ICONES PLANTARUM;

OR

FIGURES,

WITH

BRIEF DESCRIPTIVE CHARACTERS AND REMARKS,

OF

NEW OR RARE PLANTS,

SELECTED FROM THE AUTHOR'S HERBARIUM.

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TO THE

PLANTS CONTAINED IN VOLUME III.;

ARRANGED ACCORDING TO THE NATURAL ORDERS.

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* By an error called RHIZOBOLEÆ at Tab. 280.

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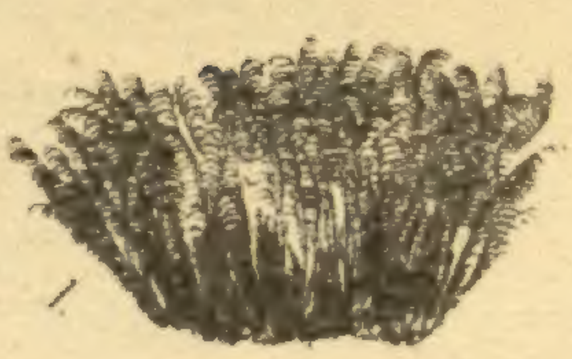
TO THE

PLANTS CONTAINED IN VOLUME III.;

ALPHABETICALLY ARRANGED.



W. H. Harvey Esq. Del.

Allan & Ferguson Lithog.

TAB. CCI.

Andræa subulata. *Harv. mst.*

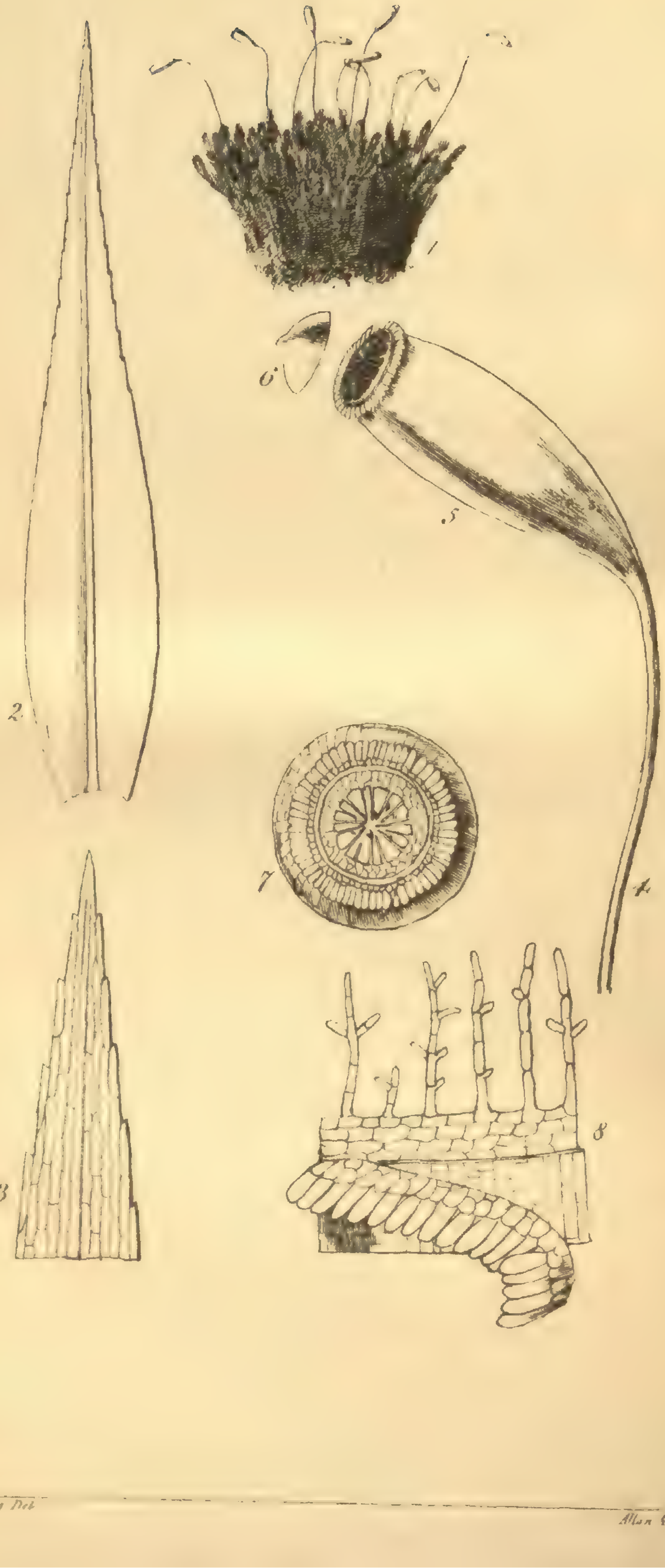
Caule subramoso, foliis basi vaginantibus attenuato-subulatis falcato-secundis enerviis, perichætialibus convolutis late ellipticis apiculatis. *Harv.*

Hab. Rocks near the summit of the gorge leading to Table Mountain, called "the Port;" Cape of Good Hope, March 21, 1837. *Hon. W. H. Harvey.*

Till lately the curious Genus of *Andræa* was supposed to be exclusively European, and four species only have been known to botanists. Now, thanks to the exertions of our scientific travellers, a fifth species has been discovered in the southern hemisphere, the one here represented; and a sixth exists in our Herbarium, from the Quitinian Andes of South America, where it was lately found by our valued friend, Professor Wm. Jameson.

The present species, in general habit, resembles *Andræa nivalis*, or luxuriant specimens of *A. Rothii*, but it is well distinguished by the nerveless leaves, and the broad convoluted one of the perichætium being apiculated.

Fig. 1. 1. Specimens; *nat. size.* *f.* 2. Single plant. *f.* 3. Leaf. *f.* 4. 5. Perichætial leaves. *f.* 6. Capsule:—*magnified.*



W. H. Harvey Esq Del

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TAB. CCII.

SCHIZYMENIUM BRYOIDES. *Harv. mst.*

GEN. CHAR. *Seta* terminalis. *Peristomium* simplex; *membrana horizontalis* ex integumento interno orta, in ciliolis subtilibus subramosis fissa. *Calyptra* dimidiata? *Harv.*

Schizymenium *bryoides*.

Habitus *Bryi*, præcipue *B. elongati*. *Caules* unciales, ramosi, dense cæspitosi, inferne copiose radiculosi; *rami* erecti, foliosi, superne dilatati. *Folia* erecta; laxiuscule imbricata, lato-lanceolata, acuminata, membranacea, subscariosa, nitida, flavo-viridia, laxe reticulata areolis oblongis, margine superne serrata. *Seta* terminalis, 5-6-lineas longa, erecta, apice curvata, lævis. *Capsula* inclinata, subhorizontalis, oblongo-subpyriformis, pallide flavo-fusca, lævis, ad oram non contracta. *Operculum* fere exacte conicum seu conico-convexum, acutum. *Annulus* magnus maxime cellulosus, operculo delapso cito deciduus. *Peristomium* simplex, e membrana interna ortum, horizontale, reticulata, in ciliolis 16 gracilibus articulatis parum ramosis fissa.

Whether the structure and direction of the fringe of this new Moss, are sufficient to constitute a Genus, distinct from some of the other single-peristomed *Bryoideæ*, may admit of a question. Indeed, notwithstanding all that has been done of late years in the beautiful Order of *Musci*, only serves to show us how much yet remains to be done before the limits of the Genera can be so defined as to afford a satisfactory and natural arrangement. To this Genus may doubtless be referred our *Weissia campylocarpa*, Ic. Pl. t. 136.

