

EDWARDS'S
BOTANICAL REGISTER:

OR,

ORNAMENTAL FLOWER-GARDEN

AND SHRUBBERY:

CONSISTING OF



COLOURED FIGURES OF PLANTS AND SHRUBS,

CULTIVATED IN BRITISH GARDENS;

ACCOMPANIED BY THEIR

History, Best Method of Treatment in Cultivation, Propagation, &c.

CONTINUED

By JOHN LINDLEY, Ph. D. F.R.S. L.S. AND G.S.

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&c. &c. &c.

New Series.

VOL. VII.

OR VOL. XX. OF THE ENTIRE WORK.

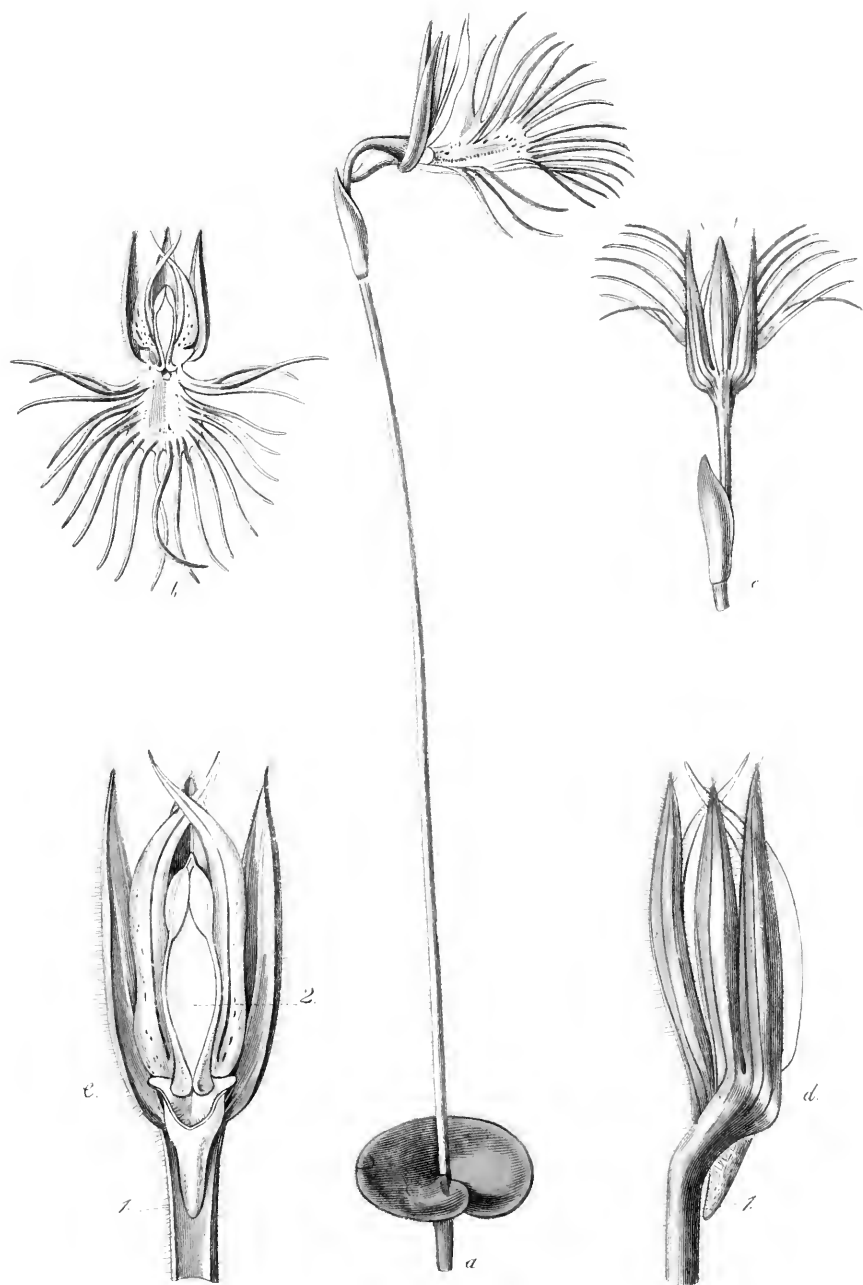
—viret semper—nec fronde caduca
Carpitur.

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Vol. 20



BARTHOLINA* pectinata.

*Pectinated Bartholina.*LIBRARY
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GYNANDRIA MONANDRIA.

Nat. ord. ORCHIDEÆ. § Ophrydeæ Lindl. (Introduction to the natural system of Botany, p. 262.)

BARTHOLINA R. Br.—*Perianthium* ringens. *Calyx* basi tubulosus, secundus, laciniis æqualibus. *Petala* sepalis parallela, falcata, infernè labello subconnata. *Labellum* calcaratum, explanatum, patens, 3-lobum: lobo medio multifido lateralibus trilobis: laciniis omnibus filiformibus. *Anthera* erecta, elongata, lobis parallelis cucullatis; *cuculli* distincti, basibus valvularum inflexis absconditi. *Pollinia* parva, caudiculis longissimis canaliculatis, glandulis intra cucullos inclusis.—Herba pusilla, uniflora, unifolia, hirsuta, radicibus tuberculiformibus.

Bartholina pectinata. R. Br. in Hort. Kew. 5. 194. Smith in Rees append. Bartholina Burmanniana. Ker in Brande's journal, 4. 204. t. 5. fig. 2.

Orchis pectinata. Willd. sp. pl. 4. 11.

Orchis Burmanniana. Linn. sp. pl. 1334. Swartz in Web. et Mohr Archiv. 1. 55. t. 3.

Arethusa ciliaris. Linn. suppl. 405.

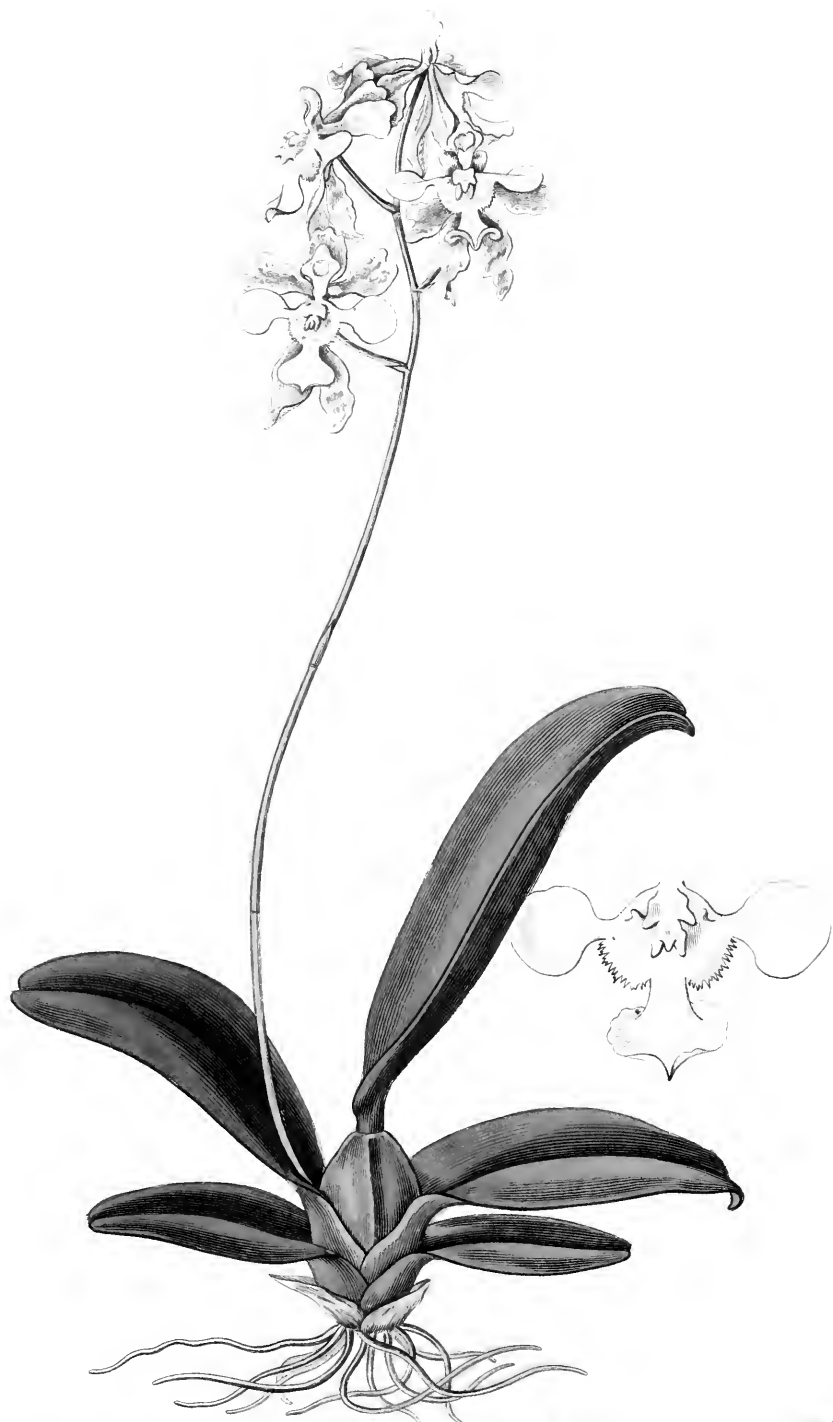
Folium reniforme, lobulis baseos imbricatis, pilosum ut omnes partes virides. Caulis vix palmaris, erectus, fuscus, teres, uniflorus. Bractea unica, ovata, cucullata, ovarium tegens. *Calyx* basi tubulosus, viridis, laciniis secundis, erectis, parallelis, lanceolato-linearibus. *Petala* falcata, acuminata, alba, violaceo colore tincta, supra antheram curva, basi cum labello levissimè connata, glabra. *Labellum* unciam latum, medio viride, basi calcare brevi conico pubescente cavo præditum, laminâ explanatâ, circumscriptione orbiculari, trilobum; laciniis lateralibus trilobis, intermedio multifido, omnibus violaceis filiformibus. *Anthera* erecta, loculis elongatis, basi contiguis: suturis ob torsionem valvularum basi approximatis; cucullis distinctis, sub basibus valvularum exteriorum antheræ absconditis. *Pollinia* parva, aurantiaca; caudiculis longissimis fulvis linearibus canaliculatis; glandulis parvis in cucullis suis latentibus.—Obs. foramen, v. areola transparens muco repleta in cucullo utroque adest sub glandulis. Stigma areola madida, oblonga, ad basin columnæ, ubi calcar ab ovario separatur.

* Dedicated by Dr. Brown to the memory of the great Danish anatomist and physiologist Thomas Bartholin, whose various writings relating to plants, in the old Copenhagen Transactions, entitle us to adorn the history of the science with his truly illustrious name.—Smith.

We believe this to be, with the exception of a very imperfect representation in Brande's Journal, the first figure from the live plant that has been published of this rare and curious species, which appears from the *Hortus Kewensis* to have been introduced so long ago as 1787, but which we never met with till we were favoured with it in August 1832 by the Messrs. Rollisson, of Tooting. It is a native of the Cape of Good Hope, where it was found by Thunberg on the sides of hills in Roode Sand, and near Cape Town, flowering in October, November, and December.

We presume that this, like all the Cape Orchideous plants, is incapable of being cultivated permanently by any means hitherto discovered; for the roots, although when first imported they flower, afterwards disappear. They should be planted in sandy loam, and kept in as light a greenhouse as possible; for it is probable that the reason of their disappearing is the want of light during their growing season in this country.

In the accompanying figures *a* is the plant of its natural size; *b*, a flower seen in front; *c*, the same viewed from behind; *d*, the same shewn in half profile, the lip being cut away, 1. is the spur; *e*, a front view of the petals and anther, 1. the spur, and 2. the anther: the two last figures are magnified.



Sub by S. Fargues 1899. Parakaly. Nov. 1 1904

ONCIDIUM* ciliatum.

Ciliated Oncidium.

GYNANDRIA MONANDRIA.

Nat. ord. ORCHIDÆE Juss. § Vandæe. (*Introduction to the natural system of Botany*, p. 262.)

ONCIDIUM.—*Suprà*, vol. 13. fol. 1050.

O. ciliatum; pseudobulbis ovatis compressis monophyllis, foliis complicatis lineari-oblongis obtusis scapo erecto flexuoso apice paucifloro pluries brevioribus, sepalis undulatis lineari-oblongis obtusis: anteriore bilobo, petalis obovatis crispis, labello æqualiter tripartito sepalis brevioribus: laciniis obovatis sinibus suis latissimis fimbriatis, crista 5-corni cornubus posticis divergentibus anticis collateralibus tuberculis quibusdam interjectis, columnæ alis ovatis acutis. *Lindl. Gen. et Sp. Orchid. Plants*, p. 200.

This plant is probably not uncommon in some parts of Brazil. It originally reached the Kew Garden, where it flowered in February 1819, at which time a sketch of it was made by Mr. Bauer; it was afterwards obtained by Mr. Cattley, who had it for several years. Mr. Knight's rich collection in the King's Road supplied the specimen from which our figure was made, in October last: about the same time Mr. Booth sent us a drawing and specimen from Sir Charles Lemon's Garden; and two or three patches of it were lately received by the Horticultural Society from Brazil.

It is very nearly related to *Oncidium barbatum*, from which it may, however, be certainly distinguished by all the divisions of the lip being equal, and by its very dwarf

* See fol. 1542.

habit. In colour its flowers vary, sometimes being yellow spotted with red, and sometimes the brownish orange of the accompanying figure.

It will only grow in a hot damp stove; but succeeds best if tied to a piece of the branch of a tree. The following is Mr. Booth's account of the species:—

“This pretty little species of *Oncidium* has been cultivated for the last three years in the collection of Sir Charles Lemon, Bart., M.P., at Carclew, Cornwall, where it has annually, in November, produced its interesting and curiously-formed flowers. I do not know who has the merit of bringing it to this country, but believe it to have been received through some of the officers of his Majesty's Packet Establishment at Falmouth.

“*Pseudobulbs* ovate, compressed, one-leaved. *Leaves* slightly complicate at the base, oblong-obtuse, about 2 inches long and half an inch broad, with a little hook at the point. Their colour is a rich shining green, excepting where they are connected with the bulbs, which is brownish red. *Scape* nearly erect, small and round, from 4 to 6 inches high, and thickly covered with brownish spots; usually two-flowered. *Sepals* much undulated, brownish green, the two lower ones pointed, the three upper emarginate and rather shorter than the rest. *Labellum* bright yellow, and about the length of the upper sepals. The lower division is reniform and unguiculate; the other two are oblique, broad at their extremity, and somewhat crescent-shaped. The fleshy part in the centre of the flower is tuberculated, and beautifully marked with blood-red spots. The lower edge is finely ciliated. The column in front is of the same colour as the labellum; behind and at its base it is marked with deep red.”



* CYCLOBÓTHRA alba.

White Cyclobothra.

HEXANDRIA TRIGYNIA.

Nat. ord. LILIACEÆ, Juss. (Introduction to the Natural System of Botany, p. 279.)

CYCLOBOTHRA Sweet. *Flores* nutantes ventricosi v. campanulati. *Sepala* glabra, acuta. *Petala* majora et dissimilia, barbata, infra medium fovea glabra nectarifera altè impressa extus gibbosa. *Stigmata* 3. *Capsula* triptera, coriaceo-membranacea. *Semina* serie simplici affixa, angulata.——*Bulbi tunicati* Californici et Mexicani, foliis *planis acuminatis*.

C. alba; umbellâ 2-3-florâ, pedunculis bracteis brevioribus, floribus oblongis inflatis, petalis ovatis obtusissimis margine nudiusculis foveâ leviter impressâ sepalis ovato-lanceolatis duplò longioribus. *Bentham in Hort. Trans. n. s. vol. 1, p. 413, t. 14, fig. 3.*

Calochortus albus. Douglas in litt.

Caulis teres, erectus, glaber, versus apicem ramosus, 3-4-florus. Folia glauca; inferius linear-lanceolatum caule sæpe altius, basi sub terra brevissime vaginans; superiora multò breviora, pedunculos excedentia. Flores solitarii, v. 2-3, oblongi, ventricosi, nutantes, ovi columbini magnitudine. Sepala viridilutea, ovato-lanceolata, acuminata, glabra, petalis duplò breviora. Petala alba, oblonga, concava, obtusa, per omnem faciem sparsè barbata, sed pilis marginalibus inflexis vix ciliata; foveâ nectariferâ flavâ pilis absconditâ, extus valdè gibbosâ. Stamina 6, hypogyna; antheris linearibus introrsis. Ovarium oblongum, tripterum. Stigmata tria, recurva.

A Californian bulbous plant, introduced by the Horticultural Society, in whose Transactions it has recently been published by Mr. Bentham. Along with the following species, and some other plants from the same country, it forms quite a new class of Horticultural objects, of great interest; representing, at midsummer, which is their time of flowering, the Fritillaries and Tulips of the spring.

They are probably quite as hardy as Tulips, like which they should be treated; unless it should prove that their bulbs are capable of living all the year round in the open

* From κύκλος a circle, and βόθρος a pit, in allusion to the circular depression from which the petals distil honey.

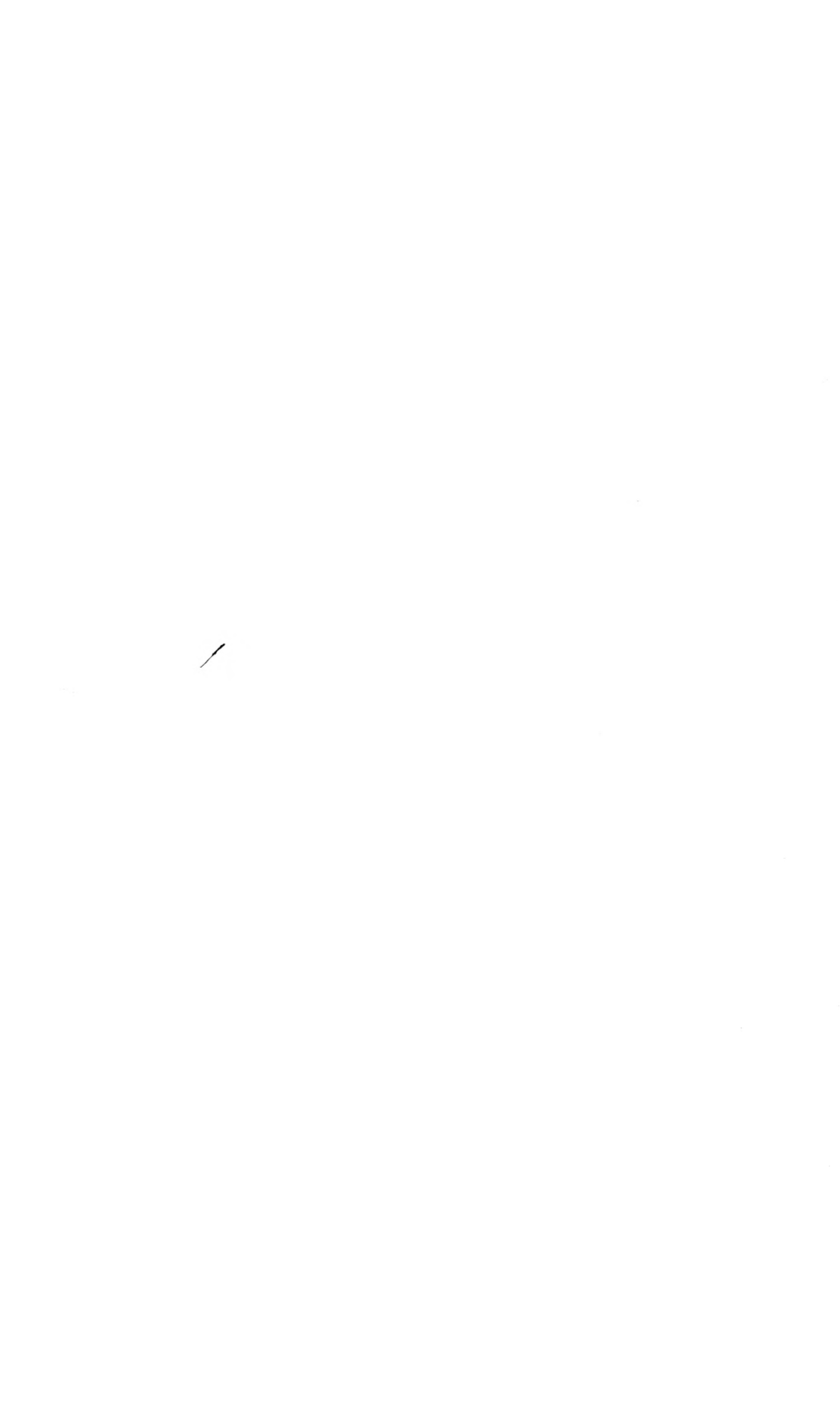
ground; a property we can hardly anticipate, considering how dry and mild a climate is that of California compared with England. In the Garden of the Horticultural Society, they have been planted in the open border, in a light loamy soil, in a cold frame, where they grew with considerable vigour, flowered beautifully, and produced some abundance of seed.

Mr. Bentham, in his remarks upon these plants in the Horticultural Transactions, observes — that “this species resembles very much the succeeding one, but the flowers are larger, the petals both longer and broader, of a whitish colour, marked towards the centre with a shallow pit, covered with inflected hairs, glabrous below it, above it slightly covered with scattered hairs, and almost naked at the border, where the few hairs that straggle so far are turned inwards, and by no means form a fringe as is the case in *C. pulchella*.”

He also observes, that “the *Calochorti* of Douglas with pendulous flowers, including the *C. elegans* of Pursh, belong certainly to the genus *Cyclobothra* established by SWEET, (British Flower Garden, 3, t. 173,) for the *Fritillaria barbata* of Kunth, and are nearer allied to *Fritillaria* than to *Calochortus*, but sufficiently distinct from either.”

To this we may add that the *Cyclobothras* may not only be known by their nodding flowers, but also by the presence of a deep honey-pit a little below the middle of the petals, whence the latter have a humped appearance externally; while, on the contrary, *Calochortus* is destitute of the honey-pit, in room of which is only a slight discolouration; the seeds also are different in the two genera: in *Calochortus* they are flat and smooth; in *Cyclobothra* they are roundish and angular. The generic character of *Calochortus* may therefore be thus expressed:—

CALOCHORTUS, *Pursh*.—*Flores* erecti, explanati, patentes. *Sepala* glabra, convoluta-acuminata. *Petala* majora, rotundata, plana, medio barbata, basi maculata, glabra. *Stigmata* 3. *Capsula* triangularis, coriacea. *Semina* serie simpliciter affixa, plana, testâ suberosâ—*Bulbi tunicati* Californici, foliis convoluta-acuminatis, rigidis.





* CYCLOBÓTHRA pulchélla.

Deep-yellow Cyclobothra.

HEXANDRIA TRIGYNIA.

*Nat. ord. LILIACEÆ. Juss. (Introduction to the Natural System of Botany, p. 279.)**CYCLOBOTHRA. Suprà, fol. 1661.*

C. pulchella ; umbellis 2-3-floris, pedunculis bracteis brevioribus, floribus globosis, petalis ovatis obtusis serrulato-fimbriatis foveâ valdè exeatâ extus callosâ, sepalis ovato-lanceolatis acuminatis vix brevioribus. *Bentham in Hort. Trans. n. s. vol. 1, p. 415, tab. 14, fig. 1.*

Calochortus pulchellus. Douglas in litt.

Caulis erectus, teres, glaber, subcorymbosus, apice magis ramosus quam in præcedente, et humilior. Folia plana, acuminata, minus glauca; superioribus brevioribus. Pedunculi bracteis foliaceis breviores, bini ternive. Flores globosi, minores quam in præcedente, lutei. Sepala virescentia, viridi-striata, petalis paululum breviora, acutissima. Petala ovata, barbata, fimbriata, basi glabra: foveâ nectariferâ pilis absconditâ.

We doubt whether this plant likes the climate of England so well as the last; for although it grew with apparently perfect health, flowered freely, and ripened its seeds under the same circumstances as *Cyclobothra alba*, yet the specimens which were produced could not be compared with the wild ones sent home by Mr. Douglas for beauty. The latter consist of many-flowered and rather dense corymbs of flowers; but the cultivated plant hardly exceeded *C. alba* in the number of its blossoms.

Speaking of *C. alba*, we adverted to the nature of the differences that exist between *Cyclobothra* and *Calochortus*. Let us use the present opportunity as a means of explaining the affinity which the two genera bear to other plants.

* See folio 1661.

We have been always accustomed to refer them to *Liliaceæ*, on account of their manifest resemblance to *Fritillaria*, and general accordance in other respects; and we scarcely expected that a different opinion could be entertained, notwithstanding the difference between the calyx and corolla, which seemed to point out a relationship to *Commelineæ*; all that we have ever considered that circumstance to indicate, was at most a tendency on the part of *Liliaceæ* to pass into *Commelineæ*. We find, however, in the last volume of Römer and Schultes' *Systema Vegetabilium*,—a work which, now that it is in the hands of Professor Schultes the younger, has become a most valuable collection of Botanical facts, notwithstanding that it has the misfortune to be arranged, in obedience to the will of the booksellers, according to the obsolete system of Linnæus. In this most useful work we find *Calochortus* referred to *Melanthaceæ*. For a long time we were at a loss to know how this singular opinion could have been formed; and we once thought that it must have arisen from the three parted style which is found both in *Calochortus* and *Cyclobothra*. But upon a more attentive consideration, we ascertained that the bulbs of all the species were described by Prof. Schultes, who appears to have seen none of them, as solid. The old expression *bulbus solidus*, which is a contradiction in terms, and which in fact means *rhizoma*, is employed upon the authority of Mr. Douglas, who inadvertently used in his descriptions the term *bulb solid*, instead of *bulb tunicated*; a technical difference which Mr. Douglas, who was little versed in the minutiae of botanical phraseology, might naturally misunderstand. Now every Botanist must know that this discrepancy, however unimportant it may appear to the uninitiated, does in fact lead to most material errors in judging of affinity: for no Liliaceous plant has, or is likely to have a *bulbus solidus*; while it is the common character of *Melanthaceæ*, which are equally hexandrous. We therefore conclude that it is this that has led Professor Schultes to refer the plants to *Melanthaceæ*, and that, now he has become aware of his error, he will agree with us in referring them, without any doubt, to *Liliaceæ*.

As this genus is likely to become extensively cultivated, and as collectors will doubtless be glad to know where to

seek for un-introduced species, the following list may be useful.

- *1. *C. pulchella*. *Bentham*, *t.* 1662——California.
- *2. *C. alba*. *id.* *t.* 1661——California.
- 3. *C. paniculata*; floribus solitariis, pedunculis bracteis subæqualibus, floribus oblongis, petalis angustis obtusis subciliatis dimidiâ superiore calvis foveâ leviter excavatâ sepalis ovato-lanceolatis acuminatis duplò longioribus. —Præcedenti affinis; caule, paniculâ, floribus solitariis, pedunculis bracteis longioribus, alabastris angustis, cæterisque satis distincta. Flores albi.——
In California Douglas, (*hab. s. sp.*)
- 4. *C. elegans*. *Bentham*, *l. c.*—*Calochortus elegans*. *Douglas*.——In California Septentrionali.
- 5. *C. flava*.—*Calochortus flavus*. *Schult. fil.*—*Fritillaria barbata*, *Kth.*——
In Mexico
- *6. *C. lutea*; *nob. t.* 1665.——*Cyclobothra barbata*, *Sweet*.——In Mexico.
- 7. *C. pallida*; *nob.*—*Calochortus pallidus*. *Schult. fil.*——In Mexico.
- 8. *C. fusca*; *nob.*—*Calochortus fuscus*. *Schult. fil.*——In Mexico.
- *9. *C. purpurea*. *Sweet*.—*Calochortus Bonplandianus*. *Schult. fil.*——*Fritillaria purpurea*. *Kth.*——In Mexico.

Of the above, those only marked * are, or have been in this country.



* CYCLOBÓTHRA lútea.

Pale Yellow Cyclobothra.

HEXANDRIA TRIGYNIA.

*Nat. ord. LILIACEÆ, Juss. (Introduction to the Natural System of Botany, p. 279.)**CYCLOBOTHRA. Supra, fol. 1661.*

C. lutea; caule bulbifero, pedunculis bracteis longioribus, floribus solitariis campanulatis, petalis rhombo-ovatis acuminatis apice calvis sepalis calvis concoloribus longioribus.

Cyclobothra barbata. Sweet Fl. Gard. t. 273.

Caulis *gracilis, subsimplex, pedalis et ultra, lætè viridis, in axillis foliorum bulbifer.* Flores *solitarii, nutantes, pedunculis bracteis longioribus.* Sepala *lutea, ovata, acuminata, intus glabra, nullo barbæ vestigio.* Petala *ovata subrhomboidea, apice angusta, facie barbata, sub medio joveata extus gibbosa.*

This pretty species was obtained some years since from Mexico by Mr. Tate, and has now become dispersed through many collections. It appears to grow freely in a light mixture of peat and loam, and to require no other protection than a good pit.

It represents a form of the genus in which the segments of the flower curve outward, instead of inward, and which consequently approaches still more nearly to *Fritillaria* than the kinds previously figured. If this difference were always accompanied by the property of bearing little bulbs in the bosom of the leaves, as happens in this and some others, it might perhaps be considered of generic importance. But it seems that *C. fusca* has no bulbs, although agreeing otherwise with the Mexican *Cyclobothras*; so that no ground can be said to exist for their separation.

When this plant was first introduced, it was supposed to be the same as the *Fritillaria barbata*, published in Mr. Kunth's account of the plants discovered by Humboldt and Bonpland; but we learn from the last volume of Römer and Schultes that that species has a bearded horse-shoe mark on its sepals, no trace of which can be found in the plant now figured. We are therefore unwillingly obliged

* See folio 1661.

to amend the name by which this has hitherto been known ; a name which would be untenable, even if *Fritillaria barbata* were the same plant, because it is equally applicable to every species of the genus.

Among Mr. Douglas's unpublished Californian plants are three related to *Cyclobothra*, a short account of which may not be unacceptable to our botanical friends ; they are all *Fritillaries*, and of remarkable appearance. The first has very much the aspect of *F. verticillata*, but the leaves are not cirrhose, and the flowers are greenish purple, spotted like *F. Melcagris*, growing in long racemes ; this may be called *F. mutica*. The second, *F. liliacea*, is closely allied to *F. alba* of Nuttall, from which it differs in its broader leaves, and differently shaped capsule ; it is a most remarkable plant, with the habit of a Lily ; its flowers are apparently pale yellow, narrow at the base, and not unlike those of *Lilium pudicum*. The third, which may be called *F. biflora*, resembles *F. tulipifolia* in habit, but differs in its two-flowered stem, and numerous leaves which are either alternate or verticillate. The two first of these would be great additions to our gardens, if they could be procured ; the last is a mere botanical curiosity, and chiefly interesting as shewing, along with *F. mutica*, how nearly the Flora of North West America, even in so low a latitude as California, approaches in some respects to that of Northern and Temperate Asia.

The distinctive characters of the three species may be expressed in technical language, as follows :—

Fritillaria mutica ; caule basi longè nudo apice racemoso multifloro, foliis inferioribus verticillatis a lata basi longè angustatis ecirrhosis, floribus secundis tessellatis nutantibus basi obtusis bracteis triplo brevioribus, pedunculis brevissimis recurvis.—*In California, cum 2 sequentibus legit Douglas.*

Fritillaria liliacea ; caule stricto apice racemoso basi folioso, foliis oblongo-lanceolatis inferioribus verticillatis superioribus alternis, floribus secundis concoloribus cernuis basi angustatis, pedunculis erectis bracteis longioribus, capsulâ oblongâ apice rotundatâ basi muticâ.

Fritillaria biflora ; caule basi nudo apice bifloro, foliis verticillatis alternisve oblongo-lanceolatis versus apicem caulis deficientibus, floribus pendulis subcylindraceis concoloribus, pedunculis bracteis brevioribus.



* ECHITES stelláris.

Star-flowered Echites.

PENTANDRIA MONOGYNIA.

Nat. ord. APOCYNÆ. Juss. (*Introduction to the Natural System of Botany*, p. 210).

ECHITES Linn. *Corolla* hypocrateriformis, fauce tuboque esquamatis, laciniis limbi quinquepartiti inæquilateris. *Stamina* inclusa. *Antheræ* sagittatæ, medio stigmati cohærentes, lobis posticis polline vacuis. *Ovaria* 2. *Stylus* 1, filiformis. *Squamæ* 5, hypogynæ. *Folliculi* graciles.——Frutices volubiles (Americæ meridionalis). *Folia opposita, ciliis interpetiolaribus glandulosis*. Pedunculi *interpetiulares, multiflori*. Flores *ut plurimum speciosi, albi, lutei et purpurei*. R. Br. in Wern. Trans. I. 59.

E. stellaris; tota pubescens; racemis corymbosis longè pedunculatis horizontalibus v. recurvis, foliis ovato-oblongis acuminatis, corollæ tubo basi ventricosco conico medio constricto fauce stellatim coloratâ, caule volubili.

Caulis *volubilis omnesque aliæ partes, salvis corollâ calycisque laciniis, pilis brevibus densis mollibus holosericeus*. Folia *ovato-oblonga, acuminata, brevi-petiolata, supra atro-viridia, subtus lutescentia; inter folia adsunt, stipularum loco, ciliæ breves rectæ parum pilosæ, deciduæ*. Racemus *multiflorus, corymbosus, umbellam referens, longè pedunculatus, horizontalis; pedicellis sæpè refractis v. tortuosis*. Calyx *5-partitus, laciniis ovatis acuminatis; inter calycem et corollam adsunt squamæ 5, breves, sepalis oppositæ, deltoideæ, 5-partitæ glabræ, cum squamis hypogynis alternantes*. Corolla *odorata, carnea: tubo medio constricto, basi ventricosco glutinoso, apice infundibulari; fauce notatâ stellâ lutâ, 5-lobâ, purpureâ, ochraceo colore limbatâ; laciniis contortis inæquilateris rotundatis*. *Antheræ supra stricturam tubi insertæ, cartilagineæ, acuminatæ in conum supra stigma conniventes, intra tubum omnino inclusæ*. *Squamæ hypogynæ 5, oblongæ, rotundatæ, sepalis alternæ*. Ovarium *subrotundum*. Stylus *filiformis*. Stigma *incrassatum, basi truncatum, apice abruptè acutatum*.

A tender stove climber, introduced from Rio Janeiro to the Horticultural Society by the Hon. Robert Gordon. In the month of August, its flowers perfume the part of the hothouse in which it is placed, with a delightful smell of

* The Latin name of the Birthwort, one of the twining species of Aristolochia. Its meaning being "serpentine," from *εχis* a snake, Linnæus applied it to the present twining genus.

Primroses. It grows readily in peat and loam, but is scarcely to be propagated except by cuttings of the root.

Although this is probably not of uncommon occurrence in Brazil, it appears to have been hitherto undescribed ; the obscure *E. pubescens* of Willdenow, to whose character it nearly approaches, having heart-shaped leaves. We have named it with reference to the coloured eye of the corolla, which, being deep rosy red in the centre, with five starry lobes, bordered with a sort of orange-yellow, gives a striking appearance to the flowers.

It belongs to the genus in its strictest sense, as defined and most skilfully limited by Dr. Brown. In the dissections in the accompanying plate, figure 1 represents the style and stigma, and the five scales that surround the ovary ; fig. 2, a perpendicular section of a part of the calyx and corolla, shewing the relative position of the ovary, style, stigma, anthers, and contracted part of the tube of the corolla.



* *ISMÈNE* Amancaés ; *var. sulphúrea*.

Sulphur-coloured Ismene.

HEXANDRIA MONOGYNIA.

Nat. ord. AMARYLLIDÆ. R. Br. (Introduction to the Natural System of Botany, p. 259).

ISMÈNE Herbert. *Scapus solidus. Corona staminifera. Tubus curvatus, cylindricus. Filamenta brevia, tria in coronam deflexa, tria inferiora implexè conniventia. Semina carnosa, rotunda, viridia.——Plantæ Americanæ foliis autumnò depereuntibus. Herbert in litt.*

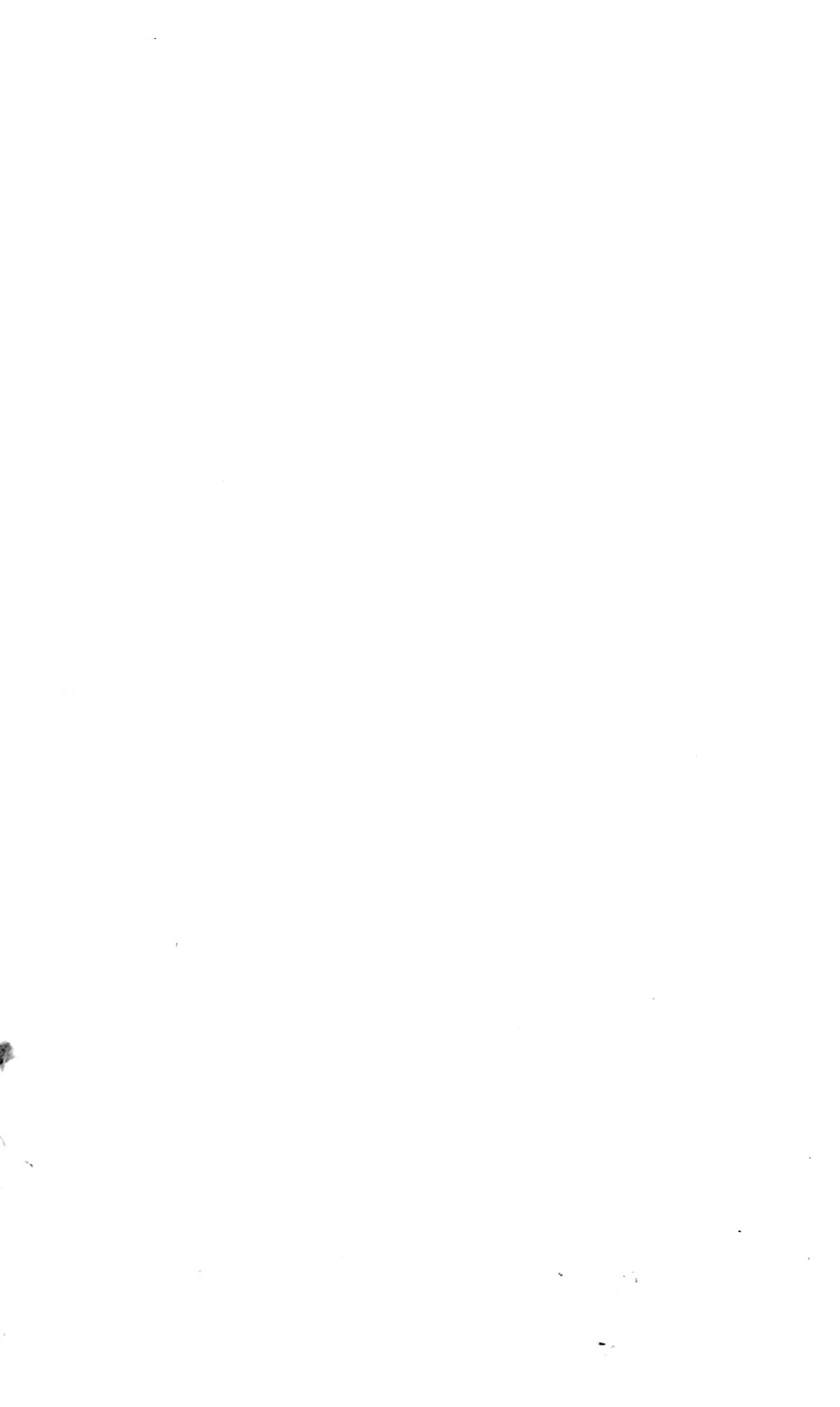
I. Amancaes ; *var. hybrida sulphurea* ; (matre *I. Amancaes*, patre *I. Calathinâ*) foliis octo tripedalibus parte inferiore pedali cylindraceâ, apice minus ac in *I. Amancaes* attenuato ; scapo tripedali, compresso ; spathâ marcescente, germine viridi brevissimè pedunculato ; tubo viridi circiter triunciali, coronâ $2\frac{1}{2}$ -unciali sulphurêâ fasciis sex internis viridibus luteo marginatis, lobis duodecim-dentatis ; limbi laciniis $2\frac{1}{2}$ -uncialibus canaliculatis : umbellâ sex-florâ, odore gravi, neque (uti in *Calathinâ*) fragrante, neque (ut in *Amancaes*) fœtido.—*Herbert in litt.*

For the drawing, technical character, and following account of this plant, we are indebted to our highly valued correspondent the Hon. and Rev. William Herbert.

