*, that its heads are yellow, that its flowers smell like the Farnese Acacia, the sweetest of Italian plants, that its root is eatable, and that the Moors employ the plant to keep moths off their clothes (*ad vermes vestimentis fugandos*).

96. *CALLIANDRA BREVIPES. Benth.* A stove shrub from Brazil, with clusters of pink mimosa-like flowers, appearing in October. Belongs to the Leguminous Order. Sent to Kew by M. Van Houtte

A branching shrub, 4 to 5 feet high. Leaves double, each portion oblong, very closely pinnated with small linear-oblong, acute leaflets, and these generally drooping. Heads of flowers on short peduncles from the axils of the leaves, few in each head. Corolla, yellow, four-cleft. Stamens six times as long as the corolla, very slender, pale red or rose-colour. A pretty shrub which grows luxuriantly in the warm stove, if potted in light loam mixed with leaf mould. Being a dry, fibrous-rooted plant, it requires to be freely supplied with water. With a little attention to tying up and pruning, it may be made a compact, handsome bush. When in flower it is highly ornamental, its bright red tufts contrasting strongly with the delicate green foliage. It is readily increased by cuttings, which should be planted under a bell-glass and placed in bottom heat.—*Botanical Magazine*, t. 4500.

97. *GALPHIMIA GLAUCA. Cavanilles.* A Mexican hothouse Malpighiad, with handsome glaucous foliage, and an abundance of gay yellow blossoms. Introduced by the Horticultural Society. Flowers in the autumn and early winter.

A beautiful shrub, easily kept in the form of a bush. The leaves are a deep bluish green, ovate, obtuse, glaucous on the underside, and furnished with a pair of glands on the edge near the base. The flowers, which are golden yellow, appear in close terminal racemes, between 3 and 4 inches long in strong plants. Each has five distinct petals, with almost exactly the form of a trowel. Grows freely in a mixture of loam and sandy peat, and is easily increased by cuttings of the half-ripened young shoots. It requires to be kept rather dry for a few months, and afterwards, during the growing season, to be freely supplied with moisture both to the roots and in the atmosphere.—*Journ. Hort. Soc.*, Vol. v. p. 139. *With a figure.*

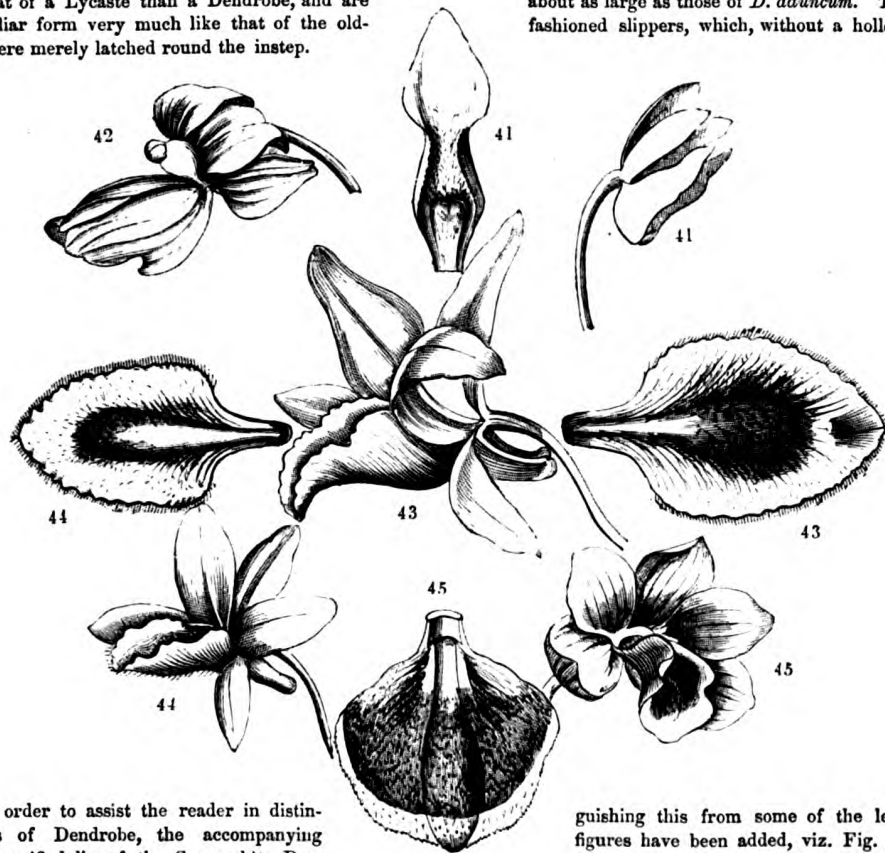
98. *TERNSTRÖMIA SYLVATICA. Chamisso and Schlechtendahl.* An evergreen Mexican greenhouse shrub, of no beauty, with greenish sweet-scented blossoms. Belongs to the Natural Order of Theads. Flowered at the Apothecaries' Garden, Chelsea, in February.

Not unlike a Sweet Bay, but more spreading. Leaves narrow, oblong, bluntly acuminate, deep green on the upper, very pale on the under side, perfectly smooth. The flowers grow singly on short curved stalks, and are quite hidden among the leaves. They are of the pale, dull, greenish purple of *Magnolia fuscata*, and quite destitute of beauty. When fresh gathered they have a very agreeable hawthorn-like scent.—*Journ. Hort. Soc.*, Vol. v. p. 141.

99. *DENDROBIUM CREPIDATUM*. A beautiful species from the Indian Archipelago, with slender erect stems, and pink white and yellow flowers. Blossomed with R. S. Holford, Esq., March 1850. (Fig. 45.)

D. crepidatum; caulibus teretibus erectis, foliis . . . , floribus geminis, sepalis petalisque oblongis obtusis firmis, labello oblongo integro subsinuato obtuso lateribus erectis intus levissimè pubescente basi utrinque plicato-venoso, cornu brevi obtuso.

Although we have an imperfect knowledge of this extremely pretty plant, we are able to state that it is perfectly distinct from all others. It first came to us in a letter from Mr. Bassett, Gardener to R. S. Holford, Esq., and afterwards the whole plant was transmitted by that gentleman's orders. The leaves however were absent, and the flowers much faded. It has slender erect stems; and the flowers, which are white, tipped with delicate pink, but deep yellow in the middle of the lip, appear in pairs as in *D. Pierardi* and its allies. They have a very firm texture, more about as large as those of *D. aduncum*. The lip has a peculiar form very much like that of the old-fashioned slippers, which, without a hollow for the foot, were merely latched round the instep.



In order to assist the reader in distinguishing this from some of the less known species of Dendrobe, the accompanying figures have been added, viz. Fig. 41, flower and magnified lip of the Snow-white Dendrobe (*D. candidum*, Lindl. in Bot. Reg. 1838, misc. no. 54); Fig. 42, a flower of the Revolute Dendrobe (*D. revolutum*, Lindl. in Bot. Reg. 1840, misc. 110); Fig. 43, Flower and magnified lip of the Green-centred Dendrobe (*D. mesochlorum*, Lindl. in Bot. Reg. 1847, t. 36); Fig. 44, Flower and magnified lip of the Egerton Dendrobe, (*D. Egertonia*, Lindl. in Bot. Reg. 1847, t. 36)

guishing this from some of the less known figures have been added, viz. Fig. 41, flower drobe (*D. candidum*, Lindl. in Bot. Reg. 1838, misc. no. 54); Fig. 42, a flower of the Revolute Dendrobe (*D. revolutum*, Lindl. in Bot. Reg. 1840, misc. 110); Fig. 43, Flower and magnified lip of the Green-centred Dendrobe (*D. mesochlorum*, Lindl. in Bot. Reg. 1847, t. 36); Fig. 44, Flower and magnified lip of the Egerton Dendrobe, (*D. Egertonia*, Lindl. in Bot. Reg. 1847, t. 36)

100. *BRACHYSEMA APHYLLUM*. *Hooker*. An ugly leguminous bush from Swan River, with winged leafless stems, and crimson flowers, not in cultivation but figured from New Holland materials. —*Bot. Mag.*, t. 4481.

101. *ISOLOMA BREVIFLORA*. (*aliàs* *Gesnera breviflora*, *Lindley*; *aliàs* *Gesneria Seemanni*, *Hooker*.)

A fine hot-house Gesneraceous plant, with long whorled shaggy racemes of scarlet spotted flowers. Native of Panama. Blossoms in October at Kew.

A very handsome, copious-flowering, and bright coloured species, approaching nearest to *G. longifolia*, but differing much in the form of the leaves and in the limb of the corolla. It was discovered by Mr. Seeman, at Panama. Stem two feet or more high, simple, rather stout below, nearly terete, villous with spreading hairs, as is almost every part of the plant. Leaves opposite and ternate, the lower ones large, broadly ovate, or sub-ovate, on rather long petioles, coarsely serrate, acute, rather than acuminate; upper ones gradually smaller and more tapering to a point, all obtuse at the base. From the whorls of the upper floral leaves, the hairy peduncles appear fasciculato-verticillate, longer than the petioles, and the uppermost ones longer even than the leaves, single-flowered. Calyx shallow, cup-shaped, with five nearly regular, acute, spreading lobes. Corolla very villous, bright brick red, a little inclined to orange. Tube nearly cylindrical, short, tapering, orange at the base; the limb of five, nearly equal, rounded segments, spotted with deeper red, and clothed with glandular hairs. Ovary roundish ovate, very villous, having at the base four conspicuous, hypogynous, broad glands, of which one is bifid. The rhizome of Gesneraceous plants is either in the form of a thick, fleshy round tuber, or consists of a number of fleshy scales, compactly seated on an elongated axis, and, therefore, analogous to an underground surculose stem. The rhizome of this species belongs to the latter form, resembling that of *Gloxinia* and *Achimenes*, and requiring the same kind of treatment. It will thrive in a mixture of light loam and leaf mould; and, in order to start the roots, they should be placed in bottom-heat in a warm stove, taking care not to give much water till they have made some progress in growth. If, during the summer, they happen to be placed in a position fully exposed to the south, they will require to be shaded during the middle of the day.—*Botanical Magazine*, t. 4504. The plant here spoken of under the name of *Gesneria Seemanni*, is only a well-grown specimen of the *Gesneria breviflora*, described in the *Journal of the Horticultural Society*, vol. iii., p. 165, (April, 1848.) It is one of the *Isolomes* which M. Decaisne has, with much reason, elevated to the rank of a genus, as had Regel, before him, under the name of *Kohleria*. Other *Isolomes*, are *G. longifolia*, *Bot. Reg.*, t. 40, 1842; *G. Hondensis*, *Bot. Mag.*, t. 4217; *G. trifolia*, *ib.*, t. 4342; *G. mollis*; *G. lasiantha*, Zuccarini; *G. tubiflora*, Cav.; and, perhaps, *G. verticillata*, Cav.; as M. Decaisne has pointed out in the *Revue Horticole*, 3rd. Ser., vol. ii., p. 465.

102. CLERODENDRON BETHUNEANUM. *Lowe*. A fine stove Verbenaceous shrub, with the appearance of *C. Kämpferi*. Flowers crimson, in large panicles, produced in September, 1849, with Lucombe and Co. A native of Borneo.

Each flower of this plant is exceedingly beautiful in itself; peduncles, pedicels, bracts, calyx, corolla, the very long and graceful stamens, all are of the deepest crimson, while the two side lobes of the corolla have a purple spot near the base, and the upper lobe has a much larger white spot. The species has been named after Capt. Bethune, R.N., who brought it and several other fine plants from Borneo. When its flowering season is past, it does not lose all its charms, for the crimson bracts and calyces remain, and the latter contain each a four-seeded berry of the richest blue colour. Although in its native country attaining a height of ten feet, it is one of those plants that flower readily when but of small size, and confined in a pot.—*Botanical Magazine*, t. 4485.

103. TABERNÆMONTANA LONGIFLORA. *Bentham*. A stove shrub of the order of Dogbanes (Apocynaceæ) with long white fragrant flowers and a green tube. Blossomed with Lucombe and Co. A native of Sierra Leone.

The shrub has close-placed, ample dark green foliage, and remarkably large white or pale cream-coloured flowers, diffusing a delicious aromatic fragrance, resembling that of cloves. Dr. Vogel, who found the plant at Sierra Leone, speaks of the shrub as very handsome, with the aspect of a Citrus, and yielding a milky juice. Leaves elliptical, large, with a short point, and a short but dilated petiole, the veins diverging almost horizontally from the mid-rib. Peduncles erect, stout, each bearing about three large white flowers. Calyx lobes broadly oval, obtuse: at their base is a circle of minute glandular scales. Corolla with the tube twisted, 4 inches in length, swollen below the middle; limb of five waved or reflexed ligulate lobes. This shrub requires a warm stove. It will thrive in a mixture of loam and peat soil, if placed so as to have the benefit of bottom-heat, and watered and syringed freely during the summer; but care should be taken that at no time (especially during its season of rest) the mould becomes saturated, for the soft and slightly succulent roots are apt to suffer if kept in too wet a state, while the plant indicates a cessation of growth.—*Botanical Magazine*, t. 4484.