Fig. 1. Tuft of *Schizymenium bryoides*; *nat. size*. *f.* 2. Leaf. *f.* 3. Portion of a leaf. *f.* 4. 5. Capsule and portion of the seta. *f.* 6. Operculum. *f.* 7. Front view of a ripe capsule on the removal of the operculum; showing the divergent annulus and horizontal peristome. *f.* 8. Portion of the peristome of the annulus:—more or less *magnified*.

TAB. CCIII.

Niphobolus Penangianus.

Fronde late ensiformi-lanceolata submembranacea breviter acuminata margine sinuata integerrima, venis internis inconspicuis, supra glabra subtus fusco-stellato-tomentosa, soris prominentibus copiosis discum versus apicem frondis occupantibus.

Hab. Pulo Penang. *Lady Dalhousie.*

This extremely fine species of *Niphobolus* will rank near to *N. albicans* of Blume (*Fl. Jav. Fil. t.* 25); but that has a much narrower, much more acuminated and coriaceous frond, with the margins revolute, a more compact tomentum, with nerves conspicuously prominent; whence Dr Wallich had called that plant by the much more appropriate name of *N. costatus.*

What may be the nature of the venation of many of the *Niphoboli* of Presl, we are ignorant, since, as that author justly observes, "venæ venulæque in plurimis speciebus invisibiles." The present species, however, when held up between the eye and the light, exhibits a nervation very different from that figured by Presl of *Niphobolus costatus*, Wall.; and indeed very similar to that of his Genus *Campyloneurum.* To us the Genus *Niphobolus* has always appeared an artificial one, depending on the presence of the copious stellated down, clothing the underside of the fronds, and in which the sori are more or less immersed. Our figure, let it be observed, represents the primary and secondary veins much stronger than they are in nature, except when seen against the light. The sori are very much crowded towards the apex of the frond, but not approaching the margin: between the primary nerves they are beautifully arranged in dense transverse lines, of 3 or 4 sori each. These are abundantly mixed with stellated hairs.

Allan & Ferguson lithog.

TAB. CCIV.

Selliguea Wallichiana.

Fronde ensiformi acuminata integerrima inferne longe in petiolum perbrevem attenuata, soris linearibus elongatis obliquis, costa prominente.

Grammitis macrophylla. *Wall. Cat. n.* 10 (*non Blume*).

Hab. Pulo Penang. *Dr Wallich. Lady Dalhousie.*

Caudex —? *Frondes* pedales v. sesqui-pedales, ensiformes, breviter acuminatæ, inferne sensim in petiolum perbrevem attenuatæ, ubique integerrimæ, submembranaceæ, supra medium 2-fere tres lineas latæ, grosse reticulatæ, venis obliquis subparallelis, venulis anastomosantibus maculis seu areolis irregularibus formantibus. *Sori* cum venis alternantes, lineares, flexuosi, integri (non interrupti), sesquiunciam longi.

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TABS. CCV. CCVI.

Langsdorffia Indica.

Gen. Char. *Receptacula* solitaria, stipites simplices terminantia, unisexualia. Flores Masculi inter paleas clavatas basi complanata in favi modum nexas sessiles. *Perigonium* infundibuliforme, limbo 3-5-fido, laciniis æstivatione induplicato-valvatis. *Stamina* 3-5, monadelpha, perigonii laciniis opposita, columna solida tubo perigonii adnata, parte libera antheris breviore. *Antheræ* connatæ, extrorsæ, biloculares; loculi æquales, juxta totam longitudinem dehiscentes; ovarii rudimentum nullum. Flores Fœminei (imperfecti?) confertissimi, pedicellati. *Stylus* filiformis, simplex. *Ovarium* stipitatum in stylum gracilem attenuatum.—Herbæ *carnosæ stipites e rhizomate hypogæo crassiusculo assurgentes, simplices, squamis obsessi, monocephali, capitula unisexualia, alia ex eodem rhizomate mascula, alia fœminea. Arnott.*

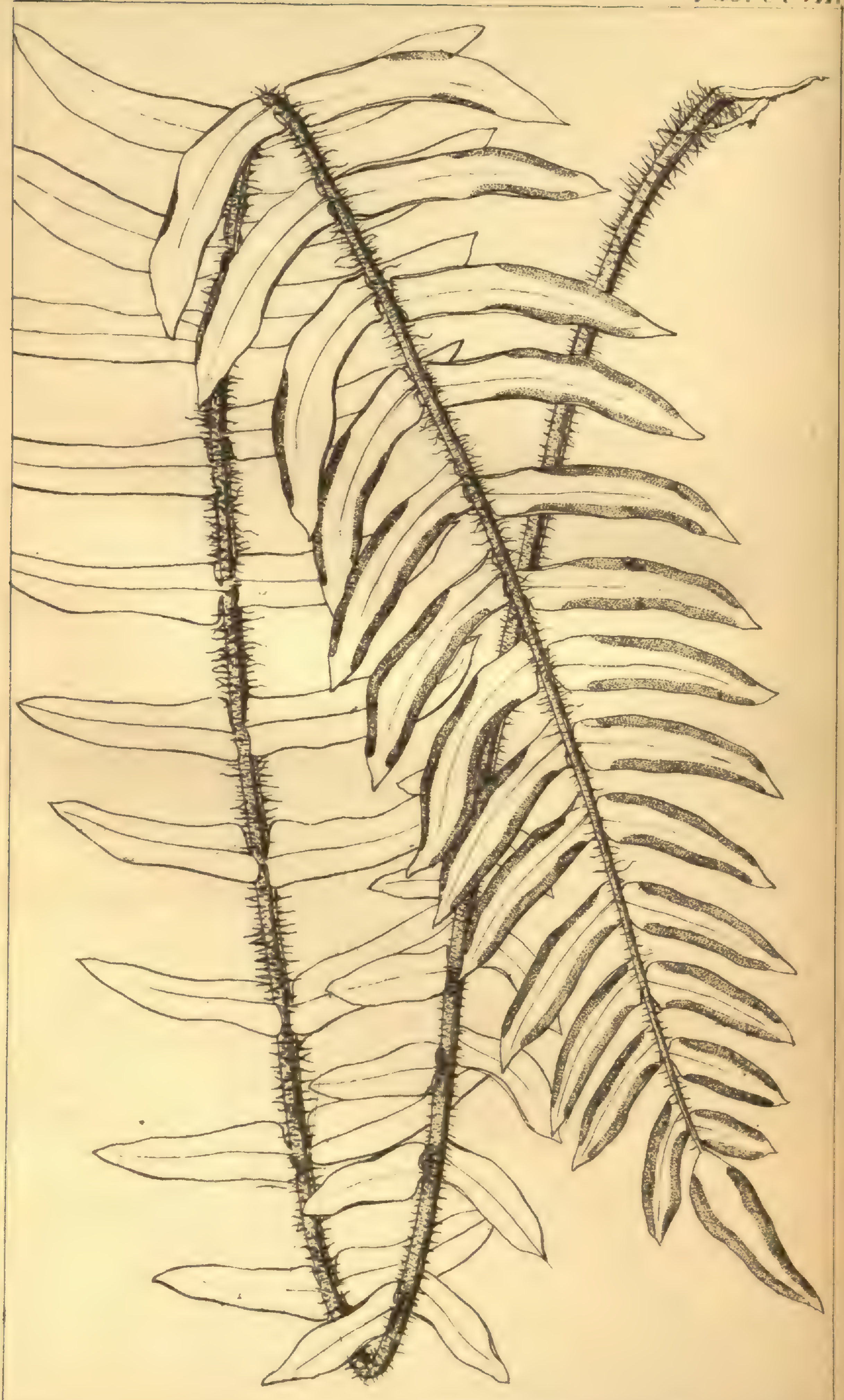
Langsdorffia *Indica;* rhizomate cæspitoso ramoso, stipitis squamis patulis ellipticis margine glabris, perigonio masc. 4-5-fido laciniis demum reflexis, floribus fœm. circa glandulam pyriformem stipitatam insertis lævibus. *Arn.*

L. Indica. *Wight. et Arn. ined.—Arn. in Ann. Nat. Hist. ined.* Balanophora Indica. *Wall. Cat. n.* 7247.—B. elongata. *Blume Enum. Pl. Jav.* 1. *p.* 87?