This very ornamental bulb was raised four years ago from a seed of *Ismene Amancaes*, which had been fertilized by the pollen of *Ismene Calathina*. It is interesting as confirming the generic character of *Ismene*, from which no intermixture with the cognate genus *Hymenocallis* has been produced, though many attempts have been made ; and also by the great change which has been wrought in it by the impression of the male species. The colour of the flower is intermediate, and the scent, though very powerful, is not delightfully fragrant as in *Calathina*, nor so disagreeable as that of *Amancaes*. The constitution is vigorous, like that of the former species, from which it inherits also a more

* A classical name applied to this genus by Mr. Herbert. *Ismene* was a daughter of *Œdipus*.

robust stature and less attenuated leaves. The natural seedlings of *I. Amancaes* make very slow progress. There is one twelve years old at Spofforth, which is not yet of flowering size ; but those of *I. Calathina* advance rapidly. The flowers of the mule have a tube slenderer than that of *Amancaes*, and the cup terminating in twelve distinct lobes which are jagged at the margin : from the points where the filaments are inserted, six strong green lines, margined with yellow, mark the inside of the cup. *Ismene Calathina* thrives vigorously out of doors in a border of sand and peat mixed, and flowers in July and August, if the bulbs are planted out in April, and taken up when the leaves decay in November or October. The soil being loose and light, it is easy to avoid breaking their strong fleshy fibres, which should not be injured. The bulbs so taken up should be put all together in a large pot, or a small tub according to their number and size ; and, some light soil being poured over them, they should be placed at the back of a greenhouse, or in any shed where they will be preserved from frost, and must have no water. *I. Amancaes* requires a much more sandy soil, and less moisture : if planted out of doors, a large pot full of soil should be taken out of the border where it is set, and the hole filled with pure white sand, and unless the summer is very wet it will succeed well. If kept in the greenhouse, it should be potted in very sandy compost, and be watered sparingly ; and should be left quite dry from the time the leaves decay till May. Peat and too much water have caused many cultivators to lose this plant, which is not difficult to preserve. The Horticultural Society have imported an *Ismene*, which, unless it be a new species, is at least a variety of *Amancaes* with very different habits, spawning abundantly, and the leaves not sheathing high, of a hardier constitution, and less averse to moisture. Its flower has not yet been seen. W. H.





* CYPRIPIÉDIUM spectábile.

Large white Lady's Slipper.

GYNANDRIA DIANDRIA.

Nat. ord. CYPRIPIEDIEÆ. *Lindl. Nixus Plantarum*, p. 22, No. 234.
CYPRIPIEDIUM. Suprà, vol. 10, fol. 788.

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- C. spectabile* ; sepalis subæqualibus oblongis obtusis, petalis lanceolatis planis longioribus, labello petalis longiore ventricoso subsulcato, stamine sterili cordato-ovato obtuso.
C. spectabile. Swartz in act. holm. 1800, p. 251. *Salisb. in act. Linn.* 1. 78. t. 3. f. 3. *Willd. sp. pl.* 4. 144.
C. album. Ait. Kew. ed. 1. 3. 303. *Bot. Mag. t.* 216.
C. canadense. Mich. Amer. 2. 161.
C. reginæ. Walt. Carol. 222. *fide Pursh.*
-

A native of the low meadows and bogs of North America, particularly in the mountainous tracts from Canada to Carolina, flowering in May and June, according to Pursh. Our wild specimens were gathered in Canada by Mr. Gouldie.

This remarkable plant is the finest of the North American Cypripediums, and is not by any means uncommon in the gardens of this country, its roots being periodically imported. It has, however, resisted all attempts at propagating it, and seldom lives above a year or two after its arrival. Those who manage it the best treat it as a greenhouse plant, keeping it constantly under glass, in a moderately warm atmosphere, and very near the light until its leaves have withered, when it is removed to a dry shelf till its growing season returns. Except in the colour of its flower, it is very nearly the same as the Siberian *C. macranthos*, already figured at fol. 1534 of this work.

* See fol. 1534.



* CATASÉTUM lúridum.

Lurid Catasetum.

GYNANDRIA MONANDRIA.

Nat. ord. ORCHIDEÆ. *Juss.* § Vandææ *Lindl.* (*Introduction to the Natural System of Botany*, p. 262).

CATASETUM. *Supra*, vol. 10, fol. 840.

C. luridum; caulibus defoliatis angustis sulcatis, perianthio subgloboso parum maculato, sepalis petalisque oblongis apice rotundatis, labello cucullato carnososo mutico apice paulò producto truncato, racemo brevi nutante.

C. luridum. *Lindl. Gen. & Sp. Orch.* p. 156.

Anguloa lurida. *Link in Verhandl. des Vereins. z. bef. des Gartenb. in dem Königl. Preuss. Staat.* 1. p. 289. t. 6.

Caules deflorati angusti, cinerei, sulcati, 3-5 uncias longi. Folia plicata, subundulata, acuminata. Racemus vix pedalis, apice nutans, pauciflorus; bracteis brevibus canaliculatis obtusis. Perianthium globosum; sepalis petalisque herbaceis oblongis apice rotundatis maculis quibusdam pallidis notatis. Labellum carnosum, cucullatum, lutescens, anticè truncatum submarginatum, marginibus atro-purpureis maculatis, nec ciliatis, nec dentatis, nec inflexis. Columna bicirrhosa generis.

After having been imported into Prussia some years since, and been apparently lost, this rare plant has suddenly made its appearance almost at the very same time in several collections. The first notice we had of it was from Messrs. Loddiges, with whom it flowered in September, 1833. Almost immediately afterwards, it was communicated to us by our amiable and much lamented correspondent the late Mrs. Arnold Harrison, whose truly splendid collection of Orchideous epiphytes has lately been added to the stock of Mr. Knight, of the King's Road; it was obtained by that lady from Bahia. We had scarcely secured a drawing of Mrs. Harrison's specimen, before a sketch and specimens reached us from Mr. Bateman; and before many more days

* A name, the meaning of which is unexplained.

had elapsed it burst into blossom in the stove of the Horticultural Society.

It is a native of the woods not only of Bahia, but probably of the greater part of Brazil, the Prussian specimens and those of the Horticultural Society having been imported from Rio Janeiro. Like all the species with similar habits, it grows freely in decayed vegetable matter, mixed with a little pure loam, among quantities of potsherds, and it probably will soon become common. Although it cannot be compared for beauty with *Catasetum tridentatum*, it is nevertheless a very interesting species ; the spots on the margin of the lip are of the deepest and richest ruddy-brown ; while the horns of the column may be compared to the forelegs of some spider lurking in the bosom of the flower to seize upon the victims that may enter it.



**BEGÓNIA heracleifolia*.*Parsnip-leaved Begonia.*

MONÆCIA POLYANDRIA.

Nat. ord. BEGONIACEÆ, Juss. (Introduction to the Natural System of Botany, p. 169.)

BEGONIA. Supra, vol. 4, fol. 284.

- C. heracleifolia*; acaulis, foliis subæqualibus ambitu orbicularibus cordatis profunde septem-lobatis lanceolatis inæqualiter sinuato-sublobatis denticulatisque ciliatis utrinque rariter sparsim pilosis supra planis obscuris subtus pallidis vesiculiferis: nervis prominulis fusciscentibus hirtellis, petiolo pedunculoque patentim hirsutis. *De Schlecht et Chamiss. in Linnæu, vol. 5, p. 603.*
- B. radiata. Graham in Edinb. New Phil. Journal for July, 1833.*

Fructus trialatus, glaber; alis rotundatis, duabus nanis herbaceis, alterâ roseâ elongatâ ascendente.

A native of Mexico, where it was met with by the German travellers Schiede and Deppe, in several localities. In the Linnæa three are mentioned, namely, shady places in Jalapa, in March; near Hacienda de la Laguna in September; Baranca de Tioselo in October. It is therefore probable that it flowers nearly all the year round in its own country as it does in England.

The plant from which our drawing was taken was received by the Horticultural Society from the Botanic Garden, Berlin. It is a very free growing hot-house plant, producing its rosy flowers in every month of the year; all that it demands at the hand of the cultivator is heat, moisture and a full exposure to light. If kept too much in the shade, the flowers lose the bright rosy tint which is natural to them, and with it their beauty.

Our learned friend, Dr. Graham, who obligingly pointed out to us the identity of his *B. radiata* with *B. heracleifolia*, thus describes it:—"Leaves (seven inches across) bright

* See folio 1252.

green above, paler below, all radical, subpeltate, cordato-palmate, hairy above and below, with seven strong radiating nerves, very prominent below, lobes lanceolate, oblong, undulate, sinuated, dentate, unequal, the central (four inches from the insertion of the petiole to its apex) being the longest, the others gradually smaller to the sinus; petiole rather shorter than the middle lobe, densely covered with long coarse entangled crystalline hairs, which, in fading, resemble yellow wool. *Scape* (two feet high) tapering upwards, straight, pretty closely covered with oblong red streaks, from which spring long, tortuous, acute, crystalline hairs. *Bractæ* in opposite pairs at each division of the flower-stalk, serrated, ovate, hairy, dentato-ciliate, nerved, smaller in every succeeding pair. *Peduncles* dichotomo-deliquescent, streaked like the scape, and somewhat hispid. *Flowers* rose-coloured, dipetalous, petals rotund, entire; male flowers in the cleft of the peduncles, expanding before the female. *Stamens* yellow, ascending; filaments cohering only at the base; anthers spathulate; connective extending beyond the loculaments."

The fruit, with which neither Messrs. Schlechtendahl and Chamisso nor Dr. Graham were acquainted, has three rounded wings, of which two are small and green, the third much longer, pink, and a little directed upwards.

* CALOCHORTUS venustus.

Spotted Calochortus.

HEXANDRIA MONOGYNIA.

Nat. ord. LILIACEÆ, Juss. (*Introduction to the Natural System of Botany*, p. 279.)

CALOCHORTUS Pursh. Flores erecti, explanati, patentes. Sepala glabra, convoluta-acuminata. Petala majora, rotundata, plana, medio barbata, basi maculata, glabra. Stylus o. Stigmata 3. Capsula triangularis, coriacea. Semina serie simplici affixa, plana, testâ suberosâ.—Bulbi tunicati (Californici), foliis convoluta-acuminatis rigidis.

C. venustus; caule paucifolio subbifloro sepalis erectis, petalis præter fasciculum pilorum glabris basi rubris et versus apicem maculâ rubrâ notatis. *Bentham in Hort. Trans.* vol. 1, n. s. p. 412, t. 15, fig. 3.

Caulis solidus, flexuosus, erectus, sub-bipedalis, striatus, apicem versus subramosus. Folia linearia, acuminata, siccatione convoluta, basi amplexicaulia. Pedunculi circiter 4 pollices longi, rigidi, uniflori. Sepala ovato-lanceolata, acuminata, recta, herbacea, petulorum longitudine. Petala cuneato-subrotunda, margine crispata, versus basin pulvillo pilorum longorum pilisq. quibusdam sparsis barbata, basi ipsa glabra; alba, basi lutescentia, vittâ cuneiformi basilari coccineâ apice lutescente, tunc maculâ subrotundâ interruptâ castaneâ luteo-limbata, denique cis apicem maculâ pallidâ sanguinolentâ notata.

A very remarkable and beautiful bulbous plant, sent from California by Mr. Douglas to the Horticultural Society, in the last part of whose transactions it has been published by Mr. Bentham. Like the *Cyclobothras*, lately figured in this work, it flowers at Midsummer, at which season it contributes, with some other species, to give quite a new feature to the flower garden.

It appears to be cultivated without difficulty, but to be less hardy than the species of *Cyclobothra*; hitherto it has been planted in the open border in the summer only; its bulbs have been taken up as soon as the leaves were

* Supra, fol. 1152.

withered ; they have been kept dry till they begin to shoot, which is about Christmas ; and they have then been planted in pots in the greenhouse, whence they will be again transferred to the open border as soon as the chance of spring frosts is over. In the garden of the Horticultural Society they have been tried both in common garden mould and in loam, and they seem to succeed equally well in either.

The stems grow about two feet high, and are sparingly clothed with rather stiff narrow green leaves, which quickly roll up, and become sharp-pointed when dry weather sets in. The flowers are placed on stiff stalks, and remain expanded for several days ; but they offer so broad a surface to the weather, that they are apt to be damaged and defaced by storms of rain. The sepals are green ; the petals are pure white at all the widest parts, and yellowish at the base, where they have a deep crimson wedge-shaped stain terminated by a yellowish spot ; above the latter is a deep stain resembling a clot of dried blood, bordered with yellow, and between the last and the end of the petal is another and a paler spot of dirty red without any yellow. A short distance above the base of the petals there is a tuft of hairs which partly overspread the vicinity of the tuft.



* LUPINUS leptophyllus.

Fine-leaved Lupin.

DIADELPHIA DECANDRIA.

Nat. ord. LEGUMINOSÆ. Juss. (Introduction to the Natural System of Botany, p. 86).

LUPINUS. Supra, vol. 13, fol. 1096.

L. leptophyllus; annuus, caulibus erectis subsimplicibus patentim pilosis, foliis linearibus utrinque angustatis pilosis vix sericeis, floribus sparsis approximatis, bracteis ante anthesin subcomosis, pedicellis bracteolatis, calycis labio superiore bipartito inferiore longiore tridentato.—*Bentham in Hort. Trans. vol. 1, n. s. p. 411.*

Caulis pedalis et ultra, simplex, ut et omnes partes herbaceæ, pilis longis albis debilibus patentissimis, brevissimis appressis intermixtis, hirsutus. Folia petiolis tenuibus, foliolis 7-9 linearibus longioribus. Stipulæ longæ subulatæ. Racemus gracilis, bracteis longis pectinato-villosis comatus. Calyx pilis longissimis villosus; bracteolis brevibus filiformibus, labio superiore bipartito inferiore longiore tridentato. Petala purpureo-lilacina, maculâ sanguineâ in medio vexilli; carina glabra.

Upon this new Lupin Mr. Bentham has the following remarks in the last part of the transactions of the Horticultural Society:—

“This species is remarkable for its narrow leaves and hairy surface. It is about a foot high: the spike of flowers is elegantly coloured with blueish lilac, and there is a deep crimson stain in the middle of the standard. The spike is covered with flowers in an irregular manner, and crowned by the long linear bracts of the unexpanded blossoms. It is not so pretty a species as many others of this generally beautiful genus; it has hitherto produced but a very few seeds, which are unusually small for a Lupin, and pale brown, mottled with a darker shade. It probably requires shade.”

Our drawing was made in the garden of the Horticultural Society in June last. The species is annual.

* See fol. 1198.



* *LIPARIS* guineensis.*S. Leone Liparis.*

GYNANDRIA MONANDRIA.

*Nat. ord. ORCHIDEÆ. Juss. § Malaxidæ Lindl. (Introduction to the Natural System of Botany, p. 262.)**LIPARIS. Supra, vol. 11, fol. 882.*

L. guineensis; foliis pluribus oblongis acutis plicatis racemo paucifloro brevioribus, scapo angulato, labello postico cuneato bilobo plano basi bituberculato, petalis sepaloque supremo linearibus patentibus, sepalis lateralibus subrotundo-ovatis labello brevioribus.

Pseudobulbi *ovati*, *nucis avellanæ magnitudine*, *exuvii membranaceis foliorum vestiti*. Scapus *semipedalis*. Flores *parvi virides sessiles, maculis 2, lutescentibus in apice labelli*. Ovarium *alatum, bracteis lineari-subulatis longius*.

A native of Sierra Leone, whence plants were brought in 1832 by Mr. Whitfield. Our drawing was made in September last in the garden of the Horticultural Society.

It requires to be kept in a damp stove while growing, but to be removed into a cooler and dry place as soon as its leaves decay.

The *Liparis Löselii* of this country is nearly related to it, but is abundantly distinct in the leaves and the form of the labellum.

* See fol. 1175.







Sub by J. Grayson, 1894, May 7, 1894

Mrs. Drake, Jan.

* *PORTULACA* Gilliesii.*Dr. Gillies' Purslane.*

POLYANDRIA MONOGYNIA.

*Nat. ord. PORTULACEÆ, Juss. (Introduction to the Natural System of Botany, p. 159).**PORTULACA. Supra, fol. 792.*

P. Gilliesii; caulibus suberectis basi ramosis, foliis oblongo-cylindraceis subcompressis obtusis punctatis, pilis axillaribus fasciculatis erectis appressis, floribus terminalibus, petalis calyce longioribus. *Hooker in Bot. Mag. t. 3064.*

Dr. Gillies, to whom we are so much indebted for many illustrations of the Botany of Chili and of the neighbouring province of Mendoza, brought seeds of this plant to the Botanic Garden of Glasgow, whence it has been liberally distributed. We are informed by Dr. Hooker that it is a native of the plains of Mendoza. This circumstance will point out the cultivation it requires; for the dryness of that climate is so well known, that it may be easily understood that the only chance of managing this plant successfully, consists in preserving it, during winter, in a well ventilated dry greenhouse or stove, and allowing it water only when in a growing state, and then only in moderate quantity.

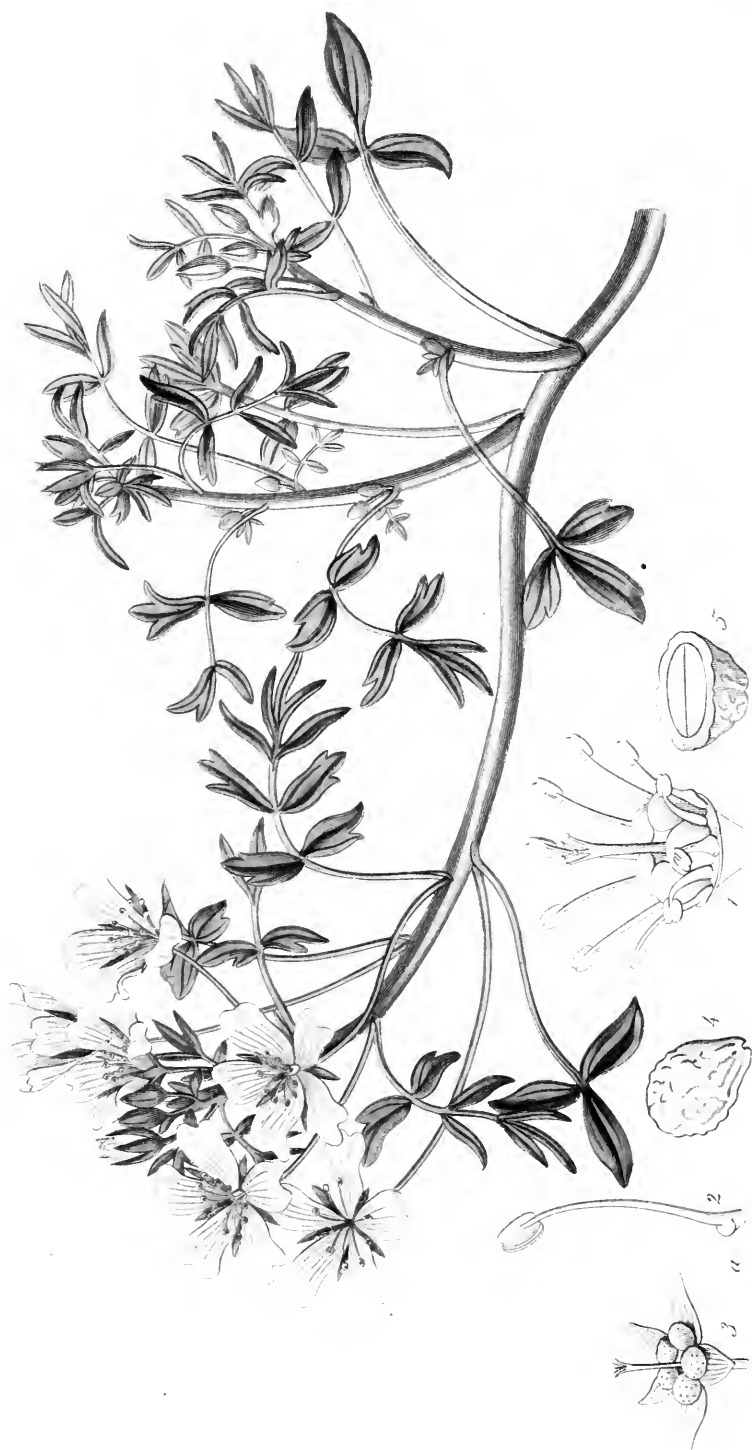
It is a truly splendid plant; but to be seen in perfection it should be exposed to the greatest heat and the brightest light that our summers will supply. It then opens its rich crimson flowers in considerable quantity, and lying as they do upon a little bed of neat deep green leaves, the prettiest effect imaginable is produced.

It is a perennial, and is propagated readily by cuttings. Our drawing was made last July in the garden of the Horticultural Society.

* An ancient Latin name, whose supposed origin has exercised the ingenuity of the learned, but concerning which we find nothing worth explaining or controverting.—*Smith.*



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Quercus agrifolia (Oak)

Quercus agrifolia

* LIMNANTHES Douglassii.

Douglas' Limnanthes.

DECANDRIA MONOGYNIA.

Nat. ord. LIMNANTHÆ. R. Brown in Lond. and Edin. Phil. Mag. July, 1833. Lindley Nixus Plantarum, p. 11, No. 31.

LIMNANTHES, R. Br. Calyx 5-partitus. Petala 5. Stamina 10. Nuculæ 5.—Herba annua, carnosa, glaberrima (Californica); floribus conspicuis.

L. Douglassii; R. Br. l. c. Bentham in Hort. Trans. vol. 1, n. s. p. 409.

Annua, pallidè viridis, succulenta, glabra. Caules spithamæi, teretes, ramosi, in planta culta prostrati v. saltem decumbentes, in spontanea erecti. Folia alterna, exstipulata; petiolo tereti, suprâ sulcato, patente; laminâ trifoliolată v. pinnatâ, 2-3-jugâ cum impari; foliolis lineari-ovatis integerrimis v. inæqualiter 2-3-lobis v. 2-3-partitis. Flores fragrantæ, $\frac{3}{4}$ pollicis lati, axillares, solitarii, laxè racemosi, pedunculis filiformibus, ascendentibus ebracteolatis foliis longioribus. Calyx basi subcarnosus, 5-partitus, æqualis; laciniis ovatis acutis corolla brevioribus, quinquevenis; venis lateralibus intramarginalibus simplicibus apice sepali cum intermedio confluentibus; æstivatione valvatâ. Petala 5, subperigyna, cuneata, retusa, lutescentia limbo albo, subsimpliciter venosa, æstivatione convoluta. Stamina 10, subperigyna; quorum 5 petalis opposita breviora sunt filamentis basi planiusculis, 5 sepalis opposita filamentis basi extus gibbosis: Antheræ oblongæ, biloculares, supra medium affixæ, versatiles, introrsæ, (in icone extrorsæ incurvâ pictoris) longitudinaliter dehiscentes. Ovaria 5, omnino disjuncta, sepalis ideoque filamentis gibbosis opposita. Stylus filiformis, laciniis 5 erectis teretibus stigmata tot minuta capitata gerentibus. Fructus calyce petalisque persistentibus induviatus, constans e nuculis 5 baccatis discoloribus rugosis monospermis. Semen erectum. Embryo exalbuminosus, cotyledonibus carnis plano-convexis, radiculâ inferâ.

A neat little annual, with flowers of a delicate yellow colour, bordered with white, and slightly but most agreeably fragrant. It is rather succulent in all its parts, is quite destitute of hairs, and has all the appearance of being a native of the sides of rivulets or of moist and shady places.

* Apparently from *Λιμνη* a lake, and *ανθος* a flower, in allusion to the supposed habits of the only species.

Concerning this, however, we have no information from Mr. Douglas, by whom it was sent to the Horticultural Society from California. It flowers in the autumn, and ripens seeds in tolerable plenty.

What gives it its chief interest is its remarkable structure, and the station it occupies in the natural system of plants. Dr. Brown, who first examined it, considers it to form, along with *Flörkea*, an obscure North American plant, a new Natural Order which he calls *Limnantheæ*, and stations near *Geraniaceæ* and their allies. In this view we have not hesitated to concur, although, as far as regards *Flörkea*, we had expressed a different opinion in the account we gave of that genus in Dr. Hooker's Journal of Botany. Without overlooking its manifest relation to *Geraniaceæ*, we had considered *Flörkea* to be upon the whole more nearly related to *Sanguisorbææ* than to any other plants. But at that time *Limnanthes* was unknown, and we had nothing to connect *Flörkea* more with one Natural Order than another. Now that *Limnanthes* has been discovered, it becomes obvious that *Flörkea*, which is closely allied to it in structure, is more nearly akin to *Geraniaceæ* than to *Sanguisorbææ*, and that it must constitute a new form in the groupe of Gynobasic Natural Orders. But while we admit this, it is necessary to add that we do not therefore give up the affinity of *Flörkea* to *Sanguisorbææ*; on the contrary, we consider it one of the links by which the gynobasic and polycarpous groupes of Dicotyledonous plants are connected.

In the Analysis of the parts represented in the plate, 1. is the ovary, surrounded by the 10 stamens, the sepals and petals being cut away; 2. a stamen, with the projection at its base, *a.*; 3. the ripe fruit enclosed in the calyx; 4. a nucule separate; and 5. the same cut through horizontally, to shew the cotyledons of the embryo.





MIMULUS Smithii.

DIDYNAMIA ANGIOSPERMIA.

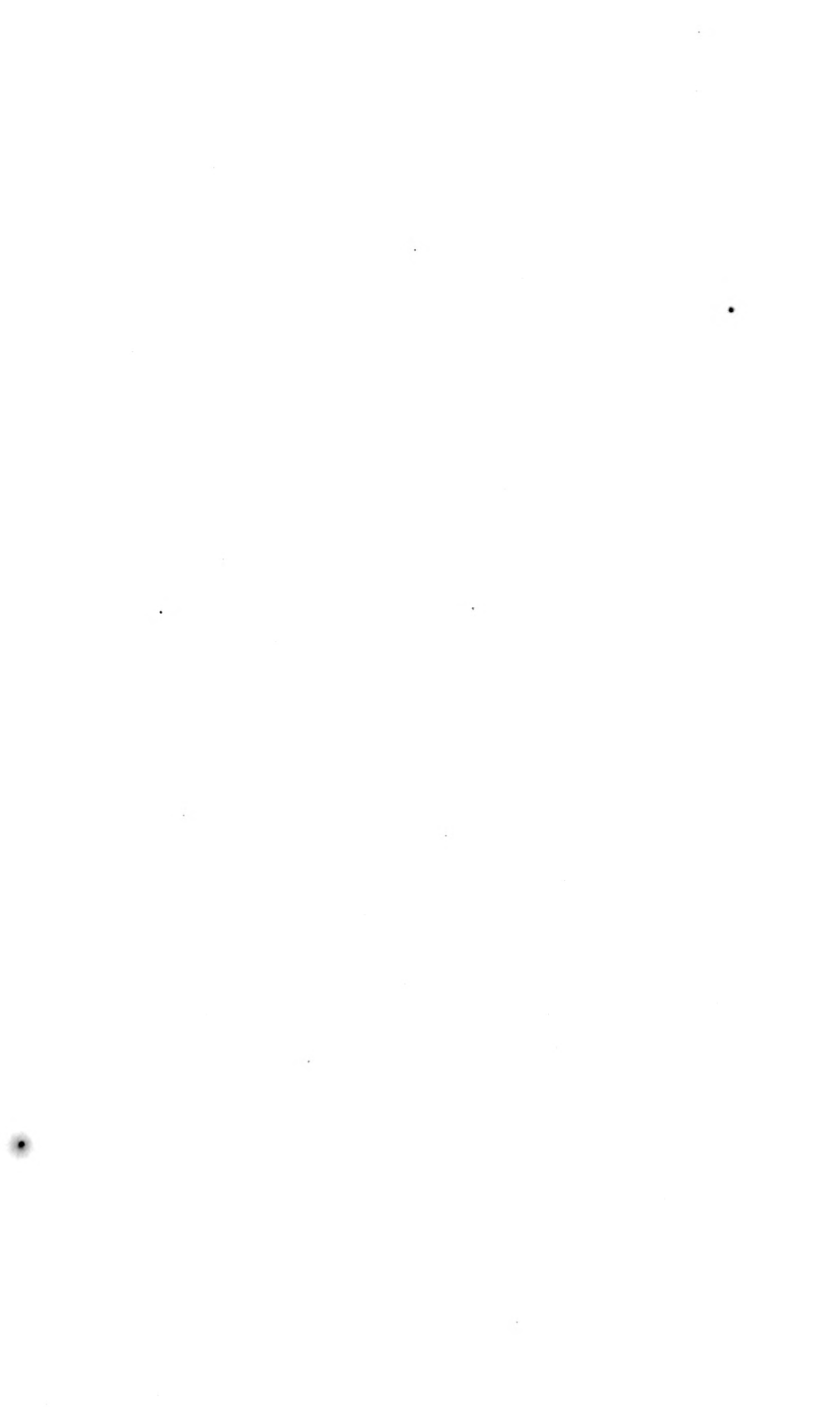
Nat. ord. SCROPHULARINEÆ. Juss. (*Introduction to the Natural System of Botany*, p. 228).

MIMULUS. *Supra*, vol. 11, fol. 874.

GARDEN VARIETY.

Flowers of this beautiful plant were put into our hands last autumn by Mr. George Smith, Nurseryman, of Islington, who informed us he had raised it between *M. variegatus*, fertilized by *Mimulus luteus rivularis*.

It is a hardy plant, with all the habit of *M. luteus rivularis*, and no doubt requires the same cultivation as that species.





Miss Bruce del.

Aug 10 of Boardwalk May 1 1834

J. M. H. sc.

* *PERNÉTTIA mucronáta*.*Pointed-leaved Pernettia.*

DECANDRIA MONOGYNIA.

Nat. ord. ERICÆÆ. *Juss. (Introduction to the Natural System of Botany, p. 182.)*

PERNÉTTIA Gaudichaud. *Calyx* 5-partitus siccus. *Corolla* globosa, limbo 5-dentato. *Stamina* 10, hypogyna; *filamentis* basi dilatatis, *antheris* muticis: lobis apice angustatis bidentatis. *Ovarium* 5-loculare, polyspermum; *squamis* 10 hypogynis ambientibus. *Capsula baccata* polysperma—Frutices (Australi-Americani), foliis *parvis sempervirentibus*, pedunculis *axillaribus paucifloris*.

P. mucronata; foliis ovatis serratis mucronatis pedunculis laxis brevioribus, squamis hypogynis integris.

P. mucronata; *Gaudichaud in Ann. des sc. vol. 5. p. 102.*

Arbutus mucronata; *Lin. fil. suppl. 239. Forst. Comment. Gött. 9. p. 31. Graham in Bot. Mag. t. 3093.*

For the opportunity of publishing this interesting plant we are indebted to William Harrison, Esq. by whom it was communicated from his garden at Cheshunt, in July, 1833. It has there already acquired a size which is quite remarkable for so small a plant, considering how young the specimen still is. Within three years it has formed a bush three feet six inches in diameter, and two feet six inches high. It is a hardy evergreen shrub, of considerable beauty, on account of the neat appearance and dark colour of its foliage; its flowers are pretty, but they are small, and do not make much appearance. Mr. Harrison cultivates it in peat, as an American plant.

It is usually called an *Arbutus*; but it agrees with that genus neither in appearance nor in structure. In both

* Named by M. Gaudichaud "after Dom Pernetty, the author of the account of a voyage to the Falkland Islands, a work remarkable for its interest as well as for its candour and exactness." The original species of the genus was mentioned by this traveller under the name of "*Bruyère à feuilles pointues*."

Arbutus and *Arctostaphylos* the anthers have two long horns projecting from their back, and the ovary is surrounded by a fleshy ring with ten angles ; but in this plant the anthers have no horns, and are split into four bristle-shaped teeth at their apex, while the base of the ovary is surrounded by ten distinct scales. We therefore adopt, without any scruple, Mons. Gaudichaud's genus *Pernetia*, which in reality is much more nearly allied to *Andromeda* and *Gaultheria* than to *Arbutus*, particularly to *Andromeda myrsinites* and *Gaultheria serpyllifolia*, which last is certainly no *Vaccinium*.

Gaudichaud refers to this genus *Arbutus pumila*, and *microphylla* ; as far as habit and the structure of the flowers are concerned, *Arbutus pilosa*, of Professor Graham, would also be referable to *Pernetia* ; but we incline to believe that plant an *Andromeda*.

The subject of these observations is a native of the Straits of Magellan ; we have specimens communicated to the late Mr. Donn, of Cambridge, out of Forster's Herbarium, others procured by Macrae, off Cape Horn, and fruit gathered in Staten Island by Mr. Webster, of H. M. S. Chanticleer. Gaudichaud did not meet with it in his visit to the Falkland Islands, but in its place he found plenty of another species, *Pernetia empetrifolia*, which formed a small bush covered with eatable berries, and growing at the back of the sand-hills wherever a little vegetable mould was collected.





* CALOCHORTUS splendens.

Satiny Calochortus.

HEXANDRIA MONOGYNIA.

Nat. ord. LILIACEÆ, Juss. (*Introduction to the Natural System of Botany*, p. 279).

CALOCHORTUS. *Supra*, fol. 1669.

C. splendens; caule 3-5-floro, sepalis revolutis, petalis intus sparsè pilosis in parte superiori glabris basi maculatis extus ecostatis. *Bentham in Hort. Trans.* vol. 1, n. s. p. 411, t. 15, fig. 1.

C. venusto similis habitu, staturâ, et figurâ florum; diversissimus tamen horum colore, petalorum hirsutie, sepalisque revolutis. Petala tota lilacina, immaculata nisi ad ipsam basin saturatiorem subsaccatam; ibi adest pulvillus pilorum densissimorum, brevium, rigidorum, a pilis longis debilibus sparsis faciei petalorum intervallo calvo sejunctus. Flores paulo minores sunt quam in C. venusto.

Another fine species of Californian bulb, obtained by the Horticultural Society from Mr. Douglas. It requires precisely the same treatment as *C. venustus*, (fol. 1669) to which we refer our readers. From that species it differs, not only in the colour of its petals, but in its flowers being somewhat smaller, and its sepals rolled back from the point; the arrangement of the hairs upon its petals is also very different. In *C. venustus* there is just above the base of the petals an oblong tuft of rather loose hairs, which gradually scatter themselves over the petal for a short distance round the tuft; but in *C. splendens*, the tuft is smaller, and composed of very short firm hairs collected into a compact oblong mass, almost resembling a wart, and separated by a smooth interval from the scattered hairs of the petal, which are long and numerous.

* See fol. 1152.

The genus *Calochortus* now consists of five species, of which the following is a list; those only marked with a * have yet been introduced into this country; all are natives of California.

- *1. *C. macrocarpus*; *Douglas*.—*Bot. Reg. fol.* 1152.
- 2. *C. nitidus*; *Douglas in Hort. Trans.*
- *3. *C. splendens*; *Douglas*.—*Bot. Reg.* 1676.
- *4. *C. venustus*; *Douglas*.—*Bot. Reg.* 1669.
- *5. *C. luteus*; *Douglas*.—*Bot. Reg.* 1567.



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* ESCHSCHÓLTZIA crócea.

Saffron-coloured Eschscholtzia.

ICOSANDRIA? POLYANDRIA? TETRAGYNIA.

*Nat. ord. PAPAVERACEÆ. Juss. (Introduction to the Natural System of Botany, p 8.)**ESCHSCHOLTZIA. Supra, vol. 14, fol. 1168.**E. crocea*; caule ramoso folioso, foliorum segmentis linearibus, pedunculi cyathis infundibuliformi: limbo maximo dilatato, calyce longe acuminato. *Bentham in Hort. Trans. vol. 1, n. s. p. 406.*Facies omnino *E. Californica*; sed flores majores aurantiaci, nec lutei, cyathi limbus maximus dilatatus, nec obsoletus, et calyx elongato-conicus, nec subrotundus acuminatus.

“In general habit, foliage, and size of the flower, this new species of *Eschscholtzia* closely resembles the *E. Californica*, introduced by Mr. Douglas on his first expedition, and now so generally admitted to be one of the most beautiful additions to our hardy ornamental plants. The present species, however, promises far to surpass even that one in the rich orange colour of the petals. It appears to be equally hardy, and, judging from the experience of a season, to flower still more freely. It is chiefly distinguished botanically from *E. Californica* by the widely expanded limb of the curious appendage of the peduncle beneath the insertion of the calyx, which is characteristic of the genus, and by the long attenuated point of the calyx.”

We borrow the foregoing account from Mr. Bentham's paper in the Transactions of the Horticultural Society, adding only, that it has not hitherto produced any seed, and that two plants in the Garden of the Horticultural Society are all that at present exist in Europe.

* See folio 1168.

When the sun shines, the petals unclose, and by their rich colour and velvety lustre produce an effect which for brilliancy is unrivalled in the Flower Garden.

Like *Eschscholtzia Californica*, this is a perennial, but in consequence of its bleeding copiously when wounded, it is not likely to bear propagation in any other way than by seed.





S. Hutton, sc.

Barclay, del.

W. H. H. H.

W. H. H. H.

* *PÆÓNIA* Moutan; *albida plena*.

Double-white Tree Pæony.

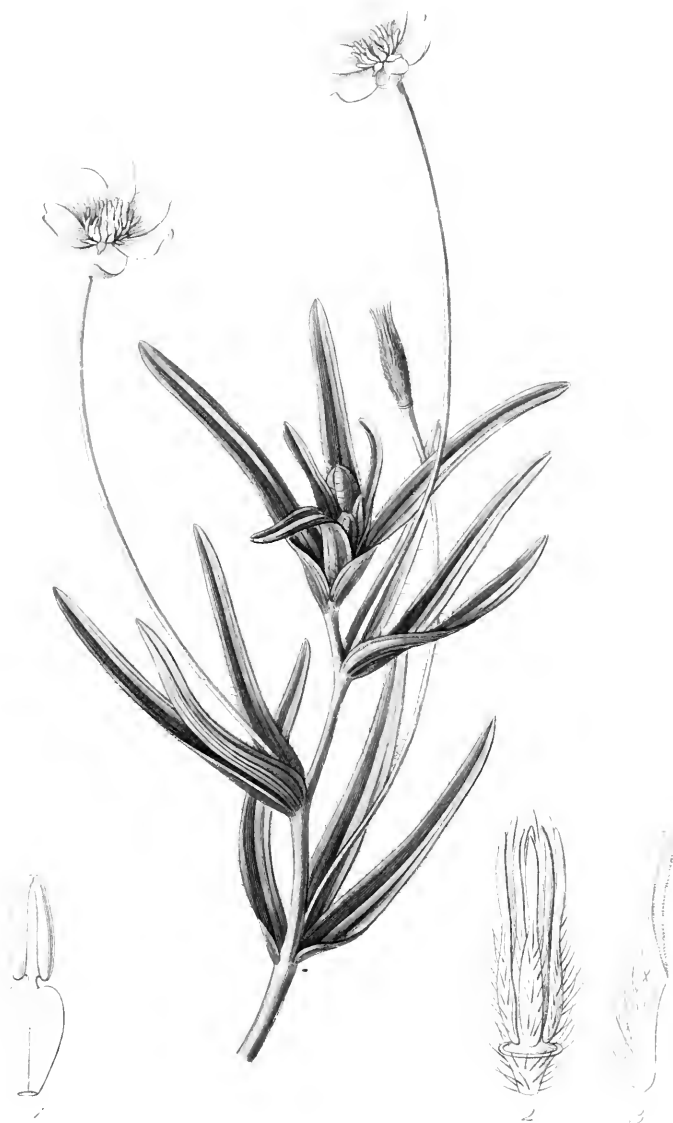
POLYANDRIA MONOGYNIA.

Nat. ord. *RANUNCULACEÆ*. Juss. (*Introduction to the Natural System of Botany*, p. 6.)

PÆONIA. *Supra*, vol. 1, fol. 42.

GARDEN VARIETY.

This noble variety of the Tree Pæony was raised by the Earl of Mountnorris from seeds of *P. papaveracea*, saved at Arley Hall. It differs from the original in being semi-double, and in having narrower and more lacerated petals. Our plate was prepared from a drawing lent us by Lord Mountnorris, in whose possession the plant, we are informed, almost exclusively exists.



PLATYSTÉMON Californicum.

Californian Platystemon.

POLYANDRIA POLYGYNIA.

Nat. ord. PAPAVERACEÆ. Juss. (*Introduction to the Natural System of Botany*, p. 8.)

PLATYSTEMON Benth. Flores trimeri! *Sepala* 3, hispida. *Petala* 6, ordine duplici. *Stamina* subindefinita; *filamentis* petaloideis; *antheris* linearibus rectis. *Carpella* 9-12, collateralia, stigmatibus linearibus erectis simplicissimis; *matura* leviter coherentia, indehiscencia, cartilaginea, torulosa; in articulos transversos monospermos secedentia. *Semina* lævia, ecristata; albumine oleoso.——Herba (*Californica*), annua, tenera, foliis (v. potius petiolis dilatatis aphyllis) linearibus parallelivenis, alternis et verticillatis, sæpè unilateralibus; floribus terminalibus et axillaribus longe pedunculatis.

