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# BOTANIST; 

CONTAINING

ACCURATEIF COLOURED FIGURES

OF TENDER AND HARDY

## ORNAMENTAL PLANTS;

WITH

DESCRIPTIONS, SCIENTIFIC AND POPULAR; INTENDED TO CONVEY BOTH MORAL AND INTELLECTUAL GRATIFICATION.

CONDUCTED BY B. MAUND, F.L.S.<br>ASSISTED

BY THE REV. J. S. HENSLOW, M. A. F.L.S. \&c. \&c.
regits professor of botant in the ditiversity of cambridge,
"The World seems to hare discorered that nothing about which Infinite Wisdom has deigned to employ itself can, properly speaking; be unworthy of any of its creatures, how lofty soever their pursuits and pretensions may be."

Sir J. E. Simite.


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A portion of which is given with each Number of the Botanist, as published monthly,forms a separate Volume.
THE GUIDE,
A part of which is likewise annexed to each Number, also forms a separate Volume

[^0] this Volume of the Botanist, will be delivered with it to the purchaser,
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Jhis is Hounta, det.
Cluluncuina-Stummondii:

## OBELISCA'RIA DRUMMON'DII.

 DRUMIIOND'S OBELISCARIA.

No. 201.
GENUS. Obeliscaria. Cass. Capitulum multiflorum heterogamum, f. radii ligulatis 1 -serialibus neutris, disci hermaph. tubulosis $\mathfrak{b}$-dentatis. $I_{\mathrm{N}}$ roldjcr. 1-seriale, squamis paucis linearibus patulis. Recert. elongatum spiciforme, paleis complicatis apice hirsutis achænia disci semiamplectentibus. Styli rami breves in appendicem parce barbellatam producti. Achenia radii trigona hispida abortiva, disci bilateraliter compressa ovalia calra antice margine subalata aut apice unidentata. Herb压 Bor. Americanæ erectæ speciosæ glabriusculæ. Caulis striato-sulcatus. Folia alterna aut irregulariter subverticillata, pinnatisecta, petiolo striato, lobis 8.9 (3-9) nunc indivisis, nunc pinnatipartitis. Rami apice longe aphylli 1-cephali. Ligulex flaræ aut croceæ. Discus cylindricus, floribus parvis fuscis innumeris.

SPECIES. Obeliscarta Drumiondit (Graham) scabro-pubescens; foliis lyrato-pinnatifidis, segmentis subintegris ; flosculis radii 5 , rotundatis, pendulis.

Character of the Genus, Obeliscaria. Capitulum manyflowered, heterogamous, flowers of the ray in one row ligulate neuter, of the disk hermaphrodite tubular five-toothed. Involucre onerowed, of few linear spreading leaflets. Receptacle elongated spike-like, the chaffs folded hirsute at the apex and half including the achenia. Branches of the style short, extended into a lanceolate appendage sparingly bearded. Achenta of the ray three-angled, hispid, abortive ; those of the disk compressed on the sides, oval without pappus, somewhat winged on the anterior edge, or with one tooth on the apex.

Description of the Species, Obeliscaria Drunmondif. Stemis many, sub-simple, rising from the crown of the root, very long, wiry flaccid, angled and furrowed, green, rough with short harsh adpressed hairs. Leaves deeply lyrato-pinnatifid, 3- 7 -lobed, scabrous from short harsh subadpressed hairs which point forwards; lobes linearoblong, blunt, 3 -nerved, the middle nerve forming a strong rib prominent behind, the two others being less prominent, more slender, waved, and distantly reticulated; middle lobe occasionally slightly incised. Peduncles (above $1 \frac{1}{2}$ foot) long, terminal, angled, and scabrous like the stem, single-fiowered. Involucre of five unequal subulato-linear
49.
spreading leaflets. Florets of the ray five, neuter, with a very large suborbicular limb ( $1 \frac{1}{2}$ inch across) waved, somewhat plicate, pendulous, more than the lower half being stained on its anterior surface of a deep brown, the remainder, both in front and behind, being a bright yellow, except where the colour is stained behind by the brown in some degree appearing through it from the front; tube very short. Disk ovate; florets green, tube shining, barrel-shaped, limb short and revolute, segments ovate, much darker than the tube, warted; stamens rising near the base of the tube; anthers dark brown, halfexserted; pollen yellow, granules orbicular; style below the cleft scarcely longer than the stamens, the segments linear, furrowed along the centre in the inside; the stigmatic surface brown, warted, and near the apex bearded ; achenia compressed, glabrous, colourless, bordered along the outer edge; pappus of tro short unequal teeth. RecepTACLE chaffy; chaffs clavato-naviculate, embracing the achenia than which they are scarcely longer, cucullate herbaceous' and villous at the top, flat membranous and wedge-shaped on the sides, each of which has a large oblong black mark in the middle.

Popular and Geographical Notice. This genus is one of those which has been removed from the heterogeneous assemblage of plants, which were formerly included under the name of Rudbeckia, and the character by which it may be distinguished seems perfectly good. The involucre seems to me to be certainly of one row, and the suspicion expressed by De Candolle that what has been called the scales of an inner rofr, are probable the outer chaffs of the receptacle, is obviously correct. De Candolle reckons only four species, and expresses doubts about one of these. The present plant is altogether different from any of them, but perfectly agrees in generic relationship. They are all natives of North America, but the exact locality of this one I do not know.

Introduction; Where grown; Culture. The plant figured was received from Mr. Rollison, and howered in the greenhouse of the Royal Botanic Garden, Edinburgh, in August, 1840. There is every reason to believe it will bear cultivation without any particular care in the open ground. The flowers remain in perfection for weeks, and there is an abundant succession on the plants.

## Derivation of the Nailes.

Obeliscaria probably obe $\lambda$ ofoog and kapa in allusion to the elevation of the disk of the flower. Druninondir from the late Mr. Drummond, to whom we owe its introduction into Britain.

Rudbeckia drumiondit. Paxton's Magazine of Botary, 1839,51. Grah.



## WITSE'NIA CORYMBO'SA.

## CORYMBOSE WITSENIA.



GENUS. Witsenia. Thunberg. Corolla regularis, tubulosa, limbo sixpartito, vel tota hexapetalo-partita. Stamina erecta, laciniarum basi adnata. Stigmata tria. Capsula 3-locularis, polysperma. Semina augulato-pressa. Suffrutices. Radix rhizoma ligneum, fibratum, abiens in caulem sursum foliis obtectum, ancipitem, adpresse ramosum; inferius articulatim cicatrizatum, articulis eundo. brevioribus denuoque ad folia confertissimis; hæc perennia, sursum tendentia, flabellatim disticlia, basin versus imbricato-equitantia, lineariensiformia, conduplicanter fissilia, superiora longiora.

SPECIES. Witsenia corymbosa; (Gawler) floribus corymbosis, Corolla hypocrateriformii, glabra.

Character of the Genus, Witsenia. Corolla regular, tubular, with a six-partite limb, or cut nearly to the base into six petals. Stamens erect, inserted into the base of the segments. Stigmas three, (4-6.) Capsule three-celled, many-seeded. Seeds angular from mutual impression.

Description of the Species, Witsenia corymbosa. Suffruticose (the specimen described forming a round bush, $2 \frac{1}{2}$ feet high.) Stear at first flat and two-edged, but becoming round, and having a rough brown cracked surface, much branched, the branches erect, soon becoming naked belor, and towards the apex giving origin to many leaves which are distichous, equitant, flat, glaucous, and in their upper half linear-lanceolate. Peduxcle terminal, flat, and two-edged, less glaucous than the leaves, corymbose, the branches trigonous, springing from the axils of sharply keeled and gradually diminishing bracts. At the base of each branch there is generally a fascicle of pedicellate flowers, each pedicel having at its base a small brown scale, and at its apex three, the two outer of which are equitant and herbaceous, the inner larger, membranous, bific at the apex, involute, inclosing the germen and lower part of the tube of the corolla. Perianth single, of fine azure blue, salver-shaped, the tube cylindrical, twice as long as the inner scale; limb six-partite, imbricated in bud, as long as the
tube, segments elliptical, glabrous, excepting where there are a few wery minute, almost microscopic, inverted hairs in the throat. Stamens opposite to the three outer segments and inserted at their base; filaments very short, anthers adnate, yellow, bilocular, bursting along the edges. Pistil projecting from the centre of the flower, nearly as long as the segments of the perianth; style colourless, glabrous, cleft at the apex into 4-6 segments, each crowned with a fimbriated stigma; germen inferior, but with six minute lobes projecting from its apex above the origin of the corolla, orate, three-celled, ovules several in each cell, placentæ central.

Popular and Geographical Notice. The genus Witsenia was established by Thunberg in his Nova Genera, and a single species named. The character was revised by Mr. Gawler, in the Annals of Botany, 1, 236, but the present plant was first described and figured by the latter botanist in the Botanical Magazine, in 1805. Few things can be more unlike in the flower than the species of Witsenia are to each other, and they are scarcely held together without reversing the Linnean rule for the establishment of Generic character. He drew these only from the parts of the flower and fruit, and too absolutely considered habit an insufficient ground. Here the identity of habit seems the great bond of union, the flower, and in some respects the fruit, being disregarded. There has been a difference of opinion among botanists as to the species which belong to this genus, but probably it should be so restricted as to contain only those of the Cape of good Hope. M. Ventenat separated the present species under the generic name Nivenia, but he has not been generally followed.

Introduction; Where grown; Culture. Witsenia corymbosa was introduced into cultivation from the Cape of Good Hope by Mr. Hibbert at Clapham, about 1803, and is deservedly a great favourite in cultivation, on account of the profusion of extremely brilliant flowers which it produces in long succession during a great part of the season. With us, in the Edinburgh Royal Botanic Garden, it is cultivated in a cool stove, and there thrives extremely. The rage for new things, naturally enough excited by many splendid novelties, but which has too frequently caused the neglect of greater beauties of longer standing, has not been able to expel it from our collections.

Derivation of the Name.
Wirsenid, named after Mir. Witsen, a Dutch botanist.
Synonymes.
Mitsenta corymbosa. Gawler: in Bot. Mag. 895. Hort. Kew. 1, 110.
Spreng. Syst, Feget. 1, 147.
Girahe.



# STEPHANO'TIS FLORIBUN'DA. 

Many-flowered stephanotis.


NATURAL ORDER, ASCLEPIADACEÆ.

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COROLLIFLOR※, DECANDOLLE.


PENTANDRIA, DIGTNIA, OF LINNEUS.

No. 203.
GENUS. Stephanotis. Du Petit-Thours. Calyx quinquesepalus, corolla brevior. Corolla hypocrateriformis, laciniis obliquis contortis. Corona staminea simplex, pentaphylla, laciniis simplicibus membranaceis erectis integris. Anther.e membrana superatæ; massæ pollinis geminæ, erectæ basifixæ. Stigna conicum, acutum. Folliculi duo, horizontales, crassi, acuminati, semiuibus papposis. Frutices madagascarienses volubiles; foliis oppositis coriaceis lævissimis, floribus ternatis vel umbellatis, pedunculo communi interpetiolari. Adolphe Brogniart Annales des Sciences Naturelles, 2nd series, v. 7, p. 30.

SPECIES. Stephanotis floribunda; (Adolphe Brogntart.) Folifs ellipticis retusis vel brevissime acuminato-uncinatis, floribus quinque ad octo umbellatis, sepalis ovatis tubo corollæ quadruplo brevioribus, laciniis coronæ stamineæ ovatis, antherarum membrano brevioribus.
Character of the Genus, Stephanotis. Calyx divided into five sepals, shorter than the corolla. Corolla salver-shaped, the divisions of the limb oblique, twisted in the bud. Staminal crown simple, of five leaflets, the divisions simple, membranous, erect, entire. Anthers surmounted by a membrane, the pollen-masses two together, erect, fixed by their base. Stigma conical, pointed. Follicles two, horizontal, thick, pointed, with tufted seeds.
Description of the Species, Stephanotis floribunda. Stem shrubby, climbing; young branches green, smooth, and shining. Leaves opposite, borne on footstalks nearly an inch in length, ovate elliptical, blunt or retuse at the end, the midrib often projecting into a short blunt point, perfectly entire, rounded or slightly heart-shaped at the base, thick, smooth, and shining, especially on the upper surface, three to five inches long. Peduncle inserted laterally between the petioles, rather shorter than the leaves, bearing at the extremity an umbel of six or eight large white fragrant flowers. Bracts very small at the base of each pedicel. Penicels about an inch long, thick and
smooth. Sepals ovate, blunt, of a pale green, about three lines long, smooth. Corolla of a pure white, the tube about an inch long, rather swelled at the base, and gradually contracted to a little below the throat, which is again somewhat expanded ; limb spreading, above an inch diameter, the divisions oval, blunt, smooth on both sides as well as the whole corolla, with the exception of the inside of the tube, which is clothed with reflexed hairs. Stamens and Pistil combined into a conical body, in the bottom of the tube of the corolla, about four lines long. Filaments thick and fleshy, forming a tube completely enclosing the ovary. Staminal crown formed of five oblong lanceolate membranous plates, blunt at the extremity, and shorter than the white broadly ovate membranes of the anthers. Pollen-masses (within these membranes) erect, attached by their base. Ovaries two, enclosed within the staminal tube, but not adhering to it, and distinct from each other, contracted into two very short styles, which support the large conical stigma to which the anthers adhere.

Popular and Geographical Notice. Stephanotis is a Madagascar genus, of which three species only are hitherto known, all probably possessing the same fragrant white flowers as the species now figured, the only one as yet in European stoves. The size of the flowers gives them much of the general appearance of an Echites, belonging to the Apocynaceæ, but the structure of the stamina at once places themamongst Asclepiadaceæ, where they are allied to Pergularia, with some resemblance in the flower, but less in essential character, to the Brasilian Schubertia.

Introduction; Where grown ; Culture. A plant of this species raised in the Botanic Garden, in the Isle of Bourbon, from Madagascar seeds, was brought to Paris, by Mr. Belanger, several years since, and presented by him to the Jardin du Roi. It flowered there, for the first time, in May, 1834, and it is from thence, probably, that it has found its way into our collections. It makes a handsome appearance in the stove when properly trained to a pillar, trellis, or the rafter of the house, its dark bright foliage contrasting finely with its large umbels of white flowers. It should be potted in peat and loam.

Stephanotis, from \(\sigma \tau \varepsilon \phi \alpha \nu 0 \varsigma\), a crown, and \(\dot{\omega} \tau \iota \varsigma\), derived from \(8 \varsigma\), an ear, in allusion to the auricles of the staminal crown, a meaning however which, if the rules of composition had been followed, ought to have been rendered by Otostephanos. Floribonda, many-flowered.

Stephanotis floribunda. Adolphe Brogniar: Annales des Sciences Naturelles, 2nd Sèrie Botanique, v. 7, p. 30.


\section*{PODALY'RIA BUXIFO'LIA.}
bOX-LEAVED PODALYRIA.


No. 204.
GENUS. Podalyria. Lamarck. Calyx laxe campanulatus, demum basi intrusus, quinquefidus. Corolla papilionacea, petalis breviter unguiculatis; vexillum amplum, orbiculatum, emarginatum, patens, alæ obovatæ, obliquæ; carina alis brevior, ovata vel late obovata incurva obtusa. Stamina decem, basi brevessime comata, cæterum libera, glabra. Ovariom sessile, villosum, pluri ovulatuin. Stylus filiformis. Stigma parvum. Legunen ovale vel oblongum, coriaceum, turgidum, villosum. Frutices capenses, foliis simplicibus, alternis, pedunculis axillaribus solitariis, unifloris vel paucifloris, bracteis deciduis forma variabilibus, bracteolis nullis, floribus purpureis roseis vel albidis.

SPECIES. Podalyria buxifolia; (Lamarck) folirs ovatis rarius oblongis supra glabris subtus dense sericeis, pedunculis uni- rarius bifloris, bracteis parvis cuneatis, calycis hirsuti lacmiis lanceolatis carina brevioribus, superioribus binis semi connatis, supra subgibbosis.

Character of the Genus, Podalyria. Calyx loose, bellshaped, at length projecting inwards at the base. Corolla papilionaceous, the petals on very short claws; the standard large, orbicular emarginate, spreading; the wings obovate, oblique ; the keel shorter than the wings, ovate or broadly obovate, curved, blunt. Stamens ten, slightly connate at the base, free from thence, smooth. Ovary sessile, hairy, with many ovules. Style filiform. Stigma small. Pod oval or oblong, swollen, thick, and hairy.

Description of the Species, Podalyria buxifolia. Stemi shrubby, erect, much branched, young branches clothed with a soft down, older ones often smooth. Stipules small, linear lanceolate, deciduous. Leaves simple, nearly sessile, broadly or narrowly ovate, sometimes nearly orbicular, rarely oblong, usually blunt, with a very small projecting point, from half an inch to three quarters in length, perfectly smooth on the upper side, clothed with thick silky hairs underneath, the margins recurved. Peduncles axillary, sometimes one-flowered, and very short, at others nearly two inches long and bearing two pedicellate flowers. Bracts at the base of the pedicels, or in the middle of the one-flowered peduncle, small, oblong or cuneate, falling off early. Calyx thick and hairy, divided to about the middle, the divisions broadly lanceolate, shorter than the keel, all
of the same length, but the two upper ones connected together above the middle, and curved forward at the top. Petals of a rich rose colour, the standard nearly an inch and a half broad, the wings not half so broad, but nearly as long, and closed over the keel, which is shorter, much curved, the petals joined at the back. Pod about an inch long, very hairy.

Popular and Geographical Notice. Podalyria is a genus of about twenty species, all shrubs, mostly ornamental, and confined, as far as hitherto known, within the limits of the Cape Colony. The genus itself is well limited; it approaches nearest to Cyclopia, and to Priestleia, both likewise Cape genera, but the former is at once known by its flat pod and tri-foliolate leaves, and the latter by the stamens more perfectly connate. The distinction of the species offer however more difficulty than perhaps any other group of the same extent, and the synonymy is in the greatest confusion. This is owing in the first place to the very different aspect of the leaves and inflorescence on the main branches of the plants as they usually grow among bushes, to that which they assume on young vigorous shoots in rich shady situations; but the confusion arises still more from the very imperfect specimens preserved in herbaria, and the number of loose and imperfect descriptions published. The plant now figured is certainly the buxifolia of some authors, it is the short peduncled one-fiowered state of the plant figured under that name by Lamarck, it is also the glauca of De Candolle and Ecklon, it is one of those considered by Willdenow as buxifolia, but it does not appear to be the buxifolia of Ecklon, nor yet that of Drege. It were much to be wished that some botanist resident at the Cape, and having opportunities of observing the species in their fresh state, would take up the genus.

Introduction ; Where grown ; Culture. Podalyria buxifolia is not of recent introduction to England, but is still scarce and possessed of much beauty. Our drawing was made at the establishment of Messrs. Low of Clapton. It should be potted in a mixture of peat and loam, and might be renewed by cuttings; but seeds produce the best plants. It requires greenhouse protection.
G. B.

Derivation of the Names.
Podalyria, said by some to have been named after Podalirius, a son of Æsculapius, but this is not probable, as the spelling is different. The apparent Greek etymology, \(\pi 8 \varsigma \pi o \delta o s\), a foot or stalk, and \(\lambda v \rho \omega \dot{\nu}\), a little lyre, is not more satisfactory, and we find no record of Lamarck's own views in forming the word. Buxifolia, box-leaved.

Podalyria buxifolia. Lamarck: Illustrations, t. 32\%,p.3. Bot.Reg.t. 869. Podalyria glauca: De Candulle, Prodromus, v. 2, p. 102. Hypocalyptus glaucus: Thunberg, Flora Capensis, p. 569.


a) Falalyian truafoliar

\section*{IPOME'A PLATEN'SIS.}

THE PLATA IPOMEA.


GENUS. Iponga. Linneus. Calyx 5-partitus nudus. Corolla campanulata rel infundibuliformis, j-plicata. Ovarium 2-3-loculare, loculis dispermis. Styles indivisus. Stigma capitatum, 2-3-lobum. Capsula 2-3-locularis. Herbe volubiles, quandoque erectæ. Folia indivisa rel lobata, nunc pinnatifida. Sexina in quibusdam comosa. Brown.

Species. Iponga Platensis (Herbert) volubilis; foliis palmatis, lobis septenis cuneato-oblongis obtusis extimis minoribus; pedunculis pauciplurifloris, superne cymosis, petiolo longioribus; calycis foliolis subrotundatoovatis, obtusis.

Character of the Genus, Iponea. Calyx five-parted, naked. Corolla campanulate or funnel-shaped, five-plicate. Germen 2-3. celled, cells 2-seeded. Style simple. Stigma capitate 2-3-lobed, Capsule 2-3-celled.

Description of the Species, Ipomea Platensis. Root large and tuberous. Stens several, long, slender, twining, warted. Petioles (two inches long) spreading, shorter than the leaves, warted, channelled. Leaves (fire inches across) pedate, 7-lobed; lobes linear, narrow, each with a strong middle rib, which is very prominent behind, and in some degree in front, but there much more slender and lodged in a groove, veins oblique, rather obscure on both sides; the three middle lobes may be looked upon as subdivisions of one, their middle ribs being in contact or united for about half an inch, and the two lateral lobes on each side may be so considered, but their middle ribs diverge from their origin. Peduncles ( \(4 \frac{1}{2}-5\) inches long) axillary, solitary, shorter than the leaves, in different varieties smooth or warted, slightly compressed, one or more flowered, with several abortive buds. Calyx of five rather unequal, concave, oval, connivent, imbricated leaflets. Corolla (in most of the varieties about \(2 \frac{1}{2}\) inches across with a tube above one inch long) funnel-salver-shaped, everywhere glabrous; limb plicate, of five undulate emarginate lobes, separated by shallow sinuses; tube cylindrical, narrowed within the 50.
calyx. Stamens of very unequal length, one of them about as long as the tube of the corolla, the others shorter, adherent to the tube till it is dilated on leaving the calyx; filaments subulate, covered with lilac-coloured spreading hairs at the lower part of their free portion, everywhere else both above and below this point colourless and glabrous; anthers erect, white, elliptical, notched below, emarginate at the apex, opening along their sides; pollen white, granules spherical. Pistil rather more than half the length of the tube of the corolla, longer than the shortest and shorter than the longest stamens; stigma white, capitate, obscurely 2-lobed, of many short congested segments; style very slightly compressed, greenish below ; germen greenish, conical, seated on a yellow glabrous disk.

Popular and Geographical Notice. This species, native of the banks of the River Plate, exists in several varieties, differing in the size of the flower, the colour of the herbage, some being glaucous and others green, diffusion of the warts, and the number of flowers which are developed on the peduncle. In several of these circumstances the specimen here figured is nearly intermediate between those in the Botanical Magazine and Botanical Register. The extensive genus Ipomœa is widely diffused through the warmer parts of the globe, and furnishes some of the finest climbers which ornament tropical forests. It exists in every quarter of the globe except Europe, where it has not been found, though there are there several species of its very near ally, Convolvulus.

Introduction; Where grown; Culture. The present species was first raised by the Hon. and Rev. William Herbert at Spofforth, from seeds communicated by Mr. Cooper, and subsequently in several establishments from seeds collected by Mr. Tweedie. The plant described flowers freely in the Garden of the Caledonian Horticultural Society, running along the rafters of the stove in which it is placed. It does not produce fruit, but Mr. James M' Nab thinks he will probably succeed in propagating it, as with other species and similarly rooted plants, by inserting a bud from the stem into a portion of the root removed and treated as are ordinary cuttings.

\section*{Derivation of the Name.}

Iponga from \(\psi \psi\) a climber, and opocos similar, from its resemblance to Convolvulus. Platensis, from the river Plate.

Ipomea Platensis. Herbert in Bot. Reg. 333. Hooker in Bot. Mag. 3685.


\section*{LATH'YRUS TOMENTO'SUS.}

\section*{COTTONY LATHYRUS.}


GENUS. Lathyrus. Linneus. Calyx urceolato campanulatus, quinquefidus, vel quinquedentatus, laciniis vel dentibus duobus superioribus brevioribus. Corolda papilionacea calycem superans, vexillum basi sæpe utrinque appendiculato-gibbum, alæ carinam orbiculatam e basi inflexam æquantes. Stamina 10 , filamento vexillari libero diadelpha vel monadelpha, ragina sive integra sive fissa. Anthere conformes. Ovaricm sessile multiorulatum. Stylus e basi refracta rectus, superne complanato dilatus, extus convexiusculus, intus concavus, villoso-pubescens. Stigma terminale, stylo vix latius abreriatum, truncato-rotundatum, retusum. Legunen compressum apterum vel sutura superiore alatum, polyspermun. Semina globoso compressiuscula, umbilico ovali strophiola conformi demum evanida. Herbe ut plurimum, scandentes in regionibus temperatis totius orbis obviæ; foliis abrupte pinnatis, cirrhosis, interdum phyllodineis, uni-bi plurijugis, stipulis semi-sagitfatis pedunculisaxillaribus, uni-bi-multiforis. Endlicher: Genera Plantarum, p. 1279.
Species. Lathyris tomentosts (Lanarck) Nitenti sericeo-tomentosus, caule angulato-ramoso, striato, stipulis semi-sagittatis petiolo plus duplo longioribus, foliolis oblongo-linearibus mucronato-acutis cirrho subramoso, pedunculis folio pluries longioribus sub 4 floris, legumine lineari dense seri-ceo-tomentoso, seminibus compresso-angulatis atro badiis. Vogel: in Linnæa, Vol. 13, p. 25.

Character of the Genus, Lathyrus. Calyx urceolate, bellshaped, five-cleft, or five-toothed, the two upper divisions or teeth the smaller. Corolla butterfly-shaped, exceeding the calyx ; standard frequently on each side with a gibbose appendage at the base. Wings equal to the orbicular keel, infiexed from the base. Stamers ten, with the filament next, the standard free, diadelphous, or monadelphous. Sheath either entire or cleft. Anthers similar. Ovarium sessile, many ovuled. Style erect, bent back at the base, flattened in the upper part, exterior somewhat convex, interior concave, pubescent. Stigma terminal, scarcely broader than the style, shortened roundly truncate, retuse. Legunen compressed, wingless, or winged on the upper suture, many-seeded. Seeds round, compressed. Unbilical oval, with a similar strophiola, which afterwards disappears.

Description of the Species, Lathyrus tomentosus. SufFruticose, covered more or less with a soft silky white pubescence, stem striated, angular, branched, but the branches more particularly angular. Leaves petiolate, one pair. Leaflets linear, lanceolate,
about fourteen lines long and three lines broad, acute, having the under surface prominently veined, and more pubescent, than the upper surface. Petioles about one third the length of the leaflets. Tenprils simple, or rarely branched, scarcely as long as the leaflets. S tipules half arrow-shaped, about as broad, and half the length of the leaflets. Peduncles angular, about five times as long as the leaflets. Flowers from three to four, large, of a delicate blue or violet colour, and forming a close head. Pedicels densely tomentose, about three lines long. Bracts deciduous. Calyx densely tomentose, divided into five nearly equal segments, and which in length are about equal to the tube. Standard oblong-round, from ten to twelve lines long, and about eight broad. Wings and Keel of equal length and a little shorter than the standard. Stamens ten, monadelphous, included within the keel, and about the length of the style. Style thickened and curved at the base, in the upper part, it is flattened and smooth, on the side next the axis it is densely villous. Pollen cylin= drical, smooth. Legumen oblong, cartilagineous, about two inches long, and three lines broad, exteriorly densely villous, containing about twelve seeds; in the interior of the valves between the spaces of the seeds is found a white compact pubescence composed of flat obtuse partitioned hairs. Funiculus delicate, about one line long. Hilun linear, seeds angularly roundish, brown, and beautifully spotted with a darker colour.

Popular and Geographical Notice. The species which compose the genus Lathyrus are showy and ornamental, and have an interesting and striking appearance, if trained against a south wall ; and such species as the following are peculiarly adapted for this: Lathyrus rotundifolius, ellipticus, roseus, purpureo-cæruleus, Armitageanus, and the species now figured, which is a neat growing plant.

This may be called an American and European genus, none having as yet been found at the Cape of Good Hope or New Holland, only two in Asia, two in Africa, and one in India, and their geographical distribution will very nearly be as follows; thirteen species are natives of North America, eleven species of Brazil and South America, thirtytwo of Europe, one of India, two of Africa, two of Asia, and six whose country is unknown.

Introduction; Where grown; Culture. The seeds from which this species was raised, were presented to the Birmingham Horticultural Society, by George Barker, Esq. in the autumn of 1839, who received them direct from Buenos Ayres, where in the neighbourhood they had been collected by Mr. Tweedie.

The soil for this species should be rich and light, and if it be planted against a south wall it will flower freely; but if planted in a stiff soil, it will be very liable to damp off.
F. W.

Derivation of the Names.
Lathyrus is from \(\lambda \alpha\) intensitive; and \(\theta o \iota \rho o s\) anything exciting. Tomentosus from its white silvery hairs.

Synonyme.
Galega binata, Spr. Vogel: in Linnea 1.c.
c

'Cilintourere jueturaeller

\section*{CLINTO'NIA PULCHEL'LA.}

PRETTY CLINTONIA.
EXOGENA.
OR
DICOTYLEDONE \(\boldsymbol{E}\).

NATURAL ORDER, LOBELIAÜEE.
CALYCIFLORE,
OF
DECANDOLLE.

No. 207.
genus. Clintonia. Douglas. Calyx tubo lineari-triquetro, contorto, cum ovario connato, limbo supero, quinque-partito Corolla summo calycis tubo inserta, tubo brevissimo, limbi bilabiati labio inferiore cuneato trilobo, superiore erecto, bipartito. Stamina quinque, cum corolla inserta; filamenta et antheræ, quarum duæ inferiores apice setigeræ, in tubum connatæ. Ovarion inferum, uniloculare. Ovuld in placentis duabus parietalibus, linearibus plurima, anatropa. Stylus inclusus; stigma exsertum, conicum, barba papillosa cinctum. Capsula lineari-triquetra, unilocularis, trivalvis, valvis linearibus, revolutis, duabus medio placentiferis. Semina plurima, minima. Herв发 annuæ procumbentes, in America occidentali extratropica, boreali et Australi observatæ; foliis sessilibus, anguste lanceolatis, integerrimis, floribus axillaribus, solitariis, sessilibus. ENDLICHER: Genera Plantarum, p. 510.
species. Clintonia pelchella. (Lindley) Folits sepalisque obtusis, corollæ laciniis superioribus ovatis acutis divaricatis labelli lacinia intermedia productiore.

