CURTIS'S

BOTANICAL MAGAZINE,

COMPRISING THE

Plants of the Royal Gardens of Kew

AND

OF OTHER BOTANICAL ESTABLISHMENTS IN GREAT BRITAIN;

WITH SUITABLE DESCRIPTIONS;

BY

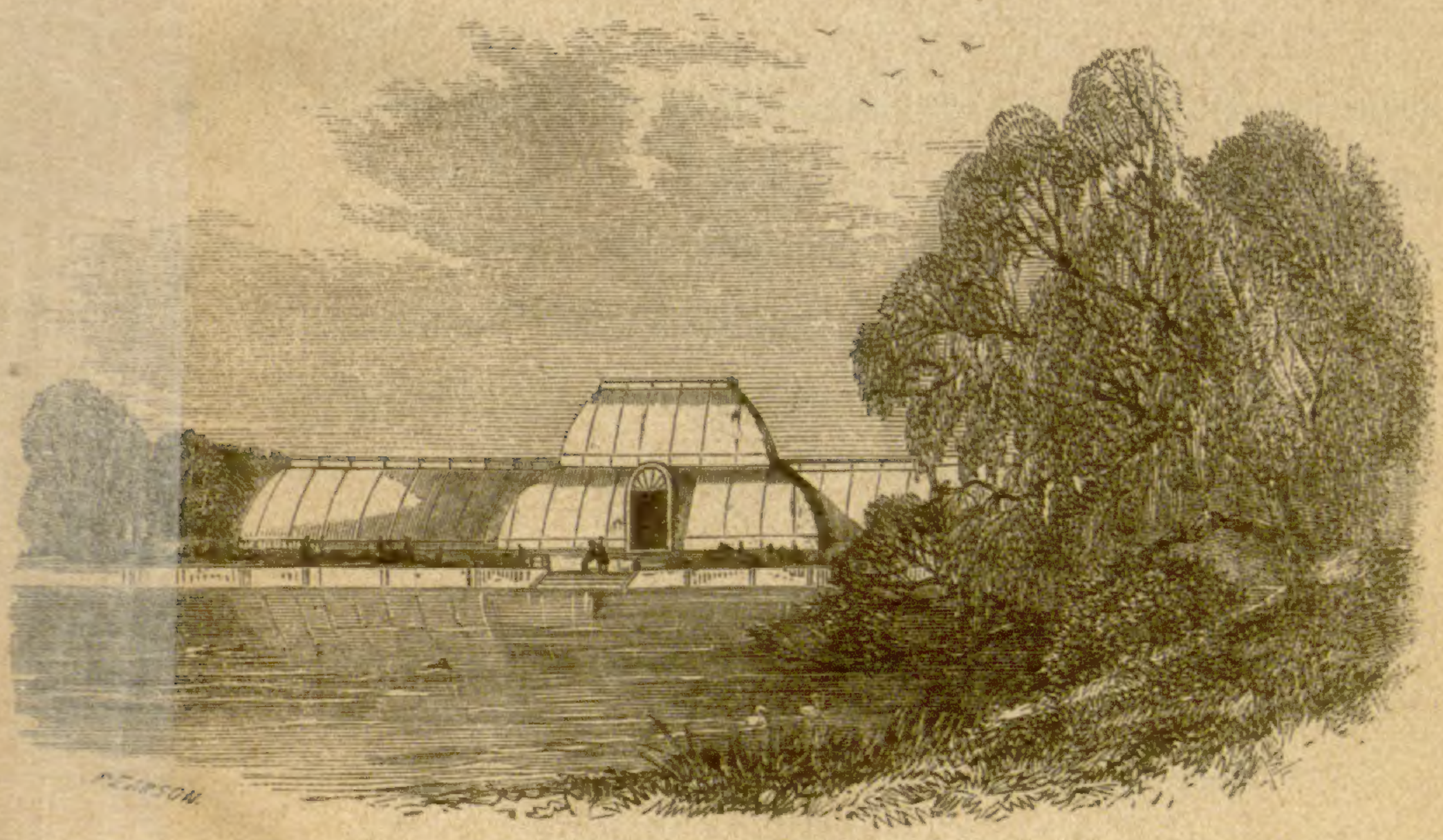
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VOL. XXIV.

OF THE THIRD SERIES;

(Or Vol. XCIV. of the Whole Work.)



PEARSON.

"Gems of the changing autumn, how beautiful ye are!
Shining from your glossy stems like many a golden star;
Peeping through the long grass, smiling on the down,
Lighting up the dusky bank, just where the sun goes down."

Campbell.

LONDON:

L. REEVE & CO., 5, HENRIETTA STREET, COVENT GARDEN.

1868.

Mo. Bot. Garden.

1897.

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TO

PROFESSOR HEINRICH GUSTAV REICHENBACH,

DIRECTOR OF THE HAMBURG BOTANIC GARDENS.

My dear Dr. Reichenbach,—

The Authors of the 'Botanical Magazine' *have long enjoyed the privilege of dedicating its successive Volumes to individuals who have signally contributed to the progress of the Botany and Horticulture of these Islands; and amongst these there are few, within late years, who have been so prominent as yourself.*

In dedicating this Volume, therefore, to you, I am recording, on the one hand, the obligations of British Orchid-growers, who have profited so largely by the prompt and generous aid you have granted them in naming their plants; and, on the other, of Scientific Botanists, who recognize in your efforts a scrupulous regard to the requirements of a scientific system of nomenclature.

I am,

My dear Dr. Reichenbach,

Most faithfully yours,

J. D. HOOKER.

Royal Gardens, Kew.

December 1, 1868.



2

W Fitch del. et lith.

Vincent Brooks, Imp.

TAB. 5683.

CATTLEYA AMETHYSTOGLOSSA.

Amethyst-lipped Cattleya.

Nat. Ord. ORCHIDEÆ.—GYNANDRIA MONANDRIA.

Gen. Char. (*Vide supra*, TAB. 5449.)

CATTLEYA *amethystoglossa;* caulibus elatis teretibus superne sensim incrassatis inferne sulcatis, foliis 2-nis oblongo-lanceolatis obtusis 5–8-pollicaribus, scapo valido erecto multifloro, pedunculis validis adscendentibus, sepalis petalisque obtusis albis roseo-suffusis et purpureo-maculatis, sepalo superiore oblongo- v. lineari-oblongo lateralibus latioribus subfalcatis, petalis obovato-oblongis, labello profunde 3-lobo, lobis lateralibus erectis, intermedio late obcordato-2-lobo roseo-violaceo, lobis patentibus corrugatis et papillosis.

CATTLEYA amethystoglossa. *Linden et Rchb. fil. Cat. Plant. Exot.* 1857, *p.* 26. *Warner, Select. Orchid. Plant. pt.* 1. *t.* 2.

EPIDENDRON amethystoglossum. *Rchb. fil. in Walp. Ann. v.* 6. *p.* 319.

There is little to add to the excellent description and figure of this magnificent plant given by Mr. Warner in his 'Select Orchidaceous Plants,' published in 1862. As he truly observes, the species is allied to *C. granulosa* (Tab. nostr. 5048) and *C. guttata* (Tab. nostr. 3693), but is very distinct from both. It is, no doubt, a native of Brazil, but its exact locality is not known, and there are no specimens of it either in Dr. Lindley's or the Hookerian Herbarium. Mr. Warner describes it as flowering in May and June; but the plant with us blossomed in February of the past year.

DESCR. *Rhizome* woody, creeping. *Stems* (pseudobulbs) two to three feet high, strict, stout, erect, gradually thickened upwards, deeply grooved; upper joints sheathed. *Leaves* six to eight inches long, two to two and a half inches broad, linear-oblong, obtuse, very coriaceous, deep green. *Scape* stout, erect, two to four inches high, sheathed at the base. *Flowers* forming an erect, somewhat candelabrum-like corymb, large and showy. *Peduncles* stout, ascending, one to two

inches long, gradually thickening into the long, slender ovary. *Perianth* white, suffused with rose-purple, four inches in diameter. *Upper sepal* erect, linear-oblong, obtuse, covered with transversely oblong purple blotches; *lateral sepals* broader, deflexed, subfalcate, similarly coloured, but with larger blotches. *Petals* broadly obovate, rounded at the apex, their purple blotches large and often confluent. *Lip* short; lateral lobes erect, with spreading apices; middle expanded, broader than long, very broadly obcordate or two-lobed, the lobes deep violet-purple, with raised radiating corrugated papillose ridges.—*J. D. H.*

Fig. 1. Column. 2. Lip:—both *magnified.*



2

1

3

W. Fitch, del et lith.

Vincent Brooks, Imp

Tab. 5684.

COTYLEDON velutina.

Velvety-leaved Cotyledon.

Nat. Ord. Crassulaceæ.—Decandria Pentagynia.

Gen. Char. (*Vide supra*, Tab. 5602.)

Cotyledon *velutina;* ramulis foliisque junioribus velutino-pubescentibus, caule erecto tereti, foliis oppositis obovato- v. subpandurato-oblongis obtusis integerrimis basi cordato-amplexicaulibus crassis enerviis viridibus marginibus apices versus brunneis, paniculæ corymbosæ ramis subhorizontalibus, floribus magnis pendulis pedicellatis, calycis lobis ovato-triangularibus corollæ tubo pallide virescente multo brevioribus, corollæ lobis lineari-oblongis subacutis patentibus flavis purpureo-marginatis, filamentis basi dilatatis.

This is another of the noble South African plants introduced by W. W. Saunders, F.R.S., of Reigate, through his energetic collector, Mr. Cooper, and liberally presented, in 1858, to the Royal Gardens, where it is, when in flower, a great ornament to the Succulent House. As a species, it approaches, firstly, *C. cuneata*, Thunb., in the form of the leaves, differing, however, in their being semiamplexicaul at the base, and in not being hispid; and secondly, *C. tomentosa*, Harv., which is a slender, more densely pubescent plant, with subpetioled leaves.

The genus *Cotyledon* contains upwards of twenty Cape species, described in Harvey and Sonder's 'Flora Capensis;' and that this number must fall far short of the total South African species, is evident from this being the second that has flowered since the publication of those descriptions (1862), and been figured in the 'Botanical Magazine' (see Tab. 5602). Amongst the species are some with the most beautifully-coloured foliage, and others with very handsome flowers, and which, together with the facility with which they are cultivated in dwelling-houses or small greenhouses, if even of indifferent construction, renders them well adapted for supplying the horticultural requirements of the less

wealthy and even the poorer classes who inhabit the outskirts of our great towns. A distribution of such succulent plants as these, would give far more enduring pleasure to the poorer classes, than the Geraniums and Verbenas of the parks, given away at the end of the season, when it is almost impossible to keep them alive without heat and glass, and quite impossible to flower them.

DESCR. A stout, succulent *perennial*, two to three feet high, with rather glaucous, terete stem and scape, and dark-green foliage; *young leaves* and *shoots* covered with a fine velvety pubescence. *Leaves* opposite, rather crowded, decussate, three to five inches long, oblong-obovate or subpanduriform, obtuse, cordate and semiamplexicaul at the base, very thick, quite smooth, even, nerveless; margins quite entire, edged with brown towards the tip. *Scape* erect, strict. *Panicle* subcorymbose, flat-headed, branched, open; branchlets nearly horizontal. *Flowers* pedicelled, pendulous. *Calyx* broad, green, with short, deltoid teeth. *Corolla-tube* one inch long, pale green below, yellow above; *lobes* as long as the tube, linear-oblong, subacute, spreading, bright yellow, with purple margins. *Stamens* exserted; *filaments* very broad at the base; *anthers* striate. *Squamulæ* connate, short, spreading. *Styles* filiform.—*J. D. H.*

Fig. 1. Lobes of corolla and stamen. 2. Stamen. 3. Ovary:—*all magnified.*



2

W. Fitch, del et lith

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Vincent Brooke, Imp.

Tab. 5685.

VITIS PLANICAULIS.

Flat-stemmed Vine.

Nat. Ord. Ampelideæ.—Tetrandria Monogynia.

Gen. Char. (*Vide supra*, Tab. 5682.)

Vitis *planicaulis;* glaberrima, caule alte scandente lignoso plano-compresso, ramulis teretibus, foliis longe petiolatis digitatim 5-foliolatis, foliolis petiolulatis oblongo-lanceolatis obtuse acuminatis subdistanter serratis basi obtusis, cirrhis robustis simplicibus, cymis breviuscule pedunculatis subcorymbosis ramosis ramis divaricatis, floribus abortu unisexualibus robuste pedicellatis 4-meris, calycis margine integerrimo, alabastris urceolatis, petalis demum patentibus caducis late ovato-triangularibus obtusis, disco inconspicuo, ovario late conico, stigmatis lobis 4 rotundatis patentibus, bacca majuscula globosa, seminibus cordiformibus dorso medio sulcatis lateribus transverse corrugatis, antice medio carinatis.

This is one of those curious tropical forms of the genus *Vitis* that form enormous llanas in the forests of the torrid zone, and attract the attention of every traveller by their remarkable characters; in the present plant it is the structure of the stem and its enormous size that form its most conspicuous features. These stems may be seen in the forests, at the base of the central Himalayan provinces, descending from the overhanging limbs of gigantic forest trees, in the form of flat, lithe bands, as much as eighteen inches in breadth, and not one inch in thickness, and of much the colour and pliability of those gutta-percha bands that are used for the driving-machinery of our manufactories. This species was discovered in the Sikkim Himalaya by myself in 1849, and the specimen here figured was derived from a plant whose seeds were sent home at that time, and which now climbs the rafters of the Succulent House at Kew. Specimens of the trunk may be seen in the Museum (No. 1). In the absence of the disk (or, more probably, its confluence

with the base of the ovary), this resembles the *Ampelopsis* section of the genus, but the tendrils are wholly different.

Descr. A perfectly glabrous, gigantic, climbing Vine. *Trunk*, at the base, eighteen inches broad by one to one and a half inch in thickness, quite flattened, dark brown, swelling at the nodes, which occur at intervals; wood soft and spongy, with large, open proper vessels. *Branchlets* and *shoots* quite terete. *Leaves* large, quinately digitate; *petioles* three inches to a span long, terete; *leaflets* a span long, petiolulate, oblong-lanceolate or linear-oblong, acuminate, with an obtuse point, rather distantly serrate, base rounded or obtuse, substance rather leathery, shining above with divergent veins. *Tendrils* long, stout, and simple. *Cymes* shorter than the petioles; *peduncles* stout; *branches* subcorymbose, divaricating. *Flowers* green, umbellulate; *pedicels* stout, one-eighth to a quarter of an inch long. *Calyx-limb* entire. *Corolla* urceolate in bud, the four petals soon separating, spreading and deciduous. *Stamens* very minute and imperfect in the cultivated plant, whence the species is probably subdioecious. *Ovary* conical, with a sessile four-lobed radiating stigma. *Fruit* glabrous, as large as the thumb-nail, and two-seeded.—*J. D. H.*

Fig. 1. Flower,—*magnified.*



Tab. 5686.

COBURGIA trichroma.

Tricoloured Coburgia.

Nat. Ord. Amaryllideæ.—Hexandria Monogynia.

Gen. Char. Corolla infundibuliformis v. cylindrica, superne ampliata, fauce dilatato, tubo incurvo, lobis imbricatis patentibus. *Corona* 6-loba, lobis 2-fidis v. 2-dentatis, dentibus alternis brevibus 2-fidis alternis staminiferis. *Filamenta* vix conniventia; antheræ breves. *Ovarium* 3-quetrum; stylus rectus, stigmate capitellato v. obtuso; ovula 2-seriata. *Capsula* oblonga, 3-locularis, 3-valvis, polysperma.—Herbæ, *bulbo tunicato*. Folia *linearia, glauca*. Scapus *compressus v. teretiusculus*. Spatha 2–4-*phylla, membranacea*. Flores *cernui v. penduli, coccinei rosei v. aurantiaci, sæpe speciosi*.

Coburgia *trichroma;* bulbo subgloboso, squamis externis brunneis, foliis 2-pedalibus $\frac{1}{2}$—$\frac{3}{4}$ poll. latis carinatis obtusis pallide viridibus scapum subæquantibus, spathis oblongis obtusis pedicellos superantibus, floribus 4-pollicaribus pendulis, tubo basi gracili demum ampliato coccineo, lobis oblongo-lanceolatis tubo 4-ties brevioribus intus roseis extus dorso fascia viridi notatis.

Coburgia trichroma. *Herbert in Bot. Mag. t.* 3867. *Bot. Reg.* 1842. *Misc. p.* 52. *Kunth, Enum. v.* 5. *p.* 647.

Pancratium trichromum. *Lexarza et De Llave, Nov. Veg. Descr. t.* 20.

Chrysiphiale trichroma. *Schult. Syst. v.* 7. *p.* 907.

This magnificent plant was first introduced, in 1838, from rocky precipices in the Andes of Peru, by the late J. Maclean, Esq., of that city, and was figured in the 'Botanical Magazine' thirty years ago, from a specimen that flowered at Spofforth. That figure gives so little idea of its size and beauty that another figure, being absolutely required, is given here. The specimen from which it is taken flowered in the choice garden of our friend W. W. Saunders, F.R.S., at Reigate, to whom we are indebted for the drawing. *Coburgia trichroma* seems to be a much better known plant in American than in English gardens, for it was first described by Llave and Lexarza from specimens cultivated in Mexico. For the following description I am indebted to Mr. J. G. Baker:—

Descr. *Bulb* subglobose or ovoid, two or three inches in diameter, the outer coats brown, membranous, truncate upwards. *Leaves* five or six, contemporaneous with the flowers, eighteen to twenty-four inches long, half to three-quarters of an inch broad, quite a line thick, in the centre glaucous-green, the inner face curved, especially in the lower part, the keel faint, the veins quite immersed. *Scape* firm, erect, subterete, glaucous-green, quite naked, about equalling the leaves. *Spathe* four- to six-leaved, the leaves about two inches long, clasping tightly round the lower part of the flowers, quite hiding the ovaries and short pedicels. *Flowers* four to six, cernuous, about five inches long, the tube four inches, bright scarlet, not more than two lines in diameter below, expanding gradually upwards to the throat, the divisions ovate-lanceolate, subpatent, about an inch deep, the inner three narrower and more acute than the outer three, all with a green keel on the outside, and with green vertical marks bounding a paler central portion on the inside. *Corona* short, with a bifid tooth between each stamen. *Stamens* equalling, and style slightly exceeding the perianth. *Capsule* bluntly trigonous.—*J. G. B.*

Fig. 1. Tube of corolla, corona, and stamens. 2. Transverse section of ovary :—*both magnified.*

Tab. 5687.

Fig. 1. OPHELIA alata; 3. angustifolia; 5. paniculata.

Winged, Narrow-leaved, and Panicled Ophelia.

Nat. Ord. Gentianeæ.—Pentandria Monogynia.

Gen. Char. (*Vide supra*, Tab. 5397.)

Ophelia *alata;* caule tetraptero, foliis ovatis v. ovato-cordatis 3–5-nerviis, cymis subcontractis, calycis lobis lineari-lanceolatis, corolla 4-partita, lobis oblongis acuminatis sordide flavis rubro-purpureo-punctatis, fovea nectarifera margine fimbriata.

Ophelia alata. *Griseb. Monog. Gent. p.* 321; *et in DC. Prodr. v.* 9. *p.* 127.

Agathotes alata. *Don in Phil. Mag.* 1836, *p.* 523.

Ophelia *angustifolia;* caule subtetragono, foliis lanceolatis lineari-lanceolatisve acuminatis 3-nerviis, cymis laxifloris, floribus gracile pedicellatis, calycis lobis lineari-lanceolatis, corolla 4-partita, lobis oblongis acuminatis purpureis cæruleo-punctatis, fovea nectarifera orbiculata, margine superiore squamula instructo.

Ophelia angustifolia. *Don, l. c. p.* 524. *Griseb. in DC. Prodr. v.* 9. *p.* 127.

Swertia angustifolia. *Don, Prodr. p.* 127. *Wall. Pl. As. Rar. v.* 3. *t.* 204.

Ophelia *paniculata*; caule tereti v. superne subangulato, ramis diffusis, foliis lineari-lanceolatis subpetiolatis 3-nerviis, marginibus scaberulis, cymis contractis, calycis lobis lineari-lanceolatis, corollæ sæpius 5-partitæ lobis oblongo-lanceolatis acuminatis albis infra medium fascia violacea semilunari notatis, fovea nectarifera fere obliterata obscure marginata.

Ophelia paniculata. *Don, l. c. p.* 525. *Griseb. l. c. p.* 124.

Swertia paniculata. *Wall. Pl. As. Rar. v.* 3. *t.* 205.

The arrival from Isaac Anderson Henry, Esq., F.L.S., of Edinburgh, of a boxful of these charming and interesting plants, deserves all the publicity that the 'Botanical Magazine' can give. Unfortunately the coloured Plate cannot

give the sparkling hues of their inflorescence, though it can their graceful habits and varied colours. They are all natives of the Himalaya and of its colder regions, though not attaining the alpine zone of vegetation. Several species inhabit the Nilghiri mountains, of which two, *O. corymbosa* (Tab. nostr. 4489) and *O. umbellata* (t. 5397), have flowered at Kew. Most, if not all, the species are annual, and have bitter roots, whence their popular use as febrifuges by the natives of India, under the names of Chirita, Chiryta, Chirayta, and Chirata, as it is indifferently spelt.

O. alata has been found hitherto in the north-west Himalaya only. *O. angustifolia*, which inhabits a lower elevation than the others (2000–6000 feet), is found throughout the range; it is a very variable plant, especially in the size and length of the calyx-lobes, which sometimes far exceed the corolla. *O. paniculata* inhabits temperate regions, from Kumaon to Sikkim.

Descr. The species may be most easily distinguished as follows:—*O. alata*, by the four-winged stem and broad ovate or subcordate leaves, greenish-yellow corolla with red-purple spots, and nectary almost surrounded with a fimbriate ridge. *O. angustifolia*, by the more terete stem, narrow leaves, flowers on slender pedicels, four-parted corolla, whose lobes are purple and spotted with blue, and the nectary is orbicular with a tongue-shaped scale at its upper margin. *O. paniculata*, by its obscurely angled stem, narrow leaves, and usually five-parted corolla, whose lobes are white, with a semilunar purple-violet band about the middle.—*J. D. H.*

Fig. 1. *O. alata*. 2. Corolla lobe,—*magnified*. 3. *O. angustifolia*. 4 Corolla lobe,—*magnified*. 5. *O. paniculata*. 6. Corolla lobe,—*magnified*.



W Fitch del et lith

Vincent Brooks Imp

Tab. 5688.

TRICHOCENTRUM ALBO-PURPUREUM.

Purple and white Trichocentrum.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. Perianthium patens, liberum, æquale. *Labellum* sessile, cum basi columna connatum, planum, 2-lobum, basi lamellosum, calcaratum. *Columna* nana, semiteres, crassa, utrinque alata. *Anthera* 2-locularis, mutica. *Pollinia* 2, complicata; caudicula cuneata; glandula minuta.—Herbæ *epiphyticæ, Americanæ, acaules.* Folia *planiuscula.* Flores *pedunculati, subsolitarii, radicales.*

Trichocentrum *albo-purpureum;* foliis sessilibus oblongo-lanceolatis acuminatis pallide viridibus, labello subquadrato 2-lobo, lobis rotundatis albis basi utrinque plaga lata purpurea notatis, columnæ alis brevibus superne in cornua porrecta productis marginibus integerrimis, calcare brevi curvo.

Trichocentrum albo-purpureum. *Reichenbach fil. in Gard. Chron.* 1866, *p.* 219.

Trichocentrum is a small genus of *Vandeæ*. allied to *Burlingtonia* and, like it, a native of South America, where the species are distributed from Peru and Brazil to Mexico; but few are known, and amongst those in cultivation the present is by far the prettiest; the only other figured in an English work is the sombre-coloured *T. fuscum* (Tab. nostr. 3969), from Mexico.

T. albo-purpureum was introduced by M. Linden, it is believed, from the Rio Negro, in North Brazil, according to Reichenbach in the 'Gardeners' Chronicle,' who gives an excellent woodcut representation of the flower, and who further states that two varieties of it are known, one with a narrow and the other with a very broad lip. The specimen here figured flowered with Mr. W. Saunders, F.R.S., at Reigate; its sepals are more obtuse, and the lip a little narrower than in the figure of the 'Gardeners' Chronicle.'

Descr. *Stem* 0, or very short; ovoid pseudobulbs sending

down long, flat, aerial roots, that adhere firmly to the wood or cork on which the plant is growing. *Leaves* three inches long by one inch broad, sessile, oblong-lanceolate, acute, thick, bright green above, pale below. *Peduncles*, from the bases of the leaves, solitary, simple, one-flowered, one inch long, with two subopposite bracts at the apex; *pedicel* short; *ovary* slender. *Perianth* nearly two inches in diameter, spreading. *Petals* obovate-lanceolate, acuminate, of a fine maroon-brown on the inner surface, outer surface and tips greenish-yellow. *Lip* subquadrate, two-lobed at the apex, white, except at the subauricled base, where there are two large, bright purple spots; basal ridges lobed. *Column* with short, entire, margined wings, produced above into subulate projecting horns. *Spur* much shorter than the sepals, curved, stout.—*J. D. H.*

Fig. 1. Ovary, lip, spur, and column:—*magnified*.



W Fitch, del. et lith.

Vincent Brooks Imp.

TAB. 5689.

BEGONIA SUTHERLANDI.

Dr. Sutherland's Begonia.

Nat. Ord. BEGONIACEÆ.—MONŒCIA POLYANDRIA.

Gen. Char. (*Vide supra*, TAB. 4131.)

BEGONIA (Augustia) *Sutherlandi;* fere glaberrima, caule gracili ramoso rubro-purpureo, foliis gracile petiolatis oblique ovato-lanceolatis basi profunde cordato-2-lobis acuminatis lobulatis et inciso-serratis, costa nervis marginibusque rubris, stipulis oblongis serrulatis, cymis multifloris, perianthii rubro-aurantiaci foliolis in fl. ♂ 4, in fl. ♀ 4–5, exterioribus rotundato-obovatis, interioribus angustioribus, staminibus receptaculo planiusculo insertis, antheris oblongis obtusis, stigmatibus 3 2-lobis, ramis vix tortis, placentis integris, capsula subæqualiter 3-alata.