Hab. In Peninsula Indiæ Orientalis prope Courtallam et Cunnawady, atque in monte Newere-Ellia in Insula Ceylano; *Wight.*

A more full description of this plant than is necessary to accompany the figure, together with a history of the Genus, will very shortly be given in *Taylor's Annals of Nat. History*, to which we refer our readers.

Fig. 1. Receptacle of male flowers:—*nat. size. f.* 2. Single male flower. *f.* 3. Female flowers. *f.* 4. Single do. *f.* 5. Portion of the style:—*magnified.*



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TAB. CCVII.

Pteris seticaulis.

Fronde stipitata lanceolata pinnata, pinnis oblongo-lanceolatis subfalcatis coriaceo-membranaceis integerrimis sessilibus acutis basi truncatis subcordatis, stipite rachique setoso-paleaceis.

Hab. Pulo Penang. *Lady Dalhousie.*

Caudex —? *Stipes* digitalis et ultra, teres, fusco-purpureus, crassitie *pennæ corvinæ*, paleis setiformibus horizontaliter patentibus obsitus. *Frons* pedalis et ultra, circumscriptione lanceolata, prope medium 3-4 uncias lata, pinnata; pinnis subremotis, horizontalibus, alternis vel oppositis, coriaceo-membranaceis, oblongo-lanceolatis, acutis, omnino integerrimis, obscure costatis, paululum falcatis, basi truncatis subcordatis, angulis acutis, superiori vix auriculato, supra saturate viridibus, subtus pallidioribus, omnino glaberrimis. *Sori* marginales, continui. *Indusium* angustum, membranaceum. *Capsulæ* rufofuscæ. *Rachis* fusca per totam suam longitudinem setoso-paleacea, paleis patentibus.

The quite entire pinnæ of this plant, the dark-coloured terete stipes and rachis, clothed with copious bristle-like paleæ, will readily distinguish this species of *Pteris* from all the species with which I am acquainted. The nerves are altogether internal, and only seen if the specimen be held up between the eye and the light, when they are observed to branch off from the costa in an oblique direction, and to be 2 or 3 times forked.

Allan & Ferguson Edinburgh

TAB. CCVIII.

Fruit of Talauma fragrantissima. *Hook.*

Gen. Char. *Calyx* 3-phyllus, deciduus. *Gynophorum* magnum, inferne subcylindricum sepius clavatum. *Petala* 6-12, obtusa, crassa. *Stamina* numerosa, supra petala gynophoro inserta; *filamenta* brevissima, vix manifesta: *antheræ* filamento continuæ, immobiles, lineares, longæ, introrsæ, 2-loculares, longitrorsum dehiscentes; connectivo in appendicem antheræ continuam ligulæformem obtusam apice producto. *Ovaria* indefinita, 1-locularia, 2-sperma, parti clavatæ gynophori insidentia, in massam valde compactam omnino coadunata, haud distinguenda nec nullo modo absque laceratione disjungenda ovariumque unicum mentientia crassissimum, ex stylis adpressis squamoso-strobiliformem, multilocularem. *Ovula* loculamentorum superiorum ascendentia, intermediorum peritropia, inferiorum suspensa! *Styli* indefiniti, complanati. *Stigmata* totidem ex rima terminali ad faciem stylorum. *Fructus* ex coadunatione unicus, magnus, strobiliformis, lignosus, multilocularis, irregulariter dehiscens; fragmentis valde inæqualibus, receptaculo centrali dehiscentia libero, magno, clavato, lignoso, *Phalli esculenti* more favoso. *Semina* in receptaculis faveolis bina vel quandoque solitaria, dehiscentia peracta seminuda.—Arbores *glaberimi.* Folia *alterna, simplicia, integerrima, reticulatim venosa; petiolus superiore pagina ex vestigiis stipularum basi callosus.* Stipulæ *geminæ, laterales, petiolo adnatæ (folio haud oppositæ) gemmam terminalem foventes, mox caducæ, superstite in ramulis earumdem vestigio circulari.* Flores *magni, terminales, solitarii; pedunculus crassus, ramulo continuus, cinctus circulari vestigio bracteæ stipularis deciduæ. Mart.*

The present figure shows the entire fruit of our *Talauma fragrantissima; nat. size.*

TABS. CCIX. CCX.

Fruit of the

TALAUMA FRAGRANTISSIMA,

burst open and exhibiting the seeds; *nat. size.*

This figure exhibits the fruit as it bursts naturally and irregularly: the outer and indurated and thickened coats of the united carpels thus, as it were, forming the pericarp, the interior being filled with cells, and these containing each one or two seeds. The pericarp, on thus separating, carries away the upper half of the cells; while the lower half, with the seeds, form the surface of the receptacle.


I

TAB. CCXI. CCXII.

Talauma fragrantissima.

Foliis lato-ellipticis obtusis, petiolis elongatis marginibus lævibus facie superiori minute tuberculatis, petalis 9 (— 10?)

Hab. Swampy grounds in the Organ Mountains, Brazil. *Mr Gardner.* (2d Coll. *n.* 305.)

Having received the fruit of this plant before the flowering specimens arrived, and indeed without being aware that any were to be expected, the two preceding plates were lithographed and printed, when the Herbarium arrived from Brazil, containing the splendid specimen with leaves and blossoms here represented (one of two which were alone gathered in that state), which I am thus tempted to figure also. I was at first disposed to refer this plant to the *Talauma ovata*, St Hil. Fl. Brazil. Merid.; but besides that the latter is an inhabitant of the western part of the province of Minas Geraes, it differs botanically from the present one in its smaller size, fewer petals, and shorter petiole wrinkled at the margins. It agrees better with the original *T. Plumieri* of the West Indies; but without further means than I possess of determining whether it be that or not, I think it safer to consider it distinct. The differences of the three species hitherto described are by no means very important, and it is possible they may all be mere varieties of *T. Plumieri.* I regret that the roughness of the whole upper and plane side of the petiole is omitted in the accompanying plate, and the error was not discovered till it was too late to be corrected.

Like the *Magnolias* (from which the Genus scarcely differs but in the union of the carpels into a many-celled dehiscent capsule) all the species are probably fragrant; but the present one has so powerful an odour, that it can be perceived at the distance of more than half a mile. This tree attains a height of 40 feet, and the flowers are greenish-yellow.

Fig. 1. represents the united ovaries of *T. Sellowiana* (from Martius) the better to illustrate the character of the Genus.

TAB. CCXIII.

Scolopendrium sagittatum.

Humile, frondibus oblongis basi dilatatis hastato-bilobis lobis angulatis, soris per totam longitudinem frondis oblongis obliquis.

S. sagittatum. *De Cand. Fl. Fr. v.* 5. *p.* 238. *Bot. Gall. v.* 1. *p.* 540.

S. Hemionitis. *De Cand. l. c. v.* 2. *p.* 552 (*non Asplenium Hemionitis, L. fide De Cand.*).

Hab. About Marseilles, and near Bonifacio in Sicily. *Requien* (*in Herb. nostr.*).