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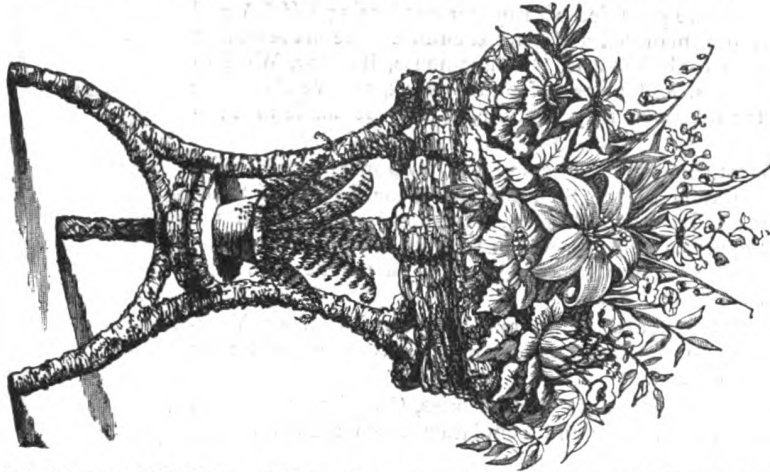
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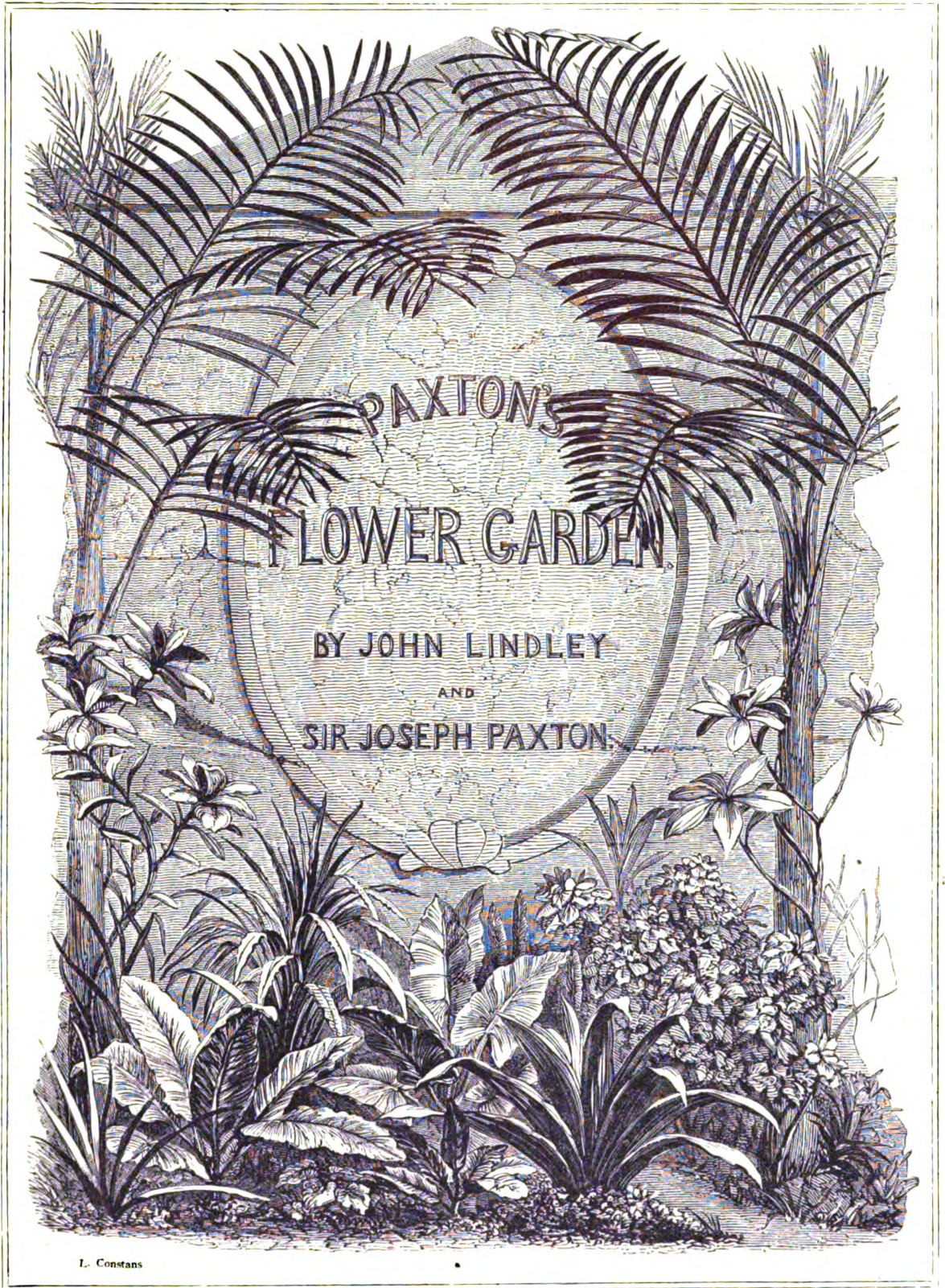
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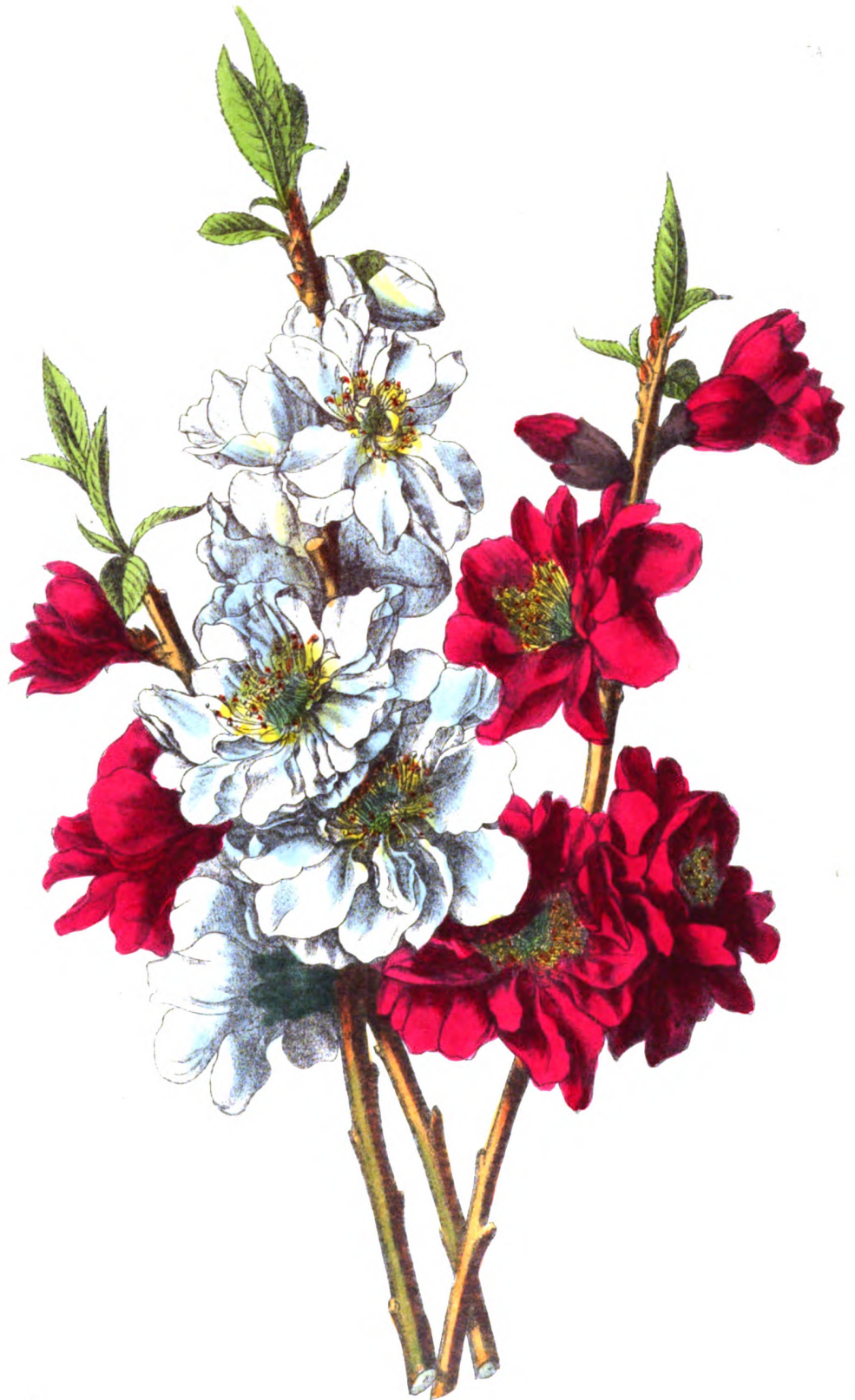
A limited number of ADVERTISEMENTS will be inserted on the Wrapper, for which early application is necessary, as a portion of the space has already been taken up.

CONTENTS OF NO.

COLOURED PLATES.

Plate
13 DOUBLE CHINESE PEACH TREES (*Amygdalus Persica flore semipleno*)
14 THE TWO-PETALLED BEGONIA (*Begonia dipetala*)
15 THE CERVANTES ODONTOGLOSSUM (*Odontoglossum Cervantesii*)

Roupellia grata (illustrated)
Pentstemon azureus
Begonia cinnabarina
Uropedium lindeni
Warrea bidentata (illustrated)
Warrea Wailesiana (illustrated)
Warrea discolor (illustrated)
Ceanothus papillosus (illustrated)
Ceanothus rigidus (illustrated)
Dipteracanthus spectabilis (illus.)
Thiebaudia scabriuscula (illus.)
Gynoxys fragrans (illustrated)
Hoya coriacea (illustrated)
Hoya purpureo-fusca (illustrated)
Aotus cordifolius
Tropæolum Beuthii
Centradenia floribunda
Achimenes Ghiesbreghtii
Oncidium nigratum
Oncidium phymatochilum
Cuphea ignea
Audibertia polystachya
Fuchsia venusta (illustrated)
Berberis Wallichiana (illustrated)
Dodecatheon integrifolium
Ixora laxiflora
Espeletia argentea
Arbutus xalapensis



Camellia sasanqua Lindl.

Painted by C. F. Zettlitz London

[PLATE 13.]

DOUBLE CHINESE PEACH TREES.

(AMYGDALUS PERSICA; FLORE SEMIPLENO.)

Hardy shrubs from CHINA, with the habit of the Common Peach.

THE Chinese and Japanese have long been known to possess several fine double varieties of the common Peach-tree. Such plants appear in their rude drawings, among their embroidery, and upon their paper hangings. Travellers talk of the exquisite beauty of these things when tortured into dwarfness. They are probably intended by Kæmpfer under the name of *Prunus flore rubro*, and *Prunus flore pleno*, of which last he says: "This is cultivated because of the beauty and abundance of its flowers. The older and more distorted or deformed it is, the more is it prized." Thunberg speaks also of a single white and a double red variety, adding that the Peach is cultivated everywhere in gardens, because of the *beauty of its flowers*.

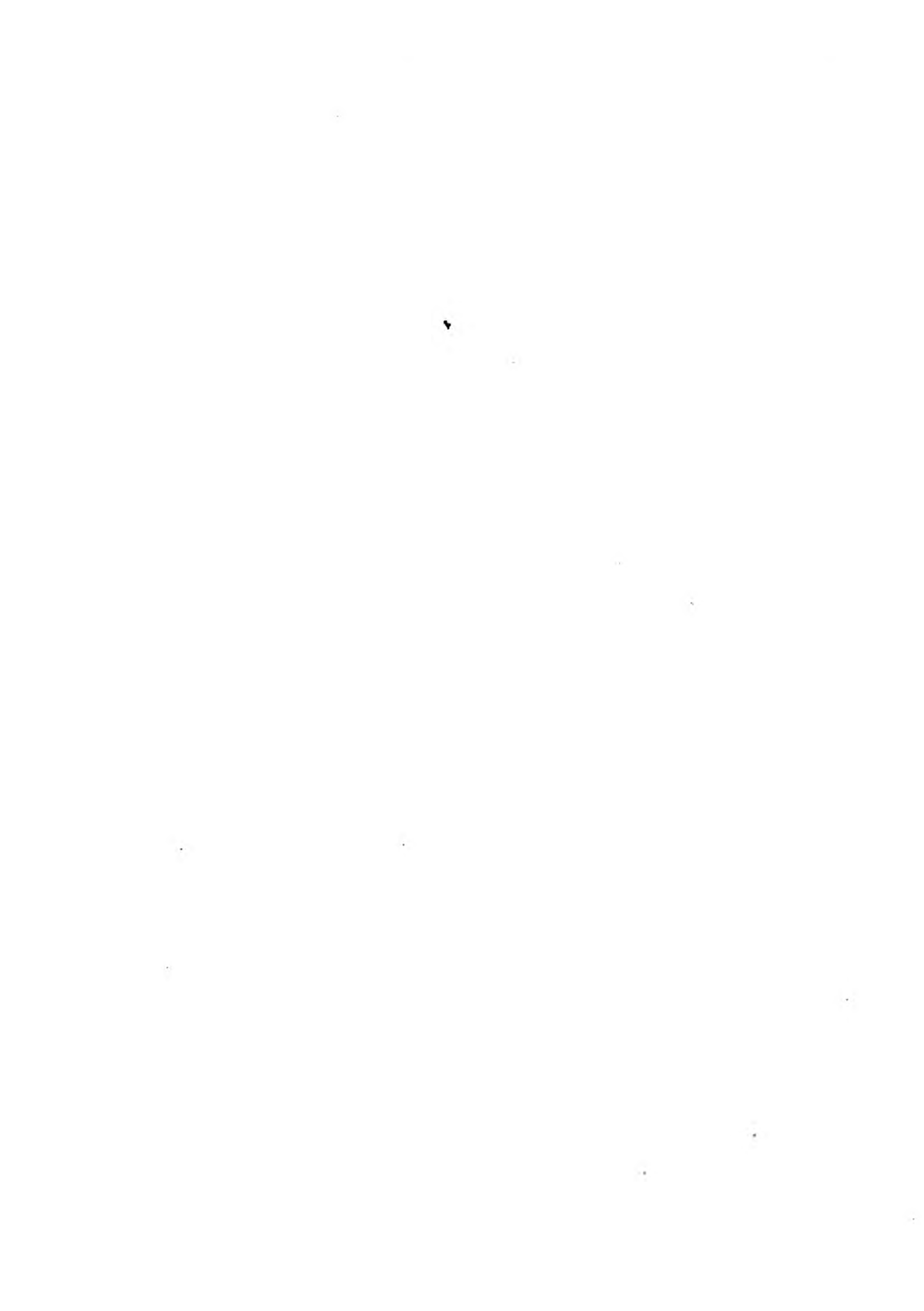
Among the valuable and authentic Chinese drawings in the possession of the Horticultural Society, no doubt the finest collection in Europe, the following varieties may be readily distinguished:—

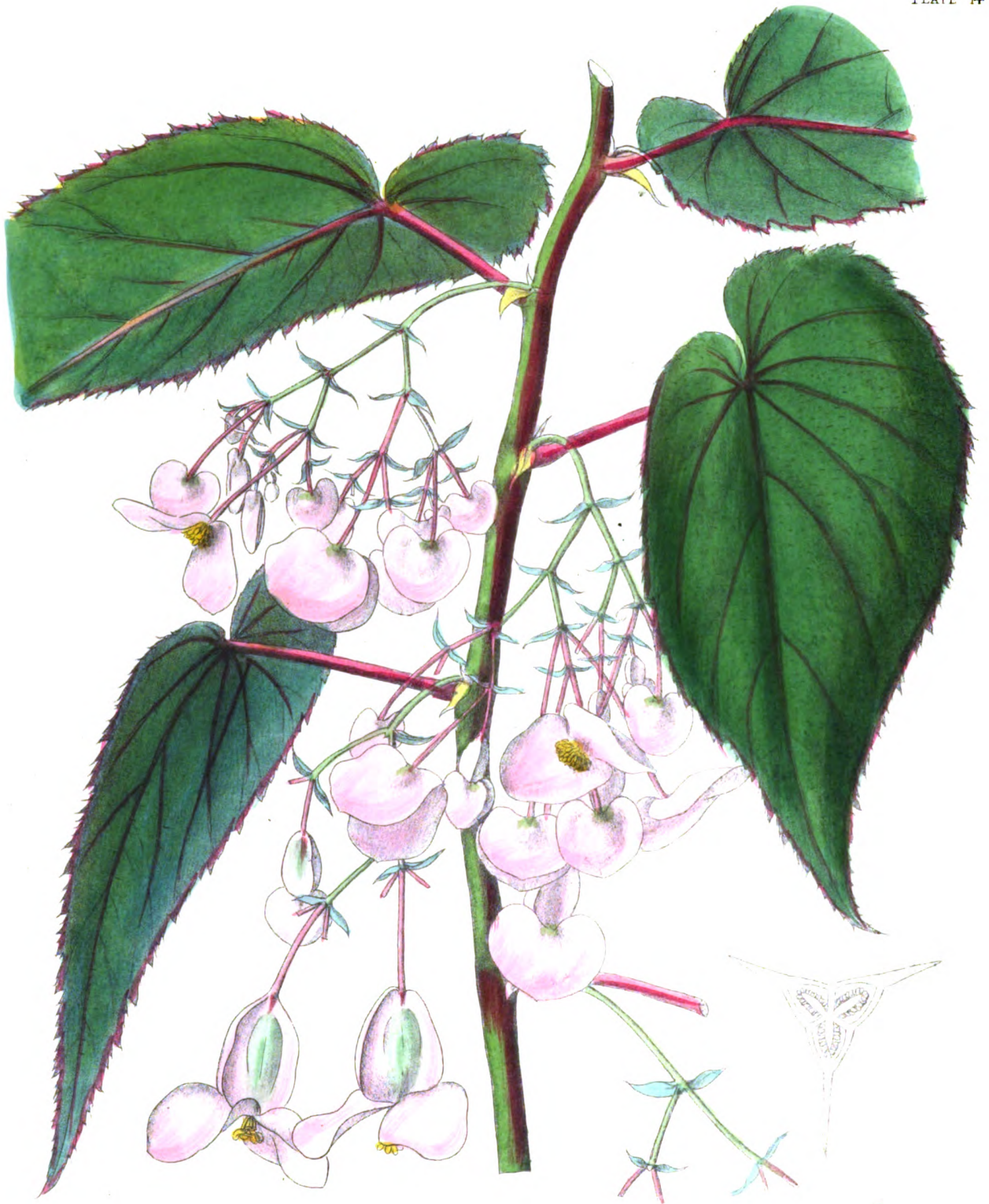
1. Large semi-double Crimson; with flowers as large as a Sasanqua Camellia; very handsome, petals acute.
2. Large semi-double Rose; like the first, but the colour not deeper than that of a China Rose.
3. Large semi-double Red; with flowers as large and deep red as No. 1, but with blunt petals, somewhat irregularly lobed.
4. Small semi-double Red; like the next, but of a deep rich rose colour; very pretty.
5. Small semi-double White, with very round petals, not much longer than the stamens.