Of the various pretty Begonias from South Africa figured in this Magazine (Tab. 3720, 3731, 4841, 5583), this is by far the most elegant, and will no doubt prove a great favourite amongst horticulturists; its graceful habit, the brilliant vinous-red hue of its branches, petioles, and of the nerves and margins of the leaves, contrasting with the delicate green of the membranous translucent leaves and copious orange-red blossoms,—are all very marked and beautiful characters. It was discovered by Dr. Sutherland, Surveyor-General of Natal, in the western mountains of that colony, altitude 3500 feet, and is one of the many discoveries of that excellent contributor to the botany of South Africa. More recently it has been collected by the unfortunate Gerrard, who lately perished whilst collecting in Madagascar, and by Mr. Cooper, who was sent out by Mr. W. Saunders, F.R.S. For the specimen here figured I am indebted to Messrs. Backhouse, of York, with whom it flowered in June, 1867.

DESCR. *Root* of small tubers. *Stem* one to two feet high, slender, graceful, and, as well as the branches, of a deep,

bright red-purple colour. *Leaves* on slender red petioles, two to three inches long; *blade* four to six inches long, very obliquely ovate-lanceolate, deeply two-lobed at the base, the lobes rounded, margin lobed and acutely serrate, bright green above, with a few small scattered hairs, paler below, the nerves on both surfaces, as well as the margin, of a bright red colour. *Stipules* oblong, red, usually serrulate or erose. *Cymes* axillary and terminal, many-flowered; *peduncles* and *pedicels* slender, red; *bracts* opposite, obovate or orbicular, obtuse or acute, red, serrulate or quite entire. *Flowers* one inch in diameter, orange or pale coppery-red, varying to a dirty rose-red; *male* with four leaflets, of which the two outer are almost orbicular, the inner much narrower; *female* with usually five leaflets, irregular in size. *Stamens* numerous, free, sessile on the receptacle; *anthers* oblong, obtuse. *Ovary* three-celled, placentas entire; *stigmas* three, with short arms. *Capsule* with three subequal wings.—*J. D. H.*

Fig. 1. Stamen. 2. Unripe capsule. 3. Transverse section of ditto:—*magnified.*



W Fitch del et lith

Vincent Brooks

Tab. 5690.

HYPOXIS elata.

Tall Hypoxis.

Nat. Ord. Hypoxideæ.—Hexandria Monogynia.

Gen. Char. Perianthii tubus cum ovario connatus, limbi 6-partiti lobis patentibus coloratis planis persistentibus. *Stamina* 6, disco epigyno inserta, perianthii foliolis opposita; antheræ lineares v. oblongæ, intus dehiscentes. *Ovarium* 3-loculare; stylus liber, brevis v. elongatus, stigmatibus 3 in columnam conicam connatis, ramis liberis; ovula numerosa, 2-seriata, amphitropa. *Capsula* 3-locularis, evalvis, polysperma.—Herbæ *perennes, sæpissime villosæ, acaules v. caudice crasso vaginis foliorum vetustorum obtecto.* Folia *tristicha, linearia v. lanceolata, basi vaginantia.* Flores *in spicas cymas v. paniculas pauci-multifloras dispositi, flavi.*

Hypoxis *elata;* elata, robusta, sericeo-villosa, foliis perplurimis revolutis 2-pedalibus lanceolato-ensiformibus costatis subtus dense lanuginosis, scapo foliis breviore nutante multifloro, floribus amplis racemosis, bracteis filiformibus, perianthii foliolis aureis dorso medio griseis et lanuginosis, antheris oblongo-sagittatis, filamentis brevibus subulatis, stylo brevi, stigmatibus connatis.

This is the handsomest of all the hitherto figured species of the genus, introduced by Mr. Wilson Saunders, F.R.S., from Natal, through his active collector, Mr. Cooper. It flowered in the Royal Gardens, Kew, first in 1863, from bulbs given by Mr. Saunders, but the drawing here given is of a much larger specimen, that flowered at Reigate in June, 1862. As a species it closely resembles the *H. Rooperi.* Moore, but is a much larger plant, with the inflorescence racemose, not disposed in open, opposite-branched, trichotomous cymes; the pedunceles are large and more slender, and the bracts are not short, persistent, and subulate; the flowers are twice as large, and the perianth segments are not green at the back, but yellow, with a dorsal green stripe.

The genus *Hypoxis* is a very large one in South Africa, whence many species remain to be introduced; as yet they have found little favour with horticulturists, most of those

that have hitherto been cultivated possessing none of the attractions of *H. elata.*

Descr. *Root* bulbous. *Stem* an inch broad at the base. *Leaves* very numerous, a foot to a foot and a half long, spreading and revolute, thinly villous above, thickly below with soft hairs, keeled and plicate, an inch to an inch and a half broad. *Scapes* numerous, shorter than the leaves, bearing a large, nodding, many-flowered raceme. *Peduncles* an inch and a half long, slender. *Flowers* two inches in diameter, golden yellow; *perianth segments* ovate-oblong, subacute, yellow and thinly villous at the back, with a green dorsal band. *Anthers* oblong-sagittate. *Ovary* with very long spreading hairs; *stigmas* consolidated.—*J. D. H.*

Fig. 1. Stamens and ovary,—*magnified.*

Vincent Brook

Tab. 5691.

ODONTOGLOSSUM Alexandræ; var. *Trianæ*.

Princess of Wales's Odontoglossum, Dr. Triana's variety.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. *Perianthium* explanatum. *Sepala* et *petala* sæpius subconformia. *Labellum* integrum, ecalcaratum, unguiculatum, ungue cum basi columnæ continuo, lamina patente basi cristata. *Columna* erecta, membranaceo-marginata, apice utrinque alata. *Anthera* 2-locularis. *Pollinia* 2, solida, caudicula lineari, glandula hamata.—Herbæ *epiphyticæ, pseudobulbiferæ, montium Americæ tropicæ incolæ.* Folia *solitaria* 2-*na v. pauca, plicata v. plana.* Scapi *ad basin pseudobulbi inserta, breves v. elongati,* 1-*multiflori, erecti v. penduli.* Flores *speciosi, racemosi.*

Odontoglossum *Alexandræ;* pseudobulbis ovatis compressis 1–2-phyllis, foliis elongatis, racemo simplici multifloro, sepalis et petalis membranaceis subæqualibus v. sepalis angustioribus ovatis v. lanceolatis acuminatis, labello polymorpho ovato v. subquadrato apice acuto obtuso v. truncato et 2-lobo, marginibus integerrimis v. dentatis, columna arcuata clavata alis laceris.

Odontoglossum Alexandræ. *Batem. in Proc. Hort. Soc.* 1864, *p.* 186; *et Monog. Odontogloss. t.* 14 *et* 19.

Var. *Trianæ;* sepalo dorsali macula solitaria rosea notato, lateralibus roseo suffusis et maculatis, petalis niveis, labello oblongo-panduriformi apice 2-lobo, marginibus undulatis et crispatis, disco plaga ampla 2-loba notato. *Tab. nost.* 5691.

For the beautiful variety here figured of this lovely Orchid the Royal Gardens are indebted to Dr. Triana, of Bogotá, a very distinguished botanist, who procured it from the New Granadan Andes, about ten leagues from Bogotá, at elevations of 7000 to 8000 feet. Two varieties of the same species have been figured by my friend Mr. Bateman, in his splendid work on the genus, neither of which rival this in beauty and delicacy of colouring, or in the size of the flower. This author well points out the very variable nature of the flower, not only as to colour, but in the form of the lip, which is rounded and two-lobed at the apex, or acute or acuminate, and entire or serrate.

It need hardly be observed, that in common with all the

other Odontoglossums we know of, this requires a cool treatment. Its flowers last for a long time, and are not surpassed by those of any other Orchid for delicacy and beauty; they expanded at Kew in October.

Descr. of var. *Trianæ*. *Pseudobulbs* an inch and a half to two inches long, compressed. *Leaves* one to two, or six to eight inches long, an inch and a half to two inches broad, acute. *Racemes* larger than the leaves, drooping, many-flowered, slender. *Bracts* short, obtuse. *Flowers* two and a half inches in diameter. *Sepals* oblong, acuminate, white suffused with rose, the upper with one circular rose spot in the centre, the lateral usually deeper rose-coloured along the upper half, and there spotted with the same. *Petals* snow-white, broader than the sepals. *Lip* oblong panduriform, two-lobed at the apex, base expanded into wing-like lobes barred with rose, margin toothed, disk with a large, 2-lobed, rosy patch, and two small spots more towards the base. *Column* with toothed wings spotted with red.—*J. D. H.*

W Fitch del et lith

Vincent Brooks Imp

Tab. 5692.

STAPELIA Plantii.

Mr. Plant's Stapelia.

Nat. Ord. Asclepiadeæ.—Pentandria Pentagynia.

Gen. Char. Calyx 5-partitus. *Corolla* rotata, 5-fida, carnosa. *Gynostegium* sæpius exsertum. *Corona staminea* duplex, exterioris foliolis v. laciniis integris v. partitis, interioris foliolis corniculiformibus simplicibus v. 2-fidis. *Antheræ* apice simplices. *Pollinia* erecta, ventricosa, margine hinc pellucida. *Stigma* muticum. *Folliculi* subcylindrici, læves, erecti. *Semina* comosa.—Plantæ *Capenses, carnosæ, ramosæ, ramis aphyllis sæpius 4-gonis angulis dentatis.* Flores *utplurimum speciosi, atro-sanguineo guttati marmorati v. fasciati. Decaisne in DC. Prod.*

Stapelia *Plantii;* ramis pubescentibus erectis 4-quetris clavatis v. columnaribus, angulis dentatis, dentibus remotis incurvis spinula molli terminatis, pedunculis calycibusque pubescentibus, corolla ampla 5-fida, marginibus longe ciliatis, laciniis lanceolatis acuminatis, disco fusco-purpureo fasciis fulvis creberrime transverse notato, marginibus late atro-purpureis.

Stapelia *Plantii. Hort. Grahamstown.*

In the year 1811, the Kew collection of *Stapeliæ* contained no less than forty-four species, that of epiphytic Orchids thirty-seven. Those were the days of small dry stoves, heated by hot-air flues; when the successful cultivation of epiphytic Orchids was regarded as impossible, and our houses overflowed with the representatives of such dry climates as South Africa and Australia. Now we boast of rather fewer species of *Stapelia* and about four hundred epiphytic Orchids; and, small as the former collection must appear when compared with the number of species of *Stapelia* that have been in cultivation (nearly eighty), it is, I believe, one of the largest now in England. In Germany, probably, much larger exist; and that much may be added to all, is evident from the fact of the subject of the accompanying Plate being quite new; it was sent to the Royal Gardens from the Botanic Garden of Grahamstown, in 1866, and flowered in November, 1867. As a species it is very near *S. grandiflora* and *S. hirsuta*, differing from both

chiefly in the pale sulphur-coloured transverse bands of the corolla lobes.

Descr. *Stem* stout, creeping; *branches* downy, five to nine inches long, erect, columnar or subclavate, with four thick wings; *wings* remotely toothed; *teeth* incurved, and terminated by short, soft, incurved spines. *Peduncles* at the base of the branches, stout, and, as well as the calyx, pubescent. *Corolla* five inches in diameter, villous around the throat; *lobes* an inch to an inch and a half broad, ovate-lanceolate, purplish-brown in the centre, and there transversely barred with wavy yellow bands, margins and apex broadly black-purple, ciliated with long hairs. *Staminal crown* double; outer lobes simple, entire, narrow; inner broader, unequally two-lobed.—*J. D. H.*

Fig. 1. Staminal crown,—*magnified*



W Fitch, del et lith

Vincent Brooks, Imp

Tab. 5693.

HYPERICUM PATULUM.

Spreading St. John's-wort.

Nat. Ord. Hypericineæ.—Polyadelphia Polyandria.

Gen. Char. Sepala 5. *Petala* 5, intus calva. *Stamina* nunc libera v. basi breviter connata, in phalanges 3–8, glandulis hypogynis 0, nunc altius connata in phalanges 3 3–8-andras cum glandulis hypogynis alternantes. *Ovarium* nunc 2-loculare, placentis 3- v. 5-parietalibus, nunc perfecte v. imperfecte 3–5-loculare; styli distincti v. rarius alte coaliti; ovula in loculis placentisve sæpius numerosa. *Capsula* septicide v. ad placentas dehiscens, placentis v. axi v. marginibus valvarum adhærentibus. *Semina* non alata.—Herbæ *suffrutices fruticesve amphigeæ.* Folia *sæpius subsessilia, coriacea v. membranacea, integerrima v. rarius serrulata.* Flores *flavi, rarius albidi, solitarii cymosi v. paniculati.*

Hypericum *patulum;* fruticosum, glaberrimum, variegatum, ramis gracilibus teretibus rubris, foliis breviter petiolatis oblongis ovato-oblongisve pellucido-punctatis obtusis subacutis apiculatisve, floribus in cymas terminales paucifloras dispositis amplis, pedicellis 2-bracteatis, sepalis orbiculatis oblongisve, petalis late oblongis v. suborbiculatis epunctatis, staminibus perplurimis, filamentis basi in phalanges 5 dispositis, glandulis interjectis 0, ovario 5-loculari.

Hypericum patulum. *Thunb. Fl. Jap.* 295, *et Icon. t.* 17. *DC. Prod. v.* 1. *p.* 545.

A very ornamental, hardy perennial, flowering abundantly in September and October, in the open air, and forming a very valuable addition to the list of available border plants. It is a native of Japan, where it was discovered by Thunberg ninety years ago, and was introduced into Kew by Mr. Oldham, collector for the Royal Gardens, who, after making many valuable botanical collections, perished of fever on the coast of China. As a species it is very nearly allied to the *H. uralum*, Hamilton, of Nepal (Tab. nost. 2375), and will probably prove to be a large-flowered variety of that plant. It is very variable in the foliage, which is flat or has recurved margins, and is green or rust-coloured beneath.

Descr. A small, perfectly glabrous, slender, branching shrub, one to three feet high. *Stems* and *branches* terete, red.

Leaves on very short petioles, from an inch and a half to two inches and a half long, ovate or ovate-oblong, obtuse acute or apiculated, flat or with recurved margins, covered obscurely with pellucid oil-glands, bright green above, paler or rusty beneath. *Flowers* in terminal, few-flowered cymes, very large, an inch and a half to two inches in diameter, bright yellow. *Peduncles* short, with two foliaceous bracts at the apex, compressed; *pedicels* short. *Sepals* much shorter than the petals, orbicular or oblong, concave, green, with reddish-green margins and slender, linear, pellucid oil-glands. *Petals* very broad. *Stamens* very numerous; filaments free, collected into five bundles. *Hypogynous glands* none. *Ovary* five-celled, with five rather slender styles and truncate stigmas.—*J. D. H.*

Fig. 1. Calyx and ovary,—*magnified.*



W. Fitch, del et lith.

Vincent Brooks, Imp

Tab. 5694.

THUNIA Bensoniæ.

Mrs. Benson's Thunia.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. Perianthii foliola membranacea, erecto-patentia, lanceolata, subæqualia, acuta. *Labellum* cum columna parallelum, basi in calcar breve obtusum productum, 3-lobum, lobis lateralibus brevibus obtusis dentatis columnam amplectentibus, intermedio producto flabellato, margine lobulato dentato undulato et crispato, disco carinis ciliatis ornato. *Columna* gracilis, semiteres, subalata, superne cucullata, 3-loba, lobo intermedio triangulari porrecto, lateralibus dentatis. *Anthera* cordata, 4-locularis, basi 8-locellatus. *Pollinia* 4, clavata, sulcata, subtiliter granulosa. *Stigma* quadratum.—Herbæ *terrestres;* caules *fasciculati, basi tuberosi, elongati, foliosi, inferne squamis foliaceis recurvis vaginati.* Flores *pauci, speciosi, terminales, nutantes, spathaceo-bracteati.*

Thunia *Bensoniæ;* floribus læte purpureis, labelli lobo intermedio oblongo lateralibus longiore, columnæ alis terminalibus profunde dentatis.

One of the most beautiful of the many recently-introduced Orchids, and like its congener, the *T. alba* (the *Phajus albus* of old), no doubt most easily grown. It was discovered by an excellent correspondent, Colonel Benson, at Rangoon, and flowered in July of last year, both at Kew and at Messrs. Veitch's establishment. As a species, it is so very closely allied to *T. alba* in everything but colour, that I have felt very great doubts as to the propriety of calling it by any other name; but the flowers are larger, and the middle lobe of the lip is much longer in proportion to the sepals, and more oblong in shape. At Colonel Benson's request it is named after his lady, and few more beautiful plants have ever borne a lady's name.

I have followed Reichenbach fil. (Bot. Zeit. 1852, p. 764), in adopting the genus *Thunia* as distinct from *Phajus*, relying chiefly mainly on the totally different habits and consistence of the flower. Reichenbach further refers the genus to *Arethuseæ*, and I find the pollinia to be composed of mi-

nute grains, without any elastic web; he ranks it near *Vanilla*, *Sobralia*, *Epistephium*, etc.

Descr. *Stems* fascicled, a foot to a foot and a half high, terete, leafy, swelling into nodose tubers at the base; below clothed with green, suborbicular, reflexed, leafy sheaths, which gradually pass upwards into the leaves. *Leaves* sub-distichous, sheathing, eight to ten inches long, linear-lanceolate, acuminate, glaucous below, membranous, and waving. *Flower* two to three inches broad, on a short terminal raceme, enclosed at first in sheathing spathes, four to five inches across. *Perianth-segments* equal, spreading, linear-lanceolate, pale bright red-purple, white towards the centre. *Lip* large, three-lobed, white at the base, deep purple beyond it, with a yellow-crested disk; lateral lobes short, obtuse, toothed; middle one broadly oblong, flabellate, crumpled, lobulate, and toothed; base produced into a short, straight, thick, notched spur. *Column* with toothed wings at the apex.—*J. D. H.*

Fig. 1. Lip. 2. Column. 3. Pollinia,—*all but* 2 *magnified.*



W. Fitch, del. et lith.

Vincent Brooks, Imp

Tab. 5695.

BEGONIA GLANDULIFERA.

Glandular Begonia.

Nat. Ord. Begoniaceæ.—Monœcia Polyandria.

Gen. Char. (*Vide supra*, Tab. 4131.)

Begonia (Begoniastrum) *glanduliferum*; acaulis, sparse glanduloso-pilosa, foliis subgracile petiolatis oblique ovato-cordatis v. semi-cordatis, acuminatis dentatis palmatinerviis siccitate subtus albo-punctulatis, stipulis ovato-oblongis obtusis viridibus, scapis gracilibus multifloris ramis strictis patulis, floribus paniculatis, bracteis oblongis, floribus albis, fl. ♂ perianthii foliolis 4, 2 exterioribus late oblongis dorso glandulosis, interioribus minoribus, staminibus parvis in globum confertis, filamentis liberis, fl. ♀ perianthii foliolis 5 subæqualibus ovatis subacutis, stylis 3 breviter 2-fidis, ovario glanduloso 3-loculari 3-alato, ala una longe producta obtusa, placentis 2-fidis, lamellis undique ovuliferis.

Begonia glandulifera. *Griseb. Fl. Brit. W. Ind. p.* 304.

A very elegant species, native of moist ravines in Trinidad, whence it was first sent to England by Mr. Lockhart, late Curator of the Botanic Gardens of that island. More recently living plants have been sent home by Mr. Prestoe, the present energetic Curator of those gardens, and to whom the Royal Gardens are indebted for many other fine plants; it flowered in February, 1867.

Descr. *Root-stock* perennial, elongate, sending down numerous stout fibres. *Stem* none. *Leaves* from the apex of root-stock on rather slender glandular petioles, three to six inches long; *blade* obliquely ovate-cordate or semi-cordate, three to five inches long, acuminate, serrate-dentate, ciliolate, dark-green above, and glabrous, beneath paler, with a few hairs on the strong nerves which radiate from the apex of the petiole. *Stipules* ovate, obtuse, green or red. *Scapes* several, often very tall (six to eighteen inches high), covered with glandular hairs, bearing at the top a branched panicle

of pure white flowers; branchlets and pedicels glandular-pilose, slender; *bracts* oblong, obtuse, green, ciliate.—*Male* flowers one inch broad across the two outer perianth leaves, which are oblong, obtuse, glandular at the back; inner pair much smaller and narrower. *Stamens* numerous, collected into a small globose capitulum; *filaments* free; *anthers* oblong.—*Female flowers* bibracteolate. *Perianth-leaves* five, ovate, subacute, nearly equal. *Styles* three, persistent in fruit, bifid, with short stigmatic arms, surrounded with a papillose band; *ovary* three-celled, three-winged, glandular-pilose; two wings narrow, the third prolonged almost horizontally, longer than broad, subacute; *placentas* bifid, the lobes ovuliferous on both surfaces. *Capsule* glandular, three-winged; wings membranous, veined, two smaller about as long as the capsule is broad; the third two to three times as long as the capsule is broad; upper margin straight, lower curved.—*J. D. H.*

Fig. 1. Ovary. 2. The same transversely cut,—*magnified.*



W Fitch, del et lith

Vincent Brooks, Imp

DICENTRANTHERA MACROPHYLLA.

Large-leaved Dicentranthera.

Nat. Ord. Acanthaceæ.—Didynamia Angiospermia.

Gen. Char. Calyx 5-lobus, lobis subulatis. *Corolla* basi tubulosa, superne campanulata; limbus 5-fidus; lobi ovato-rotundati, patentes, 2 postici minores, ad medium connati. *Stamina* 4, didynama, filamentis filiformibus basi per paria connatis; *antheræ* vix exsertæ, 2-loculares, loculis linearibus, margine minute glandulosis, basi inæqualiter 2-calcaratis. *Ovarium* disco tumido impositum; *stylus* brevis, *stigmate* emarginato; *ovula* in loculis pauca. Capsula ignota.—Suffrutex *glaberrimus, ramulis obscure 4-gonis.* Folia *elongata, breviter petiolata, obovato-lanceolata, in petiolum angustata, abrupte caudato-acuminata, obscure sinuata.* Flores *speciosi, verticillastris in spicas strictas simplices v. compositas dispositis.*

Dicentranthera macrophylla. *T. Anders. African Acanthaceæ in Journ. Linn. Soc. Lond. v. 7. p. 52.*

This fine plant was discovered by the intrepid African plant collector, Gustav Mann, in the Island of Fernando Po, and the Cameroons and Gaboon river, forming a handsome shrub, eight to ten feet high. It was afterwards collected in the Gambia by Mr. Milne, and the specimen here figured was raised from seeds or plants sent home by him, which were flowered at Glasnevin by Dr. Moore, F.L.S., the able superintendent of that establishment, in June, 1867. In its native country its flowering season is December and January, whence we may hope that it will eventually prove a useful plant for winter stove-decoration—a purpose for which, as I have repeatedly pointed out in this work, the tropical *Acanthaceæ* are admirably well suited.

Descr. A glabrous erect shrub, eight to ten feet high. *Branches* striate, obtusely tetragonous. *Leaves* large and membranous, deep green and lucid, ten to fourteen inches long, obovate-lanceolate, tapering into a short petiole, abruptly narrowed to a long point; margin undulate; nerves strong and arching. *Spikes* terminal, short, erect, a foot long, simple or branched at the base. *Flowers* almost

whorled, disposed in opposite rather distant sessile pairs of three- to eight-flowered fascicles. *Calyx* small, of five triangular subulate lobes. *Corolla* handsome, an inch to an inch and a half long, tube narrow, slightly curved, expanding into a bell-shaped five-cleft limb, rose-purple externally, almost white internally; lobes rounded-ovate, two upper smaller and connate forming a two-lobed upper lip; buds dark purple above, green below. *Stamens* four, filaments connate in pairs at the base; *anthers* scarcely exserted, yellow, two-celled; cells linear, inserted at unequal heights, obscurely glandular, each terminated below by two rigid spurs. *Ovary* two-celled, on a tumid disk; *style* filiform, apex decurved; *stigma* notched; *ovules* four in each cell.—*J. D. H.*

Fig. 1. Anthers. 2. Calyx and ovary. 3. Ovary. 4. Vertical section of ditto,—*magnified.*



M. Bloch. del. et Lith.

Vincent Brooks Imp

Tab. 5697.

ODONTOGLOSSUM Alexandræ; var. *guttatum*.

Princess of Wales's Odontoglossum, spotted variety.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. (*Vide supra*, Tab. 5691.)

Odontoglossum *Alexandræ*. *Batem. in Proc. Hort. Soc.* 1864, *p.* 186, *et Monog. Odontogloss. t.* 14 *et t.* 9. *Tab. nostr.* 5691.

Var. *guttatum*; sepalis lineari-oblongis acutis undulatis petalisque latioribus purpureo-guttatis, labello albo subpanduriformi, apice quadrato retuso caudiculato, disco flavo, margiuibus guttatis.

The remarkable difference in the form and colour of the sepals and petals and lip of this variety, as compared with those of the var. *Trianæ*, figured at Tab. 5691, or the vars. *Wearii* and *Bluntii*, figured in Mr. Bateman's magnificent monograph of the genus, have induced me to figure it here. It was flowered by W. W. Saunders, Esq., F.R.S., of Reigate, in August of last year, is rather larger-flowered than the varieties hitherto figured, and equal in beauty to any of them.

Descr. of var. *guttatum*. *Raceme* four to five inches long, about six-flowered. *Flowers* three inches and a quarter broad from tip to tip of the petals, snow-white, the outer half of the lateral sepals faintly tinged with rose-purple. *Sepals* oblong-lanceolate, acute, waved at the edges; upper with from three to five oblong, dirty pale-purple blotches near the base; lower with usually more blotches scattered on the disk. *Petals* white, broader than the sepals, more crumpled, with a few spots on the disk. *Lip* oblong-quadrate, somewhat contracted at the middle, margin toothed, apex truncate and retuse, with a short, subulate appendicle at the apex; calli small; the colour of the lip is white, suffused with yellow at the base, and having a sort of ring of dirty purple spots on the margins of the disk. *Anther* white, streaked with purple.—*J. D. H.*

Fig. 1. Ovary, lip, and column:—*magnified*.



W.Fitch,del et lith

Vincent Brooks Imp

Tab. 5698.

VERNONIA (Stengelia) Calvoana.

Signor Calvo's Vernonia.

Nat. Ord. Compositæ.—Syngenesia-æqualia.