Platystemon Californicum; *Bentham in Hort. Trans.* vol. 1, n. s. p. 405.

Herba annua, erecta, subramosa, succulenta, pilis sparsis in pedunculis calycibusque rigidioribus rarè vestita. Folia lineari-oblonga, sessilia, obtusa, venis monocotyledonearum more parallelis, inferiora alterna, intermedia 3 uncias longa sub-verticillata, suprema minora situ variantia. Pedunculi axillares et terminales foliis quadruplò longiores, ascendentes, stricti, uniflori. Sepala tria, concava, decidua, Papaveris more. Petala 6, duplici serie disposita, ovata, pallide lutea, interiora paulò minora. Stamina plurima, numerosa, hypogyna; filamentis petaloideis, antheris linearibus lateraliter dehiscentibus, innatis, brevè unguiculatis. Carpella 9-12, dorso hispida, seriebus pluribus ordinata, omninò sejuncta, stigmatibus totidem linearibus erectis; matura subcalva, coriacea, torulosa, transversim in articulos monospermos secedentia, in formam cylindraceam aggregata, stigmatibus linearibus parum divergentibus terminata.

A native of California, whence it was sent by Mr. David Douglas to the Horticultural Society, in whose garden it flowered last September; the few seeds it produced have failed to vegetate, and the plant is therefore lost to our gardens; fortunately, however, our drawing was made before the specimen had withered.

* So named from πλατυς broad, and στήμων a stamen, in allusion to the breadth of the filaments.

If it could again be procured, it would probably be preserved, for we are now more acquainted with its habits than we were at first; and it is evidently a pretty plant, if we are to judge from the dried specimens in the herbarium of the Horticultural Society. Both these and its seeds were sent home by Mr. Douglas without a particle of information as to the treatment it would require.

Mr. Bentham, to whom we are indebted for the first account of it, speaks of it as being as "interesting to the Horticulturist from its beauty as it is to the Botanist, from forming the connecting link between the Ranunculaceæ and Papaveraceæ. The trisepalous calyx, and numerous distinct ovaria would have placed it in the former order, were it not for the structure of the anthers, the very deciduous sepals, and the general habit, which do not admit of its being removed from Papaveraceæ, especially considering its close affinity with *Eschscholtzia* through *Platystigma* and *Dendromecon*.

"It is a low, branching, erect, and pale green annual, seldom attaining beyond a foot in height. The whole plant is smooth, with the exception of long spreading hairs on the peduncles, the margins, and here and there the surface of the leaves, and on the calyx and ovaria. The leaves are alternate, the upper ones often several, so near together as to have the appearance of an imperfect whorl; they are oblong, lanceolate, obtuse, perfectly entire, embrace the stem at the base, and are marked with from three to five parallel ribs. The peduncles are solitary, axillary, about six inches long, and bear at the extremity a single erect flower, rather larger than that of the common *Helianthemum*. The sepals are very hairy, round, ovate and obtuse; the petals yellow, with occasionally a reddish tinge outside. The flower is sweet-scented, and of a pale straw colour."

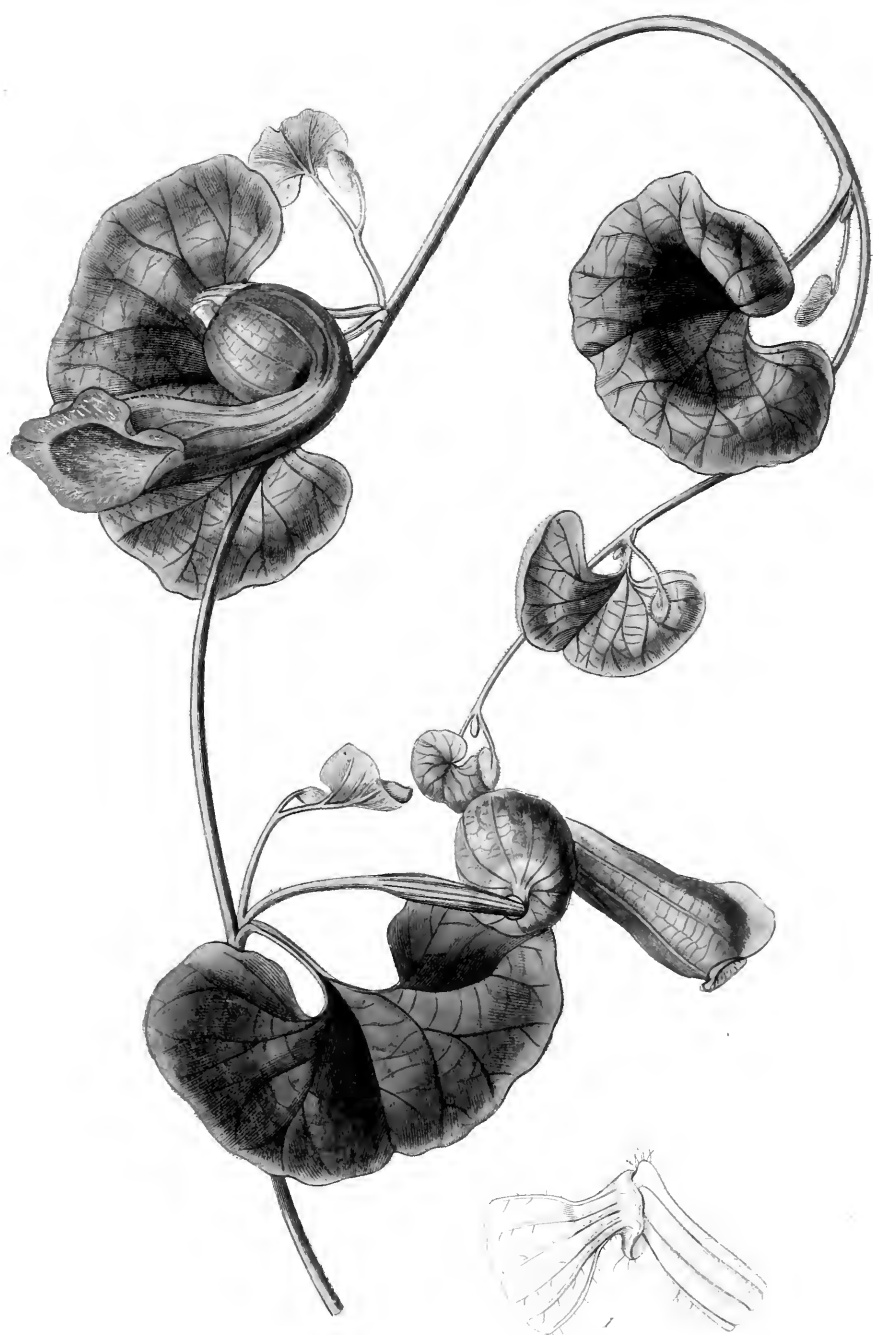
Considered in a botanical point of view, it serves to show the very close relationship that exists between the Crowfoot and Poppy tribes, to the former of which its distinct carpella, and to the latter its deciduous calyx and oily albumen so nearly equally refer it, that it might be a question in which of the two it ought with the greater propriety

to be stationed. In fact, like *Petunia* in *Solanææ* (see fol. 1626), this is a genus which stands on the very boundary line of two Natural orders, passing by one part of its structure into *Papaveracææ*, and by another part into *Ranunculacææ*, but with the mass of its characters preponderating in favour of the former. Its habit is also that of the Poppies rather than of the Crowfoots, and its curious fruit may be compared to that of *Hypecoum*, with the carpels separated and increased in number. The contractions of the sides of the carpels, in consequence of which the seeds are confined in little closed cells, occur equally in *Hypecoum*, but being of the same nature as those in the fruit of the Radish and its allies among Cruciferous plants, of *Ornithopus* and others among Leguminous plants, of several *Anonacææ*, and of divers others, cannot be esteemed characteristic of one Natural order more than another; in fact, such fruits may be expected to occur in any and every polyspermous Natural order.

The following arrangement will serve to show in what order a series of genera to connect the Poppy with *Platystemon*, and the latter with *Ranunculacææ*, would naturally follow; taking the Poppy for the typical centre of a *Papaveraceous* groupe.

Papaver — *Meconopsis* — *Glaucium* — *Eschscholtzia* — *Hypecoum* — *Platystemon* — *Trollius*, &c.

In the analysis of the accompanying plate, 1, represents a stamen; 2, a cluster of carpels; 3, a separate carpel, seen in profile.



* ARISTOLOCHÍA Chilénsis.

Chilian Birth-wort.

GYNANDRIA HEXANDRIA.

Nat. ord. ARISTOLOCHIÆ. Juss. (*Introduction to the Natural System of Botany*, p. 72.)

ARISTOLOCHIA. *Supra*, vol. 8, fol. 689.

A. *Chilensis*; herbacea, calycis infracti basi ventricosâ limbo oblongo obliquo utrinque emarginato intus villosus, pedunculis 1-floris ebracteolatis pubescentibus, foliis reniformibus emarginatis undulatis subtus pubescentibus.

A. *Chilensis*; *Bridges in litt.*

Caulis volubilis, pubescens, angulatus, pilosus. Folia subtus pubescentia, breve petiolata, exacte reniformia, emarginata, subcochleata, supra læte viridia, subtus glauca. Flores axillares, solitarii, ebracteolati, pedicellis petiolorum longitudine, ovarisque pubescentibus. Calyx infractus, viridipurpureus, venosus, intus villosus, extus læviusculus, $2\frac{1}{2}$ poll. longus, basi ventricosus, sursum infundibularis; limbo obliquo, utrinque emarginato subcompresso. (Obs. basis calycis deorsum in pileoli speciem ovarii apicem tegentem producitur; v. analysin hujus tabulæ.)

We do not discover any mention of this species among writers on South American Botany; and yet it appears to be very common in Chili, whence we have had many specimens gathered by various collectors. Mr. Bridges sends it under the name we have adopted, adding that it is called by the Chilenos *Oreja de la Zoera*, and that it is an herbaceous plant, found in stony places near Valparaiso and Quillota.

For our specimens we are indebted to Robert Bevan, Esq. who forwarded them to us in flower in September last. The plant is hardy enough to bear our climate, if protected from

* See fol. 1399.

wet and the severest cold in winter. It may no doubt be increased readily by cuttings, and may soon be expected to become common.

It is nearly related to *Aristolochia glauca* of the South of Europe, but is very different in the form of its leaves.

* *BLÉTIA* grácilis.*Slender Bletia.*

GYNANDRIA MONANDRIA.

Nat. ord. ORCHIDÆÆ, § EPIDENDRÆÆ Lindl. (*Introduction to the Natural System of Botany*, p. 262.)

BLETIA. *Supra*, vol. 17, fol. 1401.

B. gracilis; sepalis petalisque subæqualibus lanceolatis acuminatis, labelli trilobis lobis lateralibus nanis rotundatis intermedio transverso emarginato undulato: lamella solitaria in medio, foliis plicatis oblongo-lanceolatis acutis subtus discoloribus.

B. gracilis; *Lodd. Bot. Cab.* 1681.

Pseudobulbi ovati, aggregati, purpurei. Folia plicata, membranacea, latitudine variabilia, sæpius unico tantum perfecto cuique pseudobulbo. Scapus terminalis, gracilis, purpuratus, $1\frac{1}{2}$ pedem longus, erectus, calami corvini crassitudine, parcissime squamatus, apice racemum brevem 3-4-florum gerens. Flores subringentes, sepalis petalisque sordidè luteis, roseo versus apices suffusis; labello basi roseo venis picto apice luteo.

A native of Mexico, whence it was introduced by the Messrs. Loddiges, of Hackney. Our drawing was communicated by James Bateman, Esq. from his collection at Knyppersley, in July, 1833; we also received it in flower at nearly the same time from the Hon. and Rev. William Herbert.

It probably requires the treatment of *Bletia verecunda*, *acutipetala*, and *Shepherdii*, to all which it is nearly related; and it ought, when at rest, to be kept where it is in no degree exposed to circumstances that are favourable to its growth. Dryness, and a cool place at the back of a

* See fol. 1401.

green-house, or even a common pit, protected from cold and wet, would probably suit it until the season for its growth returns, at which time it should be removed to a hot damp-stove, among tropical epiphytes, to remain there till its leaves decay; when that happens, it should once more be restored to a resting-house.

The species is very distinct from any previously described.



Chrysanthemum leucanthemum L.

* *GILIA* Achilleæfolia.*Milfoil-leaved Gilia.*

PENTANDRIA MONOGYNIA.

Nat. ord. POLEMONIACEÆ. Juss. (*Introduction to the Natural System of Botany*, p. 219.)

GILIA. *Supra*, vol. 14, fol. 1170.

Sect. 3. *Eugilia*. *Folia alterna, pinnatifida v. pinnatisecta*.——*Flores subsolitarii, v. sæpius glomerati. Corollæ tubus calyce subbreuior*. Benthani in Bot. Reg. fol. 1622.

G. Achilleæfolia; caule erecto glabriusculo, foliis 2-3-pinnatisectis: segmentis lineari-subulatis, corymbis capitatis multifloris longissimè pedunculatis, calycibus sublanatis, corollis calyce duplò longioribus, staminibus corolla brevioribus. *Benthani, l. c.*

Herba annua, late viridis, ramosa, pedalis et ultra, glaberrima, salvis foliorum basibus ciliatis calycibus pedunculisque. Corollæ purpureæ; stamina ad ipsos sinus inserta, limbo breviora, antheris cyaneis.

A new hardy annual, sent from California to the Horticultural Society by Mr. Douglas. It resembles *G. capitata* in its foliage, and in the arrangement of its flowers; but its appearance is much more green, and its habit is dwarfish. The flowers, too, are purple, instead of sky-blue.

It will grow in any kind of soil, and produces seed in abundance, so that it will soon become as common as *G. capitata* itself.

Our drawing was made in August last, at which time the flowers first began to open. The plant continued in perfection till the beginning of December, when the cold nights killed it.

* Sec fol. 1170.



LINÁRIA Dalmática.

Dalmatian Toad-flax.

DIDYNAMIA ANGIOSPERMIA.

Nat. ord. SCROPHULARINEÆ. Juss. (Introduction to the Natural System of Botany, p. 228.)

Subtribus Antirrhineæ ; Chavannes.

LINARIA, Tournef. *Calyx* 5-partitus. *Corolla* personata; tubo abbreviato inflato basi calcarato; palato ad faucem prominente interdum depresso. *Capsula* valvulis dentibusve 4-10, v. operculis 2 dehiscens. *Chavannes Monogr. Antirrh.* p. 74.

L. Dalmatica; glauca, ramosa, foliis oblongo-lanceolatis acutis approximatis, floribus ad summities ramorum paucis et laxis, calycis segmentis oblongo-v. lineari-lanceolatis acutis glabris. *Chavannes, l. c. p. 126.*

— *Calcare corollæ æquali.*

Linaria grandiflora; *Desf. coroll. inst. Tourn. p. 30, t. 21. Chavannes, l. c.*

— *Calcare corollâ multò brevior.*

Antirrhinum Dalmaticum; *Lin. sp. 857.*

Linaria Dalmatica; *Mill. dict. ed. 8, No. 13.*

Seeds of this handsome plant were gathered in Persia, and presented by Sir Henry Willock to the Horticultural Society, in whose garden a plant or two flowered about Midsummer last year. The shoots spring, with very few branches, straight from the ground, and rise to the height of two or three feet. They and the leaves are covered over with a dense bloom, which contrasts agreeably with the deep yellow of the showy flowers.

It has not produced seeds; but as it is perennial, it may probably be increased without difficulty, by dividing the crown of its roots.

* An alteration of *Linum*, flax, which many of the species resemble before they flower.

That this Persian plant is the same as the Armenian and Dalmatian species, we cannot for an instant doubt. The only distinction that Monsieur Chavannes, in his elaborate and truly excellent monograph, was able to point out between them, consists in the greater length of the spur in this form of the species. But in all other respects it is so identical with the others, that it does not appear to us advisable to separate them even as varieties.

The range of the plant, then, in its wild state, will be from Dalmatia and Candia, in Europe, into Armenia and Persia.

It appears to be a hardy perennial.





* RHODODÉNDRON arbóreum; var. album.

White Tree Rhododendron.

DECANDRIA MONOGYNIA.

*Nat. ord. ERICÆ. Juss. (Introduction to the Natural System of Botany, p. 182.)**RHODODENDRON. Supra, vol. 1, fol. 37.**R. arboreum*; foliis glabris lanceolatis subtus micantibus, capsula valvulis 10, caule arboreo.*α. sanguineum*; floribus atrosanguineis, foliis subtus argenteis.*R. arboreum. Supra, vol. 11, fol. 890.**β. roseum*; floribus intensè roseis, foliis subtus ferrugineis. *Supra, vol. 15, fol. 1240.**γ. album*; floribus candidis, foliis subtus ferrugineis.*R. arboreum album. Wallich. Pl. As. rar. vol. 2, p. 23, t. 123.*

Never did we behold any flower more perfectly lovely than was this when we received it from the conservatory of Mr. Wells, in the month of February last. Its leaves of the richest and deepest green, mellowed by the warm tone of their under surface; its large clusters of bell-shaped flowers, hanging loosely yet compactly by their slender stalks, and the half transparent snowy corollas, without a stain or a spot, save what Nature had given them to render their whiteness the more pure and brilliant, formed together an effect which few objects could rival, and none surpass. Neither the rich crimson of the common Tree Rhododendron, nor the deep rose-colour of its pale variety, can for a moment be compared with that admirable delicacy which no art can imitate, and no pen describe.

Dr. Wallich, in his splendid *Plantæ Asiaticæ*, speaks thus of the native habits of this noble plant:—

“Both it and the rose-coloured variety are confined to the single mountain Sheopore, among those which I had an

* See fol. 1240.

opportunity of visiting during my sojourn in Nipal, occupying the very summit of it, at an elevation of not less than 10,000 feet above the sea. I observed a considerable number of individuals, but it appeared to me that those with rose-coloured flowers were by far the most common. They attain the size of very large forest trees, and are noble objects at all times. They blossom simultaneously in April, in which state the beauty of them surpasses all description, the ample crown of the trees being entirely covered with bunches of large and elegant blossoms. The common red-flowered or parent species is likewise found on the above-mentioned mountain, but it is less frequent there than in lower situations, where it blossoms a month earlier, that is, in March.

“There cannot be the slightest doubt that the above-mentioned trees are mere varieties of the common *Rhododendron arboreum*; and if it were necessary to adduce proofs of this, in addition to the fact that in every essential character they perfectly agree, I should mention that I have actually seen the white and rose-coloured sorts gradually change into each other, as well as into the colour of the parent tree. The only marks of distinction from the latter consist in the more or less brown colour of the lower surface of the leaves, which both varieties have in common, and the colour of the flowers, which in our variety is pure white, with a very slight tinge of pale pink on the base of two or three of the lobes of the corolla. I am convinced, moreover, that from the great elevation at which the varieties are found, they will prove hardy trees in this country; and that even the common Nipal *Rhododendron*, provided the individuals are derived from mountains not lower than that at which its varieties grow, will also stand the climate of England.”

We regret to find that experience does not confirm the expectations of our learned friend; for all the Indian *Rhododendrons* appear to be incapable of enduring the climate of Great Britain. The only way to cultivate them successfully, is to treat them as hardy conservatory plants.



*TRITELEIA laxa.

Loose-flowering Triteleia.

HEXANDRIA MONOGYNIA.

Nat. ord. ASPHODELEÆ. Juss. (*Introduction to the Natural System of Botany*, p. 273.)

TRITELEIA Hooker. *Perianthium* tubulosum, subinfundibulare, marcescens. *Stamina* 6, duplici serie inserta; superioribus petalis oppositis. *Squamæ* hypogynæ nullæ. *Orarium* æpius stipitatum, rarò sessile, polyspermum; *stigmata* trilobo.——Herbæ (*Austro et Boreali Americane*), cormis *indivisiis*. Flores *umbellati*.

T. laxa; foliis linearibus glaucis scapo longioribus, involucrio pedicellis duplo brevioribus, pedicellis laxiusculis perianthio basi angustato æqualibus, ovario longè stipitato, filamentis 6 decurrentibus basi cristatis, umbella multiflora.

T. laxa. *Bentham in Hort. Trans. vol. 1, n. s. p. 413, t. 15, f. 2.*

Involucrum membranaceum, sæpè 3-phyllum, sed floribus numerosioribus polyphyllum; bracteis pedicellis brevioribus. Umbella multiflora, (6—20), laxiuscula. Flores cœrulei, infundibulares, pedicellorum longitudine, circa ovarium marcescentes; laciniis ovatis, dorso viridi-costatis, exterioribus paulò angustioribus et acutioribus. *Stamina* 6, duplici serie ordinata, tubo adnata, filamentis elevatis basi incrassatis et crenulatis; superiora petalis opposita. Ovarium stipite longo curvo subhexagono impositum, oblongum, cyaneum, 3-loculare, polyspermum; stylus unicus brevis; stigma trilobum.

Mr. Bentham remarks that this is “a very handsome plant, the scape of which is from a foot to eighteen inches high. Its flowers are about the size of those of *Brodiea grandiflora*, and of the same deep blue colour. They grow in a lax umbel, but notwithstanding the length of their stalks stand nearly erect; the scape is, however, apt to be procumbent if not supported. It seeds freely, and will soon be very common.”

No plant can be more easy to cultivate; it will grow in common garden soil, but prefers such a mixture of peat,

* From τρεῖς three, and τέλειος complete, in allusion to the perfectly ternary arrangement of its parts.

loam and sand as is found in a border for American plants; it appears to be perfectly hardy, and if allowed to remain undisturbed, it will propagate itself by offsets as well as by seeds. At the time when our drawing was made the plant was weak, in consequence of having suffered from a long voyage round Cape Horn; it has now become stronger; and we write with a specimen before us bearing 20 flowers in an umbel. It blossoms in June and July.

At fol. 1293 of this work we defined the genus *Triteleia*, describing briefly such species as we were then acquainted with. The discovery of this rendering it necessary to amend the characters of one of the species, we avail ourselves of the present opportunity of doing so, and of publishing a fifth.

T. grandiflora (LINDL. *Supra*, vol. 15, fol. 1293); foliis linearibus glaucis scapo erecto bipedali brevioribus, involucro pedicellis æquali, pedicellis strictis perianthio infundibulari vix æqualibus, ovario breviter stipitato, filamentis 3 decurrentibus basi callosis, umbella pauciflora.—North West America. Formerly cultivated in the garden of the Horticultural Society, but now lost.

T. peduncularis; foliis linearibus scapo erecto bipedali brevioribus, involucro pedicellis quater brevioribus, pedicellis strictis perianthio obconico quater longioribus, ovario breviter stipitato, limbo perianthii tubo longiore, umbella multiflora.—California. Flowers apparently pale blue. Not yet introduced.

 $\sim 1.5 \times 10^4$

Two by J. Ridgway, 109 Piccadilly July. 1. 1834.

J. Watts & Co.

* *GARRYA* elliptica.*Elliptic-leaved Garrya.*

DIOECIA TETRANDRIA.

Nat. ord. GARRYACEÆ.

GARRYA. Dioica. ♂. *Calyx* tetraphyllus. *Stamina* 4.—♀. *Calyx* superus, bidentatus. *Ovarium* 1-loculare; *stylis* duobus setaceis; *ovulis* duobus ab apice funiculorum totidem pendulis. *Pericarpium* baccatum, indehiscens, dispermum. *Embryo* minimus, in basi albuminis carnosus.—Frutex (*Boreali-Americanus*). Folia opposita, exstipulata. Flores intra bracteas connatas, in spicis amentaceis pendulis dispositi.

Garrya elliptica. Douglas in herb.

Frutex dioicus, in hortis 3-4-pedalis, verosimiliter ferè orgyalis; ramis junioribus pubescentibus viridi-purpureis, adultis lavibus, viridi-griseis, rimosis. Lignum zonas nullas ostendit concentricas: sed maximâ pro parte e tubis ligneis constat granulis olivaceo-fuscis punctatis, circa medullam copiosam in lamellis, processibus crassis medullaribus separatis, radiatim ordinatis; vasis paucis annularibus reticulatisve inter lignum sparsis; nullis punctatis interjectis. Folia exactè opposita, exstipulata, undulata, brevè petiolata, oblonga, acuta, coriacea, sempervirentia, supra atro-viridia glabra, subtus pilis simplicibus tortilibus intertextis pubescentia et cana; venis pennatis, primariis intra marginem incurvis. Flores in amentis longis pendulis caudæformibus aggregati, e bracteis constantibus, pubescentibus, incanis, oppositis, connatis, cuspidatis, decussantibus, persistentibus; masculi (fig. 1), cuique bracteæ 3, pedunculati; sepalis 4, linearibus, pallidè viridibus, membranaceis, pilosis; staminibus totidem sepalis alternis et brevioribus; antheris oblongis, introrsis, bilocularibus, longitudinaliter dehiscentibus, (fig. 2); fœminei (fig. 3) villosi, cuique bracteæ 3, sepalis 2, minimis superis stylos decussantibus, ovario infero, 1-loculari, ovulis duobus ab apice funiculorum brevium pendulis, stigmatibus duobus subulatis (ovario intermedio anticis posticisque, lateralium dextrorsis sinistrorsisque). Fructus in amentis dispositi, baccati, pubescentes, oblongi, uniloculares, dispermi, stigmatibus persistentibus coronati. Semina oblonga; testa exteriori tenui, suberosa, interna transversè corrugata, brunnea, chalazâ conspicua ad apicem rapheque elevata ab hilo ducente. Albumen carnosum, homogeneous, embryone minimo dicotyledoneo, radiculâ hilo proximâ ideoque quoad fructum superâ.

* Named by Mr. Douglas in compliment to Nicholas Garry, Esq. Secretary of the Hudson's Bay Company, to whose kindness and assistance he was much indebted during his travels in North-west America.

Sub Germinatione embryo elongatur et axin albuminis occupat, cotyledonibus simul dilatantibus; tunc, hili coleoptile elevato, cauliculus promitur incrassatus, deflexus, cito in radiculam corrugatam mutatus; plumula demum se tollit e medio cotyledonum semper intra semen latentium, more Quercus aliarumque Cupuliferarum.

A hardy evergreen shrub, native of Northern California, where it was discovered by Mr. Douglas. It was introduced in 1828, and a male plant flowered for the first time in October last in the garden of the Horticultural Society. In appearance it is very similar to a *Viburnum*, and like that genus is readily increased by layers. It has generally been cultivated in peat, but it certainly prefers a loamy soil.

Although this plant cannot be compared for beauty to the *Berberries*, *Ribes*, *Lupines*, *Pentstemons*, *Clarkias*, *Calochorti*, and other fine things discovered by Mr. Douglas, it is probable that it is the greatest botanical curiosity in all his collections; for it appears to represent a Natural order on the one hand altogether distinct from any previously known, and on the other connecting certain well known Natural orders in an unexpected and satisfactory manner.

In its amentaceous inflorescence, imperfect flowers, superior calyx, and mode of germination, *Garrya* is very similar to *Cupulifera*, from which it differs most essentially in its wood without concentric circles or dotted vessels, its opposite exstipulate leaves, simple fruit, and minute embryo lying in a great mass of albumen.

The latter characters bring it near *Piperaceæ* and their allies, especially *Chloranthæ*, with which its zoneless wood (for *Chloranthus* has no annual zones), simple fruit, and opposite leaves also agree; but the stipules of *Chloranthæ*, together with its achlamydeous bisexual flowers, and articulated stems, distinctly separate that order.

Urticæ and *Stilagineæ* may also be compared with *Garrya* on account of their imperfect unisexual flowers, somewhat amentaceous inflorescence, and simple fruit; but their superior fruit, alternate leaves, and more perfectly formed wood are important points of difference.

Gnetaceæ, a naked-seeded order, consisting at present of the genus *Gnetum* alone, most essentially distinguished from *Coniferæ* by the veining of its leaves, its jointed stems, zoneless wood, and more complete vascular system (for it certainly abounds in true spiral vessels, contrary to the observation of Mr. Adolphe Brongniart), and forming a connecting link between *Piperaceæ* and *Taxineæ*.—*Gnetaceæ* may also be compared to *Garrya* on account of their opposite exstipulate leaves, amentaceous unisexual flowers appearing from the axillæ of connate bracteæ, their minute embryo lying in a great mass of albumen, and imperfect zoneless wood, which in both cases is chiefly constituted of woody fibre (the sides of which are marked with numerous brownish granules), and of annular and reticulated vessels lying scattered sparingly among the tubes of woody fibre.

Finally, *Henslowia*, an imperfectly known genus, with regularly zoned wood filled with dotted ducts, like those of *Ulmus*, is not to be overlooked in comparing *Garrya* with other genera, on account of its imperfect unisexual flowers and opposite exstipulate leaves; but the Natural order (*Henslowiaceæ*) of which it must be considered the type, is too little known to enable us to carry the comparison further.

Garrya, then, proves to be essentially different from any known order, and to constitute the commencement of a new natural groupe, to which the following characters may be assigned.

GARRYACEÆ.

Dicotyledones, incompletæ, rectembriæ, inarticulatæ; *ligno* exogeno, ezonato; *foliis* oppositis, exstipulatis; *floribus* unisexualibus, monochlamydeis; *ovario* infero, monocarpo, oligospermo; *ovulis* pendulis; *embryone* minimo, in basi albuminis carnosi; *germinatione* intraseminali.—*Cupuliferis* affines, easque cum *Coniferis* connectentes per *Chloranthas* in *Gnetaceis* transeuntes.

Fig. 1 represents a barren flower; 2, an anther; 3, a fertile flower; 4, a vertical section of the latter.



Det. by J. S. Burdett, July 1, 1834.

J. Smith & Co.

* GEODÓRUM fucátum.

Painted Geodorum.

GYNANDRIA MONANDRIA.

Nat. ord. ORCHIDÆÆ. Juss. § VANDEÆ, Lindl. (*Introduction to the Natural System of Botany*, p. 262.)

GEODORUM. *Supra*, vol. 8, fol. 675.

G. fucatum; scapo florifero foliis duplò breviorè, spicâ pendulâ congestâ, labello gibboso ovato emarginato integerrimo: lineis duabus callosis elevatis.

Folia e tubere subterraneo annulatim cicatrizzato erumpentia, oblongo-lanceolata, acuta, plicata, pedem longa, scapo florifero duplo longiora, frugifero subæqualia. Scapus radicalis, erectus, vaginatus, apice recurvus, et spicam ideo pendulam, partibus omnibus inversis, compactam, brevem gerens. Bracteæ lineares, acutæ, ovarii longitudine. Flores subcampanulati, magnitudine et facie *G. dilatati*. Sepala lineari-oblonga, acuta, rosea, apice paululum recurva petalis paulò latioribus omninò conformia et parallela. Labellum ob spicam inversam, anticum, revera posticum, ovatum, concavum, subtus gibbosum, cum columna parallelum et continuum nec articulatum, integerrimum, emarginatum; roseum, venis lateralibus intensioribus pictum; lineis duabus latis, elevatis, parallelis, contiguis, ochraceo-sanguineis, in medio.

A single plant of this new species of *Geodorum* sent to the Horticultural Society from Ceylon by Mr. Watson, in 1832, flowered in the Chiswick garden last July. It resembles *G. dilatatum* figured in tab. 675 of this work; but has rather smaller flowers, and a very different labellum.

It thrives in a hot, damp stove, but requires to be rested after its leaves have withered.

Fig. 1. represents the labellum seen from above; fig. 2. the column and labellum after the other parts of the flower have been removed.

* From γῆ the earth, and δῶρον a gift.



My. Tili. Pinnatifida. Folia 1 R. 24

J. Walp. 5.

* SPHÆROSTÉMA propinquum.

Small-flowered Sphærostema.

DICECIA POLYANDRIA.

Nat. ord. ANONACEÆ Juss. § SCHIZANDREÆ Blume. (*Nixus Plantarum* 9.)

SPHÆROSTEMA, BLUME.—Dioicum. *Sepala* 6, duplici ordine digesta, exterioribus minoribus. *Petala* 3. *Stamina* maris in globum coadunata, indefinita, *filamentis* omnino v. pro parte tantum connatis. *Carpella* indefinita, disperma; *matura* baccata, receptaculo longissimo spicatum disposita. *Semina* reniformia; albumine carnoso, homogæneo.——Frutices (*Asiaticæ*) *volubiles, aromaticæ, glabræ*. *Folia dentata*. *Flores axillares*.

S. propinquum; foliis ovatis acuminatis dentatis, floribus subsolitariis petiolo æqualibus, petalis ciliatis, antheris immersis.

S. propinquum, Blume.—*Wall. Cat. No.* 4986.

Kadsura propinqua. *Wall. Tentamen*, p. 11, t. 15.

Frutex *volubilis, glaber, aromaticus*. Lignum more *Stauntoniæ* *zonas* *nullas annuas ostendit, sed mera est congeries tuborum ligneorum radiatim medullam copiosam circumstantium, et processibus tenuibus medullaribus continuis in lamellas tenues separatorum; inter quos copia adest vasorum annulorum reticulorumque sine ordine dispositorum*. Tubi lignei *parietes* *habent admodum crassos, diaphanos tamen, et glandulis fuscis uniseriatis notatos; vasa multò tenuiora et grandiora*. *Folia ovata, acuminata, dentata*. *Flores masculi solitarii, axillares; pedunculo 1-2-bracteato, petiolo paulò longiore*. *Sepala viridia, inæqualia, tria exteriora minima, interiora majora, concava, oblonga, ciliata*. *Petala 3, sepalis interioribus conformia, lutea, mox fulva*. *Stamina plurima, in globum carnosum coadunata, apicibus tantum antheriferis liberis; antheræ ovatæ, biloculares, dorso affixæ, in foveis globi nidulantes*.

[*Feminei* (ex cel. Wallich) quoad *sepala masculis simillimi. Ovaria minima, valde numerosa, carnosa, ovata, supra et intus marginulâ parum elevatâ notata, imbricata in acervulum subglobosum. Stylus nullus. Baccæ globosæ, carnosæ, numerosæ, læves, coccineæ, parum minores quam in antecedente, fabricâ vero internâ omnino similes, dispositæ in spicam brevè pedunculatam, sex pollicarem, cylindricam, rachi parum incrassatâ, valde asperâ propter tubercula numerosa baccas adfigentia.*]

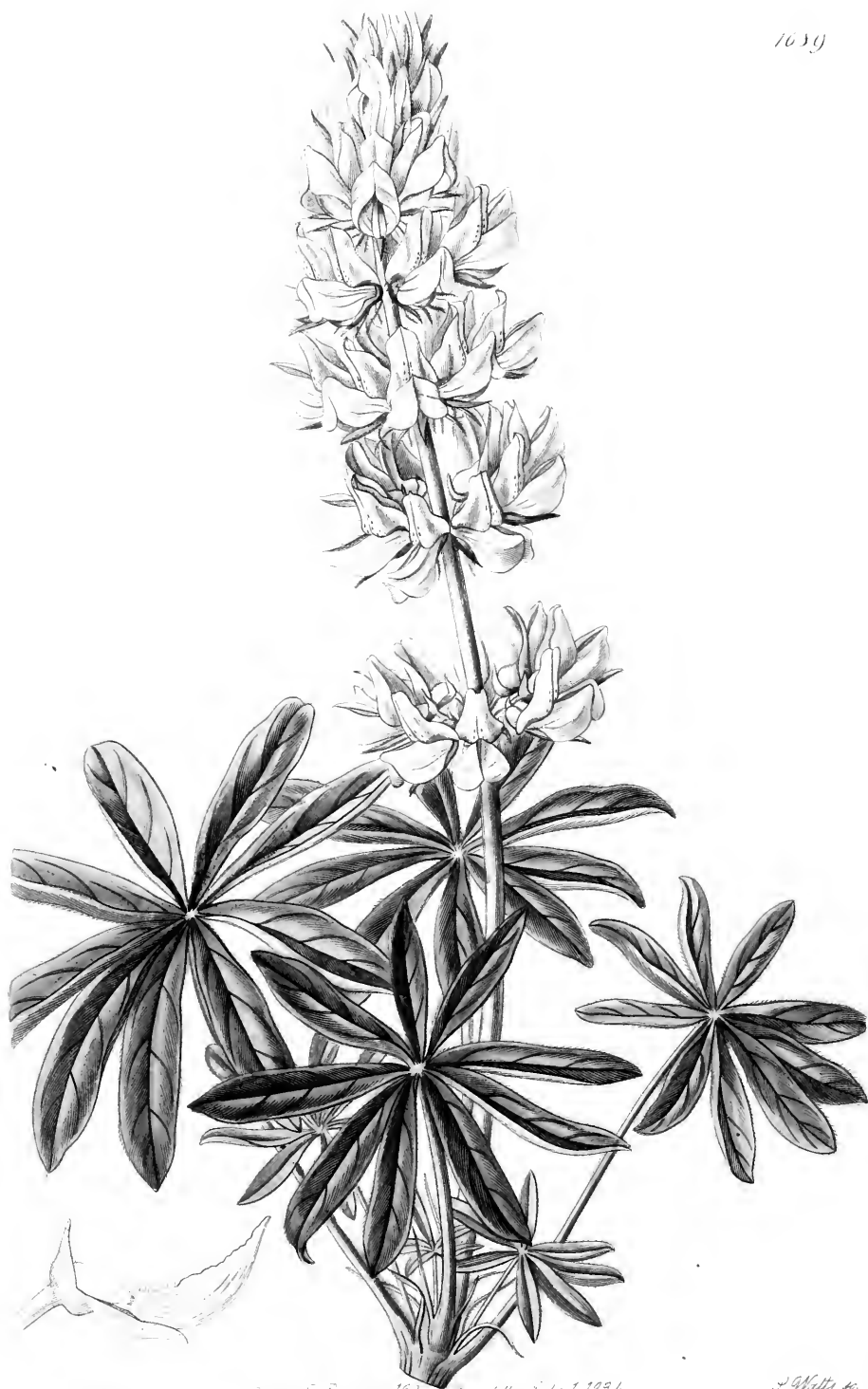
A hot-house climber, found by Dr. Wallich in Nipal, on Mount Sheopore, and on hills about Sankoo. It is easily

* So named from *σφαῖρα* a globe, and *στῆμα* a stamen, in allusion to the structure of the male flowers.

propagated by cuttings, and in the fertile state must be a handsome plant, with its long pendulous spikes of scarlet berries. Unfortunately, the plant which flowered in the garden of the Horticultural Society last July, and from which our drawing was taken, was a male; so that we are not likely to see these berries until a fresh importation of plants shall have taken place.

In the structure of its flowers it is extremely curious. The stamens (*fig. 2.*) are all consolidated into a solid globular mass, the anthers only being at liberty, and nestling in a number of little excavations (*fig. 1.*) of the mass.

We find, by our memoranda, that Dr. Blume combines this genus, *Kadsura*, *Stauntonia*, and *Schizandra* into a small group, called *Schizandreæ*. We have not at hand the work in which Dr. Blume's ideas upon this subject are explained, but we presume, from the ternary structure of the flower of those genera, their aromatic foliage, apocarpous fruit, hypogynous stamens, and minute embryo lying in a great mass of albumen, that they constitute a section of *Anonaceæ*; distinguished by the climbing habit, unisexual flowers, homogeneous albumen, and, perhaps, also by their wood. Upon this latter point we however cannot judge, from want of means of examining the wood of *Schizandra* and *Kadsura*; that of *Sphærostema* is very like the remarkable wood of *Stauntonia* or *Hollböllia*, figured in our introduction to Botany, p. 70, as will be evident from the technical description given of it in this account.



Lupinus 189. Secedilly July 1 1894

J. H. Walter sc.

* *LUPINUS densiflorus*.*Dense-flowered Lupin.*

DIADELPHIA DECANDRIA.

Nat. ord. LEGUMINOSÆ. *Juss.* (*Introduction to the Natural System of Botany*, p. 86.)

LUPINUS. *Supra*, vol. 12, fol. 1096.

L. densiflorus; annuus, pilosus, caulibus adscendentibus basi foliosis; foliolis 7-9 oblongo-spathulatis, verticillis numerosis villosis approximatis 6-10-floris, pedicellis bracteatis, calycis labio superiore membranaceo bipartito inferiore piloso tridentato duplo longiore, leguminibus villosis dispermis.