Character of the Genus, Clintonia. Tube of the calyx marked with three ridges and thence triangular, twisted, calyx united with the ovary, limb superior, five-parted. Corolla inserted on the very end of the tube of the calyx, the tube very short, the limb twolipped, under lip cuneately three-lobed, upper lip erect, tro-parted. Staliens five, inserted along with the corolla into the tube of the calyx; filaments and anthers united into a tube, the two inferior anthers bearing a slender hair at the apex. Ovary inferior, one-celled. Orules numerous anatropous, attached to two linear parietal placentas. Style included, stigma protruding, conical, surrounded by a papillose beard. Capsule marked by three narrow ridges and so three-cornered, one-celled, splitting into three valves; valves linear, revolute, two of them placentiferous in the middle. Seeds numerous, very small.

\section*{Description of the Species, Clintonia pulchella. A small} annual: stem procumbent, or but slightly erect, smooth. Leaves alternate, sessile, linear, obtuse, smooth. Flowers axillary, solitary, supported on long smooth peduncles. Calyx having the tube marked
with three elevated ridges, and thence triangular, twisted, cohering with the ovary, limb superior, five-parted, segments obtuse, spreading or reflected. Tube of the corolla very short, limb of five unequal spreading segments, whereof two from the upper lip, ovate, acute, entirely blue, three, constituting the under lip, are broader, obovate and acuminate, the central one longer than the lateral ones, rich blue towards the margin, but of a pure white from the middle downwards, save where a yellow two-lobed spot occupies the base. Stamens five, both filaments and anthers united into a monadelphous tube around the pistillum, two of the anthers bristle-pointed. Ovary inferior, onecelled; style inclosed in the tube of the stamens, stigma conical, protruding beyond it, surrounded by a papillose beard. Capsule triangular, one-celled, three-valved, valves narrow, cohering at either extremity. Seeds minute, numerous, brown, smooth.

Popular and Geographical Notice. The genus Clintonia consists as yet of two species only; Clintonia elegans and Clintonia pulchella, natives of North West America, the former in the more northern part, on the plains of the Columbia River, the latter in the more southern, viz. in California, where
'Flowers fresh in hue, and many in their class Implore the pausing step-'
Neither species is applied to any direct use, but if they serve no other purpose than that of pleasing the eye, and gladdening the heart, they were not formed in vain.

Our outward life requires them notThen wherefore had they birth?
To minister delight to man, To beautify the earth;
To comfort man-to whisper hope, Whene'er his faith is dim! For who so careth for the flowers, Will much more care for him. Mary Howitt.
Introduction; Where grown; Culture. Seeds were sent in 1831, by Douglas to the Horticultural Society, in whose garden the specimen flowered in 1839, from which our drawing was made. It grows in a pot, but is of rather difficult culture. In the borders its soil should be light and rich, where it will ripen a few seeds.

Derivation of the Names.
Clintonia, a well-merited compliment to De Witt Clinton, formerly Governor of the State of New York, and a writer on various branches of Natural History. Pulchella, from pulcher, pretty.


\section*{STROBILAN'THES SABINIA'NA.}

\section*{MR. SABINE'S STROBILANTHES.}

natural order, acanthacer.


No. 208.
Genus. Strobilanthes. Blume. Calyx quinquepartitus, laciniis herbaceis. Corolla hypogyna, infundibuliformis, tubo sensim transeunte in limbum, campanulatum, quinquefidum, laciniis æqualibus vel subæqualibus, obtusis vel emarginatis. Stamina quatuor, corollæ tubo inserta, inclusa, didynama; anthere biloculares, loculis parallelis. Sty lus simplex; stigma subula. tum, incurvum vel involutum. Ovarica biloculare, loculis biovulatis. Capsula subunguiculata, tetragono-columnaris, bilocularis, tetrasperma, loculicide bivalvis valvis medio septiferis, vel dissepimento soluto, Semina discoidea, angulata, retinaculis uncinatis subtensa. Frotices vel rarius herbæ, in Asia tropica crescentes; foliis oppositis, spicis axillaribus vel terminalibus, plus minus densis, bracteis foliaceis, vel foliaceo-membranaceis, persistentibus vel caducis, bracteolis parvis vel rarius nullis, floribus majusculis, cæruleis vel albis. Endifcher: Genera Plantarum, p. 700.

SPECIES. Strobilanthes Sabintana (Nees) Folis ofatis acuminatis in petiolum attenuatis repando-subcrenatis glabris, opposito minore, summis cordatis amplexicaulibus, spicis axillaribus terminalibusque laxiusculis visci-do-pubescentibus, bracteis orbiculatis basi cuneiformibus.

Character of the Genus, Strobilanthes. Calyx five-parted, segments herbaceous. Corolla hypogynous, fumel-shaped, the tube gradually dilating into the campanulate limb, which is five-cleft, with the segments equal or unequal, obtuse or emarginate. Stamens four, inserted into the tube of the corolla, included, didynamous; anthers two-celled, cells parallel. Style simple: stigma subulate, incur-ved or involute. Ovary two-celled, each cell containing two ovules. Capsule subunguiculate, forming a four-cornered column, two-celled, four-seeded, splitting by a loculicidal dehiscence into two valves, the valves being either septiferous in the centre or the dissepiments altogether detached. Seeds disk-shaped, angular, stretched by hooks.

Description of the Species, Strobilanthes Sabiniana. Stem two or three feet high, smooth and roundish, woody below, above branched, branches square and herbaceous. Leaves opposite, one of each pair invariably smaller than the opposite leaf, of a deep green on the upper surface, purple below; the lower leaves eight or nine inches long, from three inches to three and a quarter broad, with seven or
eight costal nerves proceeding from the midrib, the base attenuated into a short petiole, margins crenate; upper branches sessile, cordate, amplexicaul toothed or serrated. Spikes axillary and terminal, rather loose, opposite, unequal, the one being four or five inches long, the other only three or three and a half; the whole covered with a viscid pubescence; bracts orbicular and wedge-shaped at the base. Flowers purplish. Calyx of five deep-coloured spatula-shaped segments. Corolla funnel-shaped; tube yellowish at the base, at first erect, then suddenly deflected; limb unequal, five-lobed, lobes blunt or emarginate, upper lobe slightly reflected. Stamens four, didynamous; filaments declined, furnished with hairs at the base on one side only; the two longer reaching to the mouth of the corolla; anthers two-celled. Style simple, rather longer than the stamens; stigma awl-shaped. Ovary slightly quadrangular, oblong, two-celled; four-seeded.

Popular and Geographical Notice. The species of the genus Strobilanthes are mostly shrubby, rarely herbaceous plants, and natives of tropical Asia: the present species was first gathered by Francis de Silva in Pundua, and afterwards by Dr. Wallich, in Nepal, in 1823. It bears considerable resemblance to Strobilanthes plumosa, Strobilanthes auriculata, and amplectens, from all which it is distinguished however at a glance, by its smoothness, its broader leaves and looser spikes of flowers. There is a variety ( \(\beta_{0}\) ) argentea, characterised by having the spikes smaller, more pubescent and viscid, the corolla nearly half an inch longer, and more of a bluish colour. It is worthy of notice that the disparity in the size of each pair of opposite leaves, exists likewise in the spikes of the flowers, one of which is uniformly smaller than the opposite.

Introduction; Where grown; Culture. Sent by Francis de Silva to the Botanic Garden, Calcutta, whence it was sent by Dr. Wallich, in 1826, to the Horticultural Society of England.

It requires the stove, where it flowers in the end of winter, displaying several spikes, on each of which two flowers only are found expanded at one time. It may be advisable to put it for some period of the year, in the greenhouse, that it may enjoy a season of repose, which is as necessary for plants as animals, and for those of a hot country, as much as for those of a cold climate. (See Dr. Lindley's Theory of Horticulture, p. 389-44.

Derivation of the Names.
Strobilanthes, from \(\Sigma \tau \rho o b i \lambda o s\), strobilos, a cone; and av \(\theta_{o c}\) anthos, a flower, the unexpanded spikes resembling a cone. Sabiniana, in compliment to Joseph Sabine, Esq.

\section*{Synonymes.}

Strobilanthes Sabiniana. Nees Von Esenbeck: in Wallich's Plantæ Asiatic. Rariores, Vol. III, p.86. Botanical Magazine, t. 3517.
Ruellia Sabiniana. Lindley: in Botanical Register, t. 1238.




No. 209.
GENUS. Euthales. Brown. Calycis tubus ipsa basi ovario subadnatus, quinquefidus, inæqualis. Corole tubus hinc fissus, limbus bilabiatus. Anthere distinctæ. Stylus indivisus. Stigmatis indusium bilabiatum. Capsula quadrivalis, basi bilocularis. Semina imbricata, compressa. Herbe Australasicæ, foliis plerisque radicalibus, scapis caulibusque laxe dichotomis, foliis floralibus oppositis, pedicellis in dichotomis solitariis unifloris ebracteatis.

SPECIES. Euthales macrofhylla (Lindley). Glaberrina, caule erecto crasso ramoso, apice laxissime dichotome paniculato, foliis petiolatis oblongis dentatis.

Character of the Genus, Euthales. Calyx tube connected at the very base only with the ovary, five-cleft, the divisions unequal. Corolla tube split on one side, the limb bilabiate. Anthers distinct. Style undivided. Indusium of the stigma two-lipped. Capsule four-valved, bilocular at the base. Seeds imbricated, compressed.

Description of the Species, Euthales macrophylla. Root perennial. Stem herbaceous, erect, thick, perfectly smooth, as is the whole plant, branching out into a dichotomous loose spreading panicle, attaining the total height of two or three feet. Leaves on the lower part of the stem very large, attaining sometimes the length of six inches, those in the upper part gradually smaller, few and remote, and degenerating at last into mere bracts, all the leaves are opposite, oblong, somewhat pointed and bordered by a few coarse sharp teeth, narrowed at the base into a short footstalk, smooth and rather thick in consistence, irregularly three-nerved or almost penninerved. On some of the sterile branches the leaves become alternate, and are borne on longer stalks. Peduncle solitary, arising from the dichotomies of the panicle, one-flowered, slender, bearing no bracteolæ. Calyx green, with the upper segment leaf-like oblong, about four lines long, the others not half that length. Corolla yellow, about three quarters of an inch diameter, each division with a thickened lanceolate centre, somewhat greenish on the outside and bordered by 51.
broad thin bright yellow margins, somewhat waved at the edge, the tube adheres to the ovary higher than the calyx. Stamens and Pistil included within the tube of the corolla.

Popular and Geographical Notice. The order of Goodeniaceæ, is almost wholly Australian, being one of those included in the only volume of Mr. Brown's Prodromus which he completed; it was consequently divided into well defined genera, as early as 1810, the date of the publication of that invaluable work. Euthales was there established as a distinct genus, founded on the Velleia trinervis of Labillardiere, and the characters there given by Mr. Brown, are equally applicable to three or four other species now known of the same group. They are all South Australian or Tasmanian plants; the original species is found at \(\mathbb{S} w a n\) River, and various parts of the South West Coast; the Euthales tenella (or Goodenia tenella of the Botanical Magazine) a perfectly distinct species from the trinervis, is, with another undescribed species, a native of Tasmania, and the one here figured was discovered at Port Augusta. This Euthales macrophylla differs from all the others in the elongation of the stem, and the greater development of the leaves, but their relative situation, the position of the flowers, and all material points in habit as well as essential characters are the same in all the species.
G. B.

Introduction; Where grown; Culture. This Euthales was discovered by Mrs. Molloy, a zealous lover of botany, resident at Port Augusta, in South Australia, and seeds were transmitted by her to Captain James Mangles, R. N. who presented them with many others from the same source, to the Horticultural Society, and our drawing was made last year from plants there raised. It is there found to be a greenhouse perennial of very easy culture, growing freely in any rich soil, and striking readily from cuttings. It continues long in flower, - nearly all the summer, and the yellow of the corolla acquires considerable brightness, but the panicle is rather too straggling for a small greenhouse.

Derivation of thenames.
Euthales, from \(\varepsilon v\) well, handsomely, and \(\neg \alpha \bar{\lambda} \lambda \omega\) to flower, in allusion to the flowers which are handsome compared to many other Goodeniacer. MAcrophylla, large leaved.

Synonyme.
Euthales macrophylla. Lindley: Botanical Register, 1841, t. 3.




No. 210.
GEnUS. Paxtonia. Lindley. Perianthium patens, hexaphyllum, æquale; labello petalis conformi. Colunna erecta, teres, subclavata, petalis paulo brevior. Anthera terminalis, opercularis, decidua. Pollinia 8, angusta, clavata, apice coherentia. Stigma rima transversa, verticale sub rostello. Herba cæspitosa, foliis plicatis, racemo multiforo, radicali, foliorum longitu. dine. Lindley: in Botanical Registcr, Vol. XXIV, t. 60 .

Species. Paxtonia rosea (Lindley) Pseudo-bulbis dense aggregatis, oblongis, triphyllis. Folirs lanceolatis, plicatis. Scapls erectis, foliorum longitudine. Bracters ovatis, acutis, patulis. Sepalis petalisque conformibus, æqualibus, oblongis, acutis; labello antico.

Character of the Genus, Paxtonia. Perianth spreading, formed of six equal folioles; lip similar to the petals. Columin erect, round, somewhat club-shaped, a little shorter than the petals. Anther terminal, opening with lid, deciduous. Pollen masses eight, narrow, club-shaped, cohering at the apex. Stigma with a transverse slit, vertical under the beak.

Description of the Species, Paxtonia rosea. Pseudobulbs much crowded together, oblong, marked with circular lines the scars of former leaves, each bulb producing three leaves. Leaves lanceolate, plaited, nearly a foot long, vaginating and tapering at the base where they are surrounded by concave, ovate, acute, brown scales. Scapes erect, springing from the base of the bulbs, equal in length to the leaves, about the thickness of a quill, having two or three distant vaginating scales. Bracts ovate, acute, spreading, as long as the pedicels. Flowers rose-coloured, nearly half an inch in breadth, pedicels slender, as long as the ovary. Racene many-flowered. Sepals three, spreading, oblong, acute, perfectly regular. Petals three, also uniform, that which represents the labellum situated anteriorly. Column erect, round, flattened a little in front,
somewhat club-shaped, rose-coloured, shorter than the petals; the part supporting the stamens thickened at the margin and slightly lobed.

Popular and Geographical Notice. This plant is a native of Manilla, one of the Phillipine Islands, and is not only interesting in itself, from its beauty and elegance, but worthy of especial notice as an example of a perfectly symmetrical flower, in a tribe of plants, remarkable beyond all others for the singularity of shape, and bizarre character of the flowers. Instances such as this enable us to understand the real nature of the parts of the flower of orchidaceæ, which though twisted and moulded into the most fantastic forms, are yet constituted of similar organs as common flowers. It requires the acumen of a Brown, and a Richard, to surmise this, and the graphic skill of a Bauer to demonstrate it-rendering the study of these extraordinary plants practicable, and affording a constant exercise for the finest observation. All seems a maze of inextricable perplexity, till some master spirit discovers the thread, and renders the path easy to follow. Such has been the result of the labours of the distinguished botanists, above mentioned, to whom all succeeding ones owe immeuse obligations. Nature indeed sometimes aids in revealing the truth, and by the occasional production of a monster, shows the real structure of the most complicated parts. This was the case with the monstrous \(\boldsymbol{O r}\) chis latifolia, described by Achille Richard in the Memoires de la Societe d'Histoire Naturelle de Paris, in which the flower was quite symmetrical, and had three perfect stamens. The genera Thelymitra, Hexisea, and Isochilus, show a tendency to regularity of the flowers, but not so complete as in Paxtonia.

Introduction ; Where grown; Culture. Received by Messrs. Loddiges, in 183\%, from Mr. Cuming. And our drawing was made in the stove of these praiseworthy importers of so many novelties. It grows in a pot on the stage of the orchidaceous house, and flowers in the autumn.

Derivation of the Names.
Paxtonia, in compliment to Mr. J. Paxton, Gardener to the Duke of Devonshire, at Chatsworth, where his skilful treatment of the splendid collection of Orchidaceæ, will entitle him to this commemoration. Rosea, the colour of the flowers.

Synonyme.
Paxtonia rosea. Lindley: in Botanical Register, Vol. XXIV, t. 60, and Mis. Not. 113.



\section*{LO'TUS AL'BIDUS. \\ WHITISH-FLOWERED LOTUS.}


NATURAL ORDER, LEGUMINOSA.


No 211.
GENUS. Lotus. LinNeus. Calyx quinquedentatus vel quinquefidus. Corolla papilionacea; vexillum nudum ; alæ rexillo subæquilongæ, a carina liberæ; carina alis brevior, rostrata, lateraliter nuda. Stamina diadelpha: filamenta alterne apice dilatata, vexillare a basi liberum; antheræ consimiles. Ovarion subsessile, multiovulatum. Stylus glabe, filiformis, adscendens. Stigma obtusum, subcapitatum. Legunen lineare rectum rel arcuatum, teres vel compressum, apterum, uniloculare vel sæpius isthmis cellulosis transverse divisum, bivalvatim dehiscens. Herbe suffruticesve, foliis palmatim trifoliolatis, stipulis foliaceis, pedunculis axillaribus apice unifloris vel umbellatim plurifloris, umbella folio florali subtensa.
species. Lotus albidus (Loddiges) Herbacees, decumhens rel suberectus, canescens vel demum glabratus, foliolis stipulisque oblongo-cuneatis, umbellis longe pedunculatis 5 -6-floris, laciniis calyciuis tubo sublongioribus, leguminibus rectis teretibus glabris non torulosis intus divisis.

Character of the Genus, Lotus. Calyx five-toothed, or five cleft. Corolla papilionaceous, the standard without teeth or folds, the wings free from the keel, about as Iong as the standard, the keel shorter than the wings, beaked, without lateral appendages. StaMENS diadelphous, the filaments alternately dilated at the top, the upper one free from the base; the anthers all alike. Ovary nearly sessile, with many ovules. Style smooth, filiform, ascending. StigmA blunt, almost capitate. Pod linear, straight or curved, cylindrical or flattened, without wings, unilocular, or more frequently divided across between the seeds by a cellular tissue, opening in two valves.

Description of the Species, Lotus albidus. Stem herbaceous, decumbent or nearly erect, loosely branched, a foot or two high. Branches when young, as well as the young shoots, whitish, with a short silky down, which almost disappears as the leaves are full grown. Leaves palmately trifoliolate, the common petiole three or four lines long, the leaflets half an inch to three quarters long, oblong, somewhat wedge-shaped, usually blunt, with rarely a small point, narrowed at the
base. Stipules like the leaflets, but rather shorter, and broader, and less wedge-shaped. Peduncles four to six inches long, bearing an umbel of four to eight fragrant flowers, larger than in our Lotus corniculatus. Floral، leaf composed of three nearly sessile leaflets, like those of the stem leaves but smaller. Pedicels much shorter than the calyx. Calyx campanulate, nearly smooth, the teeth linear, nearly equal in length, and as long or rather longer than the tube. Petals white excepting the keel, which is tipped with a purplish tint. Pod when full grown nearly two inches long, straight, cylindrical, divided across in the inside between the seeds with a cellular tissue.

Popular and Geographical Notice. The genus Lutus, if confined to what are perhaps its most natural limits, contains chiefly South European, North African, and central Asiatic plants, with a few Australian species, for all the American plants described as Loti will probably ultimately be included in Hosackia, or referred to a new genus. One, our common wild Lotus, has a very extensive range, being found all over Europe, and central Asia, and being likewise common in Australia; in the latter country have also been found a pink-flowered species, published as Lotus Australis: an unpublished scarlet one, and the present one, with very delicate pale, almost white, flowers, which have the advantage of being very fragrant. It is a native of Van Diemen's Land, or, as it is now more generally called, Jasmannia, from whence specimens have been sent by R. Gunn, Esq. under the No. 439, and grows also, probably, along the South Coast of the Australian continent.
G. B.

Introduction; Where grown; Culture. This was first raised by Messrs. Loddiges, in 1822, from Australian seeds, and it has since been again sent over by various collectors, and will probably soon become common in conservatories. It flowers about midsummer, and may be increased from seeds or cuttings. Use sandy soil with plenty of drainers.

\section*{Derivation of the Names.}

Lotus, the name of a great variety of plants amongst the ancients, applied by modern botanists to the present genus, under the impression that our Lotus corniculatus might have been the wild herbaceous Lotus of Dioscorides. Albidus, whitish.

\section*{Synonyme.}

Lotus albidus. Loddiges; Botanical Cabinet, t. 1063.



\section*{HIBIS'CUS TELFAI'RIE.}

MRS. TELFAIR'S HIBISCUS.

or


DICOTYLEDONER.
\(\qquad\)

NATURAL ORDER, MALVACE F.


No. 212.
GENUS. Hibiscus. Linneus. Involucellom polyphyllum, foliotis sim. plicibus, vel bifurcatis. Calyx quinqucfidus, persistens, foliolis æstivatione valvatis. Corollex petala 5, hypogyna, obovato-inæquilatera, unguibus imo tubo stamineo adnata, æstivatione convolutiva. Tubus stamineus columnae-formis, infra apicem nudum, truncatum \(\nabla\) quinque dentatum, filamenta plus minus copiosa exserens. Anthere reniformes, bivalves. Ovarium sessile, simplex, quinqueloculare. Orula in loculis plurima, v panca angulo centrali inserta. Stylus terminalis, apice exserto quinquefidus: stigmata capitellata, rarissime cohærentia. Capsula quinquelocularis, loculicide quinquevalvis, valvis medio margine septa seminifera gerentibus, columella centrali nulla. Semina plurima \(\checkmark\) interdum aborta pauca, adscendentia, reniformia, testa crustacea, nuda aut squamulosa vel interdum lanata. Embryo intra albumen parcissimum mucilaginosum homotrope arcuatus; cotyledonibus foliaceis, sese plicato-involveutibus. radicula infera. Endlicher; Genera plantarum, page 982.

HYBRID. Hibiscus Telfarrie. Fruticosus, ramosus; foliis petiolatis, ovatis, subobtusis, glabris, crenatis, v dentatis, petiolis pubescentibus; stipulis subulatis, pedunculis foliis brevioribus, petalis stylis et staminibus multo-longioribus: corollis carneis.

Character of the Genus, Hibiscus. Involucellun manyleaved, leaves simple, or forked. Calyx five-parted, persistent, valvate in æstivation. Petals of the corolla five, situate on the receptacle, unequally obovate, being joined by ungues to the base of the stamineous tube, convulate in æstivation. Staminous tube columnlike, naked beneath the apex, truncate, or five-toothed, putting forth filaments more or less abundant. Anthers reniform, two-valved. Ovarium sessile, simple, five-celled. Ovules many or few in the cells, inserted on the central angle. Style terminal, the apex projecting with five divisions. Stigmas in very little heads, rarely cohering. Capsule five-celled, and five-valved, valves bearing septa, containing the seeds, on the middle of their margin, no central columella. Seeds many, or sometimes from abortion few, rising upwards, kidney-shaped, testa crustaceous, naked or in scales, or sometimes woolly. Embryo curved in the direction of the seed, within a very small mucilaginous albumen; cotyledons leafy, plicately folded, radicle inferior.

Description of the Species, Hibiscus Telfairie. Stem branched, smooth, round, from two to eight feet high. Leaves alternate, petiolate, ovate, somewhat obtuse and strongly veined, crenate or dentate. Petiole pubescent about one sixth of the length of the leaf in the upper leaves, but varying considerably in the lower ones. Stipules subulate, smooth, from three to four lines long. Peduncle smooth, about half of the length of the leaf, enlarged at the base, and articulated a little below the involucellum. Involucellum composed of five subulate leaves, which are rather pubescent, and about two thirds the length of the calyx. Calyx consists of five ovate acute divisions, divisions three-nerved, the centre one strong, the lateral ones delicate, also more or less pubescent. Corolla large, rose-colour, about three inches in diameter, and smooth on each side. Petals roundish, or obovate, having the margin more or less wavy. Stamens numerous, combined into a tube (monadelphous), about half the length of the petals, and at the apex of the tube which combines the stamens, are found five small appendages intermediate between the styles. An~ thers kidney-shaped, dehiscing across the apex. Pollen yellow, globose, echinate. Styles five, pubescent, projecting beyond the stamineous tube, Ovarium sessile, smooth, five-celled, five-valved. Seeds (immature) smooth, numerous, reniform.

Popular and Geographical Notice. Perhaps there is no tribe of frutescent plants yet introduced into this country which for show and beauty surpasses those of Hibiscus, which may be seen by the Hibiscus splendens, rosa, sinensis, Wrayr, Cameroni, liliifiorus, our present species, and many others. The Hybrid varieties of Telfairiæ are so very numerous in the Mauritius that Mr. Cameron, the skilful and scientific Curator of the Birmingham Horticultural Society, when he resided at the establishment of the late Robert Barclay, Esq., Bury Hill, the late Mr. Telfair then resident at the Mauritius, repeatedly sent over to the above establishment seeds from that country, to the amount of about forty packets of different varieties. Sweet, in his Hortus Britannicus, enumerates five varieties of those raised and flowered at Bury Hill, viz., H. roseus (H. liliiflorus, Bot. Mag.), lilicinus, carneus, fulvescens, ochroleucus. This variety, Telfairiæ, appears to be the most dwarf, and bearing the smallest flowers which have come under Mr. Cameron's observation.

Introduction; Where grown; Culture. This hybrid was raised originally at Bury Hill, in 1825, from seeds sent by the late Mr. Telfair ; but our figure was taken from a plant in the greenhouse of the Birmingham Horticultural Society, which flowered in July, 1840, and was then about two feet high. It may be propagated either by seeds, or by cuttings. Its soil should be sand, loam, and peat.

Derivation of the Name.
Hibiscos, from \(\iota\) ßıroog, the Greek name of a plant nearly allied to this genus.
Telfairie, in honour of Mrs. Telfair, the wife of the introducer.



\section*{STYLID'IUM DRUMMON'DII.}

DRUMMOND'S STYLIDIUM.


Natural order, stylidacea.

\[
\text { No. } 213 .
\]

GENUS. Styliditm. Shartz. Calyx bilabiatus. Corolla irregularis, 5-fida, lacinia quinta (Labello) dissimili, minore, deflexa (raro porrecta) reliquis patentibus (raro geminatim cohærentibus.) Colemse reclinata, duplici flexura; antheris bilobis, lobis divaricatissimis; stigmate obtuso indiviso. Cafsela bilocularis, dissepimento superne quandoque incompleto. Неrbe (rel suffrutices) scapigere vel caulescentes. Folid radicalia conferta, in petiolum quandoque attenuata; caulina sparsa, nunc verticillata, sæpe minora bracteæformia, raro apice cirrhosa vel basi soluta. Inflorescemtia taria. Calfcis labium exterius 2-dentatum, vel 2 -partitum ; interius 3 -dentatum vel 3 -partitum. Corolla purpurea, alba, violacea, raro lutea, extus sæpe pilis glanduloso-capitatis tubo basi torto, nunc brevissimo; fauce sæpius coronata denticulis glandulisve, quandoque nuda; limbi laciniis quatuor majoribus geminatim approximatis, utriusque paris altera sæpe minore. Labello ante expansionem labio angustiori calycis opposito (antico) torsione tubi mox laterali, disco sæpissime crassiusculo, intus parum conrexo, basi utrinque lacinula sæpius appendiculato, quandoque simplici. Colemya linearis, limbo longior, ad ejusdem latus alterum (ubi labelhum) exserta, dum reclinata flexura exteriore subtus irritabili, irritata cum impetu resurgens, laterique opposito floris incumbens, stigmate deorsum spectante. Asthere ante expansionem lobis verticalibus, modice patentibus, demum divaricatissimis, apicibus nunc distinctis, longitudinaliter dehisceatibus. Stigita primo obsoletum antheris incumbentibus occultatum, post earum dehiscentiam auctum, subexsertum, quandoque hispidulum, vel pappulosum. Brown.
SPECIES. Styliditar Drumimondi (Graham) foliis omuibus radicalibus, cæspitosis, lanceolato-linearibus, acuminatis, undulatis, marginibus reflexis, coriaceis, utrinque nudis, nitidis, basi squamis elongatis raginatis, scapo folia bis superante, glanduloso pubescente, paniculato; calyce bilabiato, labio superiore 3 -fido, inferiore 2 -partito ; corolla fauce coronata.

Character of the Genus, Stylidium. Calix bilabiate. Corolla irregular, 5-cleft, the fifth segment (the Labellum) dissimilar, smaller, bent down, (rarely spreading,) the others patent (rarely

Reference to the Dissections.
52.
\(1_{2}\) Germen and Column of fructification. 2, Lip.
cohering in pairs.) Column bent back, twice flexed. Anthers bilobular, lobes much divaricated. Stigma blunt, undivided. Capsule bilocular, the dissepiment being sometimes incomplete above.

Description of the Species, Stylidium drummondif. Leaves (4-8 inches long, 3 lines broad) all radical, lanceolato-linear, attenuated and rigid at the apex, coriaceous, glabrous, and shining on both sides, undulate, edges revolute, middle rib prominent both above and below, collected into fascicles, and sheathed at the base by elongated red scales. Scape twice as long as the leaves, erect, round, glandu-loso-pubescent, green, bearing upon its apex a large ovate panicle, of which the branches are glanduloso-pubescent, ascending, the lower the longer, each springing from the axil of a lanceolato-subulate glanduloso-pubescent bract, and having a similar bract at each subdivision. Flowers large and handsome, the terminal one of each branch, somewhat irregularly upwards, expands first, and also the terminal one of each subdivision. Calyx green, glanduloso-pubescent; tube adherent, twisted, elliptico-ovate; limb bilabiate, the lips placed laterally after expansion of the flower, the upper 3 -fid, the lower 2 -partite, the segments linear-elliptical, as long as the tube. Corolla (fully one inch broad from above downwards, one inch across the middle of the upper, three-fourths of an inch across the middle of the lower segments, and half an inch across the faux) very handsome; limb yellow on the outside, and brownish within before full expansion, afterwards nearly white on the outside, over the whole of which surface it is glandulosopubescent, and bright but delicate lilac on the inside, where it is glabrous, having four segments diverging in form of a St. Andrem's cross, elliptical, undulate, and sinuated, the two lower segments being rather the smaller, and more nearly obovate; fifth lobe minute, reflected upon the tube, obovate, colourless and shining in the centre, having a glandular reddish lilac border, broadest at the apex, and two slender ciliated teeth curved upwards at its base; faux crowned with two erect scimi-tar-shaped appendages, hairy, and about one-third of the length of the upper segments at the base of which they are placed, and two small slender diverging bipartite teeth at the base of the lower segments, the former being tipped with lilac, though white below, the latter every where colourless; tube colourless, twisted. Column flattened, slightly dilated in the middle, where it is reflected over the fifth lobe of the corolla, above this flexure slightly coloured lilac for a little way
in front, near the top pale greenish yellow, everywhere else colourless. Antier-loses elliptical, deflected, placed end to end in the direction of the column, along the mesial line before expansion brownish; pollen yellow. Stigma green. Germen bilocular in the lower half septum imperfect in the upper. Receptacle central, ovules numerous.