When Mr. Fortune was sent to China by the Horticultural Society, he was particularly instructed to procure these things; and the result has been the acquisition of the two beautiful varieties now represented; namely, a SEMI-DOUBLE CRIMSON, which is probably the first of the foregoing list, and a SEMI-DOUBLE WHITE, which is not found there. These have now flowered in the Garden of the Society, and prove to be great acquisitions. They have, in all respects, the habit of the common Peach tree, except that they are more excitable, in which respect they approach the Almond; and consequently they are better suited for forcing or for flowering under glass, than in the open air; because, although hardy, they suffer from wet cold nights, which brown their flowers and ruin their

gay appearance. It is not improbable, however, that seedlings may be in time produced from them in which this precociousness will disappear; for, being semi-double, it is to be expected that they will occasionally ripen fruit.

That semi-double Peaches will fruit has been pointed out by Monsieur Jacques, in the Journal of the Horticultural Society of Paris; and this writer adds the curious fact that the seedlings come true from seed. His experiment is thus detailed: "In the autumn of 1845 I put in sand twelve stones of double Peach trees, and I planted them in March, 1846. By the end of May five only came up, and by the end of the year were from 16 to 18 inches high. In the spring of the following year I pinched off some of the lower branches, and the plants continued to grow at the same rate. Political events in the beginning of 1848 prevented my transplanting them; they, therefore, went on growing in the seed-bed. In the course of that year they became a yard and half and two yards high, and were pretty well covered with branches from top to bottom. On the 5th of April, 1849, four out of these five plants were covered with flowers all along the branches, and at almost every bud; and the whole of the flowers appear to be the same as those of the common budded double Peach trees. Another interesting fact is, that this result had not to be waited for, for these shrubs were in full flower by the time they were three years old."





L. Canadensis, Pursh & Zino

[PLATE 14.]

THE TWO-PETALLED BEGONIA.

(BEGONIA DIPETALA.)

A hothouse herbaceous plant from the EAST INDIES, belonging to the order of BEGONIADS.

Specific Character.

TWO-PETALLED BEGONIA.—Single-stemmed, erect. Stem and petioles quite smooth. Leaves obliquely cordate, acuminate, doubly serrated, ciliated with soft spines, hairy upon the upper side, nearly smooth on the under; not spotted. Flowers in loose few-flowered pendulous cymes. Petals 2, roundish, heart-shaped. Wings of fruit rounded, nearly equal.

BEGONIA DIPETALA.—Simplicicaulis, erecta, caule petiolisque glabris, foliis oblique cordatis acuminatis duplicato-spinuloso-serratis supra pilosis immaculatis subtus glabris, cymis paucifloris laxis pendulis, petalis 2 subrotundis cordatis, capsulæ alis rotundatis subæqualibus.

Begonia dipetala : *Graham in Botanical Magazine*, t. 2849. *Loddiges' Botanical Cabinet*, t. 1730.

THE genus *Begonia* is now taking in gardens the place which it deserves, for it is certainly one of the richest in brilliant colours, or variety of form; and in the hands of good managers it is one of the most easily cultivated of all known genera. The blossoms too appear for the most part during the winter months, and keep well when cut for the decoration of sitting rooms.

But it must be confessed that among the many species now in cultivation, a large number are very incorrectly named, so that the whole business of arranging the genus, and reducing it to order, has still to be undertaken. The first step to a proper arrangement is the determination of what really constitutes a *Begonia*, for the genus has now become almost as full of diverse forms as the old Linnæan *Orchis*. As a first step to this it appears necessary to take into account the placentation, limiting the name *Begonia* to those, which, like that before us, have simple placentæ, and putting aside those with double placentæ under the separate genus *Diploclinium*. (*See Vegetable Kingdom*, p. 319.)

Among the species which will have to be referred to *Begonia* proper, if it is thus limited, is the present, which, although long since introduced, is by no means so well known, or so well figured as it deserves to be. The original figure in the *Botanical Magazine* does it little justice, and represents its leaves as being covered with the grey blotches which are so striking in some other species. *Loddiges*

says that these blotches come only in young plants, and disappear on the old ones. But we have never been able to find them at all in the two-petalled Begonia; on the contrary, the foliage has always that peculiar even tint represented in the accompanying plate. In fact the leaves are very nearly the same as in the pimpled Begonia (*B. papillosa*: Graham in Bot. Mag. t. 2846*), which differs in little except the leaves having shorter and hairy petioles, and in there being four petals instead of two.

The native country of this species is said to be Bombay; but we have seen no wild specimens of the plant. In gardens it flowers all the year round, and must be regarded as one of the most delicate and beautiful.

The spots on the leaves of some Begonias, and which have been said to exist here also, are caused by the presence of a stratum of air beneath the epiderm or skin; where the spots are missing, the green cells of the parenchym grow to the ends of those of the epiderm, no air intervening. When examined with the microscope the cells of the colourless skin look exactly like empty honeycomb placed on the surface of the leaf, while that part of the skin which is green has no such appearance. If the spotted leaves are boiled, the spots swell up by the distension of the air beneath them, and then look exactly like brown blisters, the green being changed to brown by the act of boiling. This would therefore seem to be an organic peculiarity of a very different degree of importance from mere peculiarity of colour, and one not likely to disappear. The history of the structure and its use is unknown. It is remarkable that it occurs only on the upper side of the leaves of Begonias, where there are no breathing pores (stomates), and never on the under side, whose stomates are large, active and abundant.

* This is a very different plant from *B. papillosa* of the Botanical Register.





[PLATE 15.]

THE CERVANTES ODONTOGLOT.

(ODONTOGLOSSUM CERVANTESII.)

A Greenhouse Orchid, from MEXICO.

Specific Character.

THE CERVANTES ODONTOGLOT.—Pseudobulbs ovate, angular. Leaves solitary, oblong, narrowed into a channelled footstalk. Scape few-flowered. Bracts and sheaths membranous, acute, equitant, long. Sepals membranous, oblong-lanceolate, acute. Petals broader, somewhat unguiculate. Lip slightly cordate, ovate, acute, with a fleshy, cup-shaped, downy stalk, having in front a double tooth, and in advance of that a pair of long hairy processes. Column downy, with rounded ears.

ODONTOGLOSSUM CERVANTESII; pseudobulbis ovatis angulatis, foliis solitariis oblongis in petiolum canaliculatum angustatis, scapo paucifloro, bracteis vaginisque membranaceis acutissimis equitantibus elongatis, sepalis membranaceis oblongo-lanceolatis acutis, petalis latioribus subunguiculatis acutis, labello subcordato-ovato acuto unguiculato, ungue carnoso cyathiformi pubescente anticæ bidentato medio tuberculato processibus 2 elongatis pilosis ante cyathum, columnæ pubescentis auriculis rotundatis.

Odontoglossum Cervantesii, La Llave and Lezarza, Orch. Mex. 2, 34; Botanical Register, 1845, t. 36.

THERE is probably not a group of Orchids the species of which are more generally beautiful than the white-lipped Odontoglots, of which this is one. They all agree in having the same habit, the same large, semi-transparent flowers, the same long membranous bracts, and the same delicacy of tint, varied by blotches of deep purple, or brown, or cinnamon.

Of these one of the rarest is the subject of the present plate, of which we received a specimen from Mr. Loddiges in the spring of this year. Its natural locality is among the mountains in the west of Mexico, whence we believe it was first brought by the late Mr. Barker's collector. In general it has a pale tinge of pink; when wild it is said to be snow-white; but in the state now represented it had gained a very distinct rose-colour, which greatly augmented its beauty.

In many respects it is nearly related to the membranous Odontoglot (*O. membranaceum*), from which it differs in the following particulars: its flowers are more pink, and rather smaller, and the

lip is by no means spotted at the base; its petals are much more acute; its lip is very slightly heart-shaped, and quite acute at the point; the two front teeth of the lip are very much longer and more hairy; and the concavity at the base of the lip has a much larger central tubercle.

In addition to those two species the gardens now contain the following, which approach them very nearly, and constitute the nucleus of the white-lipped group, viz.:—

O. maxillare. Flowers white; the base of the sepals, petals, and lip equally stained with crimson, and a very large yellow appendage.

O. rubescens. Flowers lilac; the sepals narrow, and spotted with crimson all over; the petals broad, and a little spotted near the base; the lip with no spots at all.

O. Rossii (aliàs *O. Ehrenbergii*; aliàs *O. acuminatum*). Flowers not half as large as the last; sepals green, spotted with crimson; petals and lip pure white, the former only spotted with crimson at the base.

O. stellatum. Flowers much smaller than in the last; both sepals and petals green and spotted; lip lilac in the middle, white at the edge, and strongly toothed.

There are also some other species of the groups still to introduce from the west of Mexico, which are even finer than those now enumerated.

It does not much signify in what kind of material this is grown, provided only that it be of such a nature as to detain damp, while water passes off freely and air replaces it. Fibrous peat and decayed leaves are among the best substances; the management of such plants is more important. On this head Mr. Gordon's directions are among the best we have.

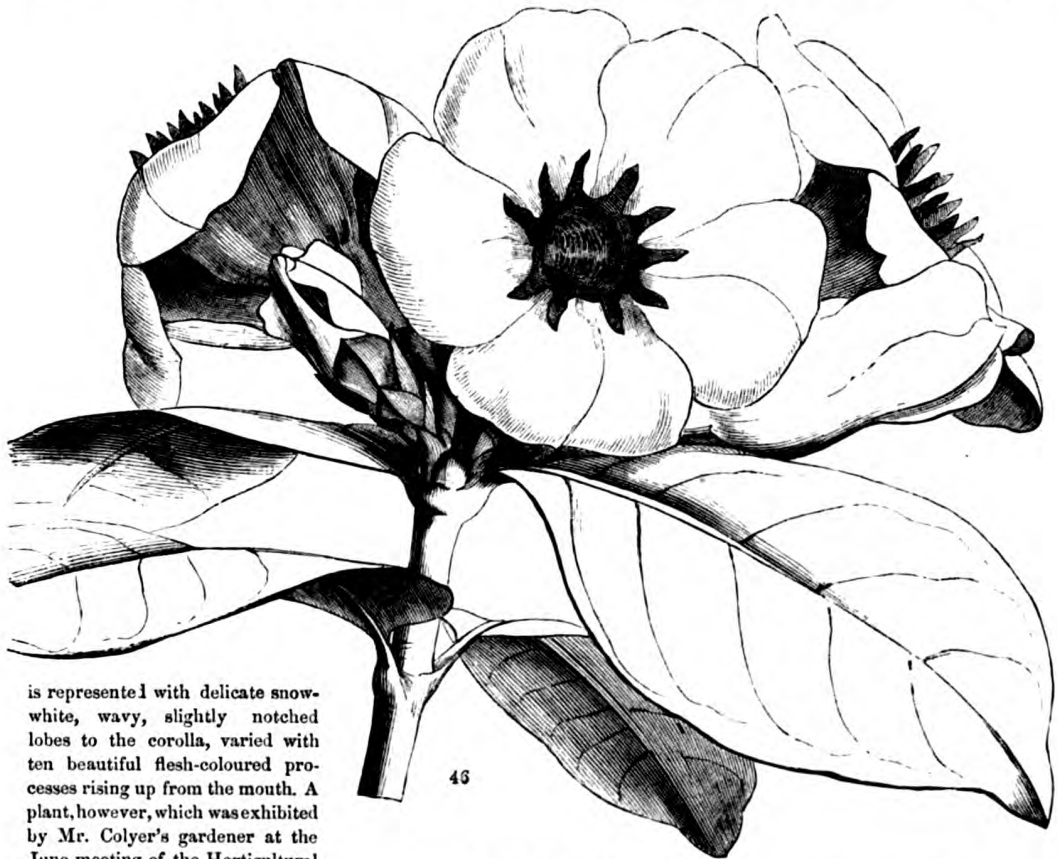
“Injury is often effected by a sudden rise of temperature by fire-heat in winter, while little or none is caused if the rise is occasioned by sun-heat; care should therefore be taken to guard against a rise of temperature by fire-heat, particularly in midwinter; rather suffer a depression of a few degrees of heat in very severe weather than use over-strong fires, which will over-dry the atmosphere, and, on the other hand, create too much moisture if water is supplied. Moisture, however, is by no means injurious to Orchids, provided they can part with it freely, but they are impatient of stagnant damp.

“When in a dormant state they should receive no more moisture than is sufficient to prevent their leaves from shrivelling; hence many of the more tender kinds do much better on blocks of wood suspended from the roof, where they can part with the superabundant moisture freely, than in pots. Nature herself indeed sets us an example to follow in regard to moisture, for we find, where the atmosphere is saturated with moisture (and a truly moist atmosphere cannot exist without a corresponding amount of heat), that the Orchids climb the loftiest trees; but, as the climate becomes drier, so they descend, until at last they are to be found growing upon the surface of the ground or upon rocks in shady places.

GLEANINGS AND ORIGINAL MEMORANDA.

104. *ROUPELLIA GRATA*. *Hooker*. A hothouse climbing plant from Sierra Leone, with large coarse white flowers. Belongs to the Dogbanes (*Apocynaceæ*). Introduced by Mr. Whitfield. (Fig. 46).