The above are the stations given by M. De Candolle for his *S. sagittatum*, a plant which some botanists have united with *S. vulgare*, and others again with *S. Hemionitis*, Willd. (*Asplenium*, L.). The specimens here figured are from Bonifacio, kindly given to me by M. Requien: and it is certainly a very distinct species from our common *Hart's Tongue*, not only in the size and shape of the fronds, but in the form and direction of the sori. I am not, however, so well satisfied respecting its differences from *S. Hemionitis* of Cavanilles, a native of Spain, Portugal, and Italy, of which I possess no authentic specimen, nor have I the opportunity of referring to the original figure in the *Annales dos Sciencias Nat.* But if the representation in Schkuhr's *Filices* (*t.* 84), which is always quoted for the true plant, be correct, I should say that the present differs from it only in the lesser development of the lobes at the base of the frond.


a
d
c
b

TAB. CCXIV.

Disa ferruginea.

Bulbo solitario indiviso, foliis radicalibus lineari-lanceolatis striatis basi attenuatis, scapo vaginato plurifloro, galea acuta basi in calcar ovario longius producta, petalis ext. ovato-lanceolatis carinatis, carina infra apicem in aristam desinente, labello lineari-lanceolato longitudine petalorum exteriorum.

D. ferruginea? *Thunb. Fl. Cap. ed. 2. p.* 11.

Hab. Summit of Table Mountain, Cape of Good Hope. *Hon. W. H. Harvey.*

Bulb oblong, undivided. *Leaves* radical, linear-lanceolate, attenuated at the base. *Scape* slender, cylindrical, smooth, about a foot high, sheathed, the sheath close-pressed, short, acute. *Spike* dense, ovate, many-flowered. *Flowers*, including bracteæ and ovaria, of a bright orange colour. *Bracteæ* shorter than the ovarium, lanceolate, acute, erect. *Galea* with a long subulate spur, longer than the ovarium, tapering —its mouth very narrow, compressed at each side with deep depressions, the lips reflexed—apex acute. *Outer petals* spreading, narrow, ovate, acute, furrowed in front, keeled at back, the keel ending in a spur: *inner* small, connivent, obtuse or slightly angular in front, behind produced into a cuspidate point, yellow. *Labellum* linear-lanceolate, as long as the outer petals, acute. *Ovarium* slightly twisted, triquetrous, the posterior angle much more prominent and distinct. *Stigma* obtuse, tubercular. *Pollen-masses* short, didymous. *Harvey.*

I am indebted to Mr Harvey for the drawing here represented.

a. Front view of a flower. *b.* Two outer and two inner sepals and lip. *c.* Side view of a flower. *d.* Portion of the germen and anther-case. *e.* Pollen-mass:—*magnified.*

TAB. CCXV.

Acrostichum caudatum.

Fronde longe stipitata oblongo-ovata subcoriacea margine squamulosa apice longe angusteque attenuata caudiformi, sterili supra nudiuscula subtus resinoso-punctata, fertili minore supra stipiteque squamulosa subtus dense capsulifera.

Hab. On Pillzhum, at an elevation of 12,000 feet above the level of the sea, Andes of Columbia. *Prof. W. Jameson.*

Caudex brevis, crassus, radicatus, ramosus, paleis subulatis intense atro-fuscis nitidis imbricatis obsitus. *Stipites* erecti, digitales fere ad palmarem, graciles, hinc sulcatæ, pallide fuscæ, parce squamulosæ. *Frondes* 2-3 uncias longæ, oblongo-ovatæ, subcoriaceæ, nitidiusculæ, integerrimæ, apice in caudam longam gracilem desinentes, costatæ, venosæ, venis horizontalibus parallelis, margine squamuloso:—*Sterilis* supra nudiuscula, subtus resinoso-punctata:—*fertilis* sterili subduplo minor, supra subdense squamosa, subtus ubique capsulifera.

This very distinct *Acrostichum* came in the last parcel I had the pleasure to receive from my invaluable correspondent, Prof. W. Jameson, now resident at Pillzhum, in Columbia, where he still prosecutes his botanical researches, and with increased success.

TAB. CCXVI.

Eryngium humile; *var.* caulescens.

Caule simplici vel ramoso, foliis radicalibus ellipticis serrato-spinosis in petiolum angustatis, capitulis subglobosis solitariis, involucri foliolis circiter 10 oblongo-lanceolatis rigidis inciso-spinosis capitulo sublongioribus, ovariis tuberculatis.

E. humile. *Cav. Ic. v.* 6. *p.* 37. *t.* 556. *f.* 1. *Delaroche Eryng. p.* 55. *Humb. et Kunth, Nov. Gen. v.* 5. *p.* 33. *De Cand. Prodr. v.* 4. *p.* 93.

Var. 1. *subacaule;* foliis longe petiolatis. *Cav. Ic. l. c.*

Var. 2. *latipes;* subacaule, foliis subsessilibus.

Var. 3. *caulescens;* caule elongato ramoso, foliis radicalibus longe petiolatis. Ic. Nostr. CCXVI.

Hab. On the Quitinian Andes; as upon Chimborazo, San Antonio, Antisana, Surrucucho, Pillzhum, &c., at an elevation of from 11,000 to 14,000 feet above the level of the sea. *Née. Humboldt. Prof. W. Jameson.*

The present species seems to be liable to considerable variation. The usual state of the plant, as found in several localities by Professor Jameson, is to be stemless; the scape bearing a single head of flowers. That here represented differs from Cavanilles' figure in its evident stem; a variety which was first noticed by Humboldt, and was found by him on Antisana. In all the varieties, the entire plant is harsh and rigid. The leaves are marked with oblong oblique reticulations. The head of flowers is of a dark, almost black colour, when dry; probably blue when recent; while the involucre is very pale and glossy, forming a beautiful ray around the little mass of flowers.

TAB. CCXVII.

VIOLA BALSAMINOIDES. *Gardn. mst.*

(§. LEPTIDIUM.)

Caule erecto angulato basi stolonifero, foliis ovatis acutis obtuse serratis glabris basi in petiolum sensim attenuatis, stipulis lanceolatis longe ciliatis, laciniis calycinis lineari-subulatis basi productis, petalis imberbibus, calcare brevissimo obtuso.

HAB. In a shady virgin forest, on the banks of a small river called the "Imbahy," Organ Mountains, Brazil. *Mr Gardner* (2d Coll. *n.* 311).

Species valde distincta. *Caulis* erectus, spithamæus et ultra, simplex, vel nunc ramosus, angulatus, glaber, inferne nudus (aphyllus), basi stoloniferus, superne foliosus. *Folia* 1-2 inferiora parva, subrotunda; *reliqua* fere exacte ovata, acuta, membranacea, glabra, obtuse serrata, basi sensim in petiolum longiusculum attenuata. *Stipulæ* majusculæ foliaceo-membranaceæ, e lata basi lanceolatæ, fimbriato-ciliatæ. *Pedunculi* solitarii, ex axillis superioribus, graciles, uniflori, folio breviores, medium versus bibracteati, bracteis anguste subulatis, alternis. *Flores* (albi?) cernui. *Calyx* profunde 5-partitus, laciniis lanceolato-seu lineari-subulatis corolla brevioribus, basi productis obtusis. *Petala* imberbia subæqualia; inferiore longiore brevissime calcarato. *Germen* ovatum. *Stylus* staminibus longior. *Stigma* obtusum. *Fructus* ellipticus, calyce persistente brevior.

a. Flower. *b.* Stamens and Pistil. *c.* Pistil:—*magnified.*

TAB. CCXVIII.

Sisyrinchium sulcatum. *Gill. mst.*

Caule repetitim dichotomo gracili ancipiti (sub lente) sulcato flexuoso glaberrimo, foliis parvis subulatis, pedunculo terminali solitario curvato, capsula globosa.