Popular and Geographical Notice. The singular, and in many instances, beautiful genus Stylidium, is in a great measure confined to New Holland and Van Diemen's Land. A very few species have been found elsewhere, but they seem to be very numerous in those colonies, and to be scattered widely from within the tropics to the southern shores. The late researches, by Baron Hugel, Mr. Anderson, and Mr. Drummond especially, show that above all they abound at the Swan River Settlement. Of the few yet in our gardens, perhaps not one is more worthy of cultivation than the present, and not one has the flowers so large. Its nearest affinity certainly is with Stylidium pilosum of Labellardier, but the flowers are in his plate small, and the inflorescence a simple or a compound raceme, and the general accuracy of his figure is confirmed to me by specimens collected at King George's Sound, and which I many years since received from the late Mr. Fraser, colonial botanist. The remarkable irritability of the column exists here as probably in all the species of the genus. The total misunderstanding of the parts of the flower in Stylidium by many of the older botanists, which deforms their accounts of the genus, was long since corrected by Brown.

Introduction; Weere grown; Culture. This species was raised by Mr。Low, of Clapton, from seeds transmitted from Swan River, by Mr. Drummond, and a plant was obligingly sent by Mr. Low from his extensive collection to the Botanic Garden at Edinburgh, in October, 1839. It came into blossom in the greenhouse there in November, \(\mathbf{1 8 4 0}\), having been planted in a mixture of peat, sand, and a little loam, and exposed to free ventilation on the shelf of the back wall, the glass being drawn down so as to leave the plant altogether uncovered during the day, even while the frost was sharp in the shade. Each blossom remains expanded during several weeks, and coming slowly in succession, the plant is kept in perfection for a very long period, the last flower having scarcely faded in the middle of March,

Few plants have been more generally misunderstood than Stylidium; the older botanists asserting that the stigma existed at the base of the column. Labillardiere at first believed that it was at the top of the column, but subsequently altered his opinion. Richard and Jussieus regarded the fifth lobe of the corolla or lip as the stigma; and numerous botanists followed the opinions of these eminent men. Thus the situation of the stigma, became a subject of warm discussion Wetween physiologists who differed in opinion. It was left for the acumen of a Brown to point out what all English botanists now recognise as true, that the stigma is situate at the top of the column in a cavity surrounded by the anthers. Here, although inconspicuous at first, it becomes more fully developed after the anthers liave scattered their pollen.

The genus Stylidium has been referred to by several vegetable physiologists as affording a prominent example of irritability. The column, which supports the anthers, as seen in the dessections, assumes a position outside of the corolla, by bending back between its lobes; on the slightest touch of a pin, near its base, it instantly leaps forward to the opposite side of the flower, where it will remain for a short time, and then gradually resume its former situation. What is effected by this peculiarity it is not easy to determine. Generally, the object of such irritability is the dispersion of the pollen, the more certainly to secure fertilization; and probably, in the present instance, this is the design of the all-wise Creator, notwithstanding the approximation of the parts of fructification. How frequently does the naturalist meet with a stumbling block in his researches! This, and thousands of other instances, show as how little we know, and how infinite is divine wisdom.

\section*{Derivation of the Names.}

Stylidium, from \(\sigma \tau u \lambda_{\mathrm{c}}\) a little column-the column of fructification being the part which here attracts notice from its remarkable irritability.

Stylidium Drummondif. Grah. in Edinburgh New Philosophical Journas for January, 1841.


Man firica viyforen

\title{
RAF'NIA TRIFLO'RA. THREE-FLOWERED RAFNIA.
}


No. 214.
GENUS. Rafnia. Thunberg. Calyx quinquefidus, lacinia infima sæpissime angustiore vel reliquis distinctis, v , plus minus coalitis. Corolle papilionaceæ vel vexillum subrotundum, carina obtusar. rostrata. Stamina 10 , monadelpha. Ofaricm sessile rel stipitatum multiovulatum. Styles filiformis; stigma capitatum. Legonen lanceolatum, compressum, polyspermum, Herbæ suffru-tices capenses, glabri, siccatione sæpe nigricantes; foliis caulinis alternis, implicibus sessilibus amplexicaulibus, integris, floralibus oppositis, floribus favis. ENDLICHER: Genera. page 1260.

SPECJES. Rafila triflora (Thunberg) glauca; foliis petiolatis sub. rotundis, ovatis, vel obovatis mucronatis, ramis angulatis, pedunculis in axillis superioribus sæpius ternis unifluris bibracteatis.
Character of the Gexus, Rafnia. Calyx fiye-parted, the lowest division generally narrowest, the rest distinct, or more or less united. The standard of the corolla, which is papilionaceous, is roundish. The keel obtuse, beaked. Stamexs 10 , monadelphous. Orarium sessile, or stipitate, many ovuled. Stile filiform. Stigma capitate. Legumen lanceolate, compressed, many-seeded. Plants suffruticose, natives of the Cape of Good Hope, smooth, often turning black in drying. Stem leaves alternate, simple, sessile, amplexicaul, entire, floral leaves opposite. Flowers yellow.

Description of the Species, Rafnia triflora. The whole plant covered with a glaucous hue. Sten suffruticose, angular, about 4 feet high. Leaves roundish, ovate, or obovate, mucronate, \(m\) idrib strong, feather veined; veins anastomosing in the axils of the leaves, arranged in threes (but only one flower opening at once); standard roundish or ovate, margin reflexed; wings the length of the keel; apex acute, and incurved. Keel obtuse, of a paler yellow than either the wings or standard. Calyx divided in five parts, unequal, the two upper divisions broader than the two lower ones. Stamens filiform, arranged in one set. Anthers dehiscing towards the axis. Pollen smooth, spherical. Stigma capitate. Ovarium stipulate, smooth, about an inch long, having the dorsal suture strongly sibbed. Seeds in the several legumes now before me solitary, and
situate at the base of the legumen, in form somewhat kidney-shaped; testa smooth, and spotted with yellowish white; hilum round, strophiolate, funiculus short.

Popular and Geographical Notice. De Candolle in the monograph of Leguminosæ, for his Prodromus in 1825, separated the genus Rafnia into two parts, retaining as the genus Rafnia those plants which have sessile but not amplexicaul leaves; and separating as a new genus, under the name of Vascoa, those which have amplexicaul leaves. In the Linnæa, for the year 1839, Mr. Walpers, of Berlin, published a paper, entitled Animadversiones Criticæ in Leguminosas Capenses, in which he makes Vascoa only a section of the genus Rafnia. and the new genus Pelecynthus formed out of the collection of Ecklon and Zeyher, by E. Meyer, he also makes a section, as it differs chiefly, according to his view, in not having a rostrate keel, and amplexicaul leaves. In the union of the genus Vascoa with Rafnia Endlicher agrees, but he (Endlicher,) retains the genus Pelecynthus as a genus distinct from that of Rafnia. It will therefore appear, from the opinion of the above authors, that the genus Vascoa D.C. will not be retained, but will go again into the situation where it was originally placed by Thunberg, Rafuia.

This plant when properly cultivated is one of much beauty, arising from its soft and pleasing glaucous hue, delicate yellow blossoms, and the clear and transparent young shoots.

Introduction; Where grown; Culture. This plant appears to have been introduced many years ago, but yet is by no means common in collections. That from which our drawing was made grew in the collection of the Birmingham Horticultural Society. It should be potted in a mixture of loam, peat, and sand. It may also be raised from cuttings, but by that means it does not seem to propagate itself so readily as many other plants, therefore care should be taken to insure seeds, which vegetate readily, and as they are frequently abortive, recourse should be had to impregnation to insure their perfection. To grow handsome plants, the leading shoots should be frequently stopped, which will prevent it growing tall; and a handsome bushy plant will be the result. It flowers in June and July. F.W.

\section*{Derivation of the Names.}

The generic name Rafnia is in compliment to Mr.C. G. Rafn, a Dane, and Botanist. The speciñc name triflora, from having three flowers, frequento ly arranged in the axils of the leaf.

Rafila cordata. Bot. Reg.
Rafale intermedia. Yogel.




GENUS. Senecio. Eessing. Capitulum multiflorum, homogamum, discoideum vel heteroganum, floribus radii uniseriatis, ligulatis, femineis, disci tubulosis, hermaphroditis. Involucri nunc nudi, nunc squamellis accessoriis calyculati, squamæ uniseriatr, apice sæpe sphacelatæ, margine subscariosæ, dorso plerumque binervatæ. Receptaculum epaleatum, nudum, vel alveolatum. Corolle radii ligulatæ, disci tubulosæ, limbo quinque dentato. Antheref ecaudatæ. Stigmata disci truncata, apice solo penicellata. Achenia teretiuscula vel sulcato-angulata, erostria, exalata. Pappus pilosus, pluriserialis, caducus, setis rectis, subæqualibus, tenuissimis, vix scabris. Genus totius regni vegetabilis vastissimum, speciebus herbaceis vel fruticosis polymorphis, per totum orbem obviis, plerisque endemicis, foliis alternis, capitulis solitariis, corymbosis rel paniculatis, corollis disci plerumque luteis, rarissime purpureis, nonquam nisi in stirpibus cultis albis, ligulis flavis, rarissime purpurascentibus vel albis. Endeicher.

SPECIES. Senecio popultfolius (Decandolle non Linnats) fruticosus, foliis petiolatis cordatis ovatis acut̂is angulatis denticulatis, suprà adultis glaberrimis, subtus ramisque cano-tomentosis, capitulis corymbosis glabris, pedicellis tenuissime bracteolatis, involucri squamis 12-15, ligulis circiter 10 , Decandolle: Prodromus. Pars. sexta, p. 409.

Character of the Genus, Senecio. Cafitule many-flowered, homogamous, and discoid or heterogamous; flowers of the ray in a single row, ligulate and pistilliferous, those of the disk tubulose, and hermaphrodite. The Involucres sometimes naked, sometimes furnished with a set of accessory scales, the scales in a single series, and frequently sphacelated at the top, subscariose at the margins, generally two-nerved on the back. Receptacle without palea, naked, or pitted. The corollas of the ray ligulate; those of the disk tubular, limb, five-toothed, Anthers devoid of an appendix. The Stigmata of the disk truncated, furnished with a pencil of hairs at the upper part only. Achenia roundish or furrowed and angular, without a beak, and without wings. Pappus pilose, arranged in several rows, soon separating from the fruit (seed, incorrectly so called) the bristles straight, nearly equal, very slender, and scarcely rough.

Description of the Species, Senecio populifolius. SuffruTtcose, stem three or four feet high, densely clothed with white wool below, progressively becoming naked towards the upper part. Leaves alternate, petiolate, petioles either auricled at the base and studded
with leaflets along both sides, or altogether naked; lamina cordate, ovate, angled, and toothed, palmatedly nerved; upper surface of the full-grown leaves nearly devoid of woolly hairs, or invested with the remains of the former downy covering, the under-surface clothed with a dense white soft wool. Inflorescence intermediate between a panicle and corymb, the pedicels bearing very few slender bracteoles. INvolucres devoid of accessory scales, in a single series formed of from twelve to fifteen leaves. Florets of the ray ten or twelve, ligulate, of a delicate purple or pink colour, three toothed at the apex, pistilliferous. Florets of the disk tubular, limb 5-toothed, hermaphrodite. Stamens five, syngenesian, anthers without tails, pollen yellow. Style continuous, with a small bush of hairs under the stigma. Stigma two-lobed. Achenia black, angular, easily detached from the pappus.

Popular and Geographical Notice. The genus Senecio, (Lessing) augmented as it has been by having referred to it many species formerly called Cinerarias, is the largest of any among flowering plants, at present known to botanists. The true Cinerarias are exclusively Cape plants, while species of the genus Senecio, as now defined by Lessing, Decandolle, and Endlicher, are met with in every part of the globe; those of the group to which our present plant is referred, belong entirely to the Canaries, embracing the Canary islands, Madeira, and the Azores. If we are correct in regarding this as a mere garden variety of Senecio populifolius, the native country of that species is in woods and watery places of Teneriffe, Laguna, and the Great Canary. The purple colour of the flowers suggests an idea, that it may be an hybrid, of which Senecio Heritieri (Decandolle) Cinerarialanata (Heriter) may have furnished the pollen. The following is its history and culture, according to Mr. David Cameron, of the Birmingham Botanic Garden, to whom we are indebted for it.

Introduction; Where grown; Culture. "It came up accidentally some years ago from self-sown seeds in one of the pots of the greenhouse, so that I cannot say anything certain about its parentage. I, however, conjecture that it must be a hybrid between Senecio heritieri, and Senecio populifolius, B. leucanthus, (Decandolle.) The flowers are fragrant, and I consider it one of the best of these plants for bedding out. It makes a fine appearance, and continues in flower all the latter part of the summer and autumn." It requires a rich soil, and may be increased from cuttings of young shoots, or by dividing the old plants in the autumn.

Derivation of the Names.
Senecio from Senex, an old man; the pappus having some resemblance to the hoary head of an aged person. Populifolius from the leaves resembling those of the Populus alba.
Cineraria populifolia. L'Heriter Sertum anglicum.
Senecio populifolius. Decandolle Prodromus.


\title{
EPIDEN'DRUM UMBELLA'TUM. UMBELLATED EPIDENDRUM.
}


No. 216.
Genus. Epidendrum. Linneus. Pertgonit foliola exteriora patentia, subæqualia; interiora æqualia vel angustiora, aut rarius latiora. Labellemi ungue cum marginibus columnæ omnino vel partim concretum, limbo integro vel partito, disco sæpius calloso, costato vel tuberculato, interdum in calcar ovario adnatum productum. Colunna elongata, clinandrio marginato, sæpius fimbriato. Anthera carnosa, bi-quadrilocularis. Pollinia quatuor, caudiculis totidem replicatis. Endlicher: Genera Plantarum, p. 193.

Species. Epidendrum umbellatum (Swartz) Foliis distichis oblongis subundulatis obtusis, sepalis lineari-oblongis obtusis petalisque linearibus patentibus, labello indiviso rotundo expanso transverso basi bicalloso, floribus corymbosis. Lindley.

Character of the Genus, Epidendrum. External folioles of the perigone spreading, nearly equal, the internal equal or narrower, very seldom broader. The labellum, by means of its claw, either entirely, or partly cohering to the margins of the column, the limb entire or divided, the disc generally callous, ribbed or tuberculated, the limb is also occasionally prolonged into a spur adhering to the ovary. Column elongated, clinandrium, margined, often fimbriated. Anther fleshy, two-four- celled. Pollen-masses four with a similar number of doubled tails.

Description of the Species, Epidendrum umbellatun. Epiphyte a span or half a foot long. Stems numerous, round, simple, the lower part covered with the persistent petioles of former leaves. Leaves alternate, distichous, vaginating, leathery, without conspicuous veins, oblong, from an inch to an inch and a half in length, emarginate, and generally not uniform, of a light green colour. Inflorescence umbelled, the peduncle short, opening from the bosom of the upper leaf, and bearing about five flowers. Flowers of a greenish white colour and waxen aspect; external folioles linear-oblong, obtuse spreading as well as the internal ones, which are linear, narrower, revolute at the margins. Labellum entire, rounded, spread out, transverse, having two callosities at the base; attached to the
ovary so as to form a cuniculus. Column straight. Anther hid within the clinandrium, four-celled. Pollen-masses four, with as many reflexed caudicles or tails. Ovary club-shaped. Seeds numerous, like particles of dust.

Popular and Geographical Notice. This plant is properly the Epidendrum difforme of Jacquin, who first described it from specimens brought from Martinique. It has a much wider range than Epidendrum nutans, as it is met with not only in several of the \(W^{\top}\) est Indian Islands, such as Jamaica, St. Vincent, but probably also in Mexico. Jacquin states than in Martinique, it clothes generally the large trees. It were well, however, to ascertain what kind of trees it chiefly dwells upon, for though orchideous plants are not parasites, and therefore derive no nourishment from the juices of the tree to which they are attached, they yet have their preferences regarding the tribe, genus, and even species of tree on which they are found. Thus M. Descourtilz, in his account of the Orchidaceæ of Brazil, states "Amidst this forest of ropes of sylvan rigging, grow innumerable Ferns, which hang down in plumes, or festoons, or the gayest lacework, vast quantities of Araceous plants, and especially Tillandsias, forming broad patches of verdure upon a sombre ground. In the midst of airy garlands of Aristolochias, Bignonias, Convolvuluses, and Passion-flowers, live the Orchidaceæ, each particular species of which seems to haunt its own peculiar plant. Thus the Epidendrum of the Cinchona refuses to live in the branches of the Lecythis and Coutarea; notwithstanding that the seeds of these epiphytes are scattered indiscriminately by the wind. Other tribes, again, are always free from Orchidaceæ, as the high trunks of Malvaceous trees, Ixoras, Carolineas, Plantains, and Palms." Bot. Register, 1839.

Introduction; Where grown; Culture. Brought from Jamaica, in 1793, by Vice-Admiral Bligh. Our plant grew in the stove of Messrs. Loddiges, at Hackney, It requires the usual treatment of such plants, and flowers in June and July. The flowers have some scent, but it is scarcely agreeable.

Derivation of the Names.
Fpidenizum, frome \(\pi i\), upon; and ozvopov a tree. Umbellatum, from umbella the corymbose inflorescence resembling an umbel.

Synonymes.
Epidendrun umbeldatum. Swartz: Prodromus, 121. Botanical Magazine, 2030. Lindley: Genera and Species, p. 102.

Epidendrun difforme. Jacquin: American, 223, t. 130.
Ebibenprua corymbosum, Flora Peruv. System, 246?.


\section*{BEGO'NIA DRE'GII.}

DREGE'S BEGONTA.


No. 217.
genus. Begonla. Tournefort. Flores monœci vel diœci. Pertanтнium petaloideum, segmenta plerumque inæqualia. FLORES MASCULI. Segienta Perianthii 2-4, rarius 6.9 , subrotunda, minora sæpe spathulata. Stamina indefinita; filamenta plus minusve coalita, receptaculo inserta; antheræ imatæ, connectivum clavatum, compressiusculum. Pistilluni nullum. Flores Feminei. Segmenta Perianthit 4-6. Stamina nulla. Styli tres, sursum dilatati, undulati. Stigmata per margines terminales porrecta. Germen inferum, 3-quetrum, alatum, 3-loculare polyspermum. HERB \(\mathrm{mel}^{\text {vel }}\) SUFFRUTICES regionum orbis calidarum, caule carnoso, translucente, articulato. Folra alterna, bistipulata. Pedunculi axillares, dichotomi. Flores rosei vel albi.

Species. Begonia dregir (Link, Klotzsch, and Otro) caulescens, ramosa, glabra; radice tuberosa; foliis transverse rhomboideis, duplicato crenatis, supra argenteo-maculatis, subtus rubris; pedunculis biforis, flore masculo perianthii segmentis duobus, fæmineo segmentis sex; capsulæ alis duabus majoribus obtusangulis, una rotundata.

Character of the Genus, Begonia. Flowers monœcious or diœcious. Perianth petaloid, segments generally unequal. Male Flowers. Segments of the Perianth \(2-4\), rarely 6-9, nearly round, the smaller ones often spathulate. Stamina indefinite; filaments more or less united, inserted into the receptacle; anthers erect, connective clavate, somewhat flattened. Pistil wanting. Female Flowers. Ṣeguents of the Perianth 4-6. Stamina wanting. Styles 3, dilated upwards, undulate. Stigmata stretched along the terminal margin of the styles. Germen inferior, 3 -sided, winged, 3 -celled. Ovules numerous.

Description of the Species, Begonia dregil. Whole Plant glabrous. Root tuberous, tuber flattened. Stem (in the specimen described, six inches high) erect, succulent, glabrous, pale red, faintly streaked with greenish white oblong spots, many rising from the crown of the root, branched. Leaves ( \(1 \frac{1}{2}\) inch long, 2 inches across) petioled, oblique, transversely elliptico-rhomboid, subpeltate, 5-9-nerved, glabrous on both sides, green, with unequal silvery spots above, red below, darker on the nerves and their branches, doubly crenate; petioles spreading horizontally, twice as long as the leaves, having a shallow chamel on the upper side. Stipules large, obliquely-ovate, colourless, reflected in the sides, marcescent. Peduncles axillary, about 53.
as long as the petioles, spreading, having at the apex two opposite bracts, similar to the stipules, but rather smaller, more round, and somewhat unequal. Flowers ( 1 inch across) white, two arising between the bracts, one male, the other female, pedicellate, expanding about the same time; pedicels unequal, that of the male flower the longer, and nearly equal to the length of the peduncle. Male Flower dipetalous, the petals subrotund, flat, slightly unequal. Sta= mens united by the filaments only at the base; connective short, broad, the two anther cells forming lines along its edges, and of rather paler yellow than it. Female Flower 6-petalous, petals undulate blunt, elliptical, two opposite narrower than the others which are subequal, style broad, fan-shaped, undulate, revolute, and twisted, having along the terminal edge the villous stigmata, which are of darker yelo low than the styles; germen with two subequal bluntly pointed wings, which are larger than the third more rounded one.

Popular and Geographical Notice. The very extensive genus Begonia was at one time considered entirely tropical, and it does abound especially on the eastern side of tropical South America, and the south and south eastern parts of India. It has been long known, however, that it extends beyond the northern edge of the tropic, in the east of Asia, reaching as high up as Japan. More lately several species have been found in Nepal, but this is less remarkable, as the hot vallies of that country furnish almost a tropical vegetation. I am not aware that any species has been found in America, to the northward of the tropic, though several are found in Mexico. Very few species have been found to the eastward of the Andes, and the species now figured, is, I believe, the first which has been detected on the continent of Africa, and in the southern hemisphere the first any where beyond the tropic. It was discovered by Dregé, but I do not know at what distance from the Cape of Good Hope. The dificulty of finding analagous forms to the Begoniacer in any other natural order, and the diversity of opinion hence arising among botanists as to their true position has been already fully adverted to at fol \(\mathbf{1 0 3}\) of this work.

Introduction; Where grown ; Culture. Seeds of this plant were obtained at the Botanic Garden, Edinburgh, from M. Otto, BerIin, in April, 1840, with the M. S. name here adopted, but without any account of its native country, but \(\mathbf{I}\) have since learned from M. Klotzsch that seeds and dried specimens were transmitted from the Cape of Good Hope to the Botanic Garden at Berlin, by M. Dregé. The seedling plants flowered abundantly with us in September, while in the hotbed where they were raised, and already have formed tubers as large as small oranges. They have received no particular treatment, and it does not appear that there will be any dificulty in preserving them in moderate heat.

\section*{Derivation of the Names.}

Begonit, in honour of Begon a French Patron of Botany. Dregil in honour of M1. Drege, to whom we are indebted for this interesting addition to our collections, and to the flora of Africa,
©


or



NATURAL ORDER, MALVACE压.


No. 218.
GENUS. Malfa. LinNeus. Infolvcellum bractea bi-stipulata, basi calyci adnata, v. rarius pedunculo inserta. Calyx quinquefidus, laciniis æstivatione valratis. Corollz petala 5, hypogyna, obovata, sæpius inaequilatere emarginata unguibus imo tubo stamineo adnata, æstivatione convolutiva. Tubus stamineus brevis, columnæformis, apice in filamenta plurima filiformia divisus. Anthera reniformes, biralves. Ovarium sessile, multiloculare. Orola in laculis solitaria, adscendentia. Strul loculorum numero, filiformes, axi centrali inserti, basi coaliti : stigmata obtusa, Capsula depressa, poly.cocca, coccis monospermis, ab axi centrali vix dilatata solubilibus, apice interdum bicuspidatis, nunc dorso \(v\). angulo centrali bivalribus, nunc indehiscentibus. Semen reniforme testa erustacea, emarginaturæ sinu umbilicata. Embryo intra, albumen parcissimum, mucilaginosum homotrope arcuatus; cotyledonibus foliaceis, sese plicato involventibus, radicula infera. Herbe suffrutices V. frutices, rarius arbusculæ, per totım orbem dispersæ, in regione Mediterranea, et Capite bonæ spei frequenter tamen crescentes; foliis alternis, petiolatis, integris v sæpius angulatis, plus minus lobatis, rarissime digitato-partitis, stipulis petiolaribus geminis, floribus axilaribus, nunc in apice ramulorum subsessilibus, et foliis bracteæformibus stipatis, nunc racemosis, spicatis v. glomeratis, corollis coloris omnis. Endlicher; Genera Plantarum, p. 980.

SPECIES. Malya odorata, Suffruticosa, glandulosa, pubescens, foliis petiolatis 3-5.lobis, acute dentatis petiola multo longioribus, involucellis ovatolanceolatis, floribus solitariis carneis.

Character of the Genus, Malva. Involucellum formed of bi-stipulate bracts, joined to the base of the calyx, rarely inserted on the peduncle. Calyx divided into five parts, valvate in æstivation. Petals of the corolla five, hypogynous, obovate, frequently unequal, notched, joined by the ungues into a staminous tube, convolute in æstivation. Stamivous tube short, column formed, divided at the apex into many filiform filaments. Anthers kidney-shaped, two valved. Ovarium sessile, many-celled. Ovula solitary in the cells, ascending. Styles the number of the cells, filiform, inserted on a central axis, joined at the base. Stigma obtuse. Capsule depressed, many cocca, one-seeded, separable from a scarcely dilated central axis, sometimes two-valved from the back, or central angle, sometimes indehiscent. Seed kidney-shaped, testa crustaceous.

Description of the Species, Malva odorata. Steir suffruticose, round, branched, from three to twelve feet high, covered
more or less with a glandular pubescence. Leaves heart-shaped, pubescent, cbtuse, from three to five lobed, lobes acutely notched, sometimes on the lateral branches the leaves are entire, not lobed, and only acutely dentate. Petioles short, varying from one third to one fifth the length of the leaves, and similarly pubescent. Stipules ovate, lanceolate. Flowers pink, solitary, issuing from the axils of the leaves. Peduncle shorter than the leaves, and covered with long hairs. Involuceleun three-leaved, leaves ovate, obtuse, hairy, arranged alternately with the leaves of the calyx. Catyx pubescent, leafless, broadly ovate and longly acuminate. Petals five, obovate, longly unguiculate, unguis hairy, and forming a tube; margin of the lamina more or less irregular. Filaments numerous, smooth, adhering to the unguis of the petals, and of an indigo colour. Anthers kidneyshaped, of a similar colour to the filament, dehiscing laterally, longitudinally. Poleen round, echinate, transparent in the centre. Styles about nine, longer than the filaments and anthers, and of a purple colour. Stigma linear, papillose.

Popular and Geographical Notice. Many of the plants composing the genus Malva are showy, handsome, and deserving of cultivation by the amateur, and from the delicacy of the petals, and the freeness of the flowering, there are perhaps but few more worthy of this distinction than the one now figured. In addition to its beauty, it gives out a delicious balsamic fragrance, scenting the whole house; this property, however, is not preserved in dried specimens. The genus Malva is pretty generally distributed over the whole world, but the greatest number of attractive species are to be found at the Cape of Good Hope, and South America. Two species are natives of this country.

Introduction; Where grown; Culture. This plant appears to be of recent introduction, Our drawing was made from a fine specimen in the Royal Garden, Kew. It is not more difficult to treat than other of the suffruticose species, and it may be propagated by cuttings in the usual way. It will thrive in any good garden soil.
F. W.

Derivation of the Names.
The word Malya seems to have been altered by the Latins, from the Greek \(\mu a \lambda a \kappa \eta\) soft. "The term was adopted in allusion to the emollient qualities of the plant. Odorata, odoriferous.



\title{
AQUILE'GIA GLANDULO'SA. GLANDULAR COLUMBINE.
}


GENUS. Aquilegia. Linhaus. Calyx quinque sepalis deciduis colo-rato-petaloideis. Petala quinque superne hiantia, bilabiata, labio exteriore magno plano, interiore minimo, deorsum producta in calcaria totidem cava inter sepala exserta. Stamina plurima, in phalanges quinque ad decem disposita, interiora, ananthera, filamentis dilatatis membranaceis oblongis. Ovaria quinque. Capsule totidem, evectæ, polyspermæ, stylis acuminatæ. Herbe perennes erectr, radice fibrosa. Folia pleraque radicalia, longe pctiolata, bitriternatim secta. Flores terminales. Decandolle.

SPECIES. Aquilegia glandulosa (Fischer) Folis biternatis, segmentis profunde incisis crenatisque obtusis, sepalis ovatis, corolla multo longioribus, petalorum calcaribus arcuatis staminibusque lamina obtusa brevioribus, orariis sex pluribusve.

Character oe the Genus, Aquilegla. Calyx of five deciduous coloured petaloid sepals. Petals five, two-lipped and gaping at top, the outer lip large and flat, the inner very small, produced downwards into as many spurs projecting between the sepals. Stanens many, arranged in five or ten bundles, the inner ones without anthers and with broad membranous filaments. Ovaries five. Capsules as many, erect, many-seeded, pointed by the styles.

Description of the Species, Aquilegia Glandulosa. Steif usually about a foot to eighteen inches high, not much branched, nearly smooth in the lower part, more or less pubescent and glandular in the upper part. Leaves chiefly radical, or proceeding from near the base of the stem, with long slender footstalks divided above the middle into three, each bearing three nearly sessile segments, which are rounded somewhat cuneate, and divided to about the middle into three lobes, which are themselves crenated or obtusely lobed; these leaves are smooth and somewhat glaucous underneath ; the few upper leaves are much smaller and often consist of a few linear segments only. Flowers solitary on the peduncles, large, nodding. Sepals oval, oblong, rather pointed, of a deep blue, smooth. Petals not half so long as the sepals, the lamina obovate, blunt, of a pale yellowish colour, spurs
blueish, much shorter than the lamina, the extremity blunt, and more or less curved, but usually much less hooked than in Aquilegia vulgaris. Stamens shorter than the petals. Capsules pubescent, six to ten in number, very seldom reduced to five.