This plant produces what is called "Cream-fruit" in Sierra Leone; a name that has probably arisen from its yielding an abundance of cream-like juice when wounded. We should, however, be unwilling to put such a dainty in the mouth; for it can hardly be destitute of the acridity for which its race is notorious. In the *Botanical Magazine* it



is represented with delicate snow-white, wavy, slightly notched lobes to the corolla, varied with ten beautiful flesh-coloured processes rising up from the mouth. A plant, however, which was exhibited

by Mr. Colyer's gardener at the June meeting of the Horticultural Society by no means justified the flattering account that had been given of it; for the flowers were great leathery bodies, not white, but dirty, like half-soiled kid gloves; while the delicate flesh-coloured teeth proved to be ten huge, ugly, brown

tusks. It is difficult to imagine a flower with a more uninviting appearance. As to the fragrance attributed to it, we perceived nothing more than a sickly or at least by no means agreeable odour. When compared with a *Stephanote*, or a *Beaumontia*, it shrinks into insignificance, notwithstanding the large size of the flowers. The following account of its habits is given in the *Botanical Magazine*, t. 4466 :—"This handsome, climbing, shrubby plant, requires to be grown in a warm and moist hothouse. It is of free growth, and being a smooth clean-leaved plant, not subject to insects, is well adapted for a trellis, or to train up a pillar or rafter; and it will also form a bushy plant grown in a pot, if supported by a wire trellis, or by neat stakes. Good fresh loam with a little leaf mould will suit it. As it is a fast grower, it requires water freely during summer; but care must be taken that the soil does not become stagnant. It is propagated by cuttings, which strike root readily when placed under a bell-glass, and the pot plunged in bottom heat. It appears to be a shy flowerer; for although we have known it in cultivation for several years, we have not heard of its producing flowers, except in the collection above mentioned."

105. *PENTSTEMON AZUREUS*. *Bentham*. A hardy herbaceous plant from California. Flowers bright blue, very handsome. Belongs to the order of *Linariads* (*Scrophulariaceæ*). Introduced by the Horticultural Society.

A smooth, glaucous, erect perennial, about 2 feet high. Leaves linear-lanceolate, quite entire upon the stem, but near the root oblong and slightly heart-shaped at the base. Flowering racemes about a foot long or rather less, slightly downy, with one short peduncle in the axil of each opposite bract, bearing from 1 to 2 flowers. The latter are rather more than an inch long, clear violet blue, much deeper in the limb than on the tube. This hardy perennial is stated by Mr. Bentham to have been gathered in the dry river beds of the Valley of the Sacramento. Hartweg wrote on his seed papers that it was a mountain plant. It is very handsome as a border flower, but as its narrow foliage is not good, it is best grown among other species, such as *Pelargoniums*, &c.—*Journ. Hort. Soc.*

106. *BEGONIA CINNABARINA*. *Hooker*. A very handsome Bolivian greenhouse (?) plant with large nodding scarlet flowers. Introduced by Messrs. Henderson of Pine-Apple Place.

Extremely handsome; the contrast between the green stem and darker green leaves, with the deep bright red of the long and stout peduncles and stipules, together with the red or rather deep large cinnabar-coloured flowers, is very striking, and renders this the most desirable of all the species for cultivation: add to which, it blooms very freely in an ordinary stove (I suspect it would do so in a greenhouse) and continues long in flower. Stem erect but zigzag, stout, succulent, pale green, slightly downy, as are the leaves and petioles. Leaves on rather short stout, terete, green petioles, from four to six or seven inches long, obliquely ovate, (the young ones much plaited and edged with red,) lobed at the margin and doubly serrated, the minute teeth red. Stipules ovate, membranaceous, acuminate, red. Peduncles a span and more long, rather stout, terete, deep and bright red, bearing a panicle of six large handsome flowers, which as well as the ovaries and pedicels and ovate bracts are rather pale red or deep cinnamon colour. The ultimate pedicels are ternate, drooping, of which the central flower is male, the lateral ones female.—*Botanical Magazine*, t. 4483.

The interior of the ovary not being described we are uncertain whether this is a true *Begonia* or not.

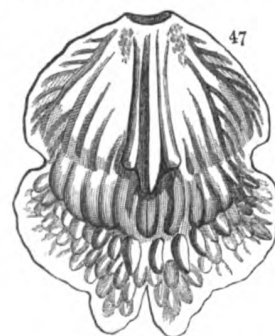
107. *UROPEDIUM LINDENII*. *Lindley*. An extraordinary herbaceous orchid, with all the habit of the long-tailed *Lady's-slipper*. Native of New Grenada. Introduced by Linden. Flowered in May with M. Pescatore.

This, which is the most remarkable of the terrestrial orchids yet known, is thus described in the *Orchidaceæ Lindeniana*: This singular and magnificent plant grows on the ground in the little woods of the Savannah, in that elevated part of the Cordillera which overlooks the vast forests at the bottom of the Lake of Maracaybo, and situated on the territory of the Indians of Chiguará, at the height of 8500 feet. Sepals oval-lanceolate, pale yellow, streaked with orange. Petals purple, orange at the base. The flower may be from fifteen to twenty inches long in its greatest diameter. Leaves thick and fleshy; June 1843. The habit of this curious plant is exactly that of *Cypripedium insigne*. The leaves are a foot long, blunt, unequally two-toothed at the point, shining, spotless, and longer than the downy scape. The bracts are two, of which the exterior is spathaceous, compressed, blunt, coriaceous, and much longer than the inner. The peduncle is six inches long, downy and one-flowered. The upper sepal is ovate-lanceolate, and four inches long; the lower are united into one of the same form, but rather wider. The petals are linear-lanceolate, extended into a long, narrow tail, and are probably eight or nine inches long, but in my specimens they are broken. The lip is of exactly the same form, but broader, and like the sepals is shaggy at the base.

We learn from Mons. Pescatore that it has now produced two flowers with him, in his great collection at the Château of Celle St. Cloud, near Paris. The sepals are white streaked with green, and more than $3\frac{1}{4}$ inches long; the petals and lip full 21 inches long, very velvety at the base, white streaked with green; the tails have the colour of wine lees.

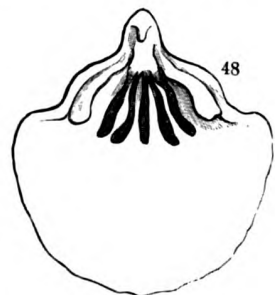
108. *WARREA BIDENTATA*. Lindley; (aliàs *W. Lindeniana*, Henfrey). A handsome terrestrial Orchid from New Grenada, with the habit of *Warrea tricolor*. Flowers pale cream-colour, with a purple lip. Introduced by Mr. Rucker before 1844. (Fig 47, the lip magnified.)

This well-marked species was originally described in the *Botanical Begister* for 1844, at p. 76 of the miscellaneous matter. It has lately been reproduced in the *Gardener's Magazine of Botany*, p. 177, under the new name of *W. Lindeniana*. It is not a native of Peru, as is stated in that work, but was found by Mr. Linden "on the ground in the thick forests at the foot of the peak of Tolima, at the height of 4000 feet," as is stated in the *Orchidaceæ Lindenianæ*, No. 96. It is said to have some pink in its flowers when wild, but that colour has not been yet observed in cultivation. The form of the lip, which is remarkable, is shown in the annexed cut.



109. *WARREA WAILESIANA*. Lindley. A one-flowered Orchid, with little beauty. Flower cream-coloured, with a violet lip. Native of Brazil. Introduced by George Wailes, Esq. (Fig. 48, the lip magnified.)

A fresh flower of this pretty species has been sent me from George Wailes, Esq., of Newcastle-on-Tyne, who received it from the late Mr. Gardner, it having been found by that lamented botanist in an excursion to the river Parahyba in search of *Huntleya Meleagris*. It appears, like that plant, to have a one-flowered scape, and is not a species of much beauty. The flowers, which smell of sweet peas, are cream-coloured, and about as large as those of *Warrea cyanea*. The sepals are all somewhat reflexed, the lateral not being straighter than the rest; the petals are also bent back, so that no arch can be formed over the column. The lip is tinted with delicate violet along the middle, is roundish, concave, wedge-shaped at the base, not at all lobed, but so turned upwards at the edges as to look as if it was furnished with basal auricles. Its appendage consists of five slender radiating violet fingers, which are perfectly free from the lip except at their origin; at the sides the edge of the lip is also furnished with a thin, linear, inflexed membrane. The column and pollen masses are those of *W. discolor*.—*Journ. Hort. Soc.*, vol. iv.



110. *WARREA DISCOLOR*. Lindley. A one-flowered Orchid from Costa Rica: sepals and petals pale lemon-colour, tinged with purple; lip dull purple. Introduced by Mr. Warszewitz. (Fig. 49, the lip magnified.)

A very distinct species, apparently one-flowered, the leaves, &c. of which I have not seen. [Mr. Bassett, the gardener to Mr. Holford, states that the habit is that of *Huntleya violacea*, the leaves, however, being only about 5 inches long and 1 inch wide.] The sepals, which are $1\frac{1}{4}$ inch long, are straw-coloured, the lower straight, concave and deflexed, the upper erect, rolled back at the point, pressed close to the petals, and with them forming an arch over the column and lip. The petals are straw-coloured at the base, dull purple at the upper part. The lip has a nearly circular outline, but is so concave as not to present that form until flattened; it is slightly 3-lobed, of a deep, dull, velvety purple colour, with, at the base, a roundish oblong yellow appendage, which adheres to the lip, and is divided at the edge into strong diverging teeth, five of which terminate so many distinct ribs. The column is yellow, shaggy in front, with an anther sloping forward, and a subulate rostell. The pollen masses are four, plano-convex, in pairs at the end of a broad, flat, thin caudicle, furnished on either side with a lateral tooth. (A singular monstrosity here occurred in the two posterior pollen masses, which had grown together into one by a narrow neck.) A remarkable species, the single flowers of which resemble a *Lycaste*, but their pollen-apparatus and lip-appendage are exactly those of *Warrea*. Upon this point it may be useful to explain that in *Lycaste* the caudicle is subulate, and the lip-appendage a truncate plate near the middle lobe of the lip, while in *Warrea* the caudicle is broad and flat, and the lip-appendage ribbed, fringed, and stationed at the very base of the lip.—*Journ. Hort. Soc.*, vol. iv.



111. *CEANOTHUS PAPILLOSUS*. *Torrey and Gray*. A hardy Californian bush, with bright blue flowers, belonging to the order of Rhamnads. Flowers in June and July. (Fig. 50.)



An evergreen bush, covered with coarse hair and resinous tubercles, in a wild state forming a compact mass of branches, in cultivation growing longer and weaker. Leaves small, deep green, narrow-oblong, obtuse, with a single mid-rib, and numerous lateral veins, covered with down on the under side. Flowers in small roundish terminal stalked heads, bright blue as in *C. azureus*.—*Journ. Hort. Soc.*

This has now been ascertained to be capable of bearing our London winters without protection. But in places exposed to the sun it suffers from frost much more than under a north wall or at the back of rock-work. Very pretty.

112. *CEANOTHUS RIGIDUS*. *Nuttall*. A hardy evergreen purple-flowered Californian bush, belonging to the Natural Order of Rhamnads. Introduced by the Horticultural Society. (Fig. 51.)

A stiff branching dark green evergreen bush; said to grow 4 feet high when wild. Young branches downy. Leaves small, truncate, spiny-toothed, subsessile, very shining and smooth on the upper side; on the under pale and netted. This network is produced by numerous short branching veins, in the interspaces between which are deep pits, reaching half through the parenchym, and each closed up by a dense ring of white converging hairs. Such pits are placed pretty generally in a double row between each of the principal lateral veins. The flowers appear in small clusters or umbels at the end of very short spurs. They are deep purplish violet, not blue, and less showy than those of *C. dentatus* or *C. papillosus*. The species seems to be even more hardy than the two last-named sorts, for it has borne the winter uninjured and unprotected both in sunny and in northern aspects; and, in fact, the specimens left unprotected are quite as healthy as those left under glass all the winter. The only blossoms that have yet appeared were in a greenhouse. It seems as if, in the open air, the shrub would prove an autumnal flowerer.—*Journ. Hort. Soc.*, vol. v.

113. *DIPTERACANTHUS SPECTABILIS*. *Hooker*. A very fine herbaceous Acanthad from Peru, with deep purple blue flowers of large size. It requires a warm green-house, or stove. Flowers in August. Introduced by Messrs. Veitch and Son. (Fig. 52.)

Sir W. Hooker states this to be unquestionably the largest flowered plant of the genus, if not of the order. It grows 2 feet or more high, much branched, and erect. Leaves nearly sessile, ovate, acuminate, ciliated, slightly pubescent on the surface, rather strongly veined and reticulated. Flowers sessile or very nearly so, two together from the axils of the upper leaves, large, very showy; more than two inches across. Calyx quite without bracts, deeply cut into 5 erect, subulate lobes, much shorter than the funnel-shaped curved tube of the corolla. The limb of the latter very large, purple-blue, veined, the 5 lobes rounded, spreading, crenate, and somewhat waved at the margins. This is found to succeed in a temperature inter-

mediate between that of the stove and greenhouse, and grows freely in any kind of light garden soil. Like many of the tropical *Acanthads*, after flowering, it becomes thin and naked. It propagates freely by cuttings. The young plants

should be kept in small pots during winter, and receive very little water. In the spring they require to be shifted into a large pot, where they will soon make rapid progress, and produce a succession of large fine blue flowers.—*Botanical Magazine*, t. 4494.



52

cones $1\frac{1}{4}$ inch long, composed of resinous, shining, slightly downy, pink, membranous oblong scales. The corolla is oblong, rather more than half an inch long, hairy, rich crimson, with a clear green tip. The species is nearly related to *T. bracteata*, and *strobilifera*, very fine shrubs still to introduce, from which it differs in its hairy flowers and other circumstances. *T. pubescens*, another species with flowers in cones, is a much larger plant, also with smooth, not downy, corollas; at least such is the case in specimens now before us from Hartweg's Collections. This should form a very useful gay addition to spring shrubs of its class. It was raised at Syon from seeds received from Mr. Purdie.

114. *THEIBAUDIA SCABRIUSCULA*. *Humboldt and Bonpland*. A greenhouse evergreen bush, belonging to the order of Cranberries (*Vacciniaceæ*). Native of New Grenada. Flowers crimson, tipped with green. Flowered at Syon in April. (Fig. 53.)

A very pretty spreading evergreen shrub with slender downy branches, and broad oblong almost cordate triple or quintuple ribbed leaves, slightly downy on the under side. The flowers appear at the ends of the branches, in drooping



53

115. *GYNOPSIS FRAGRANS*. *Hooker*. A hothouse perennial plant, from Guatemala, with very fragrant yellow flowers, appearing in December. Stems trailing. Belongs to Composites. Introduced by Mr. Skinner. (Fig. 54.)

Stems long, climbing, perennial, with succulent branches, showing a disposition to root at their base. Leaves rather distant, on long petioles, ovate or approaching to lanceolate, acute, of a rather fleshy texture, dark green. The flower-heads are rather large, very fragrant, and form a terminal, and in the lower part leafy, corymbose raceme. A coarse soft-wooded scandent plant, having a large, thick, fleshy root, of the nature of a tuber. It grows freely in a mixture of light loam and peat or leaf-mould, and, by its rapid growth and clean habit, is well adapted for covering trellis-work in the hothouse, especially as it is not liable to be attacked by insects. It increases readily by cuttings; but these, on account of their soft, succulent nature, must not be kept too close, or they will damp off before they produce roots.—*Botanical Magazine*, t. 4511.

116. *HOYA CORIACEA*. *Blume*. A Java climbing shrub, with the habit of *Hoya carnosa*, and umbels of yellowish flowers. A stove plant, flowering in August. Introduced by Messrs. Veitch and Co. (Fig. 55.)