L. densiflorus. *Bentham in Hort. Trans. n. s. vol. 1, p.*

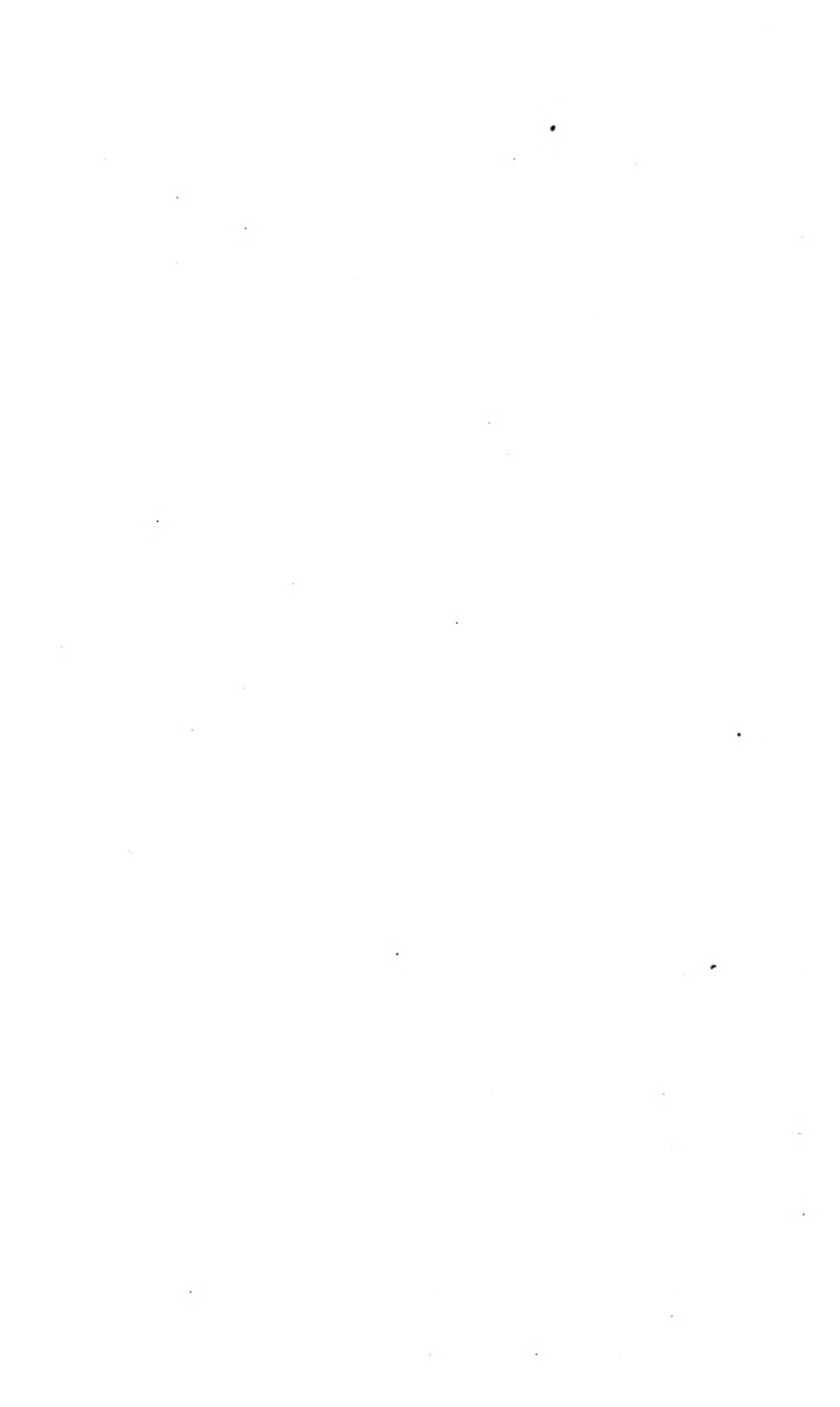
Annuus; caule erecto, simplici, brevissimo, villoso, in spontaneâ pedunculo communi multo brevior. Folia pilosa; foliolis oblongo-spathulatis, 7-9, pallide viridibus, in spontaneâ pedunculo longioribus, culta brevioribus; stipulæ setaceæ, intertextim villosæ. Verticilli villosissimi, 6-10-flori, æquales, approximati; inferioribus magis distantibus. Bracteæ a lata basi setaceæ, carinæ longitudine, apice sphacelatæ. Calyx villosus, in cultu tantum pubescens; bracteolis setaceis labii superioris longitudine; lab. sup. bipartito, laciniis approximatis; inferiore apice tridentato dente intermedio minimo, superiore brevior. (*Obs. partes in icone incuria pictoris falsè delineantur.*) Vexillum lacteum, acutiusculum, basi viridi-punctatum; alæ et carina acuminatæ, roseæ, lineis intensioribus striatæ. Semina olivacea, lævia, nigro maculata.

Raised in the garden of the Horticultural Society, from seeds sent from California, by Mr. Douglas. Mr. Bentham, in his paper in the Horticultural Transactions, to which we have so often referred, speaks of it thus:—

“The flowers, which grow in distinct whorls, are white, delicately stained with pink; they are also a little speckled at the base of the vexillum. The leaves are closely clustered together, are covered with fine soft hairs, and each has about nine narrow divisions. The stem does not grow above six or seven inches high.”

It is a hardy annual, but not one of the most beautiful species. Seeds have been hitherto produced by it in such small quantities, that it still remains extremely rare.

* See fol. 1198.





* *YUCCA* *superba*.*Superb Adam's Needle.*

HEXANDRIA MONOGYNIA.

Nat. ord. LILIACEÆ. Juss. (Introduction to the Natural System of Botany, p. 279.)

YUCCA.—*Corolla* hexapetalo-partita, campanulata, demum marcescens; laciniis æqualibus parum patentibus, ungue connatis. *Stamina* valida, brevia; filamentis basi corollæ insertis, superne tumidulis. *Antheræ* parvæ, suboblongæ v. subglobosæ. *Germ.* oblongum, teretiusculum, 6-sulcum, stamina excedens. *Stigmata* 3, sessilia, obesa, deorsum confluentia, apice parum recurvata. *Caps.* carnosæ, oblonga, obtusè 3-6-gona, apice perforata et demum dehiscens, 3-6-locularis, dissepimentis 3 crassioribus. *Semina* numerosissima, uniseriata, plana. *Römer and Schultes Syst. veg. v. 7, xli.*

Y. superba; foliis loratim lanceolatis amplis 2-3 uncias latis subplicatis parum mucronatis, floribus confertissimis oblongo-campanulatis, inapertis apice assurgenter rostratis curvantibus, caudice decempedali. *Haworth Suppl. Succ. Pl. p. 36.*—*Römer and Schultes Syst. veg. vol. 7, p. 720.*
Y. gloriosa. Bot. Rep. t. 473.

We are indebted to the Honourable and Rev. William Herbert, for the specimen from which our drawing was made. Having no knowledge of the plant ourselves, we can only repeat the observations made by Mr. Haworth, when he first pointed out the species, with the addition of Mr. Herbert's remarks in the letter that accompanied the specimens.

“This conspicuous species,” says Mr. Haworth, “has been taken, by the authors of the Botanical Magazine, for *Yucca aloifolia*; and, misled by relying too much on their decision, I have cited its beautiful figure in the Botanical Repository, for *Y. aloifolia*. But on more mature consideration, nothing can appear more distinct in the whole genus than those two plants. The leaves of the present spe-

* *Yuca* is said to be the name of this genus among the natives of Saint Domingo.

cies are entire, and smooth-margined, not serrulated, and three times broader than those of *aloifolia*; and they possess much weaker and less pungent points. Indeed, as a species, it is much nearer allied to *Y. gloriosa*; and, in fact, appears to differ from that species only in the shape of its corolla, and in its arborescent stem, which differences are, however, sufficient."—(*Suppl. Succ. p.* 36.)

Mr. Herbert tells us that he bought the *Yucca*, twenty years ago, from Mr. William Malcolm, of Kensington; and that it is unquestionably the most magnificent plant in the flower-garden. The flower-stem rises eight or nine feet high, and the profusion of blossom is so great, that as the lateral shoots are rather suberect than diverging, a pin cannot be passed between the flowers in the centre of the column. The deep crimson of the stalks and stem, and the purple stripe on the outer petals of the flower, remind one of the colour of *crinum amabile*, and contrast beautifully with the glossy white flowers. It is a very hardy species, and flowers frequently. In a very dry season the colour is not so deep; warm or temperate, and showery weather, bring it to the highest perfection of beauty. Its leaves are more acutely pointed than those of *Yucca gloriosa*.



Epilobium angustifolium L.

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W. H. S.

* *GÍLIA coronopifolia*.*Ravenfooted Gilia.*

PENTANDRIA MONOGYNIA.

*Nat. ord. POLEMONIACEÆ. Juss. (Introduction to the Natural System of Botany, p. 219.)**GILIA. Supra, vol. 19, fol. 1622, in textu.*

§ 2. *IPOMOPSIS. Folia alterna, pinnatisecta v. pinnatifida. Flores axillares v. subglomerati. Corollæ tubus elongatus longè exsertus. Bentham, supra, fol. 1622.*

G. coronopifolia; caulibus strictis paniculatis glanduloso-pubescentibus, foliis pectinatum pinnatis: laciniis filiformibus apice setaceis, corollis elongatis tubulosis limbi patuli laciniis oblongis acutis.

G. coronopifolia. Pers. synops. 1. 187.

Ipomopsis elegans. Smith Exot. bot. 1. 23. t. 13.

Ipomopsis picta. Hort. Gallic.

When we published the beautiful plant called *Ipomopsis elegans* at folio 1281 of this work, we thought it certain, firstly that the genus *Ipomopsis* was distinct from *Gilia*, and secondly that the old *Gilia coronopifolia* of the gardens was the same as that species. It however appears from the investigations of Mr. Bentham that we were in error in both these particulars; for he sinks the genus *Ipomopsis* in *Gilia*, and separates the north-west American species from that of Carolina.

In regard to the latter point we are satisfied that we were in error, and we accordingly avail ourselves of the present opportunity of pointing out the differences between the two species.

Gilia coronopifolia, a Carolina plant, called in the French gardens *Ipomopsis picta*, has its stem covered over with fine glands mingled with a delicate downiness; its leaves have

* See fol. 1170.

extremely narrow divisions, which are tapered off to a fine point ; and its corolla has the segments in no wise reflexed, but spreading flat, and oblong with a slight point.

G. pulchella (fol. 1281) on the contrary, a North-west American plant, has no glands on its stem ; its leaves have narrow flat segments, which do not taper to the point ; and its corolla has the segments almost triangular and reflexed.

By these botanical differences then they may be distinguished ; in addition to which we may add, that *G. coronopifolia* is a plant which although delicate is tolerably easy to cultivate, and produces its seed in some abundance ; while on the other hand *Gilia pulchella* is so impatient of cultivation that it is already nearly lost from our gardens.

Both species are little better than biennials, and succeed more perfectly in a cool airy green-house than in the open air ; they are equally handsome, and as may be supposed, from their having been confounded with one another, very much alike.



* *RÍBES* *níveum*.*White-flowered Gooseberry.*

PENTANDRIA MONOGYNIA.

*Nat. ord. GROSSULACEÆ. Juss. (Introduction to the Natural System of Botany, p. 54.)**RIBES. Supra, vol. 2, fol. 125.*

R. níveum; ramis aculeatis, aculeis 1-3, foliis subrotundis obtuse trilobis crenato-incisis basi integerrimis glabris, pedunculis subbifloris, sepalis reflexis, staminibus longè exsertis conniventibus pilosis stylo longioribus.

Frutex R. Grossulariæ facie et statura. Aculei sub ramulis solitarii gemini ternive pugioniformes, quibusdam præterea minoribus in internodia; in ramulis vegetioribus densissimi, reflexi. Folia glabra, axillis venarum nonnunquam villosis, venisque ipsis membrana connexis. Racemi 2-3-flori, penduli, foliis multo breviores. Calyx viridis, laciniis albis, reflexis, paululum glandulosis; petala erecta, conniventia, lacera. Stamina elongata, conniventia; filamentis pilosis, stylo piloso longioribus. Baccæ nigræ, glabræ, R. nigri omnino facie et magnitudine; sapore acido vinoso submoschato gustui gratissimo.

An undescribed Gooseberry, brought to the Horticultural Society by Mr. Douglas, from North-west America. It is nearly allied to the common European Gooseberry, from which it is distinguished by its long conical stamens.

Ribes triflorum, an American species, to which this also approaches, is essentially distinguished by its much more slender habit, smaller dingy green flowers, and much smaller fruit.

The latter is about the size of that of a Black Currant, and of the same deep rich purple colour; it has altogether the

* See fol. 1263.

appearance of a small smooth gooseberry, but its flavour is very different. It is entirely destitute of the flatness which is more or less perceptible in even the best gooseberries, in lieu of which it has a rich sub-acid vinous rather perfumed flavour, which is extremely agreeable. The fruit is rather too acid to be eaten raw, but when ripe it makes delicious tarts, and would probably form an excellent means of improving the common gooseberry by hybridizing.



* *DIPLOPAPPUS incanus*.*Hoary Diplopappus.*

SYNGENESIA POLYGAMIA SUPERFLUA.

Nat. ord. COMPOSITÆ. Juss. (Introduction to the Natural System of Botany, p. 197.)

DIPLOPAPPUS Cassini. Radius uniserialis fœmineus. Discus hermaphroditus. Pappus biserialis conformis. Corolla disci regularis. Achænium crostre.—*Herbæ v. fruticuli Americani, Asiatici, v. Africani, foliis alternis integris; capitulis terminalibus, solitariis, colore vario tinctis* Lessing. *Synops. gen. comp. p. 163.*

D. incanus; suffruticosus, foliis linearibus obtusis glauco-incanis semiamplexicaulibus, caulis corymbosi ramulis unifloris, involucri squarrosi foliolis linearilanceolatis glandulosus.

Herba perennis, suffruticosa, incano-tomentosa, subbipedalis, corymboso-ramosa; ramulis distanter foliatis monocephalis. Folia omnia linearia, incana, sessilia, apice mucronulata, patentia; in ramulis floridis sensim evanescentia. Involucra hemisphærica, squarrosa, bracteis linearibus, acutis, subglandulosis, interioribus erectis, basi albidis apice herbaceis. Radius biserialis, violaceus; discus luteus. Pappus biserialis, filiformis, pubescens; serie exteriori abbreviata; ovario tereti lanato.

A handsome half-shrubby species, discovered in California by Mr. Douglas, by whom seeds were sent to the Garden of the Horticultural Society in 1832.

It is easily known from *D. linariifolius* and its allies by its hoary leaves, and soft flower-heads, which have the leaflets reflexed at the points in a squarrose manner, and covered with minute semi-transparent glands. Its flowers are of a rich lilac, with a bright yellow disk.

The species is rather tender, and should be protected during winter in a frame. In summer it grows freely in any hot, exposed situation, for which its Californian constitution particularly qualifies it.

* So called in allusion to the double row of pappus of the genus.





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Mimulus lewisii (Pursh) Benth. Aug. 1880

J. H. S. & S.

* PULTÉNÆA flexilis.

Shining-leaved Pultenæa.

DECANDRIA MONOGYNIA.

Nat. ord. LEGUMINOSÆ. Juss. (*Introduction to the Natural System of Botany*, p. 87.)

PULTENÆA. *Supra*, vol. 5, fol. 378.

P. flexilis; glaberrima, floribus axillaribus, foliis oblongo-linearibus mucronatis planis. R. Brown in *Hort. Kew.* vol. 3, p. 19.

P. flexilis. Smith in *Linn. Trans.* 9. 248. De Candolle *Prodr.* 2. 111.

Dillwynia teucrioides. Sieber *plant. exs. n. holl.* No. 423.

Rami minutissimè pubescentes, subangulati. Folia obovato-oblonga, angusta, mucronulata, plana, viridia, nitida, glaberrima; stipulis setaceis, fuscis, petiolo paulò longioribus. Flores solitarii, axillares, brevipedunculati. Calyx glaberrimus, bibracteatus, 5-dentatus; dentibus brevibus subæqualibus.

We are indebted to Mr. Cunningham for the knowledge of this being the true *P. flexilis* of Smith and the *Hortus Kewensis*, with which an entirely different plant, with glaucous leaves and hairy calyxes, has been confounded by Mr. Sweet.

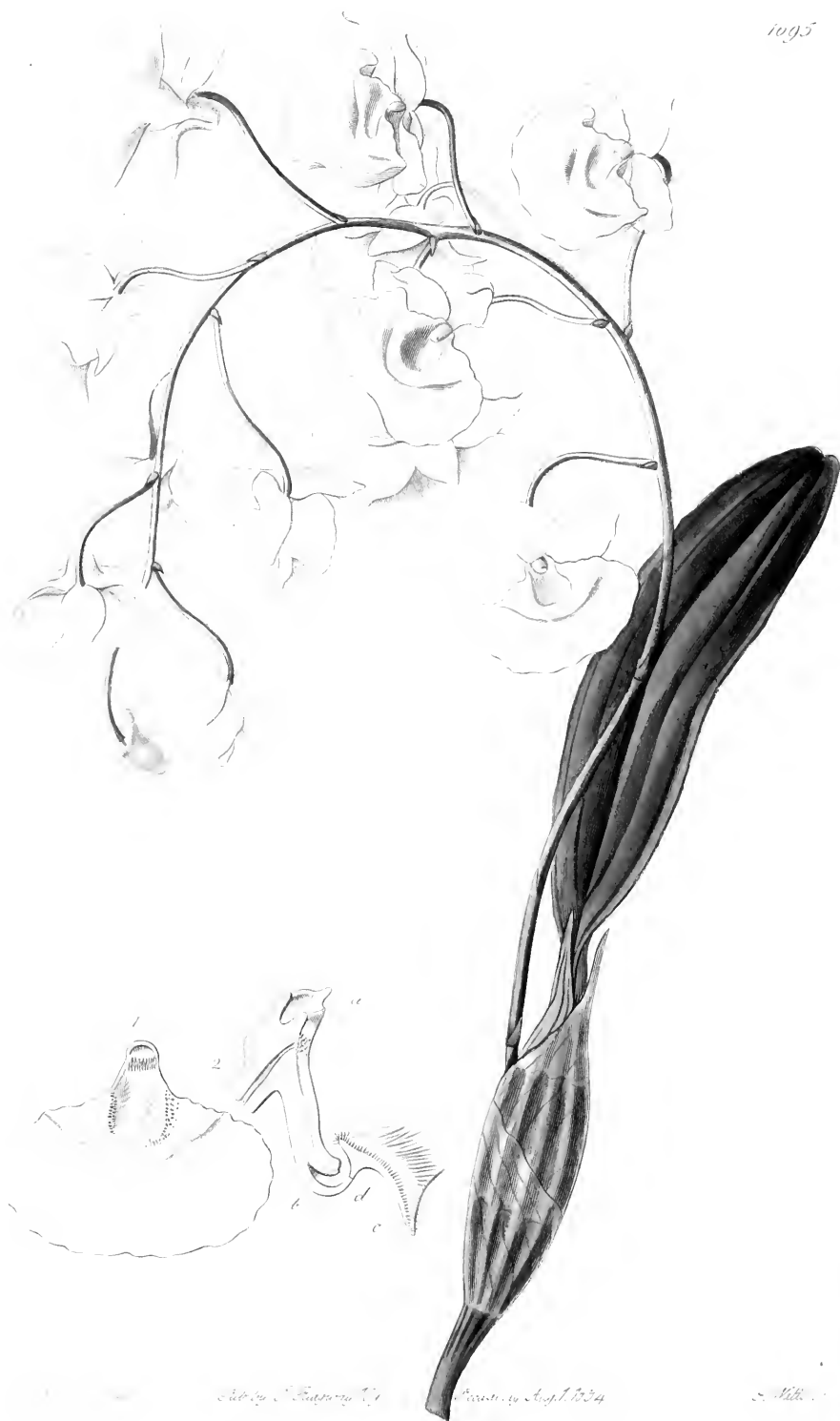
Mr. Cunningham concludes it must also be *P. flexilis* of Mr. De Candolle, because that Botanist quotes as a synonym, *Dillwynia teucrioides* of Sieber, the identity of which with the present plant is proved by the comparison of authentic specimens. The statement made by Mr. De Candolle, that his plant has no bracts, may possibly be accounted for upon the supposition that the specimens he described were imperfect.

Mr. Cunningham further adds that the species is "closely allied to *P. polygalifolia* of Rudge, but the calyx of that species is interspersed with villous hairs; its leaves are smaller; and it is altogether a more abundant flowering plant. *P. euchila* D. C. has also smaller cuneated leaves, and a remarkable

* See fol. 1584.

ample calyx, like, as De Candolle observes, *Euchilus* of R. Br. and especially, to my view, like that of some *Gompholobia*.—I have now before me an authentic bit of Sieber's *Dillwynia cuneata*."

"*P. flexilis* Sm. and Br. is a native of the country around Port Jackson, where it flowers in the spring (Sept.); and according to Hortus Kewensis, has been an occasional inhabitant of the English gardens for upwards of thirty years."



* DENDRÓBIUM aggregátum.

Clustered Dendrobium.

GYNANDRIA MONANDRIA.

Nat. ord. ORCHIDEÆ. §. Malaxidæ Lindl. (*Introduction to the Natural System of Botany*, p. 262.)

DENDROBIUM. *Supra*, vol. 7, fol. 548.

D. *aggregatum*; pseudobulbis monophyllis fusiformibus cinereis corrugatis, folio oblongo coriaceo obtuso racemo laterali cernuo multifloro duplò breviorè, petalis ovatis sepalis duplò latioribus, labello integerrimo latiore quam longo medio transversè plicato basi pubescente.

D. *aggregatum* Roxb. *Fl. Ind.* 3. 477. Lindl. in Wallich. *cat.* 7411.

Pseudobulbi *fusiformes, cæspitosi, 2-pollicares, squamis cinereis pellucidis vestiti. Folia 3-pollicaria, obscurè 5-striata. Racemi e latere pseudobulbi provenientes, 9 pollices et ultra longi, laxi, cernui, v. nutantes, 10-15-flori. Bractæ minimæ, ovatæ, purpurascetes. Flores pallidi, subcrocei, pedicellis gracilibus flexuosis inserti. Sepala explanata, angustè ovata, anterioribus valde obliquis in pseudocalcar obtusum conniventibus, more generis. Petala ovata, sepalis duplò latiora. Labellum versus basin intensius croceum, tali modo dilatatum et plicatum ut marginibus suis posterioribus petalorum dimidiam inferiorem imbricat; cum columna articulatum. Columna parva, albida, basi processu carnosio squamiformi deflexo aucta; clinandrio obtusè tridentato.*

Received, according to Dr. Roxburgh, into the Botanic Garden, Calcutta, from Mr. Pierard, who found it growing on the trunk of *Lagerstræmia Regiæ*, on the northern border of Arracan, and observed it in the woods exclusively on that tree; it was, however, found to thrive on the Mango tree in the Botanic Garden. It is also a native of the banks of the Chappadong river in the Gulf of Martaban, whence it was brought some years since by Dr. Wallich. It belongs to a curious section of the genus, all the species of which have their stems shortened into the pseudobulbous form of *Bolbophyllum*, and thus form a natural transition to that genus.

* See fol. 1239.

It appears to require as much heat and moisture as any of the Indian species, a circumstance which is explained by its inhabiting, when wild, the damp and sultry woods of Martaban. We believe it was originally distributed by the Horticultural Society; but it has hitherto flowered only in the collections of Mr. Harrison and Mr. Bateman, from both of whom we have received specimens. It blossoms in March and April.

The lip of this species is remarkable for being much broader than long, and plaited in the middle in such a manner as to form a projection round the hollowed part which lies against the column; it is moreover more distinctly articulated with the column than is usual in the genus. Its column has a fleshy reflexed appendix near its base.

In the accompanying figure 1 represents the lip, viewed from above: and 2 a section of the column and part of the lip, for the purpose of shewing at *a* the bed of the anther, at *b* the scale near the base of the column, at *c* the hairiness of the cavity of the lip, and at *d* the point of articulation between the lip and the column.



* PHACÉLIA tanacétifolia.

Tansy-leaved Phacelia.

PENTANDRIA DIGYNIA.

Nat. ord. HYDROPHYLLEÆ. R. Br. (*Introduction to the Natural System of Botany*, p. 244.)

PHACELIA. Juss. Corolla decidua. Ovarium ovoideo-globosum, pilosohispidum. Placentæ lineares, sæpius dorso parietibus ovarii adnatæ, biovulatæ. Capsula dissepimentis subcompletis pseudobilocularis. — Herbæ annuæ v. perennes, erectæ v. diffusæ. Flores racemosi, densi, sessiles, v. laxi pedunculati, cymis unilateralibus simplicibus v. dichotomis. Bentham MSS.

P. tanacetifolia ; scabro-pubescent v. hispida ; foliis bipinnatifidis : segmentis oblongis dentato-pinnatifidis, calycis laciniis oblongo-linearibus hispidis, staminibus exsertis. Bentham MSS.

P. tanacetifolia. Bentham in Hort. Trans. n. s. vol. 1. p. 479.

Annua. Caulis suberectus, debilis, ramosus, fragilis, subangulatus, pilis rigidis inæqualibus laxè exasperatus. Folia pilis brevissimis aspera, fragilia, subsucculenta, pinnata ; laciniis pinnatifidis lobis ovatis obtusiusculis grossè serratis. Racemi compositi, more ordinis circinati, hirsutissimi. Calyx ebracteatus, 5-phyllus ; sepalis linearibus, corollæ subæqualibus, 4 omnino æqualibus, quinto paululum majore et sub æstivatione a reliquis remoto. Corolla tubo brevi obconico ; limbo æquali, 5-lobo ; laciniis oblongis subundulatis patulis, æstivatione imbricatis. Stamina 5, basi corollæ inserta, filamentis subulatis exsertis ; antheræ oblongæ, flavescentes, subversatiles. Squamæ tubi 10, membranacæ, lunatæ, per. paria inter bases filamentorum approximata, verosimiliter pro antheris sterilibus à dorso tubo corollæ adnatis, lobis liberis membranaceis, habendæ. Ovarium parvum, ovatum, apice crinitum, uniloculare, placentis 2, erectis, subulatis, linearibus, liberis, (quasi parietalibus solutis), apice et basi ovario adhærentibus. Ovula cuique placentæ 2, appensa, v. potius peltata, quorum 3 sæpius abortiunt, uno tantum vivificato. Capsula loculicido-bivalvis, oblonga, calyce inclusa, monosperma. Semen oblongum, compressum, scrobiculatum, per lineam totam fere faciem occupantem placentæ adnatum ; embryo in axi albuminis carnosi, radícula tereti, superâ, cotyledonibus oblongis planis longiore.

* From φακελος, a bundle, in allusion to the flowers being collected in close parcels.

We have extracted the generic and specific characters of this plant from an important memoir by Mr. Bentham, upon the Natural order Hydrophyllæ, which was read before the Linnean Society on the 17th of June last ; it comprehends no less than 17 new species, and one new genus of this small groupe.

Upon this plant Mr. Bentham has the following observations :—

“ This is a more elegant and less weedy plant than the *P. circinata* now common in gardens. It grows to the height of a foot and a half or two feet. The stems are erect, not much branched, bearing a few rigid and reflexed hairs. The leaves are altogether from 3 to 5 inches long ; the primary segments, especially the lower ones, are slightly petiolated, from 8 to 12 in number on each leaf, and from half an inch to an inch distant. The secondary segments are from a quarter to half an inch long ; those nearest the axis, sessile and distinct, the upper ones confluent ; they are green on both sides, nearly glabrous, but covered with asperities. The flowers are of a light bluish violet colour, nearly sessile along one sided spirally incurved racemes, forming together a dense dichotomous panicle placed at some distance from the upper leaves ; the calyxes are covered with bristly hairs.

“ It is a hardy annual, thriving in any soil or situation.”

A native of California, where its seeds were gathered by Mr. Douglas.

Fig. 1. is a view of the ovarium, with the two-parted hairy style ; fig. 2. represents the corolla cut open, shewing the ten scales near its base. We would take the present opportunity of suggesting that these 10 scales represent five sterile anthers adhering to the tube of the corolla by their backs, and consisting each of two membranous lobes. This is chiefly rendered probable by their number and position ; but we are not acquainted with any direct evidence of such being the true nature of these singular appendages.



1097. *Sisymbrium officinalis* L. Aug. 1894

W. H. K.

* STÁCHYS infláta.

Bladdery Stachys.

DIDYNAMIA GYMNOSPERMIA.

Nat. ord. LABIATÆ. Juss. (*Introduction to the Natural System of Botany*, p. 239.)

STÁCHYS. *Supra*, vol. 15, fol. 1289.

§. VIII. AMBLEIA. *Suffrutices, fruticesve, tomentosi, rariüs glabrati, nec pilosi. Verticillastri 2-6 rariüs sub 10-flori. Bracteæ parvæ v. paucæ. Calyces tomentosi v. lanati dentibus mollibus muticis.* Bentham Labiat. gen. et sp. p. 558.

S. inflata; suffruticosa, ramis albo-tomentosis, foliis subsessilibus oblongis obtusis integerrimis subrugosis subtus albo-tomentosis, verticillastris subsexflores distantibus, bracteis linearibus brevibus, calycis sessilis inflato-campanulati albo-tomentosi dentibus ovatis obtusiusculis muticis, corollis calyce dimidio longioribus. *Bentham l. c. p. 562.*

Caulis *suffruticosus, incanus, lanatus, subteres. Folia ovata brevipetiolata, integerrima, rugosa, supra cinerea, infra albolanata; superiora minora, subsessilia. Spica elongata, nudiuscula; verticillastris distantibus subsexflores; foliis duobus parvis floralibus suffultis. Calyces cinerei, tomentosi, campanulati, inflati, bracteolis parvis subulatis; dentibus brevibus mollibus, erectis. Corolla pallide violacea, transparens; labio superiore lineari, subemarginato, apice inflexo, inferiore dilatato, undulato, trilobo; fauce pubescente; tubo annulo pilorum in medio. Stamina filamenta pilosiuscula, inferiorum post anthesin ad latera corollæ reflexa.*

This plant was raised in the garden of the Horticultural Society; but the label having been accidentally lost, it is uncertain of what country it is a native. Mr. Bentham conjectures that it has come from the North of Africa, which is rendered the more probable by its having been growing near some plants obtained from Egyptian seeds presented to the Society by Mr. Greenough.

It is apparently hardy; but in consequence of the mildness of the last two winters it is not safe to speak confidently upon

* See fol. 1226.

that point. All that we certainly know about it is that it grows freely in common garden soil, in the open air, and that it is easily propagated by cuttings.

It belongs to a section of the genus very different from the wild *Stachyses* of our hedges, and distinctly characterised by the small wrinkled downy hoary leaves and the soft teeth of the calyx.

Although not a very handsome plant, yet its thin half-transparent light violet flowers, and neat hoary leaves give it a pleasing appearance.

In the accompanying plate, fig. 1. represents the corolla cut open, to shew the place of the filaments and of a ring of hairs; 2. a magnified anther with the upper part of the filament; and 3. is the ovary with the style and stigma.



* *ERÍCA* codonódes.*Bell-bearing Heath.*

OCTANDRIA MONOGYNIA.

Nat. ord. ERICEÆ. Juss. (Introduction to the Natural System of Botany, p. 182.)

ÉRICA. Supra, vol. 1, fol. 6.

E. codonodes ; ramulis villosis, foliis ternis angustissimis, corollis campanulatis, calycis laciniis minimis acutis subherbaceis, antheris basi aristatis inclusis, stylo exserto stigmate simplici.

E. arboreæ facie, diversa tamen foliis angustioribus, corollis majoribus et omnino campanulatis nec subglobosis, demum stigmate parum dilatato integro nec peltato lobato. E. polytrichifolia alienæ esse speciei videtur ob corollas multo minores, stylos longiores, et stigmata magna infundibularia siccatione plicata. An E. arboreæ mera varietas?

This species of heath has the general appearance of *E. arborea*, a plant which is a great ornament to rocky places in the South of Europe, where it grows intermixed with different kinds of *Cistus* and the wild *Arbutus*. But it seems essentially distinct in its larger flowers, more slender leaves, less hoary branches, and truly bell-shaped corolla, which has by no means the globular form of that of *E. arborea* ; its stigma is moreover very small, and not at all dilated or lobed, either when dried or recent. *E. polytrichifolia*, which we presume is the *E. arborea stylosa* of English gardens, is equally distinct in the same characters.

Our drawing was made from specimens communicated to us by Mr. Wm. Wood, Nurseryman of Maresfield, in Sussex, who informs us that the species is quite hardy, and forms a

* So named from *ερεϊκω* to break, in allusion to its supposed lithontriptic powers ; its name may also refer to the unusual brittleness of the branches.

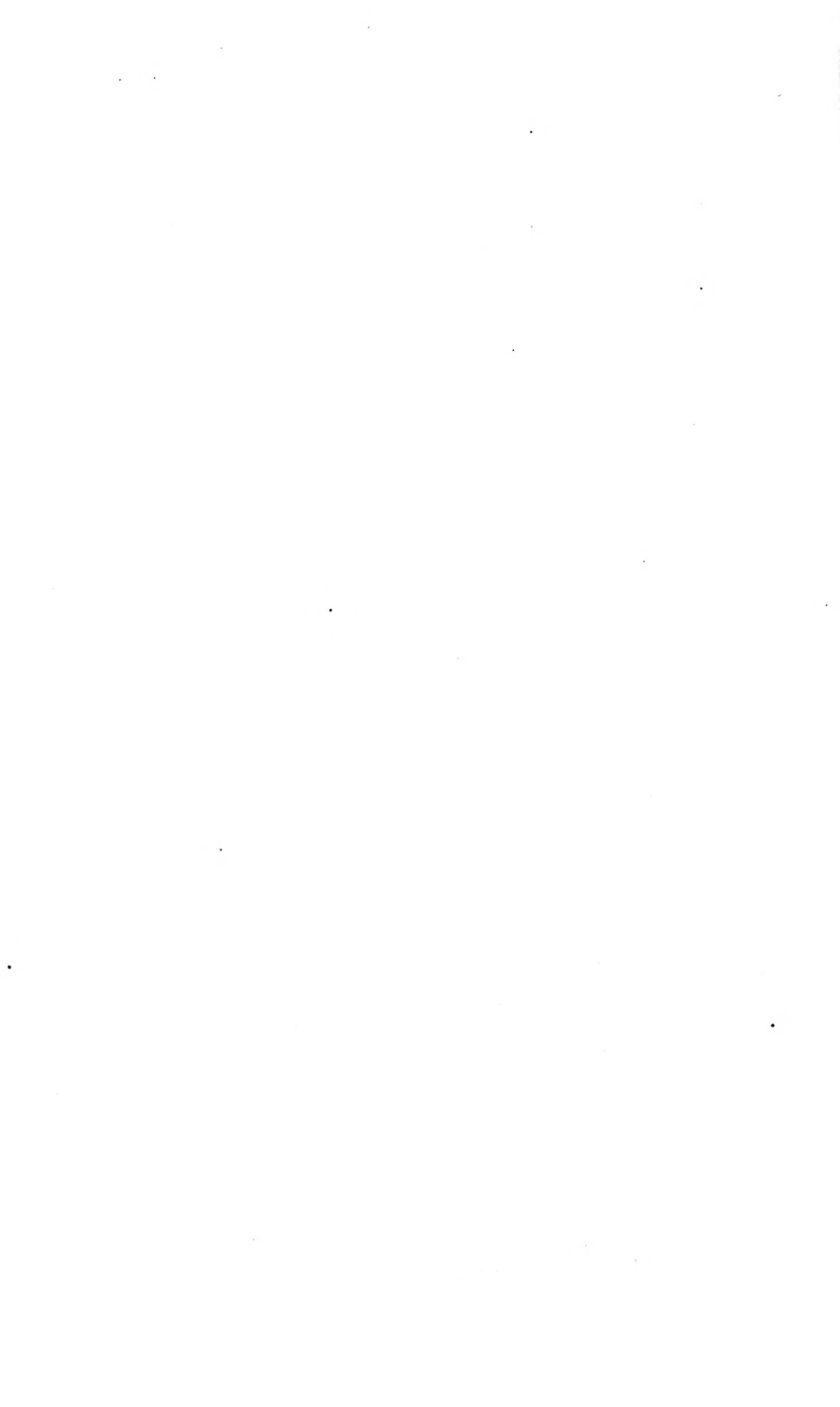
bush from 10 to 12 feet high. It begins to blossom in February, and continues till the end of May, disregarding both frost and snow, being often covered with flowers from top to bottom, and forming a most beautiful object.

It thrives in light sandy peat, and is increased, but with difficulty, either by cuttings struck in sand under a bell glass, or by layers bent down in July.









* *ONCIDIUM ampliátum.**Broad-lipped Oncidium.*

GYNANDRIA MONANDRIA.

*Nat. ord. ORCHIDEÆ. Juss. (Introduction to the Natural System of Botany, p. 262.)**ONCIDIUM. Supra, vol. 13. fol. 1050.*

O. ampliátum ; sepalis omnibus liberis, labello bilobo subrotundo transverso : laciniis lateralibus brevissimis, callo baseos 5-lobo : lobis lateralibus patentissimis planis truncatis intermediis teretibus centrali compresso, alis columnæ cuneatis dentatis reflexis, pseudo-bulbis subrotundis compressis, foliis planis oblongo-lanceolatis, scapo erecto apice ramoso.

O. ampliátum. Lindl. in Hook. Bot. misc. v. 3. p. Gen. et sp. orch. part 3. p. 202.

Folia et pseudobulbi facie omnino *O. papilionis*. Scapus ascendens, radicalis, $1\frac{1}{2}$ -2-pedalis, apice ramosus. Flores lutei, labelli dorso albo.

First found in central America by Mr. Cuming, and afterwards procured in a living state by Richard Harrison, Esq. from whom the beautiful specimen now figured was received in March last.

Peculiar as are its flowers, and distinct as the species is in most respects, it is curious that its leaves and pseudo-bulbs should be so like those of *O. Papilio*, that we have known the latter to be mistaken for it.

Like all the rest of its genus, it requires the hot damp atmosphere of a stove, in which, if we may judge by Mr. Harrison's specimens, it finds itself perfectly at home. We have not yet heard of it in any other collection.

It is well known that the most considerable part of the Epiphytal Orchideæ is found in the greatest vigour in damp sultry woods of tropical countries; and accordingly we endeavour in our artificial cultivation, to form an atmosphere for them as nearly as possible that which they would naturally breathe in such stations. That this is attended with very great success is obvious from such plants as the one now figured, and from the numerous splendid specimens which are from time to time appearing in the collections of Earl Fitzwilliam, Lord Grey of Groby, the Messrs. Harrison, Bateman, Huntley, Loddiges, and Knight, and the Horticultural Society.

But it is sufficiently evident that although this kind of treatment is admirably suited to a considerable number, there are others which grow most unwillingly, or scarcely survive, under such circumstances. For instance, *Dendrobium speciosum* languishes in situations where the *Stanhopeas* are in their greatest splendour; and the Chinese *Bletias* almost perish by the side of *Eulophia* and *Zygopetalum*. This arises from the great difference in their respective constitutions, which

* See fol. 1542.

are each adapted to distinct conditions of life, and our failure arises from our mistaking a general principle for an universal law. If a great majority of Epiphytal Orchideæ swarms in damp tropical forests, there is a considerable minority which lives in an entirely different climate, of which a few examples will not be without instruction. Thus in the genus *Oncidium* itself, where almost all the species are of tropical habits, *O. nubigenum* is only found on the cool mountains of Peru, at the height of 14,000 feet; it will therefore require a treatment altogether distinct from that of the mass of the genus. *Dendrobium moniliforme* and *catenatum*, again, occur only in Japan, as far north as 37° or 38°, or the parallel of Lisbon, and are periodically subject to a very low temperature.

But the most remarkable instances of a disposition on the part of some Orchideous Epiphytes to depart from the ordinary habits of the tribe are found in Australia and its dependency New Zealand. In some extremely valuable observations upon the geographical distribution of the Orchideous plants of New Holland, which have been placed in our hands by Mr. Allan Cunningham, we find a passage which bears so directly upon this subject, that we cannot do better than quote it entire.