S. sulcatum. *Gillies in Herb. nostr.*

Hab. Maldonado, in South Brazil. *Dr Gillies.*

A very curious and distinct species, which I can hardly doubt belongs to the Genus *Sisyrinchium*, although the only specimen I possess is destitute of flowers. The stem is scarcely a span high, slender, much branched in a dichotomous manner, ancipitate, from the stem being furnished with a narrow wing on each side, deeply striated or almost furrowed (as well as the leaves), whence Dr Gillies' specific name. At every angle or geniculation is a small broadly or ensiformi-subulate leaf, with a sheathing base. Peduncle scarcely an inch long, terminated by a globose capsule.

TAB. CCXIX.

Sisyrinchium alatum.

Caule erecto simplici vel parce ramoso subflexuoso latissime ancipiti-alato folioso, foliis ensiformibus falcatis alisque tenuistriatis, spatha diphylla terminali, pedunculis 2-4 aggregatis, perianthio glabro purpureo-lineato, capsulis ellipticis.

Hab. Demerara. *Dr Hancock.* Organ Mountains, Brazil. *Mr Gardner* (2d Coll. *n.* 683). Marshes of La Plata. *Tweedie.*

Caulis erectus, pedalis et ultra, subflexuosus, simplex vel raro divisus, utrinque lato-alatus, foliosus. *Folia* biuncialia, ensiformia, basi equitantia, subfalcata, acuta, striata. *Spatha* diphylla, bracteis foliiformibus. *Pedunculi* 2-4 ex eadem spatha, spatham excedentes. *Germen* inferum, ovale. *Perianthii laciniæ* 6, obovatæ, glabræ, flavæ, purpureo-lineatæ. *Capsula* elliptica, erecta.

This species of *Sisyrinchium* has, it would appear, an extensive range; from Demerara, where it was first found by Dr Hancock, to the marshes of the Plate River; yet I do not find that it has been described by any author.

TAB. CCXX.

Dorstenia elata.

Glabra, caule elongato flexuoso folioso, foliis ellipticis subcoriaceis obtusis basi cordatis brevi-petiolatis, stipulis 2 oppositis magnis late ovatis obtusis persistentibus, pedunculis axillaribus solitariis folio subbrevioribus, receptaculo subquadrangulari peltato.

Hab. Rocks in the deep forests of the Organ Mountains. *Mr Gardner* (2d Coll. *n.* 621).

This remarkable plant has a suffruticose, rounded, flexuose stem, like that of a Pepper, three feet in height. A large leaf, more than a span long, arises from each geniculation of this stem, and is elliptical in form, obtuse, between membranaceous and coriaceous, quite entire, cordate at the base. From the costa diverge several parallel, rather distant, and nearly horizontal nerves, which are connected by reticulated veins. Petioles scarcely half an inch long, much shorter than the two opposite, ovate, obtuse appressed stipules. Pedunculè axillary, nearly as long as the leaves, terminated by the large peltate, obtusely 4-angled receptacle.

A second species of caulescent *Dorstenia* was discovered in the same country by Mr Gardner, (but so rare that only two specimens were gathered,) nearly allied to the East Indian *D. Indica* of Dr Wallich's Cat. *n.* 4639; which may be thus characterized:—

D. hispida; piloso-hispida suffruticosa caulescens, foliis brevissime petiolatis oblongo-cuneatis subacuminatis sinuato-dentatis, stipulis — ?, pedunculis axillaribus solitariis folio multo brevioribus, receptaculo suborbiculari peltato.—Hab. Banks of the Rio Camprido, Organ Mountains, Brazil. *Mr Gardner* (2d Coll. *n.* $\frac{2}{116}$).

Allan & Ferguson sculp. Glasgow.

TAB. CCXXI.

Polypodium pilipes.

Fronde profunde pectinato-bipinnatifida, glabra, laciniis linearibus elongatis sinuato-dentatis, stipitibus pilis horizontalibus ferrugineis dense obsitis, soris solitariis subellipticis.

Hab. Chacapoyas; Andes of Peru, on the eastern declivity. *Mathews* (last collection, 1838, without No.).

Frondes spithameæ, circumscriptione variabiles, nunc lanceolatæ, nunc latissime ovatæ, cæspitosæ, stipulatæ, profunde pectinato-pinnatifidæ; laciniis elongatis linearibus, simplicibus, sinuato-dentatis, vel sæpe iterum pectinato-pinnatifidis, glabris, subcoriaceis, costatis, sub lente squamuloso-punctatis, subtus ubique, usque fere ad stipitem, soriferis. *Stipites* 2-4 pollicares, graciles, densissime hirsuti, pilis longis rufis horizontalibus. *Sori* subelliptici, elevati, nervos simplices obliquos terminantes.

The only specimens I have seen of this handsome *Polypodium* are gathered by Mr Mathews on the eastern side of the Peruvian Andes, towards the head waters of the Amazon River. It is remarkable for its deeply and doubly pectinated fronds, every segment of which is, on the underside, studded with sori, and for having the stipites clothed with long, copious, ferruginous, spreading hairs.

Fig. 1. Portion of the underside of a segment, with sori:—*magnified.*

TAB. CCXXII.

Asplenium parvulum.

Humile, frondibus laxe cæspitosis simplicibus stipitatis ovato-rhombeis sublobatis crenatis glabris, soris oblongis obliquis, stipite glabro ad basin solummodo paleaceo-squamoso.

Hab. South Brazil. *Tweedie.*

This is one of the smallest of the Genus with which I am acquainted, the whole plant scarcely exceeding two inches in height. Of this the stipes occupies about one half; it is slender, pale brown. Several stipites arise from one point, (so as to be loosely cæspitose,) perhaps from a small caudex which bears pale brown scales, and from beneath sends out fibrous roots. The frond is between ovate and rhomboidal, obtuse, the margin irregularly lobed and crenated. From an obscure central nerve or costa diverge several lateral ones, on which the oblong fructifications are situated on each side, but near the centre.

The lower figure represents the underside of a frond, magnified to about twice its natural size.

Allen & Ferguson, lithog. Glasgow

TAB. CCXXIII.

SCHOUWIA ARABICA.

GEN. CHAR. *Cal.* erectus, sepalis 2 oppositis paululum productis. *Petala* unguiculata, limbo obovato. *Filamenta* edentula. *Antheræ* lineares, acutæ. *Ovarium* sessile, ellipticum, alato-marginatum. *Stylus* subulatus, ovarii longitudine. *Stigma* sagittiforme, tenui-pubescens. *Silicula* (fere unciam longa), elliptica, insigniter lateraliter compressa, planiuscula, ala lata cincta, bivalvis, stylo elongato persistente terminata. *Septum* angustissimum. *Valvæ* membranaceæ, reticulatim nervosæ. *Semina* in quoque loculo plurima, subrotunda, compressa, horizontalia. *Podospermum* tenue, elongatum. *Cotyledones* conduplicatæ.—Herba *annua glabra ramosa.* Habitus *fere foliorum* Brassicæ.

S. Arabica. *De Cand. Regn. Veget. v.* 2. *p.* 644. *Prodr. v.* 1. *p.* 224.

Subularia purpurea. *Försk. Fl. Ægypt. Arab. p.* 117.

Thlaspi Arabicum. *Vahl, Symb.* 2. *p.* 76 (*excl. syn. Linn.*).

HAB. Arabia Felix, in moist sandy mountains, near Môr. *Förskahl.* At Hermonthis. *Sieber.* Uncultivated fields in the valley of Fature, flowering the end of February. *S. Fischer* (*n.* 108).

Radix mihi ignota. *Caulis* pedalis et ultra, ramosus, ubique glaber. *Folia* alterna, oblongo-ovata basi profunde cordata, amplexicaulia, penninervia, integerrima vel rarius obscure denticulata. *Flores* in racemos demum (fructiferos) valde elongatos ebracteatos terminales et laterales dispositi. *Pedicelli* breves calyce 3-plo breviores. *Petala* pallide lilacina, unguibus flavis.

The specimen here represented is from the collection of M. S. Fischer, above quoted.