Popular and Geographical Notice. The Columbines are all inhabitants of the temperate or even the cold regions of the Northern hemisphere in the new world as well as in the old. The greater number of species are found in central Asia. They usually prefer light woods in mountainous countries, although some of the more alpine species are also found in the crevices of elevated rocks. The present species, very common in the alpine and subalpine regions of the Altai Chain, there replaces our European Aquilegia Alpina, which it closely resembles, and of which it may possibly be a mere variety. It has, however, been distinguished by the shortness of the spurs of the petals, and by the number of ovaries, which are seldom if ever more than five, in the European species, and very rarely so few as five in the Siberian one. It is also a taller growing and handsomer plant, with larger flowers, and the petals are more frequently, though not constantly, white. None of these characters appear indeed to be absolute in all cases, but are nearly as good as those which serve to distinguish many other species of this most natural genus.
G.B.

Introduction; Where grown; Culture. We were first favoured with a specimen of this fine plant by Mr. M•Intosh, from the gardens of Claremont; and being admired, it was drawn and engraved. Subsequently, splendid specimens of the same were obligingly sent to us by Norman M‘Leod, Esq., of Dalvey, such as we were not prepared to see, and of which we confess our plate conveys but an imperfect idea. We regret its execution from the plant of our own growth, Mr. M‘Leod's flowers being four inches across. This gentleman raises his plants from seed sown in autumn. When eighteen months old, they are removed from the seed bed to one of sandy loam and leaf-mould, and planted a foot apart. Here they assume a splendour in May and June which could not have been anticipated.

Derivation of the Names.
Aquilegia, said to be derived from aquila an eagle, the spurs of the petals having been compared to the claws of that bird. Glandulosa, in allusion to the glaudular hairs with which the stems are covered.

Synonymes.
Aquilegia glandulosa. Fischer, in De Candolle's Prodromus, v. ], p. 50. Ledebour, Flora Altaica, v. 2, p. 297.



\title{
RUSSELIA JUN'CEA. RUSHY RUSSELIA.
}



No. 220.
GENUS. Russelia. Jacquin. Calyx quinquepartitus, laciniis acumi-nato-subulatis, subæqualibus. Corolla liypogyna, tubulosa, superne ventri-coso-ampliata, fauce barbata, limbo bilabiato, labio superiore emarginato-bilobo, inferiore tripartito, laciniis subæqualibus. Stamina quatuor, corollæ tubo inserta, didynama, inclusa, diclinaîa; antheræ biloculares, loculis divaricatis. Ofarium biloculare, placentis dissepimento utrinque insertis, multiorulatis. Sty lus simplex; stigma obtusum. Cafsula subglobosa, attenuata, rostrata, bilocularis, septicide.bivalvis, valvis bifidis, placentis coadnatis, demum liberis. SEmina plurima, minima, aptera. HERBE vel frutices, in Antillis et Mexico sponte crescentes; ramis angulatis, foliis oppositis vel ternatis verticillatisse, integris, corymbis axillaribus, floribus coccineis. ENDLICHER: Genera Plantarum, p. 677.

SPECIES. Russelia juncea (Zuccarini) Ramis tetragoniis erectis junceis, foliis minimis petiolatis ovatis subintegris, pedunculis filiformibus subbifloris. Lindley.

Character of the Genus, Russelia. Calyx five-parted, segments acuminately subulate, nearly equal. Corolla hypogynous, tubular, ventricosely-widening towards the summit, throat bearded, limb two-lipped, upper lip emarginately two-lobed, lower Iip threeparted, segments nearly equal. STAMENs four, inserted into the tube of the corolla, didynamous, included, deflexed; anthers two-celled, cells diverging. OVARY two-celled, the placentæ inserted on each side of the dissepiment, bearing numerous ovules. Style simple; stigma obtuse. Capsule subglobose, attenuately beaked, two-celled, splitting by a septicidal dehiscence into two valves; valves bifid, the placentæ at first cohering, ultimately free. SEEDS numerous, very small, winged.

Description of the Species, Russelia juncea. Stem about three feet high, angular, green, dividing into numerous very slender tetragonal branches of a pale green colour, the young ones nearly devoid of leaves, nodding. Leaves always small, often very minute, larger however than the very slender branches, petiolate, ovate, acute, most delicately serrate or ciliate at the margin, sometimes furnished With one or two teeth. Inflorescence apparently panicled, but in
reality consisting of the extreme slender branches, distant from each other, but disposed in the fashion of a raceme, at the points of which one or two stalked and nodding flowers are placed. Calyx small, sepals five, ovate, acute, imbricating. Corolla crimson, tubulose, about an inch long, dilating towards the upper part, limb somewhat unequally five-cleft; segments obtuse, the two superior rather approximating. Stamens four, didynamous. Anthers smooth, oblong, apiculate, lobes parallel. Stigma two-lobed; lobes oblong, flat.

Popular and Geographical Notice. The species as yet known to belong to this small genus, are herbaceous or shrubby plants natives of the Antilles and of Mexico. The present species is the produce of Mexico ; and few plants introduced of late years surpass it in the beauty of the flowers, or the delicacy, grace, and singularity of its branches. The elegant green pendulous branches terminated by the rich crimson flowers, at once charm the eye, and excite an interest by causing us to consider how such thread-like organs, and the minute leaves attached to them, can accomplish the elaboration of sufficient sap to nourish and perfect the fruit with its multitude of seeds. This is the more remarkable when we reflect that in the same country grows the Agave Mexicana, with its large, thick, and enduring leaves, which need several years before they can elaborate sufficient sap to enable it to elevate its flower stem with its countless flowers. These contrasts testify the boundless power of the Sovereign Creator, and the contemplation of them prompts us to exclaim with our great poet,
> "These are thy glorious works, Parent of good, Almighty, thine this universal frame, Thus wondrous fair; thyself how wondrous then! Unspeakable, who sit'st above these heavens To us invisible, or dimly seen In these thy lowest works; yet these declare Thy gooduess beyond thought, and power divine."

Introduction; Where grown; Culture. Sent from Mexico by Count Karwinski to Berlin and Munich, whence it was introduced into Britain in 1833.

It requires the protection of the greenhouse, and flourishes well in any light rich soil. It is easily propagated by cuttings. It flowers freely in July and August.

Dertvation of the Names.
Russelia, in compliment to Dr. Alexander Russell, an English physician, who spent some time at Aleppo, and wrote an account of the Natural History of that place. Juncea from juncus, a rush, from the rush-like character of the branches.

\section*{Synonymies.}

Russelia juncea. Lindley: in Botanical Register, t. 1793.
Russelia equisetiforisis? Chamisso and Schlectendal, Linnæa, vi, p. \(37 \%\).


\section*{TROP \({ }^{\prime} O L U M\) MORITZIA'NUM. MORITZ'S INDIAN CRESS.}


No. 221.
GENUS. Tropeolum. Linveds. Calyx 5 -partitus, lobo superiore calcarato. Petala 5, inæqualia, 3 inferiora minora aut evanida: Stamina 8, ab ipsa basi libera. Carpella 3 , suberosa, reniformia, indehiscentia, hinc sulcata rotundata. Semina magna, exalbuminosa, loculum suum implentia et hujus caritati conformia. Embryo magnus; cotylcdonibus 2, rectis, crassis, junioribus distinctis, dein arcte conferruminatis et etiam cum spermodermate adhærentibus, ima basi subdistinctis; radicula intra cotyledonum processus latente, tubercula 4 mox radicellas proferentia gerente. Herbe Americanæ, sapore nasturtiano donatæ, glabriusculæ, teneræ, diffusæ, aut volubiles. Folis alterna, non stipulacea, petiolata, peltincrvia. Pedoncult axillares, 1-flori.
species. Tropeolun Moritztanum (Link, Klotzsch, Otto) ubique glaberrimum; foliis peltatis sinuatis, reniforme-orbiculatis, basi truncatis, nervis margine mucronato-dentatis; petalis calycem vix superantibus, argute incisis, dnobus superioribus subsessilibus, basi cuneatis, tribus inferioribus longe unguiculatis, subrotundis, palmato incisis, unguibus longe ciliatis; calcare recto, petalis longiore.

Character of the Genus, Troprolum. Calyx five-partite, the upper lobe spurred. Petals five, unequal, the three lower smaller or undeveloped. Stamens eight, entirely free. Carpella three, corky, kidney-shaped, indehiscent, or furrowed and rounded. Seeds large, exalbuminous, each completely filling the loculament in which it is placed. Embryo large, with two straight thick cotyledons, at first free, afterwards firmly agglutinated to each other, and to the testa, subdistinct at the base, the radicle lying between the processes of the cotyledons, bearing four tubercles, from which rootlets presently arise.

Description of the Species, Tropeoluai Moritzianuli. Plant every where glabrous. Root tuberous. Stem long, slender, much branched. Leaves (2-2 \(\frac{1}{2}\) inches across) petiolate, alternate, reni-form-suborbiculate, bright green above, glaucous below, nerves radiated, reticulated, conspicuous, seven-nine lobed, truncated at the
base, with shallow rounded sinuosities between the lobes; lobes rounded, emarginate, having in the centre a little yellow callous tooth at the extremity of the nerve; petioles ( \(2=2 \frac{1}{2}\) inches long) acting as cirrhi to support the plant. Peduncles (three inches long) solitary, singleflowered, longer than the petioles. Flowers funnel-shaped. Calyx reddish on the outside, yellow and streaked with red within; segments ovato-lanceolate, callous at the apex, the upper the shortest and narrowest, the two lower the longest, the intermediate ones the broadest; spur straight, tapered, twice as long as the limb, more fleshy in the upper half than towards its apex, nectariferous. Corolla little longer than the calys, red on the outside, orange-coloured within; petals unequal, the two upper subsessile, multifid at the apex, entire and wedge-shaped at the base, four-nerved, the three lower with long claws, subrotund, palmate, segments acuminate, the lowest the narrowest, and passing into long ciliæ upon the upper half of the claws. Stamens rather distant, and nearly straight, rather shorter than the calyx; anthers round, dark, pollen green, granules small, spherical. Pistil nearly as long as the filaments; germen green, glabrous, three-lobed, the lobes keeled; style straight, stout; stigma of three acute segments, the upper being rather longer than the others.

Popular and Geographical Notice. The right of the Tropæolaceæ to rank as a distinct order, has been doubted. It contains only three ascertained genera, and only an inconsiderable number of species, yet it does seem to me that we cannot unite these with any of the orders to which they have been thought to be most nearly related. The whole order belongs to Mexico, or South America, and the different species of the genus Tropæolum are scattered from the Northern limit of the order, as far to the Southward as Buenos Ayres. They are used as stimulating salads, and the tuberous roots of our species, when cooked, are used extensively as an article of food. As ornaments in the flower border they have long been deservedly favourites, and the present species will be considered by florists a very acceptable addition. If the tuber be protected in the winter, there seems little reason to doubt that it will, during summer, thrive well in the open air.

Introduction; Where grown; Culture. This species was introduced from Cumana, into the Botanic Garden, Glasgow, last year, and the specimen here figured received from that establishment, flowered in the stove of the Royal Botanic Garden, Edinburgh, in September and October, potted in ordinary garden mould. Grah.

Derivation of the Name.
'Tropqolum, from \(\tau \rho 0 \pi a l o n\) a war-like trophy.
Synonymes.
Tropeolem Moritzianum. Link, Klotzsch, and Otto, Icones Pl. Rar. Hort, Berol., t. 17. Bot. Mag. 3844.
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\section*{ODONTOGLOS'SUM ROS'SII.}

\section*{ROSS'S ODONTOGLOSSUM.}


No.222.
GENUS. Odontoglossum. Humb.et Kunth. Perigonif explanati foliola angusta, acuminata, libera, exteriora et interiora æqualia. Labellems unguiculatum, cum columnæ basi continuum ecalcaratum, indivisum, lamina, patente basi cristata. Colcmina erecta, membranaceo marginata, apice utrinque alata. Anthera bilocularis. Porlinia 2-solida, caudicula lineari, glandula hamata. Herbe Americanæ, tropiacæ, epiphytæ, pseudobulbiferæ; foliis plicatis, scapo terminali vaginato, floribus speciosis. ENLICher; genera, p. 203.

SPECIES. Odontoglossum rossil (LINDLEY) pseudobulbis ovatis congestis subcompressis ancipitibus mono- vel duophyllis; foliis oblongo-lanceolatis; scapo radicali bi- vel triflora folio longiori; bracteis membranaceis carinatis acuminatis, sepalis lanceolatis carinatis acuminatis vel acutis: petalis oblongis revolutis: label!o sub-rotundo-ovato emarginato undulato lamellis unguis confluentibus rotundatis denticulis, 2 columna aptera pubescente.

Character of the Genus, Odontoglossum. Perigoniun explanate; leaflets narrow, acuminate, free, exterior and interior equal. Labellum clawed, continuous with the base of the column, spurless, undivided, lamina patent, crested at the base. Column erect, with a membranaceous margin winged on each side. Arthers two-celled. Pollen masses two, solid. Caudicula linear. Gland hooked.

Description of the Species, Odontoglossum rossii. Epiphyte, Plant from 6 to 8 inches in height. Pseudobulbs about an inch high, somewhat compressed, two-edged. Sheaths brown, scarious, longer than the pseudo-bulbs. Leaves sometimes solitary, sometimes in twos, lanceolate, striated, acute, erect or revolute, from three to six inches long and about an inch wide. Scape erect, about six inches high, producing from two to three flowers. Peduncles from two to three inches long. Bracts solitary, brown, varying in length from two to ten lines. Flowers about two inches in diameter. Sepals patent, or incurved, lanceolate-acute, of a greenish brown colour, in the inside beautifully banded with brown, on the outside spotted with the same colour. Petals white, ovate, lanceolate, obtuse, longer than the sepals, revolute, margin irregular, sometimes spotted at the base with brown, sometimes blotched with brown. Labellum
white, unguiculate, ovately round, margin dentate or undulate, obtuse, unguis about three lines long. Lamelle of the labellum yellow, cupshaped, fleshy, united in the fore part, about three lines long, striped in the centre with scarlet. Column curved, about six lines long, wingless, but membranaceous at the edges. Stigmatic cavity ovate, about half the length of the column, and tinted with pink at the margin. Anther 2-celled, beaked, the apex partaking of the same colour as the edge of the stigmatic cavity. Pollen masses two, pear-shaped, posteriorly sulcate. Caudicula linear. Gland hooked.

Popular and Geographical Notice. The genus Odontoglossum was made by Humboldt and Kunth from the collection of Orchideæ, collected by Humboldt and Bonpland during their travels in South America. It is, obviously, very nearly related to the genus Oncidium, from which it is not easily separated, unless you depend on the structure of the labellum and gland; the former of which is entire and unguiculate, the latter hooked.

The species composing this genus are natives of South America, and of which there are about twelve species known. Their flowers are handsome and showy. Although this is a very showy species, yet it is not equal in beauty to several species yet to be introduced into this country, such for instance as Odontoglossum nebulosum, whose flowers are stated to be in circumference nine inches, and Odontoglossum Cervanteii, which approach those of our present species, but are much larger and richer tinted. There is probably little doubt that from the exertions of Baron Hartweg, who has been exploring the nucleus of these plants, viz. Oxaca, at the expense of the London Horticultural Society, that if they are not at present in that collection, they shortly will be.

Introduction; Where grown; Culture. This plant was imported from Mexico in the year 1837, by George Barker, Esq. where it was found by his collector, Mr. Ross. Our figure was taken from a plant in the collection of the London Horticultural Society.

It should be cultivated in a warm and damp stove, and may be potted in the same way as other species of this tribe; or if preferred, itmay be put on a piece of mood, and suspended from the top of the stove, as many other epiphytes. Its propagation is similar to many others -merely dividing the pseudobulbs.

West.
Derivation of the Names.
The generic name Odontoglossca is from Oòovs a tooth, \(\gamma \lambda \omega \sigma \sigma a\) a tongue, in reference to the toothings at the base of the labellum : the specific name Rossii is in compliment to Mr. Ross, the collector of G. Barker, Esq.in Mexico. Synonyme.
Odentoglossum Rossif. Lindl. Bot. Reg. N. S. 1839, t. 48.



CROSS-LEAVED MARCETIA.


GENUS. Marcetia. Decandolle. Calycis tubus oblongus aut cylindraceus, lobis 4, lanceolatis. Petala 4, ovalia (ovata) aeuta. Stamina 8, æqualia (subæqualia); antheris basi bitubereulatis, oblongis, l-porosis. Ovarium liberum, glabrum. Stydus filiformis. Stigma punetiforme. Capsula 4-valvis, 4 -locularis, calyeis tubo circiter æqualis. Semina cochleata. Suffrutices Brasilienses. Rani teretes. Folia subcarnosa, oblonga, margine sæpius revoluta, basi eordata, brevissime aut vix petiolata, integerrima, sæpe enervia. Flores axillares, solitarii, subsessiles, bibraeteati, albi aut subrubentes. Deeandolle Prodr. 3, 124.

SPECIES. Marcetia decussata (Decandolle) fruticosa, ramosa; foliis sessilibus, subeordatis, ovatis, obtusiusculis, integerrimis, basi trinervis, eum ramulis ealycibusque pubescenti-velutinis; floribus axillaribus, pedicellatis, 8-andris; ealyx lobis lanceolato-subulatis tubo vix brevioribus, petalis ovalibus, aeutis; genit. longe exsertis. D C.l.e.

Character of the Genus, Marcetia. Tube of the calyx, oblong or cylindrical, with four lanceolate lobes. Petals 4, oval (ovate) acute. Stamens 8, equal, (subequal); anthers with two tubercles at the base, oblong, opening by a single pore. Ovarium free, glabrous. Style filiform. Stigma minute. Capsule 4 -valvular, 4 -celled, nearly equal to the tube of the calyx. Seeds cochleate.

Description of the Species, Marcetia decussata. Shrub erect (nine inches high in the specimen described, but from native specimens evidently attaining the size of a small bush.) Stem much branched, round; bark brown, cracked, and exfoliating; branches erect; twigs four-sided, glanduloso-pubescent. Leaves ( \(3 \frac{3}{t}\) lines long) ovate, spreading, mucronulate, 3-nerved, pubescent on both sides, also with short tomentum below, dark green above, paler below, entire and revolute in the edges, middle-rib channelled in front, prominent behind. Flowers small, solitary, axillary, on pedicels shorter than the leaves, about the middle jointed, and there having two opposite leaf-like bracts, above this point turgid when in fruit. Perhaps it would be more correct to consider all below the joint a short axillary branch, with two leaves at the apex, and a terminal ebractiate singleflowered peduncle. Calyx urceolate, glanduloso-pubescent, without bracteoles, or rarely a small one, 4 -toothed, teeth spreading, subulate,
more than half the length of the tube. Corolla 4-petalled, spreading between the teeth of the calyx, and fully three times as long as them, pale rose-coloured, slightly blotched, ovato-lanceolate, with a small deflected mucro, inserted into the throat of the calyx, glabrous. Stanevs 8, inserted into the throat of the calyx, alternately opposite to and between the petals; filaments subequal, erect, scarcely inclining to one side of the flower, glabrous, colourless, equal in length to the petals, but as these are spreading the stamens project far beyond the corolla, jointed at about two-thirds of the height, and there when in bud folded forwards; anthers at first orange-coloured, afterwards yellow, about half as long as the filaments, slightly declined, without crenatures in front, opening by one terminal pore, having at the base two small rounded auricles, which are rather larger in the longer stamens. Style filiform, rather longer than the stamens, and slightly deflected to the opposite side of the flower from them. Stigna minute. Germex superior, ovate, truncated, nearly as long as the calyx, with eight small teeth on its apex, 4 -celled. Ovules rery numerous, attached to central placentæ, cochleate.

Popular and Geographical Notice. The genus Marcetia was established by Decandolle, and the species, believed to be all from Brazil. A plant believed to be one of his species, has been found by Schomburgk to extend to British Guiana. I believe Mr. Bentham has inadvertently referred to Gardner's Specimens, No. 1288, as identical with Schomburgk's, No. 1040. The desyuamation of the cuticle of the stem and branches, and a remarkable enlargement of the fruit-bearing pedicels above the bracts in Gardner's Plant, are not observed in Schomburgk's. I have no doubt of Gardner's, No. 1288 being identical with the plant now described. Several of the species of Marcetia grow at considerable elevations on the mountains; the one now described is found in Bahia, at an elevation of 2000 feet. It is a small tidy shrub, flowering freely, and during a considerable period.

Introduction; Where grown ; Culture. The species described, the first in cultivation in Britain, was raised at Mr. Cunningham's nursery, Comely Bank, near Edinburgh, from seeds sent from Brazil, by Mr. Gardner. It has been kept in the stove, and one plant placed lately in the greenhouse, stands there in October without injury. It has required no particular management and has flowered in September and October abundantly.

Derifation of the Name.
Marcetia in honour of Dr. Marcet, to whom we owe some extremely interesting observations on the effects of poisons on regetables.

Synonymes.
Marcetia decessata. Decandolle, l. c.
Rhexia decussita. Mart. and Schrank. M. S. fide D C.
Gardner's specimens from Alagoas, No. 1288.
Grah.



\section*{TRIPTIL'ION SPINO'SUM. \\ SPINY TRIPTILION.}


NATURAL ORDER, COMPOSITÆ.
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OF
DECANDOLLE.

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\(\left(\begin{array}{c}\text { (t) }\end{array}\right)\left\{\begin{array}{c}\text { Artificial divisions } \\ \text { to which } \\ \text { this Plant belongs. }\end{array}\right\}\)


SYNGENFIA EQUALIS of Linneus.

No. 224.
GENUS. Triptilion. Ruiz et Pavo. Capitulija quinqueflorum, homogamum. Involucri biseriati, floribus brevioris foliola decem, carinata, spinula terminata, exteriora patentia, coriacea, interiora erecta, margine scariosa. Receptaculum epaleatum, piloso-fimbrilliferum. Corolle bilabiatæ, labio exteriore multo latiore, tridentato, interiore bidentato vel bifido. Anthere caudatæ. Achenia erostria, obpyramidata, costato tri-tetraquetra, pilosa vel glaberrima. PAPPI uniseriati, longi aleæ ternæ-quinæ, latæ, subconduplicatæ, apice recurva longe fimbriatæ vel ciliatae, intus sæpius pilosæ. Herbe chilenses, erectæ, humiles : foliis rigidæ membranaceis, alternis, sessilibus, varie pinnatifidis, lobis spinescentibus, superioribus semiamplexicaulibus, capitulis fasciculatis vel glomeratis, cœrulescentibus. END. licher. Genera Plantarum, p. 496.

SPECIES. Triptilion spinosum. (Reuzet Pafo.) Callf herbaceo ad apicem corymboso pubere, foliis pinnatilobatis, lobis in mucronem spinosum desinentibus. Decandolle. Prodromus. Pars VII, p. 5l.

Character of the Gerus, Triptilion. Capitule five-flowered, homogamous. The involucre shorter than the flowers, consisting of ten carinate folioles, terminated by a spine, and arranged in a double series, the outer ones spreading, and coriaceous, the inner ones erect, and scarious at the margins. Receptacle destitute of paleæ or scales, but bearing short hairs or fimbrix. The Corolla two-lipped, the outer lip much broader, three-toothed, the inner two-toothed or two-cleft. Anthers furnished with a tail. Achenia (fruit) without a beak, obpyramidal, owing to its elevated ribs three or four-square, pilose, or quite smooth. Pappus in one row, very long, consisting of three or five broad, subconduplicate stalks, recurved at the apex, with long fimbrix, or ciliae, often downy or hairy in the inner side.

Description of the Species, Triptilion spinosum. Herb very much branched, branches squarrose. Stems two feet high, numerous, decumbent, flexuose, slender, round, stiff, every where covered copiously with hairs. Leaves scattered, sessile, lanceolate, revolute at the margin,universally hairy, cartilaginous, dry, from half an inch to an inch in length, with a prominent rib on the under surface, but otherwise veinless, the lower ones pinnatifid, the upper ones incisedly toothed, or rarely entire, the segments few, lanceolate,
they, as well as the apex of the leaf, armed with a long stiff spinous point. Flowers very much crowded together in a fasciculated corymb. Involucre imbricated, unguiculate; the squamæ and bracts lanceolately subulate, the top consisting of a lengthened spreading three-cornered spiny mucro. Receptacle dotted, thickly clothed with villous hairs. Florets five, hermaphrodite, forming a very short ray, of a most beautiful and enduring blue colour, the outer lip roundish, oval, spreading, concave beneath, obtusely three-toothed, the interior of a pale yellow, bipartite, revolute, twice as short as the exterior; segments linear, lanceolate, obtuse, agglutinate at the margins. Anthers terminated by an acute lanceolate appendage, blue at the top, having at the base two petals; the setæ simple, naked, attenuated. Stigma two-parted; segments linear, convex below ; the apex spreading truncate, minutely papillose. Achenia obpyramidally threecornered, attenuated at the base, smooth. Pappus exerted, of a snowy white, and most beautiful appearance ; consisting of three rays, paleaceous, linear, canaliculate, caducous, the top recurvately spreading, forming a feathery pencil.

Popular and Geographical Notice. This genus consists of herbaceous plants, natives of Chili. The present species has a conconsiderable geographical range, being found near Valparaiso, the city of Conception, and as far south as between Valdivia and Osoro, in fields and plains. It is extremely well worth cultivating, not only from contrast of colour of the outer and inner lip of the corolla, but on account of the enduring nature of the colour of the flowers, which renders it a very great favourite with the inhabitants of Chili, who term it Siempreviva, and employ it extensively for ornamental purposes. It is remarkable that the part of the corollas which is blue, instantly becomes white on immersion in warm water. It has other claims to regard, for being intensely bitter, it proves a valuable remedial agent in many diseases.

Introduction ; Where grown ; Culture. It was first raised in this country in \(182 \%\). The specimen drawing was obligingly sent to us in July. by Mr. Philip Frost, from the garden of the Countess of Grenville, at Dropmore; and is now, at the end of twelve months, as brilliant in colour as when gathered. It has tuberous roots, should be repotted after flowering, in sandy loam and leaf mould; and kept in a cool greenhouse.

Derivation of the Names.
Triptilion, from T \(\rho \varepsilon \iota \rho\) three, and \(\pi \tau i \lambda o \nu\) a plume, alluding to the soft featherlike character of the pappus or seed down. Spinosum, from spina a thorn, alluding to the pointed termination of the leaves.

Synonyme.
Triptilion spinosum. Ruiz and Pavon: Systema Veget. 1, 185.
Naussautia spinosa. Don in Philos. Mag. 1832, p. 390.
Triptilion laciniatuar. Wild. sp. III, p. 1628.



\section*{HIBIS'CUS SPLENDENS.}

\section*{SPLENDID HIBISCUS.}


Natural order, malvacee.


No. 225.
GENUS. Hibiscus. Linnzeus. Infolecellear polyphyllum, foliolis simplicibus, vel bifurcatis. Calyx quinquefidus, persistens, foliolis æstivatione valratis. Corolle petala jo, hypogyna, ohovata-inæquilatera, unguibus imo tubo stamineo adnata, æstivatione conrolutiva. Tcbes stamineus columnæ-formis, infra apicem nudum, truncatum r quinque dentatum, filamenta plus minus copiosa exserens. Anthere reniformes, bivalves. Oraricm sessile, simplex, quinqueloculare. Orola in loculis plurima, r pauca angulo centrali inserta. Stylus terminalis, apice exserto quinquefidus; stigmata capitellata, rarissime cohærentia. Capsula quinquelocularis, loculicide quinqueralris, ralvis medio margine septa seminifera gerentibus, columella centrali nulla. Semirsa plurima \(\nabla\) interdum aborta pauca, adscendentia, reniformia, testa crustacea, nuda aut squamulosa vel interdum lanata: Esibryo intra albumen parcissimum mucilaginosum homotrope arcuatus; cotyledonibus foliaceis, sesse plicato-involveutibus, radicula infera, Endlicher; Genera Plantarum, p. 989.
species. Hibiscus splendens ( Frazer, MSS) frutex, aculeis rectis basi tuberculatis, corolla expansa extrosum costis pluribus flexuosis tomentosis, calyce 5 -fidn laciniis acutis, 3 nervibus carinatis, involucro multipartito laciniis lineari-subulatis interdum ramosis calyce paulo brevioribus, pedunculo supra medio obliquæ articulata to, folii palmatis 3.0 lobatis, lobis lanceolatis. GRAH.

Character of the Genụs, Hibiscus. Involucellum manyleared, leaves simple, or forked. Calyx five-parted, persistent, valvate in æstivation. Petals of the corolla five, situate on the receptacle, unequally obovate, being joined by ungues to the base of the stamineous tube, convolvate in æstivation. Stanineous tube columnlike, naked beneath the apex, truncate, or five-toothed, putting forth filaments more or less abundant. Anthers reniform, two-valved. Otariun sessile, simple, five-celled. Ovules many or few in the cells, inserted on the central angle. Style terminal, the apex projecting with five divisions. Stigmas in very little heads, rarely cohering. Capsule five-celled, and five-valved, valves bearing septa, containing the seeds on the middle of their margin, no central columella. Seeds many, or sometimes from abortion few, rising upwards, kidney-shaped, testa crustaceous, naked or in scales, or sometimes moolly. Embryo curved in the direction of the seed, within a very small mucilaginous albumen; cotyledons leafy, plicately folded, radicle inferior.

Description of the Species, Hibiscus splendens. Stem round, from four to twenty-two feet high, clothed with stellate pubes55.
cence, amongst which are scattered tubular prickies, arising from callous glandular bases, red on the young shoots, green on the old. Branches axillary, round, ascending. Leaves six inches long, from four to six inches broad, palmately divided into three or five lobes, underneath strongly reticulated, thickly covered on each side with a harsh stellate pubescence, lobes lanceolate, irregularly dentate, ribs prominent, more or less aculeate. Petioles in the upper leaves from two to three inches long, roundish, and aculeate, similar to the ribs. Stipules about an inch long, green, subulate, linear, free, exteriorly pubescent. Peduncle solitary, longer than the petiole, single-flowered, and bent a little from the calyx. Involucre about the length of the stipules, segments linear, subulate, sometimes branched. Calyx yellowish, divided into five segments, somewhat longer than the involucre, exteriorly pubescent, segments tapering, threenerved, the centre forming a strong keel. Corolla unexpanded about three inches in length, when fully expanded from five to six inches in diameter. Petals five, obovate, of a most delicate rose colour, nerves flexuose, prominent on the outside, and pubescent. Sramens numerous, united, filaments pale towards the base, in the upper part rose-coloured. Anthers a dark crimson, arranged in the form of a cone. Pollen large, spherical, hispid. Style about an inch long, projecting about a quarter of an inch beyond the conical combined anthers. Germen five-celled, covered with silky pubescence. Ovules numerous, each cell containing two. Seeds greenish, angular, wrinkled, and warty.