“There are two, if not three plants of this family,” says this enterprising and scientific traveller, “that grow on trees or rocks in New South Wales, whose natural constitution should, in cultivating them, form exceptions to the uniformly adopted mode of treatment of Epiphytes generally in our English stoves; namely, that in which high temperature and considerable humidity are employed. These are *Dend. æmulum*, Br., an Epiphyte uniformly found upon the rugged trunk of *Eucalyptus resinifera* or Ironbark, in the open very dry forest grounds of the older colony at Port Jackson;—*Cymbidium canaliculatum*, Br., which of late years has been observed beyond the Tropic, both at Moreton Bay and still farther to the southward at Hunter’s River, growing upon the principal limbs of several of the *Eucalypti* in the dry open shadeless forest. These two Epiphytes flourish most luxuriantly in an extremely dry atmosphere, and flower usually in the summer season in their native wilds, the high temperature of which is oftentimes greatly increased by the blighting hot winds, which not unfrequently prevail at that period from the north-west. The third is *Dendrobium undulatum* of Mr. Brown, a handsome species, originally discovered by Sir Joseph Banks at Bustard Bay, and which has been lately found on barren hills, naturally clear of timber, upon the banks of the Brisbane River at Moreton Bay, where the plant forms tufts on bare rocks exposed to the full heat of the sun, which during nine months of the year is very considerable on that part of the coast. These species were some years since received alive at Kew, from New South Wales; and with them was communicated, as a guide to their culture, a note of the particular situations, with regard to exposure to drought, &c. which they naturally occupy and delight in, in their native wilds. These particulars were, however, in all probability wholly unheeded in the King’s Gardens—the plants were asso-

ciated with other Epiphytes of this vast and variable family, from Equinoctial America and the West India Islands, desiring a humid air with warmth to luxuriate in, amongst whom the Australians soon shewed sickness, in consequence of the excess of moisture to which they were constantly subjected; and eventually dying, were not only lost to Kew, but I may add to Europe! Had they been placed in the dry stove among Cacti, *Stapelia*, &c. with but an occasional light sprinkle of water afforded them, they would have fared better! *D. æmulum* was, I find, notwithstanding, induced to flower, and thus shewed by its delicate blossoms that it was well worthy of better treatment: and might afterwards have been retained, had the notes communicated with the plant from the Colony, and its *look* and constitution, so to speak, been at all consulted. I would just observe, in this place, that it is to be greatly regretted, that collectors of these beautiful vegetables in foreign countries, are not more careful to note and communicate home with the collections they form, the particular localities of the species, which would be of great use to the experienced cultivator; inasmuch as it would enable him to treat them in a way, as nearly accordant with their habits in their respective native countries, as would secure their lives in the Garden, and probably induce them to flower when fully established in their new situations."

To these instances of Orchideous Epiphytes may be added two others, which are worthy of still more attention than those just cited. One is the beautiful little *Gunnia australis*, which has much the aspect of *Chiloschista usneoides* found in the jungle of Nipal; it grows on the branches of shrubs in Emu Bay, in Van Diemen's Land, in about 41° S. Lat. and 146° E. Long. *Earina mucronata* is the other example. This plant, although occurring as far to the Northward as 35° S. Lat. in humid forests at the Bay of Islands, in New Zealand, exists also in abundance in the "very (permanently) damp woods which clothe the shores of Dusky Bay, (Lat. 45° 45' S.) on the western side of the Larger or Middle Island of New Zealand," where it was originally observed by Forster, in Cook's Second Voyage, and where it has been since met with by Mr. Cunningham, whose words we have quoted.

Considering the lower rate of temperature which prevails in the Southern hemisphere, as compared with that of the Northern in corresponding latitudes, the station of *Earina* in New Zealand is not naturally different from the damper parts of the south-west coast of Ireland.

These remarks will we trust suffice to cause a greater degree of attention to be paid to the differences of constitution of particular species of Orchideous Epiphytes; for although we have only cited extreme cases, we may be assured that minor peculiarities, which it is not less important to study, exist in abundance.

One of the plants just mentioned being imperfectly known to Botanists, and the other not at all, we subjoin the following brief account of them for the use of our systematic friends.

GUNNIA.—Perianthium ringens. Sepala herbacea, lateralia postica, subfalcata, erecta, ungui labelli lineari longe producto adnata. Petala herbacea, sublanceolata, obtusa, ab ungue columnæ omnino libera, cum sepalo altero distincto pendulo parallela. Labellum carnosum, ungue longè producto lineari erecto, cum basi columnæ continuum, bilobum, anticè cornutum, mucrone inflexo, disco tuberculatum. Columna nana, semiteres, aptera. Pollinia 4, in paribus globosis coadunata; retinaculo lineari. Rostellum bifidum.—Herba epiphyta; radicibus longis tortuosis supra fruticum ramos repentibus. Folia lanceolata, falcata, disticha, basi, articulata. Racemus simplex, strictus, foliorum longitudine.

Sp. 1. *Gunnia australis*.

Hab. in *Insula Van Diemen*, in sinu Emu, *Backhouse*. (*hab. s. sp. comm. cel. Gunn.*)

Tota planta vix 2 pollices excedens. Sepala et petala luteo-viridia. Labellum verosimiliter album, v. leviter rubescens, lobis lateralibus oblongis obtusis; tuberculis 4, luteis, quorum 2 exteriores majores.

We have named this most curious plant after our liberal correspondent, Ronald L. Gunn, Esq. who is now examining the vegetation of Van Diemen's Land, with equal skill and assiduity. The genus is nearly related to *Chiloschista*.

EARINA. (*εαρινα*).—Sepala erecta, æqualia, acuta, membranacea, carinata. Petala carnosa, obtusata. Labellum carnosum, posticum, cucullatum, trilobum, disco nudo, cum columna continuum et subparallelum. Columna teres, nana, stigmatibus obliqui labio inferiore prominulo. Clinandrium proclive. Anthera bilocularis. Pollinia 4, per paria coherencia, collateralia.—Herba caulescens, rhizomate articulo, repente. Folia linearia, disticha, vaginantia. Flores parvi, paniculati, bracteis cartilagineis, striatis, cucullatis.

Sp. 1. *Earina mucronata*.

Epidendrum autumnale. *Forst. prodr. n.* 319.

Cymbidium autumnale. *Swartz. nov. act. ups.* 6. 72. *Willd. sp. pl.* 3. 98.

Hab. in *Nova Zelandia*. (*hab. s. sp. comm. cel. Cunningham.*)

Rhizomata inter muscos mortuos repentia, articulata. Caules ascendentes, palmares, pedalesque, pennæ corvine crassitudine, maculati, basi vestigiis laceris vaginalium vestiti. Folia lineariensiformia, apice leviter obliqua, mucronulata. Flores e bracteis rigidis cucullatis mucronatis erumpentes, parvi, ovario recto costato bracteolarum longitudine. Sepala omnia libera, angusta, mucronata, carinulata. Petala latiora, carnosa, obtusiora, æquilonga. Labellum posticum, carnosum, cucullatum, inappendiculatum, basi liberum, cum columna continuum et parallelum, trilobum, nudum; lobo intermedio bipartito laciniis oblongis crenulatis mucrone intermedio. Columna suberecta, nana, antica, teres, clinandrio subeucullato membranaceo-marginato; stigmatibus excavato, rostello obtuso. Anthera ovata, 2-locularis. Pollinia 4, per paria coherencia, cereacea, collateralia, materie viscidâ rostello adhærentia.

For fine specimens of this we are indebted to Mr. Cunningham, who observed it "growing commonly in moist woods upon the shores of the Bay of Islands, New Zealand, on mossy rocky banks, and on the limbs of trees, flowering in September and October, which in New Zealand is the season of spring." From the latter circumstance we have contrived the generic name.

This genus belongs to Malaxideæ, and is related to *Cælogyne* and *Dilochia*, of the latter of which in particular it has much the habit, only on a smaller scale. From the former its wingless column, and from the latter the number of its pollen masses, sufficiently distinguish it, independently of other points of difference.



* AZÁLEA Índica ; *lateritia*.*The Brick-red Chinese Azalea.*

PENTANDRIA MONOGYNIA.

Nat. ord. ERICÆÆ. Juss. (Introduction to the Natural System of Botany, p. 182.)

AZALEA. Supra, vol. 2, fol. 120.

A. indica ; corollis tubuloso-campanulatis, foliis spatulato-oblongis obtusis v. lanceolatis costâ rufo-hispidâ, calycibus minimis hispidissimis.

A. indica. Linn. sp. pl. 214.

Var. *lateritia* ; floribus pentandris lætè lateritiis, foliis spatulatis obtusis.

A beautiful ~~new~~ Chinese variety, our drawing of which we made in Mr. Knight's Nursery in May last. It had been introduced by Mr. M'Killigan, along with the lovely variegated kind, and with it was purchased by Mr. Knight.

The plant is remarkably bushy. Its foliage is a rich deep green, to which a slight rusty tinge is given by the numerous brown hairs of the mid-rib and margin ; the leaves are narrow, very blunt, and remarkably covered with hairs, which give their surface a rough appearance ; the flowers are of a bright clear brick-colour, a little tinged with rose.

It will no doubt require the same treatment as the other Chinese Azaleas ; and will probably form as striking a variety as any of them, on account of the peculiarly bright colour of the flowers.

The habit of the plant is entirely that of the variegated kind, and we understand that it is the opinion of Mr. Reeves that it is a mere sport from that variety. It is however very different in the colour of the flowers, as will be seen when our figure of the latter makes its appearance.

* See fol. 1366.

* ÓRCHIS foliôsa.

Leafy-spiked Orchis.

GYNANDRIA MONANDRIA.

Nut. ord. ORCHIDEÆ. *Juss. (Introduction to the Natural System of Botany, p. 262.)**ORCHIS. Supra, vol. 3, fol. 202.*

§ 1. MASCULÆ. *Sepalis lateralibus reflexis v. patentibus.* Lindl. gen. et sp. orch. pars. 4. ined.

O. foliosa ; foliis oblongo-lanceolatis acuminatis laxè vaginantibus, spicâ oblongâ multiflorâ, sepalis ovatis acutis, labello latiore quam longo obsolete trilobo plano : laciniis lateralibus emarginatis intermediâ acutâ multò majoribus, calcare pendulo cornuto labello duplo brevior, bracteis herbaceis acuminatis flore sæpè longioribus, tuberculis palmatis.

O. foliosa. Soland. MSS. *Lowe Primit. Fl. Mader. p. 13.*

Omnino *O. latifoliam* refert ; sed omnibus partibus major est, labello plano manifeste trilobo nec rhomboideo, calcare brevior, gracilior, caule elatior.

A fine species of Orchis, native of woods and copses in Madeira ; very much like the European *O. latifolia*, from which it differs in being larger in all its parts, having a distinctly three-lobed flat lip, instead of a lozenge-shaped convex one, a shorter and more slender spur, and a taller stem.

We were favoured with our specimens by Messrs. Young and Penny of Milford, near Godalming, in whose collection, so rich in Canary plants, it has for some time been cultivated. It succeeds, we are informed, extremely well, either in well-drained pots, or a turf pit, in a soil composed of the turfy portions of heath mould, with a mixture of moss and sand.

Like many others, this species varies with spotted and spotless leaves. In this country it flowers in May.

* See fol. 1155.

The genus *Orchis* is usually divided into sections, characterized by the nature of the tubercles of the roots, a distinction which obviously is inconvenient, and which is also incompatible with a natural distribution of the species. A better character may be obtained from the calyx, which in some converges into a sort of casque or helmet (§. *MILITARES*), and in others is spread open or reflexed (§. *MASCULÆ*.) The sections of *Orchis* thus obtained are so extremely distinct that it may be doubted whether, upon the principles on which other genera are constituted, they should not be considered each a genus. But so much inconvenience would attend an alteration in the names of a great many common species, that less disadvantage will perhaps arise from retaining the *militares* as a mere form of *Orchis*; although the inconvenience might be diminished by the creation of such a name as *Herorchis*.

As some time must elapse before the appearance of the fourth part of the genera and species of *Orchideæ*, it may be interesting to Botanists to know in what way we propose to distribute the genera of *Ophrydeæ*. We therefore avail ourselves of the present opportunity to explain our present views upon the subject. The following list will shew, firstly, what the general arrangement of the tribe will be, and secondly, what new genera we propose to establish.

* *Antheræ loculi contigui paralleli, basi nullo modo elongati v. divaricati.*

1. *Orchis*.—2. *Anacamptis*.—3. *Nigritella*.—4. *Glossaspis*.—5. *Gymnadenia*.—6. *Scopularia nob.*—7. *Aceras*, as limited by Dr. Brown.—8. *Serapias*.—9. *Ophrys*.

** *Antheræ loculi sejuncti, basi divergentes, sæpè elongati.*

10. *Monotris nob.*—11. *Holothrix*.—12. *Bartholina*.—13. *Disa*.—14. *Repandra nob.* (= *Disa cornuta*, &c.)—15. *Corycium*.—16. *Dryopeia*.—17. *Disperis*.—18. *Pterygodium*.—19. *Satyrium*.—20. *Bonatea*.—21. *Habenaria*.—22. *Diplomeris Don* (= *Diplochilus Lindl.*)—23. *Bilabrella nob.*—24. *Cynorchis*.—25. *Tryphia nob.* (= *Orchis secunda Thunb.*)—26. *Bicornella nob.*—27. *Cæloglossum nob.*—28. *Peristylus Blume* (the calcarate *Herminia*.)—29. *Herminium* (as limited by Dr. Brown.)—30. *Aopla nob.*—31. *Platanthera*, (= *Mecosa Blume*, and including most of the North American *Habenarias*.)—32. *Perularia nob.* (= *O. fuscescens L.*)



* MAYTÉNUS chilensis.

Chilian Mayten.

POLYGAMIA MONŒCIA.

Nat. ord. CELASTRINEÆ. R. Br. (*Introduction to the Natural System of Botany*, p. 110.)

MAYTENUS Juss. Flores polygami. Calyx 5-fidus, parvus, persistens. Petala 5, sepalis alterna, patentissima. Stamina 5, petalis alterna. Discus carnosus circa ovarium. Stigma sessile, 2-3-lobum. Capsula 1-4-valvis, valvis medio septiferis. Semina in fundo pauca, arillata. Embryo planus in albumine carnosus.—Arbusculæ Peruvianæ aut Chilenses, foliis alternis, simplicibus, coriaceis, perennantibus, dentatis, floribus axillaribus albido virescentibus, minimis. Capsulæ sæpius intus crocæ. De Cand. Prodr. 2. 9.

M. chilensis; foliis elliptico-oblongis basi attenuatis apice acuminatissimis margine serratis. D. C. l. c.

Maiten. "Feuill. obs. 3. 39. t. 27."

Senecia Maytenus. Lam. illustr. n. 1712.

Celastrus Maytenus. Willd. sp. pl. 1. 1127.

Celastrus uncinatus. Fl. Peruv. 3. t. 230. fig. A.

Maytenus boaria. Molina?

Maytenus chilensis. Hooker and Arnott. in Bot. Miscell. 3. 171.

Frutex sempervirens, in hortis orgyalis et ultra. Folia ovato-lanceolata, tenuia, glanduloso-serrulata, exstipulata, glaberrima. Flores axillares, fasciculati, herbacei, parvi, polygami. Masculorum calyx inferus, parvus, 5-dentatus; petala 5, oblonga, obtusa, concava; discus carnosus, 5-lobus; stamina 5, petalis alterna et breviora; pistilli rudimentum. Fæminei in horto nondum apparuere. Capsulæ magnitudine pisi, turbinati, cinerei, coriacei, loculicido-bivalves, dispermi. Semina 2, erecta, arillo croceo vestita.

A handsome evergreen shrub, which has been growing for some years in the garden of the Horticultural Society. It succeeds best trained to the front of a south wall, but it also survives the winter without even that slight protection. It would, no doubt, prove perfectly hardy in the milder parts of England and Ireland.

* From Mayten, the vernacular name among the Chilenos.

Its native country is Chili, where it seems to be a very common plant. Flowers in May.

Fig. 1, represents a sterile flower magnified ; 2, the calyx and disk after the petals and stamens are removed ; 3 and 4, stamens. We have not yet met with any fertile flowers. The description above given of the fruit is taken from wild specimens sent us by Dr. Gillies.

The following are the essential characters of the new genera in the foregoing list :

6. *SCOPULARIA*.—Calyx membranaceus, connivens, sepalis lateralibus minoribus. Petala membranacea, lacero-multifida, circa labellum convoluta. Labellum erectum, convolutum, membranaceum calcaratum apice lacero-multifidum. Anthera libera, erecta; loculis approximatis, parallelis, basi dilatatis ascendentibus cucullum magnum inæquilateralem glandulas tegentem formantibus. Glandulæ polliniorum sub basi dilatata loculorum antheræ absconditæ, cucullo nullo (quantum videre potui) inclusæ.—Radices testiculatæ. Folia radicalia membranacea. Caulis aphyllus. Spica elongata subsecunda.—Sp. 1. *S. Burchellii*. C. B. S.

10. *MONOTRIS*.—Sepala membranacea, postice connata, lateralibus anticè distinctis, labello petalisque duplo minora. Petala carnosæ, acuminata. Labellum liberum, apice carnosum, trifidum, cucullatum, basi cornutum. Anthera libera, erecta, loculis basi divergentibus: valvulis exterioribus dilatatis, incurvis, glandulam tegentibus.—Radices testiculatæ. Folium minimum radicale. Caulis retrorsum hispidus. Flores parvi secundi. Bractæ et sepalorum margines hispida.—Sp. 1. *Monotris secunda*. C. B. S.

23. *BILABRELLA*.—Sepala patentia, carnosæ, petalis multò minora; supremum 3 partitum. Petala membranacea, reflexa, maxima. Labellum carnosum, 3-partitum, calcaratum. Anthera loculis basi elongatis, solutis, divergentibus, distantibus, ascendentibus, glandulis nudis. Rostellum lineari-lanceolatum, recurvum, antheræ longitudine. Processus carnosus magni ascendentes.—Radices Caulis foliosus. Folia angusta membranacea. Racemus elongatus Habenariæ facie.—Sp. 1. *B. fulvicornis*. C. B. S.

26. *BICORNELLA*.—Sepala inæqualia; lateralialia majora, labello extus obliquè adnata. Petala sepalo supremo in galeam convexam agglutinata. Labellum calcaratum, indivisum, angustum, canaliculatum, columnæ nanæ adnatum. Anthera ferè horizontalis, lobis ascendentibus, basi elongatis, lobis lateralibus rostelli adnatis, extus appendice linguæformi (stamine sterili) auctis. Rostelli lobus medius ovatus, planus, abbreviatus. Pollinia minima; retinaculo longo lineari basi antheræ elongatâ tecto.—Herbæ (Mascarenenses) caule folioso v. subfolioso. Flores parvi, spicati.

27. —*CÆLOGLOSSUM*.—Sepala conniventia, æqualia, libera. Petala conformia, ungui labelli adnata. Labellum carnosum, unguiculatum, calcaratum, tripartitum, disco sæpius tuberculatum; ungue valde carnosæ, concavo, ascendente, margine nunc eroso et glanduloso, sæpius (an semper) processus 2, carnosos, clavatos, ex ore calcaris ortos, parallelos, adnatos gerente. Anthera parva, cavitatem unguis brevior, lobis basi ascendentibus, rostello tridentato brevi adnatis. Glandulæ nude.—Herbæ, (Indicæ,) radicibus testiculatis, caule folioso aut vaginato. Flores omnium minuti. Sp. 5. adhuc notæ quarum duæ sunt *Gymnadenia*? tenuis *Wull. Cat. No. 7057*, et *G. secunda. ib. No. 7054*.

30. AOPLA.—Calyx bilabiatus. Sepala lateralia deflexa, supremum erectum cum petalis agglutinated galeam formans. Labellum lineare, ecalcaratum. Anthera brevis, erecta, lobis brevibus ascendentibus, rostello decurvo elongato. Glandulæ nudæ.—Herba (Indica) radicibus testiculatis. Folium solitarium, radicale. Spica laxa secunda. Flores herbacei.—Sp. 1. *A. reniformis*. (=Hermannium reniforme Wall. Cat. no. 7067.)





* RHODÁNTHE Manglésii.

Captain Mangles's Rhodanthe.

SYNGENESIA POLYGAMIA ÆQUALIS.

Nat. ord. COMPOSITÆ. Tribe *Senecionideæ*, Subtribe *Gnaphalieæ*. 3. *Helichryscæ* Lessing.

RHODANTHE. Capitulum multiflorum, homogamum. Pappus uniserialis, piliformis, plumosus, distinctus. Achænium crostre, lanatum. Receptaculum nudum.

R. Manglesii.

Herba annua, erecta, ramosa, omnino depilata, obscure glauca; ramis teretibus distanter foliatis. Folia oblonga, obtusa, amplexicaulia. Capitula solitaria, turbinata, pedunculis nudiusculis inserta. Involueri squamæ membranaceæ, ovatæ, acutæ, exteriores argenteæ rubicundæ, interiores patentes amænè roseæ, apice denticulatæ. Receptaculum nudum. Corollæ tubulosæ, glabræ, luteæ, hermaphroditæ. Rami stigmatidis divergentes, lineares. Achænium densissimè lanatum. Pappus uniserialis, piliformis, plumosus, longitudine tubi corollæ.

A charming greenhouse annual, introduced from the Swan River Colony in New Holland by Captain Mangles, R. N. after whom we have named it. It first flowered in the beautiful collection of Robert Mangles, Esq. of Sunning Hill, where our drawing was obtained in 1833, and whence it has since been liberally distributed. In token of its beauty it received the distinction of a medal at one of the great exhibitions in the Garden of the Horticultural Society.

Its season of perfection is May and June, at which time there is nothing in the Gardens that equals it in beauty, for it possesses the brilliancy of the Cape *Helichrysa*, without their stiffness and formality. In July it becomes shabby, and by the beginning of August its seed is ripe and its life departed.

* From *ῥοδον*, a rose, and *ἀνθος*, a flower, in allusion to the colour of the flower-heads.

It requires to be treated as a tender annual, and to be kept in a cool greenhouse during its time of growth; too much heat seems to be particularly offensive to it.

The Botanical relationship of *Rhodanthe* seems to be greatest with *Podotroche*, from which it differs in having a pappus composed of a number of perfectly distinct filiform feathery rays.



W. J. Bur to W. J. Bursey Sept. 1864

W. J. Bur.

* *GILIA* tricolor.*Three-coloured Gilia.*

PENTANDRIA MONOGYNIA.

Nat. ord. POLEMONIACEÆ. Juss. (Introduction to the Natural System of Botany, p. 219.)

GILIA. Supra, vol. 19, fol. 1622, in textu.

§ 3. *EUGILIA. Folia alterna pinnatifida v. pinnatisecta. Flores subsolitarii, v. sæpius glomerati. Corollæ tubus calyce subbrevior. Benth*am supra, fol. 1622.

G. tricolor ; caule erecto glabro folioso, foliis bipinnatisectis : segmentis linearisubulatis, corymbis 3-6-floris virgato-paniculatis, corollis calyce subtriplo longioribus. *Benth*am l. c. *Hort. Trans. n. s. vol. 1. t. 18. f. 3.*

Mr. Benth^{am}, in his account of this in the Transactions of the Horticultural Society, remarks that it is “perhaps the handsomest of the new Polemoniaceæ received from California, both from the general appearance of the plant, and the abundance and brilliancy of colour of the flowers. It grows to the height of about a foot, with an erect stem, and foliage much resembling that of *G. capitata*, but the flowers are very much longer, and instead of being collected in globose heads widely spread at the end of long peduncles, they are few in number in each head ; but the peduncles being much shorter and very numerous, they form a large and rather dense panicle, in which the deep orange of the centre of the colour, and the light purple or white of the margin, separated by a circle of deep purple, show off to great advantage.”

It is quite hardy, and will grow in any kind of soil. The time of flowering is from July to September, but it may be retarded or advanced by a little management. Nothing can well be prettier than this is when thickly filling a bed a few feet in length and breadth.

* See fol. 1170.



* LUPINUS nanus.

Dwarf Lupine.

DIADELPHIA DECANDRIA.

*Nat. ord. LEGUMINOSÆ. Juss. (Introduction to the Natural System of Botany, p. 86.)**LUPINUS. Supra, vol. 13, fol. 1096.*

L. nanus ; annuus humilis pilosiusculus, caulibus decumbentibus parum ramosis, foliolis 5-7 spathulatis, floribus verticillatis, calycibus sericeo-lanatis villosis obsolete appendiculatis : labio superiore bipartito inferiore longiore obscure tridentato.

L. nanus. Benth. in Hort. Trans. vol. 1. n. s. t. 14. f. 1.

We have no prettier annual than this little Lupine, which has recently been introduced from California by the Horticultural Society. It forms a low tufted plant, from 6 inches to a foot in height, producing a succession of upright shoots, terminated by several tiers of flowers, which continue to open in succession for two months. The colours being bright purple, intermingled with white and rose, a gay variegated appearance is produced, which is extremely agreeable when the plant is grown in masses.

It is well adapted for covering flower-beds, or for forming a compartment in a parterre, or for the edge of a small clump, or in short for any purpose which requires neatness, and a protracted blooming.

If sown in the autumn it will flower in May and June ; if sown in spring, it will be in beauty in August and September ; and by deferring the period of sowing till the beginning of June, it may be made to blossom as late as November.

* See fol. 1098.

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Del. by J. R. R. 1894

J. R. R.

* CEROPÉGIA elegans.

Elegant Ceropegia.

PENTANDRIA DIGYNIA.

Nat. ord. ASCLEPIADEÆ. R. Br. (*Introduction to the Natural System of Botany*, p. 210.)

CEROPEGIA. *Supra*, vol. 8, fol. 626.

C. elegans; volubilis, lævis, radice fibrosa, foliis oblongis acutis, pedunculis axillaribus 1-2-floris, corollæ tubo clavato incurvo basi inflato-ventricosso, limbo hemisphærico, laciniis ligulatis longe ciliatis, lobis coronæ staminæ exterioribus profunde bipartitis. *Wallich. in Bot. Mag. t.* 3015.

A native of the mountains of India called the Nilgherry, and introduced to this country in 1826 by Dr. Wallich.

It is a small twining plant, with dingy purplish brown stems and leaves, and livid flowers blotched with purple. They have little beauty, except when they are open; at that time their orifice is closed by a number of long purple bristles, which converge over the centre, and form a sort of natural *chevaux-de-frise*, which will prevent both the ingress and egress of insects.

Being an East Indian plant, it is usually kept in the stove, where it flowers well enough from May to October, and is easily multiplied by cuttings. It is, however, nearly hardy; it thrives better in the open border trained to a stick in a sheltered place, and in the winter requires no better protection than a common green-house.

* From κηροπήγιον a candlestick, in allusion to the resemblance borne by the corollas of some species to the branch of an antique candelabra.



* ECHINOCÁCTUS Eyriesii.

Sweet-scented Spiny Cactus.

ICOSANDRIA MONOGYNIA.

*Nat. ord. CACTEÆ. Juss. (Introduction to the Natural System of Botany, p. 54.)**ECHINOCACTUS* Link et Otto. Omnia Cerei, sed caulis umbilicatus v. globosus.

E. Eyriesii; caule subgloboso umbilicato, costis 13 continuis acutatis subundulatis, tuberculis lanatis spinas plures breves rigidas rectas gerentibus, flore bucciniformi curvato 6 uncias longo odoratissimo extus cinereo villosus, petalis acutissimis stellatis.

E. Eyriesii. Otto in verhandl. Preuss. Gart. ver. c. ic.

We do not find any mention of this remarkable species in the treatises of either Martius, Link and Otto, or De Candolle; but we believe it is published with a figure in the Transactions of the Prussian Horticultural Society, a work we do not happen to have at hand.

It was presented to the Horticultural Society some years since by Sir John Lubbock, who had procured it from Mexico, where the genus seems to exist in great numbers; it flowers at various seasons, and now and then forms an offset.

Independently of the large size of its flowers, which rival in dimensions those of the *Cereus* tribe of *Cacti*, it is remarkable for the rich delicious odour they exhale at night, at which time its glorious blossoms expand. When young they resemble long sooty-grey horns covered over with a thick shaggy hairiness, and would never be suspected

* The form of the marine animals called Echini has naturally suggested the application of their name to plants which so much resemble them.

to conceal a form of the utmost beauty, or a clear and delicate complexion. When the hour of perfection has arrived, and the coarse veil of hair begins to be withdrawn by the expansion of the unfolding petals, one is amazed at the unexpected loveliness which stands revealed in the form of this vegetable star, whose rays are of the softest white, while the disk is of a rich yellow formed by the stigma and the clustering anthers.



* CATASÉTUM semiapértum.

Half-open Catasetum.

GYNANDRIA MONANDRIA.

Nat. ord. ORCHIDÆÆ. Juss. §. Vandææ. Lindl. (Introduction to the Natural System of Botany, p. 262.)

CATASETUM. Supra, vol. 10. fol. 840.

C. semiapertum ; foliis oblongo-lanceolatis undulatis racemo compacto longioribus, perianthio subpatente secundo : laciniis lanceolatis, labello apice incurvo eucullato marginibus ciliato-denticulatis.

C. semiapertum. Hooker Exot. fl. t. 213. Lindl. gen. et sp. Orch. p. 156.

Habitus, pseudobulbi, et folia omnino *C. tridentati*. Flores diversissimi, odorati, herbacei, immaculati : sepalis petalisque angustè lanceolatis sæpius dependentibus ob labellum posticum. Labellum subcompressum, carnosum, lobo apicis rotundato incurvo, lateralibus ciliâ tenui, denticulatâ tamen, marginatis.

First introduced by Mr. Bell Edward Lloyd, who sent it from Brazil to Miss Falkner of Fairfield, about 8 or 9 years ago. More recently it has been transmitted to Mr. Harrison of Liverpool by Dr. Dundas, an eminent medical gentleman residing at Bahia.

It is not so shewy as *C. tridentatum*, but it is peculiarly fragrant, a quality which all the other known species are destitute of. It requires the same treatment ; and when in rapid growth will thrive the better if its roots are actually allowed to immerse themselves in water.

Our specimen was communicated to us by Mr. Harrison in February last.

* See folio 1667.



W. & A. H. B. H. 1854

W. & A. H. B. H. 1854

* TALAÚMA Candóllii.

De Candolle's Talaum Tree.

POLYANDRIA POLYGYNIA.

Nat. ord. MAGNOLIACEÆ. Juss. (Introduction to the Natural System of Botany, p. 24.)

TALAUMA Juss. Petalu 9-15, ordine ternario serialia. Stamina numerosa, antheris anticis. Ovaria plura, coadunata, biovulata. Fructus coadunatione unicus, strobiliformis, lignosus, irregulariter dehiscens, seminibus 1-2 pendulis, in foveolis receptaculi centralis cylindraceo-clongati dehiscentiâ liberi. Blume Flora Javæ Magnol. p. 29.

T. Candóllii; foliis oblongis utrinque acuminatis glabris, floribus 9-12-petalis, petalis exterioribus calycinis reliquis triente brevioribus. *Bl. l. c. t. 9.*

Magnolia odoratissima. Reinwdt.

A native of Java, where it is found growing in thickets to the height of about 15 feet, and perfuming the air with so delicious an odour that the very Javanese think it worth the pains of cultivation.

Its flowers open very unwillingly in the stove. Dr. Blume has represented them closed, as they commonly appear; but we were so fortunate as to be able to sketch the plant with its flowers fully expanded, just as they were about to drop off. At first they are a pale lemon colour, but they change to a sort of buff, in which state we have represented them.

It is a tender stove plant, increased only by inarching upon *Magnolia pumila*, which Dr. Blume has ascertained to be also a *Talauma*, or by layers, or by having a pot of earth fastened round a wounded branch. It flowers in February and March.

* The vernacular name of the South American species.



²⁶ **LEPTOSÍPHON** androsáceus.

Androsace-like Leptosiphon.

PENTANDRIA MONOGYNIA.

Nat. ord. POLEMONIACEÆ. Juss. (Introduction to the Natural System of Botany, p. 219.)

LEPTOSIPHON. Benth. *Calyx* tubuloso-campanulatus, æqualis, semi-5-fidus, lobis lineari-subulatis acutis, sinibus membranaceis. *Corolla* infundibuliformis, (hypocrateriformis) tubo longè exserto tenuissimo, limbo campanulato (rotato) 5-fido; lobis ovalibus obtusis integerrimis. *Stamina* fauce inserta; *antheræ* oblongæ, basi sagittatæ. *Capsulæ* loculi polyspermi.—*Herbæ annuæ, basi glabræ, apice pubescentes. Folia sessilia, opposita, palmatisecta, segmentis linearibus v. subulatis. Flores densè corymboso-capitati, axi sublanato. Bractæ imbricatæ, foliis conformes, segmentis ciliato-hirsutis. Bentham, supra, fol. 1622.*

L. androsaceus; foliis 5-7-fidis: laciniis oblongo-linearibus, corollæ tubo limbo 2-3plo longiore, staminibus limbo corollæ triplo brevioribus. *Bentham, l. c. Hort. Trans. vol. 1. n. s. t. 18. f. 1.*

Herba erecta, spithamæa, ramosa, annua, internodiis foliis duplo longioribus, undique pilis rigescentibus articulatis sparsis vestita. Caulis teres, purpurascens. Folia opposita, sessilia, digitato-4-10-partita, nunquam v. rarissime 3-5-7-v. 9-partita, laciniis linearibus acuminatis, ciliatis; superiora densissime flores fasciculatos involucrantia, eorumque tubo æqualia. Calyx infundibuliformis, 5-fidus, laciniis æqualibus, triangulari-subulatis, pilosis, membrana tenui ad sinus junctis. Corolla uncium longa, alba, purpurea, aut violacea, hypocrateriformis; tubo gracillimo lutescente, glanduloso-pubescente; limbo planiusculo utrinque glabro: laciniis oblongis obtusè apiculatis. Stamina brevissima, exserta, fauce purpurea sub sinibus inserta. Pollen luteum. Ovarium parvum, oblongum, atroviride, disco nullo; 3-loculare, polyspermum. Stylus capillaris; stigma luteum 3-partitum, laciniis angustissimis obtusis æqualibus.

“This is a bushy annual, growing to the height of eight or ten inches, smooth in the lower part, with the upper leaves and extremities of the branches slightly downy. The leaves are opposite and sessile, but nearly divided to the

* Literally *slender-tube*, in allusion to the structure of the corolla.

base into a number of linear segments, so as to appear to be whorled. The flowers are collected into terminal heads, surrounded at their base by a number of floral leaves, divided, like the stem leaves, into linear segments. The long slender tube of the corolla projects beyond these leaves, and bears at the top five spreading oval divisions, varying in colour from white to pale blue and pink. The multitude of these flowers gives the plant a very gay appearance, and as it is perfectly hardy and promises to seed well, there is no doubt but that in a short time it will be found an important addition to our flower-beds."

To the foregoing account by Mr. Bentham, in the Horticultural Society's Transactions, we have little to add. Although the species is perfectly hardy, yet it cannot bear our summer heats, and only flourishes in the spring, or more particularly the autumn, when the sun has lost his power, and the nights are cool with heavy dews. It should therefore either be sown in the autumn, so as to flower early, or in June, in order that it may be ready for blossoming in September.

Any kind of soil seems to suit it, but it is not improbable that a shaded American border may be best. It is a native of California, whence it was sent by Mr. Douglas.

The leaves are deeply divided into very narrow sharp-pointed segments, which we remark are always some *even* number, 4, or 6, or 8, or 10, and never an odd number, a fact that seems to deserve the attention of the systematic Botanist.



Det. by J. Gray, N.Y. Herbarium Oct. 7, 1834

P. Miller, Sc.

* *CALCEOLARIA* polifolia.*White-leaved Slipperwort.*

DIANDRIA MONOGYNIA.

*Nat. ord. SCROPHULARINÆ. Juss. (Introduction to the Natural System of Botany, p. 228.)**CALCEOLARIA. Supra, vol. 9, fol. 723.*

C. polifolia ; suffruticosa, caulibus ascendentibus foliisque ovatis incano-tomentosis levissimè crenatis, pedunculis dichotomis, floribus congestis, corollæ labio inferiore majore subgloboso, staminibus stylo brevioribus.
C. polifolia. Hooker in Bot. Mag. t. 2897.

Apparently a very common plant in the passes in the mountains between Valparaiso and St. Jago, for almost every collection from that locality contains it.

It is a hardy perennial, about a foot high, with a woody stem, which would probably become shrubby in favourable situations. Its little hoary leaves, and very numerous pale primrose-coloured flowers, have quite a peculiar appearance, and render it extremely different from all the other species.

It thrives with the same treatment as other *Calceolarias*, but it is impatient of damp in winter ; cuttings readily multiply it.

Our drawing was made in September 1833, in the garden of the Horticultural Society, where it had been raised from seed received from Mr. Cruickshanks.



* SOLÁNUM etuberósum.

Tuberless Solanum.

PENTANDRIA MONOGYNIA.

*Nat. ord. SOLANÆÆ. Juss. (Introduction to the Natural System of Botany, p. 231.)**SOLANUM. Supra, vol. 1, fol. 71.** *Inermia, foliis imparipinnatis ; racemis corymbosis terminalibus.**S. etuberósum ; rhizomate crasso subterraneo etuberoso, caule herbaceo, foliis inæqualibus complicatis undulatissimis approximatis alternis minutis, pedicellis articulatis, calycibus corollisque 5-angulatis glabris.**Facies omnino S. tuberosi, sed tubera nulla profert ; flores majores sunt, brevius pedunculati, calyxque glaber est et lucidus, nec pilis hispidus. Species certo certius distinctissimu, etsi notis levibus cognoscenda.*

This curious plant is a hardy perennial, native of Chili, whence it was obtained some years since by the Horticultural Society. It bears its rich clusters of deep purple blossoms, with a golden yellow centre, from July to October, and is very easily multiplied by dividing its stout rooting underground stems.

Although extremely similar to the Potatoe in appearance, yet its larger and more compact flowers, and its want of the power of producing tubers render it a proper plant for a flower-garden.

There can be no doubt that this is a species essentially distinct from the Potatoe, and yet it is impossible to point out any character by which it is to be positively distinguished, except the want of tubers, and the smoothness of the calyx and flower-stalks ; these latter have a shining, and nearly downless surface, instead of the rough dull appearance which we meet with in those parts in the common Potatoe.

* See folio 1516.



* NEMÓPHILA insignis.

Shewy Nemophila.

PENTANDRIA MONOGYNIA.

Nat. ord. HYDROPHYLLEÆ. *R. Br.* (*Introduction to the Natural System of Botany*, p. 244.)*NEMOPHILA.* *Supra*, vol. 9, fol. 740.

N. insignis; foliis oppositis pinnatifidis basi in petiolum angustatis: lobis integerrimis 1-2-dentatisve, calycis sinibus reflexis, corollis calyce duplo longioribus, ovariis multi-ovulatis. *Bentham in Hort. Trans. vol. 1. n. s. p. 643.*

The *Nemophilas* are all difficult plants to preserve in gardens. *N. phacelioides* has long since disappeared; and we fear this brilliant Californian species, which flowered in August 1833, in the garden of the Horticultural Society, will scarcely be found more manageable. Mr. Bentham gives the following account of it in the Transactions of the Horticultural Society:—

“This elegant species of *Nemophila* is readily distinguished by the size of the flowers, which are larger even than those of *N. phacelioides*, (figured in the Botanical Magazine, t. 2373.) It is a low procumbent herb, but less straggling than the *parviflora* and *peduncularis*. The leaves are from one to two inches long, green, with a few rigid hairs; the lobes from 3 to 5 on each side, deeply cut, but not reaching the midrib, of nearly equal size on the same leaf, ovate and slightly falcate. The peduncles axillary, solitary, one-flowered, nearly twice as long as the leaves. Flowers blue, above an inch in diameter. The ovary contains usually 20 or 24 ovula, regularly arranged on each side of the central lines of the broad fleshy placenta, and from 8 to 12 of these ovula usually attain maturity in each capsule.

* See folio 1601.

“ It is a hardy annual, requiring a rich soil, not damp, and a situation fully exposed to the sun ; it must be protected carefully from wet when forming its seeds, or they will not ripen ; indeed it produced its seeds in the garden very sparingly, with all the care that could be given to it.”





J. Hook.

Scilla maritima, var. *maritima*

* BATEMANNIA Colleyi.

Colley's Batemannia.

GYNANDRIA MONANDRIA.

Nat. ord. ORCHIDEE & VANDEE. (Introduction to the Natural System of Botany, p. 262.)

BATEMANNIA. *Flores ringentes. Sepala patentia, lateralia unguiculata basi æqualia. Petala sepalis latiora, basi obliqua, pedi producto columnæ adnata. Labellum cum columna articulatum, trilobum, cucullatum. Columna semiteres, basi elongata, clinandrio marginato. Anthera parva, bilocularis, membranacea. Pollinia 2, postice biloba, glandulâ triangulari, caudiculâ nulla.*

B. Colleyi.

Epiphyta. Pseudobulbi ovati, subtetragoni, lucidi, olivacei, subcorrugati, ovi gallinacei magnitudine. Folia 2-3, obovato-oblonga, plicata, basi angustata. Racemus radicalis, pendulus, semipedalis, laxè 5-10-florus. Bractee rhombeæ, striatæ, cucullatæ, inflatæ. Flores pedicellati, ovario pedicello brevior. Sepala et petala poll. longa, intus fusce-purpurea, extus viridi vitta notata, apice quoque viridia; sepalum posterius oblongum obtusiusculum: lateralia spatulata divergentia petalis paulo longiora; petala a basi triangulari oblonga, sepalo supremo latiora. Labellum oblongum, ultra medium disci bidentatum, album, intus lutescens, extus levissime rubescens; lobis rotundatis, serrulatis, lateralibus intermedio subcuneato brevioribus. Anthera membranacea, depressa, quadrata, 2-bocularis. Rostellum subulatum. Clinandrium marginatum, dentatum. Stigma; rima parva transversa.