Gen. Char. Capitulum pluri- seu multiflorum, æquali florum. *Involucrum* imbricatum, floribus brevius, squamis interioribus longioribus. *Receptaculum* sæpius nudum. *Corolla* regularis, 5-fida, lobis subæqualibus. *Filamenta* lævia. *Achænium* basi callosum, disco epigyno magno. *Pappus* sæpius 2–3-serialis, serie interiore setiformi externam sæpe paleaceam longe superante.—Herbæ frutices *v.* arbores. Folia *sæpissime alterna.* Inflorescentia *varia.*

Subgenus Stengelia. *Involucri* squamæ exteriores oblongæ v. oblongo-lanceolatæ, in appendicem amplam latam dilatatæ, bracteolis foliaceis circumdatæ.—Stengelia, *C. H. Schultz, mss.*

Vernonia (Stengelia) *Calvoana ;* fruticosa, ramulis pubescenti-tomentosis, foliis caulinis sessilibus obovato-lanceolatis acuminatis dentatis deorsum longe attenuatis sæpe auriculato-2-lobis, corymbis amplis laxe ramosis, ramulis elongatis, capitulis pedunculatis late hemisphærico-campanulatis, involucri squamis externis linearibus lanceolatisve herbaceis, intermediis 2–multiseriatis in laminam chartaceam obtusam dilatatis, intimis minoribus erectis concavis, corollis violaceis, pappi setis multiseriatis compressis, achænio glaberrimo, receptaculo amplo plano lævi.
Stengelia Calvoana. *Hook. f. in Journ. Linn. Soc. Lond. v.* 7. *p.* 199.

This magnificent composite plant was discovered on the Cameroons mountains, in the Bight of Benin, by Gustav Mann, whilst collecting for the Royal Gardens, Kew, at elevations of from three to seven thousand feet, in December, 1861, and was by him introduced into our gardens, where it first flowered in January, 1866. It was accompanied by another and apparently equally handsome species, *V. (Stengelia) insignis*, Hook. f., which differs remarkably in the petiolate leaves, and which has not yet been introduced. The name *Calvoana* was given in compliment to Signor Calvo, of Fernando Po, who rendered Mr. Mann essential service in his arduous journeys on the Cameroons mountains and river.

March 1st, 1868.

Descr. A tall shrub, eight to twelve feet high. *Stem* stout, sulcate, branched, tomentosely pubescent. *Leaves* eight to fourteen inches long, sessile, oblong-lanceolate, acuminate, toothed, much narrowed at the base, which is unequally auricled. *Corymbs* large, branching and spreading, bearing leafy toothed bracts. *Heads* two inches broad, white, with a purple eye. *Involucral scales* large and spreading, in many series; outer lanceolate, green, herbaceous; intermediate of several rows, spreading, broad, white, obtuse; inner erect, concave, shorter. *Florets* purple. *Corolla* tubular below, campanulate above, equally five-cleft, segments erect. *Stamens* exserted. *Style*-arms revolute. *Pappus* of several series of filiform, shortly pilose, shining bristles.—*J. D. H.*

Fig. 1. Intermediate involucral scale. 2. Floret. 3. Style arms. 4. Achene and pappus. 5. Achene. 6. Pappus bases:—*all but* 4 *magnified.*



2. 1. 5. 4. 3.

W. Fitch, del. et lith.

Vincent Brooks, Imp.

Tab. 5699.

COLA acuminata.

Kola-nut Tree.

Nat. Ord. Sterculiaceæ.—Monœcia Monadelphia.

Gen. Char. Flores unisexuales v. polygami. *Calyx* 5-fidus, rarius 4- v. 6-fidus. *Petala* 0. *Columna staminea* (nunc brevissima) apice antheras 10–12 simplici serie annulatim adnatas ferens. *Ovarii* carpella 5–10 v. rarius 10–12, subdistincta v. connata, ∞-ovulata; styli totidem, breves, filiformes v. dilatati, intus v. supra stigmatosi. *Carpella* matura crassa, intus rima dehiscentia, ∞-sperma. *Semina* obovoidea, exalbuminosa; cotyledones 2 v. 4, crassæ; radicula hilo proxima.—Arbores. Folia *integra v. juniora lobata, cum petiolo articulata.* Flores *in caule v. in axillis fasciculati, breviter cymosi v. subpaniculati.*

Cola *acuminata;* foliis obovatis oblongis obovato-lanceolatisve acuminatis venosis utrinque glabris, junioribus sæpe 3-lobis, columna staminea brevi, antherarum loculis divaricatissimis.

Colá acuminata. *Br. Pl. Jav. Rar. p.* 237. *Walp. Rep. v.* 5. *p.* 106.

Var. *β. acuminata;* foliis breviter petiolatis latioribus. *Hook. Fl. Nig.* 233.

Sterculia acuminata. *Palisot, Fl. d'Oware, v.* 1. *p.* 41. *t.* 24.

S. grandiflora *et* S. nitida. *Vent. Hort. Malm. v.* 2. *p.* 91 *in nota.*

S. verticillata. *Schum. Pl. Guin. p.* 240.

Lunania *Bichy, DC. Prodr. v.* 2. *p.* 92.

I have here the pleasure of figuring for the first time in England, a plant of remarkable importance in an economic point of view, the well-known kola-nut of tropical Africa, also known as the Cola, Korra, or Gorra nut, the seeds of which are universally eaten by the negroes of West Africa and the West Indies as a condiment. The trade in this nut is immense throughout tropical Africa, and extends from Tripoli to Benguela and Angola. The seeds are about the size and appearance of a horse-chestnut, have an astringent taste, and a portion of one is chewed by the negro before every meal to promote digestion and improve the flavour of whatever is eaten after it. It is also used as a medicine and to render putrid water wholesome. The tree is abundant along the western coast, and found also on the eastern, and

is cultivated in the West Indies and Brazil, and forms a valuable property to the natives. There is another kind of kola-nut, known as the bitter kola, whose botanical history is wholly unknown. The kola has been introduced into the Royal Gardens, Kew, repeatedly, from both West Africa and the West Indies, but never flowered till January of the present year.

Descr. A small *tree*, about forty feet high, resembling an apple-tree. *Leaves* alternate, on petioles half an inch to six inches long; blade four to six inches long, oblong-obovate or obovate-lanceolate, long-acuminate, coriaceous, nerves strong below, glabrous on both surfaces. *Flowers* unisexual, in short, many-flowered, axillary, corymbose racemes, about one inch across, yellow in the garden specimens, described as streaked with purple in Africa. *Perianth* scurfy-tomentose; tube short, campanulate; limb of five to six oblong, subacute, spreading lobes. *Anthers* about ten, whorled round the apex of a very short column; cells superimposed vertically. *Ovary* tomentose, subglobose, with six short spreading stigmas, six-celled, surrounded at the base by imperfect anthers.—*J. D. H.*

Fig. 1. Male flower. 2. Staminal column. 3. Ovary. 4. Transverse section of ditto. 5. Imperfect anthers at base of ditto:—*all but Fig.* 1 *magnified.*



W. Fitch, del. et lith.

Vincent Brooks, Imp.

ARISTOLOCHIA RINGENS.

Gaping-flowered Aristolochia.

Nat. Ord. Aristolochieæ.—Gynandria Hexandria.

Gen. Char. (*Vide supra*, Tab. 5420.)

Aristolochia (Gymnolobus) *ringens*; glaberrima, caule volubili alte scandente, foliis late reniformi-rotundatis, sinu obtuso, obtusis emarginatisve subtus glaucis, basi digitatim 7–9-nerviis, pseudo-stipulis reniformibus profunde auriculato-2-lobis, floribus longe pedunculatis, ovario infra apicem dilatatum tuberculato, perianthio viridi purpureo marmorato, utriculo obovoideo inflato, tubo infra-apicali refracto assurgente 2-labiato, labiis valde elongatis superiore lineari-lanceolato obtuso concavo, inferiore breviore spathulato, ungue marginibus recurvis, lamina dilatata orbiculata v. ovata.

Aristolochia ringens. *Vahl, Symb. v.* 3. *p.* 99. *Jacq. Coll. v.* 5. *t.* 4. *f.* 2. *Duchartre in DC. Prodr.* xv. *pt.* 1. *p.* 471.

A. grandiflora. *Vahl, Symb. v.* 2. *p.* 94. *t.* 47.

Howardia ringens. *Klotzsch in Monatsb. Acad. Berl.* 1859. *p.* 607.

This noble plant was introduced into the Royal Gardens by its late collector, Mr. Purdie, from the plain of Santa Cruz, in New Granada, where its roots are esteemed as an antidote for snake bites, and form one of the many plants having that reputed property, and called "Guaco" by the natives. It inhabits also the Caraccas, and, according to Ducharte, the West Indian islands near that coast. The form of the lobe of the lower lip varies, in the dried specimens, from oblong to orbicular-reniform, and as the latter character is the only distinctive one assigned to the *A. hians*, Willd., which comes from the same country, I suspect that this latter is not a distinct species.

A. ringens has flowered repeatedly in the Royal Gardens, usually in the month of September.

Descr. A tall, slender, twining, perfectly glabrous plant. *Leaves* petioled; petioles one to two inches long, broadly or-

bicular-reniform, with a broad sinus, obtuse or emarginate, dull pale green above, glaucous below, digitately five- to seven-nerved at the base. *False stipules* reniform, very deeply two-lobed. *Peduncles* slender, four times as long as the petioles. *Ovary* slender, twisted, grooved, expanded at the apex into a dark purple, callous disk, tubercled on the upper surface just below this. *Flowers* seven to ten inches long, pale green, marbled and reticulated with dark black-purple. *Perianth* with an obovoid ventricose sac two inches and a half long, which is woolly inside; tube ascending obliquely from the sac, terete, dividing into two very long lips; *upper lip* (lower as the flower hangs) oblong-lanceolate, obtuse, concave, recurved, hairy inside below the middle; lower shorter, spathulate, claw long, with recurved margins, blade broadly ovate or orbicular, or almost reniform. *Stamens* six, equidistant on the almost sessile column.—*J. D. H.*

Fig. 1. Base of perianth cut vertically, showing the column:—*of the natural size.*



W. Fitch, del, et lith.

Vincent Brooks, Imp.

Tab. 5701.

IPSEA speciosa.

Beautiful Ipsea.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. Sepala explanata, æqualia; lateralia basi obliqua, subsaccata, cum pede columnæ connata. *Petala* paulo minora, obovato-oblonga. *Labellum* cum basi columnæ articulatum, concavum, late 3-lobum, lobis lateralibus magnis erectis subacutis, intermedio porrecto oblongo obtuso, disco obtuse carinato et canaliculato. *Columna* semiteres, elongata, basi et apice paulo incrassato. *Anthera* parva; pollinia 8, cereacea, caudiculis 4 pulvereis, per paria cohærentia, altero cujusvis paris minore.—Herba *tota pubescens, epigæa, rhizomate tuberoso carnoso.* Folia 1–2, *graminea, elongato-lanceolata, plicata.* Scapus *strictus, gracilis, elongatus, bracteis spathaceis ornatus*, 1–2-*florus.* Flores *ampli, speciosi, flavi.*

Ipsea speciosa. *Lindl. Gen. et Sp. Orchid. p.* 124. *Wight, Ic. Pl. Ind. Or. t.* 1663.

A very beautiful terrestrial Orchid, one of the very few golden-flowered species of that class, with the habit of a *Bletia;* it is a native of Ceylon, whence a number of its tubers were sent to the Royal Gardens, in 1866, by Mr. Thwaites; of these some were distributed to various cultivators, and others planted here under different conditions. These grew freely; but the only person who has hitherto succeeded in flowering the plant is Mr. Bateman, who exhibited it in January of the present year. If it can only be made to flower as easily as the Bletias, it will indeed become a very valuable addition to every Orchid collection.

Descr. Whole plant finely pubescent. *Rhizomes* terrestrial, tuberous, hard, fleshy, as large as a nut or larger, often fascicled, subglobose, with conical tops, furnished with the fibrous remains of old leaves. *Leaf* usually solitary from the rhizome, appearing before the flower, four to eight inches long, narrow lanceolate, tapering into a petiole, half an inch to three-quarters of an inch wide, plaited, green. *Scape* lateral on the rhizomes, very slender, erect, one to two feet high, one- to two-flowered, with distant spathaceous bracts; spathes

one inch long, tumid, loosely appressed to the scape, subacute, green. *Flowers* sessile or nearly so, two inches and a half in diameter, golden-yellow, with faint red lines on the disk of the lip, between the lateral lobes. *Sepals* oblong, obtuse, the lateral connate at the base of the column, then oblique, and together forming an inconspicuous sac. *Petals* obovate-spathulate, rather smaller than the sepals. *Lip* as long as the sepals, broad, concave, three-lobed, lateral lobes ascending, subacute, middle one horizontal, recurved, obtuse, with several obtuse ridges on the disk. *Column* long.—*J. D. H.*

Fig. 1. Ovary and column. 2. Lip. 3 and 4. Pollinia :—*all magnified.*



W Fitch, del et lith

Vincent Brooks, Imp

Tab. 5702.

HIBISCUS marmoratus.

Marbled-flowered Hibiscus.

Nat. Ord. Malvaceæ.—Monadelphia Polyandria.

Gen. Char. (*Vide supra*, Tab. 5406.)

Hibiscus (Ketmia) *marmoratus*; fruticosus, hirsutulus, foliis ovatis v. ovato-cordatis integris v. obtuse 3–5-lobis subacutis crenato-dentatis basi 3–5-nerviis, stipulis parvis subulatis, pedunculis 1-floris axillaribus petiolo multo longioribus supra medium articulatis, involucelli foliolis 8–10 oblongo- v. lanceolato-spathulatis acutis patentibus calyce brevioribus, calyce campanulato eglanduloso 5-fido lobis acutis, petalis inferne in tubum convolutis superne patentibus calyce multo longioribus, lamina obovato-cuneata retusa roseo-maculata, columna staminea gracili, stigmatibus capitellatis, ovulis numerosis.

Hibiscus marmoratus. *C. Lemaire in Ill. Hortic. v.* 3, *February*, 1856. *t.* 82. *Planchon in Fl. des Serres*, *t.* 1159.

Abutilon marmoratum. *Hort.*

This fine plant is a native of Mexico, whence it was imported, in 1854, by M. Auguste Tonel, and flowered in the following year in M. Verschaffelt's establishment at Ghent. It has since been widely distributed; and the specimen from which the accompanying figure was made was raised from seed sent by Dr. Anderson from the Calcutta Botanical Garden in 1866, which flowered in February of the present year. It is described as a greenhouse plant by Lemaire and Planchon, but our specimen flowered in a stove.

Descr. A pubescent or subhirsute branching shrub. *Leaves* on rather short petioles, variable in shape, ovate, ovate-cordate or oblong-cordate, acute, entire or obscurely three- to five-lobed, bluntly toothed, dark green and rugose on the upper surface, paler below, three to four inches long, two to four inches broad. *Stipules* small, subulate, persistent. *Peduncles* solitary, axillary, stiff, much longer than the petioles, articulate above the middle. *Flowers* two inches and a half long, and as wide across the petals. *Involucel* of eight to ten spreading, obovate-oblong, or subspathulate acute green leaflets, with subrecurved tips. *Calyx* tubular-campanulate,

five-cleft almost to the middle; lobes ovate, acute, erect. *Petals* much longer than the calyx, convolute into a tube below, above spreading, obovate-cuneate, retuse, white, reticulately mottled with bright rose-pink. *Staminal column* slender, exserted. *Stigmas* five, capitellate. *Ovules* numerous.—*J. D. H.*

Fig. 1. Calyx cut open, involucel, and staminal column :—*magnified.*



W. Fitch, del. et lith.

Vincent Brooks, Imp

Tab. 5703.

DENDROBIUM CUMULATUM.

Clustered-flowered Dendrobe.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. (*Vide supra*, Tab. 4755.)

Dendrobium (Stachyobium) *cumulatum;* caulibus fasciculatis elongatis pendulis teretiusculis vaginis scariosis nodis exceptis tectis, foliiferis brevioribus, foliis 3–4-pollicaribus lineari- v. elongato-oblongis acuminatis, racemis corymbiformibus densi-multifloris, rachi brevi pedicellisque gracilibus rubro-purpureis, floribus 1 unc. latis roseo-purpureo pallide tinctis, sepalis petalisque subæqualibus oblongis obtusiusculis, labello obovato-oblongo obtuso planiusculo glaberrimo, calcare labello æquilongo crasso recto apice angustato obtuso.

Dendrobium cumulatum. *Lindl. in Gard. Chron.* 1855, *p.* 756.

This very pretty species is another of Colonel Benson's valuable Moulmeyne contributions. A comparison with the Dendrobes contained in Dr. Lindley's Herbarium, now at Kew, proves it to be his *D. cumulatum*, of which I find no figure published, nor other description than that quoted as in the 'Gardeners' Chronicle,' where it is stated that the specimens were leafless, that their native country is unknown, that the colour of the flower varies in depth, and that the lip is sometimes freckled with rose-coloured spots. Our plant differs from one of Dr. Lindley's varieties in the flowers being much smaller, for he gives the dimensions as "two inches long," but as he does not state in which direction this measurement is taken, it is impossible to compare them; in our specimens they measure an inch and three-quarters from the tip of the spur to the tip of the lip, and one inch across the sepals. Dr. Lindley further describes the tip of the spur (*mentum*) as incurved and subacute, which is scarcely the case in our specimens.

The specimen here figured flowered in Kew in September. 1867.

Descr. *Stems* tufted, pendulous, one to two feet long.

slender, subterete, internodes almost concealed by the scarious pale brown sheath. *Leaves* few, on shorter branches, three to four inches long, an inch to an inch and a half broad, narrow oblong, acuminate, pale bright green, with brown apices. *Flowers* numerous, collected into subglobose corymbs of three inches diameter at the nodes, rose-purple, vanilla-scented, an inch in diameter; rhachis of corymb and pedicels deep red-purple, bracts minute. *Sepals* and *petals* nearly equal, oblong, subacute, transparent. *Lip* longer and broader than the sepals, obovate-oblong, obtuse or retuse, glabrous, nearly plane, quite entire. *Spur* stout, straight, almost tumid, contracted at the obtuse apex. *Column* very short.—*J. D. H.*

Fig. 1. Column lip, and spur:—*magnified.*



W. Fitch, del. et lith.

Vincent Brooks, Imp

Tab. 5704.

RAPHISTEMMA ciliatum.

Ciliated Raphistemma.

Nat. Ord. Asclepiadeæ.—Gynandria Pentandria.

Gen. Char. Calyx alte 5-fidus. *Corolla* campanulata v. rotato-campanulata, limbo 5-fido. *Gynostegium* tubo inclusum. *Corona* staminea 5-phylla, foliolis gynostegium duplo superantibus exsertis compressis apice inflexis. *Antheræ* membrana terminatæ; *pollinia* clavata v. ovato-rotundata, sub apice affixa, pendula. *Stigma* obscure 5-gonum. *Folliculi* sæpius abortu solitarii, subventricosi. *Semina* comosa.—Frutices Indici *v.* Moluccani, *caule tenui volubili.* Folia *cordata, supra petiolum glandulifera.* Flores *albi, corymbosi.*

Raphistemma *ciliatum;* laxe pilosum, foliis late ovato-cordatis acuminatis sinu profundo clauso, pedunculis elongatis pendulis, pedicellis filiformibus, calycis lobis parvis acutis, corollæ tubo brevissimo, lobis patentibus ovatis acutis longe ciliatis.

A pretty, delicate climber, bearing a profusion of white blossoms, the fringed edges of whose corollas have a very beautiful appearance. The seeds were sent from Penang by the Honourable Colonel Man to the Royal Gardens through Mrs. Courtenay Bell, of Kew, and flowered in October, 1867.

Of the genus *Raphistemma* only two species have hitherto been described, one a native of continental India, and the other of Java, and from both which the present differ in its pilose stems, very slender pedicels, short corolla-tube, and its fringed lobes.

Descr. *Stem* slender, twining, covered with spreading or reflexed hairs. *Leaves* on slender petioles, ovate-cordate, acuminate, deeply two-lobed and auricled at the base, the sinus closed by the almost overlapping auricles, two inches long by an inch and three-quarters broad. *Peduncles* axillary, pendulous and ascending, two to four inches long, bearing an interrupted corymb of flowers; *pedicels* filiform, almost capillary, an inch and a half long, reddish below the middle. *Flowers* half an inch to three-quarters of an inch in diameter, pale greenish-yellow, faintly rose-coloured towards the

base of the corolla lobes. *Calyx* lobes five, small, subacute. *Corolla* tube very short; lobes large, broad, spreading, beautifully ciliated. *Appendages of the column* laterally compressed, spurred behind at the base, their incurved apices produced. *Pollinia* clavate.—*J. D. H.*

Fig. 1. Calyx and column. 2. Ovaries. 3. Pollinia :—*all magnified.*



N. Fitch, del et lith

Vincent Brooks, Imp

Tab. 5705.

COCHLIOSTEMA Jacobianum.

General Jacobi's Cochliostema.

Nat. Ord. Commelyneæ.—Monadelphia Triandria.

Gen. Char. Sepala 3, oblonga, obtusa, concava. *Petala* 3, subæqualia, sepalis latiora, fimbriata. *Staminodia* 3, villosa; 2 erecta, linearia; tertia abbreviata, plumosa. *Columna staminea* cucullata, marginibus involutis, antheras 3 spiraliter tortas includens; *antheræ* 2 erectæ parallelæ, tertia inferior, transversa. *Ovarium* 3-loculare, obliquum; stylus ascendens, filiformis, stigmate simpliciusculo; ovula numerosa, 2-seriata. *Fructus* ignotus.—Herbæ *acaules, foliosæ, Americæ tropicæ incolæ.* Folia *basi vaginantia, oblongo-lanceolata.* Flores *in paniculas axillares dispositi, fugaces.*—Cochliostema, *Lemaire in Illust. Hortic. t.* 217.

Cochliostema *Jacobianum;* glaberrimum, foliis 3-4-pedalibus oblongo-lanceolatis acuminatis basi angustatis utrinque viridibus marginibus brunneis, paniculis amplis axillaribus foliis brevioribus ramis oppositis et verticillatis, bracteis amplis albis et pallide purpureis, sepalis anguste oblongis obtusis roseo-purpureis, petalis obovatis fimbriato-ciliatis cæruleis.

Cochliostema Jacobianum. *K. Koch et Linden, Wochenschrift,* 1867, *p.* 322. *André, Revue Horticole,* 1868, *p.* 71. *Masters in Gard. Chron.* 1868, *p.* 264 (*cum ic. xyloq., et* 323, *anal.*).

This superb plant certainly ranks amongst the grandest stemless Monocotyledons known, combining the foliage of a gigantic *Anthurium* with masses of inflorescence which, for size, delicacy, and beauty of tints, cannot well be surpassed. Nor in a botanical point of view is this plant less noteworthy, the structure and arrangement of the anthers of the genus *Cochliostema* being most curious, and for an excellent account of which I would refer to Dr. Masters's papers, above quoted. It is there assumed that the apparent number of stamens and staminodes is six, but the normal number nine. Of these nine the three outer are represented by two blue staminodes, and a third staminode reduced to a tuft of yellow hairs; whilst the other six consist of two broken series of three each, the intermediate series being represented by the two upright spiral anthers within the

hood and a suppressed stamen (of which there is no visible evidence), and the innermost series by the horizontal spiral anther and two suppressed stamens (of which there is no visible evidence). This explanation is ingenious, and is probably substantially correct.

C. Jacobianum is a native of Ecuador, from which it was introduced by Mr. Linden, who exhibited it in full foliage at the Paris Exhibition of 1867, and sent to England the flower here figured. It has a faint sweet odour, not to be compared with that of the *C. odoratissimum*.

Descr. A stemless epiphyte. *Leaves* numerous, spreading, three to four feet long, sheathing at the broad base, then oblong-lanceolate, four to six inches broad, deep green, edged with brown. *Peduncles* axillary, stout, suberect, as thick as the finger, white tinged with pink or purple, a foot long, bearing an immense panicle of flowers. *Bracts* opposite and whorled, oblong, concave, three to four inches long. *Branches* of panicle stout, four to six inches long, bearing at their apices short scorpioid, deflexed cymes; pedicels three-quarters of an inch long. *Flowers* two inches to two inches and a half in diameter. *Sepals* oblong, obtuse, concave, purple-pink. *Petals* obovate, longer than the sepals, of a fine violet-blue, fringed with soft purple hairs. *Staminodes* three, two lateral linear, purple, fringed; third a tuft of yellow hairs at the back of the staminal column. *Staminal column* (or hood) pedicelled, petaloid, blade concave, with involute margins, ovoid, produced into two long tubular points, being cleft through the middle to the base, enclosing three anthers. *Anthers* spirally twisted; one horizontal at the base of the hood, two vertical, one in each involute half of the hood. *Ovary* ovoid, three-celled; style filiform, curved; stigma minutely three-lobed.—*J. D. H.*

Fig. 1. Reduced figure of whole plant. 2 and 3. View of staminodes, staminal hood, and ovary. 4. Vertical section of lower part of staminal hood, showing the anthers:—*all but Fig.* 1 *magnified.*

W. Fitch del. et lith.

Vincent Brooks, Imp.

Tab. 5706.

LYCASTE Barringtoniæ; var. *grandiflora*.

Mrs. Barrington's Lycaste, large-flowered variety.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. (*Vide supra*, Tab. 4193.)

Lycaste *Barringtoniæ;* pseudobulbis oblongis compressis demum costatis, foliis amplis subternis oblongo-lanceolatis acuminatis plicatis, scapo radicali pseubobulbo subæquilongo vaginato unifloro, bractea ovarii longitudine, floribus albis flavisve, sepalis oblongo-lanceolatis subacutis, petalis paulo minoribus, labelli trilobi lobis lateralibus parvis erectis, intermedio ovato-rotundato marginibus erosis, callo lato adnato alte sulcato apice 2-dentato.

Lycaste Barringtoniæ. *Lindl. in Bot. Reg.* 1844, *Misc. p.* 15.

Epidendrum Barringtoniæ. *Smith, Ic. Pict. t.* 25.

Dendrobium Barringtoniæ. *Swartz, Nov. Act. Ups. v.* 6. *p.* 82. *Willd. Sp. Pl. v.* 4. *p.* 132. *Hook. Exot. Fl. t.* 119.

Colax Barringtoniæ. *Lindl. Bot. Reg. t.* 897.

Dendrobium ciliatum. *Swartz, Pers. Synops. v.* 2. *p.* 523.