Popular and Geographical Notice. The order Malvacer is, for the most part, tropical, and in regions of high temperature the species revel in all their beauty. The present plant, as stated under No. 212, is one of the most beautiful of the genus. It is a native of New Holland, where, says its discoverer, Mr. Frazer, it is so beautiful that it is considered the King of all known Australian plants, that its flowers are nine inches across, and so profuse a flowerer is it, that they literally cover the entire plant.

Introduction; Where grown; Culture, This species was raised from seeds sent to this country by Mr. Frazer, in the year 1828, from which flowering plants were raised in 1830. Our drawing was taken from a plant in the collection of the Birmingham Horticultural Society. It may be propagated either by seeds, or by cuttings. Its soil should be sand, loam, and peat.

Derivation of the Name.
Hibiscus, from \(\quad \beta \iota \sigma \kappa o s\), the Greek name of a plant nearly allied to this genus. Splendens, in allusion to its elegant inflorescence.

Synonymes.
Hibiscus splendens. Bot. Mag. t. 3025. Bot. Reg. t. 1629. Flor, Cab. Vol. 1, t. 22. Graham, Edin. Philos, Jour. p. 176.
F. W.
\&



\section*{RPIDENDRUM NU'TANS。 \\ NODDING EPIDENDRUM.}


No. 226.
GENUS. Epidfndrum. Linnefu. Perigonit foliola exteriora patentia, subæqualia; interiora æqualia vel angustiora, aut rarius latiora. Labellest ungue cum marginibus columnæ omnino vel partim concretum, limbo integro vel partito, disco sæpius calloso, costato vel tuberculato, interdum in calcar ovario adnatum productum. Colomins elongata, clinandrio marginato, sæpius fimbriato. Anthera carnosa, bi-quadrilocularis. Pollinia quatuor, caudiculis totidem replicatis. Herber Americanæ tropicæ, epiphytæ; caule nunc basi vel apice pseudo-bulboso, nunc elongato, apice folioso, foliis carnosis vel rarissime striato-venosis, floribus spicatis, racemosis, corymbosis vel paniculatis, terminalibus lateralibus. ENDLICHER: Genera Plantarum. 193.

SPECIES. Epidendrem nutans (Shartz) Foliis oblongis distichis undu. latis obtusis, racemo nutante multifloro, sepalis oblongo-lanceolatis petalisque lineari-lanceolatis obtusis patentibus, labelli trilobi lobis lateralibus cordatis ovatis: intermedio transverso truncato apiculato basi bicalloso venis tribus elevatis. Lindley.

Character of the Genus, Epidendrum. External folioles of the perigone spreading, nearly equal ; the internal equal, or narrower, very seldom broader. The Labellum, by means of its claws, either entirely or partly cohering to the margins of the column, the limb entire or divided, the disc generally callous, ribbed, or tuberculated; the limb is also occasionally prolonged into a spur, adhering jo the ovary. Colusyn elongated, clinandrium margined, often fmbriated. Anther fleshy, two-four-celled. Pollev-masses four, with a similar number of double tails.

Description of the Species, Epidendrum nutans. Epiphyte. Stem simple, round, leaves distichous, undulating, obtuse. Inflo= rescence racemose, nodding, many-flowered. Flowers of a whitish green colour, the external folioles oblong-lanceolate, the internal linearlanceolate, obtuse, spreading; labellum three-lobed, lateral lobes cordate and ovate, the central lobe truncated, apiculate, having two callous
points at the base, and three elevated veins. Ovary cohering with the prolonged spur of the labellum, so as to form a cuniculus.

Popular and Geographical Notice. The very extensive genus Epidendrum, containing nearly one hundred species, is peculiar to the New World, more especially the Southern part of America, and the West Indian Islands; several are natives of Mexico, but scarcely any extend farther North; yet the only epiphyte in the United States belongs to this genus, viz. Epidendrum conopseum (Robert Brown), which is found on the Magnolias of Carolina and Georgia, and hence sometimes called Epidendrum Magnoliæ. The species now figured grows on trees among the mountains of the Western side of the island of Jamaica, Many species of Epidendrum are remarkable for the exquisite odour of their flowers, which they are most apt to diffuse in the evening or during the night. Of such is the one now before us, which is thus among the number of the plants
"That keep
Their odour to themselves all day, But when the sun-light dies away, Let the delicious secret out, To every breeze that roams about."

\section*{Moore.}

Introduction ; Where grown ; Culture. Brought to England in 1793. The plant from which our drawing was made flowered in the rich collection of the Messrs. Loddiges, at Hackney. It grows in a pot on the stage of the stove, and requires sandy loam, with a large quantity of potsherds at the bottom, to ensure free drainage, which is the great requisite of these plants; or it may be suspended from the roof, attached to a branch.

Derivation of the Names.
Epidendrun, from \(\varepsilon \pi \iota\) upon, and \(\delta \varepsilon \nu \delta \rho o \nu\) a tree, the habitat being on the stems or branches of trees. Nutans, from the nodding appearance of the group of flowers.

\section*{Synonymes.}

Epidendrum nutans. Swartz: Prodromus descriptionum vegetabilium Indiæ occidentalis, 121. Flora Indiæ occidentalis, t. 1499. Willdenow: No. 13. Hooker: Exotic Botany, I, t. 50. Lindley : Genera and species of Orchide. ous plants, p. 105,



\section*{SIP HOCAM'PYLUS REVOLU'TUS. \\ REVOLUTE SIPHOCAMPYLUS.}


GENUS. Sifhocampylus. Pohl. Calyx tubo obconico turbinato vel hemisphœrico, cum ovario connato, limbo libero quinquefido. Corolla summo calycis tubo inserta, tubulosa, tubo integro, incurvo vel rarius recto, limbi quinquefidi, bilabiati, laciniis subæqualibus vel duabus superioribus paulo longioribus. Stamina quinque, cum corolla inserta, filamenta et antheræ, quarum duæ inferiores, vel omnes, apice barbatæ vel mucronatæ, connata. Ovariominferum, vertice breviter exsertum, biloculare. Ovula in placentis carnosulis dissepimento utrinque longitudinaliter adnatis plurima, anatropa. Stylus inclusus, stigma exsertum bilobum, lobis divaricatis orbiculatis. Capsula bilocularis, vertice exserto loculicido bivalvis. Semina plurima, minima, scrobiculata. Embryo in axi albuminis carnosi orthotropus, radicula umbelico proxima, centripeta. Suffrotices Americani tropici; folins alternis vel oppositis, petiolatis, serratis; floribus axillaribus solitariis, pedicellatis, rarius in racemum vel corymbum approximatis, rubris. ENDLICHER. Genera Plantarum, p. 511, No. 3859.

SPECIES. Siphocampylus revolutus (Graham) caule terete erecto, parce ramoso, ramis villosis, flexuosis; foliis alternis, breviter petiolatis, rugosis, rigidis, cordato-ovatis, acuminatis, superioribus apice revolutis, supra scabrosis, subtus pubescentibus, marginibus reflexis, simpliciter dentatis; pedicellis folio brevioribus, tubo calycis turbinato-hemisphœrico, lobis subulatis divergentibus dimidio breviore; corolla calycibus \(5_{0}\) longiore, externe villosiusculo, tubo basi apiceque constricto, limbo subæqualiter 5 -fido, lobis lanceolatis superioribus rectis, aliis reflexis, interne pilosiusiculis.

Character oe the Genus, Siphocampylus. Calyx with an obconical top-shaped or hemispherical tube, adhering to the ovarium, the limb being free and quinquefid. Corolla inserted into the top of the calyx tube, tubular, with an entire incurved or rarely straight tube, the segments of the five-cleft bilabiate limb subequal, or the two upper slightly longer. Stameas five, inserted along with the corolla; filaments and anthers, of which the two lower, or the whole, are bearded or mucronate at the apex, connate. Ovary inferior, slightly superior at the apex, bilocular. Ovula numerous, upon somewhat fleshy placentr attached to each side of the dissepiment, anatropous. Style included; stigma exserted, two-lobed, lobes divaricated, round. Capsule bilocular, free at the apex, loculicidal, bivalvular. Seeds very numerous, minute, scrobiculate. Embryo in the axis of fleshy albumen, orthotropous, radicle towards the umbilicus.

Description of the Species, Siphocampylus revolutus. Sten erect, round, sparingly branched, branches zigzag, villous, green. Leaves alternate, on short stout channelled petioles, rigid, wrinkled, spreading wide, dark green and rough, with very short hairs above, lighter and villous below, cordato-ovato, acuminate, the apex of the upper ones revolute, the edges reflexed, simply dentate; middle rib and veins very prominent below, channelled above. Peduncles solitary, axillary, erect, half as long as the leaves, villous, without bracts. Calyx green, villous; tube turbinato-hemispherical, with 10 strong ribs, and as many round glands between the apices of these; limb 5-partite, segments twice as long as the tube, subulate, diverging at the apex. Corolla five times as long as the calyx, purplish red; tube entire, slightly deflexed, contracted at the throat, and for a space equal to the length of the calyx segments at the base, where it is deeply marked by five grooves, in the centre infiated and compressed laterally; limb five partite, segments subequal, linear-lanceolate, acute, slightly hairy within, the two upper straight and paler within, the lateral ones spreading or reflexed, slightly falcate downwards, the lowest revolute, and, as well as the lateral ones, nearly white. Stanens as long as the corolla; filaments inserted along with this into the top of the calyx, adhering to the tube as far up as the extent of the contracted portion at the base, above this uniting into a tube, red and glabrous; anthers lead-coloured, cohering into a curved tube, the two lower bearded with white hairs at the apex, the three upper having a very few similar hairs in their commisures. Style encased by the stamens, projecting beyond the anthers, glabrous, red. Stigma of two blunt, revolute lobes. Germen inferior, green, glabrous, and with a free conical apex, bilocular. Ovules very numerous, small, on large central placentæ.

Popular and Geographical Notice. This beautiful genus is entirely American, and scarcely passes without the tropics, but is found on both sides of the line. I do not know from what part the seeds of the present species were introduced. It is a true example of the genus, and altogether unlike the plants known in cultivation as Siphocampylus bicolor (t. 139) and S. Cavanillesii (t. 234), which are true Lobelias.

Introduction; Where grown ; Culture. Seedling plants were received at the garden of the Caledonian Horticultural Society, from Mr. Low, of Clapton, in September, 1839. They grew to the height of five feetlast year, in the stove, without flowering; cuttings were formed, these rooted readily, and, when of a small size, flowered in February, 1841. We possess the plant at the Botanic Garden, also from Mr. Low. It is kept in the Greenhouse, and is very healthy, but has not yet come into flower. It requires no particular soil or treatment.

Derivation of the Names.
Siphocampylus, from \(\sigma \iota \phi \omega \nu\) a tube, and \(\kappa \alpha \mu \pi v \lambda o s\) curved, in allusion to the bent tube of the corolla.

Grah.


'linyernthes macelatex.

\section*{CORYAN'THES MACULA'TA.}

SPOTTED CORYANTHES.


NATURAL ORDER, ORCHIDACEE.


No. 228.
GENUS. Coryanthes. Hooker. Perigonit patentissimi foliola exteriora dilatata, flexuosa, conduplicata, lateralia maxima, basi distincta, interiora multo minora, erecta. Labellua calumnæ basi continuum; unguiculatum, maximum, galeatum, tridentatum, in medio unguis appendice poculiformi circumdatum. Colusna elongata, teres, basi bicornis, apice recurva, bialata; stigmate transverso rimæformi. Anthera bilocularis. Pollinia duo, compressa, postice sulcata, candicula lineari arcuata, glandulæ lunate apicibus re-currato-approximatis.-Herbe Americanæ tropicæ, epiphytæ, pseudobulbosæ; foliis striatis, racemis pendulis, floribus maximis. Endlicher Genera Plantarum, p. 199.

SPECIES. Coryanthes maculata (Hooker) Bulbo elongato, foliis latolanceolatis, racemis multifloris nutantibus, (labello intus purpureo-maculato.)

Character of the Genus, Coryanthes. The Perigone very greatly spread out, having the external folioles (sepals) dilated, flexuose, conduplicate, the lateral ones largest, distinct at the base ; "the interior folioles (petals) much smaller, erect. Labellum continuous with the base of the column, unguiculate, very large, helmet-shaped, three-toothed, in the middle of the claw surrounded by a cup-shaped appendix. Colunn elongated, round, two-horned at the base, the apex recurved, and two-winged, the stigma transverse resembling an opening. Anther two-celled. Pollen masses two, compressed, furrowed behind; the little tail linear, curved; the little glands cres-cent-shaped, with the points recurved and approximating.

Description of the Species, Coryanthes maculata. Pseu. Do-bulbs crowded, each about six inches long, striated, broad at the base, and tapering to a point whence spring two expanding "broadly lanceolate striated leaves, of rather a membranous consistence. Scape nearly two feet long, springing from the base of the bulbs, at first taking a horizontal direction, ultimately pendulous, furnished with two or three remote scales. Inflorescence racemose. Pedicels supported by lanceolate bracts, which partially embrace them. Sepals membranous, thin, soon becoming flaccid, the upper one lanceolate,
acuminate, undulating, the lateral ones very large (about two inches and a half broad) free, contracted at the base, semi-cordate, when first expanded resembling the wings of a bat, afterwards becoming flaccid. Petals lanceolate, undulate, flexuose, directed towards the helmet of the lip. Labellum fleshy, two inches and a half long, unguiculate, spotted with yellow and purple; hypochilium dilated, the sides inflexed, helmet-shaped, rounded externally, passing into a narrow channelled mesochilium; the epichilium very large, less fleshy, helmetshaped, the ovate apex inflexed. Columin free, furnished at the base with two elongated horns which distil a liquid, the apex club-shaped and recurved, the margins prolonged into wings. Stigma with a transverse cleft.

Popular and Geographical Notice. The woods of Demarara have the trunks of the trees frequently ornamented with the pendant flowers of this most singular plant. As if to form a contrast with the nearly regular flower of the Paxtonia rosea, which we lately figured, the parts of the flower assume every possible peculiarity, rendering the spectator doubtful whether he be looking at a flower, insect, or a bird. "The lip is furnished near its base with a yellow cup, over which hang two horns constantly distilling water into it, and in such abundance as to fill it several times ; this cup communicates by a narrow channel formed of the inflated margin of the lip, with the upper end of the latter, and this also is a capacious vessel very much like an old helmet, into which the honey that the cup cannot contain may run over." The object of this secretion probably is to attract insects or birds, which by the disturbance they cause in extracting the honied fluid, aid in the fertilization of the seeds. Robert Brown believes that many orchidaceous plants, except Ophrys and its kindred, are dependant on insects for accomplishing the process of fertilization. Humming birds, with their long slender bills appear likewise to contribute to this object, and their small size and lightness seem to fit them well for this office. (See Kalm's Travels in N. America, Vol. II, p. 354.)

Introduction; Where grown ; Culture. Sent in 1829, by James Ankers, Esq. to C. S. Parker, Esq. Liverpool. Our specimen grew in the inexhaustible store of Messrs. Loddiges. It requires to be suspended in the damp stove.

Derivation of the Names.
Coryanthes, from roo \(\mu \mathrm{g}\) a helmet, and \(\alpha \nu \theta_{\text {og a }}\) fiower. Maculata, from maculata, spot.

Coryanthes maculata. Hooker: Bot. Mag.t. 3102. Lindley, Botanical Register, t. 1793.



\title{
OSBEC'KIA CANES'CENS. \\ hoary osbeckia.
}


NATURAL ORDER, MELASTROMACE E.


No. 229.
GENUS. Osbeckia. Linneus. Calyx tubo orato v. oblongo, inferne cum orarii basi connato, sæpe setis a basi palmatis v pube stellata aut rarissime simplici vestito, limbi quadriquinquefidi lacinis cum totidem appendicibus alternantibus. Corole petala 4 r .5 , calycis fauci inserta ejusdem laciniis alterna, orata rel obovata. Stamina 8 rel lo, cum petalis inserta, subæqualia, antheræ oblongo-lineares, subarcuatæ, rostratæ, uniporosæ, connectivo ad basin incrassato, antice breviter bicalcarato vel biauriculato sive mutico. Orarirar semi-inferum, vertice iibero conico, setosum, quadriquinqueloculare, loculis multiovulatis. Sty Capsula sicca, calycis tubo sursum truncato inclusa, quadri-quinquevalvis. Semina plurima, cochleata Frutices vel suffrutices, in Asia et Africa tropica crescentes, plerumque setoso-asperi ; ramulis magis minusve tetragonis, folins oppositis, rarissime verticillatis, nerrosis, subintergerrimis, floribus terminalibus sæpe capitatis, bracteato-involucratis, nunc solitariis, rarius racemosis vel subcorymbosis, purpurascentibus, speciosis. ENDLrCHER. Genera Plantarum, page 1214.

SPECIES. Osbeckia canescens (Meyer) caulis suffruticosus, quadrangularis; foliis decussatis subsessilibus oratis 5.7 nervis basi cordiformibus; floribus racemosis paniculatis, petalis purpureis obcordatis emarginatis; calycis lobis persistentibus, appendicibus subulatis integerrimis; connectivis curvatis purpureis basi luteis.

Character of the Genus, Osbeckia. Tube of the Calyx ovate or oblong, joiner with the base of the orarium, frequently clothed with setæ palmate at the base, or a stellate pubescence, very rarely a simple pubescence, limb with four or five divisions, alternating with the appendices. Petals of the corolla four or five, inserted in the throat of the calyx, ovate or obovate, and alternate with the divisions of the calyx. Stamens eight or ten, inserted with the petals, somewhat equal. Anthers oblong, linear, somewhat bowed, rostrate, one-pored, connective thickening to the base, with two short spurs, or ears projecting forward, or absent, four or five celled, many-ovuled. Strie filiform, thickening beneath the apex. Stigira punctiform, Capsule dry, including the truncated tube of the calyx, four or five celled, loculicidal, four or five valved. Seeds many, cochleate.

Description of the Species, Osbeckia canescens. Stem somewhat shrubby, square, unbranched, about two feet and a half 56.
high, covered thickly with a stellate pubescence, giving it a roughness, which is very perceptible to the touch. Leaves heart-shaped at the base, opposite, decussate, shortly petiolate, and densely covered on each side with the same stellate pubescence which is found on the stem, prominently from five-seven nerved. Flowers shortly pedunculate, large, and showy, of a delicate and pleasing purple colour, arranged in a paniculate raceme. Bracts large, pinkish, half the length of the calyx, pubescent, concave, half enclosing the alabastum, very deciduous. Petals four, inversely heart-shaped, notched at the end, of short duration. Calyx covered with a stellate pubescence, divided into four parts, each part regular ovate, acuminate persistent, alternate with the divisions are found subulate appendages, which are pubescent, similar to the other parts of the calyx. Filaments yellow, deciduous, ten, attached to an elevated rim situate at the base of the divisions of the calyx. Connective longer than the flaments, curved, bifid at the base, of a bright purple colour, marked with yellow at the base. Anthers of a purplish blue, half the length of the connective. Pollen white, smooth, having a transparent line in the centre. Style twice as long as the stamens and anthers, curved, pinkish, smooth. Stigma situate at the extreme apex. Ovarium five-sided, pubescent, five-celled, five-valved. Seeds numerous, attached to placentæ, arising from the centre of the ovarium, and situate in the centre of each valve

Popular and Geographical Notice. The genus Osbeckia is composed of species which are exceedingly handsome and showy, as may be witnessed by the one now figured. They are all shrubs, or suffruticose plants, inhabiting the tropical parts of Asia, Africa, and America.

Introduction ; Where grown ; Culture. This plant was introduced from the Royal Berlin Botanic Garden into the Birmingham Horticultural Gardens, in the year 1838, and from a plant in the latter establishment our drawing was taken. It was there treated as a stove plant, but possibly may even be suitable for ornamenting the open ground during the Autumn months. It flowers in August and September. It should be planted in loam and peat, and may be increased by cuttings, and also by seeds. F. W. Derivation of the Names.
The generic name is given in honor of Mr. P. Osbeck, a Swedish clergyman and naturalist ; the specific, canescens, from its hoary appearance.

Osbeczia canescens. Meyer, Floral Cabinet, vol. 3. p. 131.



\section*{BRACHY'COME IBERIDIFO'LIA.}

IBERIS-LEAVED BRACHYCOIIE.

\[
\text { No. } 230 .
\]

GENUS. Brachycome. Cassinf. Capitulum multiflorum, heterogamum, Goribus radii uniseriatis, ligulatis, femineis, disci tubulosis, hermaphroditis. Involucri campanulati squamæ pauciseriales, margine membranaceæ. Rfeceptaculun conicum, subalveolatum. Corolle radii ligulatr, disci tubulosix, limbo quinque-dentato. Anthere ecaudatæ. Achenia plano-compressa, erostria. Pappus brevissimus, setoso-coroniformis. Herbe Novæ-Hollandiæ perennes, erectæ ; foliis alternis, glabris, pauce dentatis, pinnatilobatis vel trifidis, capitulis solitariis ramos apice aphyllos terminantibus, disco luteo, radio albo. Endlicher: Genera Plantarum, p. 381.

SPECIES. Brachycone iberidifolia (Benthan) Glaberrima, caule erecto ramoso, foliis pinnatisectis : segmatis lineari-subulatis distantibus integerrimis, pedunculis nudis monocephalis, involucri squamis oblongis acutiusculis apice membranaceis, acheniis subteretibus clavatis lævibus vel vix tuberculosis pilis paucis hispidulis apice plicatis, pappo subnullo. Bentham, in Hugel Enumeratio, p. 59, No. 198.

Character of the Genus, Brachycome. Capitule manyflowered, heterogamous, florets of the ray in a single series, ligulate, pistilliferous, those of the disk tubulose, hermaphrodite. The scales of the campanulate involucre in few rows, and membranous at the margins. Receptacle conical, slightly pitted, The corollas of the ray ligulate, those of the disk tubulose, with the limb five-toothed. Anthers devoid of a tail. Achenia (seed-vessels) flattish compressed, without a beak. Pappus very short, occurring in the form of a bristly crown.
Description of the Species, Brachycome iberidifolia. A peremnial herbaceous plant, smooth throughout; stem erect, branched, leaves pinnately cut, segments linear-subulate, distinct, entire. Peduncles naked, bearing a single capitule. Scales of the involucre oblong, somewhat pointed and membranous at the top. Florets of the ray tubulose, tube somewhat bulging and hairy below, limb smooth, five-toothed. Stamens five, anthers syngenesian, and devoid of an
appendix. Style one, stigmata two, club-shaped and hairy. Achenia flattish, club-shaped, and crowned by a scanty, bristly pappus or seed-down.

Popular and Geographical Notice. This is one of the plants discovered on the Swan River, on the West coast of New Holland, by Baron Hugel. It is called the Large Swan (River?) Daisy, from its resemblance in its botanical characters to the genus Bellis, from which, When the pappus is entirely wanting, as occasionally occurs with this species, it scarcely differs, save in the membranous tips of the scales of the involucre. Though we hail it as a pleasing accession to our already rich store of cultivated flowers, we much question whether the settlers on the Swan River will accept of it as a substitute for the daisy of their native land, with all its touching associations and poetical enchantments, and which has possessed a charm and an interest for the self-exiled missionary, scarcely to be understood, save by those long severed from their native strand. The devoted and accomplished missionary, Dr. Carey, while at Mysore,
" Where Flora's giant-offspring tower
In gorgeous liveries all the year,"
cherished an English Daisy with an almost passionate regard. He thus wrote to a friend in Yorkshire: "With great labour have I preserved the common field daisy, which came up in some English earth, for six or seven years, but my whole stock is now only one plant. I have never been able, even with sheltering them, to preserve an old root through the rains, but I get a few seedlings every year. The proportion of small plants in the country is very inconsiderable, the greater number of our vegetable productions being either large shrubs, immense climbers, or timber trees."

Introduction ; Where grown; Culture. Introduced by means of seeds sent to Mrs. Wray, of the Oaklands, near Cheltenham, to whom we are indebted for the specimen now figured. It flowers abundantly in the open border, but is so intolerant of wet, that to ensure its preservation, it should be taken up, and transferred to the greenhouse, in autumn.

Derivation of the Names.
Prachycome, from \(\beta \rho a \chi u s\) short; and ко \(\mu \eta\) hair, alluding to the short pappus. Iberidifolia, from iberis, a kind of candy tuft, and folium a leaf.

Brachycome iberidifolia. Bentham in Hugel's Enumeration of the Swas River Plants, p. 59, No. 198; Botanical Register, 1841, fig.9.



\section*{GALEAN'DRA DEVONIA'NA. DUKE OF DEVONSHIRE'S GALEANDRA.}


No. 231.
GENUS. Galeandra. Lindley. Perianthium patens, petalis sepalisque subæqualibus adscendentibus. Labellex infundibuliforme, indivisum vel obsolete trilobum, calcaratum, intus lamellis quatuor auctum. Columina erecta membranaceo-alata, clinandrio declini. Pollinia duo, postice excarata, caudicula brevi glandulæ brevi divergenti bilobæ adnata. Herbe terrestres, et epiphytæ, caulibus foliatis, racemis terminalibus. LiNDLEY: in Sertum Orchidaceum, Tabula XXXVII.
species. Galeandra Devoniana (Lindley) Caule erecto simplici tereti polyphyllo, foliis lanceolatis trinerviis, racemo sessili erecto multifloro, labelli lamina orata obtusa crenulata lamellis quatuor pone basin, antheræ crista carnosa rotundata pubescente.

Character of the Genus, Galeandra. Perianth spreading, sepals and petals nearly equal, ascending. Lip undivided or obscurely three-lobed, spurred, internally enlarged by four plates or lamellæ. Colunn erect, membranaceously winged, clinandrium directed downwards. Pollen-masses two, hollowed out behind, the caudicula short, and adhering to the short diverging two-lobed gland.

Description of the Species, Galeandra Devoniana. Stem erect, simple, round, many-leaved, leaves embracing the stem, lanceolate, three-nerfed. Inflorescence a racemose peduncle, sessile, erect, many-flowered. Perianti of five spreading folioles, nearly equal, of a yellowish green, except the lip, which is of a whitish or cream colour, marked by pinkish, longitudinal, and irregularly transverse lines. Lip prolonged into a spur of a green colour: the lamina ovate, obtuse, crenulate, marked, at the hinder part, with four elevated plates. Axthers furnished with a fleshy rounded pubescent crest.

Popular and Geographical Notice. The following is an account of this plant, by Mr. Schomburg, its discoverer, extracted from his letter, in Dr. Lindley's elegant Sertum Orchidaceum: "During our peregrinations we have seen this plant no where else but at the
banks of the Rio Negro, a tributary of the Amazon; where, in the neighbourhood of Barcellos, or Mariua, we found it growing in large clusters on the trees which lined the river, sometimes on the Mauritia aculeata, or even on the ground, where the soil consisted of vegetable mould. It was so luxuriant that some of the large clusters of stems, which sprouted from a common root, might have been from ten to twelve feet in circumference." The profusion of orchidaceous plants in tropical America may be judged of by the following statement of Dr. Walsh: "The destruction of a tree in these woods does not lessen the abundance of vegetable life. On every stem which had lost its own bark and leaves, a crop of parasites had succeeded, and covered the naked wood with their no less luxuriant leaves and flowers. Of these the different species of air-plants, and Tillandsias were the most remarkable. The first were no less singular than beautiful; they attach themselves to the dryest and most sapless surface, and bloom as if springing from the richest soils. A specimen of one of these, which I thought curious, I threw into my portmanteau, where it was forgotten; and some months after, in unfolding some linen, I was astonished to find a rich scarlet flower in full blow; it had not only lived, but vegetated and blossomed, though so long excluded from air, light, and humidity. Every withered tree here was covered with them, bearing flowers of all hues, from the brightest yellow to the deepest scarlet." Notices of Brazil, II, p. 306.

Introduction ; Where grown ; Culture. Sent, by Mr. Schomburg, to the ever-augmenting stores of the Messrs. Loddiges, at Hackney, where our drawing was made, in 1840. It grows in a pot, in the stove. Much attention must be given to ensure free drainage.

Derivation of the Names.
Galeandra, a word most inelegantly compounded of Galea a helmet, and avip a stamen, from the helmet-shaped crest of the anther. Devoniana, a justly merited compliment to the Duke of Devonshire, President of the Horticultural Society.

Synonyme.
Galeandra Devoniana. Lindley, Sertum Orchidaceum, t. 37.


Bifinniis impiestore

\title{
EP'ACRIS IMPRES'SA. Var. glaucescens. PITTED EPACRIS.
}


No 232.
GENUS. Epacris impressa. Cavanilles. Calyx quinquepartitus, coloratus, multibracteolatus, bracteolis textura calycis. Corolld hypogyna, tubulosa limbo quinquepartito patente imberbi. Stanina 5 , corollæ tubo inserta, inclusa r rarius exserta; filamenta filiformia, antheræ supra medinm peltatæ. Squayule hypogynæ 5. Ovariey quinqueloculare, loculis multiovulatis, stylus simplex, stigma obtusum. CAPSULA quinquelocularis, placentis columnæ centrali adnatis, semina plurima. Freticuli in Nova Hollandia obvii, in Nova Zeelandia rari, sæpius glabri, foliis sparsis petiolatis r. basi simplici sessilibus, floribus axillaribus sæpius spicam foliatam formantibus, albis v. purpurascentibus. Endlicher. Genera Plantarum, p. 748.

SPECIES. Epacris mpressavar.glaucescens; ramulis pubescentibus, foliis sessilibus subreflexis lineari lanceolatis glaucis mucronatis; floribus roseis pedicellatis axillaribus geminis; calycibus et squamulis pubescenti-relutinis.

Character of the Genus, Epacris. Calyx five-parted, coloured, with many bracteolæ, the bracteolæ of the same texture as the calyx. Corolla hypogynous, tubulose five-parted, patent, and beardless. Stamens five, inserted in the tube of the corolla, included, or rarely exserted, filaments filiform. Anthers peltate, above the middle. Squaliule hypogynous, five. Ovarium fivecelled, cells many-ovuled. Style simple. Stignia obtuse. Capsule five-celled, placenta adhering to the central column. Seed numerous.

Description of the Species, Epacris impressa; variety glauCESCENS. Stem a foot high, smooth, or pubescent, branched, branches covered with a soft white pubescence. Leaves sessile, narrowly lanceolate, entire, or very obscurely toothed, mucronate, and covered on the upper surface with a pleasing glaucous hue. Flowers smooth, of a bright rose colour, arranged in twos, axillary, situate on pedicels, and the whole forming a handsome spike of about six or eight inches long, and about two inches broad. Pedicels about two lines long, covered with imbricating scales, the margins of which are covered with a long soft pubescence. Calyx about one fourth the length of the corolla, and having the margins covered with pubescence similar to that on the scales of the pedicel. Corolla from eight to ten lines long, five-lobed at the apex, lobes ovate, reflexed. If Filaments five,
arranged alternately with the lobes of the corolla. Anthers five, situate at the mouth of the corolla. Pollen angular. Style included within the corolla, and only reaching to about half its length. Stigma capitate. Ovarium green, smooth. Seeds numerous.