Fig. 1. Silicula, slightly *magnified.*

TAB. CCXXIV.

Quèrcus Mackiana.

Foliis perennantibus (?) brevissime petiolatis oblongo-ovatis subcoriaceis integerrimis basi acutis apice brevi-acuminatis nervis utrinque petiolis ramisque novellis pubescentibus, glandibus spicatis conico-ovatis apiculatis pube tenui obductis, cupula brevissima planiuscula e squamis brevibus subulatis pubescentibus.

Hab. Assam. *Mrs Mack.*

I am indebted to the lady of the Rev. Mr Mack of Serampore for a most interesting collection of plants from Assam, during a visit made to that country on account of her health. Amongst other undescribed species is the present strikingly handsome Oak, well marked by its foliage and acorns. The latter, even in the fully ripe state, are clothed with a very fine down. The cups, too, are singularly shallow, and the scales are subulate and downy.


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TABS. CCXXV. CCXXVI.

Prepusa connata. *Gardner mst.*

Herbacea, foliis caulinis connatis, calyce latissime campanulato maxime inflato exalato.

Hab. Growing gregariously on the nearly bare face of a dry rock in the Organ Mountains, Brazil, at an elevation of about 5000 feet above the level of the sea. *Mr Gardner* (2d Coll. *n.* 541).

Few plants among Mr Gardner's many Brazilian discoveries have given me more pleasure than this, a second species of Martius' fine Gentianeous Genus *Prepusa*:* for such it most unquestionably is, differing from the generic character only in the wingless calyx, which, in this case, I consider of value only as a specific distinction. I shall give Mr Gardner's own description, drawn up on the spot.

Root perennial. Stem herbaceous, a foot or a foot and a half high. Leaves oblong, obtuse, about 5-nerved, somewhat fleshy, those of the root 4-5 inches long and spreading, of the stem much smaller, opposite, and connate; those at the forkings of the branches united almost for their whole length, and forming a large two-lipped sheath. Flowers large. Calyx particularly large, inflated, membranous, reddish-purple, 6-toothed; teeth apiculate. Corolla yellowish, with a few faint purple streaks, a little longer than the calyx; tubular below, ventricose in the middle; limb erecto-patent, 6-lobed, lobes broadly ovate, slightly crenulate, apiculate. Stamens 6, rising from the bottom of the ventricose portion of the corolla, and included. Filaments filiform. Anthers versatile, purple, 2-celled. Pollen brown. Ovary cylindrical, 1-celled, 2-valved, many-seeded. Seeds attached to 4 parietal placentæ, which are obviously formed by the inflexed margins of the valves. Style subulate, of the same length as the filaments. Stigma bilamellate, green. *Gardn. in litt.*

The other species of the genus is *P. montana*, a shrub 8-10 feet high, inhabiting the interior mountains of Bahia.

Fig. 1. Corolla:—*nat. size.* *f.* 2. Stamen. *f.* 3. Pistil:—*magn.*

* So named from πρεπουσα, on account of the conspicuous character of the plant.

Allen & Ferguson Lithog

TAB. CCXXVII.

GUATTERIA MAYPURENSIS.

Foliis oblongis acuminatis in petiolum brevem decurrentibus subcoriaceis glabris nitidis costa subtus pedunculis ramulisque novellis fulvo-hirsutis, pedunculis axillaribus solitariis unifloris, petalis oblongo-lanceolatis exterioribus paullo minoribus omnibus utrinque calyceque extus pubescenti-pilosis.

G. Maypurensis. *Humb. et Kunth, Gen. Am. v.* 5. *p.* 42. *De Cand. Prodr. v.* 1. *p.* 94.

HAB. Banks of the river Paquequer, in the Organ Mountains. *Mr Gardner* (2d Coll. *n.* 306).

Every one who has at all had occasion to study the *Anonaceæ* in a dried state, will comprehend the difficulty of determining specimens, often very incomplete, by the aid of books alone, where they are in general but meagrely described. Such is the case with the present species, of the Genus of which I cannot feel certain in the absence of fruit. Unwilling to multiply species unnecessarily, I refer it to the *Guatteria Maypurensis* of Humboldt, with the character of which it sufficiently corresponds. Mr Gardner notices it as a much branched shrub, from 10-12 feet high. Its branches are slender and glabrous, except at the extremities, where the young shoots, as well as peduncles, and the middle of the leaves beneath, are clothed with ferruginous patent hairs. The flowers are an inch or an inch and a half in diameter, spreading; the calyx small, externally hirsute. Petals all over downy, hairy at the lower part of the outer ones beneath.


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TAB. CCXXVIII.

Lycopodium biforme.

(§ Phlegmaria.)

Caule gracili repetitim dichotomo pendente, foliis laxis remotis undique insertis subdisticho-patentibus lineari-subulatis integerrimis, nervis subtus paullo prominentibus, capsulis axillaribus et in spicis elongatis gracilibus dichotome ramosis, bracteis late ovatis brevi-acuminatis capsula minoribus.

Hab. Face of a shady rock, at an elevation of about 5000 feet above the level of the sea, on the Organ Mountains. (2d Fern Collection, *n.* 80).

This must be referred to the *Phlegmaria*-group of the *Lycopodia*, of which it is the slenderest species, and with the most lax and distantly inserted foliage, of any known to me. It possesses occasionally the characters of the group "*Capsulis axillaribus*," that is, the capsules are not unfrequently in the axils of the common leaves of those branches which have not been converted into bracteated spikes.

Fig. 1. Portion of a plant with axillary capsules:—*nat. size.* *f.* 2. Capsule and bractea from a spike. *f.* 3. Capsule and bractea from *f.* 1:—*magnified.*


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TABS. CCXXIX. CCXXX.

Loranthus lageniflorus.

Corolla longe tubulosa æqualiter 5-fida, antheris erectis, involucro campanulato magno colorato circa flores paucos subcapitatos. *Arn.*

Loranthus lageniflorus. *Wight, Cat. n.* 2437.—*Arn. New or rare Indian Pl. in Ann. of Nat. Hist. ined.*

Hab. Malabar. *Dr Wight.*

Lignosus, glaber, parasiticus. *Folia* opposita, petiolata, petiolo 2-4 lineas longo, ovato-lanceolata, seu elliptico-oblonga, obtusa, basi rotundata, penninervia, crassa, coriacea. *Pedunculi* fasciculati ad ramos annotinos orti, brevissimi, apice involucrum sanguineum gamophyllum campanulatum magnum 4-5-lobum ferentes. *Flores* 4-5 in fundo involucri subsessiles. *Calycis limbus* cupularis membranaceus, repando-5-dentatus. *Corolla* puberula, tubulosa, involucrum duplo superans, apice supra medium quinquefida, versus laciniarum basin per æstivationem inflatim annulata, laciniis linearibus demum reflexis. *Antheræ* erectæ. *Arn.*

This is perhaps the most beautiful of the Genus. Its blood-red involucres are about an inch long, and four to six lines across. *Arn.*

Allan C. Ferguson del.

TAB. CCXXXI.

Bruchia brevipes.

Laxe cæspitosa minuta acaulis, foliis ovatis valde concavis acuminatis nervo valido longissime excurrente, seta foliis duplo breviore erecta, capsula obovata cum operculo coadunato acuminata, calyptra magna mitriformi-campanulata longe apiculata margine in lobulis plurimis subæqualibus brevibus fissa.

Hab. Road-side, near "Newlands," Cape of Good Hope. *Hon. W. H. Harvey.*

Our valued friend, Mr Harvey, has been already eminently successful in his Muscological researches in Southern Africa, even in the immediate vicinity of Cape Town, and the present is a new species of a little known Genus, intermediate between *Splachnum* and *Voitia*, of which only one species has yet been characterized, namely, *B. Vogesica*, of the Vogesian Alps; though the authors of the beautiful *Bryologia Europæa*, Messrs Bruch and Schimper, are of opinion that the *Phascum flexuosum* of Schwægrichen also belongs to the same Genus.