Maxillaria ciliata. *Ruiz et Pav. Fl. Per. Syst. p.* 221? *Lindl. Bot. Reg. t.* 1206.

M. Barringtoniæ. *Lodd. Bot. Cab. t.* 1824. *Lindl. Gen. et Sp. Orch. n.* 23.

Var. *grandiflora;* flore albo pallide virescente, 5 poll. diametro.

A fine old Orchid, now rarely seen in cultivation, and which has, according to Dr. Lindley, been re-christened over and over again, as our knowledge of the Order and limitations of its genera have advanced or retarded, as the case may be. That it is now rightly placed in *Lycaste* there can be no doubt; and the present variety is certainly the largest flowered, if not the showiest, of the genus. The specimen here figured was flowered by Mr. Bull, F.L.S., of Chelsea; had leaves fully two feet long, and was very sweet-scented. The species is a native of the West Indies and South America.

I follow Dr. Lindley in the above citations of synonyms;

May 1st, 1868.

they include plants of very different size and colour of flower, and of no little variety of form of sepals, petals, and lip. The specimen here figured vastly exceeds any of his varieties in the size of the flower, and in its structure approaches nearest to Lindley's figure of *M. ciliata* (Bot. Reg. t. 1206), is, however, very green, and much smaller.

Descr. *Pseudobulbs* oblong, compressed, deep green, three to five inches long, at length furrowed. *Leaves* two to three at the apex of the pseudobulb, six to ten inches long, broadly oblong-lanceolate, acuminate, plaited and ribbed, dark green. *Scapes* about as long as the pseudobulb erect, two-flowered, covered with loose sheathes. *Flowers* of var. *grandiflora* six inches long from the tip of the upper to those of the two lower sepals, nearly white, with a faint green hue. *Sepals* narrow oblong, obtuse. *Petals* smaller, rather undulate. *Lip* three-lobed, lateral lobes small, erect, middle much larger, nearly orbicular, margin erose or fringed, appendix adnate to its surface, and bifid at the apex.—*J. D. H.*

Fig. 1. Column. 2. Lip. 3. Pollen:—*all magnified.*

W Fitch, del et lith.

Vincent Brooks, Imp

BEGONIA FALCIFOLIA.

The Sickle-leaved Begonia.

Nat. Ord. Begoniaceæ.—Monœcia Polyandria.

Gen. Char. (*Vide supra*, Tab. 4131.)

Begonia *falcifolia;* pagina superiore folii setosa excepta glaberrima, nitida, caule erecto subramoso, foliis petiolatis lanceolato-falcatis attenuato-acuminatis basi oblique cordatis, irregulariter serrato-dentatis uno latere sublobatis junioribus albo-punctatis, subtus rubro-purpureis supra saturate viridibus inflorescentia roseo-purpurea, perianthii foliolis ♀ et ♂ 2 orbiculatis roseis staminibus breviter monadelphis, ovario 3-alato apice contracto, stylis 3, stigmatorum cruribus brevibus fascia papillosa semel torta basi continua cinctis, placentis integris.

A very lovely species, a native of Peru, from whence it was imported by Messrs. Veitch, being discovered by their collector, Mr. Pearce. For the plant here figured, which has been in flower almost ever since Christmas, the Royal Gardens are indebted to W. Wilson Sanders, Esq., F.R.S. I am at a loss to which of Klotzsch's or A. De Candolle's sections of the genus to refer it, there being none of these with entire placentas which have but two leaflets of the perianth in both the male and female flower.

Descr. *Stems* one to two feet high, glabrous, terete, erect, more or less branched. *Leaves* petiolate, four to seven inches long, petiole an inch and a half to two inches, falcate-lanceolate, gradually narrowed to the tip, base two-lobed-cordate, the larger lobe produced laterally, irregularly serrate or duplicate dentate-serrate, four or six smaller teeth occurring between the larger, veins very oblique, prominent beneath, under-surface deep red-purple, upper very deep green, often bronzed, covered with short, stiff, scattered, erect hairs, the younger spotted with white. *Stipules* small, oblong, acute. *Panicles* short, axillary, hermaphrodite, six- to ten-flowered, much shorter than the leaves, rose-pink; peduncles and pedicels very slender; bracts small, oblong. *Perianth* of both

sexes of two orbicular, glabrous, rose-coloured leaflets, half an inch long. *Stamens* monadelphous at the base, in a unilateral, curved bundle, filaments about as long as the clavate anthers. *Ovary* oblong, equally three-winged, contracted to a short neck at the apex; styles three, free, except at the base, bifid, the lobes short, with a short, twisted, continuous fascia; placentas quite entire.—*J. D. H.*

Fig. 1. Stamen. 2. Ovary. 3. Transverse section of do.:—*all magnified.*

W Fitch, del. et lith.

Vincent Brooks, Imp.

TAB. 5708.

ONCIDIUM CUCULLATUM; var. *nubigenum*.

Alpine Oncidium.

Nat. Ord. ORCHIDEÆ.—GYNANDRIA MONANDRIA.

Gen. Char. (*Vide supra*, TAB. 4148.)

ONCIDIUM *cucullatum;* pseudobulbis anguste oblongis, folio plano lineari-oblongo acuto, pedunculo gracillimo, racemo simplici erecto v. nutante, sepalis lateralibus alte connatis petalisque subæqualibus ovato-oblongis acutis, labello amplo suborbiculato basi 2-auriculato marginibus integerrimis, tuberculis ad basin parvis, columnæ brevis margine nudo.

Var. *nubigenum;* racemo suberecto, sepalis petalisque albis v. fusco-purpureis apice viridibus, labello amplo, lobis lateralibus parvis intermedio dilatato emarginato albo concolore v. basi roseo.

ONCIDIUM cucullatum D. nubigenum. *Lindl. Fol. Orchid. Oncidium, p.* 22.

Of this remarkably pretty Orchid I received two varieties last year, the one in December, with white sepals and petals, from Wentworth Buller, Esq., and the other in June, with these organs of dingy purple, from Messrs. Backhouse and Sons, of York; both are clearly referable to Lindley's very variable *O. cucullatum*, var. *nubigenum*, though differing in the purple spot at the base of the lip. The specimen here figured is Mr. Backhouse's, and, though smaller than the wild specimens in our Herbaria, has more flowers. It is a native of forests on the western side of ridge of Asuay, in Ecuador, alt. 11,000 feet, where it was discovered by Professor Jameson, of Quito, some thirty years ago, and is one of the most alpine of the genus, though Dr. Lindley mentions another variety of the same species (*cucullatum*) as ascending to 13,000 feet.

DESCR. *Pseudobulbs* an inch and a half to two inches long, narrow-oblong, compressed, smooth. *Leaf* solitary, five to seven inches long, three-quarters of an inch to an inch broad, linear-oblong, acute, deep green, plane, coriaceous. *Scape* very slender, erect or inclined, sheaths distant. *Raceme* simple,

inclined, many- and dense-flowered, four to five inches long. *Flowers* crowded, three-quarters of an inch to an inch diameter; pedicels and ovary slender, curved, ascending. *Sepals* and *petals* equal, small, ovate, acute, white or dull purple, with green tips; lateral sepals connate. *Lip* broader than long; lateral lobes small; middle very large, almost reniform, membranous, glabrous, with smooth, entire edges, white, with purple blotches and three small calli at the base. *Column* short, white and purple.—*J. D. H.*

Fig. 1. Column and lip. 2. Pollen; both of Mr. Backhouse's specimen:—*magnified.* 3. Flower of Mr. Buller's specimen:—*of the natural size.*



W. Fitch, del et lith.

Vincent Brooks, Imp

Tab. 5709.

LONICERA Standishii.

Standish's Honeysuckle.

Nat. Ord. Caprifoliaceæ.—Pentandria Monogynia.

Gen. Char. Calycis tubus ovoideus v. subglobosus, limbus brevis, 5-dentatus, deciduus v. persistens. *Corolla* tubulosa, infundibuliformis v. campanulata, basi gibba v. æqualis, limbi 2-labiati obliqui v. rarius symmetrici lobi 5. *Stamina* 5, tubo corollæ inserta, antheræ inclusæ v. exsertæ. *Ovarium* 2–3-loculare; stylus filiformis, stigmate capitato; ovula in loculis numerosa, angulo interiore 2-seriatim inserta. *Bacca* carnosa, 2–3-locularis, v. ob septa evanida 1-locularis, loculis oligospermis. *Semina* ovoidea v. oblonga, testa crustacea.—Frutices *erecti* v. *scandentes, hemisphærii borealis incolæ, gemmis squamosis.* Folia *opposita, integra vel rarius lobata.* Flores ***in cymas v. capitula pedunculata dispositi.***

Lonicera *Standishii;* erecta, virgata, ramulis subflexuosis scaberulis, setis retrorsis deciduis hispidis, foliis deciduis breviter petiolatis anguste ovato-oblongis oblongo-lanceolatisve acuminatis ciliatis superne glaberrimis subtus secus nervos petioloque setulosis, pedunculis brevibus retrorsum hispidis 2-floris, bracteis lanceolato-subulatis, ovariis glabris connatis, corollæ albæ tubo brevi basi gibbo, limbi 2-labiati labiis tubo multo longioribus, superiore quadrato 4-fido, inferiore anguste oblongo. omnibus obtusis.

This charming, fragrant, early-flowering Honeysuckle has been for some time in cultivation in Europe, but hitherto it has borne no name in English gardens, except that in some places it has been confounded with the similarly fragrant *L. brachypoda*, Thunb., and *L. fragrantissima*, of Japan. M. Baillon, who has had the goodness to compare it with authentic specimens of *L. brachypoda* in Baron Delessert's herbarium at Paris, assures us that the two are quite different. and that the present is cultivated in France under the name of *L. Standishii*, which is supposed to have been given it by the late conductor of this Magazine. It hence appeared probable that our plant was one of Mr. Fortune's Chinese introductions, and, on application to Mr. Fortune, he informs us that it is common in gardens at Shanghae, and was sent home by him many years ago, and distributed by the Horticultural Society with *L. fragrantissima.* Whatever may be

the origin of the name *Standishii*, it is well applied in honour of the active and intelligent nurseryman to whom many of Mr. Fortune's rich Chinese collections were consigned.

Descr. A twiggy, deciduous shrub, with flexuous, pale yellow-brown branches, covered with deciduous, reflexed bristles, that leave a papilla when they fall away, and are hence scabrid. *Leaves* three to five inches long, an inch to an inch and three-quarters broad, very shortly petioled, ovate-oblong or oblong-lanceolate, acuminate, rounded at the base, pale green, upper surface glabrous, margin ciliate, nerves prominent below and petiole hispid. *Flowers* in pairs, on short, curved, retrorsely hispid peduncles, white, very sweet-scented, one-fifth of an inch to half an inch long, ovaries connate; *calyx* truncate. *Corolla* glabrous, with a short tube that is gibbous at the base, limb two-lipped, lips longer than the tube; upper quadrate, cleft to the middle into four blunt lobes; lower, of one narrow, oblong lobe. *Stamens* exserted.—*J. D. H.*

Fig. 1. Peduncle and flower:—*magnified.*



Tab. 5710.

CYMBIDIUM pendulum; var. *atro-purpurea*.

Pendulous Cymbidium, purple-flowered variety.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. (*Vide supra*, Tab. 5457.)

Cymbidium pendulum; foliis ensiformibus distichis coriaceis oblique obtusis, racemis pendulis multifloris, bracteis minutis, floribus $2\frac{1}{2}$ poll. diametro, sepalis petalisque subæqualibus lineari-oblongis obtusiusculis, labelli 3-lobi lobis lateralibus parvis acutis, intermedio ovato v. oblongo obtuso v. apiculato, disco lamellis 2 parallelis approximatis mediocribus. *Swartz, Nov. Act. Ups. v.* 6. *p.* 73. *Lindl. Bot. Reg.* 1860. *t.* 25.

Var. *atro-purpurea;* sepalis petalisque extus flavo-viridibus intus atro-purpureis, labelli pallide purpureo-maculati lobo intermedio lateralibus triplo majore recurvo basi dilatato.

There can, I think, be little doubt but that this fine plant is a form of *C. pendulum*, Swartz, a native of Singapore, Java, and the Philippine Islands, as well as of many parts of India proper, as the Himalaya and Khasia mountains, and those of the Western Peninsula. It flowered with Messrs. Rollison, of Tooting, in March of the present year, and was imported from the East Indian islands, probably Java, but this is, I understand, doubtful. The leaves were three feet in length, and spikes of two feet and a half, presenting a truly noble appearance, far surpassing any of the other varieties of the same species hitherto discovered. Wallich's *C. Finlaysonianum* (Tab. n. 7358) seems hardly different from *C. pendulum*, and there are probably many other forms.

Descr. *Stems* tufted. *Leaves* two to three feet long, equitant, and deeply grooved at the base, then ensiform, half an inch to three-quarters of an inch broad, keeled, very coriaceous, obliquely obtuse at the apex, one half ending in an incurved tooth. *Spike* two feet long, lax, pendulous, many-flowered. *Bracts* very minute. *Sepals* and *petals* similar, an inch and a half to an inch and two-thirds long, linear-oblong, obtuse, coriaceous, externally dull yellow-

green, internally intensely dark purple, with green edges at the tips. *Lip* recurved, shorter than the sepals; lateral lobes small, acute, pale purple; middle lobe broadly oblong-cordate, much larger, white tinged with rose-colour, and with a few purple spots; disk yellowish, with two narrow, approximate, slender, parallel ridges. *Column* dark purple; *anther* pale.—*J. D. H.*



W. Fitch. del et lith

Vincent Brooks Imp.

Tab. 5711.

ERANTHEMUM ASPERSUM.

Speckled-flowered Eranthemum.

Nat. Ord. Acanthaceæ.—Diandria Monogynia.

Gen. Char. (*Vide supra*, Tab. 5440.)

Eranthemum *punctulatum;* fruticosum, glaberrimum, ramulis lævibus, foliis petiolatis oblongo-ovatis obtusiusculis obscure repando-sinuatis, cymis axillaribus breviter pedunculatis foliis brevioribus multi-densifloris, calycis puberuli lobis subulatis erectis corolla multo brevioribus, corolla hypocraterimorpha, tubo gracillimo pollicari albo, limbi plani lobis oblongis obtusis albis 4 superioribus disco excluso purpureo-punctulatis, inferiore majore disco sanguineo-purpureo margine punctulato, filamentis ciliatis, antheris oblongis obtusis.

A remarkably-beautiful stove shrub, sent from the Solomon Islands by Mr. John Veitch during his Australian voyage, and communicated to the Royal Gardens in 1867, without name, where it flowered fully in March of the present year. It appears undescribed, but is manifestly closely allied to *E. Cooperianum* (Tab. nost. 5467) and *E. tuberculatum* (Tab. nost. 5405). It differs remarkably from any species known to me in the very straight, slender corolla-tube, and white limb, curiously speckled with purple, all but one lip-like lobe, which is almost wholly purple, giving the corolla-limb the appearance of an Orchid flower.

Descr. Apparently a slender shrub, much branched, glabrous; stems and branches tetragonous. *Leaves* on short petioles, two to three inches long, ovate or ovate-oblong, subacute, obscurely sinuate, waved at the margin, dark green above, paler below; petioles a quarter to half an inch long. *Cymes* numerous, axillary, shorter than the leaves. *Peduncles* half an inch to an inch long, three- to five-flowered; pedicels very short, and, as well as the calyx, puberulous. *Corolla*-tube four or five times as long as the calyx, straight, very slender, white; limb flat, an inch to an inch and a quarter in its longest diameter, five-lobed; lobes oblong, obtuse, four upper

white, sprinkled with purple dots towards the margin, the two lateral rather larger and longer than the two upper; lower lobe largest, very deep blood-purple at the base and over the disk, the broad white margin speckled with purple. *Stamens* altogether included, filaments short, with a line of recurved hairs; anthers linear-oblong, subacute, cells nearly equal. *Ovary* narrow oblong, on an annular disk; style slender, stigma minutely two-toothed.—*J. D. H.*

Fig. 1. Stamens. 2. Calyx and style. 3. Ovary and disk:—*all magnified.*



N.Fitch del et lith.

Vincent Brooks, Imp

Tab. 5712.

OPHRYS INSECTIFERA; var. *aranifera*.

Spider Ophrys.

Nat. Ord. Orchidæe.—Gynandria Monandria.

Gen. Char. Sepala patentia, supremo fornicato v. galeato. *Petala* minora, patentia, linearia oblonga v. cordata. *Labellum* columnæ basi insertum, sessile, rigidum, planiusculum v. marginibus recurvis, carinatum v. lobatum. *Columna* brevis, aptera, antice fissa, 2-bursiculata. *Anthera* verticalis, mutica; pollinia caudiculis rectis, glandulis distinctis intra bursiculis reconditis.—Herbæ *in Europa media et australi indigenæ, habitu Orchidis.* Flores *laxe spicati, labello varie picto. Endl.*

Ophrys *insectifera;* sepalis oblongis lineari-oblongisve, petalis consimilibus v. subcordatis multo minoribus, labello subquadrato-oblongo obscure lobato, columna rostrata.

Ophrys insectifera. *Linn. Sp. Pl. vol.* 2, 1343 (1765). *Moggridge, Contributions to the Flora of Mentone, pl.* 43.

Var. *aranifera;* petalis glabris planis viridibus, labello integro v. apice emarginato.

Ophrys insectifera, *var. β. Linn. Sp. Pl. l. c.*

Ophrys aranifera. *Huds. Fl. Angl. p.* 392. *Curt. Fl. Lond. ed.* 2. *t.* 67.

Ophrys aranifera, *var.* apiculata. *Reich. Ic. Fl. Germ. t.* 465. *f.* 2, 3.

The receipt of a beautiful set of *Ophrys* bulbs, collected by our indefatigable correspondent T. Moggridge, Esq., in the neighbourhood of Mentone, together with the advancing taste for the cultivation of terrestrial and especially spring-flowering Orchids, has induced me to figure what Linnæus considered as the typical form of that group of *Ophrys* which includes the lesser and common Spider, the Bee, and the Drone, amongst British Orchids, and several other foreign ones, and which have been distinguished as good species by most succeeding authors. Mr. Moggridge has figured a series of these forms in his charming work, 'Contributions to the Flora of Mentone,' and, after carefully studying the structure and habits of an enormous series of specimens in a living state, and in a locality where they abound, he has

come to the conclusion that Linnæus was right, whom he quotes as saying that they "seem at the first glance perfectly distinct, but one who compares them with their congeners, and has before him all the varieties at the same moment, will easily perceive them to be sprung from one stock, and will find no means by which he can distinguish them, however constant they may be."

The interest of this subject is however by no means exhausted when this conclusion is arrived at; on the contrary, in a philosophical point of view, it is vastly increased, for Mr. Moggridge has, with great acuteness, observed some very curious facts connecting the various forms of flowers with their seasons of coming into flower, showing "the intimate connection which exists between the sequence in which each variety flowers, and its approximation to one of the extreme forms;" a sequence which, he goes on to say, he "cannot regard as fortuitous," but is rather "led to surmise that laws new to me are here in operation." The different varieties occupy no less than five months in flowering; the plant here figured (*O. aranifera*) commences the series, flowering in December at Mentone (at Kew in February), whilst the last to flower is the *O. apifera* (our Bee-Orchis), which there appears in April, but with us in June.

For further particulars I must refer to Mr. Moggeridge's excellent work, and can only hope that, with extended opportunities, he will be able to clear up the whole question of the origin and interdependence of the principal forms of *Ophrys*. —*J. D. H.*



W. Fitch, del. et lith.

Vincent Brooks, Day & Son. Imp

Tab. 5713.

STROPHANTHUS Capensis.

South African Strophanthus.

Nat. Ord. Apocyneæ.—Pentandria Monogynia.

Gen. Char. Calyx 5-partitus, lobis intus basi glandulosis. *Corolla* infundibuliformi-campanulata, lobis 5 longissime ligulatis v. lineari-subulatis, sinistrorsum convolutis, ore corona 10-cornuta cincto. *Stamina* basi fauce corollæ inserta, filamentis crassiusculis tubo adnatis; *antheræ* sagittatæ, apice mucronatæ v. appendiculatæ. *Ovarii carpella* 2, subglobosa; *stylus* cylindricus, stigmate capitato v. oblongo. *Folliculi* crassi, obtusi, polyspermi. *Semina* oblonga, compressa, carnosa.—Frutices *erecti v. sarmentosi Africani et Asiatici.* Folia *opposita et* 3-*natim verticillata, integerrima.* Flores *majusculi, in cymas terminales dispositi, flavi rubri v. virides.*

Strophanthus *Capensis;* scandens, foliis 3-natim verticillatis, oblongo- v. obovato-lanceolatis acutis glaberrimis marginibus recurvis, cymis 4–6-floris, pedicellis bracteas excedentibus, sepalis subulato-lanceolatis, glandulis calycinis 7–10 erectis, corolla flava, lobis basi aurantiacis, antheris pilosis appendice subulata pilosa terminatis, stigmate mitriformi.

Strophanthus Capensis. *Alph. DC. Prodr. v.* 8. *p.* 419.

A very handsome South African shrub, of which there are native specimens in the Kew Herbarium, collected, in January of the present year, by Mrs. Henry Hutton, of Bedford, in the Kaga-berg forest, where it forms a lofty climber, at elevations of about 5000 feet above the sea. These arrived at Kew almost at the same time as the living specimens here figured, which I owe to Mr. Veitch, with whom the plant flowered in April. It is a very handsome evergreen climber, admirably suited for a conservatory wall or pillar, and for which, it may be safely predicted that it will prove a valuable acquisition. The calyx-lobes of the native specimens are considerably larger than those of the cultivated, but I find no other difference whatever between them.

Descr. A lofty, evergreen, leafy, dark green, glabrous climber. *Leaves* close-set, two to three inches long, half to

two-thirds of an inch broad, shortly petioled, oblong- or obovate-lanceolate, attenuated towards the base, acute, paler beneath, quite entire. *Cymes* terminal, about as long as the leaves, four- to six-flowered; *bracts* subulate-lanceolate, shorter than the pedicels. *Calyx-lobes* variable in size, subulate-lanceolate, erecto-patent; *glands* about ten, erect, ligulate, unequal in size. *Corolla* bright yellow, with dark orange spots at the base of the lobes; *tube* and *throat* half an inch long; *lobes* an inch to an inch and a half, ligulate from a broad base; *throat* campanulate, with five bifid scales united into a tube, which surrounds the mouth. *Anthers* pilose, and having a pilose terminal appendix. *Style* stout; *stigma* mitriform.—*J. D. H.*

Fig. 1. Corolla, laid open. 2. Stamen. 3. Calyx and style. 4. Glands of calyx and pistil:—*all magnified.*



Vincent Brooks, Day & Son

Tab. 5714.

ERYTHRONIUM GIGANTEUM.

Gigantic Erythronium.

Nat. Ord. Liliaceæ.—Hexandria Monogynia.

Gen. Char. Perianthium corollinum, persistens, late campanulatum, 6-phyllum; foliolis subæqualibus, interioribus basi callosis. *Stamina* 6, 3 interiora hypogyna, 3 exteriora basi foliolorum adhærentia. *Ovarium* brevissime stipitatum, 3-loculare; stylus terminalis, stigmate 3-lobo v. 3-partito; ovula in loculis numerosa, 2-seriata. *Capsula* 3-gona, 3-locularis, polysperma. *Semina* ovoidea, inversa, testa fusca; chalaza terminali. caudicula basi tumida instructa; embryo minimus.—Herbæ *bulbosæ*, *subacaules*, *scapigeræ*, *in Europa et Asia media et America boreali indigenæ*. Folia *sæpius* 2-*na*. Scapus 1–3-*florus*; *floribus majusculis nutantibus*.

Erythronium *giganteum*; foliis 2 amplis obovato-oblongis obtusis fusco-maculatis, scapo elato 2–3-floro, floribus 3 unc. diam. albis, petalis ovato-lanceolatis, lamina alba, ungue aureo et aurantiaco fasciato, antheris flavis, stigmatis lobis subelongatis.

Erythronium giganteum. *Lindl. in Bot. Reg. v.* 21. *sub t.* 1786. *Kunth, Enum. v.* 4. *p.* 219.

Erythronium grandiflorum, *var.* γ. albiflorum. *Hook. Fl. Bor. Am. v.* 11. *p.* 182.

This is by far the handsomest species or variety of *Erythronium* hitherto introduced into this country. It is a native of North-west America, and was communicated from the Edinburgh Botanic Garden in April of the present year. I have had some difficulty in determining what name it should bear, the Herbarium specimens of the West American forms of the genus (*E. grandiflorum*, Pursh, *E. giganteum*, Lindl., and *E. revolutum*, Sm.) being utterly indistinguishable in a dry state; and their published characters being founded on the colour of the flowers,—white, yellow, and purple,—they have been all reduced, and, I suspect, very properly, to one species, in the 'Flora Boreali-Americana.'

E. giganteum was discovered by Douglas, who does not notice the colour of the flower, nor does Lindley, in his diagnosis of it above quoted. They would appear to be white in Douglas's own specimens preserved in the Hook-

erian Herbarium, but in the 'Flora Boreali-Americana' they are stated to be yellow; and another variety is noticed as having white flowers (viz. δ. *albiflorum*), to which the present plant no doubt belongs. From some observations by Burke in the Hookerian Herbarium, it would appear that the species or forms of West American *Erythronia* retain their colours over considerable areas, and that they are at least constant races, whence for horticultural purposes the present will, no doubt, bear a specific name.

Descr. A tall *herb*, one to two feet high. *Leaves* five to eight inches long, oblong-obovate, obtuse, dark green, blotched with dark brown. *Scapes* two- to four-flowered; *peduncles* one to two and a half inches long. *Flowers* two to three inches in diameter. *Petals*, with the limb, white, the claw green on the back, in front golden-yellow, with an irregular, transverse, orange-yellow band. *Stigma* with three slender recurved lobes.—*J. D. H.*

Fig. 1. Petal. 2. Pistil. 3. Transverse section of ovary:—*all magnified.*



W Fitch, del et lith.

Vincent Brooks Day & Son, Imp.

Tab. 5715.

STOBÆA SPHÆROCEPHALA.

Round-headed Stobæa.

Nat. Ord. Compositæ.—Syngenesia Superflua.