Sent from Demerara to James Bateman, Esq. by Mr. Colley, his collector in that country, who has just returned from a successful mission with a considerable number of epiphytes, which are new to our gardens.

Mr. Colley states that this plant, when in perfection, bears double the number of flowers in the accompanying plate. Even in its present state, it is a very handsome species, and extremely different from all genera previously

* We name this genus in compliment to James Bateman, Esq. of Knyphersley, an ardent collector and successful cultivator of Orchideous epiphytes. Mr. Colley, after whom the species is called, was Mr. Bateman's collector in Demerara.

described. It belongs to the *Maxillaria* set of Vandeæ, which is characterised by the projecting base of the column. But in this genus the petals are not only much larger than the sepals, but seem as if they had pushed the lateral ones out of their place. It is generally the sepals which grow to the lengthened base of the column, hiding the lip until the flower opens; but in *Batemannia* the sepals have a narrow contracted base, and the office of protecting the lip is performed by the broad-based petals.

Our specimens were communicated, along with a drawing by Mr. Holland, in August last.

Fig. 1 is a view of the column and back sepal, the other parts being cut away; 2 is the inside of the lip; 3 is a view of the pollen masses from above; 4 one of the pollen masses with its posterior lobe.



* KENNÉDYA nígricans.

Dingy-flowered Kennedyya.

DIADELPHIA DECANDRIA.

*Nat. ord. LEGUMINOSÆ. Juss. (Introduction to the Natural System of Botany, p. 86.)**KENNÉDYA. Supra, vol. 11, fol. 944.*§. 1. *Foliis 3-foliolatis, carinâ rectâ vexillo sublongiore. D. C.**K. nigricans*; foliis ovato-oblongis obtusis solitariis ternatisve, racemis simplicibus, floribus erectis, calycibus villosis basi angustatis.Frutex volubilis, facie *K. rubicundæ*; sed foliola latiora, obtusiora, sæpe solitaria, magis reticulata, racemi simplices nec paniculati; flores erecti, secundi, quasi resupinati, nec penduli; calyces multo angustiores et villosiores; demum petala purpureo-nigra maculâ oblongâ viridi in discum vexilli.

A fine addition to the species of green-house twiners, native of New Holland, where its seeds were collected by Dr. Nisbet. Our specimens were supplied from the garden of Boyd Miller, Esq. of Collier's Wood, near Mitcham.

It is very near *K. rubicunda*, from which it differs not only in the remarkable colour of the petals, but also in its broader and more reticulated leaves, and in its much more compact inflorescence, the flowers of which stand erect, instead of being pendulous, as in that species. It flowers in April.

* Sec folio 1421.



* *AZALEA indica* ; *variegata*.*The Variegated Chinese Azalea.*

PENTANDRIA MONOGYNIA.

Nat. ord. ERICEÆ. *Juss.* (*Introduction to the Natural System of Botany*, p. 182.)

AZALEA. *Supra*, vol. 2, fol. 120.

A. indica ; corollis tubuloso-campanulatis, foliis spatulato-oblongis obtusis v. lanceolatis costâ rufo-hispidâ, calycibus minimis hispidissimis.

A. indica ; *Linn. Sp. pl.* 214.

Var. *variegata* ; floribus pentandris albo roseoque variegatis, foliis spatulatis obtusis.

This is the celebrated variegated Chinese Azalea, which so many attempts have been made in vain for these twenty years to procure alive. It was brought home by Mr. M'Kiligan in 1832, and is now in possession of Mr. Knight, of the King's Road.

In habit and leaves it is exactly the same as the brick-red kind figured at *t.* 1700 ; but it is far handsomer in flower. The blossoms which were produced in Mr. Knight's Nursery, not having been so perfect as could have been wished, we have completed our figure from a Chinese drawing in the possession of the Horticultural Society, which had been made under the inspection of Mr. Reeves.

* See folio 1366.



* ECHINOCÁCTUS oxygónus.

Sharp-angled spiny Cactus.

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTEÆ. *Juss.* (*Introduction to the Natural System of Botany*, p. 54.)*ECHINOCACTUS. Supra, fol. 1707.*

E. oxygonus; glaucescens subglobosus 14-angularis, costis acutis repandis, spinis patulis inæqualibus, flore longissimo. *Link et Otto in Verhandl. des Pr. Gart. Vereins, vol. 6. t. 1.*

We have been favoured by Mr. Frederick Mackie with the figure of this species, which he received along with a large number of other rare and valuable succulent plants, belonging to the unrivalled collection of Mr. Hitchin, which he has recently added to his Nursery at Norwich.

The flower remained expanded about 48 hours. The species is thus described in the Transactions of the Prussian Horticultural Society :—

“The stem is from 10 inches to a foot in height, nearly 10 inches in diameter on the top, somewhat smaller below, and nearly of a globular form, of a bluish-green colour. Its ribs, which are fourteen, rise from a broad base, running into an acute edge. The furrows are somewhat sharp; spines about 14, of various sizes, the outer generally larger, the inner smaller; those more or less divaricate from each other, these standing up nearly perpendicular; all of a brown colour, cone-like, not flat, the younger surrounded

* See folio 1707.

by a tomentum, which is more or less wanting in the older. The flowers proceed from the furrows about the middle of the stem ; are nearly a foot long ; reversed, cone-shaped ; the tube somewhat curved ; firmly attached to the germen ; exteriorly covered with leafflets ; the lower are small and red, increasing upwards in size, and at last terminating in the petals, which are broad, lance-shaped, and of a rose-colour. The stamens are numerous, and every where internally attached to the tube, shorter than the flower. The stigma is multifid and equal to the stamens. We received this plant from Mr. Sello, from the Brazils, without giving its strict habitat."



Urtica dioica L. f. *dioica* L. f. 1713.

* DEUTZIA scabra.

Rough-leaved Deutzia.

DECANDRIA TRIGYNIA.

Nat. ord. PHILADELPHÆ. Don. (Introduction to the Natural System of Botany, p. 52.)

DEUTZIA. Thunb. *Calyx* 5-partitus. *Petala* 5, suberecta. *Stamina* 10, epigyna; filamentis marginatis tridentatis. *Discus* epigynus cyathiformis. *Ovarium* 3-5-loculare polyspermum. *Styli* 3-5. *Stigmata* simplicia, compressa. *Pericarpium* chartaceum, umbilicatum, stylis persistentibus discoque caroso coronatum, 3-5-loculare, polyspermum, basi dehiscens.—Frutices, foliis deciduis, serratis, stelluto-pilosis, Philadelphi facie.

D. scabra; foliis ovatis acutis argute serratis utrinque pilosis, racemis terminalibus tomentosis basi subcompositis, floribus sæpius trigynis.

D. scabra. Thunb. *fl. Jap.* p. 10. et 185. t. 24. *De Cand. prodr.* 3. p. 16.

Joro, vulgo Utsúgi v. Jamma Utsúgi Kæmpf. *amæn. exot.* p. 854.

Frutex in hortis ramis gracilibus subscaudentibus, cortice glabro castaneo vestitis. Folia ovata, acuminata, argutissimè serrata, utrinque stellatim pilosa, scabriuscula, petiolis brevibus lepidotis, atroviridia, subtus paulò pallidiora. Racemi terminales, foliis longiores, erecti, basi subramosi, densè piloso-tomentosi. *Calyx* inferus, tomentosus, 5-partitus. *Petala* nivea 6-7 lineas longa, angusta, oblongo-lanceolata, obtusa, pubescentia. *Stamina* 10, alternu breviora, filamentis marginatis, tridentatis, deute intermedio longiore antherifero; *Antheræ* subrotundæ, longitudinaliter dehiscentes. *Discus* epigynus cyathiformis, luteus, carnosus, margine subcrenulato. *Ovarium* inferum, 3-4-loculare, placentis carnosis polyspermis. *Styli* 3-4, filiformes, apice in stigmata compressa incrassati.

A new hardy shrub, native of the Fakon mountains and neighbouring parts of Japan. For this most interesting addition to our gardens we are indebted to John Reeves,

* Named by Thunberg after John Deutz, Sheriff of Amsterdam, &c. who was one of the gentlemen by whose assistance that Botanist was enabled to prosecute his researches in Japan.

Esq. who imported it in 1833. From a plant presented by that gentleman to the Horticultural Society our drawing was made in May last.

It forms a small shrub, which strikes freely from cuttings or layers, thriving in common garden soil. It appears to require to be trained to a stick, as its branches are not stiff enough to stand erect, and it seems to have something of a climbing habit. It is doubtful, however, whether this is not owing to weakness in its cultivated state, for Thunberg tells us that his plant is a little tree about as high as a man. We presume this species is the same as is represented by that Botanist in his *Flora of Japan*; although it must be confessed that the figure he has given would scarcely by itself sanction such a conclusion. But upon considering his description, and the account given by Kämpfer of his *Joro Utsugi* plant, which Thunberg states to be the same as *D. scabra*, we suspect that any partial discrepancy which may be observable between our plant and the accounts of these writers, must be considered unimportant. The principal difficulty consists in the statement made by Thunberg, that the leaves of *Deutzia scabra* are used by the Japanese, on account of their roughness, for polishing furniture. This, if true, would certainly not be reconcileable with the plant before us; but in addition to the improbability of any plant allied to *Philadelphus* possessing any such property, it is to be remarked that Kämpfer, a far better authority than Thunberg, makes no mention of their being employed for this purpose. He only says that the wood is used by the cabinet-makers for making the very finest of their pegs, for which its hardness and toughness render it well adapted.



* BILLARDIÉRA ovális.

Oval-leaved Billardiera.

PENTANDRIA MONOGYNIA.

Nat. ord. PITTOSPOREÆ. R. Br. (*Introduction to the Natural System of Botany*, p. 138.)

BILLARDIERA. Smith. Sepala 5, acuminata. *Corolla* tubuloso-camp-nulata, petalis 5; unguibus margine convolutis approximatis. *Stamina* petalorum longitudine; *antheris* liberis, linearibus, longitudinatiter dehiscentibus. *Ovarium* rectum, 2-loculare, polyspermum. *Pericarpium* molle, spongiosum, subhaccatum, loculis inflatis. *Semina* plurima, pulpâ nullâ obducta, rotunda, compressa.—Frutices volubiles (Australasici) foliis integris serratisve, floribus sub-solitariis, viridi-lutescentibus, axillaribus, pendulis.

B. ovalis; ramis junioribus pubescentibus, foliis lineari-oblongis obtusis utrinque concoloribus, pedunculis 1-floris glabris flori subæqualibus, petalis rectis obtusiusculis.

A native of Van Diemen's Land, whence it was introduced by Mr. Lowe, of Clapton, who furnished us with the specimen for our figure. It is nearly related to *B. longiflora*, from which it chiefly differs in its smaller and shorter flowers, and more oval obtuse leaves; with the fruit we are unacquainted. Its flowers change from greenish yellow to dark purple, and appear in May.

It is probable that it will be quite hardy enough to live in this country trained to a west wall, if protected from wet in winter; at all events a cold pit would be ample covering for it, and for all the other species. The beautiful *Sollya* also (figured at tab. 1466 of this work) grows with all its native luxuriance in such a situation.

With regard to the latter plant, we avail ourselves of the present opportunity of making a few remarks touching its differences from *Billardiera*. At the time when we described *Sollya*, we were acquainted only with its flowers; but their structure was so different from that of *Billardiera* that we had no doubt of its constituting a distinct genus. Its inflorescence opposite the leaves, short somewhat campanulate corollas, short stamens, with the anthers adhering in a cone round the style, and opening by two pores at their points, were obviously characters of importance when contrasted with the axillary inflorescence, long corollas, whose petals roll together into a tube, and the long stamens with widely distant anthers of *Billardiera*. Upon such marks, then, the genus was formed; and when we afterwards ascertained that Labillardière had described the fruit of *Sollya* as a dry papery

* So named in compliment to the French Botanist La Billardiére, who accompanied D'Entrecasteaux in his Voyage in search of La Pérouse, from 1791 to 1794.

berry, we thought that character, whatever it might mean, was something worth noticing in addition.

It however turns out, from the observations of Mr. Don, that the fruit of *Sollya* is succulent, and filled with a soft pleasant pulp, and therefore he has proposed to reduce it to *Billardiera* (*Brit. Fl. Gard. 2nd series, fol. 252 note.*). But, in the first place, the character of *Sollya* is, as we have just stated, independent of the structure of the fruit; so that if the latter were really like that of *Billardiera*, still the genus *Sollya* would remain; and secondly, a succulent fruit filled with soft pulp is not what occurs in *Billardiera*, whose pericarpium indeed is of a soft spongy substance, but wholly destitute of internal pulp, the seeds lying loose in the cells. Mr. Don adds that the fruit of *Sollya* is four-celled. We have never seen the fruit more than half ripe; in that state it has two cells, each of which is occupied by two rows of seeds, set fast in a firm somewhat fleshy substance, which fills each cell, and which we presume to be what finally becomes the soft pulp that envelopes the seeds. A cross section of the fruit made at that time looks as if there were four cells, which is not the case. The genus *Sollya*, then, instead of being destroyed by the discovery of the true character of its fruit, is established on still more solid grounds than before.

Although it turns out that *Sollya* has not the thin papery pericarpium that has been assigned to it, yet we have been favoured by Mr. Cunningham, to whose numerous discoveries, and the disinterested liberality with which they are communicated to others, we have so often had occasion to bear witness, with a new genus allied to *Sollya*, in which the pericarpium is dry and leathery. This plant is called *Cheiranthera linearis* by its discoverer, because its anthers bend away from the ovary, forming themselves into a line slightly curved like the fingers of an open hand, and resembling what occurs in the *Pleurandras* of the same country. This remark of Mr. Cunningham is the more important because it tends to approximate *Pittosporæ* to *Dilleniaceæ*, and thus to confirm the propriety of placing those plants near each other in a natural arrangement. (*See Nixus pl. p. 10.*) By means of a drawing from the living plant, and fine dried specimens with which Mr. Cunningham has supplied us, we are enabled to draw up the following character of this most interesting genus.

CHEIRANTHERA. *Cunn. Mss.* Sepala 5, acuminata. Corolla crateriformis, petalis 5; unguibus distantibus. Stamina 5 erecta, pistillo breviora; antheris liberis, linearibus, secundis, p. iris apicis dehiscentibus. Ovarium declinatum, biloculare, polyspermum. Pericarpium siccum, indehiscens, ventricosum. Semina plurima, pulpâ nullâ obducta.—Frutex erectus (Australasicus), foliis linearibus, integris subfasciculatis, floribus cæruleis corymbosis erectis.

1. *C. linearis* Cunningham. Found in dry barren tracts of country on the north of Bathurst, New South Wales, where it was observed in flower and young fruit in November 1822. Subsequently, in the same season (namely the summer of 1825), it was again detected most luxuriantly in flower in an arid scrubby region at the foot of Croker's range of mountains, on the west of Wellington Valley, in the interior of that colony.

This is one of the most beautiful plants in all the flora of New Holland.



* *ADÉSMIA* Loudonia.*Mr. Loudon's Adesmia.*

DECANDRIA MONOGYNIA.

Nat. ord. LEGUMINOSÆ. Juss. (*Introduction to the Natural System of Botany*, p. 87.)

ADESMIA. D. C. *Calyx* 5-fidus, laciniis acutis subæqualibus. *Corolla* papilionacea, vexillo juniore super alia petala complicato, carinâ apice curvo-truncatâ. *Stamina* distincta, approximata. *Legumen* compressum transversè plurarticulatum, suturâ superiore subrectâ crassiusculâ, infer. sinuato-lobatâ, articulis 1-spermis demum secedentibus suborbiculatis. *Semina* compressa, reniformi-orbiculata.——Herbæ australi-Americanæ. Stipulæ lanceolatæ. Folia abruptè pinnata; petiolo in setulam producto. Pediculi axillares, 1-flori, et foliorum superiorum abortu in racemum terminalem dispositi. De Cand. Prodr. 2. 318.

A. *Loudonia*; fruticosa cinereo-sericea erecta ramosissima valde foliosa, foliis trijugis foliolis lineari-lanceolatis mollibus patentibus petiolo longioribus, pedunculis axillaribus solitariis calycem 5-fidum sericeum æquantibus, vexillo sericeo, leguminibus (vix maturis) triarticulatis appresso-sericeis calyce duplo longioribus, *Hooker and Arnott, Bot. Misc. vol. 3. p. 193.* quibusdam mutatis.

Frutex *Genistæ* cujusdam sericeæ facie. Caulis et folia cinerea, sericea, Stipulæ angustissimæ, liberæ. Foliola lineari-lanceolata, mollia, subtus pallidiora. Flores solitarii, axillares, foliis breviores. Calyx sericeus 5-fidus, laciniis anterioribus longioribus. Vexillum sericeum, complicatum in alas ineumbens. Alæ glabræ vexillo breviores. Carina paulo incurva alis pallidior et brevior, suturâ anteriore villosâ. Stamina 10, subæquilonga, fere hypogyna, filamenta libera ferè usque ad basin, membranaceo-marginata, apice subulata; Antheræ parvæ, oblongæ, æquales. Ovarium lineare utrinque angustatum, villosum, stylo ascendente curvato subulato glabro.

A Chilian shrub, our drawing of which was made from a specimen in the possession of Mr. Tate. It was originally supposed to be a new genus, and was called *Loudonia*, to which some not over-honest dealer added the specific name

* So named from α priv. and ἑσμός a union; in allusion to the separation of the stamens by which *Adesmia* is known from *Onobrychis* and *Æschynomene*.

superba, for the sake of inducing people to buy it. So far is it from deserving such a name, that we should not have thought it interesting enough to be figured if it had not been for the purpose of putting an end to this fraud.

It is very like some gray *Genista*, and may be easily preserved in a dry frame during the winter. It flowers in June.

In habit it agrees but indifferently with the mass of the genus, but its flowers present no distinction ; and Dr. Hooker finds the fruit to be that of *Adesmia*.

PIRACY.

[Extract from the *Times Newspaper* of Nov. 8, 1834.]

COURT OF CHANCERY, FRIDAY, NOV. 7, 1834.

RIDGWAY *v.* HENDERSON.

Mr. Kindersley moved for an injunction to restrain the defendant from continuing the publication of two numbers of a work in which it was alleged there were piracies from the work of the plaintiff. The plaintiff had for some time past published a work, entitled the "*Botanical Register*," which appeared monthly. It contained plates, eight in each number, representing flowers and plants, and descriptions of those plates. The defendant also published a periodical work on botany, similar in some respects to the plaintiff's work, and he had copied in two of his numbers two plates, one of which recently appeared in the plaintiff's work, and the other in a number published by the plaintiff some years ago. The plaintiff's and the defendant's works were handed up to the Lord Chancellor, who compared the plates pointed out, and was satisfied that the one was copied from the other. The letter-press was then referred to, and there also a great similarity was apparent. It was pointed out by the counsel, that where in the original work a reference had been made to a preceding number, in the words "*supra*, vol. 2," the copier had mistaken the word *supra* for the name of some author, and had so printed it.

The Lord Chancellor said these were the pitfalls into which pirates often fell. There was a curious instance of a similar mistake committed in a piracy upon Dr. Johnson's Dictionary. The Doctor stated the word "curmudgeon" to be derived from the French, *cœur méchant*, and added as his authority for this derivation the words "unknown correspondent." The copier (Dr. Ash) mistook these last words, and gave the word curmudgeon as derived from the French *cœur. unknown, méchant, correspondent*. In this case his Lordship said there was enough shewn to warrant the injunction, which he ordered accordingly.

We beg to call attention to the foregoing extract. It may not be generally known to the public, although it has long been notorious to those who are conversant with the publishing business, that there exists in this metropolis, on the part of certain writers and booksellers, a system of gross literary piracy; that no sooner does valuable original matter, which has been obtained at great expense by the fair dealer, make its appearance, than it is snatched up and republished verbatim by certain unprincipled persons; in particular, that there are books called cheap periodicals, which are entirely maintained by the plunder of original

works of reputation ; and in short, that there are individuals who, under the name of publishing booksellers, open shops for no other purpose than that of becoming receivers of pirated goods of a particular description. If these persons committed such offences against what are termed the criminal laws of England, they would be speedily transferred to our penal settlements as felons ; but as they cunningly confine their practice to acts, which, whatever may be the moral delinquency of the perpetrator, the law refers to the class of civil offences, they cannot be brought to the bar of the Old Bailey, but are amenable to higher courts, and subject to pecuniary punishment only. By the operations of depredators of this kind, we have long been seriously injured. The principal part, if not the whole of certain cheap periodicals, have been prepared by pirating the letter-press and plates of this work ; that such proceedings should take place without acknowledgment is only human nature, for when will the thief acknowledge from what purse he has purloined his gains ; that they should go unpunished would be to offer a premium to roguery at the expense of honesty. We have therefore at length determined to put down, if we can, the practice of literary piracy, so far as we are interested, by an appeal, first to the laws of the country, and secondly to the good feeling of the public, who we are persuaded would be as much ashamed of encouraging book-robbery by the purchase of publications supplied by it, as they would feel themselves disgraced by being seen to enter the shop of a notorious housebreaker, for the sake of the cheap bargains his plunder might enable him to offer.

To our appeal to the law, the Bench has promptly and efficiently responded by the above injunction. To our appeal to the public we are confident that a similar answer will be made, and that the high moral feeling which is the peculiar boast of this country, will be quite sufficient to put down such practices.

We therefore warn all those whom it may concern, that we shall immediately proceed in the courts of justice against all future piratical offenders, until the nuisance is abated ; and that we shall take efficient means of another kind, to expose the parties to whom these observations more particularly apply, if we shall see occasion to do so.





* MYÁNTHUS cérnuus.

Drooping Fly-wort.

GYNANDRIA MONANDRIA.

Nat. ord. ORCHIDÆÆ § VANDEÆ. (*Introduction to the Natural System of Botany*, p. 262)*MYANTHUS*. *Lindl. Supra*, fol. 1538.*M. cernuus*. *Gener. and Sp. of Orch. pl. part 3. p. 155.**Catasetum trifidum*. *Hooker. Bot. Mag. t. 3262.*

This very curious plant is found growing upon the trunks of trees near Rio Janeiro. It seems first to have found its way to this country through Trinidad, whence it was sent to the Glasgow Botanic Garden, and figured in the Botanical Magazine.

For the beautiful drawing which we now publish, we are indebted to Miss M. A. Huntley, the daughter of the Rev. J. T. Huntley, in whose rich collection it flowered in great beauty in May last.

Like all the species with the habit of the now common *Catasetums*, this is very easily cultivated, provided it is rested for some months by being kept *cool* and dry, when not growing, and is vigorously forced when in full vegetation. We know not whether it is as avid of water as some of the *Catasetums*, but we find those plants thrive best when their roots are actually immersed in water while growing.

[In the dissections, fig. 1. represents a side view of the flower, to shew that when it is expanded the two petals are connivent with the upper sepal; fig. 2. shews the labellum jointed with the column; fig. 3. a back view of the pollen-masses with their caudicula and gland. *M. A. H.*]

* From *μῦα* a fly; the flowers look when dried very much like a fly pressed flat.



* **LÁLAGE** ornáta.*Gay-flowering Lalage.*

MONADELPHIA DECANDRIA.

Nat. ord. LEGUMINOSÆ. §. *Loteæ* De Cand. (*Introduction to the Natural System of Botany*, p. 87.)

LALAGE. Flores bracteis deciduis aridis inclusi. *Calyx* bilabiatus; labio superiore bifido, inferiore tripartito, laciniis omnibus setaceis. *Vexillum* planum, subrotundum, emarginatum. *Carina* obtusa. *Stamina* omnia connexa, decimo semilibero. *Legumen*
Frutex Australasicus. Folia alterna, simplicia, stipulata. Flores axillares, aurantiaco-purpureoque varii.

Lalage ornata.

Frutex atroviridis; ramis teretibus sericeis. Folia lata, ovata, breve petiolata, valdè reticulata præsertim infra, supra scabriuscula, brevissime pilosa, subtus sericea. Stipulæ setaceæ, lineatæ, scariosæ, petioli longitudine, dorso pilosæ. Flores gemini, axillares, e squamis imbricatis, testaceis, aridis, deciduis erumpentes; pedicellati, bracteolis filiformibus viridibus villosis calycis longitudine. Calyx villosus, intus coloratus. Vexillum subrotundum, explanatum, emarginatum, intensè luteum basi maculâ sanguineâ limbo fusco-purpureo notatum. Alæ fusco-purpureæ, lineari-oblongæ, obtusi sinu, cum carina parallelæ. Carina paulò inflata, lætè purpurea, denticulata obtusa. Stamina basi alba, apicibus purpurea. Antheræ ovatæ, obtusæ. Ovarium villosissimum, stylo ascendente, subulato, glabro.

A native of the south-west coast of New Holland, where its seeds were collected by Mr. Baxter. Our drawing was made in Mr. Knight's Nursery in April last.

This is one of the prettiest of the New Holland leguminous plants. Its leaves are of a deep rich green, and the colour of the flowers is a pleasing mixture of yellow, orange,

* May we be permitted to apply to this gay and lively-looking plant the name of a laughing witty dame, who has been immortalized by the poetry of Horace?

purple, and crimson. It requires to be kept in a well-aired green-house, and may be multiplied by cuttings.

Although its fruit is unknown, we have no hesitation in considering it a new and distinct genus ; differing from *Hovea*, *Bossiæa*, and *Platylobium*, in the form of the upper lip of the calyx.



* EUPATÓRIUM glandulósum.

Glandular Eupatorium.

SYNGENESIA POLYGAMIA ÆQUALIS.

Nat. ord. COMPOSITÆ § EUPATORIÆ Lessing. (*Introduction to the Natural System of Botany*, p. 197.)

EUPATORIUM L. *Capitulum* pauci—s. multi—nec 4-florum. *Pappus* uniserialis non plumosus. *Corolla* limbo a tubo non distincto. *Involucrum* pauci-multiseriale. *Rachis* ebracteolata. *Achenium* 4-5-quetrum.—Arbores, frutices, aut herbar, in Europa et Asia, sed longe pleraque in America crescentes, pl. erecti, ramis folisque oppositis, sive verticillatis, rarius alternis; capitulis violaceis v. albis, corymbosis s. corymbo-paniculatis. Lessing.

§ 4. *Involucrum* campanulatum; foliolis crebris subæqualibus lanceolatis acutis. *Caulis* sæpius herbaceus. Kunth. synops. 2. 418.

E. glandulosum; caule herbaceo paniculato glanduloso-hirto, foliis oppositis ovato-triangularibus subacuminatis grossè serratis supra glabris subtus pilosisculis, corymbis terminalibus trifidis, ramis ramulisque glanduloso-hirtis, involucri foliolis acutis subciliatis exterioribus pubescentibus. Humb. et Kunth. nov. Gen. et Sp. pl. vol. 4. p. 122. t. 346. Synops. l. c.

Caulis herbaceus, fusco-purpurascens, pilis brevibus erectis glandulosis densissime obsitus, 3-4 pedes altus, ramosus. Folia in plantâ vegetiore rhomboidea, v. triangulari-ovata, petiolata, basi cuneata integerrima, apicem versus grosse serrata, in debiliore oblonga, vix rhomboidea et brevius petiolata; supra glabra venis triplicibus costæformibus altius impressis, subtus pubescentia, petiolo glanduloso. Flores albi, leviter suaveolentes, ramis inflorescentiæ corymbosis glanduloso-pilosis. Involucrum campanulatum; squamis subulatis pallide viridibus, glandulosis, subæqualibus, appressis. Receptaculum planum, nudum. Achenia nigra, tetraquetra, lævigata, pappo simplici pauciradiato pubescente coronata.

A native of Mexico, whence seeds were received by the Horticultural Society some years since, through the favour of the late Mr. Canning. It was found by Humboldt and Bon-

* Pliny says that Eupator, King of Pontus, first used the Eupator herb medicinally. The Eupatorion of the Greeks was however not this genus, but the modern Agrimony.

pland upon the high table-land of Mexico, between Carpio and Gasave, at between 7 and 8000 feet of elevation.

For some time after it was raised it was kept in a pot, where it flowered abundantly in November and December in the green-house ; and from plants so treated our drawing was prepared. But it has subsequently been turned into the soil of a turf-pit, which is screened from wet and the most severe of the winter's cold, and there it has grown so vigorously as scarcely to resemble its former self ; on this account some discrepancy will be found between our description and figure. It now forms a thick bush three or four feet high, which flowers in October and November.

Easily increased by cuttings, which strike root as freely as those of the *Dahlia*.



"1" - 1834

Drawn by S. H. H. H. H.

1834

J. Walter sc.

* PYROLIRION aúreum.

Golden Flame-lily.

HEXANDRIA MONOGYNIA.

Nat. ord. AMARYLLIDÆ. (*Introduction to the Natural System of Botany*, p. 259.)

PYROLIRION. Herbert. — Scapus uniflorus, cavius. Flos sessilis, campanulato-infundibularis, erectus, laciniis æqualibus acutis apice recurvis, tubo cylindraceo spathe bifide subæquali. Stamina æqualiter patentia, tubi faucibus nudâ inserta; tribus longioribus. Antheræ biloculares. Ovarium 3-loculare, polyspermum, ovulis horizontalibus planis; stigma trifidum: laciniis linearibus apice dilatatis.

P. aureum. Herbert in Bot. Mag. append. p. 37.

Amaryllis peruviana. Poir. enc. meth. suppl. 1. 315. Ker in Bot. Mag. 1089.

Römer et Schult. Syst. Veg. 7. 805.

Amaryllis aurea. Fl. Peruv. vol. 3. t. 286. u. p. 56.

Bulbus subrotundus, paululum turbinatus, pallidè fuscus, castaneæ parvæ magnitudine. Folia 2na v. solitaria (in cultû), linearia, apice angustata, atroviridia, canaliculata, apice recurva. Scapus teres, curvus, uniflorus, in cultû foliis brevior, in spontaneis longior, et robustior. Spatha membranacea, bifida, tubo paulò longior. Flos sessilis in scapo, amœnè aureus, in cultû vix 3-pollicaris, in spontanea 4-poll. Perianthium infundibulare, in tubum angustatum, supra tubum subventricosum, vel quasi angustè campanulatum, sed nullo modo abruptè constrictum ut in iconè Fl. Per. quæ ad siccum confectum videtur. Sepala lanceolata, acuta, usque ad tubum distincta, ibi conferruminata; Petala conformia, omnia aequalia, et æqualiter patentia. Stamina faucibus tubi inserta, filamentis versus basim sensim incrassatis, sed nequaquam ex squama oriundis; tria paululum breviora; omnia æqualiter patentia. Antheræ lineares, versatiles. Ovarium oblongum, cum scapo continuum, obscurè trigonum, triloculare, polyspermum; ovula plana, horizontalia. Stylus simplex, teres; stigmata 3, linearia, apice dilatata, minute pupilloso.

Introduced from Peru by Richard Harrison, Esq. of Liverpool, and communicated to us in flower in April last. It is said by the authors of the Flora Peruviana to be com-

* Literally Fire-lily, from the colour of the flowers.

mon about Lima in fields and hedges, flowering in January and February, and that it is called *Hamancæ de Antibo*, which means *sativy Hamanca*. We have wild specimens gathered near Lima by Mr. Mathews (No. 400).

There is no doubt of its being the *Amaryllis aurea* of the Flora Peruviana, notwithstanding its smaller size, which is owing to cultivation, its longer style, which it may be supposed is more fully formed than the Perianth, and some discrepancies between it and the figure given by Ruiz and Pavon. The latter appears to have been made from a dried specimen, and is very inaccurate in many respects. In the first place, the flower is represented as stalked; certainly it is sessile; secondly, the stamens are said to arise from scales in the mouth of the tube; there are no such scales; and finally, all that concerns the form of the tube of the flower and the ovary is a mere caricature.

Whether or not the genus *Pyrolirion* is a good one, we have not the means at hand of determining to our satisfaction; as it has not any such campanulate flower as has been represented by Ruiz and Pavon, the most prominent feature in its supposed character is done away with, and then it becomes difficult to separate it from *Zephyranthes*; it differs, however, from that genus in its sessile flowers, which we incline to consider a character of much importance, and in the dilatation of the points of its stigma into little spoons. From *Oporanthus*, which is totally different from *Sternbergia*, it is chiefly its stigma and the reflexed points of its perianth which distinguish it, unless the seeds should prove different, as the form of the ovules renders probable.

In the mean while, until the remainder of the structure of this plant shall have been ascertained, we adopt Mr. Herbert's name, without however attempting to define the species, for we do not see what are the distinctive characters of either *P. flavum* or *flammeum*.



* LEPTOSÍPHON densiflorus.

Thick-flowered Slender-tube.

PENTANDRIA MONOGYNIA.

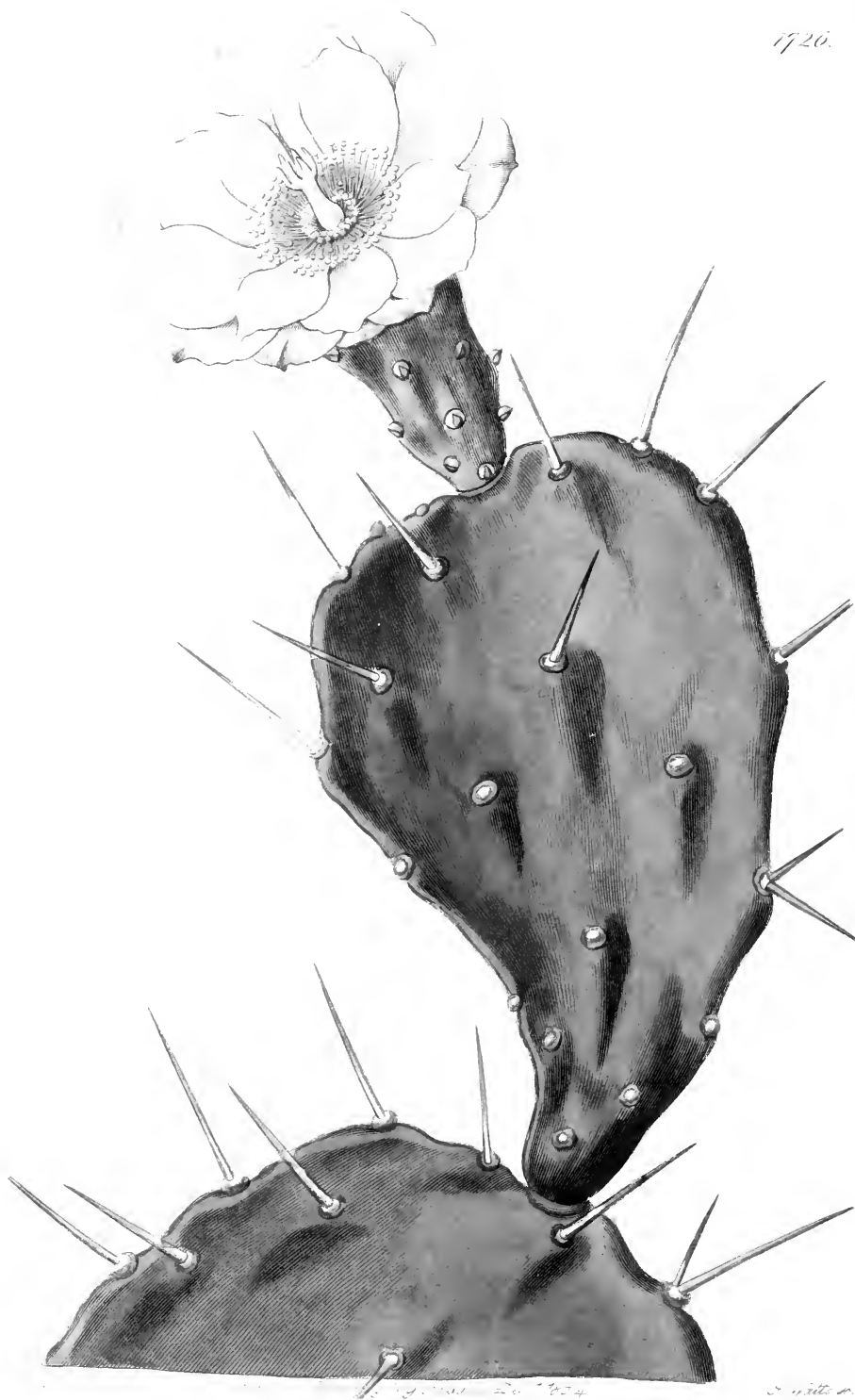
*Nat. ord. POLEMONIACEÆ. Juss. (Introduction to the Natural System of Botany, p. 219.)**LEPTOSIPHON. Supra, fol. 1710.*

L. densiflorus : foliis 9-11-fidis, laciniis subulatis strictis margine revolutis, corollæ tubo limbo brevior. *Bentham supra fol. 1622 in textu. Hort. Trans. n. s. v. 1. t. 18. f. 2.*

In its general appearance before flowering, this is very like *L. androsaceus*, only it is somewhat grayer in consequence of its leaves being more glandular. When in flower it is very different; its corolla is three times as large, with broader and blunter segments, and with a short thickish tube, instead of a long and slender one. Its colours vary in the same manner from purple to blue and white, but they are less lively, and are not produced in the same abundance; and it must be considered decidedly inferior in point of beauty.

It flowers in October and November, if sown in the spring; and in April and May, if sown in the autumn; but it would hardly survive a severe winter. Its seeds are produced in very small quantity, so that, being an annual, it is likely to remain for some years a very rare plant.

* Sec folio 1710.



J. G. Smith 20 1854

J. G. Smith

* *OPUNTIA monacantha*.*One-spined Opuntia.*

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTEE. (*Introduction to the Natural System of Botany*, p. 54.)

OPUNTIA. Tourn. *Sepala* numerosa, ovario adnata, foliiformia, summa plana, brevia, intima petaliformia, obovata, rosacea, expansa, tubo supra ovarium nullo. *Stamina* plurima, petalis breviora. *Stylus* cylindricus, basi constrictus. *Stigmata* plurima, erecta, crassa. *Bacca* ovata, apice umbilicata, tuberculosa, sæpè spinifera. *Embryo* subspiralis, teretiusculus. *Cotyledones* semiteretes, germinantes foliaceæ planæ crassæ. *Plumula* parva.—Frutices, trunco *demum tereti, juniore ramisq. rarissimis cylindricis, sæpius plus minus compressis, articulatis, articulis ovatis v. oblongis fasciculos aculeorum aut setarum ordine quincunciali seu spirali dispositos gerentibus*. Folia *sediformia, caducissima, sub quoque fasciculo juniore*. Flores *e fasciculis aut marginibus articulorum orti, flavi, aut rubentes*. *Stamina tactu subirritabilia*. De Cand. prodr. 3. 471.

O. monacantha; articulis obovato-oblongis, aculeis solitariis subulatis validis.

De Cand. l. c.

Cactus monacanthus. Willd. *enum. suppl.*

We were favoured with a fine plant of this Cactus by the Countess of Guildford in May last. It is said to be a native of the hotter parts of South America.

With regard to the species, or supposed species of this difficult genus, we cannot do better than quote the words of Professor De Candolle, who has long, carefully and skilfully cultivated them.

“With regard to Nopals with yellow flowers, although they are the most common in the gardens, the study of their

* Said to be named from the country of the ancient *Opuntians*, where it grew wild. These people were located upon the site of the present Tolandi, in the Morea, where one species is still found.

species is perhaps more complicated than that of any other section. It appears pretty well made out that M. Lamarek and myself have united as varieties under the name of *Cactus opuntia*, some species which are truly distinct ; but I also think that since that time Botanists have gone too far in describing as species a heap of varieties probably originated in cultivation, and the flowers of which are still unknown. The descriptions of Opuntias made from wild plants correspond so ill with those made in gardens, that it is almost impossible to identify them, considering the negligent manner in which travellers have described them. Thierry de Menonville, who to be sure was an indifferent botanist, but who gave his entire attention to the study of Nopals, says expressly, ‘ that if Linnæus justly complained that the species of Cacti with angular stems were inexactly described, we may be sure that the description of Opuntias is still more incomplete, both with regard to number and form. There exist in Mexico thirty species, very different from all that have been described ; and I have had neither the time nor the liberty to describe them.’