This very humble species forms scattered tufts on the ground, only recognisable as a plant by an eye accustomed to investigate the minuter beauties of the vegetable creation. Root small, fibrous. Stem almost none. Leaves longer than the whole fructification, ovate, very concave, tapering upwards and uniting with the strong excurrent nerve to form a long, stout, rigid, hair-like point. Seta scarcely longer than the capsule, which latter is obovate, tapering into a moderately long beak,—the operculum being continuous with the capsule, as in *Phascum*. Calyptra large, covering the capsule almost entirely, campanulate, cut at the margin into a number of obtuse, pretty equal lobes, and tapering upwards suddenly into a long mucro.

Fig. 1. Small tuft:—*nat. size.* *f.* 2. Single plant. *f.* 3. Outer, and *f.* 4, inner leaf. *f.* 5. Capsule and seta. *f.* 6. Calyptra. *f.* 7. Sporules:—*magnified.*


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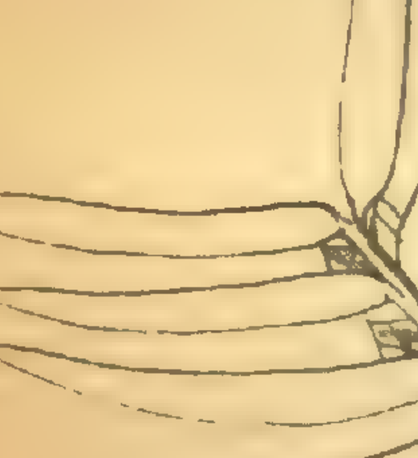

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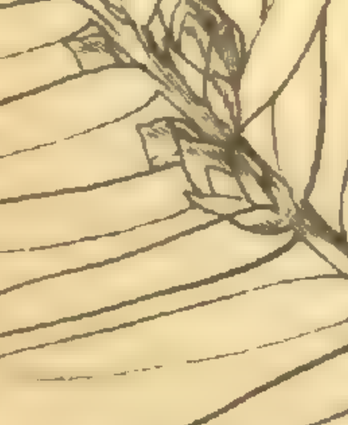

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TABS. CCXXXII. CCXXXIII.

Torreya taxifolia.

Gen. Char. Torreya. *Arn.* (*non Spreng.*) Dioica.—Masc. *Amentum* primo subglobosum, demum elongatum. *Rachis* nuda, demum elongata, basi squamis siccis quadrifariam imbricatis bracteata, multiflora. *Squamæ* staminiferæ pedicellatæ, subpeltatæ, dimidiatæ, hinc antheram 4-locularem pendulam gerentes.—Fœm. *Amentum* ovatum, basi, ut in mare, bracteatum, uniflorum. *Discus* carnosus hypogynus nullus. *Ovulum* erectum. *Semen* ovatum, basi squamis siccis haud grandefactis bracteatum, cæterum nudum; *testa* crassa extus carnoso-coriacea, intus fibrosa: *tegmen* crustaceum, durum. *Albumen* ruminatum. *Embryo* subcylindricus, brevis; *cotyledones* connatæ.—Arbores. Rami *patentes;* ramuli *distiche furcati.* Folia *disticha, linearia, rigida, mucronato-pungentia. Arn.*

T. taxifolia. *Arn. in Tayl. Ann. of Nat. Hist. v.* 1. *p.* 130.

Taxus montana. *Nutt. in Journ. Ac. Sc. Phil. v.* VII. (*non Willd.*)

Hab. Middle Florida; as upon calcareous hills on the eastern bank of the Appalach River, near the confluences of the Flint and Chattahoochie; and at Flat Creek of the Appalach, and at Aspalaga, plentiful. (*Dr Torrey.*)

For a more full account of this fine taxoid plant, which forms a middling-sized tree, and is named in compliment to a distinguished naturalist, and one of the most estimable of men, I refer to Dr Arnott's *Memoir* above quoted.

Tab. CCXXXII. Branch from a male tree. *Fig.* 1. Male amentum. *f.* 2. Front; and *f.* 3. back view of an antheriferous scale:—*magnified.*

Tab. CCXXXIII. Branch from a female tree. *Fig.* 1. Female amentum, with the fecundated ovule:—*magnified. f.* 2. Ovule cut through vertically, showing the *testa* (or outer coat) with the fibrous bodies imbedded in the substance; next to it the *tegmen,* including the nucleus:—*magnified. f.* 5. Mature seed: *nat. size. f.* 6. The same, with the testa removed, which, at *f.* 7, is cut through vertically to show the ruminated albumen. *f.* 8. The embryo. *f.* 3. Germinating seed, the cotyledons protruded. *f.* 4. The shrivelled albumen removed from *f.* 3.—The dissections are from Dr Torrey's drawings.


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TAB. CCXXXIV.

MICROSPERMA LOBATA.

GEN. CHAR. *Calycis tubus* obovatus, ovario adhærens, limbi laciniis 5 lanceolatis patentibus. *Petala* 5 patentia, ovalia. *Stamina* numerosa, calyci inserta: *Filamenta* libera, brevia, æqualia: *Antheræ* rotundatæ, compressæ, ad margines longitudinaliter dehiscentes. *Ovarium* apice solummodo liberum, in stylum filiformen attenuatum, demum deciduum. *Stigma* obtusum. *Capsula* calycis limbo coronata, ad apicem, intra calycem, dentibus 5 dehiscens. *Receptacula* 5, filiformia, parietalia, longitudinalia. *Semina* minutissima, numerosa, ovali-oblonga, subpellucida, angulata.—Herba *aspera, Mexicana, subsucculenta*. Caulis *flexuosus, subvolubilis?* Folia *alterna cordato-ovata, sublonge petiolata, penninervia, lobata, serrata.* Flores *majusculi, racemosi, secundi, bracteati, terminales*. Corolla *flava*.

Microsperma lobata.

HAB. Santa Catarina, near Monterrey, Nouv. Leon, Mexico. *Berlandier.*

The specimens I possess of this plant are not so perfect as I could wish, yet I think the figures made from them are quite correct; and from these it will be seen that it belongs to the *Loaseæ*, but to an undescribed Genus, most allied to *Mentzelia*; differing in habit, in the inflorescence, in the more abundant stamens, and especially in the 5 valves of the capsule, and the exceedingly numerous minute seeds.

Fig. 1. Flower. *f.* 2. Anther. *f.* 3. Calyx and nearly mature capsule. *f.* 4. Ripe capsule, laid open. *f.* 5. Seeds:—*magnified.*

Aller. & Ferguson Lithos

TAB. CCXXXV.

Gilia congesta.

(§ Eugilia.)

Lanata subsimplex, foliis bipinnatifidis carnosis laciniis linearibus obtusis, floribus (albis) densissime capitatis capitulis racemosis, calycibus 5-dentatis bracteisque dense lanatis.

Gilia congesta. *Hook. Fl. Bor. Am. v. 2. p. 75.*

Phacelia furcata. *Douglas, mst.*

Hab. Sandy plains of the Columbia. *Douglas.*

Root somewhat fusiform, annual? Stems 3 or 4 from the top of the root, scarcely a span high, simple, rather copiously leafy and very woolly. Leaves woolly, an inch or more long, fleshy, pinnatifid and bipinnatifid; the segments linear, obtuse. Flowers in dense, exceedingly woolly clusters or heads, so woolly as almost to conceal the flowers. Heads racemose. Pedicels of the flowers scarcely any; bracteas about as long as the calyx, linear. Calyx bell-shaped, 5-fid. Corolla with the tube as long as the calyx: the limb of 5 oval spreading segments, white, with a yellow eye. Stamens exserted. Anthers oval-oblong. Germen oval or obovate, triquetrous. Style shorter than the stamens, filiform. Stigma trifid.