Gen. Char. Capitula multiflora, v. discoidea floribus omnibus tubulosis et hermaphroditis, v. radiata floribus radii neutris. *Involucri* squamæ multiseriatæ, basi concretæ dein spinescentes, marginibus spinulosis. *Receptaculum* profunde alveolatum, alveolis fimbrilliferis v. setiferis. *Filamenta* lævia. *Pappi* setæ æquales v. inæquales v. in coronam concretæ. *Achænia* turbinata v. obpyramidata, sulcata, sæpe alveolis receptaculi immersa.—Herbæ *habitu* Carduaceæ, *Capenses*, *glabræ araneosæ v. lanatæ*. Folia *alterna, sæpissime pinnatifido-lobata*. Capitula *ramos terminantia, flava, rarius purpurea.*

Stobæa *sphærocephala;* herbacea, erecta, ramosa, laxe araneosa, caule alato, alis spinulosis, foliis radicalibus lanceolatis pinnatifidis spinuloso-dentatis ciliatisve, demum glabratis lobis rotundatis, caulinis longe decurrentibus, capitulis corymbosis globosis discoideis, involucro disco multo breviore, squamis angustis marginibus 1–2 spinulosis, receptaculi squamis acicularibus, pappi squamis brevibus in coronam chartaceam irregulariter fissam connatis, achæniis glaberrimis.

Stobæa sphærocephala. *DC. Prodr. v.* 6. *p.* 518. *Harv. et Sond. Fl. Cap. v.* 3. *p.* 490.

The Cape genus *Stobæa* consists of no less than forty-three species of for the most part handsome golden-flowered thistle-like plants, well adapted for the open border, but of which the present is the first that has ever been cultivated and figured in this country. It was raised from seeds sent by our excellent correspondent Henry Hutton, Esq., of Bedford, South Africa, and flowered in the open air in September, 1864.

Descr. A stout, erect, branching *herb*, two to three feet high, loosely covered with cobwebby down. *Branches* broadly winged, with the green, spinous, decurrent bases of the leaves and bracts. *Radical leaves* eight to ten inches long, lanceolate, narrowed to the base, deeply sinuato-pinnatifid, the lobes broad, rounded, spinous-toothed, cobwebby below, glabrous above, and often spinulose on the surface;

cauline leaves much smaller, spinulose. *Heads* an inch to an inch and a quarter in diameter, golden-yellow. *Involucral scales* connate at the base, the free portion spreading, reflexed, spinulose at the apex and margin, green, cobwebby. *Receptacle scales* all acicular. *Flowers* all tubular, much longer than the involucre; *tube* curved, puberulous; *limb* of five narrow spreading lobes. *Anthers* long, connate; *filaments* glabrous. *Style arms* recurved, linear, papillose. *Achene* glabrous; *pappus hairs* connate into a short, stiff, irregularly-cleft annulus.—*J. D. H.*

Fig. 1. Floret and receptacle seta. 2. Achene and pappus. 3. Arms of style:—*all magnified.*



Tab. 5716.

AGAVE DASYLIRIOIDES.

Dasylirion-like Agave.

Nat. Ord. Amaryllideæ.—Hexandria Monogynia.

Gen. Char. (*Vide supra*, Tab. 5333.)

Agave *dasylirioides;* acaulis, foliis numerosissimis coriaceis anguste ensiformibus patenti-recurvis longe attenuato-acuminatis marginibus pectinatim serrulatis utrinque convexiusculis pallide glauco-viridibus striolatis, scapo longissimo, parte nudo suberecto bracteis numerosissimis falcato-secundis crinito, parte florifero elongato dependente, spica densissima cylindrica, floribus 2-nis viridibus, perianthio subcampanulato 6-lobo, lobis brevibus obtusis, staminibus strictis perianthio cum ovario æquilongis, antheris brunneis.

Agave dasylirioides. *Jacobi et Bouché in Hamburg Gartenzeit. v.* 21. *p.* 344, *et v.* 22. *p.* 269.

The noble Agave here figured has been a very conspicuous plant in the conservatory of the Regent's Park Botanic Gardens, where it has flowered three times, on each occasion presenting the same remarkable appearance that our drawing conveys. Mr. Sowerby informs me that it was raised from a packet of seeds sent from Mexico about twenty-five years ago, amongst which seeds were also those of the *Fourcroya longæva*, figured in this Magazine (Tab. 5519). This Agave first flowered in about 1860, and again in 1864, and lastly in January of the present year; on each occasion the old head died away, and a new one formed at its base. For the reduced drawing of the entire plant here given, I am indebted to a lady friend of Mr. Sowerby's. The leaves were three and a half to four feet long, the flower-stem ten feet and a half high, and the crowded sickle-shaped, one-sided bracts on which produced a no less remarkable appearance than the pendulous habit of the floriferous parts. My authority for the specific name of *dasylirioides* is General Jacobi, who says that the same species is cultivated in the Vienna Botanic Garden. Koch, however, considers it the

same with *A. dealbata*, Lemaire, a plant I have no means of comparing it with.

Descr. *Stem* in our specimen very short or none. *Leaves* three and a half to four feet long, very numerous, the central erect, the others recurved, narrow ensiform, an inch to an inch and a half broad, rather convex on both surfaces, sharply but minutely pectinately toothed, dull glaucous-green, striated. *Scape* ten and a half feet long, flowering portion sharply recurved, and quite pendulous; lower part most densely clothed with subulate, ensiform, curved, falcate, secund bracts. *Bracts* all similar, and with a similar curvature, the lowest one foot long, the upper gradually smaller. *Inflorescence* a very dense, cylindric, pendulous spike, five feet long, green, dotted with the brown anthers. *Flowering-bracts* subulate, longer than the flowers. *Flowers* sessile, pale green, in pairs, an inch and three-quarters long, exclusive of the stamens; ovary cylindric, rather shorter than the campanulate, six-cleft perianth, whose lobes are short, obtuse, concave, and nerveless. *Filaments* as long as the flowers, stout, strict; *anthers* linear-oblong, bright red-brown. —*J. D. H.*

Fig. 1. Portion of scape and bracts. 2. Upper portion of leaf. 3. Margin of leaf. 4. Flowers. 5. Transverse section of ovary:—*all but* 3 *and* 4 *of the natural size.*



W Fitch del et lith

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ABUTILON vexillarium.

Standard-flowered Abutilon.

Nat. Ord. Malvaceæ.—Monadelphia Polyandria.

Gen. Char. (*Vide supra*, Tab. 4840.)

Abutilon *vexillarium;* frutex glaber, ramis gracilibus, foliis gracile petiolatis cordato-lanceolatis grosse serrato-dentatis venosis, stipulis subfoliaceis oblongis pauci-dentatis lobulatisve, floribus axillaribus solitariis gracillime pedicellatis pendulis, calyce ampullaceo rubro 5-alato breviter 5-fido, lobis triangularibus acuminatis, corollæ tubo calyce incluso, lobis stramineis exsertis ovatis acutis, antheris numerosissimis exsertis multiseriatis in conum oblongum confertis stigmatibusque purpureis.

Abutilon vexillarium. *Morren in Belg. Hortic. Octob.* 1864, *p.* 289. *f.* 16. *ex Lemaire, Illustr. Hortic. t.* 432.

Sida Leopoldi, *Hort.*

A most elegant warm greenhouse plant, published first by Morren in 1864, but of which the native country, though said to be South America, seems to be entirely unknown; and there are no native specimens in the Herbaria at Kew. It flowered in the Palm House of Kew in March of the present year, and had a most attractive appearance, from its graceful habit, and the vivid contrast of the red calyx and sulphur-coloured corolla.

Descr. A very slender, graceful, glabrous *shrub*. *Branches* spreading, leafy. *Leaves* almost pendulous from the very slender, spreading petioles, two to three inches long, cordate-lanceolate, coarsely toothed, bright green above, paler below. *Stipules* persistent, oblong, obtuse or acute, irregularly lobulate or toothed. *Flowers* numerous, solitary from the axils of the leaves, pendulous from very slender pedicels an inch long. *Calyx* one inch long, narrow flagon-shaped, bright red, obtuse at the base, narrowly five-winged, with five short, acute, triangular teeth. *Corolla*-tube enclosed in the calyx-tube; lobes short, exserted, twisted, ovate-acuminate, pale sulphur-coloured. *Staminal* tube very slender, twisted;

anthers small, very numerous, collected in an oblong cone, purple. *Styles* five; stigmas minute, capitate, purple.—*J. D. H.*

Fig. 1. Longitudinal section of the flower:—*magnified.*



W. Fitch, del et lith.

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Tab. 5718.

NASONIA PUNCTATA.

Cinnabar-red Nasonia.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. Sepala patentia, lateralia connata. *Petala* conformia, æqualia. *Labellum* liberum, cum pede paulo producto columnæ articulatum, medio constrictum et appendiculatum. *Columna* erecta, basi teres; clinandrio elongato erecto, margine petaloideo cincto. *Anthera* unilocularis, apice longissima cum columna parallela ideoque decurva. *Pollinia* 2, solida, sphærica, caudiculæ longissimæ diaphanæ subulatæ apice affixa; glandula ovata. *Rostellum* breve, 2-fidum. *Ovarium* 3-quetrum.—Herbæ Austro-Americanæ, *parvulæ, epiphyticæ, ramosæ, foliosæ.* Folia *coriacea, disticha.* Flores *pedicellati, axillares, pro planta majusculi.—Lindl. in Pl. Hartweg.*

Nasonia *punctata;* foliis ½-pollicaribus oblongo-lanceolatis acutis carinatis. floribus subsolitariis cinnabarinis, sepalis petalisque subconformibus oblongis obtusis, labello sepalis breviore late obovato subcuneato retuso v. transverse oblongo flavo basi scutellato, scutello sub lobo parvo aurantiaco, columnæ alis irregulariter lobato-dentatis.

A very pretty little Orchid, discovered by Hartweg in the mountains of El Sisme in Peru, and called by Lindley *N. punctata*, from the dark spots seen on the perianth of dried specimens, which are of a very pale colour, quite unlike the vivid red of the living plant. The specimen here figured flowered with Messrs. Veitch in April of the present year, and was called *N. cinnabarina*; the latter is a plant described by Reichenbach fil. in the 'Gardeners' Chronicle,' 1867, p. 544, as having been imported by Linden; I can, however, find no difference, except the above-mentioned one, of colour of flower, between Veitch's and the original specimens of Lindley's plant.

Descr. *Stems* tufted, three to five inches long, rather stout, leafy throughout above the rooting portion. *Leaves* distichous, half to two-thirds of an inch long, spreading, with short, broad sheaths that clasp the stem; limb jointed on the sheath, oblong-lanceolate, acute, keeled. *Flowers* axillary, pedicelled, solitary, nearly an inch long across the

sepals; pedicel shorter than the leaves, with short bracts on the middle; *ovary* three-winged. *Sepals* and *petals* cinnabar-red; upper *sepal* oblong, obtuse, somewhat recurved; lateral joined nearly to their apices, also slightly recurved, their free parts short, subacute. *Petals* projected forward, like the upper sepal, rather conniving. *Lip* much shorter than the sepals, broadly obovate-cuneate, retuse, yellow, with a two-lobed shield of a bright orange colour at the base. *Wings* of the column dilated, irregularly cut and toothed.—*J. D. H.*

Fig. 1. Leaf. 2. Flower with petals and sepals removed. 3. Lip and column. 4. Lip. 5. Column. 6. Anther. 7 and 8. Pollinia:—*all magnified.*



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Tab. 5719.

PÆONIA Emodi.

Himalayan Peony.

Nat. Ord. Ranunculaceæ.—Polyandria Polygynia.

Gen. Char. Sepala 5, herbacea, persistentia. *Petala* 5–10, conspicua, lata, efoveolata. *Carpella* 1–5, multiovulata, disco carnoso cincta, maturitate coriacea, folliculatim dehiscentia. *Semina* magna, albumine carnoso. —Herbæ, *radice caudiciformi perennes, v. caules ramosi plus minus lignosi.* Folia *alterna, ampla, pinnatim dissecta v. composita.* Flores *speciosi, purpurei albi v. rubri.*

Pæonia *Emodi;* herbacea, foliis ternatim sectis utrinque glabris læte viridibus lucidis, floribus subpaniculatis albis, carpello solitario tomentoso.

Pæonia Emodi. *Wall. Cat. n.* 4727. *Royle, Ill. p.* 57.

P. officinalis. *Hook. f. et Thoms. Fl. Indica, p.* 60.

The herbaceous Peonies comprehend a group of variable plants, about whose specific distinctions naturalists are little likely to be of one mind. In the Herbarium they are undistinguishable specifically; in the garden a certain number differ, apparently permanently, by characters of most unequal value. In the 'Flora Indica' Dr. Thomson and I referred the Himalayan Peonies to forms of *P. officinalis*,—a conclusion little acceptable to some botanists, and not at all to gardeners. On reviewing the subject *à propos* to the present plant, I see no reason to alter my opinion that, as compared with the species of many other genera, the Himalayan ones may well be referred to forms or varieties of the European; but as they differ greatly in habit, colour, and those qualities that render them worthy of cultivation, as well as in some other points of a little more moment, I here keep one at any rate distinct. This is the *P. Emodi* of Wallich, a common temperate Himalayan plant from Kumaon to Kashmir, which is easily recognized by its slender habit, white, subpanicled flowers, and solitary tomentose carpel; in this respect alone, of a solitary tomentose carpel, it differs from *P. albiflora*, Willd. (Tab. Nostr. 1756), of Siberia; and in the tomentose carpel alone from a Kashmir one-carpelled plant, hitherto not

distinguished from this, and which, therefore, differs from *P. albiflora* in the solitary carpel alone.

The *P. Emodi* was flowered, in the open air in May of the present year, at Glasnevin Gardens by Dr. Moore, F.L.S., who says of it that it is the most distinct of all the herbaceous Peonies, several of the flowers expanding together on the same stem, and being always monogynous. It is more tender than any other herbaceous species, and appears above ground a month earlier than these do.—*J. D. H.*

Fig. 1. Disk and ovary. 2. Stamen:—*both magnified.*



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Tab. 5720.

PHARBITIS Nil; var. *limbata*.

White-edged Pharbitis.

Nat. Ord. Convolvulaceæ.—Pentandria Monogynia.

Gen. Char. Calyx 5-partitus. *Corolla* campanulata v. infundibuliformi-campanulata. *Stamina* inclusa. *Ovarium* 3- rarius 4-loculare; stylus filiformis, inclusus, stigmate capitellato 2-lobo; ovula in loculis 2.—Herba ***volubiles, caule elongato.*** Folia ***integra*** v. ***lobata.***

Pharbitis *Nil;* caule retrorsim piloso, foliis cordatis 3-lobis lobo intermedio basi dilatato, petiolis longiusculis, pedunculis 2–3-floris petiolo brevioribus longioribusve, sepalis elongato-subulato-lanceolatis erectis dein lente recurvis longe acuminatis, corolla ampla. *Choisy in DC. Prodr. v.* 9. *p.* 343.

Var. *limbata;* corolla violacea, albo-marginata.

Pharbitis albo-marginata. *Lindl. in Journ. Hort. Soc. v.* 5. *p.* 33. *Henfrey in Gard. Mag. Bot. v.* 2. *p.* 217, *cum ic.; Flore des Serres, t.* 608; *Lemaire, Jardin Fleuriste, t.* 97.

The most beautiful plant here figured was raised from seeds collected in North Australia, and sent by Dr. Mueller to Kew, where it flowered in a stove in May of the present year. *Pharbitis Nil* itself is an extremely common tropical weed, so widely distributed, that it is difficult now to say of what country it is a native. The variety *albo-limbata* was originally imported from Java by Messrs. Rollisson, of Tooting, and is probably not uncommon in the East Indian Islands; it was considered a good species by Lindley, but more correctly referred by Henfrey to *P. Nil*, from which it differs only in the colour of the flowers. So many Malayan island plants, and especially annuals, are also North Australian, that its appearance in the latter country is not extraordinary.

Descr. A slender, twining annual. *Stems* hispid with retrorse hairs. *Leaves* on rather slender hairy petioles, two inches and a half to four inches long, cordate, three-lobed, the lobes broad, the middle one broadest and acuminate. *Peduncles* variable in length, one- to three-flowered, hispid.

Flowers bibracteate. *Calyx*-lobes green, one inch long, hispid. *Corolla* two inches long; tube pale rose-purple; limb two inches and a half in diameter, of a deep violet-purple edged with white. *Stamens* included, filaments slender, hairy at the base; anthers rather short. *Ovary* short; style slender; stigma small, capitate, lobed, granulate.—*J. D. H.*

Fig. 1. Ovary, disk, style, and stigma. 2. Stamen :— *both magnified.*



2.



3.

4.

1.

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Tab. 5721.

PLEROMA MACRANTHUM.

Large-flowered Pleroma.

Nat. Ord. Melastomaceæ.—Decandria Monogynia.

Gen. Char. Calycis tubus paleaceus strigosus v. hirsutus; lobi persistentes v. decidui. *Petala* 5, obovata, sæpe inæquilatera et retusa. *Stamina* 10, æqualia v. subæqualia, filamentis glabris pilosis v. glandulosis; antheræ consimiles, arcuatæ, connectivo basi producto antice 2-tuberculato. *Ovarium* liberum v. costis calyci adnatum, vertice hispidum, 5-loculare; stylus curvus, stigmate punctiformi. *Capsula* 5-valvis, calyce inclusa. *Semina* cochleata. —Frutices *v.* suffrutices, *rarius* herbæ, *sæpius hispiduli.* Folia *petiolata, coriacea, 3–7-nervia.* Flores *sæpissime in paniculas 3-chotomas dispositi, ampli, violacei v. purpurei, calyce sæpe bracteis involucrato.*

Pleroma *macranthum;* fruticosum, erectum, pubescens, foliis petiolatis ovatis oblongo-ovatisve acuminatis minute denticulatis 5-nerviis superne rugulosis, floribus terminalibus subsolitariis amplissimis, calycis tubo ovoideo lobis ovato-lanceolatis acuminatis, petalis obovato-obcordatis violaceis subapiculatis, filamentis 10 styloque pilosis.

Lasiandra macrantha. *Seem. in Journ. Bot. v.* 2. *p.* 361. *t. xxiv.*

This magnificent plant was discovered by M. Libon in the province of St. Catherine, Brazil, and introduced from thence by Mr. J. Linden into his garden at Brussels, where it flowered in 1864. For the specimen here figured I am indebted to Mr. Bull, of Chelsea, who flowered it in April of the present year. For size and vividness of colour, this certainly is the finest flowered of all *Melastomaceæ*, and that it is both easy of cultivation and a free flowerer is shown by Mr. Bull's plants of five inches high bearing six or seven flowers and buds; his largest plants were four feet high, and had leaves four inches long.

Descr. A pubescent branched shrub, four feet high and upwards. *Branches* terete. *Leaves* opposite, petioled, two to four inches long, ovate or oblong-ovate, acuminate, minutely denticulate, five-nerved, rugose with closely anastomosing veins, vivid green above, pale below. *Flower* soli-

tary, terminal or three together towards the ends of the branchlet—one terminal and two in the axils of the uppermost leaves, shortly pedicelled, five inches in diameter. *Calyx-tube* ovoid, densely pubescent; *lobes* five, large, spreading, ovate-lanceolate; *bracts* two, orbicular, concave, enclosing the calyx-tube. *Petals* deep violet above, more purple beneath, obovate-obcordate, retuse with a short broad apiculus, glabrous. *Stamens* deep purple; *anthers* with small pores; *filaments* pubescent, glandular here and there. *Style* slender, pilose.—*J. D. H.*

Fig. 1. Stamen. 2. Ovary and calyx. 3. Vertical section of ovary. 4. Transverse section of ovary:—*all magnified.*



W. Fitch, del. et lith.

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Tab. 5722.

PRIONIUM Palmita.

South African Palmite.

Nat. Ord. Junceæ.—Hexandria Monogynia.

Gen. Char. Perianthium glumaceum, 6-phyllum, foliolis subæquilongis, 2 exterioribus suboppositis carinatis, ceteris dorso coriaceis. *Stamina* 6, hypogyna, perianthii foliolis opposita. *Ovarium* liberum, 3-loculare; stylus 0, stigmatibus 3 recurvis; ovula pauca, infra medium loculorum inserta, ascendentia. *Capsula* 3-locularis, loculicide 3-valvis, loculis 1-spermis. *Semina* oblonga, ascendentia, testa laxa cellulosa, albumine carnoso; embryo in axi albuminis clavatus, ejusdem longitudinis v. dimidio brevior.—Frutex Capensis, *fluviatilis, caudicibus fastigiatis lignosis elongatis reliquiis foliorum vetustorum vestitis.* Folia *versus apices ramulorum conferta, elongato-ensiformia, marginibus carinaque spinuloso-serratis.* Flores *parvi, in paniculam ramosam terminalem erectam strictam dispositi.*

Prionium Palmita. *E. Meyer in Linnæa, v.* 7. *p.* 131; *Kunth, En. Pl. v.* 3. *p.* 315; *Hook. Lond. Journ. Bot. v.* 9. *p.* 173. *t.* 4.

Juncus serratus. *Thunb. Prodr. p.* 66.

The Palmite of the South African rivers is one of the most curious plants hitherto introduced into cultivation, having the flower of a *Juncus*, the habit of a Pineapple, and inhabiting running streams in such masses, that the matted stems often form a sort of floating bridge, capable of supporting a man. The plant is, further, of considerable commercial importance from the fibrous matter of the bases of the leaves, which is used for brushes and brooms; the finer fibres of the middle and upper part of the leaf have also been used as a textile material.

For living specimens the Royal Gardens are indebted to Messrs. Haage and Schmidt, of Erfurt, from whom it was received in 1857; but, though treated in various ways, it never flowered till the present year, when a plant in the succulent house threw out a panicle four feet long. It was grown in a pot, which stood in a pan of water, in which it has succeeded better than in a water-tank.

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The following are Burchell's descriptions of the appearance of the plant in its native rivers, extracted from his 'Travels in Southern Africa' (v. 1, p. 89):—"We soon after crossed the Palmiet river, whose waters were of a brown colour, resembling coffee, but clear and wholesome. The Boers believe this brownness to be caused by the great quantity of Palmiet that grows everywhere in these streams, but I have observed them to be thus coloured before they reach the foot of the mountains, and far above where the Palmiet begins to grow." And again, p. 91, "Most of the rivers we passed in this excursion are choked up with this plant. Some notion of their appearance may be gathered by imagining a vast number of Pineapple plants, without fruit, so thickly crowded together as to cover the sides and even the middle of the stream, standing seldom higher than three to four feet above the surface, but generally under water when the river swells above its ordinary height: they have much the growth of Dragon-trees, or of some Palms." Again, p. 139, "The ford, which had rather the appearance of a cave, led us through the tall, thick Palmite, with which the river was in this part so choked up, that its waters seemed as if struggling to find a passage between the stems. It would be very unsafe, without great care, for a traveller to ford a river of this kind; for should he, by the force of the stream, be carried into the Palmites, he might find the greatest difficulty in extricating himself or his horse from amongst the entangled branches."—*J. D. H.*

Fig. 1. Whole plant:—*reduced*. 2. Branch of panicle. 3. Leaf. 4. Flower. 5. Ovary. 6. Transverse section of ovary. 7. Capsule:—*all but* 2 *and* 3 *magnified.*



W. Fry, Lithr. to the Queen.

Vincent Brooks, Day & Son, Imp.

Tab. 5723.

NANODES Medusæ.

Medusa's-head Orchid.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. *Sepala* ringentia, posticum fornicatum, lateralia labello subopposita, eique basi connata. *Petala* sepalis lateralibus subconformia et subparallela, libera. *Labellum* cum columna connatum, carnosum, indivisum. *Columna* clinandrio alato. *Anthera* 2-locularis, rostrata. *Pollinia* 4, compressa, collateralia, in caudicula ovata oblonga v. lineari sessilia.—Herbæ Brasilienses *et* Novæ Granadæ *incolæ, epiphytæ, caulescentes, humiles, cæspitosæ.* Folia *disticha, vaginantia, brevia, approximata.* Flores ***apices versus caulis axillares, solitarii.***

Nanodes *Medusæ;* caulibus crassis pendulis pedalibus, foliis 3-pollicaribus oblongis obtusis apice inæqualiter 2-lobis, floribus magnis, sepalis petalisque subæqualibus lineari-oblongis acutis fusco-viridibus, labello maximo orbiculato apice 2-lobo basi cordato 2-lobo ambitu profunde fimbriato luride purpureo, pollinis caudicula lineari-oblonga.

Nanodes Medusæ. *Reichb. fil. in Gard. Chron.* 1867. *p.* 432.

Amongst the many *bizarre* flowers which *Orchideæ* present, few are more singular than this *Nanodes*, to which Mr. Reichenbach has most felicitously given the specific name of *Medusæ*. Altogether the flattened, stout culms, and the pale glaucous colour of the foliage, and the extraordinary appearance and lurid purple of the flower, give it a most sinister appearance, and, for an Orchid, a most unusual one. I follow my learned friend Professor Reichenbach in referring it to *Nanodes*, from Lindley's meagre description of which genus it differs in the upper sepal not being arched. It is a native of Ecuador, introduced by Messrs. Backhouse, of York, and was flowered by the celebrated Orchid-grower, Mr. Day, of Tottenham.

Descr. Epiphytical. *Stems* densely tufted, pendent, branched from the base, a foot long, terete at the base, thence covered densely with the imbricating flattened leaf-sheaths, which are as broad as the thumb. *Leaves* distichous; *blade* two to

four inches long, linear-oblong, an inch to an inch and a quarter broad, curved, unequally two-lobed at the apex, semi-amplexicaul at the base where it joins the sheath, margins recurved, keeled, obscurely striate, very pale glaucous-green. *Flowers* leathery in consistence, one or two axillary at the ends of the branches, two inches and a half in diameter, very shortly pedicelled, flat, as if vertically compressed. *Sepals* and *petals* nearly equal and similar, linear-oblong, green, tinged and edged with faint red-purple ; *upper sepal* reflexed ; *petals* rather twisted. *Lip* very large, orbicular, bifid at the apex, two-lobed and embracing the top of the column at the base, margin deeply cut into spreading, flexuous, subulate fimbriæ, dull purple, dirty green on the disk. *Column* green, truncate. *Pollen-masses* at the top of a ligulate caudicle, with an intervening glandular mass.—*J. D. H.*

Fig. 1, Lateral, 2, anterior, and 3, posterior view of column. 4 and 5. Lateral and anterior views of pollen-masses and caudicle : —*all magnified.*



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Tab. 5724.

MONIZIA edulis.

Cenoula da Rocha, or Rock Carrot.