Porular and Geographical Notice. The Epacrideæ are very nearly related to Ericaceæ, so much so that Link has made it only a section of Ericaceæ,but in this he is not followed either by Decandolle or Endlicher, who make it a distinct natural order, founding, as the distinction, that the anthers in the Epacrideæ are only one-celled, and destitute of awns or tails; whilst in Ericaceæ the anthers are twocelled, and are more or less furnished with these appendages. The order Epacrideæ is composed wholly of small shrubs, which are, with few exceptions, inhabitants of New Holland. Very few are found in New Zealand and the Sandwich Islands; and but one species, according to Endlicher, has been found in the Arctic regions.

Introduction; Where grown ; Culture. Our coloured figure of this favourite plant was drawn from a specimen with which we were favoured by Mr. Gregory, nurseryman, of Cirencester; it is a beautiful variety, raised by him, from British-grown seeds, sown in August, 1838; and in March, 1840, it flowered, when only twelve inches high. Mr. Gregory informs us that from the same stock he has flowered numerous other seedlings of very splendid character. The outline sketch was taken from another seedling plant raised by Mr. Williams, gardener to J. Willmore, Esq. of Oldford, from seeds imported from Van Diemen's Land. This plant was three feet high, and seven years old, when it first flowered. The most prominent difference between these varieties is in the form of their corollas, which, for the convenience of comparison, are shown in an open state, in outline, on our plate.

Epacris may be increased slowly, but surely, by cuttings, at all seasons of the year; the best time however for this purpose is to take off the hard stubby cuttings near to the bottom of the plants in autumn, plant them in sand, under a bell-glass, in a gentle heat, and they will be found nicely rooted, and ready for potting off in the following spring. In culture they require to be potted in a light sandy peat soil, and should be progressively shifted into the next sized pots, as soon as their roots are found to have reached the side of the pot: during growth, they should at all times have a plentiful supply of water. F.W.

Derivation of the Name.
Epacris, from \(\varepsilon \pi \iota\) epi, upon, and \(\alpha \kappa \rho \iota \varsigma\) a summit of a mountain, in reference to the place of growth of some of the species. Impressa, from the little impressions or pits found at the base of the corolla.
c



NATURAL ORDER，BEGONIACEÆ．


No． 233.
GENUS．Begonia．Linveus．Flores monœci．Masctli．Perigonity tetraphyllum，foliolis subrotundis，duobus exterioribus majoribus．Stamina plurima；filamenta brevissima，libera rel basi connata，antheræ extrorsæ， biloculares，loculi lineares，discreti，connectivi continui obtusæ margini adnati， longitudinaliter dehiscentes．Feminei．Pertgonitar tubo triptero，cum orario connato，limbi superi，quadrinorempartiti，persistentibus lobis pluriseria－ tim imbricatis．Orcla in placentis e loculorum angulo centrali bilamellatis plurima，anatropa．Stili tres，bifidi；stigmata crassa，flexuosa rel capitata． Capsula membranaceo－trialata，trilocularis，luculicide－trivalvis．Semina plurima，minima，striata．Embryo in axi albuminis carnosi orthotropus． Herbre in Asia et America tropica indigenæ，foliis alternis，petiolatis，integris rel palmatilobis，basi sæpe cordatis，inæquilateris，integerrimis，dentatis rel mucronate－serratis，stipulis lateralibus membranaceis deciduis，crmis axilla－ ribus pedunculatis dichotomis，floribus albis roseis rel rubicundis．ENDLICHER． Genera，p． 941.
species．Begonia nitida（Hortus Kemensis）fruticosa erecta，foliis glaberrimis inæqualiter cordatis obsolete dentatis，capsula ala maxima subro－ tunda．Dryander，Trans．Linnean Society of London，rol．I，p． 159.
Character of the Gexus，Begonia．Flower monecious． Stamintferous Flowers with the perigone of four segments，the folioles roundish，the two exterior large．Stamens numerous；fila－ ments very short，free or united at the base，anthers extrorse，two－ celled，cells linear，distinct，adherent to the obtuse margin of the continuous connectivum，dehiscing longitudinally．Pistiliferous Flowers having the tube of the perigone three－winged，united to the ovary，the limb superior，of from four to nine segments，the persistent lobes imbricated in several rows．Otary inferior，three－celled． Ovules numerous，anatropous，attached to placentr，formed of two plates，springing from the central angles of the cells．Stiles three， tro－cleft；stigmata thick，flexuose or capitate．Capsule triangular， from three membranaceous wings，three－celled，splitting by a loculi－ cidal dehiscence into three valves，Seeds numerous，small，striated． Embryo orthotropous，in the axis of a fleshy albumen．

Description of the Species，Begonia nitida．Stemi inclined to be woody at the lower part，upper rather fleshy and succulent， round，branched，remarkably smooth，and，as well as the under surface
of the leaves, shiming. Leaves alternate, petiolate, stipulate. Stipules sessile, oblong, acuminate, deciduous. Leaves somewhat fieshy, very smooth, persistent, very unequally cordate at the base, the one lobe being twice the size of the other, so that the leaf is very oblique, acute at the apex, margin irregularly and obscurely toothed, the young leaves pinkish at the margin, seven-nerved, nerves not very conspicuous on the upper, very distinct on the under surface, upper surface of a light green, under of a bright or pearly white (owing to great inequalities, of the surface). Peduncles dichotomous, with opposite bracts under the forks, and at the pedicels; bracts semiamplexicaul, ovate, erect, of a pinkish colour. Flowers monœcious. Staminiferous Flowers placed lowest in the cyme, spreading, two external longer, opposite, roundish, inseparable from the pedicels, two internal smaller, attenuate at the base, narrower but not shorter than the external ones. Stamens numerous, short, erect; anthers oblong, erect, two-celled, yellow. Pistilliferous Flowers at the top of the cyme. Perigone having the tube three-winged, two folioles in an outer whorl, five in a double series, of unequal dimensions. Ovary inferior or only semi-adherent. Styles three, short, divergent. Stigmata divided, large, spiral, pubescent, yellow. Capsule triangular, three-winged, wings unequal, the third being very long, threecelled. Seeds very numerous, small, brown, and very much pitted.

Popular and Geographical Notice. This species of Begonia is a native of the mountains of Jamaica. The geographical destribution has already been given (Botanist, vol. III, t. 103, and V, t. 217). The affinities of the order have also been discussed, without any satisfactory conclusion being formed. The analogy of properties is in favour of the Polygoniacer. Begonia grandiflora and Begonia tomentosa have bitter astringent roots, which are used in Peru in hæmorrhages and scorbutus, like Bistort with us. Begonia odorata and Begonia suaveolens are fragrant, like Polygonum odoratum. Rheum ribes yields in the East a cooling drink, a similar one is prepared in Brazil from several species of Begonia. Oxalate of potass is obtained from several species of Rumex, so likewise from many Begonias. Sundry Rumices are used as sorrels, and the leaves of this species are known in Jamaica, and those of Begonia obliqua in Martinique as the "Sorrel of the woods." While in Brazil the leaves of Begonia ulmifolia, bidentata, spathulata, cucullata, and hirtella, are all used as cooling salads; lastly the root of Begonia obliqua is called " wild rhubarb '.

Introduction ; Where grown; Culture. Brought to England in 1779. Our plant grew in the very fine collection of John Allcard, Esq., Stratford, near London, to whose courtesy we are much indebted. It groms in the conservatory, and is easily propagated by cuttings.

\section*{Synonymes.}

Begonianitida. Hortus Kewensis. - obliqua. Heretier, Sterpes Novæ。



\section*{GONOL'OBUS HIS'PIDUS. HISPID GONOLOBUS.}


No. 234.
GENUS. Gonolobus, Richard. Calyx quinquepartitus. Corolla sub. rotata, quinquepartita. Corona staminea scutelliformis, lobata. Anthere appendice membranacea terminatæ transversim dehiscentes. Pollinia transversa extremitati exteriori affixa. Stigma depresso planiusculum. Follicult patentes, rentricosi, subcostati, semina plurima, ad umbilicum comosa. Suferutices volubiles, in America boreali et tropica crescentes; foliis oppositis, lutiusculis,umbellis interpetiolaribus. ENDLICHER, Genera, page 595.
SPECIES. Gonolobus hispides. (Hooker) Suffruticosus, volubilis, foliis cordato-ovatis, acutis, undulatis, caule petiolis pedunculisque hispidissimohirsutis; floribus umbellatis, corollis coriaceis, intus basi tuberculosis.

Character of the Genus, Gonolobus. Calyx five-parted. Corolla somewhat wheel-shaped, five-parted. Corona stamineous, scutelliform-lobed. Anthers terminating with a membranaceous appendage, dehiscing transversely. Pollinia transverse, fixed to the exterior extremity, Stigma flattish. Follicles patent, ventricose, somewhat ribbed. Seeds many, comose to the umbilicus.

Description of the Species, Gonolobus hispidus. Stemi suffruticose, round, somewhat twining, clothed with long, soft, yellowish hispid hairs. Leaves opposite, petiolate, membranaceous, of a pale green colour, ovate, cordate, or orbicular, the upper ones acute, undulate, and ciliate, each side smooth, with the exception of the veins on the under side, which are prominent. Petioles from a quarter to half an inch long, covered with hairs, similar to those on the stem. Peduncles axillary, hairy, scarcely as long as the petioles. Flowers from four to ten, umbellate. Pedicels hairy, about half as long as the peduncles. Bracts subulate, about the length of the pedicels. Calyx smooth, about one third the length of the corolla. Corolla from half to three quarters of an inch in diameter, rotate, concave, of a thick coriaceous leathery texture, and of a dark shining brownish purple colour, divided into five equal ovate acute parts, in the exterior of which, at the base, are small raised points. Nectaries of five erect dark, purple, fleshy, bifid, scales from the base of the corolla; within these appendages are arranged the five stamens, which are united into a very thick stipes. Anthers five, extrose, two-celled, between which are found two small diverging lobes. Pollen masses two, compact, waxy, yellow. Ovarium inferior, ovules numerous.

Popular and Geographical Notice. The species which compose this genus are not of a showy character, indeed many of them are no better than rambling weeds, and not worth cultivating; such are for example, Gonolobus maritimus, and Gonolobus diadematus. Perhpas for beauty there has not been introduced a more attractive species than the one now figured, as each umbel contains from eight to ten blossoms, having a diameter of from two to three inches, which are arranged in the axils of the leaves, alternate on each side of the stem, at a distance of about three inches; and so freely are its flowers produced that they commence at about eighteen inches from the ground, and continue to the height of several feet. The flowers, however, are not of an attractive, brilliance, being of a dark brown purple colour; but it has a powerful and concentrated fragrance, of so singular a description that it has been compared, by Sir W. J. Hooker, to the flavour of roasted peas. The number of described species at present introduced amounts to about thirty, all natives of South, and the warmer parts of North, America: the locality of our present species is Entre Rios, South Brazil.

If, however, the species of this genus are not showy, they are, together with the whole of the natural order Asclepiadaceæ, very singular in structure, so much so that they differ from all other dicotyledones or exogens, and are more related in their sexual structure to the Orchidacer, as may be witnessed in the compact waxy texture of the pollen masses, and which are found so uniformly in the Asclepiadaceæ proper. On the relation of Asclepiadaceæ to Orchidaceæ some interesting observations have been published, by Dr. then Mr. Brown, to which the reader is referred.

Introduction; Where grown; Culture. Our plant was introduced into this country in the year 183\%. It was sent, in that year, by Mr. Tweedie, to the Glasnevin Garden, in which establishment it flowered in 1839, at which time our drawing was there taken.

Is is treated as a stove plant, but, probably, it will stand our winters in a sheltered situation, against a warm wall, on the southern coast; where, if trained, it will flower in much greater perfection than remaining in a pot; and its lurid flowers will form a striking contrast to many other climbers. It may be propagated by cuttings, placed under a hand-glass in a stove; and when potted out should be planted in loam, sand, and peat.

West.
Derivation of the Names.
Generic name, Gonolobus, from \(\gamma \omega \nu \mathrm{l}\) a an angle, \(\lambda o b \mathrm{os}\) a pod. The specific name, hispidus, from its hairiness.

Synonymes.
Gonolobus hispidus, Hooker; in Amoth. Bot. Journal, t. 295. Bot. Magazine, t. 3786.



\section*{GENIS'TA BRACTEOLA'TA.}

\section*{Racenose genista.}


No. 23.5.
Gents. Gexista. Lamáack. Calyx bilabiatus, labio superiore bipartito, inferiore tri-dentato, aut quinque-lobo, lobis tribus inferioribus ad apicem feré coalitis. Texiletm oblongoorale. Capina oblonga, recta, genitalia non omnino continens. Stamina monadelphia. Lfgemes plano.compressum aut rarius subturgidum, polyspermum rarius oligospermum, eglandulosum. Decandolle, Prod. rol. 2, p. 140́.
SPECIES. Gexista bracteolata (Line)foliis trifoliolatis, foliolis obotatis, racemis breribus, ramis striatis, cum foliis adpresse sericeo-pubescentibus.

Character of the Genus, Genista. Calyx bilabiate, with the upper lip bipartite, and the inferior tridentate, or else fire-lobed, with the three inferior lobes united nearly to the apex. Vexillum oblong-oral. KeEL oblong, straight, incompletely enclosing the sexual organs. Stanens monadelphous. Legume flatly-compressed, or more rarely somewhat turgid, manr-seeded, rarely few-seeded, without glands.

Description of the Species, Genista practeolata. A large shrub, with numerous pendant branches, flowering profusely from almost erery lateral branch. Brascees angular. The whole plant covered with short appressed silky tomentum. Leares trifoliate, on moderately long petioles, the leaflets oborate-lanceolate, slightly mucronate, darker abore, more silky below, stipules Fery small, subulate. Racemes moderately cromded, rather short; the pedicels short, with a linear lanceolate bract at their base, or about half war up, and two other rery minute ones close to, and alternating with, the lips of the calrs. Calyx with the upper lip bipartite, forming two equal
teeth, the lower lip about the size of one of the divisions of the upper, somewhat depressed, with three very minute teeth. Flower bright yellow. Standard oblongo-subcordate, emarginate, with a very short claw. Wings obliquely linear-obovate, with narrow linear twisted strap-shaped claws. Keel ovate-oblong, straight, enveloping (at first) only the base of the staminiferous tube, but ultimately drooping, and almost entirely excluding it, its petals somewhat smaller and paler, but very like the wings. Stamens monadelphous, alternately long and short. Ovary somewhat compressed, hairy, containing about nine ovules.

Popular and Geographical Notice. Dr. Lindley having kindly identified our plant with Genista bracteolata we can have no hesitation in assigning to it the name of that species. In the brief descriptions of Decandolle's Prodromus it is impossible to find characters sufficiently precise for separating species so closely allied as this and Genista candicans, and perhaps further enquiry may, after all, prove them to be identical. At least the figure in the Botanical Register, with its elongated racemes of scattered flowers, scarcely accords with our much more condensed and shorter ones, or even with one of Link's specific characters, "racemis brevibus"; neither can the leaflets of our plant be considered "obtusissima." Such discrepancies in descriptions make it difficult for us to feel satisfied, when comparison with authentic specimens would probably leave us in no doubt. The species seems inclined to produce double flowers, at least we found some which had a double standard, and where the upper lip of the calyx was subdivided into three segments. J. S. Henslow.

Introduction; Where grown; Culture, The plant was raised from seed, by R. Bevan, Esq., near Bury St. Edmunds, under the name of Cytisus Chrysobotrys, but he is not aware from whence the seed was obtained. The specimen figured in the Botanical Register was raised from seeds gathered by Mr. Webb at Teneriffe. It is probably of easy culture; and, flowering so early as the first week of March, is a great acquisition to the greenhouse.

Derivation of the Names.
Genista, from the Celtic word Gen, a small bush. Racemosus, full of clusters.

Synonyme.
Genista racemosa. Lindley, Bot. Reg. 1840, pl. 23.



\section*{LOBE'LIA CAVANILLE'SII. \\ cavanille's lobelia.}

EXOGENE.

\(0 R\) \(\left\{\begin{array}{c}\text { Natural division } \\ \text { to which } \\ \text { this Plant belongs. }\end{array}\right\}\)
-

NATURAL ORDER, LOBELIACEE.


No 236.
GENUS. Lobelia. Linneus. Calyx S-lobus; tubo obconico, ovoideo, rel hemisphærico. Corolla superne longitudinaliter fissa, bilabiata, tubo cylindraceo vel infundibuliformi recto; labio superiore sæpius minore et erecto, inferiore sæpius patente latiore 3-fido vel rarius 3-dentato. Anthere 2 inferiores vel rarius omnes apice barbatæ. Ovariom inferum vel semisuperum, imo (in speciebus simillimis) subliberum. Herbe vel rarius suffrutices, foliis alternis, floribus sæpius racemoso spicatis, pedicellis axillaribus, corolla cærulea alba, violacea, rubra vel ex rubro aurea.

SPECIES. Lobelia Cavanillesil (Martius) foliis lineare-lanceolatis, serrulatis, glabris; pedunculis folio æquantibus fere semper ebracteatis; calyce 5-fido, glaberrimo, undulato, segmentis tubo campanulato æquantibus; antheris hirsutissimis.

Character of the Geyus, Lobelia. Calyx 5-lobed; tube obconical, ovoid or hemispherical. Corolla split longitudinally above, bilabiate, the tube cylindrical or funnel-shaped, straight; the upper lip generally smaller and erect, the lower generally spreading broader, 3 -cleft or rarely 3 -toothed. Anthers, the two lower, or rarely the whole, bearded at the top. Ovarius inferior, or half superior, or (even in species much allied) nearly free.

Description of the Species, Lobelia Cavanillesii. Stem, ( 4 feet high) erect, but slender and lax, glabrous, of deep red-purple, marked by prominent scars where the leaves had fallen, branched below, hardly above, somewhat woody. Leaves (3-4 \(\frac{1}{2}\) inches long) narrow lanceolate, acutely serrulate, spreading wide, glabrous, darker above than below, where the strong middle rib and reticulated veins are very prominent. Peduncles axillary, solitary, filiform, wiry, glabrous, purple, about as long as the leaves, ebracteate, spreading wide, or having a segmoid flexure outwards. Calyx green, purplish along the ribs, undulate, glabrous, 5 -cleft, segments ovato-linear, as long as the tube which is campanulate. Corolla glabrous, bilabiate, inserted into the throat of the calyx, cleft along the whole of its upper side, where it is red but yellow below and within ; segments of the upper lip linear, acute, erect and twisted; lower lip oblong, slightly deflected, 3-dentate. Stamens scarcely shorter than the corolla; fila-
ments at first yellow, afterwards reddish, inserted into the calyx at the base of the corolla, to which they adhere at their origin, monadelphous; anthers coherent along their whole extent, red on the outside before the corolla opens, afterwards leaden coloured, densely covered with long white hairs which arise from the lines between them, yellow on the inside and yielding yellow pollen. Pistil rather shorter than the stamens ; style yellow, glabrous; stigma of two short blunt lobes, each having a tuft of hairs at its base ; germen half superior, conical at its apex, bilocular, placentr central, and covered with many small ovules.

Popular and Geographical Notice. The genus Lobelia, though much reduced, may still require reform. Lobelia Cavanillesii and the species figured at tab. 139 of this work, are among those in which a diversity of habit makes it desirable that a good technical character could be formed by which to separate them. They are in cultivation in this country as species of Siphocampylus, but with that genus (see No. 227), they neither agree in character nor habit. Decandolle considers tab. 139, Lobelia laxiflora of Humboldt and Kunth, and this, to be merely varieties of the same. The much smaller growth of this and the character which I have drawn of it may, perhaps, keep them specifically distinct. In cultivation I have not seen them to vary so much as Decandolle thinks they do, but enough to make me little confident in this opinion. I believe they are both natives of Mexico.

Introduction ; Where grown; Culture. Lobelia Cavanillesii was first described in this country by Sir W.J. Hooker in 1837, with a statement that it was imported into the Botanic Garden, Glasgow, from Professor Lehmann of Hamburgh. It was received at the Botanic Garden, Edinburgh, from Mr. Rollison, in 1838, is now frequent in collections; its elegance and beauty entitle it to general cultivation. It is probable that Mr. Cameron's observations regarding the culture of Siphocampylus bicolor (No. 139), may in some degree be applicable to this plant.

Derivation of the Name.
Lobelia in honour of Lobel, physician to James the VI of Scotland.

\section*{Synonymes.}

Lobelia Cavanilesii. Mart. choix. pl.jard. Mun. p. 12, t. 9. Hook. in Bot. Mag. 3600. Anonyma VI, Hernand, t. 351. L. persicifolia Humb, et Kunth, nov. Gen. Am. 3 p. 310.
Rafunticum Kunthianum. Presl. Prodr. Lob. p. 27. Andrieux. pl.mex. n. . 267.

Siphocampylus Cavanillesit. Hort. Lobelia laxiflora \(\beta\), angustifolia D. C. Prodr. 7, 383.

All these I quote on the authority of Decandolle, except the Bot. Mag., Humboldt, and the garden name, not haring seen any other of the works.
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Notramorice Sivembucultie

\section*{ALSTROME'RIA ERREMBAUL'TII. \\ ERREMBAULT'S ALSTRGEMERIA.}

genus. Alstrgmeria. Linneus. Perigonium corollinum superum, sexpartitum, subcampanulatum, regulare vel subbilabiatum, foliola interiora augustiora, duo basi subtubulosa. Stamina sex, imo perigonio inserta; filamenta erecta vel declinata, antheræ ovales, erectæ. Ovarium inferum, triloculare. Orula in loculis plurima, horizontalia, anatropa. Stylus filiformis, directione staminum; stigma trifidum, lobis replicatis. Capsula oblonga, v. globosa, tri-sex costata, trilocularis, loculicido-trivalvis, vel rarius baccata indehiscens. Semina in loculis plura, subglobosa, horizontalia, testa membranacea, rugosa, raphe immersa, umbilicum basilarem chalaza apicali tuberculiformi jungente. Embryo axilis, albumine carnoso dimidio brevior, extremitate radiculari umbilicum attingente. Herbae in America tropica et Australi extratropica indigenæ; radicibus tuberosa-fasciculatis, caule folioso erecto, scandente vel volubili, floribus terminalibus umbellatis. Endificher. Genera Plantarum, p. 180.

Hybrid. Alstrgemeria Errembaultif (Hortus Belgicus) foliis glabris acutis; floribus geminis; vel raro tribus; foliolis perigonii ovatis vel obovatis apiculatis purpureo maculatis.

Character of the Genus, Alstremeria. Perigonium corollalike, superior, six-parted, and rather bell-shaped, regular, or somewhat two-lipped, interior leaflets the narrower two somewhat tubulose at the base. Stamens six, inserted at the bottom of the perigonium, filaments erect, or declinate. Anthers ovate, erect. Ovarium inferior, three-celled. Ovula numerous in the cells, horizontal, anatropous. Style filiform, in the direction of the stamens, stigma trifid, lobes replicate, Capsule oblong, or globose, three to six ribbed, three-celled, three-valved, rarely an indehiscent berry. Seeds many, in the cells rather globose, horizontal, testa membranaceous, rugose.

Description of the Hybrid, Alstremeria Errembaultif. Stem round, about eighteen inches high, smooth. Involucral leaves about four, smooth, linear, lanceolate, acute, about two inches long, and a quarter of an inch broad. Peduncles about the length of the involucral leaves, round and smooth. Bracts smooth, linear, varying from an inch long, and three lines broad, to half an inch long, and a line and a half broad. Flowers about twelve, arranged in form of an umbel, about three inches in length, and two inches and a half in diameter, each peduncle bearing two, or rarely three, flowers. Leaflets of the perigone six, ovate, or obovate, more or
less apiculate, smooth, the interior white, more or less painted of a delicate rose pink colour, and beautifully spotted with purple, or short purple streaks, the apicula is more or less of a delicate green colour; on the exterior surface of the leaflet the pink colour is deeper, and is not so much spotted or streaked as the interior surface, and having a large deep green blotch near the apex. Filaments six, declinate, shorter than the style, of a dark pink colour. Anthers yellow, oblong, innate, about one sixth the length of the stamens, two-celled, cells opposite, contiguous. Style about one sixth longer than the filaments, smooth, and of the same colour as the stamens, and having the apex divided into three parts, each of which is reflexed; stigma minute. Germen ovate, or globular, smooth, with six deep furrows.

Popular and Geographical Notice. The Genus Alstrœmeria is composed of herbaceous plants with tuberous roots. They are exclusively inhabitants of South America, and that part of North America situate within the tropics. The whole of the species of this genus are peculiarly handsome, and well worthy of cultivation by those who delight in a collection of beautiful and shewy plants. Alstromeria Salsilla is a plant of great beauty, and native of Peru. Its roots are cultivated in the West Indies similar to the potatoe with us, and are eaten by the inhabitants.

Introduction; Where grown; Culture. The plant now figured, Alstrœmeria Errembaultii, is a hybrid, probably from peregrina or psittacina, and was first raised in the Belgium Garden. Our drawing was made from a plant obligingly transmitted to us from the collection of Charles Barclay, Esq. Bury Hill, near Dorking, Surrey, where not only this, but many others of this tribe of plants are cultivated in great perfection by his gardener, Mr. Scott, who, more than once, has obtained the medal of the London Horticultural Society, for their exhibition at the Chiswick gardens. This is not a tribe of plants very difficult of culture, although to arrive at the perfection of Mr. Scott, requires science, and skill. Many of the species require no protection, and may be planted out of doors, against a south wall, or in the front of a greenhouse, provided that the soil is both light and dry; in such a situation the following species have stood the severest of our winters, in the Birmingham Botanical Gardens, without having so much as a leaf injured. Alstræmeria acutifolia, pulchella, versicolor, Hookerii, tricolor, and psittacina. The only protection there employed was to keep the soil well loosened on the surface. All the species may be propagated by division, but the best plants are raised from seeds. Mr. Scott has kindly sent us some observations on the culture of the genus, which, as space will not admit their insertion here, shall be printed in the Auctarium, of the Botanic Garden.

Alstrgmeria, after Baron Alstrœmer, a Swedish botanist. Errembaultir, probably after the name of the person who raised it.



\title{
THUNBER'GIA ALA'TA. winged thunbergia.
}

Var. Green-flowered.


GENUS. Thunbergia. Linnatus. Calyx brevis cupuliformis, truncatus aut pluridentatus, dentibus tum pluribus quam decem. Bractere duæ ad basin calycis, calyce majores eumque ante anthesin valvatim tegentes. Corolla campanulato-infundibuliformis, fauce inflata, limbo quinquefido patente subæquali. Stamina quatuor didynama. Anthere erectæ, adnatæ, bilocellatæ, locellis parallelis margine ciliato-barbatis, altero basi paulo breviore ibidemque in calcar aristiforme producto. Stigma infundibuliforme, transverse emarginatum sub-bilabiatum. Annulus nectarifer crassus, lobatus, ovarium cingens. Capsula ad basin globosa, bilocellata, di-tetrasperma; superiora versus rostra-to-attenuata, depressa, commisura plana contigna. Dissepimentum membranaceum, in centro cohærens, a valvis solubile. Retinacula nulla, quorum loco annulus cartilagineus basin seminum cingens, qui ex ambitu funiculi umbilicalis oritur. Semina globosa, basi callosa perforata, funiculo umbilicali per foramen intrante. Cavun interius, a parte hili, convexum, post solutam partem callosam et fere osseam, retinaculi vices gerentem, semen extrinsecus marginatum. Flores axillares pedunculati, solitarii vel in racemum dispositi Plantr scandentes. Corolle speciosæ, luter vel cœruleæ, fauce plerumque saturatiore. Nees von Esenbeck. In Wall. Plant. Asiat. Rarior. 3, 77.
species. Thunbergia alata (Hooker) val. clorantha; volubilis, vil-loso-sericea, foliis cordato-sagittatis acutis alate petiolatis, calyce 12-fido, bractiolis repandis, limbo corollæ viride circumcluso.

Character of the Genus, Thunbergia. Calyx short, cupolashaped, truncated or many toothed. Bracte two, at the base of the calyx, larger than and including it. Corolza campanulato-funnelshaped, throat inflated, limb five-cleft, spreading, subequal. Stamens four, didynamous, anthers erect, adnate, bilocular, the lobes parallel, coarsely ciliated, unequal at the base, the shorter having a bristle-like spur. Stigma funnel-shaped, sub-bilabiate; a thick nectariferous lobed ring embracing the base of the germen. Capsule globular at the base, bilocular, two-four seeded, attenuated into a beak. Dissepiment membranaceous, cohering in the centre, separable from the valves. Retinacula wanting, and the place supplied by a cartilaginous ring, embracing the base of the seed. Seeds globular, perforated at the base, where the podosperm enters. Flowers axillary, pedunculate, solitary, or in racemes. Scandent plant, with handsome flowers, which are blue or yellow, the throat being generally darker.

Description of the Variety, Thunbergia alata-clorantha. Stem twining, branched, hairy, compressed, hairs loosely reflexed. Leaves (two-and-half inches long, one-and-half broad) smaller upwards, petiolate, sagettato- deltoid, sinuated, pubescent on both sides, wrinkled, dark green above, paler below, midrib and veins channelled above, prominent below ; petiole as long as the leaf, bordered with a narrow waved wing. Peduncles solitary, axillary, opposite, single flowered. Bracts coherent to about a quarter of their length on the lower side, rather more above, waved and pubescent. Calyx a small many-toothed cup, pale green, and pubescent. Corolla small, outside slightly glanduloso-pubescent; tube narrow, sub-cylindrical, and dark purple for about three times the length of the calyx, above this enlarged, compressed, paler and more leaden coloured, slightly falcate; limb orange-coloured, of five sub-linear emarginate lobes, concave, and tipped on the outer surface with green; faux deep purple, and, as well as the upper part of the inside of the tube, clothed with short purple hairs, two broad hairy lines extend from this along the inner side of the back of the tube, to the top of the narrow portion of the tube where the hairs are numerous, around the origin of the stamens; hairs jointed. Stamens subequal, filaments glabrous, green. AnTHERS yellow, cells unequal, the shorter cells in all the four stamens, spurred at the base, bursting along the front, and there ciliated. Stigma bilabiate, concave, the lower lip the shortest and broadest. Style straight, glabrous, much longer than the stamens. Germen bilocular, seated on a yellow disk, dark green, glabrous, compressed, sand-glassshaped, the lower portion the largest, the upper nearly solid, each cell of the lower portion containing two ovules.