“The principal characters hitherto employed are the form of the joints and the spines. The first of these characters is to be depended upon only when the mean of all the joints of an individual is taken into account, for there are few Nopals of any size, the same individual of which will not furnish joints of different forms. As to the spines, their number is often variable on the same individual, and all travellers say the same species may have them or be without them ; their length is not more constant, and varies within such extensive limits, according to the mode of culture, that we can scarcely give it any importance. The garden Nopals, in general, have them less numerous and smaller than the wild plants. The colour of the spines seems somewhat less variable, but as yet we have upon this subject nothing but garden observations, made upon individuals propagated by cuttings of each other, and we do not know whether these characters come thus from seeds. I therefore consider the principal part of the Nopals with yellow flowers as of doubtful species.”

1724



* COLUTÉA nepalénsis.

Nepal Bladder-senna.

DIADELPHIA DECANDRIA.

Nat. ord. LEGUMINOSÆ § LOTEÆ D. C. (*Introduction to the Natural System of Botany*, p. 87.)

COLUTEA L. *Calyx* 5-dentatus. *Vexillum* explanatum, bicallosum, carinâ obtusâ majus. *Stamina* diadelphea (9 et 1.) *Stigma* laterale sub apice styli uncinato. *Stylus* posticè longitudinaliter barbatus. *Legumen* stipitatum cymbiformi-ovatum inflatum scariosum.—*Frutices inermes*. *Stipulæ parvæ, caulinae*. *Folia impari-pinnata*. *Racemi axillares, pauciflori, foliis paulo breviores*. De Cand. Prodr. 2. 270.

C. nepalensis; foliolis subrotundo-ellipticis retusis, racemis paucifloris nutantibus, callis vexilli papilliformibus, leguminibus coriaceis pubescentibus.

Spreng. cur. post. p. 278.

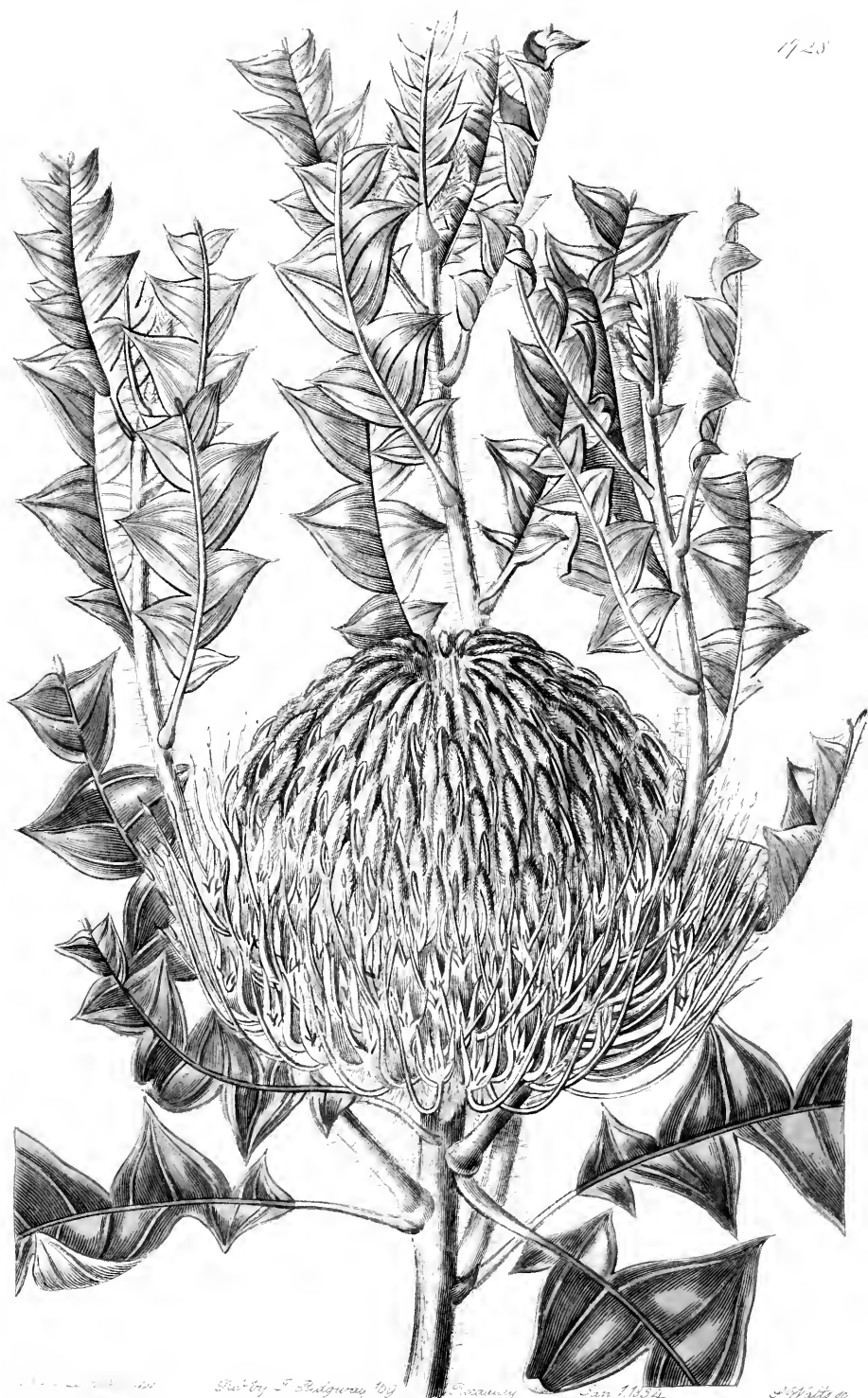
C. nepalensis. *Sims in Bot. Mag.* t. 2622.

This hardy shrub was introduced to our gardens from Nipal some years since, but it has as yet been little cultivated. In point of appearance it is when young far more handsome than the common Bladder Sennas. Its leaflets are rounder and more shining, and its flowers of a lighter and rather brighter tint, with a more graceful arrangement on the branches; it is moreover a smaller and neater-looking species.

From the character above quoted from Sprengel, the pods would seem to be materially different from those of the common species; but we have never seen them. No specimens were distributed under Dr. Wallich's direction; nor indeed are we aware of any wild specimens having been seen in herbaria.

Flowers in June; increased by layers.

* The *κολουτέα* of Theophrastus is supposed to have been the *Colutea cruenta* of modern Botanists.



Banksia

Banksia F. B. Gregory 189

Banksia

Jan 1, 1894

Banksia

* *BANKSIA speciosa*.*Shewy Banksia.*

TETRANDRIA MONOGYNIA.

Nat. ord. PROTEACEÆ. (Introduction to the Natural System of Botany, p. 68.)

BANKSIA. Supra, vol. 8, fol. 688.

1. Stylus perianthio longior hinc unguibus citius solutis arcuatim exsertus. Stigma lamina tardiùs dehiscentibus inclusum. Amicuntum floriferum cylindraceum, fructiferum folliculis transversis pluribus. Banksiæ veræ. *R. Brown Prodr.* 247.

B. speciosa; foliis linearibus pinnatifidis: lobis triangulari-semiovatis mucronatis subtilis niveis obsoletè nervosis, perianthii lamina lanatis, stylo pubescente, folliculis tomentosis. *R. Brown in Linn. Trans. v. 10. p. 210. Prodr.* 252. *Graham in Edinb. Phil. Journ. Dec. 1830. Bot. Mag. t. 3052.*

A rare species, which, as far as we know, has only flowered three times in this country; first, in the Botanic Garden at Edinburgh, next in the garden of his Grace the Duke of Northumberland, to whom we are indebted for an opportunity of figuring it, and, lastly, in the collection of Henry Berens, Esq. at Sidecup.

It is chiefly for its beautiful foliage and graceful habit that it is valued, its flowers having no strikingly brilliant colours to recommend them.

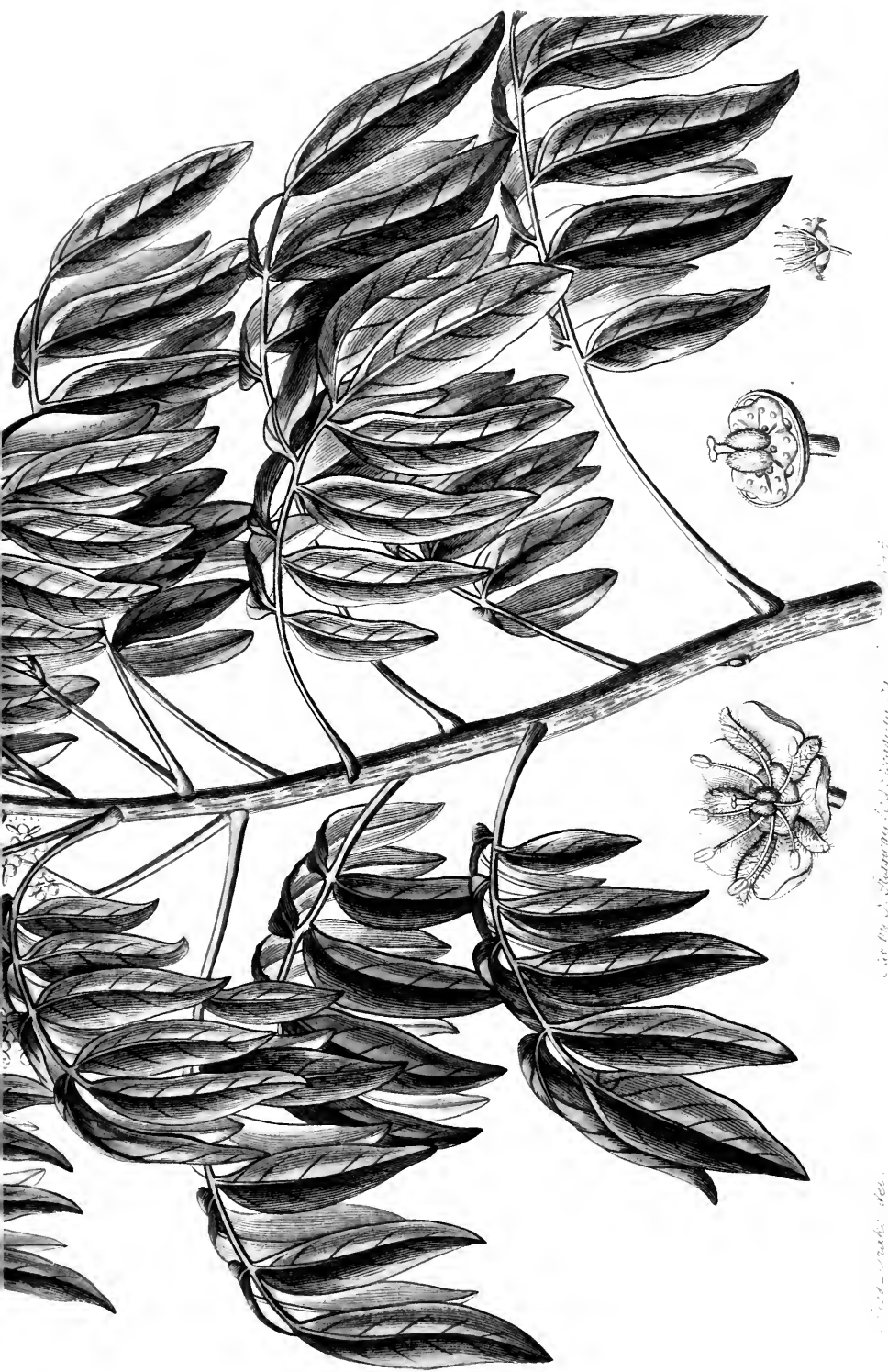
We found neither the whiteness of the under side of the leaves, nor the faintness of the veins, which are supposed to

* It is almost superfluous to say that this fine genus was named in honour of the late Sir Joseph Banks, the enlightened traveller, and the steady friend of science, whose memory would deserve to be immortalized, if it were only for his protection of such men as Dryander and Brown.

be characteristic of the species ; but these were probably only accidental deviations from what is usual.

Dr. Brown states it to be a native of Lewin's Land, on the south coast of New Holland, in rocky places near the sea-coast.





* EUPHÓRIA Lóngan.

The Longan Tree.

POLYGAMIA MONÆCIA.

Nat. ord. SAPINDACEÆ. (Introduction to the Natural System of Botany, p. 116.)

EUPHORIA. Supra, vol. 13, fol. 1059.

E. Longan; foliolis subquadrijugis cum impare ovali-lanceolatis obtusis opacis, venis subtus elevatis pinnatis, floribus paniculatis, fructibus inermibus verrucosis.

Euphoria Longana. Lamarck Dict. 3. 574. De Cand. Prodr. 1. 611.

*Dimocarpus Longan. Lour. Cochinch. 1. 288. Hort. Trans. vol. 2. t. 28.**

Nephelium Longanum. Cambess. Wight et Arnott. Fl. Penins. Ind. Or. 1. 113.

Scytalia Longan. Roxb. Fl. Ind. 2. 270.

The Litchi and the Longan are two of the finest fruits that the Chinese possess. Both are occasionally sent to England as presents, but they are never seen in the shops. They have, when imported, a brown shell, which in the former is prickly, in the latter simply warted, and contain a single seed surrounded by a succulent aril, having much the taste of an excellent raisin, only rather more vinous.

This species seldom flowers, and has produced its fruit in only one place in this country: namely, at Mr. John

* Literally *well-bearing*, in allusion to the value of its fruit, and the abundance in which it is produced.

Knight's, of Lee Castle, near Kidderminster, in the year 1816. Specimens were sent to the Horticultural Society, in whose Transactions the following account was soon after published, with a figure of the fruit :

“Two species of *Dimocarpus* have been introduced into our gardens : the *D. Litchi*, and *D. Longan*. They are both natives of the southern part of China, where they are known as the *Li-tchi* and the *Long-yen*, and much cultivated ; they have also been transplanted thence to different places in the East Indies. The present is believed to be the only instance of the fruit having been brought to maturity, in Europe ; and persons who were well acquainted with it in its native places of growth, pronounced these specimens quite as good as those grown within or near the tropics. The *Li-tchi* is most esteemed by Europeans : the Chinese prefer the *Long-yen*, considering it to possess medicinal properties as a stomachic. Both species are trees, and many varieties of each are cultivated in China, differing in the quality of the flesh, the time of ripening, and in the shape of the fruit, some being nearly globular, some heart-shaped, and others oblong, but not varying much in size. The *Li-tchi* fruits are, however, generally the largest, and are of a red colour, when ripe, excepting in one variety, in which the coat remains green. The small scutiform processes, on the coat of the fruit, in the *Li-tchi*, are more sharp, or pointed, than those of the *Long-yen*. The fruit of the latter is uniformly of a light brown colour. In both species the pulp is surrounded with a tough, thin, leathery coat ; it is a colourless semi-transparent substance, in the centre of which is a dark brown seed, of different sizes, in the different

varieties. The flavour of the pulp is slightly sweet, sub-acid, and particularly pleasant to the taste, in a warm climate. The fruit of the Li-tehi, dried either in the sun, or by fire-heat, is frequently brought to England by the ships from China. In this state, the pulp is shrivelled and reduced, within the coat or shell, to half its usual size, and has a rich and sweet taste, if it has been well preserved."

A very tender stove plant, flowering in May. Our drawing was made in the hot-house of his Grace the Duke of Northumberland, at Syon, in 1833.



Engraving of the Iris, Jan 1 1825

J. M. Smith

* ACANTHOPHIPPIUM b́icolor.

Two-coloured Barrel-Orchis.

GYNANDRIA MONANDRIA.

Nat. ord. ORCHIDÆE § VANDEÆ. *Lindl. (Introduction to the Natural System of Botany, p. 262.)*

ACANTHOPHIPPIUM. *Blume. Perianthium* ventricosum. *Sepala* agglutinata, lateralía unguí columnæ adnata, dorsale cum petalis spatulatis fornicato. *Labellum* unguiculatum, cum basi longè productâ columnæ articulatum, limbo trilobo indiviso complicato, disco lamellato. *Anthera* carnosa, bilocularis. *Pollinia* 8, inæqualia, sessilia.—Herba *terrestris, subcaulescens*. *Caulis* infernè bulbosus, vaginatus. *Folia* oblongo-lanceolata, plicata. *Pedunculus* vaginatus pauciflorus. *Flores speciosi*. *Lindl. Gen. et Sp. Orch. 177.*

A. *bicolor* ; petalis oblongo-lanceolatis acutiusculis, labelli lobis lateralibus rotundatis, perianthio ovato.

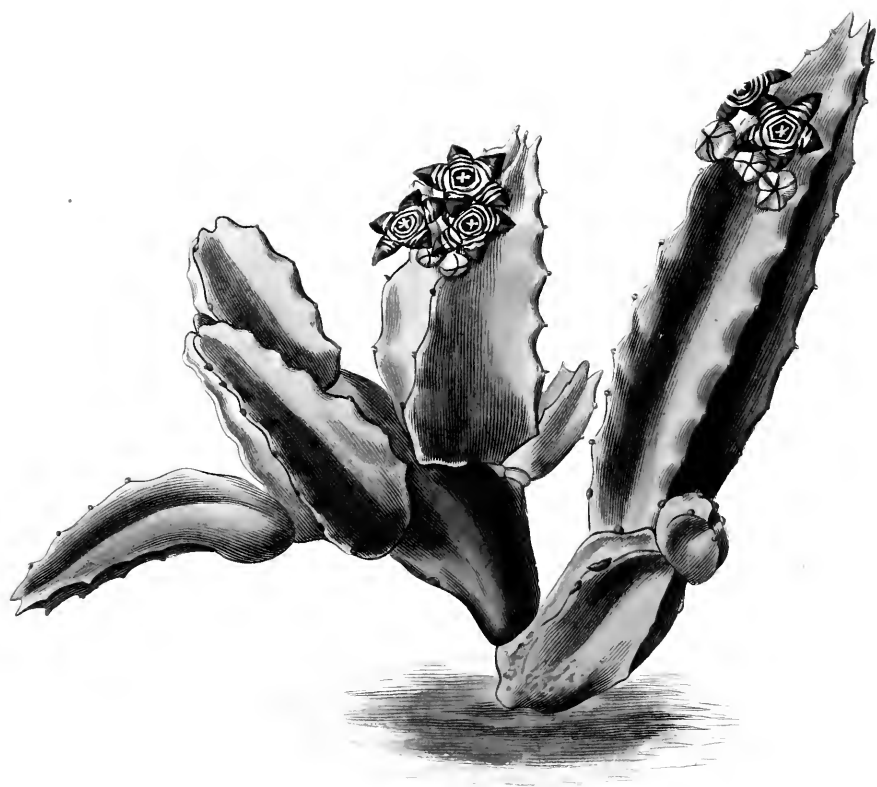
Planta *terrestris* ; pseudobulbis oblongo-ovatis, corrugatis, atroviridibus, reliquiis foliorum vestitis, paulo in collum angustatis. *Folia* 2-3, oblongo-lanceolata, utrinque acuta, plicata, erecta, basi angustata, sed petiolo nullo. *Pedunculus* radicalis ; squamis ovatis, concavis, brunneis, magnis, vaginatus, 2-4-florus. *Perianthium* carnosum, unciam et dimidiam longum, ovatum, vel subconicum, flavum, apice patulum sanguineum. *Sepala* omnia conglutinata, oblonga, obtusa, lateralía basi obliqua, basi longè productæ columnæ inserta. *Petala* æquilonga, apice minùs maculata, lineari-oblonga, acuta. *Labellum* cum pedè longâ columnæ unguem efficiente articulatum, inflexum, complicatum, trilobum ; lobis lateralibus rotundatis intermediâ mugis luteâ et carnosâ, asperiusculâ ; lamellis disci 2 tantum, concavis, lined elevatâ sejunctis. *Columna* semiteres, acuta ; stigmatè marginato ; clinandrio immarginato proclivi. *Pollinia* 8, geminata, in glandulam anticè emarginatam sessilia.

A highly curious and extremely rare epiphyte, found in Ceylon by Mr. Watson, the Superintendent of the Government Garden at Peradenia, and transmitted by him to the Horticultural Society. It has very much the habit of a *Geodorum*, only it has pseudo-bulbs, instead of tubers.

* A name, the meaning of which is not explained by its author, Dr. Blume.

It flowers in June, and succeeds extremely well in a mixture of peat and sand, mixed with broken pots, provided it has a great deal of heat and moisture during the growing season, and a few months rest annually in a cool and dry atmosphere.

Of the only two other known species, one is a native of Java, the other of Sylhet. Neither has yet been imported.



* STAPÉLIA Gussoneána.

Sicilian Stapelia.

PENTANDRIA DIGYNIA.

*Nat. ord. ASCLEPIADEÆ. (Introduction to the Natural System of Botany, p. 210.)**STAPELIA. Supra, vol. 9, fol. 755.*

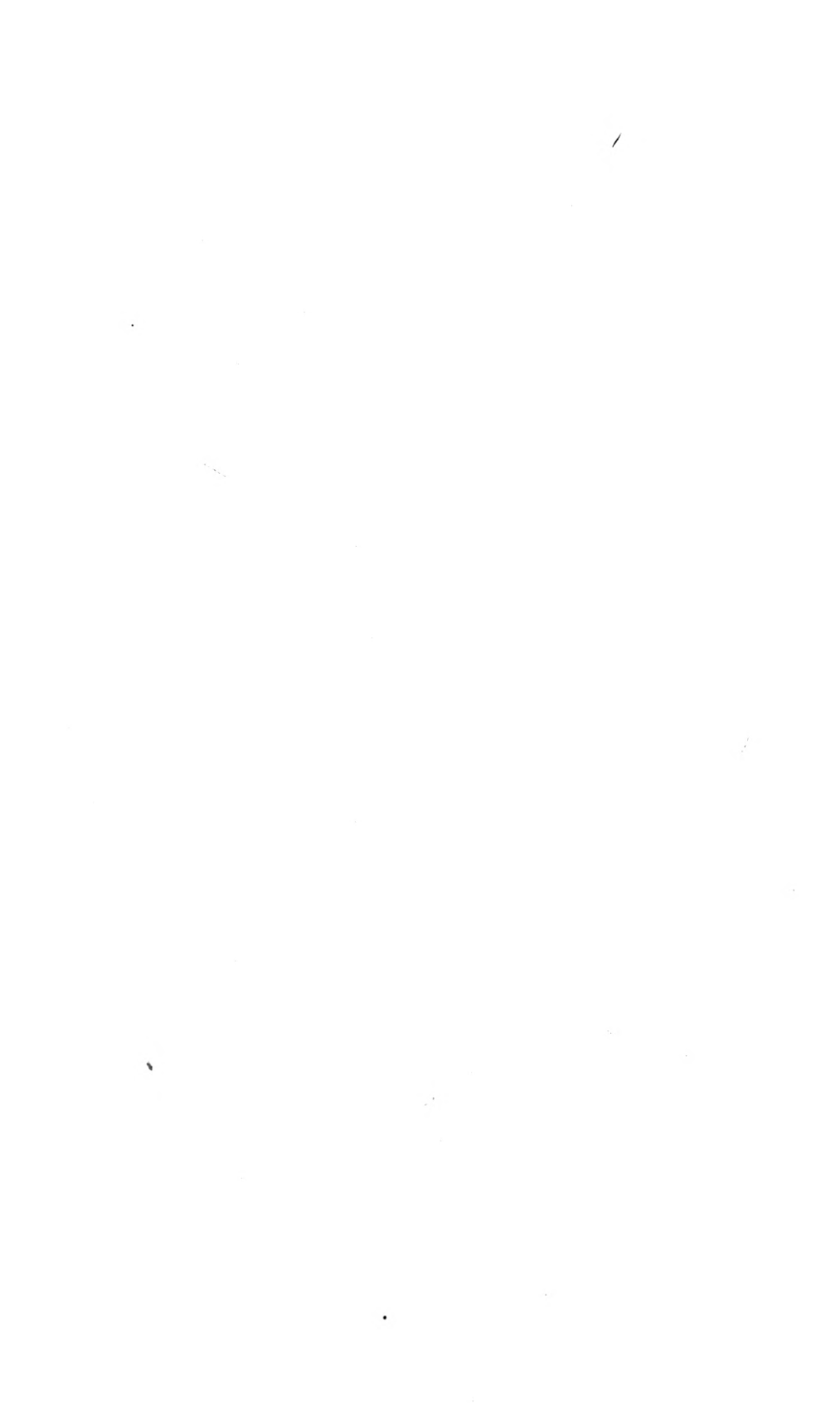
-
- S. Gussoneana*; caulibus cinereo-glaucis crassis tetraquetris faciebus concavis, angulis dentatis inermibus, floribus fasciculatis parvis, corollis glabris.
S. Gussoneana. Jacquin.
-

One of the greatest geographical curiosities we know. The genus *Stapelia*, extensive as it is in species, does not possess one other which is not found in South Africa; so that this, which is a native of rocks on the south of Sicily, is cut off, as far as we know, from all the remainder of the genus, by the whole continent of Africa. Are we to infer from this that Central Africa contains *Stapelias* in its unknown Flora? or is this a northern form, having no connection with the Hottentot races except in general structure? Perhaps we shall be justified in assuming the former to be the more probable theory, if we take into consideration that Forskahl found a plant without flower, which he took for a *Stapelia*, in Arabia; and that *Carallumas*, which are altogether *Stapelias* in habit, are found in Continental India.

The species was first made known by Baron von Jacquin at the meeting of Naturalists at Vienna in 1832, and we presume that he has since published it somewhere under the name he then gave it. Mr. Bentham brought it to England with him, and gave it to the Garden of the Horticultural Society, where our drawing was made last October.

* See folio 755.

Unfortunately we neglected to make any notes upon the structure of its flowers when they were before us, and we are therefore unable to describe them. When we shewed the plant to the late Mr. Haworth, he pronounced it to be entirely different from any which he had ever seen.



1732



Helianthus 169. Scissally Jan 1. 1875.

F. Math. del.

* MESEMBRYÁNTHEMUM rubrocinctum.

Red-edged Fig Marigold.

ICOSANDRIA POLYGYNIA.

*Nat. ord. FICOIDEÆ. (Introduction to the Natural System of Botany, p. 160.)**MESEMBRYANTHEMUM. Supra, vol. 3, fol. 260.*

§ 30. CONFERTA.

Caules fruticosi, ramis confertis ascendentibus. Folia opposita, subconnata conferta triquetra acuta, angulis lævibus. Flores pedunculati solitarii aut ternati speciosi sole expansi rubicundi aut pallidè rosei. *De C. prodr. v. 3. 436.*

M. rubrocinctum; caulibus humilibus ascendentibus ramosissimis, floriferis unifloris, foliis læte viridibus rubrocinctis acinaciformibus lævibus, bracteis connatis, floribus maximis.

M. rubrocinctum. Haworth.

A species which may perhaps be considered the finest of this very extensive genus. It is nearly related to *M. spectabile*, from which it differs in its larger flowers and leaves, and in its connate bracts.

It is a native of the Cape of Good Hope, and is said to have been described by the late Mr. Haworth in some of his papers, but we have not been so fortunate as to light upon the place.

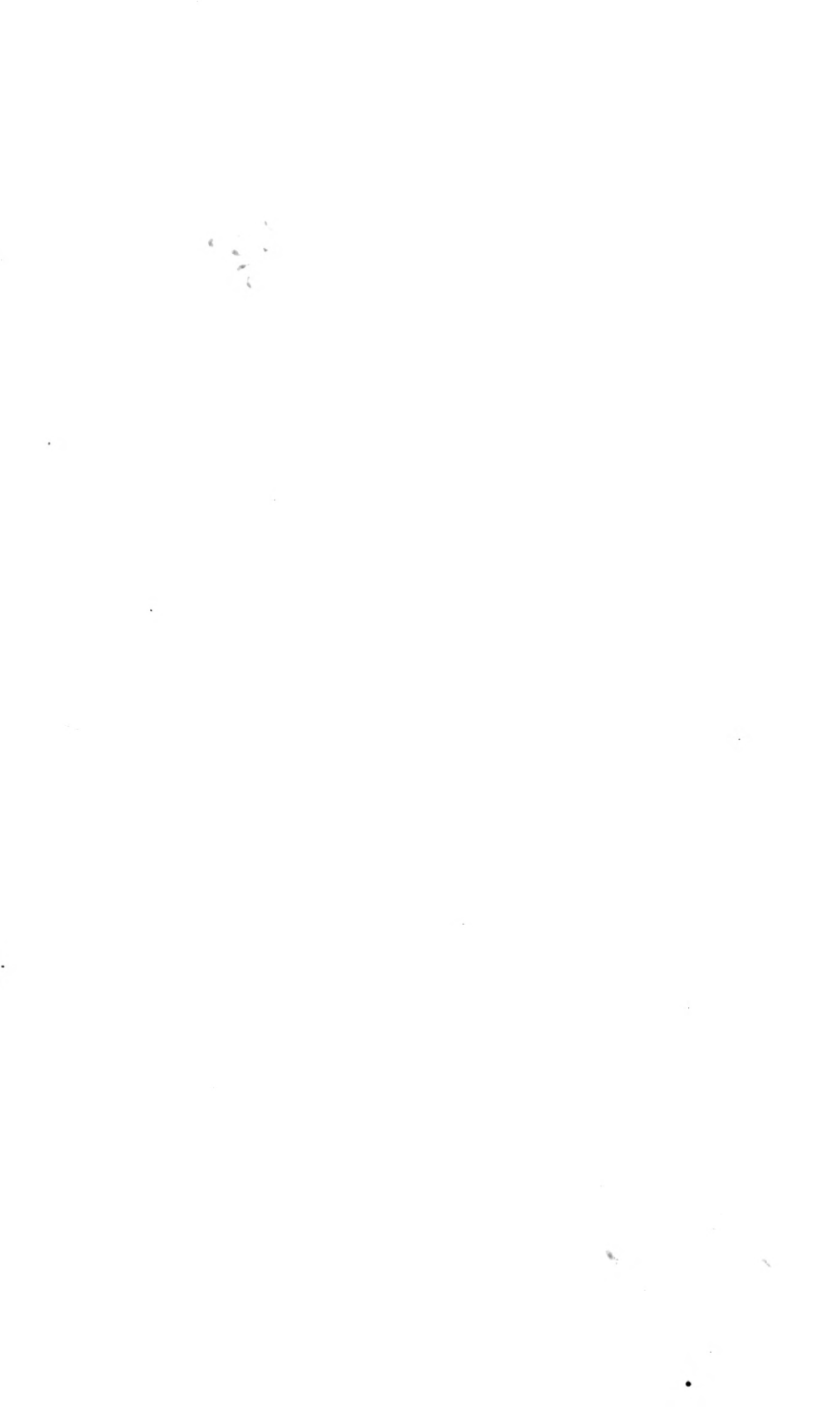
For our specimen we are indebted to the Hon. W. F. Strangways, in whose garden in Dorsetshire it blows in the greatest profusion upon an old wall.

Independently of its extraordinary beauty, this has the great merit of being able to resist as much cold as a *Pelar-*

* From μεσημβρία noontide, and ἀνθεω to flower; in allusion to the time of the day at which its blossoms usually expand.

gonium, and consequently of being capable of enduring a very mild winter in this climate. Even in our most severe seasons, it is only necessary to protect it with a few layers of matting from the wet, and no fear need be entertained of preserving it.

Our drawing was made in May last.





* SYRÍNGA Josikæa.

Lady Josika's Lilac.

DIANDRIA MONOGYNIA.

Nat. ord. OLEACEÆ. (*Introduction to the Natural System of Botany*, p. 224.)

SYRINGA. L. *Calyx* brevè 5-dentatus. *Corolla* subhypanthiiformis limbi partitionibus 4, concavis. *Stigma* bifidum. *Capsula* ovato-compressa, acuminata, bilocularis, loculicido-bivalvis, dissepimento medio longitudinaliter secedente, utrinque in valvula persistente (folliculorum coadunatorum fabrica repetita); *semina* oblonga, deplana, circumalata. *Reichenb. Fl. excurs.* p. 432.

S. Josikæa; foliis ovalibus acuminatis subtus pallidis, floribus subinodoris.

S. Josikæa; *Jacq. in Botan. Zeitung.* 1831. t. 67. 399. *Reichenb. pl. crit.* viii. 32. No. 1049. t. 780. *Fl. Germ. excurs.* p. 432. *Bot. Mag.* t. 3278.

The addition to our gardens of a new species of Lilac, is an event of no little importance to all lovers of fine flowers and sweet odours. We are therefore happy to lay before our readers a figure of a plant which will probably be the most beautiful of the genus, on account of the deep colour of its blossoms. It is not indeed so fragrant as the Persian species, but this will be considered an advantage by those who find the delicious fragrance of the common Lilac too oppressive to be borne except in the open air.

S. Josikæa flowers in the month of May, and resembles the old species very much in its general appearance; but its leaves are a remarkably dark green, nearly white beneath, and its flowers a peculiar deep stone-blue; so that it has been compared to a dark-flowered lilac placed on the stem of a Tacamahac poplar.

* A poetical name. Syrinx was an Arcadian nymph, who was changed into a reed, from which the first flute was made. This genus is easily applied to the same purposes; and the Turks fabricate from its vigorous shoots their finest pipe sticks.

It was introduced to this country by the Messrs. Booths, of Flotbeck, near Hamburgh, to whom, as the first nursery and seedsmen in Germany, we recommend all those who wish to procure the productions of the countries east of the Rhine. Our drawing was made in the garden of the Horticultural Society.

S. Josikæa is a native of Transylvania, in the county of Klausenburg, near Sebes, in stony places, upon the territory of the Countess Rosalie Josika, born Czaky, after whom it has been named. It was first made known to Botanists by Baron von Jacquin, at the meeting of Naturalists at Hamburgh in 1830; and was afterwards particularly mentioned in the *Botanische Zeitung* for 1831, Vol. I. p. 399, where we find the following interesting note concerning our common *Syringa vulgaris* :

“Concerning *S. vulgaris*, which is marked in the *Flora Germanica* as if it were of foreign origin, and which is said in all books to be a native of Persia, although common in hedges and gardens, we may observe, whatever specimens may have been brought from Persia to Germany and the rest of Europe, that this species is undoubtedly wild in one part of the district comprehended in the German Flora. This is in Hungary, where it ornaments with its flowers, according to Dr. Heuffel, the inaccessible lime-stone rocks of the valley of Cserna, Mount Domaglett, and all the rocks along the Danube, at the military boundaries of Moldavia, Szaszka, Csiklova, and Krassova.”

We may add, that the Himalaya Lilac (*S. Emodi*) differs but little from this except in the flatness of its leaves and the shallowness of its veins.



— 2 — 4. —

Collected by J. H. S. in 1855. Readily Jan. 1, 1855.

J. H. S.

* COLLÍNSIA bicolor.

Two-coloured Collinsia.

DIDYNAMIA ANGIOSPERMIA.

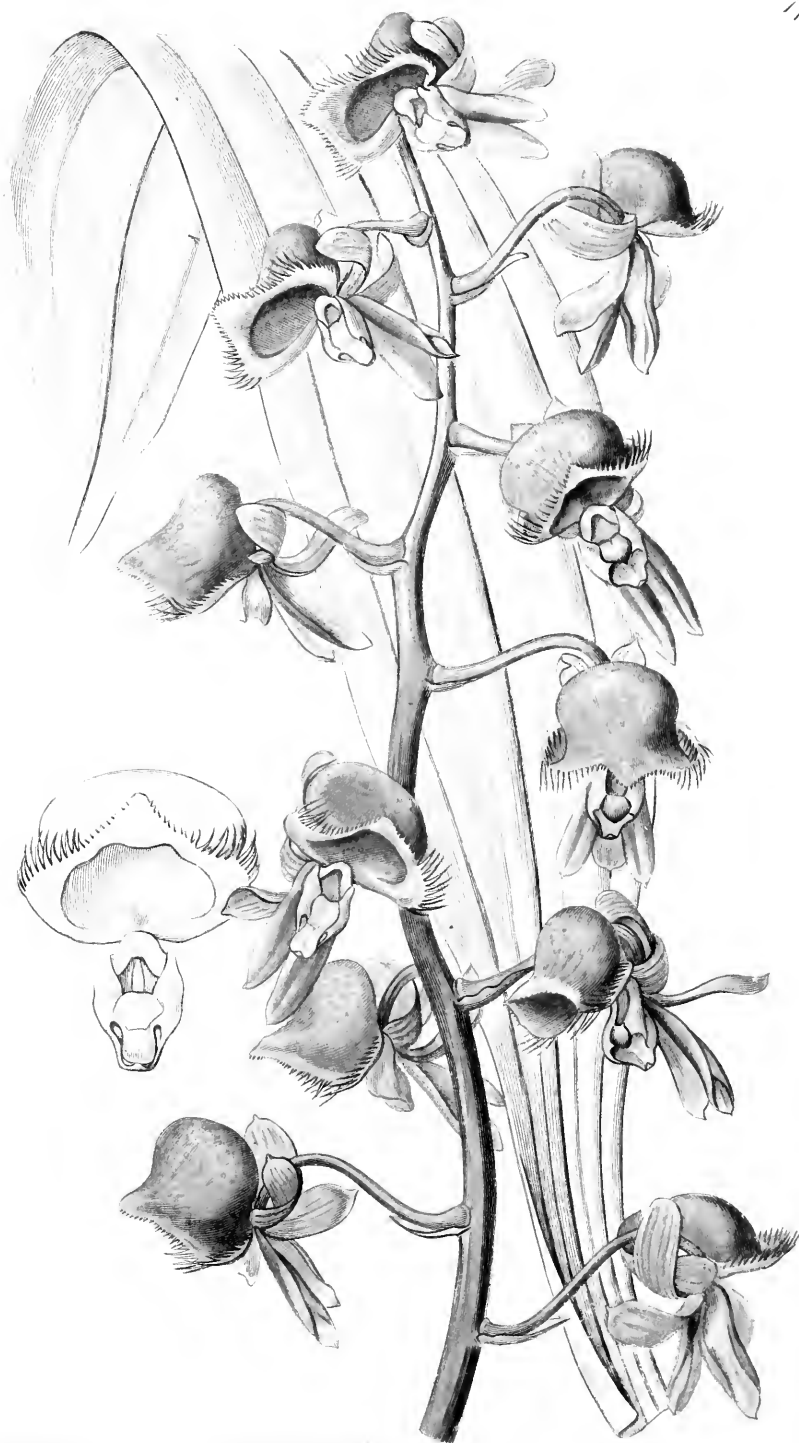
*Nat. ord. SCROPHULARINEÆ. (Introduction to the Natural System of Botany, p. 228.)**COLLINSIA. Supra, vol. 13, fol. 1082.**C. bicolor* ; foliis ovato-lanceolatis basi subcordatis, laciniis calycinis ovatis. *Bentham in Hort. Trans. n. s. vol. 1. p. 480.**Annua. Caulis erectus, ramosus, pedulis, v. paulò altior, levissimè pubescens. Folia glabra, ovata, subsessilia, serrata ; suprema minora integerrima. Flores verticillatim spicati, speciosi. Calyx glanduloso-pubescens ; tubo pallido ; laciniis viridibus, ovatis acutis. Corolla omninò ut in C. grandiflora sed duplo major, et colore diverso ; labium superius cum tubo album, inferius roseo-purpureum.*

A new and handsome hardy annual, introduced by the Horticultural Society from California in 1833. Nothing is known of the circumstances under which it is found wild, nor is it possible to tell, in the absence of native specimens, how far the cultivated plant equals the wild appearance ; but, as far as can be ascertained at present, it thrives perfectly in common black garden mould ; it has not been tried either in loam or peat.

It grows from a foot to a foot and half high, and produces its pretty two-coloured blossoms most copiously in May and June, when it has been sown the previous autumn ; if sown in May, it will flower in August and September.

A very few plants only have yet been raised ; so that it is still very rare, although they seeded in some abundance.

* See folio 1082.



* *MONACHANTHUS* discolor.*Dingy Monk-flower.*

GYNANDRIA MONANDRIA.

Nat. ord. ORCHIDÆ, § VANDEÆ, Lindl. (*Introduction to the Natural System of Botany*, p. 262.)

MONACHANTHUS. *Perianthium* explanatum. *Sepala* et *petala* deorsum versa. *Labellum* posticum, carnosum, indivisum, ventricosum, sepalis multo majus. *Columna* brevis, crassa, mutica. *Anthera* et *Pollinia* Cataseti. —Epiphyta *Cataseti* habitu. *Genera* et *Sp. Orch.* 157.