Discovered by Dr. Blume in mountain woods on the western side of Java. Mr. Thomas Lobb detected it in the same island, on Mount Salak. Everywhere glabrous. Stem branched, twining, taper. Leaves on short thick petioles, which are glandular above at the setting on of the blade, which latter is almost exactly elliptical, or approaching to ovate, acute, between coriaceous and fleshy, acute or shortly acuminate, ribbed, with rather indistinct veins. Peduncles longer than the leaf, pendent, bearing a large umbel of numerous flowers, brown in the state of the bud, much paler when fully expanded. Pedicels very obscurely villous. Sepals subulate, much shorter than the corolla, which is glabrous and glossy externally, within pale tawny, and downy. The lobes triangular, acute. Coronet white, with a dark brown eye: leaflets ovate, gibbous at the base, obtuse, the apex a little curved down.—*Botanical Magazine*, t. 4518.

117. *HOYA PURPUREO-FUSCA*. *Hooker*. A remarkable twining stove plant, with small umbels of richly tinted purple and grey flowers. A native of Java. Flowers in September. Introduced by Messrs. Veitch and Son. (Fig. 56.)

Said to be common in the woods of Java. Sir W. Hooker compares it with the Cinnamon-leaved *Hoya*, and with the great-leaved (*H. macrophylla*) "but in the latter the leaf is reticulated between the nerves, the staminal crown (coronet) has the leaflets much more acuminate, and the colour of the flowers is quite different." It is a glabrous twining and branching shrub, everywhere (except the corolla) glabrous. Branches often throwing out short fibrous roots. Leaves on very thick brownish petioles, 4 to 5 inches long, exactly ovate, acute, or shortly acuminate, thick, fleshy, 5-nerved, the nerves all diverging from the base, and having a gland at the base where set on to the petiole. Peduncles axillary, shorter than the leaf, occasionally rooting, and bearing a dense many-flowered umbel. Corolla rotate, ashy-brown, downy and hirsute above, cut into 5 roundish and shortly acuminate lobes. Coronet of 5 ovate, fleshy, rich purple-brown, acute leaflets, nearly plane at the top, convex below.—*Botanical Magazine*, t. 4520.

118. *AOTUS CORDIFOLIUS*. *Bentham*. (*alias* *Gastrolobium Hugelii Henfrey*.) A pretty greenhouse leguminous shrub from Swan River, with glaucous heart-shaped leaves in threes, and large yellow axillary flowers. Introduced by Messrs. Knight and Perry.

This well-known plant, long ago published by Mr. Bentham under the name here quoted, is reproduced as a novelty in the *Gardeners' Magazine of Botany*. It is rather a nice plant, but its grey leaves are a disadvantage, and its yellow flowers are too much like those of a *Genista*. It must rank with *Pultenæas* and plants of that kind, and requires the same sort of management; that is to say, it wants to be potted in loose turfy soil, more loamy than peaty, to be grown in a brisk heat, with plenty of water applied with a syringe, in order to keep the air damp, and then when the growth is completed to be carefully hardened off. If they grow over fast the shoots will bear to be stopped; but not till the lengthening process is at an end.

119. *TROPÆOLUM BEUTHII*. *Klotzsch*. A tuberous climbing herbaceous plant from Bolivia. Flowers yellow. Introduced by Messrs. Low and Co.

Found by Bridges in Bolivia. Leaves deeply cut, peltate, roundish, bright green above, pale green beneath; leaflets 5-6 obovate; divisions of the calyx elliptical, apiculate, as long as the straight spur; petals obcordate, twice as long as the calyx. Near *Tropæolum brachyceras*.—*Allgem. Gart. Zeit.*, No. 21, 1850.

120. *CENTRADENIA FLORIBUNDA*. *Planchon.* (*alias* *Donkelaaria floribunda* of *Gardens.*)

A dwarf half-shrubby plant from Guatemala, belonging to the Melastomads; with numerous lilac flowers. Introduced by Van Houtte and Co.

A very pretty species, much more worth growing than the Rosy Centradene, now common in gardens. The leaves are long, deep green, delicately tinged with violet on the underside, and full $2\frac{1}{2}$ inches long; having a pendent position they present both surfaces to the eye. The flowers are produced in much abundance, exhibit various tints of lilac, and produce a charming effect.—*Flore des Serres*, No. 453.



121. *ACHIMENES GHIESBREGHTII* of the *Gardens*. Origin unknown. A stove herbaceous plant with handsome scarlet flowers. Belongs to the Gesnerads. Introduced by Mr. A. Henderson.

Stems erect, deep purple brown, with a few scattered hairs. Leaves opposite, stalked, oblong-lanceolate, rugose, convex, coarsely serrated, not unlike those of the larger stinging-nettle. Flowers solitary, axillary, with a slender hairy peduncle, twice as long as the leafstalks. Calyx smooth, equally 5-parted. Corolla deflexed, nearly cylindrical, gibbous at the base on the upper side, $1\frac{1}{2}$ inch long, bright scarlet, with an oblique regular limb, and a circular throat. Disk, a lobed fleshy ring. Stigma large, two-lobed, very hairy. This is a neat, distinct, and rather slender kind, requiring the same treatment as the old *A. coccinea*, and easily increased by the small scaly rhizomes. It grows about 8 or 10 inches in height, and flowers from June to August. It is very handsome.—*Journ. Hort. Soc.*, vol. v. *With a figure.*

122. *ONCIDIUM NIGRATUM*. An orchid from Guiana, with cream-coloured flowers spotted with blackish-brown, arranged in a branched panicle. Introduced by Mr. Loddiges.

O. nigratum (BASILATA) paniculâ ramosâ, sepalis linearilanceolatis undulatis acutis æqualibus, labello triangulari postice rotundato apice angustato acuto, cristâ multituberculatâ, columnæ alis angustis subdentatis basi productis.

A very curious and distinct species, received from Sir Robert Schomburgk many years since, and at last flowered by Mr. Loddiges. It is nearly allied to *O. phymatochilum*. The blossoms grow in branched panicles, and are about as large as those of *O. incurvum*. The colour of the sepals and petals is pale yellow or cream colour, with a few irregular brownish black blotches. The lip is brighter yellow, with a brown stain or two below the point.

123. *ONCIDIUM PHYMATOCHEILUM*. A beautiful orchid, supposed to be derived from Mexico, with long green sepals and a white lip. Flowers in April.

O. phymatochilum (BASILATA) racemo subpaniculato, sepalis linearibus acuminatis apice recurvis lateralibus longissimis, labelli auriculis convexis dilatatis crenatis lobo intermedio unguiculato ovato acuminato basi multituberculato, columnæ alis semicordatis acuminatis.

Under this name is now not uncommon in gardens a charming orchid, supposed to have been obtained from Mexico, with erect, narrow, somewhat paniced racemes of greenish flowers having a snow-white lip. Three years since we received it from Messrs. Loddiges and the late Mr. Clowes. It has oblong, 2 edged, not furrowed, olive green pseudobulbs slightly tinged with purple, and surrounded by scales as long as themselves, which, when young, are olive green spotted with crimson. The leaves are of thin texture and vary in form from linear-lanceolate to oblong. The flowers are remarkable for the great extension of the lateral sepals, on which account, and because of their green colour spotted with chocolate brown, they have much the appearance of belonging to some Brassia. The lip is pure white, with yellow tubercles and a few stains of the same colour near the base.

124. *CUPHEA IGNEA*. *Alphonse De Candolle*. (*aliàs C. platycentra* of *Gardens*.) A Mexican perennial, with long scarlet flowers.

It is stated in the *Flore des Serres* that the true Broad-spurred Cuphea (*platycentra*, Bentham) is not the plant known under that name in Gardens; and consequently M. Alphonse De Candolle has given the latter the appropriate name of the Fiery Cuphea (*C. ignea*).

125. *AUDIBERTIA POLYSTACHYA*. *Bentham*. A half-hardy herbaceous plant from California, with white leaves, and racemes of white flowers. Belongs to the Labiate order. Introduced by the Horticultural Society.

A white, sage-like, herbaceous plant, growing about 2 feet high. Leaves on long stalks, oblong, blunt, crenate, having a strong and by no means agreeable odour, proceeding apparently from numerous point-like dark brown glittering glands with which they are covered, especially on the under side. Stem erect, producing a great number of white labiate flowers, on short, lateral, one-sided racemes. Stamens long and prominent. This seems to be unable to bear an English winter without protection; for it has perished among rockwork in that of 1849-50. The flowers have no beauty; but the snow-white leaves and stems produce an appearance sufficiently remarkable to give it a claim to cultivation where the climate agrees with it.—*Journ. Hort. Soc.*, vol. v.

126. *FUCHSIA VENUSTA*. *Humboldt*. A handsome greenhouse shrub, with lanceolate leaves in threes, and long solitary pendent salmon-coloured flowers tipped with pink. A native of Peru. Introduced by Mr. Linden. (Fig. 57.)

This is one of the best of the Peruvian Fuchsias, for the introduction of which we are indebted to Mr. Linden, from

whom we received fresh flowers last autumn. Hartweg found it commonly near Santa Fé de Bogota, but, owing to the mismanagement of that collector, its seeds, like nearly all else that he brought home with him, perished in the hold of a sugar ship. It has long narrow lanceolate deep green leaves, quite toothless at the edge, usually growing in threes. The flowers appear singly in the axils, and are full 3 inches long, while the stalk measures $2\frac{1}{2}$ inches more. The tube of the calyx has the form of a lengthened cone, its lobes being tipped with light emerald green. The petals, which are also salmon-coloured, are lanceolate, wavy, not rolled up, but a little turned back at the point, and something longer than the calyx.

127. BERBERIS WALLICHIANA. *De Candolle.*



See our No. 14, p. 12.
(Fig. 58.)

This has now flowered with Messrs. Veitch and Son, and proves to be even more handsome than was anticipated, the flowers being large, and deep yellow, arranged as in the accompanying figure.

128. DODEC THEON INTEGRIFOLIUM. *Michaux.* A hardy herbaceous plant, belonging to the Order of Primworts. Flowers purple and yellow. Native of California. Introduced by the Horticultural Society.

A dwarf stemless plant, with a few long narrow, almost spatulate, undivided leaves, and a slender scape, bearing a single nodding flower, very like that of the common species, and of the same purple colour, with a yellow eye and dark purple anthers. Such was the plant in the Horticultural Garden. Upon looking, however, to the wild specimens, we find that it becomes much more vigorous when older, bearing as many as three flowers on a scape, or, according to Sir Wm. Hooker, eleven or twelve; in which case it becomes as interesting as the old and well-known species, so frequent in gardens. A damp, rich, shaded American border suits it best; and there it may be expected to grow without difficulty.—*Journ. Hort. Soc.*, vol. v. *With a figure.*

129. IXORA LAXIFLORA. *Smith.* A graceful hothouse shrub from Sierra Leone, with panicles of long, slender, pink, sweet-scented flowers. From Lucombe & Co. Belongs to the order of Cinchonads.

Well worthy of general cultivation, for while small it has handsome foliage and flowers, which have a delicate and most agreeable fragrance. Leaves, the largest a span in length, oblong-lanceolate, acuminate, feather-veined, attenuated at the base into a very short petiole. Panicle terminal, large, and singularly trichotomous. Calyx deep red, the tube (or ovary) globose, red; the free portion or limb is very small and cleft into four erect, appressed teeth. Corolla white tinged with pink; the tube $1\frac{1}{2}$ inch long, slender; the limb cut to the base into four spreading obovate segments, hairy in the disk.—*Botanical Magazine*, t. 4402.

130. ESPELETIA ARGENTEA. *Humboldt and Bonpland.* A singular greenhouse herbaceous plant of the Composite order, with handsome silvery leaves and yellow heads of flowers. Blossomed at Kew and at Syon in the summer of 1848. Native of New Grenada.

The whole plant has a peculiar and somewhat terebinthine odour, and yields like the genus *Silphium* (to which *Espeletia* is allied in essential characters) a copious gum-resin, used in the preparation of ink, and for other purposes.

This is a beautiful plant, and a stately one when in flower, attaining then the height of five or six feet. Before flowering, however, the appearance is very different. A plant of three or four years old has a trunk six or eight inches high and as thick as one's wrist, rather bare below, but the rest forming a crown of dense spreading leaves a foot and more long, spreading all round like those of an Aloe. Leaves narrow-lanceolate, densely silky, and shaggy on both sides. At the flowering season the apex of the trunk lengthens out into an upright densely silky, nearly leafless corymbosopaniculate stem.—*Botanical Magazine*, t. 4480.

131. ARBUTUS XALAPENSIS. *Humboldt.* A dwarf Mexican half-hardy shrub, with dull evergreen leaves, and close clusters of reddish flowers. Introduced by the Horticultural Society.

A low, dull brownish-green evergreen bush. Branches, petioles, and underside of leaves covered with a soft short down, without any trace of setæ. Leaves oblong, flat, long-stalked, rounded at the base, perfectly entire, or very slightly serrate, with a hard, firm, reddish edge, somewhat downy on the upper side. Flowers dirty reddish-white, in close downy terminal short pyramidal panicles. Peduncles glandular and woolly. Calyx nearly smooth. Corolla ovate, at the base, almost flat, and unequally gibbous, with a contraction below the middle, and a very small limb. Ovary with a granular surface. This little bush is by no means ornamental. It grows slowly, requires protection in winter, has dull spotted leaves, and remains in flower only for a week or two in April. Although a true *Arbutus*, it seems to have none of the beauty of its race, and must be consigned to the collectors of mere botanical curiosities.—*Journ. Hort. Soc.*, vol. v. *With a figure.*



Publishing Monthly, Price Sixpence, Illustrated with Engravings.

THE VILLA GARDENER.

THIS Magazine is not intended for Professional Gardeners, who are already so well supplied with ably conducted weekly and monthly journals, but for that very large class—the dwellers in Suburban Residences and Villas—who are interested in Gardening simply as a relaxation from other pursuits, who do not employ a regular gardener, and who have no Periodical devoted expressly to their interests.

The pages of THE VILLA GARDENER are occupied with matter concerning VILLA and TOWN GARDENS—to their laying out, planting, and general culture—the management of plants in the open air, the Conservatory, Greenhouse, Dwelling-house, Balcony, Wardian Case, &c. City Gardens, Squares, Parks, and places of public resort, receive also some degree of attention proportionate to the influence they exercise, or may be made to exercise, on the public taste.

Special articles by some of the most competent writers of the day appear regularly on all Gardening operations—as the Preparation of the Soil, Manuring, the Sowing of Seed, Striking Plants from Cuttings, Grafting, Layering, Pruning, Training, Watering, and the innumerable other operations which require to be performed in the course of the year, even in the smallest Garden. The Conductors have also something to say on the best mode of dealing with the Pests of the Garden, Insects especially.

Notices of New Flowers, Fruits, Ornamental Plants and Trees, and Culinary Vegetables, so far as these may be interesting to Amateurs, appear in each Number, and their respective merits or demerits are fairly criticized.

Particular attention is given to the construction of Conservatories, Greenhouses, Stoves, and Hothouses, and of the varied modes of Heating and Ventilating which are continually being brought under public notice.

Garden Architecture and the proper use of Statuary, Vases, and other Garden Ornaments form an important feature of THE VILLA GARDENER. Improvements in Garden Tools, Implements, and other appliances, are also duly noticed and criticized.