Nat. Ord. Umbelliferæ.—Pentandria Digynia.

Gen. Char. Calycis dentes obsoleti. *Petala* oblonga, lanceolata, apice angustata, incurva, dorso pilosa. *Discus* depressus. *Stamina* incurva. *Fructus* oblongus, a dorso compressus, carpellis dorso leviter convexis non alatis, jugis omnibus crassis obtusis; primaria, lateralibus juxta commissuram sitis inconspicuis; secundaria, dorsalibus primariis conformibus, lateralibus multo majoribus cum plana commissurali continuis, fungosis; vittæ sub jugis secundariis solitariæ. *Carpophorum* 2-partitum. *Semen* complanatum.—Frutex *erectus, caudice simplici v. diviso, elato, crassitie brachii humani.* Folia *ad apicem caudicis v. ramuli conferta, recurva, oblonga v. ovato-oblonga,* 3–4-*pinnatisecta;* foliolis *vernicosis incisis.* Umbellæ *amplæ; involucri et involucelli bracteæ* 6–10, *lineari-lanceolatæ.* Flores *parvi, albi.*

Monizia *edulis. Lowe, Manual of Flora of Madeira, p.* 365, *et Hook. Kew Journ. Bot. v.* 8. *p.* 295.

The Madeiran group of islands possesses two of the very few frutescent Umbelliferæ hitherto discovered; both are plants of excessive rarity and singularity, and both have flowered and fruited in the Royal Gardens within six months of one another; of these, one is the subject of the present Plate, the other is *Thapsia decipiens* (Tab. nostr. 5670).

Monizia was discovered by my friend the Rev. R. Lowe, M.A., on sea-cliffs on the east side of the Great Deserta Island, about one thousand feet above the sea, in clefts, hollows, and ledges; there he describes it as having a stem a foot or more high, but in the Royal Gardens the largest specimen attained a height of nearly seven feet before flowering, and the smallest (two have flowered) about two feet; these flowered within a few weeks of one another in April and May. The root, which is like a branched carrot, and black externally, contains a pure white farinaceous substance, like that of the common Pig-nut (*Bunium flexuosum*), which it resembles in taste, and when boiled is compared to a bad, stringy parsnip.

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In times of scarcity the root is eaten, boiled and raw, by the goat-herds, orchil-gatherers, and fishermen of the Desertas.

The genus *Monizia* was named in honour of Senhor J. M. Moniz, a zealous Madeiran botanist, and cultivator of the native plants of the islands. It is so closely allied to *Thapsia*, that in the absence of fruit it was referred to that genus in the 'Genera Plantarum' of Mr. Bentham and myself; but after a careful examination of fresh specimens, I am disposed to retain the genus, which differs from *Thapsia* in its singular habit, well-developed involucral bracts, and the thick ribs of the fruit, the lateral secondary of which are very much incrassated and corky when ripe, with no disposition whatever to produce wings. *Melanoselinum*, again, a genus founded upon the other Madeiran caulescent Umbellifer (*Thapsia decipiens*), may be distinguished from both *Monizia* and *Thapsia* by the large-cut involucral bracts, the notched petals with inflexed lacinulæ, the toothed edges of the wings of the carpels, and the Palm-like stem; it is, however, much nearer to the two Mediterranean *Thapsias* than *Monizia* is. —*J. D. H.*

Fig. 1. Reduced view of whole plant. 2. Portion of caudex. 3. Branch of umbel. 4. Portion of leaf. 5. Flower. 6. Fruit. 7. Transverse section of mericarp:—***all but 5 and 7 of the natural size.***



W. Fitch, del. et lith.

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TAB. 5725.

ONCIDIUM MARSHALLIANUM.

Mr. Marshall's Oncidium.

Nat. Ord. ORCHIDEÆ.—GYNANDRIA MONANDRIA.

Gen. Char. (*Vide supra*, TAB. 4148.)

ONCIDIUM (§ Macropetala) *Marshallianum;* pseudobulbo cylindraceo-ovoideo tereti, foliis anguste oblongis, floribus amplis flavis, sepalis nanis superiore obovato apiculato lateralibus basi in unguem connatis oblongis undulatis, petalis unguiculatis panduræformibus 2-lobis, labello amplo in unguem basi breviter auriculatum constricto, limbo dilatato transverse oblongo 2-lobo basi aperte cordato, callis in ungue rostratis, columnæ alis quadratis.

ONCIDIUM Marshallianum. *Reichb. fil. in Gard. Chron.* 1866, *p.* 682.

This superb species of *Oncidium* was figured from a specimen flowered by W. Marshall, Esq., of Enfield, and is stated by its original describer, Dr. Reichenbach, to have been introduced by Messrs. Low and Co., of Clapton, but whence is not stated; it flowered in May of the present year. It is most nearly allied to *O. pectorale*, Lindl., but differs in the sepals and lip.

DESCR. *Pseudobulbs* two to four inches long, ovoid-cylindric, terete. *Leaves* five to seven inches long by two broad, oblong-lanceolate, acute, bright green above, paler below, coriaceous. *Panicle* very large and broad, much branched, many-flowered. *Flowers* very large, two inches and a half broad across the petals, on slender pedicels, the pedicel and ovary together two to three inches long, bright sulphur-yellow with purple blotches on the sepals, petals, and claw of the lip. *Sepals* small, stipitate, upper one-third of an inch long, obovate, apiculate, concave in the centre, banded with purple; lateral placed under the lip, oblong, undulate, connate into the stipes. *Petals* shortly stipitate, broadly fiddle-shaped, undulate and crisped at the margin, two-lobed at the apex, with purple, broad, transverse bars on the disk. *Lip* as large as the rest of the flower, contracted at the base into

an auricled claw, which is spotted with orange-red, and bears a tubercled beaked callus; auricles oblong, obtuse, ascending; limb of lip transversely oblong, two-lobed at the apex. broadly cordate at the base, hence two-winged, bright yellow, unspotted, margins scarcely undulate, surface smooth. *Column* with short quadrate wings.—*J. D. H.*

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Tab. 5726.

SPIRÆA palmata.

Palmate-leaved Spiræa.

Nat. Ord. Rosaceæ.—Icosandria Pentagynia.

Gen. Char. (*Vide supra*, Tab. 4795.)

Spiræa *palmata;* glaberrima, ramis sulcatis, foliis palmatim 5-7-lobis, lobis ovato-lanceolatis acuminatis argute duplicato-serratis, petiolis validis superne glandulosis v. minute foliolatis, stipulis dimidiato-lanceolatis glanduloso-serratis, floribus cymoso-umbellatis, albis v. rubris, sepalis parvis reflexis obtusis, petalis orbiculatis, stylis brevibus recurvis, carpellis 4–5 pilosis 2-ovulatis.

Spiræa palmata. *Thunb. Fl. Japon. p.* 212. *DC. Prod. v.* 2. *p.* 544.

By far the handsomest species of the genus hitherto imported, and certainly one of the most beautiful hardy plants in cultivation; the deep purple-red of the stems and branches, passing into the crimson-purple of the glorious broad corymbs of flowers, contrasts most exquisitely with the foliage, which in autumn assumes beautiful tints of brown and golden-yellow. *Spiræa palmata* is a native of Japan, and was introduced by Messrs. Noble, of Bagshot, through Mr. Fortune, from whom dried specimens are in the Hookerian Herbarium at Kew. The specimen here figured flowered in June of the present year. Thunberg describes it as sometimes having white flowers, and Professor Asa Gray has referred a white-flowered Japanese plant to this, which however is identical with a glabrate form of *S. digitata* (var. *glabra*, Ledebour), and differs in the much broader stipules with cordate bases.

Descr. A glabrous, erect undershrub. *Branches* slender, deeply grooved, and, as well as the stipules, petioles, and peduncles, of a bright crimson-purple colour. *Leaves* petioled, *petiole* three to seven inches long, either glandular towards the apex or furnished with several minute gland-serrated leaflets; terminal or solitary *leaflet* four to five inches diameter, five- to seven-lobed; *lobes* ovate-lanceolate, acute, sharply

irregularly serrate, five- to seven-nerved; *uppermost leaves* three-lobed. *Stipules* erect, obliquely lanceolate, the uppermost leaves subulate, gland-toothed. *Corymbs* numerous, terminating the branches, six to twelve inches across, much branched. *Flowers* and all their parts wholly of a fine crimson colour, small, one-eighth of an inch diameter, shortly pedicelled. *Calyx lobes* very small, broadly oblong, obtuse, recurved. *Petals* nearly orbicular, concave. *Stamens* very numerous, filaments capillary, flexuous; *anthers* very minute. *Carpels* four to six, hairy, with short recurved styles and capitate glandular stigmas.—*J. D. H.*

Fig. 1. Flower. 2. Carpels:—*magnified.*



W.Fitch del et lith.

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Tab. 5727.

MYRICA Nagi.

Yangmae Fruit of China, and Yamamo-moki of Japan.

Nat. Ord. Myricaceæ.—Monœcia Tri-octandria.

Gen. Char. Flores mono-dioici. Masc.: *Amenta* filiformia. *Bracteæ* 1-floræ, 2-bracteolatæ. *Stamina* 2–8, filamentis liberis v. inter se connatis; *antheræ* 2-loculares. Fœm.: *Amenta* ovata v. cylindrica. *Bracteæ* 1-floræ, 2-bracteolatæ. *Squamulæ* hypogynæ, cum ovarii basi concrescentes. *Ovarium* 1-loculare; *stylus* brevissimus, stigmatibus 2 elongatis. *Ovulum* 1, basilare, orthotropum. *Drupa* 1-sperma. *Semen* erectum; embryo exalbuminosus, antitropus.—Arbores, frutices *et* arbusculæ. Folia *alterna, integra serrata* v. *laciniata, rarius pinnatifida.*

Myrica (§ Gale) *Nagi;* foliis e basi longe cuneato-lanceolatis acutis obtusisve integerrimis v. supra medium serratis coriaceis, amentis masc. simpliciusculis, fl. masc. bractea ovato-orbiculata obtusa, bracteolis 2–4 ovatis, staminibus ad 6, filamentis brevibus liberis, ovario papilloso, drupa globosa dense papillosa.

Myrica Nagi. *Thunb. Fl. Jap. p.* 76. *Cas. DC. Prodr. t.* 16. *pt.* 2. 157.

Myrica Nagi. *Sieb. et Zucc. Fam. Nat. fasc.* 2. *p.* 106.

Myrica integrifolia. *Roxb. Fl. Ind. v.* 3. *p.* 765. *Wight, Ic. t.* 764. *Cas. DC. Prodr. l. c.*

The interesting Chinese fruit here figured was sent to me by James Bateman, Esq., F.R.S., of Biddulph Grange, in whose stove at Knypersley it ripened in June of the present year. The male flowers are figured from native specimens. The *Myrica Nagi* is a very commonly cultivated tree in China and Japan, and is much esteemed for its subacid fruits, which are eaten by natives and Europeans, both raw and cooked. I can find no difference between it and the *M. integrifolia* of Roxb., which, though described as tetrandrous in Candolle's 'Prodromus,' is certainly hexandrous to octandrous in specimens that I have examined.

Myrica integrifolia is a very common native bush or tree in the mountainous parts of Bengal and the eastern peninsula of India, and especially in Silhet, where it is called Sophee.

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and the fruit is eaten both pickled and raw. *M. sapida*, Wall., is probably another variety.

DESCR. A nearly glabrous evergreen ramous shrub or small tree; *branchlets* slightly pubescent. *Leaves* crowded towards the ends of the branches, three to five inches long, oblong-lanceolate, subacute, contracted into a short slender petiole, obtusely serrate from the midrib to the apex or quite entire, deep green above, pale beneath (in native specimens the leaves vary greatly in size, form, and dotting). *Male catkins* axillary, solitary, short, cylindrical, half an inch to an inch and a half long. *Bracts* minute, glandular, the outer broadly orbicular, obtuse, the lateral smaller. *Stamens* six to ten; *filaments* very short, subulate; *anthers* broad, didymous. *Female catkins* shorter than the male, fewer flowered; *outer bract* as in the male; *bracteoles* more numerous, fleshy. *Ovary* globose, covered with mamillary tubercles that are crowned with a papilla, one-celled. *Styles* two, stout, recurved, obtuse, grooved on the inner face; *ovule* solitary, pendulous. *Drupe* oblong or globose, as large as a cherry or smaller, deep red-purple, studded with mamillary tubercles; *flesh* soft, juicy, acid, of radiating soft fibres. *Stone* oblong, compressed, covered with a coating of fibres that radiate through the flesh. *Seed* exalbuminous.—*J. D. H.*

Figs. 1 and 2. Female flower. 3. Ovary. 4. Male catkin. 5. Male flower. 6. Stamen. 7. Transverse section of drupes:—*all but* 4 *and* 7 ***magnified.***



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Tab. 5728.

AERIDES mitratum.

Mitre-spurred Aerides.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. (*Vide supra*, Tab. 5138.)

Aerides *mitratum;* caule brevi, foliis confertis longissimis cylindricis attenuato-acuminatis superne alte sulcatis marginibus acutis, racemis erectis multi-densifloris, floribus albis labello antheraque purpureis, sepalis petalisque subæquilongis brevibus oblongis obtusis, labello late trulliformi sepalis paulo majore obtuso planiusculo, basi utrinque unilobulato, calcare mitriformi compresso obtuso, columna brevi.

Aerides mitratum. *Reichenbach fil. in Mohl. et Schlecht. Bot. Zeit.* 1864. *p.* 415.

A charming species, allied to *Aerides cylindricum* (Tab. nostr. 4982) in the foliage, which is however very much longer and differing totally in the inflorescence. It is stated by Reichenbach to be a native of Moulmeyne, from whence it was introduced by Mr. Day, of Tottenham, in whose magnificent collection of Orchids it flowered in April of the present year. It is not in either the Hookerian or Lindleyan Herbaria, and is hence probably exceedingly rare.

Descr. *Stems*, in the only specimen seen, short, sending out abundance of very stout branching, cylindrical, aerial roots. *Leaves* crowded, upwards of two feet long, cylindrical, and gradually tapering to a very fine point, like whip-lashes, upper surface deely channelled, margins sharp, as is the base to the groove, giving the latter a triangular outline on a cross section, dull green. *Racemes* numerous, erect, five to ten inches long, cylindrical, obtuse, on short, stout, dull purplish-red pedunceles. *Flowers* crowded, half to three-quarters of an inch in diameter, shortly pedicelled, white, with purple lip and anther-case. *Sepals* and *petals* subsimilar, subequal, spreading, short, broadly oblong, obtuse, flattish. *Lip* broadly

trulliform, obtuse, almost flat, with a horn-like projection on each side at the base. *Column* short; *anther-case* beaked. *Spur* short, very thick, projecting backwards, mitre-shaped, obtuse, much laterally compressed.—*J. D. H.*

Fig. 1. Side view of flower. 2. Lateral view of flower :—*both magnified.*



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Tab. 5729.

SARCOCAULON Burmanni.

Burmann's Sarcocaulon.

Nat. Ord. Geraniaceæ. Pentandria Pentagynia.

Gen. Char. Flores regulares. *Sepala* 5, imbricata. *Petala* 5, hypogyna, imbricata. *Glandulæ* 5, petalis alternæ. *Stamina* 5, omnia antherifera, basi in annulum brevissime connata, ceterum libera. *Ovarium* 5-lobum, 5-loculare, rostratum, rostro apice in stylum abeunte, ramis 5, linearibus introrsum stigmatosis; ovula in loculis 2, superposita. *Capsulæ* lobi 2-spermi, ab axi placentifero septifrage dehiscentes, caudis a basi ad apicem elastice revolutis. *Semina* exalbuminosa; cotyledones convoluto-plicatæ.—Herbæ suffruticesve *Austro-Africanæ, carnosæ v. succulentæ v. basi lignosæ, petiolis defoliatis spinescentibus armatæ.* Folia *parva.*

Sarcocaulon *Burmanni;* foliis obovato-cuneatis inciso-crenatis glabris puberulisve, petalis albis sepala mucronata duplo excedentibus.

Sarcocaulon Burmanni. *Eckl. et Zeyher. Harv. et Sond. Fl. Cap. v.* 1. *p.* 256.

Geranium spinosum. *Burm. Ger. n.* 2. *Cav. Diss. v.* 4. *p.* 195. *t.* 75. *f.* 2.

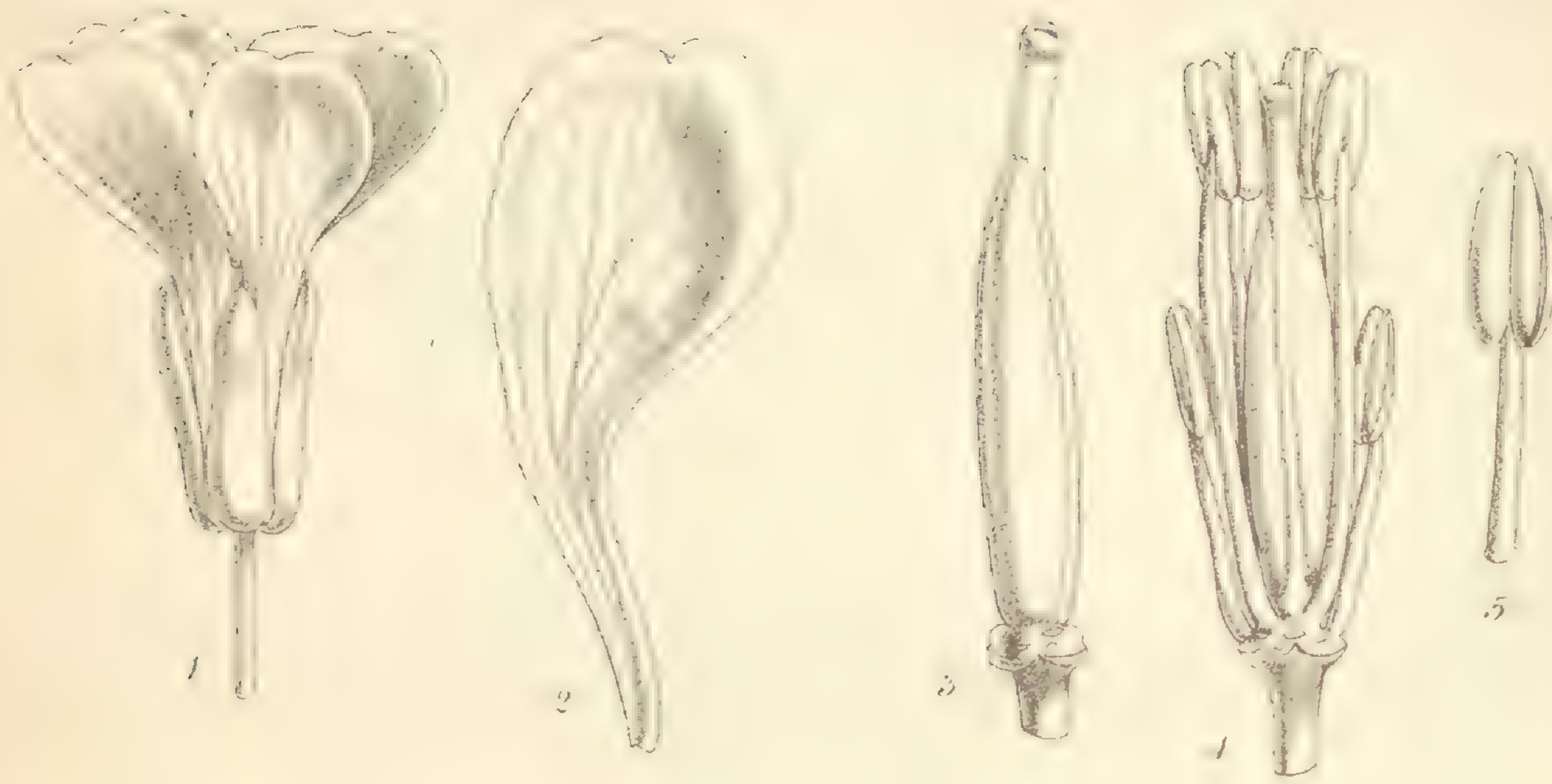
Monsonia Burmanni. *DC. Prodr. v.* 1. *p.* 638.

Amongst the many remarkable forms of *Geraniaceæ* which abound in South Africa, the present is conspicuous for its woody stem that abounds in resin, short tortuous branches, slender spines, which are reduced to petioles, two-lobed leaves, and beautiful pearly-white, plaited corolla. It was communicated to the Royal Gardens from the Botanic Gardens of Grahamstown, by Mr. Tuck, and flowered in May of the present year. The genus *Sarcocaulon* differs from *Monsonia* in little but habit; it consists of several species, all natives of the drier parts of the interior of South Africa. A very similar species, *S. Patersoni*, from Namaqualand, secretes such a quantity of waxy, inflammable substance in the bark, that the stems finally become mere tortuous tubes of wax; the woody substance decaying away and leaving the firm, waxy coating of the bark, which is apparently indestructible. This latter species, Dr. Brown informs me, is called by the Dutch "Gifdoorn" (Poisonous Thorn) and "Inkrup Doorn" (Cress in

Thorn), and, by the natives, " 'Novra," preceded by a click in pronunciation.

DESCR. *Stems* woody, about eight to sixteen inches high, much branched. *Branches* as thick as the little finger, cylindrical, terete, quite smooth, woody, the bark separating from the wood, to which, in old age, it forms a waxy sheath, studded with scattered spines an inch long, which are the petioles of undeveloped leaves; branchlets green. *Leaves* scattered, glabrous or downy, on slender petioles, black, a quarter to three-quarters of an inch long, broadly obcordate, with a mucro between the lobes, which are irregularly and bluntly toothed towards the apex, coriaceous, nerveless, deep green. *Stipules* minute, subulate. *Flowers* large, solitary, axillary, shortly pedicelled, an inch and a half in diameter; pedicels about as long as the leaves. *Sepals* linear-oblong, with a stout dorsal mucro near the apex, green. *Petals* obcuneate, beautifully wrinkled and plaited, pearly-white with a faint rosy tinge. *Filaments* slightly hairy at the base; anthers yellow. *Ovary* pubescent.—*J. D. H.*

Fig. 1. Leaf. 2. Flower, with petals removed. 3. Stamen. 4. Pistil. 5. Transverse section of ovary;—*all magnified.*





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Tab. 5730.

LEAVENWORTHIA aurea.

Golden-flowered Leavenworthia.

Nat. Ord. Cruciferæ.—Tetradynamia Siliquosa.

Gen. Char. Sepala basi æqualia. *Petala* cuneiformia. *Siliqua* linearis v. oblongo-linearis, subinflata, marginibus rectis v. inter semina contractis, valvis planis, septo hyalino transverse areolato 2-nervi, stigmate 2-dentato. *Semina* 1-seriata, compressa, late alata; radicula recta, brevissima.—Herbæ *annuæ, humiles, scapigeræ.* Folia *lyrato-pinnatifida.* Flores *lutei rosei v. purpurei, in scapis solitarii v. laxe ramosi.*

Leavenworthia *aurea;* siliqua marginibus undulatis, stylo subelongato.

Leavenworthia aurea. *Torrey in Ann. Lyc. New York, v.* 3. *p.* 87. *t.* 5. *A. Gray, Man. Bot. N. U. States, p.* 31; *Gen. Ill. t.* 57.

Cardamine uniflora. *Michaux, Fl. Bor. Am. v.* 2. *p.* 29. *DC. Prodr. v.* 1. *p.* 150.

A lovely hardy annual, or perhaps biennial, introduced by Mr. Thompson, of the Ipswich Nurseries, and sent to me for figuring by my friend Mr. Wilson Saunders, F.R.S., of Reigate, with whom it flowered in June of the present year.

The genus *Learenworthia* consists of two species, both natives of the middle and Southern States of North America: one species, *L. aurea*, is described as having yellow flowers, and the other, *L. Michauxii*, white or purplish flowers, yellowish towards the base, and it is suspected by Dr. Gray that these are varieties of one; according to the specimens in the Kew Herbarium, however, *L. aurea* has the margins of the pod waved and a very distinct style; and *L. Michauxii*, the margins of the pod straight and a very short style, whence, notwithstanding the colour of the flowers, I have referred the present plant to *L. aurea.* Chapman, who notices these differences in the style in his 'Flora of the Southern United States,' also observes that the radicle of *L. aurea* is straight, and of the other slightly curved.

Descr. A glabrous, stemless annual, or at most biennial,

throwing out from the crown a profusion of spreading leaves and numerous slender, one-flowered scapes, which are really axillary amongst the crowded leaves. *Leaves* two to three inches long, petioled, lyraté-pinnatifid, the terminal lobe largest, rounded, obscurely lobed, the lateral much swollen, subopposite, short, broad, and decurrent. *Scapes* as long as the leaves, erect. *Buds* drooping. *Flowers* resembling those of a Wood-sorrel, two inches and one-third in diameter, pale lilac, with a golden edge. *Sepals* linear-oblong, equal, obtuse. *Petals* clawed, obovate-spathulate, retuse. *Ovary* with a manifest style.—*J. D. H.*

Fig. 1. Flower. 2. Petal. 3. Pistil. 4. Apex of scape, stamens, and pistil. 5. Stamen:—*all magnified.*

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Tab. 5731.

EPIDENDRUM PANICULATUM.

Paniculate Epidendrum.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. (*Vide supra*, Tab. 5336.)

Epidendrum *paniculatum ;* foliis distichis oblongo-lanceolatis acuminatis, caule apice vaginis membranaceis setaceo-acuminatis vestito, panicula effusa multiflora, floribus gracile pedicellatis roseo-purpureis, sepalis spathulato-ligulatis obtusis, petalis sepalis multo angustioribus fere filiformibus, labelli profunde 4-lobi laciniis lateralibus obovatis obtusis intermedii 2-partiti lobis divaricatis oblique linearibus obtusis, disco 2-carinato, carinis basi subcornutis.

Epidendrum paniculatum. *Ruiz et Pav. Fl. Peruv. Syst. p.* 243. *Lindl. Gen. et Sp. Orch. p.* 108.

This, the most superb of all the paniculate Epidendrums, and perhaps the most floribund of Orchids, was discovered by Ruiz and Pavon, near Huayaquil, in Peru ; and since then in the province of Pasto by Hartweg, in Bolivia by Bridges, and in the province of Pamplona, New Granada, by Schlim, at an elevation of 7–8000 feet above the sea. Its robust yet graceful habit, profuse and lovely rose-lilac flowers that last a long time, and its odour, render it one of the most charming of cool-house Orchids. The specimen here figured was flowered by Messrs. Veitch in April of the present year, and was four feet in height.