Popular and Geographical Notice. Nees von Esenbeck subdivides this genus, in the work quoted above, and describes several species not before published. He doubts whether this should not, Thunbergia angulata, Hooker, and Thunbergia tomentosa, Wall. be removed from Thunbergia. The varieties of this species in point of colour, are now very numerous in our stoves. The one now figured differs materially from any of them, but I doubt whether it will be permanent.

Introduction; Where grown; Culture. I have only seen this form in the nursery garden of Mr. Cunningham, Comely Bank, Edinburgh. It succeeds best in the stove, but I have seen it in flower in the open air, though of much smaller beauty.

Grah.
Derivation of the Name.
Thunbergia, in commemoration of the Swedish Botanist and Traveller, Thunberg.

Thunbergia alata. Hooker; Exotic Flora, t. 177. Spreng.; Syst. vegt. cær post 237 . Nees.; l. c. 3,78.



\title{
PORTULA'CA THELLUSO'NII. THELLUSON'S PORTULACA.
}


NATURAL ORDER, PORTULACE.


No. 239.
GENUS. Portulaca. Tournefort. Calyx tubo cum ovario inferne connato, limbo semisupero v. supero,bifido v. bipartito, circumscisse deciduo. Corole epetala quatuor-sex, summo calycis tubo inserta, libera v.ima basi coalita integerrima. duo sæpius majora, fugacissima colliquescentia. Stamina 8, v. plurima, petalorum imæ basi aggregatim inserta; filamenta subulata. Antherex biloculares, didymæ, loculis ovalibus longitudinaliter dehiscentibus. Ovarium semi-superum, v . inferum uniloculare. Ovula plurima, columellæ basilari liberæ, simplici v. ramosæ funiculis distinctis inserta, amphitropa. Stylus tri-octofidus, v. partitus lobis intus stigmatosis. Capsula ovatav. subglobosa, membranacea, unilocularis, medio \(v\). infra apicem circumscisse dehiscens, placenta basilari. Semina plurima, reniformia, lævia v. striata et granulosa. Embryo annularis, albumen farinaceum includens. Herbex carnosæ, humiles, inter tropicos Americæ copiosæ, in veteris orbis regionibus calidis et temperatis raræ; foliis alternis v. oppositis integerrimis teretiusculis v. planis, pilis stipularibus in axiliis congestis, rarius nullis, floribus alaribus v. axillaribus, solitariis, remotis \(v\). ad ramorum apices congestis, sessilibus, \(v\). pedicellatis, involucro foliorum subverticellatim congestorum universali v. partiali rarius proprio tctraphyllo calycem mentiente cinctis, pctalis flavis purpureis v. roseis, tenerrimis, sole matutino expansis medidiano in gelatinam colliquescentibus. ENDIICHER. Genera Plantarum, p. 949.

SPECIES. Portulaca Thellusonif (Lindley) annua, caule erecto, axillis filamentosis, foliis alternis subcylindricis acuminatis abtusis, floralibus subverticillatis, floribus ad apices ramorum congestis sessilibus, petalis bilobis concavis sepalis subæqualibus pluries longioribus.
Character of the Genus, Portulaca. Calyx with a tube, connate beneath with the ovarium, limb semi-superior, or superiorbifid, or bipartite, cut round and falling off. Petals of the corolla from four to six, inserted in a tube at the top of the calyx, free, or joined at the base, entire, two, oftentimes the larger very fugaceous, and withering away. Stamens eight, or many, aggregately inserted at the base of the petals, filaments subulate. Anthers two-celled, didymous, cells ovate, dehiscing longitudinally. Ovarium halfsuperior, or inferior, one-celled. Ovula many, free at the base of the columella, simple, or branched, funiculus distinct, amphitropous. Style trifid, or octifid, or parted lobes inwardly stigmatose. Capsules ovate, or somewhat globose, membranaceous, one-celled, dehiscing in the middle or beneath the apex, placenta at the base. Seeds many, reniform, smooth, striated or granulose. Eubryo amular, included within a farinaceous albumen.

Description of the Species, Portulaca Thellusonil. Stem annual, or at most biennial, round, branched, smooth, from about one foot to a foot and a half high, and more or less of a deep pink colour. Leaves alternate, fleshy, somewhat cylindrical, smooth, about an inch long, having in the axils tufts of long white filamentous hairs. Floral leaves numerous, arranged in the form of a whorl, and in length and form similar to those of the stem. Flowers one or more at the apex of the branches. Calyx leaves two, ovate, acute, skinny, about three lines long, externally of a pinky colour. Corolla about tro inches and a half in diameter, of a most brilliant crimson colour, with a yellow star in the centre, with blotches about the star of a still darker crimson. Petals five, ovate, obtuse, concave, two-lobed, having the margins recurved. Stamens numerous, of a dark purple colour, smooth, shorter than the style. Anthers round. Pollen yellow, roundish. Style longer than the stamens, of a lightish purple colour, increasing in size from the base upwards, smooth. Stigma five-cleft, divisions more or less recurved, the under side smooth, the upper side strongly pubescent. Ovarium roundish, five or six angled, one-celled, ovaria numerous, rather reniform, granulose, arranged round a central columella, on a placenta.

Popular and Geographical Notice. This is a truly brilliant plant, and when in perfection its crimson flowers are dazzling to the eye; as an annual (or little more) it is an attractive addition to the stove. At first this plant was considered, by Dr. Lindley, as a hybrid between Portulaca grandiflora, and Portulaca Gilliesii, but subsequent observation has convinced Dr. Lindley that it is a true species, and distinct from its congeners by its two-lobed petals. Its native country is not stated by the above author, who first described it in the Botanical Register, for 1839, but most probably it is a native of tropical America, as that country contains most of the species of the genus, few being found in the temperate or warm parts of the old world.

Introduction; Where grown ; Culture. This plant, according to Dr. Lindley, was sent from Florence to the London Horticultural Society, by Lord Rendlesham. The genus may be easily propagated by cuttings, and the species Portulaca Gilliesii, grandiflora, and the one now figured, may be rapidly increased by the leaves, which, if suffered to remain on the soil of the pot after they have fallen, will soon strike root, and, in a short time, produce vigorous plants. The soil should be peat, loam and sand. West.

Derivation of the Names.
Portulaca, from Porto to carry, and lac milk. Thellusonir after the Hon. Frederick Thelluson (now Lord Rendlesham), who introduced it.

Synonyme.
Portulaca grandiflorarutila. Bot. Mag. 1839, Misc. 1J4. Bot. Reg. 1840, t. 31.



\title{
GREVIL'LEA SERI'CEA. \\ silky grevillea.
}


NATURAL ORDER, PROTEACEE.
\(\left.\left.\begin{array}{c}\text { MONOCHLAMYDEF, } \\ \text { OF } \\ \text { DECANDOLLE. }\end{array}\right\} \begin{array}{c}\text { Artificial divisions } \\ \text { towhich } \\ \text { this Plant belongs. }\end{array}\right\}\) TETRANDRIA,

No. 240.
GENUS. Grevillea, Brown. Perianthium irregulare; foliolis laciniisve secundis, apicibus cavis staminiferis. Anthere immersæ. Glandula hypogyna unica, dimidiata. Ovarium dispersmum. Stigma obliquum, depressum, (raro subverticale conicum). Folliculus unilocularis, dispersmus, loculo centrali. Semina marginata, vel apice brevissime alata. Frutices rarius arbores, pilis dum adsint medio affixis. Folia alterna, indivisa vel pinnatifida. Spicse nunc elongatæ racemosæ, nunc abbreviatæ corymbosæ vel fasiculiformes, involucro nullo, pedicellis geminatis, raro pluribus paribus fasciculisve unibracteatis. Perianthia sæpissime rubicunda nunc flava, inquibusdam oblique inserta. Folliculi vel coriacci ovati, stylo toto coronati, seminibus ovalibus, angustissime marginatis et apicc brevissime alatis; vel lignei, suborbiculares, pseudo-bivalves, basi tantummodo styli mucronati, seminibus undique alatis. Brown.

SPECiES. Grevillea sericea (Brown) foliis ellipticis oblongisve, obtusis, mucronatis, marginibus refractis; ramulis floriferis erectis; racemis abbreviatis recurvis; barba interiori perianthii demidio inferiore unguium breviore; pistillis semuncialibus. Br.

Character of the Genus, Grevillea. Perianthium irregular, the leaflets or segments secund, the apices concave staminiferous. Anthers immersed in the hollow. Hypogynous gland single, dimidiate. Ovarium two-ovuled. Stigma oblique, depressed, (rarely subvertical and conical). Follicle unilocular, two-seeded, the loculament central. Seeds bordered, or very shortly winged at the apex.

Description of the Species, Grevillea sertcea. Shrub, in the specimen described, seven feet high, erect, stem round, slender, bark brown and cracked; branches erect, slightly anguled, green on the shaded side, red on that most exposed to the light, at first shortly pubescent, becoming glabrous. Leaves (inch and half long, quarter of an inch broad) lanceolate, mucronate, dark green and becoming glabrous above, silky with adpressed hairs below, slightly folded forwards along the centre, middle rib prominent below, edges slightly revolute. Racemes on short axillary branches, about as long as the leaf. Pedicels silky. Flowers crowded, secund, pale purple, Perianth irregular, four-cleft, cut to the base along the upper side, silky on the outside, and having a narrow band of dense tomentum of
uniform colour around the inner side of the throat. Stamens sessile, in the apices of the perianth, the lobes divaricate at the base. Germen and its flattened pedicel green, glabrous. Style of the same colour with the perianth but rather lighter, glabrous, excepting near the apex, where there are a few short hairs. Stigma dilated, flat, oblique, slightly pointed in the centre, disk prominent on the lower side, emarginate. Fruit coriaceous, glabrous, somewhat uneven, nearly black when ripe.

Popular and Geographical Notice. At fol. 153, along with some general observations regarding the Proteaceæ, notice was taken of the chief station in Australia for the genus Grevillea. In conformity with these observations, the present species, which has been in cultivation in this country about fifty years, is known to be native in the neighbourhood of Port Jackson. It varies considerably in the form of its leaves, and the density of the racemes, passing on the one hand towards Grevillea dubia, and on the other towards Grevillea linearis. The great abundance of Proteaceæ in the flora of New Holland is discouraging to the prospects of the emigrants, which are at present crowding to that country from Great Britain, by proving that a large proportion of its surface has a barren soil; but the same circumstance is consolitary to those persons, by proving that the climate is healthy, and destitute of marsh miasmata, so destructive of life in many countries, upon which the overflowing population of Great Britain is annually discharged.

Introduction; Where grown; Culture. Grevillea sericea is said to have been introduced from New South Wales, by Messrs. Lee and Kennedy, about the year 1890. It is a handsome growing plant, therefore ornamental, even when devoid of flowers; and as it frequently produces them in the autumn and winter months as well as in the summer, it is still the more desirable. It is not commonly seen even in first-rate collections, which makes it desirable to bring it again under the notice of cultivators. It requires but the usual greenhouse treatment.

\section*{Derivation of the Name.}

Grevillea, in compliment to the memory of the Right Honourable Charles Francis Greville.

Synonymes.
Grevillea sericea. Brown; in Trans. Lin. Soc. 10, 167. Ibid; Prodr. Flor: Nov. Holland, 376. Hort. Kew. 1, 204. Ræm. et Schultes, Syst. Veget. 3, 410. Spr. Syst. Veget. 1, 475.

Embothrium sericeom. Willd. Sp. Pl. 1.539. Ibid,Hort. Berol. 142. Smith New Holl. 25, t. 9, f. 1-4. Andrews's Repository, t. 100. Pers، Synops. 1, 118. Bot. Mag. 268
Embothrium cytisoides. Cavanill. Icon. IV, 60, t. 386, f. 2.
Lysanthe sericea. Knight and Salisb. Prot. 118.
Lysanthe cytisifolia. Knight and Salisb. Prot. 119.
Grah.



\section*{CLEM'ATIS FLOR'IDA.} SIEBOLD'S CLEMATIS.


NATURAL ORDER, RANUNCULACEÆ.


No. 241.
GENUS. Clematis. Linn. Calyx corollinus, tetraphyllus, foliolis æstivatione valvatis vel subinduplicatis. Stamina indefinita hypogyna. Ovarta plurima, libera, unilocularia, ovulo unico pendulo. Achenia plurima sessilia, stylo nudo vel barbato caudata. Semen inversum. Herbex erectæ vel suffrutices samentosi scandentes zonæ temperatæ regionibus calidioribus ubique majori copia obvii; foliis oppositis, integris vel pinnatisectis, petiolis quandoque cirrhosis, inflorescentia composita, floribus sæpius bibracteolatis, bracteolis interdum fori approximatis, involucrum bibolum constituentibus. Endlichek: Genera plantarum, page 844.

Species. Clematis florida var. Sieboldi (Hort) pedunculis uniforis folio longioribus, foliis ternatim decompositis, segmentis ovatis acutis integerrimis, sepalis orali-lanceolatis acuminatis; staminibus sterilibus linearibus vel lineari-lanceolatis atropurpureis.

Character of the Genus Clematis. Calyx corolla-like, fourleaved, leaflets valvate, or somewhat induplicate, in æstivation. Stamens indefinite situate beneath the ovaria. Ovaria many, free, one-celled with one pendulous ovula. Achenia many, sessile, caudate with a naked, or barbed, style. Seed inverse.

Description of the Species, Clematis florida, var. Sieboldi. Stem round, angular, or grooved, covered with soft hairs, its habit is branched and twining, varying from six to twelve feet in height. Leaves petiolate-ovate, lanceolate, more or less acuminate, smooth, with the exception of the strong veins which are more or less hairy; leaves are sometimes opposite, sometimes arranged in threes; entire or laciniate; sometimes the leaves are wholly wanting, and in their place are substituted tendrils. Peduncles pubescent, in length various, those nearest to the flower usually about two lines long : those further removed from the flower, from one to two inches long. Pedicels pubescent, from two to four lines long. Flowers solitary, showy, large, about four inches across. Calyx of six whitish ovate lanceolate leaflets, acute, or ending in a sharp point, and alternately arranged. On the exterior side of the leaflets is a dark bromnish green linear lanceolate streak, which runs from the apex to the base.

Stamens, anthers, style, and stigma abortive, being metamorphosed into linear lanceolate leaflets, of a dark purple colour, and forming by that means what is called a double fower.

Popular and Geographical Notice. The Genus Clematis is composed for the most part of showy, and ornamental plants, which are peculiarly adapted for walls, or for trellis work; and for that purpose none is more suitable (if equally so) than the one now figured, for its foliage is both abundant and elegant, and its flowers large and showy; its large greenish-white sepals beautifully contrasting with its dark and rich purple centre ; and the flowers moreover are produced in abundance. There is another species-Clematis macrophylla, (Atragene macrophylla, Ledebour Flora Altaica) of which a magnificent figure is published in the Icones Plantarum Altaicarum. It is represented there as having beautiful azure sepals, and it is probable that this beautiful plant has not as yet been introduced into this country, for although we have seen several called by that name, these have no resemblance to the figure in point of beauty, but have their sepals very much smaller, and of a dingy colour; probably it may be a variety, and the true plant is still a desideratum.

They are Geographically distributed through the whole of the temperate and warm parts of the globe.

Introduction; Where grown; Culture. It appears to have been introduced to the Clapton Nursery in the year 183\%. It is perfectly hardy, although frequently to be seen ornamenting the greenhouse, in which situation it produces its flowers earlier; and being protected from the variations of the weather, its colours are more brilliant. It is easily propagated by layers, or cuttings ; and although it will thrive in any common garden soil, its favourite compost is loam and peat.

West.
Derivation of the Name.
Clematis from Kahma, a tendril.

Clematis florida \(\nabla\). Sieboldi. Bot. Reg. N. S. 1838, t. 25.



\title{
LOPHOSPER'MUM ERUBESCENTE-SCANDENS HYBRID CLIMBING LOPHOSPERMUM.
}


NATURAL ORDER, SCROPHULARIACEE.


No. 242.
GENUS. Lophospermum. Don. Calyx 5-partitus. Corolla campanulata; limbo 5-lobo, subæquali. Capsula bilocularis, irregulariter dehiscens. Semina imbricata, membranaceo-alata. Don. Trans. of Linnean Soc., Vol. XV, p. 351.
HYBRIDA. Lophospbrimom erubescente scandens. foliis cordatis subacuminatis, late et inequaliter inciso-serratis, corollæ limbo patente.

Character of the Genus, Lophospermum. Calyx five-parted. Corolla campanulate; limb five-lobed, nearly equal. Capsule twocelled, dehiscing irregularly. Seeds imbricated with a membranous wing.

Description of the Hybrid, Lophospermun erubescentescandens. Stems or branches herbaceous, long, terete, slender, palegreen, more or less tinged with red; and covered with fine, short, patent, glandular, pubescence. Leaves alternate, petiolated, from cordate and sub-acute, to cordato-hastate and acuminated; broadly and unequally toothed, with the teeth shortly mucronate. The largest are about three inches long by three broad, of a dull yellowish-green, and covered with the same pubescence as the stems. The petioles are about two inches, grooved above, and serve the purpose of tendrils, by twisting round objects. About seven primary sub-digitate nerves, prominent below, with corresponding depressions above; the secondaries few and little conspicuous. Peduncles about an inch long, axillary, solitary, flexuose, one-flowered. Calyx five-partite, with the segments above an inch in length, sub-cordato-lanceolate, comnivent, and a little pinched in the middle at the base, so that their margins (which are slightly undulated) form prominent angles; the uppermost segment rather larger than the other four. Corolla twice as long as the calyx, labiately-funnel-shaped, of a purplish rose-colour, with the base dilated and white, slightly pubescent outside, except along the sides, flattish above, with two depressed lines below, which, on the inside of the tube, form two elevated ridges, covered with bright
yellow, glandular, pubescence; the throat is mottled inside; the limb five-lobed, and sub-bilabiate; the two upper lobes somewhat larger, rounded, slightly reflected, and slightly pubescent within; the three lower-most lobes patent, the middle one rather the smallest. Stamevs four, didynamous, two as long and two rather longer than the tube, to which they are attached immediately above the dilated base : filaments hairy below, glandular towards the top, and smooth in the middle. Anthers cream-coloured, incumbent, two-lobed, lobes free below, oblong, bursting longitudinally, the connective projecting backwards in the form a small white gland. There is a minute tuft of hair between the two shorter stamens, which may be considered as a fifth rudimentary stamen. Pistil length of the shorter stamens. Ovarium conical, depressed, two-celled, hairy above, seated on a pale, smooth, fleshy, disk; style subulately-filiform, and (together with the stamens) inclined to the upper side of the corolla, glabrous, but with a few glandular hairs near the base. Stigma small, forming a mere glandular apex, curved at right angles to the style, obscurely lobed, though one lobe is evidently longer than the other. Ovules in each cell numerous, attached to a central placenta.

Popular and Geographical Notice. In Vol. 1, No. 17, we have figured and described the Lophospermum scandens, and have alluded to the Lophospermum erubescens, as a plant which has been frequently mistaken for the former. Our present plant is a hybrid, raised last year (1840), by Mr. Turner, of the Bury Botanic Garden, from seeds of the Lophospermum scandens, fertilized by pollen of the Lophospermum erubescens; and it may be considered a decided improvement (if we may use such an expression), on the general appearance and beauty of either parent. We are entirely opposed in sentiment to those persons who regret the introduction of hybrid plants, merely because it is troublesome to assign to them a place in our systematic arrangements. We would request the systematist to remember that the botanist has a higher object than merely describing and arranging specific forms. Such a branch of our science must ever be looked upon as a means to an end. The ultimate aim of true science is to ascertain the laws by which nature is governed; and the more we multiply our experiments, and the more care we take in noting the results, the more likely are we to arrive at definite notions of those laws. At present no one knows with certainty what are the true limits to the variations in form which any one species may assume; and it is impossible to foresee whether multiplied observations on
hybridizing may not lead us to some law of vegetation by which a botanist may be able to pre-determine the possible limits of every species, as accurately as a mineralogist can now define the limits within which all those forms of crystallization must necessarily lie, which belong to any particular simple mineral. We would therefore suggest to those persons who have opportunities of studying hybrids, that they should record their observations under some such form as the following table, where we may see at a glance to what extent the hybrid resembles, or differs from, both parents. If we were in possession of some hundred comparisons of this kind (and the more minute the better), we might then, possibly, be able to detect some general law by which the production of hybrids and the limitation of species is governed -but until greater pains has been bestowed upon such enquiries than have hitherto been taken, we can hardly expect much progress to be made in solving this mysterious question.

\section*{J. S. Henslow.}

> SCANDENS.
> PUBESCENCE, less dense \& rather longer. None on the corolla.
> On the edges of the calyx, and on the inner surface, but only on the mid.rib outside.
> LEAVES, rather less downy.
> Secondary veins mostly depressed beneath.

CALYX, longer \& more acuminate.

Segments less pinched and undulated.
COROLLA, shorter, \& the segments of the limb more connivent. Darker \& more dingy. Purplish at the base, and white below on the throat.
Less mottled inside. Hair of the beard on ridges inside shorterbut ridges more prominent
RUDIMENTARY Stamens, tufted.
PISTIL, longer; and the lobes of the stigma minute.

\section*{Hybrid.}
scattered chiefly above and below the corolla.
on both the outside and the inside of the calyx.
quere, if the paler colour was due to the unbeal. thy state of the plant. secondary veins much as in scandens.

\section*{Erubescens.}
more dense, \& decidedily shorter.
on the outside of the corolla.
on both the outside and inside of the calyx.
more downy
secondary veins marked \& prominent beneath. shorter and broader. rather more downy outside.
segments more pinched and undulated.
longer, and the segments of the limb reflexed. More arched. paler, and less bright. white at the base, and purplish below on the throat.
more mottled inside.
hair of the beard longer, but ridges less prominent.
not tufted.
the lobes of the stigma unequal.

Introduction; Where grown ; Culture. It has already been mentioned that this hybrid plant was raised in the Botanic

Garden of Bury St. Edmund's, by Mr. Turner, the curator of that establishment. We are informed that for the more convenient and extensive disposal of it to all who desire to possess the plant, the stock of it has been disposed of to the Messrs. Henderson, Nurserymen, of Pine Apple Place, Edgeware Road, London. Under the care of these extensive and superior cultivators we doubt not but it will meet every attention which may tend to develope its superiority. They have called the plant Lophospermum Hendersonii. Diogenes would, we fancy, have almost smiled, had he witnessed our present system of giving names; the frequency of it, however, in the present day, renders the little trait of vanity which it displays quite excusable. In the present instance, we doubt not, its proper appellation will be adopted, now that it is figured and published. The system of compounding the specific names of parent plants, between which hybrids have arisen, was first proposed in Maund's Botanic Garden, and applied to a plant raised by the author himself. Under No. 385 of that work it is observed, "Authors have not agreed on the most convenient mode of naming hybrid or mule plants. Some have thought that names may be completely arbitrary ; some name them after the person with whom they originated ; whilst others would altogether excommunicate such productions from botanical nomenclature. Notwithstanding the opposite theoretical position taken by some botanists, we believe, doubtlessly, that hybrid plants become established, and hold a permanent place in the vegetable kingdom; it is therefore but reasonable to notice them; and it is far better that their origin be registered, whilst it is known, in lieu of remaining to become the subject of future conjecture and error."

In allusion to the Lophospermum erubescente-scandens Mr. Turner says, "It is remarkable for its strong growth, its bright green foliage, and above all, the extreme abundance of its flowers, which are of a very superior colour and size, compared with either of its parents. In fact, numbers of persons, who have seen the plant trained up against one of the old abbey walls, have pronounced it to be one of the finest ornaments for a wall or trellis that our gardens can boast."

It demands no peculiarity of management. If the root be left in the open ground during winter, it must be covered over as a protection against frost.

Derivation of the Names.
Lophospermum, from \(\lambda_{0} \phi_{0}\) (lophos) a crest, and \(\sigma \pi \varepsilon \rho \mu a\) (sperma) a seed. The trivial name of erubescentescandens, is given from the parents; erubescens, growing red or blushing, and scandens, climbing.



\section*{PIME'LEA INTERME'DIA. \\ INTERMEDIATE PIMELEA.}


NATURAL ORDER, THYMELAÜE

\[
\text { No. } 243 .
\]

GENUS. Pimelea. Banks et Solander. Perianthidm infundibuliforme, limbo 4 -fido, fauce esquamata. Stamina duo, fauce inserta, laciniis exterioribus opposita. Stylos lateralis. Stigma capitatum. Nux corticata, raro baccata. Frutices. Folia opposita, raro alterna. Flores capitatiterminales, foliis involucrantibus sæpe dissimilibus, interdum connatis, rarius spicati vel axillares, quandoque dioici. Perianthir tubus in plerisque medio articulatus, articulo inferiorc persistenti. Brown, Prod. 1, 359.

SPECIES. Pimelea intermedia (Lindley) foliis utrinque glabris, lanceolatis acutis, floralibus 2-4-capitulo multo brevioribus; calycibus sericeis, tubo cylindraceo incurvo, ramis glabris: Lindley, Bot. Reg. 1439.

Character of the Genus, Pimelea. Perianth funnel-shaped, limb four-cleft, throat without scales. Stamens two, inserted into the throat, opposite to the outer segments. Style lateral. Stigma capitate. Nut with a hard external coat, rarely berried.

Description of the Species, Pimelea intermedia. Shrub slender, erect, with long, straight, almost filiform branches. which are covered with brownish-yellow, glabrous, cracked, bark. Leaves (three-quarters of an inch long, about two lines broad) glaucous, glabrous on both sides, with a distinct mid-rib, but no conspicuous veins, linear-lanceolate, inclining to spathulate on the branches, becoming ovate and shorter towards the capitulum, which is manyflowered and terminal. Flowers white, longer than the involucre, which scarcely differs from the ordinary leaves of the plant. Perianth surrounded at its base with long erect hairs, tomentous on the outside, striated, dilated over the germen, and diaphanous between the striæ at this part; segments of the limb subequal, elliptical, with slightly involute edges. Stanens at first erect, afterwards reflexed on the limb, and shorter than it. Anthers oblong, pollen bright orange. Gernen
oblong, pale green, glabrous. Style filiform, glabrous, longer than the perianth; stigma minute, capitate, bearded.

Popular and Geographical Notice. The genus Pimelea is widely distributed along the coasts of Australia and in Van Diemen's Land, and a few species are found in New Zealand. Many of them are very ornamental, and the more popular in cultivation on account of the facility of management of the greater number, and the profusion of flowers which they produce. The present species is native of King George's Sound.

Introduction; Where grown; Culture. I believe this plant was first raised at Mr. Low's nursery, Clapton, from seed gathered by Mr. Baxter, its discoverer. The specimen now figured was received at the Royal Botanic Garden, Edinburgh, from Mr. Mackoy, at Liege, in the spring of 1837; flowered freely in March, 1838, and has continued to do so for several months every year since. In the arrangement of the species it must be placed in the section in which the floral leaves and those of the branches are subsimilar, and should stand next to Pimelea sylvestris. It is of slender growth, about two feet high, has not perfected seeds, but is easily propagated by cuttings, and grows readily in peat soil, mixed with sand, under the protection of the greenhouse.

Derivation of the Name.
Pimelea, said to be from \(\pi \tau \mu \varepsilon \lambda \eta\) fat, but why so called it is hard to conjecture.

> Synonyme.

Pimelea intermbita. Lindley, l.c. Grah.



\section*{GOLDFUS'SIA ISOPHYL'LA.}

EQUAL-LEAVED GOLDFUSSIA.


No. 244.
GENUS. Goldfussia. Nees von Esenbeck. Calyx 5-partitus, sub. æqualis. Corolla infundibuliformis, limbo 5 fido, obtuso æquali. Stamina inclusa didynama, humiliora sæpe brevissima reflexa. Anthere nutantes; locelli in connectivo uncinato glanduloso obliqui ovati membranacei. Stigma simplex subulatum altero latere crenatum. Capsula sexangularis bivalvis, a dissepimento solubilis, loculis inferius dispermis. Semina discoidea, retinaculis subtensa. Inflorescentia ; flores pauci in capitulo, bibracteolati, bracteis deciduis; rarius spicati, spica post delapsas bracteas magis elongata, capitula pedunculata, pedunculo simplici vel diviso. Frutices foliis penninerviis, curvinerviis, nervis omnibus apicem petentibus, nec vero attingentibus.

SPECIES. Goldfussia isophylla (NeEs) foliis lanceolatis æqualibus remote serrulatis septuplinerviis.

Character of the Genus, Goldfussia. Calyx five-parted, nearly equal. Corolla funnel-shaped; limb five-cleft, blunt, equal. Stamina included, didynamous, the smaller ones often very short and reflexed. Anthers nodding, the cells oblique, ovate, membranous, upon a glandular hooked connective. Stigma simple, subulate, crenate on one side. Capsule six-angled, bivalvular, the valves separable from the dissepiment, the cells having in the bottom two discoid seeds, subtended by retinacula.

Description of the Species, Goldfussia isophylla. Stem erect, slender, much branched, angled, glabrous. Leaves opposite, equal, narrow, lanceolate, much attenuated at both extremities, distantly serrulate, entire towards the base, glabrous, dark green above, paler below. Flowers in terminal or axillary lax capitula, each subtended by a lanceolate glabrous bract. Calyx deeply but unequally four-five-cleft, segments unequal, lanceolate, blunt, whitish, but brown and pubescent on the sides and edges. Corolla lilac, veined, angled, funnel-shaped, curved towards the upper sides, undu=
late, sparingly glanduloso-pubescent, lower part of the tube white, hairy on its upper side within; limb four-lobed, lobes blunt, or marginate, the lower frequently bifid, the number of lobes of the calyx varying with those of the corolla. Stamens included, didynamous, without the rudiment of a fifth; filaments hairy; anthers suborbicular, attached by their backs, lobes bursting along their face. Pistil longer than the stamens, extending nearly to the division of the limb: stigma linear, narrow, extending a little way along the back of the style; style glabrous, swelling towards its extremity, and terminating in a cone; germen obovato-lanceolate, compressed, ciliated at its apex, opposite the edges of the dissepiment. Ovules few.