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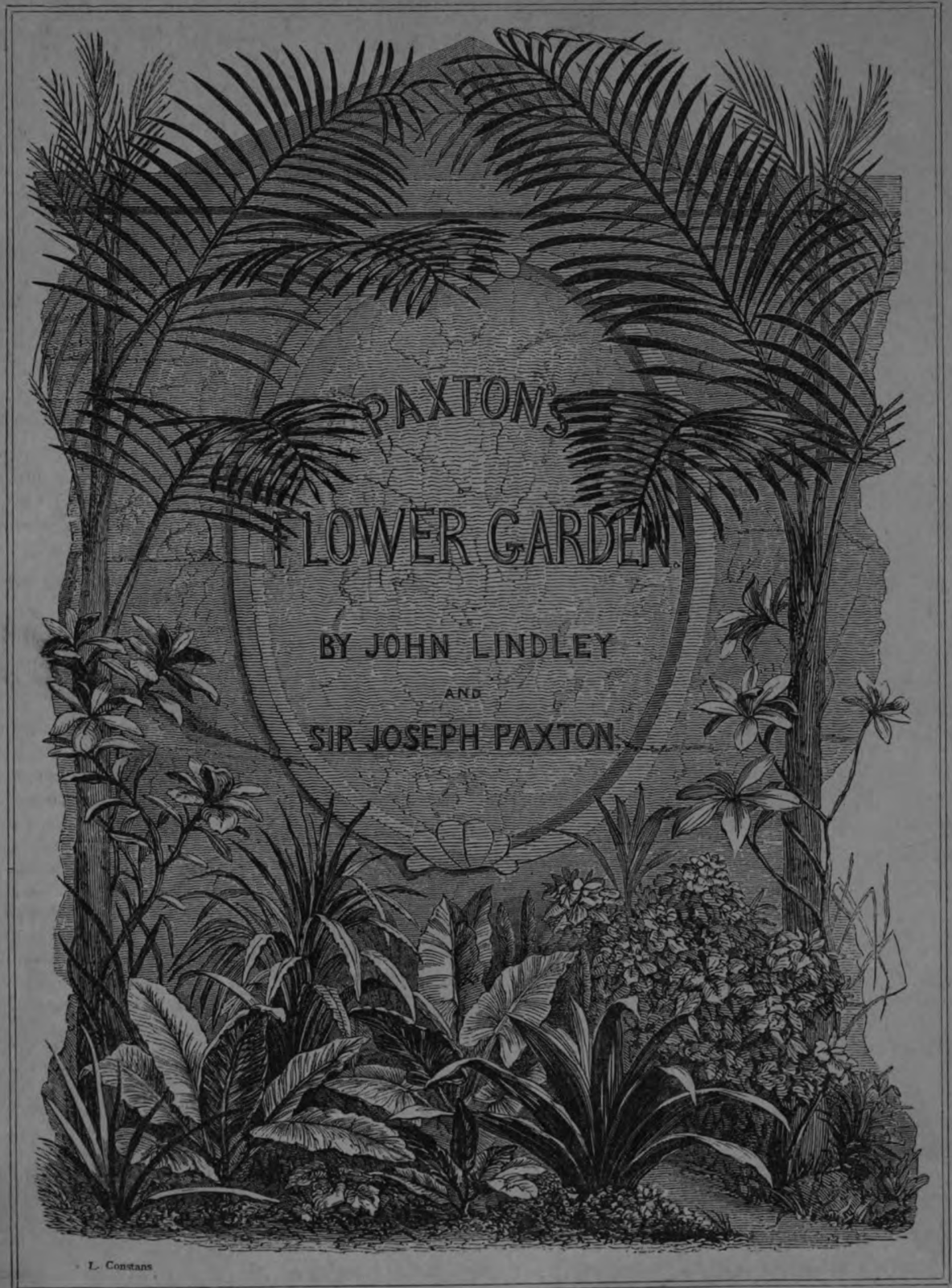
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CONTENTS OF NO

COLOURED PLATE

Plate

- 16 THE WHITE CUNNING
RHODODENDRON (Rh
dendron cinnamomeum,
Cunninghami)
- 17 THE CLOSE-HEADED BEJ
(Bejaria coarctata)
- 18 THE SPECKLED ODONTOC
(Odontoglossum nævium

Passiflora Medusæa (illustrated)
Cuphea cinnabarina (illustrated)
Lisianthus Princeps (illustrated)
Parsonsia heterophylla (illustrated)
Parsonsia variabilis

Acineta densa (illustrated)

Campanea grandiflora (illustrated)
Abutilon insigne (illustrated)
Acropera armeniaca (illustrated)
Campylobotrys discolor (illustrated)
Columnnea aurantiaca (illustrated)
Arctocalyx Endlicherianus (ill
Rhododendron jasminiflorum (

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[PLATE 16.]

THE WHITE CUNNINGHAM RHODODENDRON.

(RHODODENDRON CINNAMOMEUM; VAR. CUNNINGHAMI.)

A hardy evergreen hybrid Shrub. R. cinnamomeum ♂, maximum ♀.

FOR the figure of this noble shrub we are indebted to Mr. George Cunningham, of the Nursery, Liverpool. It is probably the best hybrid Rhododendron yet raised, not possessing, indeed, the rich colours of the crimson mules, but quite as valuable to the cultivator on account of its large heads of pure white spotted blossoms. The history of the plant is thus given by Mr. Cunningham in his correspondence:—

“It was raised between Cinnamomeum and a late White Maximum, as you will at once see by the foliage. It is very remarkable for its strong ribbed leaf and brown under-surface. The white of the flower is very pure, and the dark purple spots contrast with it very beautifully. It is quite hardy; its maternal parent being the latest and hardiest of all our Rhododendrons, and Cinnamomeum, the father, will stand any severity of an English winter in January; but as it pushes early in the spring, it is liable to be cut by our late frosts.

“The object which I had in view in hybridising *R. cinnamomeum* with a pure White Maximum, was to improve the colour of each parent, keeping the purple spots of the former, and getting a later period of flowering from the latter. In this part of the kingdom the flowers from the hybrids with the Indian species and Ponticum, or Catawbiense, are in three seasons out of four destroyed by late frosts; the colour also of those between the true Scarlet Arboreum and the pink and purple species is diluted, and that between them and Cinnamomeum, or the White Arboreum, is often of a *muddy* pink, turning, as the flower gets old, into a dirty white. In the one I have sent you to figure, these objects have been obtained—the white colour has been preserved in all its purity, and a perfect hardiness also acquired. None of my plants of it have had any protection.”

In form the leaves are exactly intermediate between the two parents. To the shape of the Cinnamon Tree Rhododendron they add the convexity of *R. maximum*; and the downy surface of the under-side is just half-way between the two. In both the mule and its ♀ parent, the hairiness consists of numerous much-entangled tubes, blunt, transparent, flat, thin-sided, and very often arranged in a starry manner. They are evidently the beginning of the ramments (?) of *Bejaria*.

In one respect both leaves and stem are unlike either parent. The latter is of a rich crimson brown, and the former are covered with an abundant resinous secretion, which renders them sticky to the touch.

THE VERVAENE RHODODENDRON.

Although derived from a different source, and much less interesting than the preceding, the variety published by M. Van Houtte under the name of *Rhododendron ponticum*, var. *Vervaeanum*, *flore pleno*, deserves mention in this place. It was no hybrid, but was an accidental seedling obtained by a M. Vervaene, "dont les heureuses tentatives de semis ont doté l'horticulture de cette riche acquisition," from *Rhododendron ponticum*. According to M. Van Houtte, it is no less remarkable for the elegance of its habit, than for the abundance of its flowers, the great breadth of its heads and of its corolla, and for its delicate tints. His very fine figure represents it as forming a head about as large as that shown in the annexed plate; the flowers measure full three inches in diameter, are semi-double, of a rich lilac colour, with the upper lip white, spotted with yellow. See *Flore des Serres*, tt. 492, 493.



L. ...

[PLATE 17.]

THE CLOSE-HEADED BEJARIA.

(BEJARIA COARCTATA.)

A half-hardy evergreen Shrub, with crimson flowers, from the ANDES OF NEW GRENADA, belonging to the Order of HEATHWORTS.

Specific Character.

THE CLOSE-HEADED BEJARIA.—Branches shaggy with spreading hairs. Leaves oval, acute, on short stalks, closely imbricated, glaucous beneath; the stalk and midrib shaggy, otherwise smooth. Flowers deep crimson, in very close corymbs; stalks short, covered with rusty wool; the calyx nearly smooth. Petals erect, nearly parallel, (not spreading). Style long, projecting.

BEJARIA COARCTATA; ramis patentim villosis, foliis ovalibus acutis breviter petiolatis densè imbricatis margine revolutis subtus glaucis petiolo costâque villosis cæterùm glabris, corymbis densissimis abbreviatis, pedunculis brevibus ferrugineo-tomentosis, calycibus glabriusculis, petalis rectis subparallelis, stylo longè exserto.

B. coarctata: *Humboldt and Bonpland, Plante æquinoctiales*, vol. ii. p. 125, t. 121.

THIS genus is little known in Europe. Mutis named it after his friend Professor Bejar, of Cadiz: but Linnæus, misreading j for f, published it under the erroneous name of Befaria. It should be written as above and sounded Beharia. It is nearly related to the Rhododendron, from which it differs in its petals being all distinct, overlapping each other, and not united into a tube. The species inhabit the Alps of Peru and Mexico, where their beauty becomes fully developed, and rivals that of the Azaleas and Rhododendrons of the United States and India.

The plant now figured seems to have found its way to Europe both through England and Belgium. To our own country it was sent by Mr. Purdie for His Grace the late Duke of Northumberland; and it was at Syon that it flowered, for the first time in Europe, in May last under the care of Mr. Ivison; we also believe that Mr. Linden's collectors, who found it near Pamplona, at the height of 8500 feet, also furnished a supply of fresh seeds. A third traveller from whom it has been derived was Messrs. Veitch's collector Lobb, who found it on the mountains of Peru. From one of his specimens a short account of it was given in the Gardeners' Chronicle for 1848, with a woodcut which we reproduce for the sake of showing the very inferior appearance of the plant in a wild state, and the

nature of the hairiness, which is merely represented by colour in M. Constans' figure. It has hirsute branches, woolly flower-stalks, and a nearly smooth calyx, with seven or eight smoothish, blunt, ovate sepals, whose edges are a little woolly. The flowers are deep rich crimson, and very closely arranged. Each consists of seven or eight smooth petals. The leaves, when very young, are in the wild plant woolly on the under-side; when full grown are perfectly smooth, shining, rather convex, nearly sessile, and glaucous on the under-side. The nature of the longer hairiness is peculiar, and is more like



Bejaria coarctata, from a wild specimen.

what Botanists call raments than ordinary hairs, that is to say, it consists of long narrow thin plates tapering to a point, filled with a brown fluid, and composed of many rows of cells. Mixed up with them is a close wool or fur, much shorter, and composed of curved, or hooked, entangled, also brown, hairs.

We have little doubt that this is the plant represented by Humboldt and Bonpland under the name of *B. coarctata*, notwithstanding some small discrepancy in their description of the hairiness; for we know that such mountain plants vary much in the amount and nature of the wool that invests them at different seasons. The species is, however, totally different from what

is published in the Botanical Magazine, t. 4433, under the same name, which Sir William Hooker



B. Lindeniana.

does not appear to have recollected had been previously given to the subject of this plate. This error was pointed out by M. Hérincq, who, in reproducing the figure, called the species *B. Lindeniana*. This plant has also flowered in the great collection at Syon, and was exhibited by Mr. Ivison at one of the late exhibitions in the garden of the Horticultural Society, when the accompanying figure was made. It has much shorter hairs on the stem even when young, and they soon give way to a mere ferruginous down. The leaves are perfectly smooth, longer-stalked, flat, spreading, oblong, becoming blunt, although often sharp-pointed when young; and instead of the rich deep green of the close-headed *Bejaria*, they have a yellowish cast. The flowers, which are in loose corymbs, are pale pink, streaked with a darker rose-colour. In the *Botanical Magazine* their petals are represented as spreading as flat as those of a Mallow; but in the Syon plant they are closed, as in our cut. We suspect this to be very near Mr. Linden's *B. tricolor*, which is, however, said to be yellow at the base of the corolla.

Closely related to these, but perhaps finer than any, is a plant raised by Messrs. Veitch & Co. of Exeter. We presume it to be that which Mutis called *æstuans*, because, it would seem, it glows like a fire. Mr. William Lobb found it in the province of Chachapoyas, at the height of 8000 feet, and describes the flowers as rose-coloured. Messrs. Veitch of Exeter have raised it. The branches are covered with coarse hairs. The leaves are fringed with blackish bristles; when young they are covered beneath with a rusty secretion; when full grown they are very glaucous on the under-side, and dark green on the upper. The calyx and flower-stalks are shaggy with coarse hairs, and clammy with a sticky juice which oozes out from the surface.

Although we venture to attach to this species the name of *æstuans*, judging from the definition of it in books, yet it is quite possible that it may be another species. Indeed, if M. Hérincq is right in stating that the plant of Mutis has the habit of *Rhododendron ferrugineum*, it must be something quite different. No doubt it is distinct from Mr. Linden's *B. æstuans*, which Hérincq calls *myrtifolia*, and which is said to have long lanceolate leaves, very much narrowed towards the point.

It may be worth while to add to these memoranda a list of the *Bejarias* now or formerly in cultivation, with their supposed aliases:—

1. *B. racemosa* Vent.—Probably lost.
2. *B. glauca* H. B.—Formerly flowered at Ghent.
3. *B. ledifolia* H. B.—Fl. des Serres, t. 194.
4. *B. Lindeniana* Hérincq (*aliàs* *B. coarctata* Hooker).—Bot. Mag., t. 4433.
5. *B. coarctata* H. B.



Bejaria æstuans, Mutis.

6. *B. myrtifolia* *Hérincq* (aliàs *B. æstuans* *Linden*).
7. *B. æstuans* *Mutis*.
8. *B. cinnamomea* *Lindley*.*
9. *B. drymifolia* *Linden*.
10. *B. densa* *Planchon* (aliàs *B. microphylla*).
11. *B. tricolor* *Linden*.
12. *B.* —, an unknown species at Syon, with lanceolate leaves, and red branches covered with viscid stiff hairs.

The proper mode of managing these *Bejarias* is still uncertain. They are charming plants, and worth any amount of care and trouble. We believe that the treatment of Indian Azaleas will suit the strongest, and that of *Rhododendron Chamæ-Cistus* the weakest. A damp atmosphere, and free circulation of air in summer, are no doubt essential. Mr. Linden cuts the matter short, as will be seen by the following extract from his priced Catalogue :—

BEJARIA (<i>Befaria</i>) <i>ÆSTUANS</i>	30 francs.	BEJARIA (<i>Befaria</i>) <i>glauca</i>	10 francs.
„ <i>COARCTATA</i>	15 „	„ <i>LEDIFOLIA</i>	10-50 „
„ <i>DENS</i> (<i>microphylla</i>)	25 „	„ <i>TRICOLOR</i>	40 „
„ <i>DRYMIFOLIA</i>	40 „	„ <i>sp. nova.</i>	„ „

“Réputé à tort comme étant d’une culture difficile, ce magnifique genre réclame au contraire *peu de soins*. Planté en pleine terre, il fleurit abondamment et n’exige en hiver qu’une température très-basse et peu d’humidité.”