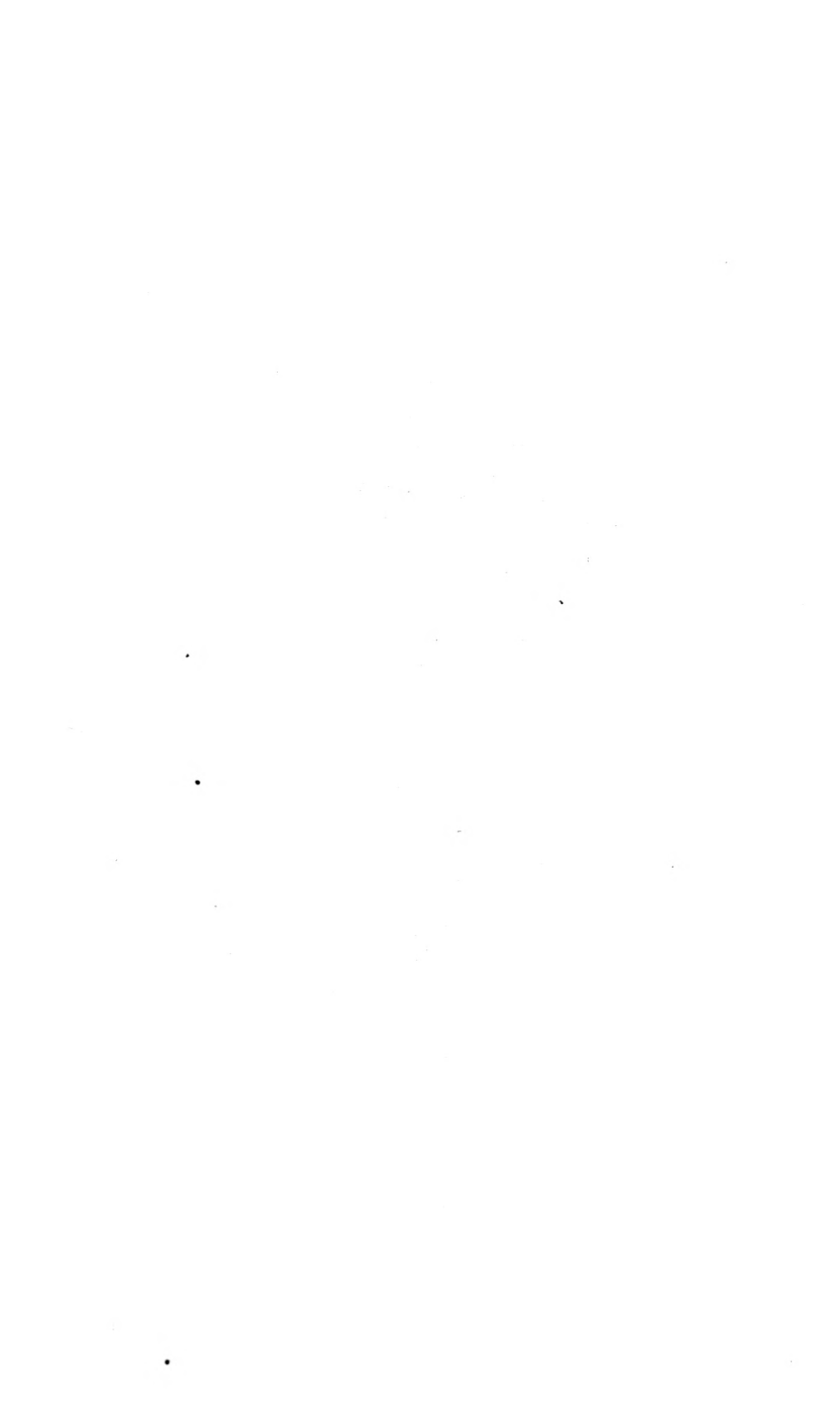
M. discolor; racemo laxo multifloro, labello hemispherico marginibus planis medio fimbriatis.

Epiphyta, pseudobulbis 3-poll. longis, oblongis, teretibus, leviter corrugatis, cicatricibus foliorum annulatis. Folia oblongo-lanceolata, plicata. Racemus cylindraceus, lusus, multiflorus, spithamum longus. Sepala linearia, obtusa, reflexa, viridi-fusca. Petala recta, conformia, fusco-purpurea. Labellum posticum, cucullatum, acutum, carnosum, viridi-purpureum, intus viridi-luteum, margine reflexo medio fimbriato. Columna brevis, viridi-lutea, mutica, stigmatibus excavati margine inferiore convexo prominente, lateralibus deorsum productis.

A very rare plant in Demerara, whence Mr. Bateman received a single bulb by his collector, Mr. Colley. We are enabled to figure it by means of a specimen from the collection at Knypersley, which we received in November last.

Although not handsome, this is an interesting plant, as confirming the genus *Monachanthus*, which before consisted of but a single species found in the Brazils, of which we shall give a figure in some future number of this work. It differs from *M. viridis* in the number of the flowers, in their colour, and especially in the form of the lip, which looks more like an old rusty iron scull-cap, than any thing else we can compare it to.

* *Monks flower*, which is the meaning of this generic name, will not be considered unapplicable, when you compare the labellum of the original species to a cowl.



1736.



Senecio J. Paraguay 150 Penadilly Feb. 1. 1895.

J. Walp. ex.

* LITHOSPÉRMUM rosmarinifolium.

Rosemary-leaved Gromwell.

PENTANDRIA MONOGYNIA.

Nat. ord. BORAGINÆ Juss. (Introduction to the Natural System of Botany, p. 241.)

LITHOSPERMUM L. Calyx 5-partitus. Corolla infundibularis, pervia, fauce 5-gibboso-impressâ, plicatâ aut lævi. Nuculæ osseæ basi truncatæ. Reichenb. fl. excurs. 1. 336.

§ 3. *Margarospermum*. Faux lævis, nuculæ lævissimæ. *Rchb.*

L. rosmarinifolium ; fruticosum, foliis linearibus demum revolutis subtus albis utrinque subtiliter pilosis, corollis subhypocrateriformibus pilosis, antheris styloque inclusis.

L. rosmarinifolium Tenore fl. Neap. prodr. suppl. II. p. 65. Synopsis p. 33. non Rchb.

L. graminifolium, Römer et Schultes syst. veg. vol. 4. p. 47? non Viv.

Caulis suffruticosus, diffusus, palmaris ad bipedalem, pilis appressis subtilibus pubescens. Folia linearia v. lineari-lanceolata, margine revoluta, supra subpilosa, infra pilis pallidis siccatione albis dense vestita. Gyriflorum axillares, pedunculati, pauciflori, foliis multò breviores. Calyx 5-partitus, corollâ triplò brevior ; laciniis subulatis appresso-pilosis. Corolla inter hypocrateriformem et infundibularem, tubo pallide purpurascente apice piloso basi glabro ; limbo intensè cæruleo plano, extus densè piloso. Antheræ et stylus inclusa.

A native of the south of Italy ; it was found by Tenore growing on the limestone rocks of the island of Capri.

Our drawing was made from a fine plant flourishing in the rich collection of Mrs. Marryat, to whom the seeds had been brought by Mrs. Pallisser. It is a beautiful and highly interesting species, and one of the best adapted for rockwork in a mild climate. It appears to require no particular care in

* Literally *Stoneseed* ; a most appropriate name, the little nuts, or seeds as they used to be called, being extremely hard, and having as smooth a surface as a polished pebble.

the management, except to be protected from wet in winter. When we saw it in flower in September last, it was not above a foot high, but we understand it has since increased very much in size as well as in beauty. The blue of the flowers is of the most intense and brilliant tint. We presume it may be propagated by cuttings.

We cannot in this place undertake to unravel all the synonyms of this plant, about which there is very great confusion in systematic writers. All we can answer for are the following points.

1. It is the *L. rosmarinifolium* of Tenore, as we have ascertained by the examination of authentic specimens. It is probably, therefore, the *L. graminifolium* of Römer and Schultes.

2. It is not *L. graminifolium* of Viviani, as we have also ascertained by consulting authentic specimens from Viviani himself; that species has the truly funnel-shaped, or obconical corolla of a *Pulmonaria*, without a trace of hairs on its outside; its anthers are as long as the limb of the corolla; and the style is much longer than either.

3. Neither is it the *L. rosmarinifolium* of Reichenbach, who seems to have described some variety of *L. graminifolium*, as he himself suspects.

4. *L. fruticosum*, to which it is also referred in Römer and Schultes, has its leaves covered with sharp, callous, spreading bristles, and the corolla smooth on the outside, besides having a totally different habit.

We may add that this last, and *L. oleæfolium* of the Pyrenees would be great acquisitions to our Gardens.



Scilla maritima L. 1735.

P. Walp. 10.

* CHELÓNE centránthifolia.

Valerian-leaved Chelone.

DIDYNAMIA GYMnosPERMIA.

Nat. ord. SCROPHULARINÆ Juss. (*Introduction to the Natural System of Botany*, p. 228.)

CHELONE.—*Supra*, vol. 2. fol. 175.

C. centranthifolia; glaberrima, glauca, foliis ovato-lanceolatis integerrimis basi cordato-amplexicaulibus, paniculâ elongatâ, corollis tubulosis pendulis glabris fauce nudis, filamento quinto imberbi. *Bentham in Hort. Trans.* vol. 1, n. s. p.

Perennis. Caulis 3-7-pedalis, teres, glaucus, rubro maculatus. Folia glauca ovato-lanceolata, cordata, obtusa, glabra, et lævia. Panicula sapius longissima, gracilis, flexuosa, ramis omnibus brevibus parum divisis. Pedunculi filiformes. Calyx 5-partitus: laciniis ovatis, acutis, aut cuspidatis imbricatis. Corolla tubulosa, nullo modo inflata, gracilis, unciam longa, infundibularis, coccinea; limbo subæqualiter 5-partito, bilabiato. Antheræ oblongæ per paria quadratim approximatae, glabræ, albidae. Filamentum quintum subulatum, apice dilatatum, antherarum longitudine, glabrum.

A new hardy herbaceous plant, related to *Chelone barbata*, from which it chiefly differs in its very long graceful panicle, more slender flowers destitute of a beard at their mouth, and differently shaped leaves. It is a species of considerable beauty, growing well in any soil or situation, if exposed to the sun; but best adapted to planting among American plants, from the midst of whose bushy masses its long panicles may rise like slender scarlet plumes.

A native of California, whence it was sent by Mr. David Douglas, without any intimation of the situation it naturally occupies. Flowers from July to November; produces seeds in tolerable plenty.

* See folio 1211.

* *CAMPANULA fragilis*, β . *hirsuta*.*Hairy-leaved brittle Bell-flower.*

PENTANDRIA MONOGYNIA.

*Nat. ord. CAMPANULACEÆ Juss. (Introduction to the Natural System of Botany, p. 185.)**CAMPANULA*.—*Supra*, vol. 1, fol. 56.

C. fragilis; caulibus ascendentibus diffusis ramosis, foliis radicalibus longè petiolatis cordatis rotundatis obtusè crenato-lobatis, caulinis minoribus ovatis et lanceolatis, floribus paniculatis, lobis calycinis lineari-lanceolatis erectis corollæ subæqualibus, stylo exserto, capsulâ ovoideâ. *Alp. De Cand. Monogr. des Camp.* 306.

C. fragilis. *Cyrril. plant. fasc.* 1. p. 32. t. 11. f. 2.

C. diffusa. *Vahl. Symb.* p. 11.

C. cochlearifolia. *Vahl. Symb.* p. 18.

C. crassifolia. *Nees v. Esenb. Syll. Ratisb.* 1. 6. *amæn. bot. fasc.* 2. p. 9. t. 4.

A native of the southern parts of Italy, in many places of which it is by no means uncommon, as in the neighbourhood of Naples, the island of Capri, about Cava, on Mount Pollino, and probably elsewhere in Calabria, according to Alphonse de Candolle, who remarks that it is hardly met with further north than 41° of latitude, that it occupies the evergreen region of Italy, and that it even struggles through the lower woodland region as far almost as the upper limits of the beech, that is to say to 3000 feet of elevation above the sea. It grows in exceedingly dense tufts, hanging down from the face of limestone rocks; and flowering in the summer months.

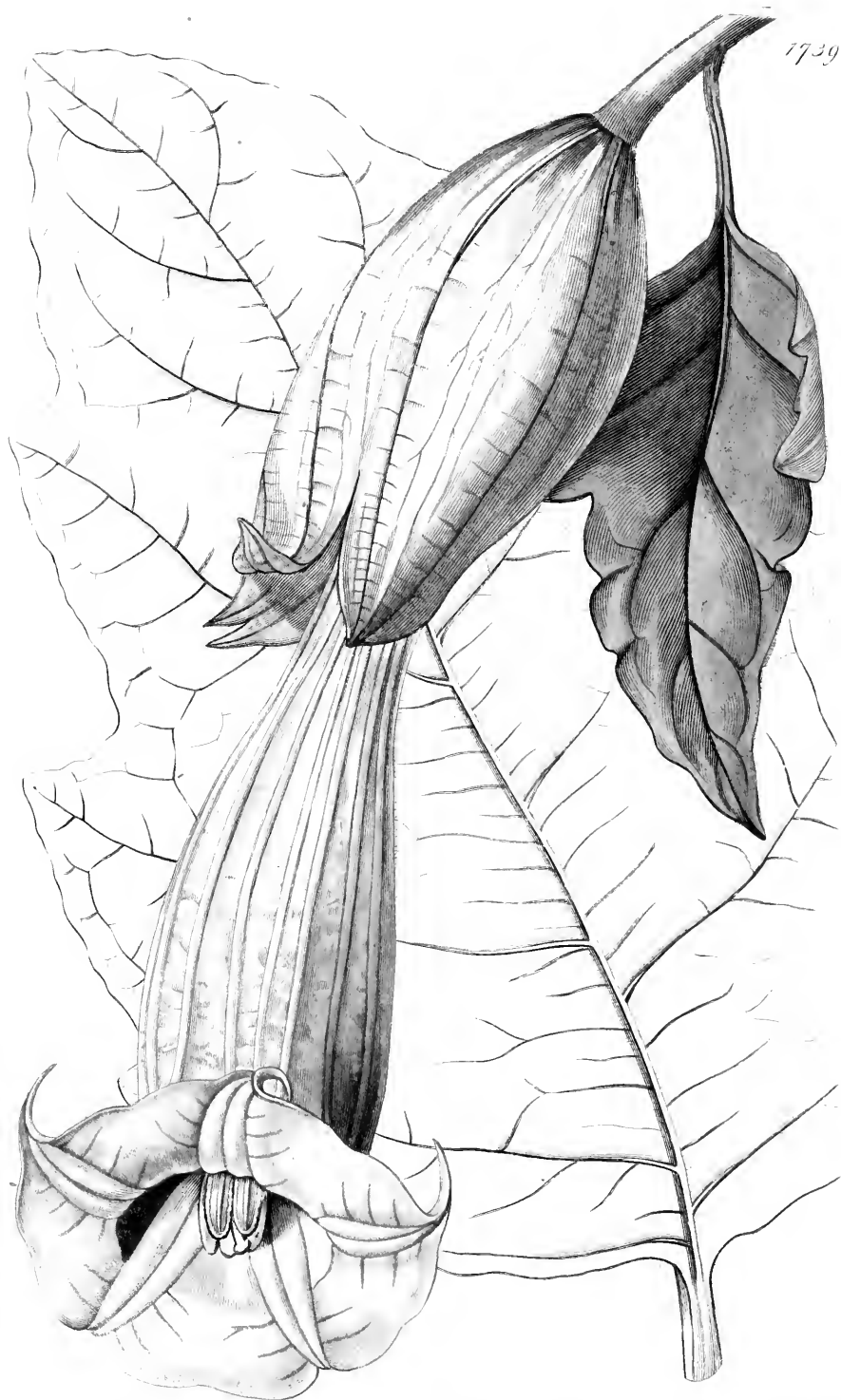
In its native stations it is one of the most lovely objects imaginable. Often have we heard travellers from Italy expatiating upon the beauty of the spots which are enamelled

* The English name *Bell-flower*, and the Latin *Campanula*, equally refer to the form of the corolla.

with the bright blue patches of this interesting stranger, but it was never our good fortune to see it alive, till we met with it in the garden of Mrs. Marryat, at Wimbledon, where our drawing was made last September.

It had been given to Mrs. Pallisser by Professor Tenore as his *Campanula Carolini*; but probably in mistake; for it agrees entirely, not only with the account given of *C. fragilis* by that Botanist, in the latest of his published works, but also with dried specimens from himself under the same name. *C. Carolini* has much smaller and paler flowers, and the segments of the calyx both narrower and longer.

A perennial plant, for which it will be difficult to find in this country the same combination of the mild dry air, the limestone rocks, and the sunny skies of Naples. We presume it will be necessary to treat it as a greenhouse or delicate frame plant in winter; and no doubt the greatest precaution will be required to prevent its damping off.



* *BRUGMANSIA* *bicolor*.*Two-coloured Brugmansia.*

PENTANDRIA MONOGYNIA.

*Nat. ord. SOLANÆ Juss. (Introduction to the Natural System of Botany, p. 231.)**BRUGMANSIA Pers. Omnia Daturæ nisi calyx persistens nec basi circumscissilis deciduus.**B. bicolor* ; foliis ovatis sinuato-lobatis, corollâ versicolore.*B. bicolor. Pers. Synops. 1. 216. Römer et Schultes, Syst. veg. 4. 307.**B. sanguinea. Don in Sweet's Brit. Fl. Gard. t. 272.**Datura sanguinea. Ruiz et Pavon. Fl. Peruv. 2. p. 15. Humb. et Kunth. nov. gen. et sp. pl. Amer. vol. 3. 6.*

A shrubby plant, requiring exactly the same treatment as the *Brugmansia arborea*, growing vigorously in the open air in this climate during summer, but requiring protection in winter.

It is on many accounts one of the most interesting plants that have been yet brought from South America, for which the public is indebted to Charles Crawley, Esq., who brought it with him from Guayaquil in 1833. It was originally raised in the garden of Miss Traill, and also by Lady Gibbs, of Hayes Common near Bromley, by whom we were favoured with the specimen now represented, and the sight of a beautiful drawing of the flowers in the two conditions of colour. In the *Flora Peruviana*, and the systematic work of Baron Humboldt it is fully described ; from their statements and the materials we have received from Lady Gibbs, we are enabled to draw up the following statement.

* So named in compliment to Brügmans, a Professor of Natural History and Botany at Leyden, who occupied himself with vegetable chemistry, and who is said to have been the first to notice the secretions of plants by their roots.

This remarkable plant is a native of elevated and cold situations in the provinces of Tarma, Xauxa, Huarochesi, Canta, and Humalies, where it grows among rubbish; it is also found near the village of La Cruz, and on the banks of the river Mayo, between Almaguer and Pasto in New Grenada, where it was found by Humboldt and Bonpland, at nearly 7000 feet above the sea. It begins to flower in June and ceases in November. By the Peruvians it is called *Floripondio encarnado* and *Campanillas encarnadas*; by the Columbians *Bovochevo*. Its stature varies from 10 to 20 feet, the stem being generally undivided and terminated by a roundish leafy head. The flowers are either a bright yellowish orange colour, or the deep orange red of our figure; we believe they change from the former to the latter. They are succeeded by an oblong, smooth, yellow, pendulous capsule, which is as much as eight inches long. The seeds, like those of the common *Stramonium*, are narcotic in a high degree. In the Temple of the Sun, in the city of Sogamoza, there is a famous oracle, the priests of which inspire themselves by chewing the intoxicating seeds of this plant, just as the Pythoness at Delphi received the influence of her god by chewing laurel leaves and inhaling a gaseous vapour. From the fruit itself the Columbians prepare a drink called *Tonga*, which when weak is merely soporific, but drank in stronger doses produces frenzy, which can only be removed by administering immediate draughts of cold water.

From deference to the authority of Mr. Don, we adopt the genus *Brugmansia*; but we confess our inability to discover any ground for separating it from *Datura*, except that its calyx does not separate from its base, and drop off as in the commoner species of the latter genus.

With regard to the specific name, however, we feel bound to preserve that first given to the plant in Persoon's synopsis. It would have been better, perhaps, had that Botanist retained the specific name of the Flora Peruviana, although *in transferring the plant to a new genus* he was by no means required to do so; but as he did not, we cannot perceive either the necessity or the expediency of creating a new name now;

while on the other hand the inconvenience of doing so must be manifest to every one.

We were favoured by Miss Traill with the following memorandum, concerning the management of the plant.

“Some of the plants were placed in the open ground near the greenhouse; but they died down in the cold weather. They have since sprung up and attained the height of about three feet, and have borne leaves and flowers rather imperfectly developed. The stove plants kept their leaves all the winter, and are now between five and six feet high. The plant will not flower in pots, as it has large and spreading roots, and requires a constant supply of moisture.”





* GRÓBYA Amhéristiæ.

Lady Amherst's Grobya.

GYNANDRIA MONANDRIA.

Nat. ord. ORCHIDÆÆ, § VANDEÆ, Lindl. (Introduction to the Natural System of Botany, p. 262.)

GROBYA. Perianthium explanatum, bilabiatum. *Sepala* lateralia basi connata, sigmoidea, labello supposita, supremo erecto breviora. *Petala* dilatata, sepalo multo majora, erecta, conniventia. *Labellum* liberum, lobatum, nudum, cum basi columnæ articulatum, ascendens, sepalis minus, (nanum). *Columna* erecta, semiteres, arcuata, basi incrassata; *anthera* proclivi; *stigmat* fornicato. *Pollinia* 2, posticè lobata, caudiculis duabus brevibus glandulæ ovali adnatis. Herba *Braziliensis, pseudobulbosa, foliis gramineis, racemo pendulo radicali.*

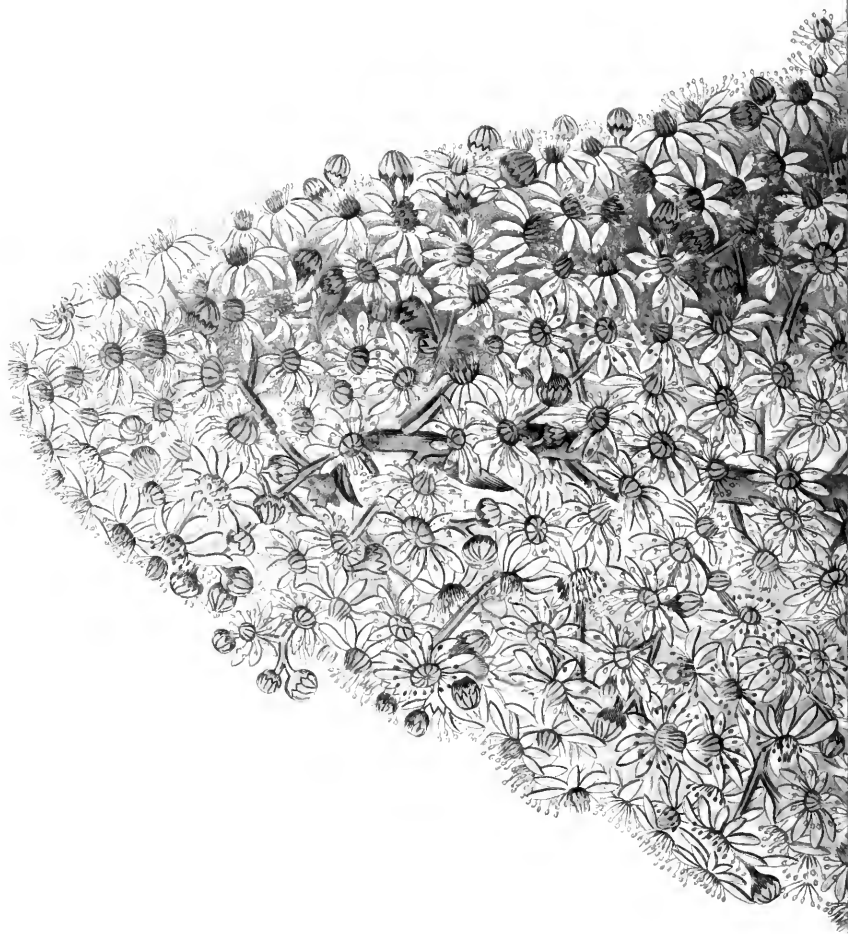
G. Amherstiæ.

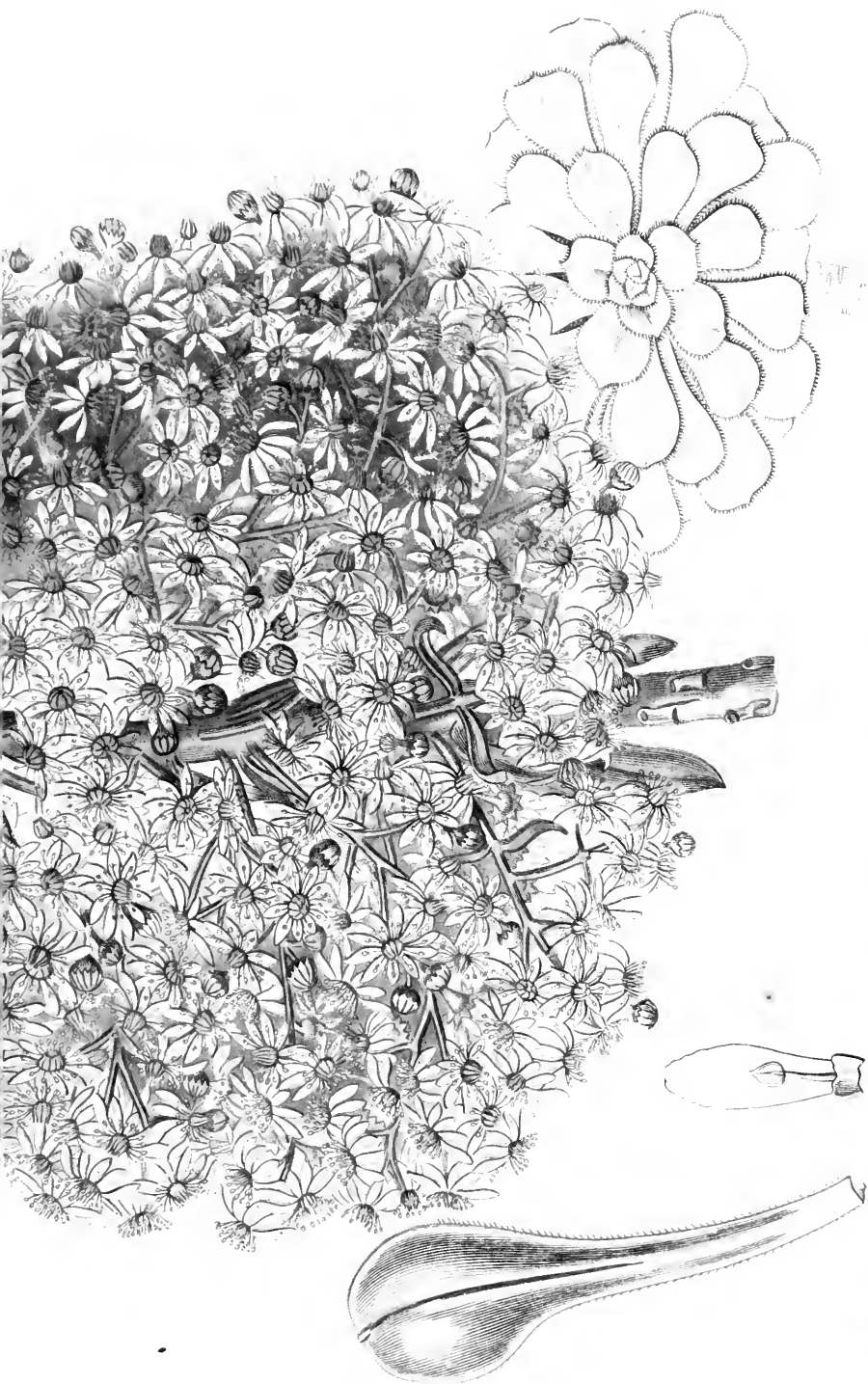
Pseudobulbi ovati, virides teretes, cicatricibus 1-2 foliorum annulati. Folia 3-4 e vagina squamata, linearia, striata, acuta, debilia. Racemus pendulus, densus, 3 pollices longus, pseudobulbis duplò longior. Sepala pallide ochracea, unicolora. Petala maculis fusco-purpureis seriatis notata. Labellum cuneatum, apice 5-lobum, lobo quinto cæteris exteriore, disco nudum, atropurpureum. Columna pallida, facie purpureo fasciata.—
1. Labellum. 2. Columna. 3. Pollinia cum glandulâ suâ.

For this curious species we are obliged to the Countess Amherst, in whose collection at Montreal it flowered for the first time in September last. It had been sent home by Mr. Hayne, a Commissioner in Brazil, from the interior of that country in 1829. To the pencil of Lady Sarah Amherst we are indebted for a sketch of the manner in which the plant grows.

* The genus is named in compliment to the Right Honourable Lord Grey of Groby, a munificent patron of Horticulture, and a most zealous cultivator of Orchideous Epiphytes; the species records the sense we entertain of the claims of the noble family of Amherst upon the gratitude of Botanists, for the countenance afforded by them to natural history so long as their power continued in the Eastern world.

Grobya is most nearly allied to *Cymbidium*, from which it is distinguished, firstly, by the lateral sepals being united at the base; secondly, by the large size of the petals; thirdly, by the lip having no parallel elevated lines; and fourthly, by the pollen masses being united to the gland by two distinct caudiculæ.







* *SEMPERVIVUM* *urbicum*.*City Houseleek.*

DODECANDRIA HEXAGYNIA.

*Nat. Ord. CRASSULACEÆ De Cand. (Introduction to the Natural System of Botany, p. 161.)**SEMPERVIVUM.*—*Supra, vol. 18, fol. 1553.*

§ 1. *Chronobium*. Propagines nullæ. Flores sæpius flavi, rarius albi.
—Species omnes Canarienses aut Maderienses *D. C.*

S. urbicum; caule fruticoso erecto apice folioso veteribus foliorum cicatricibus quadratis tessellato, foliis spathulatis glabris nitidis cartilagineo-ciliatis, basi tetragono-attenuatis apice rubro-marginatis. *De Cand. Prodr. 3. 411.*

S. urbicum. *Horn. suppl. p. 60. ex. D. C. Haworth in Phil. Mag. 1827, p. 125.*

Folia *atroviridia, spathulata, obtusa; ciliis marginis rigidis cartilagineis.* Panicula *spithamæa, densissima, pyramidalis.* Flores *glabri, aurei.* Squamæ *hypogynæ latæ, truncatæ, glabræ, levissimè emarginatæ.*

A greenhouse plant, found commonly on rocks and the roofs of houses in Teneriffe, in inland parts of the Island, where the air is damper than in the valleys.

It was first met with by the late Dr. Christian Smith, who perished in the disastrous expedition under Captain Tuckey to the Congo. Latterly it has been found by Messrs. Webb and Berthelot, in their examination of the Flora of the Canaries. We obtained our specimen from Mr. Young, the skilful manager of the garden of the former of these Gentlemen, at Milford near Godalming. It flowers in the months of December, January, and February; and is one of the handsomest of the shrubby species of this interesting genus. As Messrs Young and Penny of Milford have plants of this and other curious things from the Canary Islands for sale, the public will have no difficulty in procuring it from them.

* See folio 1553.

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<i>Linaria Dahurica</i>	1683	<i>Oxalis divergens</i>	1620
<i>Linum mexicanum</i>	1326	<i>Oxalis tortuosa</i>	1249
<i>Linum sibiricum</i> , var. <i>Lewisii</i>	1163	<i>Oxalis variabilis</i>	1505
<i>Liparis elata</i>	1175	<i>Pachypodium tuberosum</i>	1321
<i>Liparis guineensis</i>	1671	<i>Palavia rhombifolia</i>	1375
<i>Lisanthus spida</i>	1275	<i>Paeonia albiflora</i> , var. <i>Pottsii</i>	1436
<i>Lithospermum rosmarinifolium</i>	1736	<i>Paeonia hybrida</i>	1208
<i>Loasa amboresifolia</i>	1390	<i>Paeonia Montan</i>	1678
<i>Loasa Placei</i>	1599	<i>Paeony</i> , Semidouble tree	1456
<i>Lobelia longiflora</i>	1200	<i>Pancratium pedale</i>	1641
<i>Lobelia purpurea</i>	1325	<i>Papaver Persicum</i>	1570
<i>Lobelia</i> , Low's purple	1445	<i>Passiflora ligularis</i>	1339
<i>Lobelia Tupa</i>	1612	<i>Passiflora gossypifolia</i>	1634
<i>Lonicera involucrata</i>	1179	<i>Passiflora kermesina</i>	1633
<i>Lophanthus anisatus</i>	1282	<i>Passiflora phœnicea</i>	1603
<i>Lophospermum erubescens</i>	1381	<i>Pentstemon acuminatum</i>	1285
<i>Lotus arenarius</i>	1488	<i>Pentstemon attenuatum</i>	1295
<i>Lowea berberifolia</i>	1261	<i>Pentstemon confertum</i>	1260
<i>Lupinus arbustus</i>	1230	<i>Pentstemon densum</i>	1318
<i>Lupinus albidifrons</i>	1642	<i>Pentstemon diffusum</i>	1132
<i>Lupinus aridus</i>	1242	<i>Pentstemon glandulosum</i>	1262
<i>Lupinus densiflorus</i>	1689	<i>Pentstemon glaucum</i>	1286
<i>Lupinus elegans</i>	1501	<i>Pentstemon pruinoseum</i>	1280
<i>Lupinus laxiflorus</i>	1140	<i>Pentstemon pulchellum</i>	1138
<i>Lupinus lepidus</i>	1149	<i>Pentstemon Scouleri</i>	1277
<i>Lupinus leptophyllus</i>	1670	<i>Pentstemon speciosum</i>	1270
<i>Lupinus litoralis</i>	1198	<i>Pentstemon triphyllum</i>	1245
<i>Lupinus micranthus</i>	1251	<i>Pentstemon venustum</i>	1309
<i>Lupinus mutabilis</i>	1539	<i>Pereskia Bleo</i>	1473
<i>Lupinus nanus</i>	1705	<i>Perilomia ocyonoides</i>	1394
<i>Lupinus ornatus</i>	1216	<i>Pernettia micronata</i>	1675
<i>Lupinus plumosus</i>	1217	<i>Persea gratissima</i>	1258
<i>Lupinus polyphyllus</i> , var. <i>albiflorus</i>	1377	<i>Petunia violacea</i>	1626
<i>Lupinus rivularis</i>	1595	<i>Phacelia tanacetifolia</i>	1696
<i>Lupinus Sabianus</i>	1435	<i>Pharum fistulosum</i>	1546
<i>Madia elegans</i>	1458	<i>Platystemon Californicum</i>	1679
<i>Magnolia Yulan</i> , var. <i>Soulangiana</i>	1164	<i>Phlox floccosa</i>	1300
<i>Malva Munroana</i>	1306	<i>Phlox speciosa</i>	1351
<i>Malva purpurata</i>	1362	<i>Pholidota imbricata</i>	1213
<i>Malva umbellata</i>	1608	<i>Phycella Herbertiana</i>	1311
<i>Mammillaria pulcra</i>	1329	<i>Pimblea humilis</i>	1268
<i>Mammillaria tenuis</i>	1523	<i>Pimblea hispida</i>	1578
<i>Maxillaria ciliaris</i>	1206	<i>Pimblea intermedia</i>	1439
<i>Maxillaria decolor</i>	1549	<i>Pimblea sylvestris</i>	1582
<i>Maxillaria racemosa</i>	1566	<i>Pleurothallis prolifera</i>	1298
<i>Maxillaria tetragona</i>	1128	<i>Plumeria Lambertiana</i>	1378
<i>Maxillaria viridis</i>	1510	<i>Podolobium trilobatum</i>	1333
<i>Maytenus chilensis</i>	1702	<i>Polemonium caeruleum</i> , var. <i>piliferum</i>	1303
<i>Mesembryanthemum rubrocinctum</i>	1732	<i>Polemonium humile</i>	1304
<i>Michauxia levigata</i>	1451	<i>Polygala oppositifolia</i> , var. <i>major</i>	1146
<i>Microstylis ophioglossoides</i>	1290	<i>Polygonum injuncundum</i>	1250
<i>Milla biflora</i>	1555	<i>Portulaca Gilliesii</i>	1672
<i>Mimulus propinquus</i>	1330	<i>Potentilla arguta</i>	1379
<i>Mimulus ruscus</i>	1591	<i>Potentilla glandulosa</i>	1583
<i>Mimulus Smithii</i>	1674	<i>Potentilla Hopwoodiana</i>	1387

	<i>Folium</i>		<i>Folium</i>
Potentilla laciniosa	1478	Senecio lilacinus	1342
Potentilla missouriica	1412	Senecio Tussilaginis	1550
Potentilla Russell's	1196	Serapias cordigera, var. <i>longipetala</i>	1189
Potentilla viscosa	1392	Silene laciniata	1444
Pothos scandens	1337	Sinningia villosa	1131
Pratia begoniifolia	1373	Sisyrinchium grandiflorum	1364
Prunus candicans	1135	Sisyrinchium odoratissimum	1283
Prunus dasycarpa	1243	Solandra guttata	1551
Pultenaea flexilis	1691	Solanum crispum	1516
Pultenaea rosmarinifolia	1581	Solanum elaeagnifolium	1712
Pultenaea subumbellata	1632	Sollya heterophylla	1466
Purshia tridentata	1446	Sophora velutina	1185
Pyrolis aureum	1724	Sonchella rubra	1498
Pyrus angustifolia	1207	Sparaxis pendula	1360
Pyrus crenata	1655	Spermedictyon azureum	1235
Pyrus Bollwylliana	1437	Sphacele campanulata	1382
Pyrus grandifolia	1154	Sphacostema propinquum	1688
Pyrus nivalis	1434	Sphenotoma capitatum	1515
Pyrus salicifolia	1482	Spiraea arifolia	1365
Pyrus sinensis	1248	Spiraea chamaedrifolia	1222
Pyrus spuria	1196	Stachys albicaulis	1558
Ranunculus creticus, var. <i>macrophyllus</i>	1432	Stachys germanica, var. <i>pubescens</i>	1289
Reevesia thyrsoides	1236	Stachys inflata	1697
Renanthus coccinea	1131	Stachys Salvia	1226
Rhaphiolepis rubra	1400	Stanhopea cburnea	1529
Rhodanthus Manglesii	1702	Stapelia Gussoneana	1731
Rhododendron Alta-clerense	1414	Statice puberula	1450
Rhododendron arboreum, var. <i>roseum</i>	1240	Stemodia chilensis	1470
Rhododendron arboreum, var. <i>album</i>	1684	Stenactis speciosa	1577
Rhododendron, Cartons	1449	Sterculia lanceolata	1256
Ribes cereum	1263	Sterculia Tragacantha	1353
Ribes divaricatum	1359	Stigmaphyllon aristatum	1659
Ribes inebrians	1471	Streptocarpus Rexii	1173
Ribes aivenum	1692	Stylidium fasciculatum	1459
Ribes punctatum	1658	Syringa Josikaea	1733
Ribes sanguineum	1349	Tabernaemontana densiflora	1273
Ribes setosum	1247	Tacsonia pinnatifida	1536
Ribes speciosum	1557	Talauma Candellii	1709
Ribes tenuiflorum	1574	Tellima grandiflora	1178
Rose Clare	1438	Tenorium orchideum	1255
Rosa multiflora, var. <i>platyphylla</i>	1372	Thermopsis fabacea	1272
Rosa Ruga	1389	Thryallis brachystachys	1162
Rubus nutkanus	1368	Tillandsia acaulis	1157
Rubus roriculus	1607	Tillandsia rosea	1357
Rubus spectabilis	1424	Tillandsia stricta	1338
Ruellia Sabiniana	1238	Trachymene cærulea	1225
Saccolabium papillosum	1552	Tradescantia undata	1403
Sagittaria angustifolia	1141	Trichopetalum gracile	1535
Salpiglossis atropurpurea	1518	Tritolium vesiculosum	1408
Salvia angustifolia	1554	Triteleia laxa	1685
Salvia foliosa	1429	Tropaeolum pentaphyllum	1547
Salvia fulgens	1356	Tulipa Oculi solis, var. <i>persica</i>	1443
Salvia Grahami	1370	Tulipa Oculi solis, var. <i>præcox</i>	1419
Salvia involucrata	1205	Tupistra nutans	1223
Sarcanthus guttatus	1443	Turraea pinnata	1413
Sauroglossum elatum	1618	Ulex genistoides	1452
Schizanthus pinnatus, var. <i>humilis</i>	1562	Vaccinium ovatum	1354
Schizanthus retusus	1544	Verbena Melindres	1184
Scilla plumbea	1355	Vernonia axilliflora	1461
Scottia angustifolia	1266	Viburnum cotinifolium	1650
Scottia dentata	1233	Villarsia reniformis	1533
Scottia levis	1652	Viola præmorsa	1254
Scutellaria alpina	1460	Westringia longifolia	1481
Scutellaria alpina, var. <i>lupulina</i>	1493	Xerophyllum setifolium	1613
Sedum Cepæa	1391	Yucca superba	1690
Selago Gillii	1504	Zephyranthes mesochloa	1361
Sempervivum villosum	1553	Zinnia violacea, var. <i>coccinea</i>	1291
Sempervivum urbicum	1741		

THE END.

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