In Lindley's Herbarium we find a much broader-leaved plant bearing this name, with shorter pedicels to the flowers, which are described as green, having a white labellum ; it was gathered at Truxillo by Funck and Schlim (n. 732).

Descr. *Stems* tufted, erect or inclined, simple, two to four feet high, covered with the distichous leaves, except at the terete base. *Leaves* four to seven inches long, narrow-lanceolate, acuminate, spreading and recurved, green, often spotted with purple, keeled. *Panicle* a foot or more long,

nodding, broadly-ovate, much-branched, very many-flowered; branches green, slender, curved, and spreading. *Bracts* subulate, half an inch to an inch long, green. *Pedicels* and *ovary* an inch to an inch and a half long, very slender, and flower rose-pink. *Flowers* three-quarters of an inch in diameter. *Sepals* spreading and reflexed, linear-spathulate, obtuse. Petals almost filiform, but rather broader at the apex, as long as the sepals. *Lip* sessile on the apex of the column; two lateral lobes obovate-oblong, irregularly crenate; middle divided nearly to the base into two broadly-linear, spreading, oblique lobes; disk with small yellow longitudinal calli; edges of the lobes of the lip white.—*J. D. H.*

Fig. 1. *Reduced* figure of entire plant. 2. Upper part of stem. 3. Branch of panicle, *both of the natural size.* 4. Flower:—*magnified.*



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Tab. 5732.

PUYA Whytei.

Mr. Whyte's Chilian Puya.

Nat. Ord. Bromeliaceæ.—Hexandria Monogynia.

Gen. Char. Sepala 3, herbacea, æqualia. *Petala* 3, obovato-oblonga, basi erecta, supra medium patenti-recurva, basi intus squama aucta, marcescendo spiraliter convoluta. *Stamina* 6, hypogyna, æqualia, filamentis filiformibus; antheræ oblongæ v. lineares, basi 2-fidæ. *Ovarium* liberum, 3-gonum, 3-loculare; stylus filiformis, stigmatibus 3 spiraliter contortis; ovula numerosa, in loculis 2-seriata, horizontalia. *Capsula* cartilaginea, 3-locularis, loculicide 3-valvis, polysperma. *Semina* compressa.—Herbæ *Americæ Australis incolæ, rupicolæ, caule brevi v. elongato apice folioso.* Folia *angusta, spinosa.* Flores *mediocres, in paniculas bracteatas dispositi.*

Puya *Whytei;* foliis confertis patenti-recurvis elongato-subulatis remote spinosis spinis inferioribus recurvis, supra concavis viridibus, subtus sparse argenteo-lepidotis, pedunculo valido erecto bracteis recurvis oblongis vestito, panicula erecta pyramidata densiflora, bracteis mediis superioribusque integerrimis, petalis obovato-oblongis luride virescente-cæruleis metallicis.

A superb rock-plant, introduced by Messrs. Veitch from Chili, through Mark Whyte, Esq., an enthusiastic amateur, in whose honour as discoverer it is named at Messrs. Veitch's request. As a species, it is so very similar to the drawing of *P. cærulea*, in the Botanical Register (1840, t. 11), that it is with great hesitation that I propose another name for it. The most obvious difference, in comparing the plates, will be seen to consist in the colouring of the flowers, and this I suspect may be due to the colourist; for the most peculiar dull metallic blue shot with green of Messrs. Veitch's plant is so difficult for an artist to seize and represent, that I can well conceive Dr. Lindley's colourist to have failed in reproducing it. In *P. cærulea* the bracts are more serrated, and the petals narrower; in all other respects they seem identical. *P. cærulea* is described as an almost hardy perennial rock-plant, of a most striking habit, and very ornamental. *P. Whytei* has proved hardy through last winter, and indeed flowered in the open air.

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Descr. *Stems* very short and branching, bearing an immense rigid tuft of spreading and recurved foliage. *Leaves* one to two feet long, narrow subulate, one inch broad at the base, finely attenuated, spinous, spines remote, rigid, curved, upper surface concave, green, lower somewhat silvery. *Peduncle* three feet high, stout, erect, clothed with broadly-oblong recurved bracts. *Panicle* pyramidal, much and densely branched, branches ascending, densely clothed with flowers and bracts. *Flowers* shortly pedicelled, an inch and a half long, campanulate. *Sepals* linear-oblong, obtuse, green, convex, not keeled. *Petals* more than twice as long, obovate-oblong, dull metallic blue shot with green, red purple when withered. *Anthers* bright orange-yellow. *Stigmas* spirally twisted.—*J. D. H.*

Fig 1. Reduced figure of plant. 2. Leaf; and 3, portion of panicle, *both of the natural size.* 4. Stamen and pistil. 5. Transverse section of ovary. 6. Pistil:—*Figs.* 4 *to* 6 *magnified.*



W. Fitch, del et lith.

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Tab. 5733.

LINARIA ORIGANIFOLIA, *var.* CRASSIFOLIA.

Marjoram-leaved Toad-flax.

Nat. Ord. Scrophularineæ.—Didynamia Angiospermia.

Gen. Char. Calyx profunde 5-partitus. *Corolla* personata, tubo basi calcarato, labio superiore erecto, palato prominulo, nunc amplo faucem claudente, nunc depresso fauce pervia. *Antherarum* loculi oblongi. *Capsula* ovoidea v. globosa, loculis sæpius subæqualibus, poro uni- v. plurivalvato dehiscentibus, loculo inferiore minore nunc indehiscente. *Semina* nunc ovoidea aptera angulata v. rugosa, nunc discoidea alata.—Herbæ, *rarius* suffrutices, *hemisphærii borealis temperatæ incolæ.* Folia *inferiora sæpius opposita v. verticillata, superiora alterna.* Flores *axillares, solitarii* v. *racemosi.—Benth.*

Linaria (*Chænorrhinum*) *origanifolia;* pubescens v. glabriuscula, foliis ovatis obovatis oblongisve breviter petiolatis, pedicellis longiusculis alternis, sepalis linearibus v. lineari-spathulatis villosis. *Benth. in DC. Prodr. v.* 1. *p.* 287.

Var. β. *crassifolia;* foliis ovatis crassiusculis, corolla majore 7–9 lin. longa.

Linaria crassifolia. *DC. Fl. Franc. v.* 5. *p.* 410.

Anarrhinium crassifolium. *Willd. Sp. Pl. v.* 3. *p.* 261.

Antarrhinium crassifolium. *Cav. Ic. v.* 2. *p.* 11. *t.* 114.

A lovely hardy rock-plant, native of Southern France, Spain, and Portugal, inhabiting walls and crevices of rocks, and ascending to 5000 feet in the Pyrenees and mountains of Asturias. The specimens here figured flowered in the Royal Gardens in May of the present year, and were received from the Hull Botanic Gardens. The plant is conspicuous for the bright green of the foliage, and profusion of bright blue-purple flowers, which have appeared in succession almost throughout the summer, thus rendering it one of the most valuable herbaceous plants for rock decoration.

Descr. A diffuse hardy perennial, more or less covered with glandular hairs or nearly glabrous. *Stems* none. *Branches* wiry, prostrate and ascending, four to six inches high, much divided, leafy upward. *Leaves* variable in form and consistence, usually opposite throughout the plant; in var. *crassi-*

folia half an inch long, rather thick and somewhat succulent, very shortly petioled, ovate, obtuse, bright deep green. *Flowers* axillary towards the ends of the branches, which often run out into leafy or bracteate racemes, on long or short pedicels. *Sepals* linear-spathulate, villous and glandular, obtuse, much shorter than the corolla, very unequal, slightly spreading. *Corolla* three-quarters to nearly one inch long, pale but bright blue-purple, with a yellow palate and red-purple throat; lobes all retuse and emarginate, spur short, obtuse. *Ovary* obovoid, villous; style straight, with a very oblique clavate apex and small oblong lateral stigmatic surface.—*J. D. H.*

Fig. 1. Apex. 2. Ovary:—*both magnified.*

W. Fitch del et lith

Vincent Brooks Day & Son, Imp

Tab. 5734.

BLANDFORDIA Cunninghamii.

Allan Cunningham's Blandfordia.

Nat. Ord. Liliaceæ.—Hexandria Monogynia.

Gen. Char. Perianthium tubuloso-campanulatum, marcescens, ore 6-fido. *Stamina* 6, basi declinata, basin versus tubi inserta, filamentis filiformibus inæquilongis, apice cucullo connectivi insertis. *Ovarium* stipitatum, lineare, 3-loculare, in stylum brevem attenuatum, stigmate 3-lobo; ovula plurima, 2-seriata, horizontalia. *Capsula* prismatica, basi perianthio vaginata, 3-partibilis, polysperma, loculis angulo interno dehiscentibus acuminatis membranaceis. *Semina* linearia, testa villosa laxa membranacea fusca.—Herbæ *Australasicæ, perennes, radicibus crasse fibrosis.* Folia *radicalia, lineari-elongata; scapus teres.* Flores *racemosi v. racemo contracto subumbellati, penduli, rubri.* Capsula *erecta.*

Blandfordia *Cunninghamii;* foliis margine integerrimis, bracteis linearibus subacutis, floribus umbellatis densis 2-pollicaribus, perianthio flammeo intus lobisque aureis.

B. Cunninghamii. *Lindl. in Bot. Reg. v.* 31, *sub t.* 18.

Of the four or five known species of this magnificent Australian genus, the present is by far the most handsome and profuse flowerer. It was raised by Messrs. E. G. Henderson and Sons, of the Wellington Nurseries, St. John's Wood, who flowered it in April of the present year. It is a native of the Blue Mountains, in New South Wales, where it was discovered by the late Allan Cunningham, who describes it as "growing on a stiff clayey soil, below a permanent elevated peaty bog." It is nearly allied to the *B. grandiflora* of Brown, a native of Tasmania, but differs in the serrulate margins of the leaves.

From *B. flammea*, Hook. (Tab. nostr. 4819), it differs in the narrower perianth, its colour, and especially in the broader leaves, which are quite smooth on the margin.

Descr. *Root* of tuberous fibres. *Leaves* all radical, distichous, one to two feet long, erect and spreading, bright green above, pale below, narrow linear-ensiform, somewhat keeled at the back, nearly half an inch broad at the base. *Scape* two to three feet high, stout, terete, with numerous appressed

linear-oblong, acute bracts, one to two inches long. *Floral bracts* subulate, the lower broader, as long as the pedicels. *Flowers* sixteen to twenty in a terminal umbellate panicle, shortly pedicelled, pendulous. *Perianth* conical, two inches long, externally bright orange-scarlet with golden-yellow segments, internally all yellow; segments ovate, subacute, slightly spreading. *Stamens* inserted towards the base of the perianth, declinate, filaments curved; *anthers* linear-oblong, yellow, exserted. *Ovary* stipitate, very slender.—*J. D. H.*

Fig. 1. Base of perianth and stamens. 2. Ovary :—*both magnified.*

W. Fitch, del et lith

Vincent Brooks Imp

Tab. 5735.

ARECA Baueri.

Norfolk Island Betel Palm.

Nat. Ord. Palmeæ.—Monœcia Hexandria.

Gen. Char. Flores monoici, sessiles in eodem spadice, spatha duplici cincti; masculi superiores, plerumque fœmineis 2 stipati.—Masc. *Perianthium* 6-partitum, 2-seriale. *Stamina* 3–12.—Fœm. *Perianthii* foliola 6, imbricata, 3 exteriora minora, 3 interiora convoluta. *Ovarium* 1–3-loculare; stylus brevissimus, stigmate minuto 3-dentato. *Drupa* monosperma, fibrosa; albumen ruminatum v. læve; embryo basilaris.—Palmæ *erectæ, Asiæ, Australiæ subtropicæ, et Ins. Pacif. incolæ.* Caudex *elatus, gracilis v. robustus, annulatus.* Folia *pinnata, basi vaginantia, decidua.* Flores *in spadices simplices v. ramosas axillares dispositi.*

Areca *Baueri;* caudice robusto, foliis pinnatis, pinnis multijugis anguste lineari-lanceolatis acuminatis, costis petiolisque sparse lepidotis, spadice ramoso, ramis crassis albis, floribus albis v. pallide carneis, perianthii foliolis exterioribus in masc. subulatis in fœm. ovatis, interioribus masc. et fœm. ovatis acutis, bacca globoso-ovoidea rubra nitida, albumine æquabili.

Areca Baueri. *Hook. f. in Fl. Nov. Zel. v.* 1. *p.* 262, *in obs.*

A. sapida. *Endl. in Prod. Fl. Ins. Norfolk. p.* 26 (*non Forst.*).

This beautiful Palm is closely allied to the *A. sapida*, Forst., of New Zealand (Tab. nostr. 5139), and, indeed, it long passed for that plant, from which it is chiefly distinguished by its greater size, larger and broader pinnæ, the broader outer segments of the female perianth, and especially the white flowers and more globose and scarlet berries. It was introduced into Kew many years ago from Norfolk Island by the late Allan Cunningham, and now has attained a trunk eight feet high. It flowers annually in the Palm-house during autumn and winter, and ripens its fruit about midsummer. It also grows in the temperate-house, but not nearly so freely or well.

Descr. *Caudex* twenty feet high in its native state, and four to ten inches in diameter, terete, green, smooth, closely ringed with scars. *Leaves* six to nine feet long, pinnate, rachis

beneath, costa and nerves at back of the pinnules sparingly clothed with furfuraceous scales. *Pinnules* close-set, two feet long by an inch and a half broad, stiff, acuminate, usually three-nerved, ribbed and plaited; rachis triangular towards the base, convex above. *Spathes* eight to ten inches long, white, narrow-oblong, acuminate, flat at the back, three to four inches across. *Spadix* axillary, but, owing to the falling away of the leaf as soon as the spathe is ready to open and the flowers are fully formed, only flowering when infra-axillary, horizontally patent from the caudex, one to two feet long, sparingly branched; branches stout, divaricating, white in flower, green in fruit. *Flowers* crowded, white, nearly half an inch when expanded. *Outer perianth-segment* broadly ovate in the female, narrower in the male, inner oblong, acute. *Berries* nearly globose, half to three-quarters of an inch in diameter, scarlet, shining. *Albumen* not ruminate.—*J. D. H.*

Fig. 1. Reduced view of whole plant. 2. Portion of spadix, of natural size. 3, Male, and 4, female flowers;—*both magnified.*



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TAB. 5736.

ODONTOGLOSSUM CONSTRICTUM.

Narrow-petalled Odontoglot.

Nat. Ord. ORCHIDEÆ.—GYNANDRIA MONANDRIA.

Gen. Char. (*Vide supra*, TAB. 5691.)

ODONTOGLOSSUM *constrictum;* pseudobulbis ovoideis compressis, foliis elongato-lineari-lanceolatis, scapo elongato gracillimo, panicula ampla laxe ramosa multiflora, bracteis minutis ovatis acuminatis, sepalis petalisque subsimilibus oblongo-lanceolatis acuminatis aureis fusco-maculatis, labello panduriformi apice truncato v. rotundato apiculato v. caudato, albo maculis duabus roseis notato marginibus erosis, crista lamellis parvis dentatis, columna elongata apice 2-cirrhosa.

ODONTOGLOSSUM constrictum. *Lindl. in Bot. Reg.* 1844; *Misc. p.* 17; *Reichb. f. in Walp. Ann. v.* 6. *p.* 825.

This beautiful species was sent to us from Messrs. Backhouse, of York, under the name of *O. angustatum*, from which it differs in the bracts, the sessile sepals, the form of the lip and its crest, and in the slender cirrhi at the apex of the column. It is, however, identical with Lindley's *O. constrictum*, a native of Caraccas, of which I have examined original specimens collected by Linden. The plant was originally introduced in about 1843, when, as Lindley states, it flowered both with Mr. Rucker and with Mr. Clowes, at Broughton Hall. The flowers of the native specimens are considerably larger than those of the cultivated, measuring two inches and a half to three inches across the expanded petals; but in form, colour, and markings of these, and in the structure of the column, lip, and crest, there is no difference whatever between the native and cultivated specimens.

DESCR. *Pseudobulbs* two inches to three inches and a half long, ovoid, compressed, but not sharp-edged, obscurely grooved. *Leaves* a foot long by an inch and a half broad, bright green, narrow linear-lanceolate, rather obtuse, shortly

keeled. *Scape* very slender, a foot to a foot and a half long, with few remote, short, sheathing, membranaceous bracts. *Panicle* as long as the scape, loosely branched, branches spreading; bracts at the forks and pedicels very small, short, ovate, acute. *Pedicels* slender. *Flowers* an inch and three-quarters in diameter (in the specimen figured). *Sepals* and *petals* nearly equal and similar, sessile, oblong-lanceolate, much acuminate, bright yellow, blotched with orange-brown. *Lip* fiddle-shaped, with a rounded or truncate tip, terminated by a decided apiculus or sometimes a short acuminate tail, white, with a rose-coloured blotch on each side at the middle; crest short, projecting, toothed; margins erose. *Column* without wings, but with two projecting cirrhi at the apex.—*J. D. H.*

Fig. 1. Front, and 2, lateral view of column and lip:—*both magnified.*

W. Fitch, del. et lith

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Tab. 5737.

PASSIFLORA cincinnata.

Curly-fringed Passion-flower.

Nat. Ord. Passifloreæ.—Pentandria Trigynia.

Gen. Char. Calycis tubus brevis, urceolaris; lobi 4–5, lineares v. oblongi, intus sæpius colorati et dorso infra apicem cornuti. *Petala* 4, 5, v. 0, calycis lobis subæqualia. *Corolla* simplex v. duplex, exteriore filamentis 1–2-seriatis v. membrana tubulosa, interior multiseriata v. tubulosa v. 0. *Gynophorum* elongatum. *Stamina* 4–5, filamentis basi gynophori adnatis; antheræ versatiles. *Ovarium* stipitatum; styli 3, subterminales, stigmatibus capitatis; ovula numerosa, placentis 3 affixa. *Bacca* polysperma. *Semina* arillata.—Frutices, *rarius* herbæ, *scandentes, rarius erectæ, cirrhiferæ.* Folia *alterna.* Stipulæ 2 *v.* 0. Flores *inter majores, pedunculis articulatis, sæpius* 3-*bracteatæ.*

Passiflora (Granadilla) *cincinnata;* glabra, foliis digitatis v. palmatisectis 5-lobis, lobis oblongis mucronulatis integris v. pinnatifidis serrulatis, petiolo 2-glanduloso, stipulis subulatis, pedunculis axillaribus solitariis 1-floris petiolis longioribus, bracteis ovatis obtusis basi glandulosis, calycis tubo brevi, lobis 5 oblongis obtusis intus petalisque consimilibus purpureis, coronæ sub-3-seriatæ filis extimis petalis longioribus contortis violaceis, ceteris brevibus capitellatis.

Passiflora cincinnata. *Masters in Gard. Chron. Sept.* 1868, *cum ic. xylog.*

Of the one hundred species of Passion-flower known in herbaria most have still to be introduced into our gardens, and this though many of them are natives of very accessible countries and of temperate regions long traversed by Europeans. One of the latter is the present beautiful species, which was discovered in the provinces of Pernambuco and Ceara in Brazil, by the late Mr. G. Gardner, so long ago as 1837. It was introduced into cultivation by Mr. Philip Frost, gardener to Mr. Fortescue, the proprietor of the beautiful Dropmore Gardens. It flowered profusely in a cool greenhouse in August of this year, and was identified and carefully described by Dr. Masters in the 'Gardeners' Chronicle.'

Descr. A branched, glabrous, slender climber; branches terete. *Leaves* about three inches broad, deeply palmate or

digitately lobed; lobes five, oblong, serrulate, glabrous, bright green above, pale below; *petiole* about one inch long, biglandular between the middle and base. *Peduncles* axillary, single-flowered, larger than the petiole. *Bracts* three, large, oblong, boat-shaped, with two large glands at the base. *Flower* three inches in diameter. *Sepals* five, oblong, obtuse, green at the back, with a short horn towards the apex, violet internally, the colour laid on in minute dots. *Petals* similar to the sepals, and also violet. *Corona* of many rows, outer of twisted cilia, longer than the petals, violet banded with white; inner in many series, short, simple, slightly thickened at the apex. *Gynophore* seated in a tubular sheath.—*J. D. H.*

Fig. 1. Portion of flower:—*magnified.*



Tab. 5738.

ACRIDOCARPUS Natalitius.

Port Natal Acridocarpus.

Nat. Ord. Malpighiaceæ.—Decandria Digynia.

Gen. Char. Calyx 5-partitus, glandulis minutis v. 0. *Petala* inæqualia, unguiculata, subintegra, glabra. *Stamina* 10, omnia perfecta, filamentis brevibus distinctis; antheræ magnæ, oblongæ v. sagittatæ, poro v. rima brevi dehiscentes. *Ovarium* 3-loculare, hirsutum; styli 2, longissime divergentes, flexuosi. *Samaræ* 1 v. 2, receptaculo oblongo applicatæ, in alam obliquam margine antico superiore incrassato productæ. *Semina* sæpe angulata; embryo curvus.—Arbores *v.* frutices *Africanæ, interdum scandentes.* Folia *sæpissime alterna, exstipulata.* Racemi *terminales, rarius laterales.* Flores *lutei.*

Acridocarpus *Natalitius;* scandens, foliis alternis oblongis v. linear- v. obovato-oblongis obtusis glaberrimis coriaceis marginibus recurvis, racemis terminalibus simplicibus elongatis multifloris ferrugineis, bracteolis subulatis eglandulosis, samaræ glabriusculæ ala extrorsum adscendente oblique oblonga, calycis glandulis parvis, antheræ oblongæ poris dehiscentes.

Acridocarpus Natalitius. *A. Juss. Monog. Malpigh. p.* 232. *Walp. Rep. v.* 5. *p.* 287. *Harv. et Sond. Flor. Cap. v.* 1. *p.* 231.

A very handsome subtropical climber, introduced from South Africa by W. Wilson Saunders, Esq., F.R.S., in whose warm greenhouse it flowered in July of the present year. It is a native of margins of woods in the Natal colony, and will prove a very valuable addition to the rather scanty list of free-flowering woody plants suited to a conservatory, especially if, like some of its nearest allies, it is proof against insect pests. The other species of this genus are all tropical African, this being, indeed, one of the most temperate plants of the large family to which it belongs.

Descr. *Stem* woody, climbing; branches terete; branchlets covered with a rufous pubescence. *Leaves* alternate, three to eight inches long, shortly petioled, oblong or obovate or lanceolate-oblong, obtuse, coriaceous, veiny, margins recurved, above deep green, below pale, with two glands at the base close to the midrib. *Stipules* none. *Raceme* simple, or rarely

with a branch at the base, terminal, three to seven inches long, many-flowered; rachis stout, clothed with ferruginous hairs. *Pedicels* slender, half an inch long, with three minute subulate bracts at the base. *Flowers* one inch in diameter, pale yellow. *Sepals* oblong, obtuse, green, with two glands externally, pubescent with ferruginous hairs at the middle of the back. *Petals* nearly orbicular, clawed, edges crenate-toothed. *Stamens* small; anthers oblong, opening by terminal pores. *Styles* two, very slender, recurved; ovary hairy. *Ripe carpels* two, with broad, arched, expanded, coriaceous, veined wings.—*J. D. H.*

Fig. 1. Flower with petals removed. 2. Ditto, showing glands of calyx. 3. Stamens. 4. Pistil. 5. Transverse, and 6, vertical section of ovary. 7. Ripe fruit:—*all but Fig. 7 magnified.*



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Tab. 5739.

MASDEVALLIA Veitchiana.

Mr. Veitch's Masdevallia.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. (*Vide supra*, Tab. 5476.)

Masdevallia *Veitchiana;* foliis lineari-oblongis obtusiusculis, pedunculis gracilibus folio duplo longioribus supra mediam bracteatis unifloris, bracteis elongatis vaginantibus, flore majusculo rubro-aurantiaco, sepalis in tubum campanulatum connatis, supremo late ovato longe caudato-acuminato, lateralibus majoribus late ovatis obliquis abrupte angustatis incurvis, petalis inclusis lineari-oblongis obtusis albis, labello lineari-oblongo apice recurvo subacuto ecristato, columnæ margine integro.

Masdevallia Veitchiana. *Reichb. fil. mss. (ex Hort. Veitch.).*

By far the most striking species of *Masdevallia* hitherto figured, discovered by the late Mr. Pearce in the Cordillera of Peru whilst collecting for the Messrs. Veitch, with whom it flowered last month in their coolest orchid-house. In point of colour it is not only one of the most beautiful, but most singular of Orchids; for the vivid hue of the flower is due to the whole inner surface of the sepals being studded with minute papillæ of a brilliant cadmium-yellow colour; these are largest and most crowded when the colour is deepest.

Descr. *Stems* densely tufted. *Leaves* four to six inches long, by one broad, narrow linear-oblong, rather contracted at the base, hardly acute, coriaceous, bright green. *Scape* a foot high, erect, slender, terete, with two or more appressed, narrow, elongate, sheathing bracts, the upper placed far below the flower. *Germen* terete, deeply grooved. *Perianth* three inches across. *Sepals* connate into a bell-shaped tube, of a brilliant orange-red colour, internal surface papillose and glistening, external pale and glossy; free portion of sepals broadly ovate, suddenly contracted to long points, the

upper narrower, but longer and erect, with a very tapering point, the lateral oblique, with incurved points. *Petals* small, white, hidden, linear-oblong, obtuse. *Column* not winged.—*J. D. H.*

Fig. 1. Column, ovary, and petals. 2. Lip. 3. Column. 4. Pollinia :—*all magnified.*



W. Fitch, del. et lith.

Vincent Brooks, Day & Son, Imp.

Tab. 5740.

FUCHSIA coccinea.

Scarlet Fuchsia.

Nat. Ord. Onagrarieæ.—Octandria Monogynia.