* “Messrs. Veitch are also in possession of a third species of this genus, with purple flowers, found on the Andes of Caxamarca, at the height of 8000 feet. Its flowers are very much injured in the specimen before us, but appear to be smaller than in the species now figured (*B. æstuans*), and are arranged in a close panicle. The leaves are remarkable for being covered on the lower side with a bright brown wool, on which account it may be named THE CINNAMON *BEJARIA* (*Bejaria cinnamomea*).

“*Sp. CHAR.*—Branches downy and hispid. Leaves slightly downy above, covered beneath with thick ferruginous wool. Flowers in a close terminal panicle, with very woolly and hispid stalks and calyxes.”—*Gardeners' Chronicle*.



Orchis *Sp. & Sim.*

[PLATE 18.]

THE SPECKLED ODONTOGLOT.

ODONTOGLOSSUM NÆVIUM.)

A stove Epiphyte, from the ANDES OF NEW GRENADA, belonging to the Order of ORCHIDS.

Specific Character.

THE SPECKLED ODonTOGLOT.—Pseudo-bulbs ribbed. Leaves thin, lanceolate, narrowed to the base. Panicles spreading. Sepals and petals narrow, ovate-lanceolate, acuminate, wavy. Lip of the same form, with a slight tendency to become hastate, with the 2 teeth of the crest large, downy, somewhat 3-lobed. Processes of the column subulate, spreading.

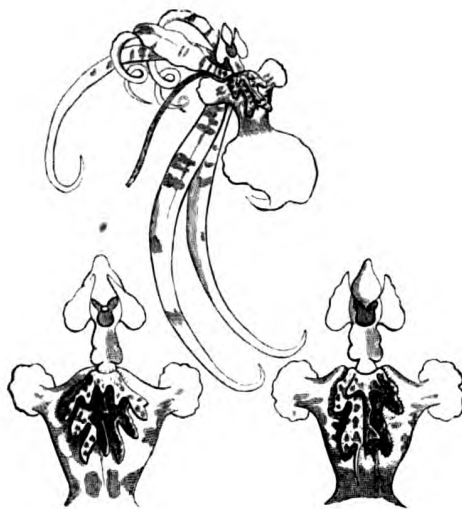
ODONTOGLOSSUM NÆVIUM.—Pseudo-bulbis costatis, foliis tenuibus lanceolatis basi angustatis, paniculâ diffusâ, sepalis petalisque angustis ovato-lanceolatis acuminatis undulatis, labello subconformi vix hastato: cristæ dentibus 2 grossis subtrilobis pubescentibus, columnæ cirrhis subulatis patulis.

IN Central America there exists a herd of Odontoglots the distinctions between which can hardly be settled, in the first instance at least, by dried specimens. They have all a similar habit, branching panicles, and white-lipped flowers spotted with crimson, with long narrow wavy divisions. At present there are only two in cultivation, viz. that now published and the Sweet Odontoglot (*Odontoglossum odoratum*) good plants of which we see are offered for sale by Mr. Linden at the modest price of two guineas each. In that plant the sepals and petals are yellow, while the lip alone, which is distinctly halberd-shaped, is white. In this, on the contrary, there is no yellow, but all the ground is pure white.

The plant before us was sent to England several years since by Sir R. Schomburgk, and was exhibited by Mr. Loddiges at one of the Spring meetings of the Horticultural Society in the present year. What appears to be the same species is No. 721 of Mr. Linden's herbarium of 1846, found by his collectors, Funck and Schlim, at the height of 6000 feet, at St. Lazaro and la Peña, in the province of Truxillo, and said to have a *yellow* lip spotted with crimson; a circumstance possibly connected with the colour of the fading flowers. Another supposed variety of this same plant was flowered by Messrs. Rollisson in June 1847, with rather larger blossoms: and in that particular it would appear as if these Odontoglots were subject to considerable differences, just as we have large and small states of the Ample Oncid (*Onc. ampliatum*), the Sphacelated Oncid, and even the Wentworth Oncid, of which last Sir Philip Egerton has lately flowered a magnificent form.

Pseudo-bulbs ovate, compressed, rather strongly but bluntly ribbed. Leaves narrowly oblong, tapering to the base, single on the pseudo-bulbs, shorter than the panicle. Flowers pure white, speckled everywhere with rich crimson, arranged in the garden plant in a narrow racemose panicle; in what appears to be the same thing wild they form a loose branched panicle of considerable size. Bracts very short, scale-like. Sepals and petals from an ovate base linear-lanceolate, acuminate, spreading equally and very wavy. Lip of the same form and colour, but shorter, downy, very slightly halberd-shaped near the base which is yellow, with the edges of the claw clasping the column. Teeth of the crest yellow, rather small, distinct, with about 3 unequal blunt lobes to each; downy. Column downy, narrowed to the base, with a pair of awl-shaped ears near the summit, below the anther-bed.

The resemblance of this to the Long-tailed Oncid (*O. phymatochilum*) is so great as to raise a question as to the distinction between Oncids and Odontoglots. We have often opened this discussion, and endeavoured to show how the two genera could be certainly separated; but it must be owned that, after all, there is something vague and unsatisfactory in the characters usually assigned to the genera. Species, indeed, have been indifferently placed in one or the other, or species stationed in the Oncids by one botanist have been referred to the Odontoglots by another. It will therefore be useful to explain that, in addition to any other distinction, this may be taken as unexceptionable, namely, that the Oncids have a short column, tumid at the base in front, as in the annexed cut of *Oncidium phymatochilum*, while the Odontoglots have a lengthened column without any such tumour.



The management of this, and all such plants, is precisely what is required for the Spotted Oncid (*O. maculatum*).

GLEANINGS AND ORIGINAL MEMORANDA.

132. *PASSIFLORA MEDUSÆA*. *Lemaire*. A stove species of unknown origin, with red and yellow flowers. Introduced by M. Van Houtte. (Fig. 59.)

One of the slit-leaved species, with a slender habit, and pretty starry flowers, the rays of which are orange the first day, and lilac or rose the next. According to M. Lemaire, who named it on account of "quelque ressemblance avec la tête de la fille de Phorcus, après que ses cheveux eussent été changes en serpents par Minerve," these flowers have a strong penetrating odour in which there is nothing disagreeable. But M. Planchon, whose nose seems to be differently constituted, asserts that this smell, which becomes perceptible at the period of the change of colour, is most disgusting.—*Flore des Serres*, 528.

133. *CUPHEA CINNABARINA*. *Planchon*. A half-shrubby plant from Guatemala, belonging to the order of



Loosestrifes (Lythraceæ). Flowers crimson or deep purple. Introduced by M. Van Houtte. (Fig. 60.)

M. Planchon thinks this different from the *C. Llavea*, long since known in gardens, distinguishing it by its paniced flowers, the colour of the anthers, and some other circumstances. It seems to be a good bedding plant. Two varieties are figured, one with rich crimson, the other with purple flowers.—*Flore des Serres*, 527.

134. LISIANTHUS PRINCEPS. *Lindley*. A greenhouse shrub, with very long scarlet, yellow and green flowers. A native of New Grenada. Belongs to the Gentianworts. Introduced by Mr. Linden. (Fig. 61.)

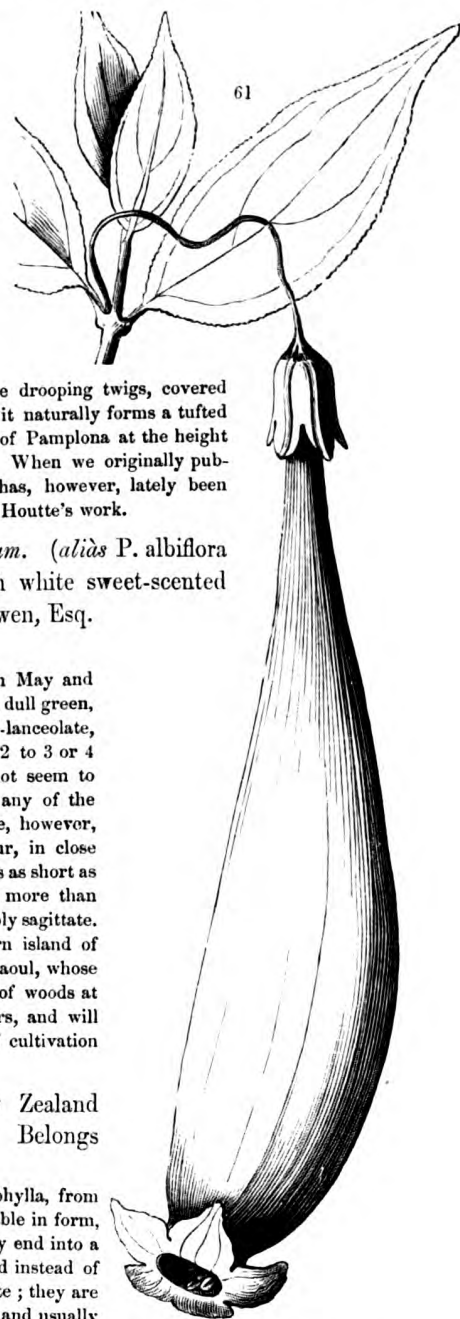
This must be one of the noblest plants in existence. Its long flowers, the size of the accompanying figure, are rich scarlet melting into yellow at either end, with an emerald green 5-lobed limb; they hang in clusters of four from the ends of the drooping twigs, covered with firm deep green opposite leaves. According to Mr. Linden, it naturally forms a tufted shrub 2 or 3 feet high, growing at the entrance of the table land of Pamplona at the height of 10,000—11,000 feet above the sea. *Flore des Serres*, t. 557. When we originally published this plant we knew it only from dried specimens. It has, however, lately been flowered by Mr. Linden, and is beautifully represented in M. Van Houtte's work.

135. PARSONSIA HETEROPHYLLA. *Allan Cunningham*. (alias *P. albiflora Raoul*.) A New Zealand twining evergreen shrub with white sweet-scented flowers. Belongs to the Dogbanes. Introduced by J. R. Gowen, Esq. (Fig. 62.)

A twining evergreen greenhouse plant, flowering abundantly in May and June. Stem covered with fine down, pale yellow; leaves leathery, dull green, slightly downy, wavy, very variable in form; linear-lanceolate, ovate-lanceolate, obovate, or even spatulate, often repand, varying in length from 2 to 3 or 4 inches. These singular diversities in the form of the leaves do not seem to be confined to any particular parts of the plant, but appear on any of the branches, and all intermingled; the short spatulate leaves are, however, most usual on short lateral shoots. Flowers pale cream-colour, in close one-sided naked panicles, rather sweet-scented. Calyx three times as short as the corolla. Corolla urceolate, with a revolute 5-cleft border, not more than a quarter as long as the tube. Anthers without any tails, but simply sagittate. According to Cunningham, this plant is common in the northern island of New Zealand, at Hokianga and Wangaroa, in shady woods. M. Raoul, whose *P. albiflora* can scarcely be different, found it on the outskirts of woods at Akaroa. It is rather a nice addition to our greenhouse climbers, and will probably prove hardy in the south of England. For purposes of cultivation it is much superior to *P. variabilis*.—*Journ. Hort. Soc.*, vol. v.

136. PARSONSIA VARIABILIS. *Lindley*. A New Zealand twining evergreen shrub, with white fragrant flowers. Belongs to Dogbanes. Introduced with the last.

A small twining greenhouse plant, very much like *P. heterophylla*, from which it differs in its leaves being shining and much more variable in form, the linear ones being far narrower, and often expanded at the very end into a circular blade. The flowers are not more than half the size, and instead of being contracted at the mouth or urceolate, are exactly campanulate; they are also far less hairy, by no means so numerous or densely arranged, and usually intermingled with long narrow leaves. It is a very curious thing, but possesses little claim to beauty. Its flowers are, however, much sweeter than in *P. heterophylla*.—*Journ. Hort. Soc.*, vol. v.



137. *ACINETA DENSA*. An epiphyte from Costa Rica, with a pendulous short close raceme of yellowish, somewhat fragrant flowers. Blossomed in July, in the nursery of Messrs. Lane and Son, of Berkhamstead. (Fig. 63.)

A. densa; racemo oblongo denso nigrofurfuraceo, bracteis ovario duplò brevioribus, labelli hypochilio concavo intus versus apicem dente obtuso tomentoso aucto, metachilii lobis lateralibus truncatis basi angustioribus appendice plano ovato subtridentato angulis posticis sinuatis, epichilio lineari-oblongo basi verrucoso, columnà dorso tomentosá.

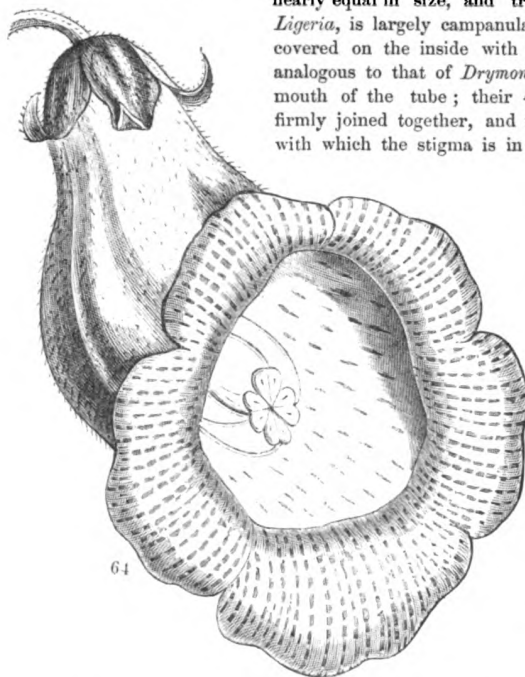
This is one of M. Warezewitz's collection, imported in 1849 by Mr. Skinner. It was found at Turialba, in Costa Rica, and is very near the Barker Acinete, notwithstanding the appearance of dissimilarity caused by its dense, not long and narrow, raceme. The flowers are pale yellow, slightly spotted externally with crimson. The lip is yellow at the point, spotted with broad blotches on the lateral lobes, deep crimson in the space between the lobes occupied by the appendage. As regards structure, this Close-flowered Acinete differs from the Barker *A.* in having a more concave hypochil, the tooth of which is not notched at the point; an entire epichil remarkably warted at the base, and the lateral lobes of the metachil not at all rounded, with the posterior angles of the intermediate appendage sinuous, and not extended into a long subulate process.

138. *CAMPANEA GRANDIFLORA*. *Decaisne*. (*alias* *Besleria* (?) *grandiflora* *Humboldt and Bonpland*; *alias* *Drymonia* (?) *grandiflora* *G. Don.*) From New Grenada. A stove Gesnerad, with the habit of *Gloxinia*. Flowers white, with crimson dots in lines. Introduced by Mr. Linden. (Fig. 64.)

M. Decaisne, who first published this genus, accompanied it by the following valuable observations, which we are the more desirous of transcribing, because they were published in a work little consulted by botanists. "This beautiful Gesnerad grows to a height of about $\frac{3}{4}$ of a foot; its cylindrical stem,



somewhat woody at the base, herbaceous above, is covered with long white hairs. The leaves are opposite, oval, more or less acuminate, sometimes oblique, soft, crenated at their edges, stalked and covered with long hairs like those which cover the branches. The flowers grow in a tuft at the end of a long axillary or terminal peduncle; each flower being supported on a pedicel furnished with a lanceolate bract. The calyx is herbaceous; its 5 divisions are oval, acuminate, nearly equal in size, and traversed by 3 nerves. The corolla, somewhat like that of *Ligeria*, is largely campanulate, and has 5 rounded lobes: the tube white, hairy outside, covered on the inside with red spots tolerably symmetrically arranged, is somewhat analogous to that of *Drymonia punctata*. The stamens, though included, appear at the mouth of the tube; their 4 glabrous filaments carry heart-shaped anthers, which are firmly joined together, and form at the mouth of the tube a sort of pale yellow star, with which the stigma is in contact. The disk, formed of 5 fleshy, obtuse yellow bodies, surrounds a roundish hairy ovary.