Popular and Geographical Notice. The genus Goldfussia was established by Nees von Esenbeck, in his account of the East Indian Acanthaceæ, in Wallich's Plantæ Asiaticæ Rariores, and included fourteen species of Ruellia, in the Herbarium of the East India Company. In habit this species exceedingly resembles that longer known one, Goldfussia anisophylla, but is at once distinguished by the uniformity of its opposite leaves: and it is a smaller plant. They are both matives of Sylhet.

Introduction; Where grown; Culture. I have only seen this species in cultivation in the nursery garden of Mr. Cunningham, Comely Bank, Edinburgh; where it thrives well, and flowers freely during a great part of the year, in the stove, without requiring any particular attention.

Derivation of the Name.
The genus was named by Nees von Esenbeck, in honour of Professor Goldfuss, of Bonn.

Synonyme.
Goldfussia isophylla. Nees von Esembeck; in Wall. Pl. Asiat. Rar., 3, 88. Wall. Cat., No. 7162.
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\section*{HIBIS'CUS CAMERO'NII. cameron's hibiscus.}

EXOGENTE.

or

NATURAL ORDER, MALVACE \(\mathscr{A}\).
THALAMIFLORE,
OF
DECANDOLLE.

No. 245.
GENUS. Hibiscus. Linnzus. Involucellum polyphyllum, foliolis simplicibus, vel bifurcatis. Calyx quinquefidus, persistens, foliolis æstivatione valvatis. Corolle petala 5 , hypogyna, obovata-inæquilatera, unguibus imo tubo stamineo adnata, æstivatione convolutiva. Tubus Stamneus columnæ-formis, infra apicem nudum, truncatum \(v\) quinque dentatum, filamenta plus minus copiosa exserens. Antheree reniformes, bivalves. Ovarium sessile, simplex, quinqueloculare. Ovula in loculis plurima v pauca, angulo centrali inserta. Stydus terminalis, apice exserto quinqeficus; stigmata capitellata, rarissime cohærentia. Capscla quinquelocularis, loculicide quinquevalvis, valvis medio septa margine seminifera gerentibus, columella centrali nulla. Semina plurima v interdum abortu pauca, adscendentia, reniformia, testa crustacea, nuda au squamulosa vel interdum lanata. Embryo intra albumen parcissimum, mu-. cilaginosum homotrope arcuatus; cotyledonibus foliaceis, sesse plicato-involventibus, radicula infera. Afbores, Frutices, vel Herbæ, in regonibus tropicis subtropicisque, parce in temperatis calidioribus crescentes; foliis alternis, petiolatis, integris vel lobatis, glabris, varie pubescentibus, vel scabris, stipulis lateralibus geminis, floribus axillaribus, solitariis, vel foliorum abortu terminalibus, paniculatis, corymbosis, racemosis vel rarius spicatis, stipulaceo-bracteatis, corollis amplis, petalis coloris varii, sæpissime basi macula discolori disti netis. Endlicher; Genera Plantarum, p. 982.

SPECIES. Hibiscus Cameronif (Knowles and Westcott) frutex inermis; foliis velutinis, subpeltatis, cordatis, 3-5-lobis, lobis inæqualiter incisoserratis, obovato-lanceolatis; pedunculis folio subæquantibus; involucello ex foliolis decem minutissimis; corolla expansa; ovulis plurimis singulis loculis, glabris.

Character of the Genus, Hibiscus. Involucellum manyleaved, leaflets simple, or forked. Calyx five-cleft, persistent, valvate in æstivation. Petals of the corolla five, situate on the receptacle, unequally obovate, being joined by their claws to the base of the stamineous tube, convolute in æstivation. Stamineous tube columnlike, beneath the naked truncate or five-toothed apex, putting forth filaments more or less abundant. Anthers reniform, two-valved. Ovarium sessile, simple, five-celled. Ovules many or few in the cells, inserted on the central angle. Style terminal, the apex projecting with five divisions. Stigmas in very little heads, rarely cohering. Capsule five-celled, and five-valved, loculicidal, valves bearing septa, containing the seeds on the middle of their margin, no central columella. Seeds many, or sometimes, from abortion, few, 60.
rising upwards, kidney-shaped, testa crustaceous, naked or scaly, or sometimes woolly. Embryo curved in the direction of the seed, within a very small mucilaginous albumen; cotyledons leafy, plicately involute upon each other, radicle inferior.

Description of the Species, Hibiscus Cameronit. Trunk erect; branches sub-erect, green, closely villous. Leates (four inches long, five inches in their greatest breadth) petiolate, sub-peltate, scabrous, wrinkled, undulate, paler below, three-five-nerved, deeply threelobed, the lateral lobes having each a shorter and more rounded subsidiary lobe at its base; petioles as long as the leaves, spreading wide, channelled above, villous. Peduncles axillary, solitary, nearly as long as the leaves, villous, articulated towards the apex. Involucellum minute, of about ten leaves. Calyx five-cleft, villous on the outside, inflated at the base, sharply angled, ten-nerved, segments deltoid, acute, shining within, but having short spreading glandular pubescence scattered over the surface. Corolla large and handsome; tube very short, glabrous, and shining; limb spreading wide, and revolute, glanduloso-pubescent on the outside, glabrous within, except at the base, where there are a few short hairs; segments obliquely-obovate, strongly marked with many nerves, which are branched only towards their apices, yellow for a small space at the base, the upper half of the segments being partially, and unequally, tinged with red, each handsomely marked in the throat with a large deep-purple spot. Sheath of filaments glabrous, purple, furrowed, scarcely so long as the corolla. Anthers yellow. Stigmata diverging immediately above the tube of the filaments, yellow. Styles cohering except at their apices, covered with yellowish-green tomentum at the base, glabrous above. Germen conical, with similar tomentum. Ovules numerous, in two rows in the cells, ovate.

Popular and Geographical Notice. The extensive genus Hibiscus furnishes many ornamental plants, but generally requiring stove heat in cultivation, as a large proportion are from low latitudes.

Introduction ; Where grown; Culture. Introduced in 183\%, by the Rev. J. A. James, who presented to the Botanic Garden, at Birmingham, seeds, gathered by the Missionaries at Madagascar. It requires to be kept in the stove. It flowered freely in the garden of the Caledonian Horticultural Society when of small size, but has never produced fruit, the upper part of the peduncle always separating at the joint.

Derivation of the Names.
Hibiscus, from ißuroog, the name given by Dioscorides to a plant of this family, supposed Althæa. Cameronir, in honour of the excellent Superintendant of the Birmingham Botanic Garden.

Synonyme.
Hibiscus Cameronif. Paston's Magazine of Botany, February, 1841. Bot. Mag. 3936.

Grah.



\section*{OPUN'TIA DRUMMON'DI.}

DRUMMOND'S PRICKLY PEAR.

EXOGENAE


OR


DICOTYLEDONESE.

natural order, cactacee.


No. 246.
GEnUS. Opuntia. Tournefort. Calycis foliola plurima, foliacea, ovario adnata, summa plana, brevia. Corolle superæ petala plurima, obovata, basi connata, rotato-expansa. Stamina plurima, basi petalorum inserta, iisdem breviora; filamenta libera vel nonnihil inter se connata; antheræ oblongæ. Ovarium inferum, uniloculare, placentis parietalibus, multi-ovulatis. Stylus cylindraceus, basi constrictus; stigma tri-octopartitum, laciniis crassis, erectis. Bacca ovoidea, apice umbilicato-tuberculata, sæpe spinigera, unilocularis, pulposa placentis parietalibus nerviformibus. Semina plurima, reniformia. Embryonis subspiralis, albumen tenue cingentis cotyledones semicylindricæ, germinatione foliaceæ, radicula longa cylindrica. Frutices carnosi, articulati, in America calidiore tropica et extratropica indigeni, nonulli inter tropicos veteris orbis et in regionem Mediterraneum olim advecti, nunc quasi spontanei, trunco axi lignoso percurso ramisque cylindricis aut compressis, articulis oblongis vel ovatis, spinis heteracanthis, validis et setiformibus, in foliorum rudimentis subulatis mox caducis axillaribus, quincunciatim vel spiraliter dispositis, cujusvis fasciculi annue numero auctis, floribus e fasciculis spiniferis, vel articulorum marginibus ortis, albis, rubris, vel flavis, magnis, speciosis, staminibus sæpe irritabilibus, baccis exignis vel magnis, viridibus, purpureis vel favis, sæpe ficiformibus, edulibus, secundo vel tertio anno demum maturescentibus. Endlicher: Genera Plantarum, p. 945.

SPECIES. Opuntia Drummondi (Grah.) caule erecto, ramoso; articulis lineari.oblongis, subcompressis, viridibus, junioribus foliosis, senioribus aculeatis; foliis minimis, subulatis, carnosis, conniventibus; aculeis setaceis cumque 1.2 elongatis validis, stigmate 4 partito.

Character of the Genus, Opuntia Leaflets of the calyx numerous, adnate to the ovary, the upper flat, short. Corolla superior, petals numerous, obovate, connate at the base, spreading; Stamens numerous, inserted into the base of the petals, and shorter than them; filaments free, or slightly cohering; anthers oblong. Ovary inferior, one-celled, the placentæ parietal, having many ovules. Style cylindrical, constricted at the base; stigma three to eightparted, the segments thick, erect. Berry ovoid, umbilicately tuberculated at the apex, often spiny, one-celled, pulpy, the parietal placentæ nerve-like. Seeds numerous, kidney-shaped; albumen thin; embryo subspiral, cotyledons cylindrical, foliaceous in germination; radical long, cylindrical. Fleshy articulated shrubs, indigenous in the warmer tropical and extratropical parts of America, some long
since introduced into the tropical parts of the old world, as well as the shores of the Mediterranean, now occur there as if native; a woody trunk or axis pervades the stem, the branches of which are cylindrical or compressed, the joints oblong or ovate, the thorns of different kinds, strong or bristle-like, in the axils of the subulate caducous rudiments of the leaves, quincuncially or spirally arranged, the number being annually increased, the flowers arise from the fasciculi of spines or from the margin of the joints, and are white, red, or yellow, large and shewy, the stamens often irritable, the berries small or large, green, purple, or yellow, often fig-shaped, edible, not becoming ripe under two or three years.

Discription of the Species, Opuntia Drumiondi. Stem (in the specimen described, nine inches high) much branched, branches erect, joints linear-elliptical, subcompressed. Leaves small, fleshy, subulate, deciduous, their place after falling being occupied by a tuft of wool, a number of small barbed hair-like coloured spines, and one or two which are much elongated and rigid. Flowers (when expanded, tro inches across) terminal, yellow, opening wide. Sepals in few rows, the outer gradually elongated from the leaves, the inner having the form and colour of petals, elliptical and truncated. Stamens scarcely more than half as long as the flower, very numerous; pollen granules globular, somewhat irregular on the surface. Pistil rather longer than the stamens; stigma four-parted, segments fleshy, pointed, erect; style glabrous, white, swollen above its base, contracted at its origin, and tapering towards the stigma; germen like one of the joints of the stem, less compressed, leafy. Ovules numerous, nearly filling the elliptical cavity.

Popular and Geographical Notice. Not only this genus, but the whole of the Cactaceæ, are original natives of America, and chiefly in the tropics, though some extend into the warmer parts of both temperate zones. Some, however, are naturalized in Asia and Africa, and even in the south of Europe - dry, warm, stony, or sandy places being the situation in which they thrive best.

Introduction; Where grown; Culture. Plants of the species now described were received both at the Botanic Garden, Edinburgh, and by Dr. Neill, Canonmills, from Mr. Drummond, in 1835. They were gathered by him in Apalachicola, and flowered with Dr. Neill (and with him, and at the Caledonian Horticultural Society's Garden, only, as far as I know), in July, 1838 and 1839.

Derifation of the Name.
The generic name, Opcatia, is a great misnomer, if derived, as is said, from the Opuntii, a reople of the Morea, in whose district it seemed wild. If this be right, the Jackdaw was unfairly dealt with.

Grah.


fanmeire meiticillator.

\title{
GESNE'RA DOUGLA'SII.
}

DOUGLAS'S GESNERA. Whorled variety.


EXOGENE.


OR


DICOTYLEDONEA.


NATURAL ORDER, GESNERACEI.


No. 247.
GENUS. Gesnera. Linneus. Calyx tubo cum ovarii basi cohærente, limbo quinquepartito, subinæquali. Corolla perigyna, tubulosa, tubo ima basi quinquegibboso, limbi subbilabiati labio inferiore trilobo. Stamina corollæ inserta, quatuor didynama, inclusa, cum rudimento quinti; antheræ biloculares, in diseum cohærentes, demum solutæ. Ovariun basi calyci cohærens, glandulis quinque cinctum, uniloculare, placentis duabus parietalibus, bilobis. Ovula plurima, in funiculis longiusculis anatropa. Strlus simplex; stigma capitatum, obsolete bilobum. Capsula coriacea, unilocularis, bivalvis, valvis medio placentiferis. Semina plurima, subclavata. Embryo in axi albuminis carnosi orthotropus; cotyledonibus brevibus, obtusis, radicula umbilicum spectante, centrifuga.
sPECIES. Gesnera Douglasif. Var. verticillata (Lindley) Foliis pseudo-verticillatis, ovatis obtuse-crenatis, cymis terminalibus umbellatis, corollæ limbo subæquali, glandulis duabus superioribus dilatatis, inferioribus obliteratis.

Character of the Genus, Gesnera. Calyx adhering by its tube to the base of the ovary, with a five-partite somewhat unequally divided limb. Corólla perigynous, tubular, with five gibbous projections close to the base; the limb somewhat bilabiate, the inferior lip three-lobed. STamens attached to the corolla, four, didynymous, included, with the rudiment of a fifth. Anthers twocelled, at first cohering together into a disk-like expansion, at length separating. Ovary adhering to the base of the calyx, surrounded by five glands, one-celled, with two bilobed parietal placentæ. Ovules numerous, anatropous, attached to rather long umbilical chords. STyLE simple, stigma capitate, very slightly two-lobed. Capsule coriaceous, one-celled, two-valved, each valve bearing a placenta along the middle. Seeds numerous, somewhat club-shaped. Embryo orthotropous, in the axis of a fleshy albumen. Cotyledons short, blunt, the radicle turned towards the hilum, and from the axis of the fruit.

Description of the Species, Gesnera Douglasil. Var. verticillata. Stems one or more, simple, one to three feet high, terete, and, as well as the whole herbage, dark green and covered with fine downy but somewhat harsh pubescence. The stems rise from a
swollen globose rhizoma, about two inches in diameter. Leaves normally opposite, but generally collected into distant spreading whorls, of from three to six each; petioles short, deeply channelled, and, as well as the midrib and principal veins, of a red tint; limbs ovate, tending to ob-cordate, broadly and bluntly serrate. InfloresCence rising from a terminal whorl of leaves, with flowers varying from two to more than twenty in number, in cymes, umbellately arranged, the peduncles often indistinctly developed, the whole covered with pubescence; occasionally a still more numerous set of flowers are similarly developed among the lower whorl of leaves, and arranged in a pseudo-verticillate manner. Pedicels two or three inches long, red, erect; the flowers inclined or nodding. Calyx halfsuperior, with a very short tube, and five somewhat irregular lanceolate teeth. Corolla about two inches long, cylindrically funnel-shaped, with five vesicular swellings at the base, somewhat irregularly fivelobed, slightly spreading, and somewhat bilabiate, the two lobes of the upper lip rather the smallest. A rounded tubercle is seated on the outside, between each sinus of the mouth. Stamens four, didynamous, included. Anthers cohering, pollen white. Ovary ovate, tapering to a subulate style, as long as the corolla. Stigma a little swollen, emarginately truncate, Two large yellow glands are seated at the base, at the upper side of the ovarium. J.S. Henslow.

Popular and Geographical Notice. All the species of this genus are from tropical America; and, like their allies, the Gloxineæ, possess very succulent and tuberous rhizomata. They are mostly highly ornamental stove plants, of easy culture.

Introduction; Where grown ; Culture. The present plant was grown in the Botanic Garden at Cambridge. It has not assumed the most ornamental form which this species sometimes presents, when numerous flowers arise in the lower whorl of leaves, as well as those which crown the summit - in a manner analogous to what we commonly see in the Chinese Primrose. It requires a rich light soil.

\section*{Derivation of the Name.}

Gesnera, altered from Gesneria, given by Plumier in honor of Conrad Gesner. Dovglasir, from the late botanical traveller, Douglas. Verticillata whorled.

Gesneria verticillata. Bot. Mag. No. 2776
Gesneria Douglasif, var. verticillata. Bot, Mag. No. 3612. Bot. RegNo. 1110.



\section*{TROP \(\mathbb{E}^{\prime} O L U M E D U^{\prime} L E 。\)}

\section*{EDIBLE-ROOTED INDIAN CRESS.}


NATURAL ORDER, TROP \(E O L A C E \not E\).


No. 248.
GENUS. Tropeolum. Linneus. Calyx S-partitus, lobo superiore calcarato. Petals 5, inæqualia, 3 inferiora minora aut evanida. Stamina 8 , ab ipsa basi libera. Carpelea 3 , suberosa, reniformia, indehiscentia, hinc sulcata rotundata. Semina magna, exalbuminosa, loculum suum implentia et hujus cavitati conformia. Embryo magnus; cotyledonibus 2, rectis, crassis, junioribus distinctis, dein arcte conferruminatis et etiam cum spermodermate adhærentibus, ima basi subdistinctis; radieula intra cotyledonum processus latente, tubercula 4 mox radicellas proferentia gerente. Herbe Americanæ, sapore nasturtiano donatæ, glabriusculæ, teneræ, diffusæ aut volubiles. Folia alterna, non stipulacea, petiolata, peltinervia. Pedunculi axillares, 1 -flori.

SPECIES. Tropeolum eduli. (Bridges) foliis longe petiolatis, peltatisectis, segmentis 6.8, obovatis, intergerrinis; petalis 5, unguiculatis, lobatis, calyce longioribus.

Character of the Genus, Tropeolum. Calyx five-partite, the upper lobe spurred. Petals five, unequal, the three lower smaller or undeveloped. Stamens eight, entirely free. Carpella three, corky, kidney-shaped, indehiscent, or furrowed and rounded. Seeds large, exalbuminous, each completely filling the loculament in which it is placed. Embryo large, with two straight thick cotyledons, at first free, afterwards firmly agglutinated to each other, and to the testa, subdistinct at the base, the radicle lying between the processes of the cotyledons, bearing four tubercles, from which rootlets presently arise.

Description of the Species, Tropeolum edule. Root tuberous. Stem climbing, glabrous, branched. Leaves glaucous, peltate, alternate, cut to the apex of the petiole into \(6-8\) obovate entire unequal segments, reflected in their sides; petioles very long. Peduncles longer than the leaves, and like the petioles, acting as tendrils. Flower buds ovate, angled, green, longer than the spur,
which is nearly straight. Flowers after expansion widely funnelshaped. Calyx segments ovate, subacute, green, yellow towards the base ; Spur slightly curved, scarcely longer than the limb. Petals five, unequal, unguiculate, orange yellow, |bluntly lobed, nerved and undulate, all longer than the calyx. Stamens about as long as the calyx, declined. Anthers small, round.

Popular and Geographical Notice. Notice was already taken at fol. 221, under Tropæolum Moritzianum, of the doubt entertained among botanists of the title of Tropæolaceæ, to rank as a distinct order. Longer reflection on the subject has only strengthened the opinion then expressed, that they should. The geographical dsitribution and sensible properties of the species of Tropæolum were then also noticed. The specific name given to this plant, is not a happy one, because any of the species may be, and most of them are eaten as salads, and the roots of others besides this are eaten when cooked. The roots of this, either roasted or boiled, are eaten in seasons of scarcity, by the poor natives of the province of Colchagua.

Introduction; Where grown; Culture. Tubers were sent by Mr. Bridges, from Valparaiso, and collected by him near Curico, in Chili. They produced flowers in the spring of 1842, in the garden of Mr. Coventry, at Jersey, and in the establishment of Messrs. Lowe, at Clapton. This should receive the same treatment as the other free growing species, and will be found, like them, very ornamental in the flower border during summer.

Derifation of the Name.
Trofeolum, from tootalov a war-like trophy.
Sýnonyme.
Tropeolum edule. Bridges, Paxton's Magazine of Botany. July, 1842.
Grah.



\section*{OLDENLAN'DIA DEPPEA'NA. \\ DEPPE'S OLDENLANDIA.}


No. 249.
GENUS. Oldenlandia. Linneus. Calycis tubus subglobosus dentes 4 per anthesin subapproximati in fructu persistentes sinu latissimo separati distantes. Corolla breve tubulosa limbo 4 -fido, fauce villosâ aut glabrá. Stamina breve exserta, antheris ovatis aut orbiculatis. Stigia indivisum aut bifidum. Capsula subglobosa laciniis calycinis distantibus parvis coronata bilocularis vertice loculicidâ rimâ dehiscens. Semina innumera minima placentæ subglobosæ adfixa et quasi semi immersa stirpes alsinoideæ herbaceæ rarissime fruticulosæ. Folia opposita, mediante stipulá iis utrinque subadnexâ. Pedunconitaxillares aut terminales, uni-bi aut multiflori sæpius, elongati gracilis. Decandolle. Prodr. vol. 4, page 424.
species. Oldenlandia Deppeana (Chamisso et Schlechtendahl) fruticulosa ramosissimo erecta glabra, foliis petiolatis ovato lanceolatis in petiolum attenuatis acuminatissimis firmis ad marginem subrevolutis scabris, stipulis albidis glanduloso-pubescentibus setoso-laciniatis setis apice in crassato-glandulosis, floribus in apicibus laxe paniculatis.

Character of the Genus, Oldenlandia. Tube of the Calyx rather globose, teeth four and somewhat approximating when in flower, persistent, distantly separated by a very wide space. Corolla shortly tubulose, limb divided into four parts, having the throat villous or smooth. Anthers scarcely protruding, either ovate or orbicular. Stigma entire, or bifid. Capsule subglobose, crowned with the small distant divisions of the calyx, two-celled, dehiscing at the top by a loculicidal chink. Seeds very numerous, small, adfixed to subglobose placentas, and as if half immersed. Plants resembling Chickweed, mostly herbaceous, very rarely shrubby. Leaves opposite, having the stipules somewhat joined to them on both sides in the middle. Peduncles axillary or terminal, one, two, or many-flowered, oftentimes slenderly elongated.

Description of the Species, Oldenlandia Deppeana. Stem shrubby, round, erect, from a foot to eighteen inches high, much branched, smooth. Leaves petiolate, ovate, lanceolate, acuminate, sus. 60,
smooth, margin scabrous, more or less recurved. Petioles about three lines long. Stipules rather fleshy, whitish, scabrous, laciniate, lacinire glaudular at the apex. Peduncles varying from one to two inches long, smooth. Pedicels about half as long. Bracts in pairs, those on the lower branches lanceolate, those on the upper ones subulate. Flowers white, paniculate. Corolla four-cleft, divisions ovate, acute, smooth, Stamens four, projecting a little beyond the corolla. Style cleft, longer than the stamens. Stigma globose. Capsule, when ripe, a bright and pleasing brown colour.

Popular and Geographical Notice. The genus Oldenlandia, as before stated, does not afford plants of any striking beauty; but, although it cannot vie in that respect with others, it possesses recommendations which make it a favourite with many cultivators. Its pearly white flowers are innocently pleasing, they are produced in abundance, and continue all the year round without intermission. Its medicinal and other properties are of little importance, if we except Oldenlandia umbellata, which is said to be much cultivated by the natives of Coromandel, under the name of Chay or Chaya, for the use of the Madras dyers and calico printers; and is used for the same purposes as Madder is in this country; but it imparts a far superior colour, giving the beautiful red so much admired in the Madras cotton.

The genus contains about forty species, which for the most part are inhabitants of the old world, three only being found in the new, of which our present plant is one.

Introduction; Where grown; Culture. It was introduced in the year 1836, by the Birmingham Horticultural Society; a plant having been obtained from \(\mathbb{M}\). Otto, of the Royal Botanic Garden, Berlin. It requires the temperature of the greenhouse, and may be propagated by cuttings of the young shoots, without the aid of a hand glass; and should be cultivated in a mixture of loam, peat, and sand.

Oldenlandia is a genus established by Linneus; the name of it having been adopted after the Danish botanist, Oldenland, who lived in the seventeenth century.



\title{
ERI'CA PYRIFOR'MIS. PYRIFORM ERICA.
}


NATURAL ORDER, ERICACE®.


No. 250.
genus. Ertca. Linneus. Calyx æqualis vimbricatus, quadripartitus, vel rarius quadrifidus. Corolla hypogyna tubulosa, hypocrateri-morpha, urceolata, campanulata, v globosa, limbo brevi, rarius maximo quadrifido, connivente, erecto, patente vel revoluto. Stamina 8 rarius 6.7, disco hypogyno glandulosa inserta. Filamenta libera rarissime submonadelpha. Antherez inclusæ V exsertæ, terminales, ad insertionem filamenti appendicibus duabus aristatæ vel cristatæ, vel omninò muticae, poro orbiculari vel oblongo v rima longitudinali dehiscentes. Ovarium quadriloculare rariùs 8 loculare, loculis, 2.00 ovulatis. Stylus filiformis. Stigma obtusum capitatum, vel peltatodilatatum sæpe breviter 4 lobum. Capsula 4 , rariùs 8 -locularis, loculicidé quadrivalvis, disscpimentis demüm fissis partim valvulis, partim columellæ adhærentibus. Semina placentis axilibus affixa, ovoidea vel compressa, testa adhærente reticulata læviuscula, vel nitida, rarius in membranam tenuem expansa. Frutices rigìduli, ramosissimi; rarius flaccidi. Folia saepissimè linearia acerosa, marginibus omninó revolutis et sub folia cohærentibus paginam inferiorem veram omninó occultantibus, nonnumquam latiora paginâ inferiora plus minusve evidente rariùs omninó plana verticellata vel rarius alterna vel sparsa. Flores in pedicellis uniforis axillares, vel terminales solitarii, verticellati, capitati v umbellati, plerumque cernui. Bractex in pedicello sæpissime tres, 2 oppositis tertia infra sita rariùs difficientê. Bentham ; in Decand. Prodrom. Vol. 7, p. 613.

SPECIES. Erica pyriformis. Hort. (Hybrid) caule ramosissimo glabro, foliis quaternis linearibus obtusis patentibus scabris; floribus ternis albidis sublateralibus; bracteis subremotis; sepalis ovatis acutis; corolla infundibuliformi cernua, limbo contracto revoluto glabro genitalibus inclusis.

Character of the Genus, Erica. Calyx equal or imbricate, four-parted, rarely quadrifid. Corolla situate below the ovarium, tubulose, salver-shaped, urceolate, bell-shaped, or globose; limb short, rarely of any considerable size, quadrifid, connivent, erect, patent, or revolute. Stamens eight, rarely six or seven, inserted on the hypogynous disc. Filaments free, very rarely somewhat joined. Anthers included or exserted, terminal, having two appendices at the insertion of the filament, aristate, or crested, or wholly free, dehiscing by an oblong or orbicular pore, or by a longitudinal chink. Ovarium four, rarely eight-celled, cells two to many-seeded. Style filiform. Stigma obtuse, capitate, or peltate, often shortly four-lobed. Capsule four rarely eight-celled, each cell four-valved, the dissepiments
finally cleft apart, adhering to the valves, and a part to the columella. Seeds affixed to central placentr, ovoid, or compressed, the testa adhering to them being reticulated, somewhat smooth or shining, rarely spread out into a fine membrane. Leaves most frequently linear, acerose, margins wholly revolute, and cohering under the leaf, and altogether hiding the real lower surface, sometimes they are rather broad, the lower surface being more or less shown, rarely are they entirely flat, whorled or rarely alternate, or scattered. Flowers on pedicels, one-flowered, axillary, terminal, solitary, or whorled, capitate, or umbellate, mostly drooping, Bracts on the pedicels, mostly two, opposite, the three situate below, rarely wanting.

Description of the Species, Erica pyriformis. Stem very much branched, round, covered with a brownish pubescent bark. Leaves arranged in fours, linear, patent, ciliate, obtuse, margin slightly revolute and transparent. Flowers numerous, in threes, nearly sessile, somewhat arranged on one side of the stem, drooping. Corolla white, tubular, about half an inch long, more or less inflated in the centre, contracted at the base, limb divided into four parts, each part revolute, smooth. Calyx linear, acute, one-sixth the length of the corolla. Bracts linear, somewhat remote, and of unequal lengths. Anthers awnless, dehiscing by a pore at the apex. Stamens and Style concealed within the tube of the corolla; style onethird longer than the stamens. Stigma globose.

Popular and Geographical Notice. All the species of Erica are exceedingly showy and handsome. It is one of the most extensive tribes of the vegetable kingdom, containing no less than about four hundred and fifty species, without varieties. They are almost exclusively natives of South Africa, but few species are found in Europe, and those the least attractive. The Erica cinerea, one of the most common of our British Heaths, is used, according to Lightfoot, by the inhabitants of the Western Isles of Scotland, boiled in water, to dye their yarn yellow. In Long Island it is frequently used for tanning leather ; and also for brewing, two-thirds of Heath being used to one of malt.

Introduction; Where grown; Culture. This is a hybrid, raised by Mr. Williams, gardener to John Willmore, Esq., Oldford, near Birmingham; from impregnating Erica physodes with the pollen of Erica grandinosa.

It requires the same treatment in cultivation as the Cape species, and may be propagated in the usual way.

Derivation of the Name.
Erica, from a supposition that the Erica of the ancients was a Heath.

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\section*{Systematic Name.}

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Lilium Thunbergianum, ... Liparia sphærica, ., ....... Lisianthus Russellianus,.. Lissochilus parviflorus, .... Lobelia Cavanillesii,....... Lobelia ramosa, ........... Lophospermum erubes.-scan.
Lophospermum scandens,... Lotus albidus,
Luculia gratissima, .........
Malva odorata, ...........
Manettia cordifolia, ......
Marcetia decussata, ......
Maxillaria cristata,........
Maxillaria tenuifolia,......
Mentzelia stipitata, ......
Meyenia Hawtayneana, ..
Mimulus Cardinalis, ......
Mimulus roseo-cardinalis,..
Mimulus puniceus,........
Nelumbium luteum, ......
Obeliscaria Drummondii,..
Odontoglossum Rossii, ....
Oldenlandia Deppeana, ..
Oncidium crispum........
Oncidium papilio, ........
Oncidium reflexum, ......
Opuntia Drummondii, ....
Orthosiphon incurrus, ....
Osbeckia canescens, .......
Oxalis Bowiei, ...........
Oxylobium scandens,......
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[^0]:    Those portions of the above works originally annexed to the Numbers comprisedin