Gen. Char. Calycis tubus ovoideus v. subglobosus, supra ovarium in limbum 4-lobum deciduum productus. *Petala* 4, rarissime 0, convoluta v. patentia v. reflexa. *Stamina* 8, filamentis filiformibus; antheræ lineares v. oblongæ. *Ovarium* 4-loculare; stylus elongatus, stigmate integro v. 4-lobo; ovula perplurima, angulo interim multiseriatim affixa. *Bacca* 4-locularis, oligo-polysperma.—Frutices *v. arbusculæ Mexici, Americæ australis et Novæ Zelandiæ incolæ.* Folia *opposita alterna et verticillata.* Flores *axillares solitarii aggregati paniculati v. racemosi, sæpius speciosi.*

Fuchsia *coccinea;* ramulis gracilibus petiolisque sparse patentim pilosis, foliis oppositis et 3-natim verticillatis brevissime petiolatis anguste ovatis basi rotundatis cordatisve sinuato-dentatis, pedicellis 1–3 axillaribus gracillimis, floribus pendulis, petalis convolutis.

Fuchsia coccinea. *Ait. Hort. Kew. ed.* 1. *v.* 2. *p.* 8. *Duhamel, Arb. ed. nov. v.* 1. *t.* 13; *non Bot. Mag. t.* 97.

F. elegans. *Salisbury, Stirp. Rar. t.* 7.

Nahusia coccinea. *Schnevoogt's Icones, n.* 21.

It will surprise many of our horticulturists to learn that the plant now called *Fuchsia coccinea* in our gardens is not the first described species of that name, though it has borne it almost exclusively from within a year or two of the introduction of the real plant; and it may still more surprise them to know that the original *F. coccinea* is very rarely seen in cultivation. There is a story current amongst gardeners that the common Fuchsia was, when originally introduced, a greenhouse plant, but that it has become so far acclimatized as to withstand, without protection, the coldest winters of many parts of England, Scotland, and Ireland, and the milder winters of all Great Britain; be this as it may, it is not doubted that the *Fuchsia coccinea* was once treated as a stove or greenhouse plant, and now flourishes both in a greenhouse and out-of-doors. Now, whether the true *F. coccinea* has changed its habits no one can say, for next to nothing seems to be known of its history between the date of its introduc-

tion as a greenhouse plant in 1788, and its re-discovery in the greenhouse of the Oxford Botanic Garden in 1867; the fact being, that the much hardier *F. Magellanica* was imported from wintry Tierra del Fuego very shortly after the introduction of *F. coccinea*, and immediately usurped its name and spread it to every garden in the kingdom, whilst the true plant lingered in Botanic Gardens, lastly surviving (greatly to the credit of the Baxters, father and son) in that of Oxford alone. It may be more common abroad, and is almost naturalized in Madeira, according to Mandon.

The native country of the true *coccinea* is unknown; it is probably Brazilian, as it resembles the Brazilian more than the Western or Southern American species; Salisbury says it was introduced by Vandelli from Brazil, whereas Aiton attributes its introduction to a Captain Frith, from Chili.

The evidence of the plant here figured being the true and original plant of Aiton's 'Hortus Kewensis,' ed. 1, rests on the fact that named specimens of the same are preserved in the Banksian Herbarium of the British Museum, and in Sir J. Smith's Herbarium at the Linnean Society, all procured at Kew in the year of the introduction of the plant, and at the date of its being described by Aiton.

The Royal Gardens are indebted to Mr. Baxter for one of the two plants preserved at Oxford, and from this the figure here given was made.

As a species, *F. coccinea* is much more graceful than any of the varieties of *F. Magellanica*, flowers even more freely, and is readily distinguished by the almost sessile leaves with broad bases, and the hairy twigs and petioles; further, its foliage turns of a bright crimson when about to fall.—*J. D. H.*

Fig. 1. Flower, with one calyx-lobe removed:—*magnified*.

W. Fitch, del. et lith

Vincent Brooks, Day & Son, Imp

Tab. 5741.

APHELANDRA NITENS.

Glossy-leaved Aphelandra.

Nat. Ord. Acanthaceæ.—Didynamia Gymnospermia.

Gen. Char. (*Vide supra*, Tab. 5463.)

Aphelandra *nitens;* glaberrima, caule tereti robusto, foliis breviter et crasse petiolatis crasse coriaceis ovatis subacutis, basi in petiolum decurrentibus marginibus recurvis supra læte-viridibus nitidis subtus atro-purpureis, spica simplici erecta elongata stricta 4-gona, bracteis imbricatis pollicaribus pallide viridibus ovato-lanceolatis acuminatis serratis concavis carinatis nervosis, floribus miniatis, bracteis subulatis sepalis subulato-lanceolatis aristato-acuminatis paulo brevioribus, corollæ tubo gracili calycem superante, limbi labio superiore parvo erecto convoluto inferiore amplo 3-partito lobis obovato-oblongis patentibus integerrimis lateralibus minoribus, staminibus labio superiore involutis.

A near ally of the *A. aurantiaca*, Lindl. (Tab. nostr. 4224), but a much more beautiful plant, and indeed one of the handsomest of the splendid Order to which it belongs. Nothing can exceed the brilliant glossy polish of the upper surface of the leaves, the dark vinous purple of their under surface, and the brightness of the vermilion-scarlet of the corolla. It is a native of Guayaquil, in New Granada, from whence it was sent to England by Mr. Pearce, when collecting for Messrs. Veitch, and flowered in the Royal Exotic Nurseries, Chelsea, in May of the present year.

Descr. *Stem* in the specimen figured three feet high, stout, erect, sparingly branched, cylindrical, green, quite glabrous. *Leaves* four to six inches long, narrowed into petioles of a quarter to half an inch, exactly ovate, subacute, quite entire, thick and coriaceous, brilliant polished green on the upper surface with impressed veins and recurved margins, beneath deep vinous-purple. *Spike* terminal, erect, six inches long, one inch in diameter, simple, shortly peduncled, tetra-

gonous, of numerous imbricating appressed bracts. *Bracts* one inch and a half long, ovate-lanceolate, concave, keeled, serrate, pale green, veined. *Flowers* an inch to an inch and a half in diameter, bright vermilion-scarlet. *Bracts* subulate. *Sepals* elongate-lanceolate, aristate, puberulous, longer than the bracts. *Corolla-tube* longer than the calyx, upper limb of one small erect lobe, convolute and concealing the stamens; lower lip broad, of three obovate-oblong, substipitate, spreading lobes, the central the largest. *Style* very slender.—*J.D.H.*

Fig. 1. Bracts, calyx, and style:—*magnified.*



3



2.



1.



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Tab. 5742.

GENTIANA Pyrenaica.

Pyrenean Gentian.

Nat. Ord. Gentianeæ.—Pentandria Monogynia.

Gen. Char. Calyx 4–10-fidus v. partitus, rarissime spathaceus et fissus. *Corolla* infundibuliformis, campanulata v. rotata, fauce nuda v. barbato-fimbriata, limbo 4–5-fido rarius 10-fido, lobis alternis nanis. *Stamina* 4–5, corollæ tubo inserta, filamentis basi æqualibus; *antheræ* erectæ, immutatæ, rimis dehiscentes. *Ovarium* 1-loculare; stylus brevis, stigmate 2-partito obtuso; ovula numerosa, placentis 2 parietalibus affixa. *Capsula* 2-valvis, polysperma. *Semina* minima, compressa.—Herbæ *perennes, regionum temperatarum imprimis hemisphærii borealis incolæ.*

Gentiana (Chondrophyllum) *Pyrenaica;* caulibus cæspitosis brevibus florem subæquantibus, foliis anguste lanceolatis mucronatis margine scaberulis calycis 5-fidi appressi lobis ovato-lanceolatis acutis corollæ tubum dimidium æquantibus, corollæ hypocraterimorphæ cyaneæ tubo sensim ampliato lobos 10 ovales duplo superante, capsula elliptica stipitata.

Gentiana Pyrenaica. *Linn. Mant. p.* 55. *Gouan, Obs. p.* 7. *t.* 2. *f.* 2. *Kitaibel, Plant. Hung. t.* 207. *Griseb. in DC. Prodr. vol.* 9. *p.* 105. *Reich. Fl. Germ. t.* 1050. *f.* 2.

Thanks, especially to the exertions of the Messrs. Backhouse, the horticultural-loving public begin to understand the ease and effectiveness with which many alpine plants can be cultivated, and the beautiful appearance they make. Amongst these the Gentians are proverbial for their beauty, and, with the single exception of *G. acaulis*, have been hitherto equally so for their difficulty of culture, being, in fact, one of the opprobria of horticulturists. Of the success that attends care and judgment we may judge by the fact that Messrs. Backhouse and Sons cultivate many species in the open air, and are constantly adding to the number. Of these, *G. Pyrenaica* is one of the rarest and most beautiful; it is a native of the Pyrenees and Alps of Hungary, Caucasus, and Armenia, at elevations of 5–8000 feet above the sea level. Like its congeners, it is an early flowerer, and the specimens from which the accompanying

figure was made were sent by Messrs. Backhouse in full flower from the Nurseries near York in March of this year. For the method of cultivation of this and other alpines, I would refer the reader to their excellent annotated catalogue.

Descr. A dwarf, tufted, hardy, perennial-rooted *herb*. *Stems* short, an inch to an inch and a half long, clothed with narrow-lanceolate, acute, coriaceous, rough-edged leaves. *Flowers* solitary, sessile on the tips of the stems, and of about the same length. *Calyx* tubular, with five short acute lobes. *Corolla* salver-shaped, three-quarters of an inch in diameter, with a rather funnel-shaped tube, ten-lobed, green externally; lobes within deep prussian blue, edges crenulate. *Ovary* stipitate.—*J. D. H.*

Fig. 1. Bud. 2. Corolla laid open. 3. Ovary :—*all magnified.*



W. Fitch, del. et lith.

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Tab. 5743.

ONCIDIUM macranthum.

Large-flowered Oncidium.

Nat. Ord. Orchideæ.—Gynandria Monandria.

Gen. Char. (*Vide supra*, Tab. 4148.)

Oncidium (Microchila) *macranthum;* pseudobulbis ovoideo-ampulliformibus leviter sulcatis, foliis lanceolato-loriformibus acuminatis strictis, floribus maximis, sepalis unguiculatis orbicularibus basi cordatis undulatis obtusis, petalis æqualibus conformibus sed unguibus brevioribus, labelli parvi crassi hastati lobis lateralibus deltoideo-ovatis acuminatis cornutis intermedio elongato-triangulari apice angustato linguiformi acuto, cristæ lobis 3 omnibus 2-cornutis, cornubus recurvis, columnæ alis rotundatis.

Oncidium macranthum. *Lindl. Gen. et Sp. Orchid. p.* 205; *Folia Orchidacea, Oncidium, p.* 4; *et in Paxt. Fl. Gard. v.* 2. *p.* 126.

Truly described by Lindley as a "magnificent species;" one plant of it, indeed, is enough to ornament a house of considerable dimensions. It appears to be not uncommon in Peru and New Granada, there being many specimens of it in our Herbaria. It was first described from specimens collected by the celebrated Peruvian travellers, Ruiz and Pavon, and preserved in Lambert's Herbarium, and which were labelled as from Guayaquil. This is, however, no doubt an error, as it is a mountain plant, and, like most of its congeners, prefers a cool rather than an intermediate house.

Professor Jameson, of Quito, gathered it on the Andes at 7000 feet, Hartweg at the foot of Tanguragua at 14,000 feet, and Matthews in Peru, the exact locality not known. The superb specimen here figured flowered at the Earl of Londesborough's in the spring of this year, and it shortly afterwards flowered at Mr. Veitch's establishment. The blossoms remain in perfection for several weeks, which renders it a peculiarly valuable plant for ornamental purposes.

Descr. *Pseudobulbs* ovoid or flagon-shaped, three inches

long, turgid, grooved. *Leaves* a foot long by an inch to an inch and a half broad, narrow lanceolate, acuminate. *Panicle* climbing, two to three feet long, lax-branched, many-flowered. *Bracts* three-quarters of an inch long, cymbiform. *Flowers* three to four inches in diameter, on pedicels which, together with the ovary, are three to three and a half inches long. *Sepals* clawed, orbicular-oblong, obtuse, cordate at the base, waved, upper dirty yellow-brown, lateral dull orange-yellow, claws green. *Petals* similar to the sepals, but with shorter claws, pale golden-yellow, streaked with blood-red at the very base. *Lip* hastate, very thick and coriaceous, much smaller than the sepals, lateral lobes forming short, rather recurved horns, middle ones with a hemispherical base and tongue-shaped acuminate limb. These lobes are dark purple-brown, except the tip and disk of the middle lobe, which is yellow. Crests three, white, each two-lobed, the lobes recurved. *Wings* of column rounded, purple-brown.—*J. D. H.*



1. 2. 3. 4.

W Fitch, del. et lith.

Vincent Brooks, Day & Son, Imp.

Tab. 5744.

PARROTIA Persica.

Persian Parrotia.

Nat. Ord. Hamamelideæ.—Pentandria Digynia.

Gen. Char. *Calyx* campanulatus, basi ovario adhærens, lobis 5–7 coriaceis persistentibus. *Petala* 0. *Stamina* 5–7, perigyna, calycis lobis opposita, filamentis filiformibus; antheræ basifixæ, connectivo mutico v. mucronato. *Ovarium* semi-inferum, 2-loculare; styli 2, stigmatibus simplicibus; ovula in loculis solitaria. *Capsula* lignosa, semisupera, 2-valvis, valvis 2-partibilibus, endocarpio corneo soluto 2-valvi. *Semina* oblonga, testa atra nitida. —Arbores *et* frutices, Persiæ *et* Kashmiræ *incolæ*. Folia *oblonga v. orbicularia, decidua, crenata*. Stipulæ *amplæ, deciduæ*. Flores *præcoces, conferti, subcapitati, bracteis amplis membranaceis involucrati, tomentosi.*

Parrotia *Persica;* foliis breviter petiolatis obovato-oblongis basi rotundatis obtusis ultra mediam grosse crenato-serratis, antheris linearibus mucronatis.

Parrotia Persica. *C. A. Meyer, Index Cauc. p.* 47. *Ledebour, Fl. Ross. v.* 2. *p.* 377.

Hamamelis Persica. *DC. Prodr. v.* 4. *p.* 268.

The tree now figured for the first time is one of the rarest in cultivation. It is a native of the Trans-Caucasian provinces of Russia, and of Northern Persia. Two small trees of it exist in the Royal Gardens, which were received as pot-plants from St. Petersburg some twenty-five to thirty years ago; one of these is trained against a west wall, the other, which is nine feet high, stands in the open ground, and the latter flowered abundantly in March of the present year. The great beauty of the plant consists in the magnificent colouring of the foliage in late autumn, when the leaves usually turn of a brilliant orange and golden-yellow and scarlet, and hang upon the plant on the wall till late in winter; on the plant in the open ground they are shed much sooner. During the present year, however, this colouring has been very dull, a peculiarity shared by the Scarlet Oaks, American Maples, Liquidambar and Salisburias at Kew, all of which have

turned of a dull yellow or purple or brown, instead of their usual brilliant hues. The genus was named in honour of the Russian Professor Parrot, who made the first ascent of Mount Ararat in 1829. The wood of *Parrotia* is stated to be excessively hard and durable, whence the tree is called in Persian Temir-Agatsch, or "iron tree." There is but one other species of the genus, *P. Jacquemontiana*, Decne., a native of the Kashmir Himalaya.

Descr. A small *tree*, ten to fifteen feet high, with spreading branches and very hard wood. *Leaves* alternate, on short downy petioles, three to four inches long, one and a half to two and a half inches broad, broadly ovate- or obovate-oblong, rounded at the base, coarsely and crenately toothed beyond the middle, more or less pubescent below when young with silky hairs, beautifully plaited (like beech-leaves) in vernation, brilliantly coloured in autumn. *Flowers* appearing before the leaves in lateral and terminal involucrate heads on the young branchlets; *bracts* oblong, deciduous, outer dark and scaly, inner membranous, greenish. *Flowers* small, conspicuous for their spreading stamens with scarlet anthers. *Calyx* of five to seven oblong lobes, with silky apices. *Corolla* none. *Filaments* half an inch long, five times as long as the calyx-lobes; anthers linear, apiculate. *Ovary* of two carpels, with long recurved styles, and several ovules in each cell.—*J. D. H.*

Fig. 1. Male flower. 2. Anther. 3. Ovary. 4. Ripe fruit (from dried specimen) :—*all magnified.*



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Tab. 5745.

CAMPANULA ISOPHYLLA.

Ligurian Campanula.

Nat. Ord. Campanulaceæ.—Pentandria Monogynia.

Gen. Char. *Calyx* 5-fidus. *Corolla* 5-loba v. 5-fida, sæpius campanulata. *Stamina* 5, filamentis basi dilatatis antherisque liberis, membranaceis. *Ovarium* 3–5-loculare, loculis lobis calycinis oppositis, stylus pilis mox deciduis tectus, stigmatibus 3–5 ; ovula ∞. *Capsula* ovata v. turbinata, 3–5-locularis, loculis prope basim v. apicem valvula parietali sursum dehiscentibus. *Semina* plurima.—Herbæ *annuæ v. perennes, per regiones temperatas hemisphærii borealis diffusæ.* Folia *radicalia sæpe majora, caulina alterna.* Flores *racemosi spicati v. capitati, cærulei purpurei v. candidi.*

Campanula *isophylla ;* cano-pubescens v. glabrata, rhizomate ramoso, caulibus suberectis simpliciusculis brevibus ramosis densis et dense foliosis multifloris, foliis inter se subæqualibus petiolatis late ovato-cordatis grosse crenato-dentatis, floribus corymbosis, lobis calycinis lineari-oblongis patentibus hic illic dentatis, corolla late campanulata profunde 5-loba dimidio brevioribus, stylo exserto, capsula ovoidea.

Campanula isophylla. *Moretti, Appendix ad Schouw. prospett. Fl. Ital. p.* 22. *DC. Prod. v.* 7. *pt.* 2. *p.* 476. *Reich. Ic. Pl. Cent. v.* 3. *t.* 202. *fig.* 344.

Campanula floribunda. *Viviani, Fl. Lyb. Append. p.* 67.

A very beautiful and rare hardy herbaceous plant, native of the ancient Liguria, as the district between the Gulf of Tuscany and the Apennines was called, frequenting rocky sea cliffs; there are also specimens in the Hookerian Herbarium collected on the east of the Apennines, near the town of Feriale, in Modena. The specimen here figured was received from J. Traherne Moggridge, Esq., who collected it on the shores of the Riviera, and which bloomed in the Royal Gardens in August of the present year, presenting a mass of most lovely blue flowers that lasted a considerable time.

Descr. *Rhizome* a short woody branched stock, sending out very many short, slender, leafy, pubescent branches, four to eight inches high, bearing flowers abundantly. *Leaves* all

very uniform in size and shape, none radical in the flowering state of the plant, all on slender petioles, an inch to an inch and a half long, two-thirds to three-quarters of an inch broad, broadly ovate-cordate, coarsely crenate-dentate, or almost lobulate, usually covered thickly with a hoary pubescence, sometimes nearly glabrous. *Flowers* pedicellate, an inch to an inch and a quarter in diameter, pale, but very bright blue, with orange-yellow pollen in the style. *Calyx-lobes* narrow, linear-oblong, entire or with one or two teeth, spreading, about half as long as the corolla. *Corolla* broadly campanulate, lobed almost to the middle, lobes spreading. *Style* slender, exserted; stigmas three.—*J. D. H.*

Fig. 1. Flower with corolla removed;—*magnified.*



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Tab. 5746.

LYCHNIS (Petrocoptis) Lagascæ.

Lagasca's Lychnis.

Nat. Ord. Caryophylleæ.—Pentandria Tri-pentagynia.

Gen. Char. Calyx inflato-ovoideo- v. clavato-tubulosus, 5-dentatus, 10-nervius. *Petala* 5, ungue angusto, lamina integra 2-fida v. laciniata, basi sæpius 2-squamata. *Stamina* 10. *Torus* in gynophorum stipitiforme plus minus elongatus. *Ovarium* 1-loculare v. ima basi septatum, ∞-ovulatum; *styli* 5, rarius 4 v. 3. *Capsula* apice in dentes v. valvas breves tot quot styli v. duplo plures dehiscens. *Semina* umbilico marginali affixa, tuberculata v. lævia; embryo periphericus.—Herbæ, *sæpius erectæ*, *habitu* Silenum. Flores *sæpe speciosi.*

Lychnis (Petrocoptis) *Lagascæ;* glaberrima, glauca, caulibus cæspitosis dichotome ramosis inferne 4-quetris ramosissimis, foliis sessilibus basi subconnatis integerrimis obsolete nervosis, infimis linearibus obtusis mediis ovato-lanceolatis subacutis, summis lanceolatis, floribus in dichotomiis et in summis ramulorum longe pedunculatis, pedunculis lateralibus medio 2-bracteolatis, calyce obsolete striato, petalis retusis, stylis 3–5, seminibus strophiolatis.

Petrocoptis Lagascæ. *Willkomm, Ic. et Descr. Plant. Hisp. v.* 1. *p.* 32. *t.* 21; *et Sert. Fl. Hisp. p.* 24. *Walp. Ann. v.* 4. *p.* 292.

Silenopsis Lagascæ. *Willkomm in Bot. Zeit.* 1847, *p.* 237. *Walp. Rep. v.* 1. *p.* 92.

This is at once one of the most beautiful and most rare of the rock-plants now under cultivation in England, its native locality being confined to a very narrow belt of the sub-alpine region of the North-Western Pyrenees, where it has been seen by but two or three botanists, whilst for beauty it is difficult to conceive anything more sparkling, and at the same time delicate, than the rose-coloured, white-eyed blossoms. The tendency of the plant is to form a hemispherical mass in the pot, when it resembles in habit and colour, but on a large scale, one of those lovely pink *Androsaces* of the glacial regions of the Eastern Alps, which have hitherto all but defied our most skilful cultivators. The Royal Gardens are indebted for this gem to Mr. Niven, formerly of Kew, now the energetic curator of the Hull Botanic Gardens; it flowered in May of the present year.

December 1st, 1868.

The figure in Willkomm's Icones gives no idea either of the beauty or habit of the plant; it was confessedly executed from dried specimens, and represents the flowers as white.

Descr. A low, perennial, glabrous, glaucous, tufted *herb*. *Stems* densely dichotomous, branched, two to four inches long, leafy below. *Lowest leaves* linear, obtuse; middle ones ovate-lanceolate, half an inch to three-quarters of an inch long, subacute, sessile, connate at the base; upper smaller, lanceolate. *Peduncles* terminal and in the forks, one to two inches long, strict, erect; lateral ones with two minute bracts, middle naked. *Flowers* two-thirds of an inch in diameter, produced in profusion. *Calyx* clavate, obscurely striate, half an inch long, green and dull red. *Petals* clawed; blade pale rose-colour, with two white acute scales at the base, retuse and slightly erose at the apex. *Styles* three to five. *Seeds* with a woolly strophiolus.—*J. D. H.*

Fig. 1. Petal. 2. Gynophore and ovary :—*both magnified.*



W. Fitch del et lith.

Vincent Brooks Day & Son Imp.

Tab. 5747.

AGALMYLA staminea.

Long-stamened Agalmyla.

Nat. Ord. Cyrtandraceæ.—Diandria Monogynia.

Gen. Char. Calyx quinquepartitus, æqualis. *Corolla* hypogyna, tubulosa, incurva, tubo basi annulo villosa, fauce dilatato, limbo obliquo 5-lobo sub-2-labiato. *Stamina* antherifera 4, filamentis longe exsertis; antheræ parallelæ, apicibus connatis; staminum rudimenta 3, brevia, setiformia. *Ovarium* elongatum, lineare, stipitatum, disco tumido insidens, in stylum validum attenuatum, stigmate æqualiter 2-lobo; ovula numerosa. *Capsula* siliquæformis, elongata, pseudo-4-locularis, 2-valvis, polysperma. *Semina* pendula, apice nuclei affixa, utrinque monotricha.—Herbæ *tropicæ, altera* Javanica *altera* Borneensis, *caule radicante.* Folia *alterna, oblonga, acuminata, denticulata.* Flores *axillares, fasciculati.*

Agalmyla *staminea;* caule brevi prostrato radicante, foliis longe valide petiolatis ovato-lanceolatis serratis supra glabris subtus marginibusque sparse pubescentibus multinerviis, fasciculis florum subradicalibus, floribus gracile pedicellatis.

Agalmyla staminea. *Blume, Bijdragen, p.* 767. *Brown in Bennett, Plant. Jav. p.* 116. *Hook. Ic. Pl. t.* 733, 734. *A. DC. Prod. v.* 9. *p.* 263. *Paxt. Mag. Bot. v.* 15. *p.* 73, *cum ic. Van Houtte, Flore des Serres, v.* 4. *t.* 358.

Justicia parasitica. *Lamarck, Illustr. v.* 1. *p.* 42.

Cyrtandra staminea. *Vahl, Enum. v.* 1. *p.* 105.

A brilliantly-coloured stove-plant, native of Java, where it grows in mountain woods, and first introduced into European gardens by Mr. Lobb, the late intelligent and energetic collector for Messrs. Veitch and Sons.

The specimen here figured flowered in the Royal Gardens in June of the present year, and continued flowering for several weeks.

Descr. *Stem* stout, almost as thick as the little finger, a foot long, creeping and rooting from the lower surface. *Leaves* alternate, with an abortive one opposite the base of each, erect, on stout petioles four to eight inches long. *Blade*

as long, ovate or oblong-lanceolate, deep green and glabrous above, below paler and as well as the margins covered with a fine appressed pubescence; nerves strong and numerous, margin coarsely serrate. *Flowers* in large axillary sessile fascicles of eight to fourteen together, pedicelled, pedicel half an inch long, with an oblong-lanceolate bract of the same length at the base. *Calyx* greenish-red, of five linear lobes with recurved apices. *Corolla* scarlet, puberulous, two inches long, five times as long as the calyx; tube dilated below the mouth, with a ring of hairs near the base; lobes short, obtuse, recurved. *Stamens* two; filaments dark purple, slender, very long and exserted; anthers parallel, cohering by their tips, red purple. *Staminodes*, three small bristles. *Ovary* very slender, stipitate, the stipes inserted in a tumid disk; style stout; stigma two-lobed.—*J. D. H.*

Fig. 1. Calyx and ovary. 2. Base of ovary, its stipes and disk:—*both magnified.*

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5732 Puya Whytei.
5704 Raphistemma ciliatum.
5729 Sarcocaulon Burmanni.
5726 Spiræa palmata.
5692 Stapelia Plantii.
5715 Stobæa sphærocephala.
5713 Strophanthus Capensis.
5694 Thunia Bensoniæ.
5688 Trichocentrum albo-purpureum.
5698 Vernonia (Stengelia) Calvoana.
5685 Vitis planicaulis.