"We are indebted for this magnificent greenhouse plant to Mr. Linden, who raised it from seeds collected by himself near Santa Fé de Bogota. M.M. Humboldt and Bonpland, who had previously discovered it, described it some years ago under the name of *Besleria grandiflora*; but the genus *Besleria*, as regarded now, contains plants with flowers that are axillary, whose calyx has 5 thick leaflets, whose corolla is nearly regular, slightly thickened at the base, and whose ovary is surrounded by a cupuliform disk: *Besleria flava*, Lin.; *B. peduncularis*, Poepp.; *B. arguta*, Poepp.; and *B. elegans*, H. B. K., may serve as the type of this genus, into which have been crowded a number of plants which do not possess its characters. For this reason I have named many hothouse plants, improperly called *Besleria*, *Chrysothemis*. They have a campanulate calyx with 5 teeth, to the sinus of which correspond as many more or less prominent sides. Their corolla is nearly regular, with 2 projecting folds on its lower lip: their stamens are included, their stigmas are 2-lobed, and their disk is a notched fleshy gland. This genus at present includes 2 species, viz., *C. pulchella* Dne. = *Besleria pulchella* Lodd., *Bot. Cab.* 1028; *C. venosa* Dne. = *Besleria melissæfolia*

Hortul. Each has an orange yellow corolla, streaked with carmine, and enclosed in a calyx with 5 wings, like that of *Sinningia*.

"The confusion which I have noticed is not confined to *Besleria*, but extends to the genus *Columnnea*, which I reduce to those species the corolla of which reminds one of that of *Dircaea*; its long tube is parted into 4 lobes: the upper broad and notched, the lateral ones oval and turned back, the lower like a small pendent tongue. An exact idea of this structure can be obtained from *Columnnea Schiediana*. The other species belonging to this genus are, *C. Lindeniana* Brongniart; *C. flava* Mart. and Gall.; *C. crassifolia* Brongniart; *C. scandens* L.; *C. hirsuta* L.

"M. Lemaire has separated from this genus *Columnnea*, for the purpose of making a new genus, *Collandra*, the species described and figured in the *Bot. Mag.*, 4294, under the name of *Gesneria auro-nitens*. I have adopted the separation correctly pointed out in the *Flore des Serres* (vol. 3, May, 1847, p. 225), although I have not been able to discover by analysis that the hypogynous disk is constantly formed of unequal glands; but the separation of this plant from *Columnnea* was so natural, that it had been already made by Tussac and by M. Reichenbach; unfortunately, the names substituted by these gentlemen could not be retained. I unite then to the genus *Collandra*, *Alloplectus sanguineus*, as well as other species, which are easily distinguished by the extreme inequality presented by each pair of leaves, one of which, constantly very much reduced, reminds one of the disposition of these same organs in *Ruellia anisophylla*.

"Lastly, many species of this group have at the end of the limb of their leaves a large blood-coloured spot, from which they are called in the colonies *Yerba de la Doncella*. Such is *Collandra phœnicea* Dne. = *Dalbergaria phœnicea* Tuss. *Fl. Antill.* i. p. 141, t. 19. The names of *Dalbergaria* Tussac, or of *Tussacia* Reichenbach, proposed for this plant, cannot be adopted, inasmuch as they already apply to other plants; the name of *Collandra* ought therefore, I think, to be retained.

"The genus *Alloplectus* comprehends a great number of species, and many very different looking plants, which require to be grouped. The *Alloplectus*, properly so called, has a more or less bulging corolla, with a limb of five rounded nearly equal divisions; a calyx with deep segments, coloured, entire or toothed, and a disk reduced to a great notched gland. In this group I place *Alloplectus speciosus* Linden, Cat.; *A. pendulus* Endl. and Poepp., t. 205; *A. dichrous*, *Bot. Mag.* 4216; *A. Pinelianus* Hortul.; *A. glaber* Dne. (*Hypocyrtia glabra*, *Bot. Mag.* 4346); *A. strigulosus* Dne. (*Hypocyrtia strigulosa*, Hort.); *A. splendens* Dne. (*Hypocyrtia splendens*, Hort., et *Columnnea zebrina*, Hort.); *A. congestus* Dne.; *A. bicolor* Dne. (*Besleria bicolor*, Hook.); *A. concolor*, *Bot. Mag.* 4371; *A. cristatus* Mart. (*Besleria cristata*, L.). The

species with coriaceous, glabrous leaves, and in which the calyx is surrounded with large petaloid bracts, ought, I think, to constitute a natural group, for which I propose the name of *Macrochlamys*. This group comprehends *Macrochlamys Patrisii* Dne. (*Alloplectus Patrisii*, DC.); *M. involucratu*s Dne. MSS.; *M. Miquelii* Dne. (*Alloplectus Patrisii* Miq. non DC.); *M. speciosus* Dne. MSS.; *M. guttatus* Dne MSS., Linden, No. 547.

"The other genera of the tribe of Gesnerads, with a free ovary and named by Brown Besleria, are *Hypocyrtia*, with an hypogynous, cupule-shaped disk; *Episcia*, the type of which may be taken to be *E. bicolor*.—*Bot. Mag.* 4590; *Drymonia*, of which one species, *D. punctata*, is cultivated; *Nematanthus*, figured in the *Bot. Mag.* 4080; and in Paxton, under the wrong names of *Columnnea splendens grandiflora*, vol. x.; *Tapeinotes*; and *Trichanthe*, of which we have no species in our gardens."

According to M. Van Houtte, who is the sole possessor of this fine species, it grows perfectly in a greenhouse in a mixture of leaf-mould and loam. M. Planchon mentions a second *Campanea*, with sea-green flowers, speckled with purple, and current under the name of *Gloxinia tigridia*, concerning which we have no further information.



139. ABUTILON INSIGNE. *Planchon*. A greenhouse shrub, with large round heart-shaped leaves,

and pendulous flowers with broad rich crimson veins, almost covering a white ground. A Mallowwort from New Grenada. Introduced by Mr. Linden. (Fig. 65.)

A very fine species, with the habit of the other kinds now so common in gardens, but with large bell-shaped flowers remarkable for the very deep rich crimson of the veins, which scarcely leave any white perceptible between them or on the edges. It is said to be a native of the cold regions of the Andes of N. Grenada, and to succeed perfectly in the open air in summer.—*Flore des Serres*, t. 551.

140. ACROPERA ARMENIACA. An epiphyte from Nicaragua, with rich apricot-coloured flowers in pendent racemes. Belongs to the Orchids. Flowers in July. Introduced by M. Warzewitz. (Fig. 66.)



A. armeniaca; racemo laxo multifloro, sepalis apiculatis lateralibus obliquis apice rotundatis, petalis liberis columnâ duplò brevioribus, labello calceato carnosò apice libero ovato plano acuminato intus pone basin cristâ tuberculatâ aucto.

For this curious and really pretty species we are indebted to Sir Philip de Malpas Grey Egerton, Bart. It differs from the *A. Batemanni* in its petals being much shorter than the column, and perfectly distinct from it, and in the point of the lip being undivided, free and flat. There is nothing peculiar in its habit; but its large flowers, coloured like the sunny side of a ripe apricot, are very remarkable.

141. CAMPYLOBOTRYS DISCOLOR. *Lemaire*. A handsome dwarf half-shrubby plant, belonging to Cinchonads. Flowers rich red in axillary clusters. Introduced by M. Van Houtte, of Ghent. (Fig. 67.)

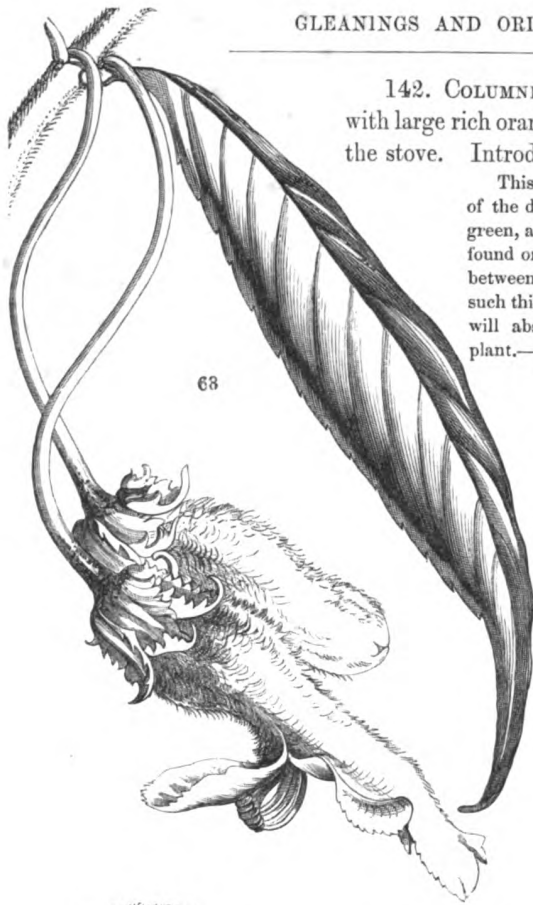
This appears to be a dwarf soft-wooded plant, flowering freely when only a few inches high, and not exceeding a foot in stature. The stems are crimson-purple; the leaves have deep rose-coloured stalks, a satiny shining surface raised between the lateral veins, and a rich tint of purple on the under side. The flowers are said to form a short



nodding spike, placed on an axillary crimson stalk 2 or 3 inches long. The corolla is a deep rich red.—*Flore des Serres*, t. 427.

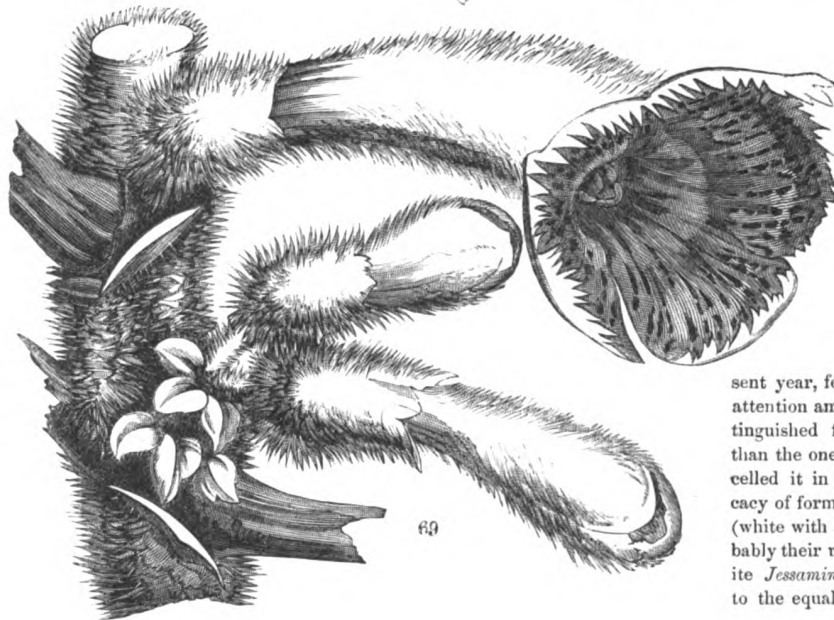
142. *COLUMNEA AURANTIACA*. *Decaisne*. A climbing Gesnerad, with large rich orange-coloured flowers, from New Grenada. Requires the stove. Introduced by Mr. Linden. (Fig. 68.)

This must be one of the handsomest of its race, the flowers being of the deepest and richest orange colour; the calyx pale yellowish green, and the stalk richly spotted with purple at the point. It was found on the Andes of Merida, in a temperate region, forming a zone between 9000 and 10,000 feet of elevation above the sea. Like all such things, it grows well upon a lump of nearly rotten wood, which will absorb water like a sponge, and give it back gradually to the plant.—*Flore des Serres*, t. 552.



143. *ARCTOCALYX ENDLICHERIANUS*. *Planchon*. A stove Gesnerad, with a shaggy brownish-black stem, and long yellow sessile flowers. From Mexico. Introduced by M. Abel, of Vienna. (Fig. 69.)

A remarkable plant said to have been found by the traveller Carl Heller, in the forests near Mirador, in the province of Vera Cruz, at the height of 2000 feet above the sea. It has the habit of an *Alloplect*. The leaves are fleshy, oval, unequal at the base, doubly serrated, and shaggy with long hairs on the veins of the under-side. The flowers are represented as springing from various parts of the surface of the stem, and not from the axils of the leaves exclusively. The shaggy calyx is nearly smooth at its upper end and glaucous. The corolla is golden yellow, with a regularly lacerated 5-lobed limb, streaked inside with lines of large crimson spots.—*Flore des Serres*, 546.



144. *RHODODENDRON JASMINIFLORUM*. *Hooker*. A greenhouse shrub, with fragrant white flowers. Native of Malacca. Introduced by Messrs. Veitch & Co. (Fig. 70.)

“At the first, and truly splendid, Exhibition of flowers at the Chiswick Gardens of the present year, few plants excited greater attention among the visitors most distinguished for taste and judgment, than the one here figured. Many excelled it in splendour; but the delicacy of form and colour of the flowers (white with a deep pink eye), and probably their resemblance to the favourite *Jessamine* (some compared them to the equally favourite *Stephanotis*),

attracted general notice. So unlike, indeed, are they to the ordinary form of *Rhododendron* blossoms, that the 'Gardeners' Chronicle,' in recounting the prizes of the day, seemed to imply that this was probably no *Rhododendron* at all!" It is a native of Mount Ophir, Malacca; elev. 5000 feet, and seems a ready flowerer. Branches bare of leaves below, and knotted where they had been inserted. Leaves crowded towards the upper part of the branches, lowermost ones subverticillate, on short petioles, obovate-oblong, rather acute, glabrous, nearly coriaceous. Umbel terminal, many-flowered. Peduncles 1-flowered, short, with small reddish bracteas at the base, and, as well as the very small, shallow, obscurely 5-lobed calyx, lepidote. Corolla salver-shaped, white, slightly tinged with rose below the limb; the tube two inches long, straight, scarcely gibbous at the base; the limb spreading, of five obovate wavy lobes, almost exactly equal. Stamens 10. Filaments filiform, downy, as long as the tube. Anthers red (forming a red eye, as seen at the mouth of the white corolla). Ovary oblong-cylindrical, lepidote, 5-celled, glandular at the base. Style rather shorter than the stamens, filiform, downy. Stigma dilated, obtuse, green.—*Botanical Magazine*, t. 4524.

We do not think that the "Gardeners' Chronicle" expressed an opinion adverse to this plant being a *Rhododendron*. And we can answer for this, that any observation which was made had no relation to the mere form of the corolla. There are points connected with the alpine Indian *Rhododendrons* which have attracted no attention, and yet deserve serious examination. What, for instance, is the meaning of the *continuation* of the style and ovary, instead of the usual *articulation*? And what is the equivalent among true *Rhododendrons* of the epidermoidal glands, capped with scurfs, which lie everywhere among the stomates of this and some other *Rhododendrons*? These matters are of higher interest than the comparative length of the tube of a corolla.



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