Fig. 1. 2. Flowers. *f.* 3. Pistil:—*magnified.*

TAB. CCXXXVI.

Anemia Drègeana. *Kze.*

Fronde sterili lineari-oblonga pinnata, pinnis subsessilibus, oblique ovatis obtusis subauriculatis basi sursum truncatis deorsum cuneatis, margine crenulato, subtus ad venas strigosis, supra glabris nitidulis, fertili apice tripartita, partitionibus duabus fertilibus tripinnatis, tertia sterili pinnata, stipite rachibusque utriusque frondis villoso-paleaceis. *Kunze.*

Anemia Drègeana. *Kunze, Acotyl. Afr. Austr. Recens.* 1. *p.* 13.

Hab. Shady clefts of rocks in woody places at Omsamwubo, and at the great cataract between Omsamwubo and Omsamcaba, Southern Africa. *Drège.*

Hitherto the Genus *Anemia* had been considered exclusively an inhabitant of the New World: but the present is one of the many important discoveries made by the German botanist Drège, in Southern Africa. Kunze, in the little work above quoted, has made 2 vars., but upon very slight grounds;—*α.* pinnis sterilibus ovato-oblongis obtusiusculis;—*β.* pinnis sterilibus breviter ovatis obtusissimis.—Our specimens of *α* exhibit both these kinds of pinnæ.


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TAB. CCXXXVII.

KRIGIA NERVOSA.

Foliis radicalibus ovatis lyrato-pinnatifidis caulinis subintegris, involucri foliolis ovatis 1-2-nerviis paleis patentibus brevioribus, nervis validis prominentibus, scapis hispidis.

HAB. San Felipe de Austin, Texas. *Drummond* (Coll. III. *n.* 164).

In the United States are three genera of *Compositæ-Cichoraceæ*, (*DC.*), which have a striking general similarity the one with the other:—I allude, 1st, to *Krigia*, Schreb., which has a pappus of 5 broad paleæ, and an inner one of 5 alternate setæ: 2. *Cynthia*, Don, which has a pappus of several broad paleæ, and an inner one of many setæ: and, 3. *Apogon*, Nutt., which is destitute of pappus, or, when present, it is minute and simply composed of 5 short and broad paleæ.—The learned De Candolle has given their characters very correctly, but has erred by following Nuttall in referring to the Genus *Krigia*, *K. Caroliniana*, which certainly belongs to *Cynthia*. The *K. leptophylla*, I have reason to think, is only a var. of the original *K. Virginica*. *K. dichotoma* is now acknowledged by Nuttall himself to be nothing more than the autumnal state of the species last mentioned; and *K. montana* is, to say the least of it, a very dubious plant, from the high mountains of Carolina, and apparently only known to Michaux. Thus it would seem we had only one certain species described, till Mr Drummond detected the present (as well as *K. Virginica**) in Texas. The character of *K. Virginica* may stand thus—

K. Virginica; foliis radicalibus oblongis lyrato-pinnatifidis caulinis plerumque integris linearibus, involucri foliolis enerviis lævissimis lanceolatis pappo erecto brevioribus, scapo glabro.

In *K. Virginica* the involucre becomes reflexed after the fruit has fallen, the fruit is larger than in *K. Texana*, the pappus longer and whiter, twice as long as the nearly black fruit: (in *K. Texana*, of the same length as the brown fruit). In both, the fruit is deeply striated, and longitudinally impresso-punctate and rough, and the number of paleæ and setæ constantly 5, although Nuttall says that they vary from 5 to 8.

Fig. 1. Involucre with ripe fruit. *f.* 2. 3. Achenia:—*magnified.*

* This is in Mr Drummond's 3d Texas Coll. n. 163, also from San Felipe de Austin.


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TAB. CCXXXVIII.

Adenostemma Brasilianum.

Caule erecto scabriusculo, foliis petiolatis triangularibus secus petiolum subcuneatis obtuse inæqualiter dentatis scabriusculis, paniculæ ramis puberulis, capitulis subcorymbosis, involucri squamis glabriusculis ovali-oblongis obtusis, corollæ tubo pubescenti, styli ramis longissimis, acheniis muricatis.

Adenostemma Brasilianum. *Cass. Dict. d'Hist. Nat.—De Cand. Prodr.* 5. *p.* 112.

Verbesina Brasiliana. *Pers. Syn. Pl. v.* 2. *p.* 472.

Hab. Brazil. *Vandelli.* St Catherine. *Bacle.* Organ Mountains. *Gardner* (2d Coll. *n.* 502).

"*Involucrum* polyphyllum, multiflorum. *Receptaculum* subconcavum, nudum, scrobiculatum. *Flosculi* omnes hermaphroditi. *Corolla* alba, tubulosa, 5-dentata, extus tomentosa glutinosa. *Stamina* inclusa. *Styli* rami corolla duplo longiores. *Achenium* obovatum, triangulare, paululum curvatum. *Pappus* aristis 3 patentibus apice glandulosis, glutinosis, inferiore breviore." *Gardner, mst.*

Of this Genus, so remarkable in the nature of its pappus, there are species in South America and the West Indies, in South Africa, the East Indies, and in the Friendly Islands; and many of them, even from widely different localities, very much resemble each other. The present, though departing in some trifling particulars from the description of De Candolle, is, nevertheless, I feel satisfied, the *A. Brasilianum*, as I equally am that the following is the *A. triangulare* of that distinguished author.

Fig. 1. Involucre with flowers. *f.* 2. Single floret. *f.* 3. Achenium:—*magnified.*

Allen & Ferguson lith.

TAB. CCXXXIX.

Adenostemma triangulare.

Caule erecto pubescenti-hirto, foliis petiolatis trilobo-triangularibus grosse inæqualiter acutissime serratis lævibus, petiolo superne alato, paniculæ ramis elongatis glabriusculis, involucro hemisphærico truncato obtuse dentato, squamis fere ad apicem concretis, corollæ dentibus valde hirsutis, styli ramis brevibus, achenijs grosse muricato-tuberculatis.

Hab. Brazil. About Rio Janeiro. *Lund.* On a moist bank in the Organ Mountains, at an elevation of about 3800 feet above the level of the sea. *Mr Gardner* (2d Coll. *n.* 503).

Although, at first sight, this very much resembles the *A. Brasilinianum*, it is truly and abundantly distinct. The leaves are larger, smoother, with a tendency to be 3-lobed; the styles are short; the tips of the corolla very hairy, and the achenia more coarsely muricated or tuberculated; but what distinguishes it best, is the circumstance of the scales of the involucre being united into one piece, an hemispherical cup, truncated, or at most only shortly and bluntly toothed, at the margin. In these two species, and probably in all, the corollas adhere together by their viscid surface, so as to fall off in a mass from the achenia.

Fig. 1. Involucre and flowers. *f.* 2. Single floret. *f.* 3. Achenium :—*magnified.*


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TAB. CCXL.

KEERLIA SKIRRHOBASIS.

Annua ramosa canescenti-velutina, foliis sessilibus oblongis obtusis basi attenuatis integerrimis aut serratis, involucri squamis margine submembranaceis, ligulis 20-25 linearibus, corollarum omnium tubo basi demum incrassato et indurato.

Keerlia skirrhobasis. *De Cand. Prodr. v.* 5. *p.* 310.

HAB. Mexico, between Bejar and Rio Trinidado. *Berlandier.* Rio Brazos of Texas, and at San Felipe de Austin. *Drummond* (III. Coll. *n.* 186).

I had marked this as a distinct Genus among Mr Drummond's plants, when the fifth volume of De Candolle's *Prodromus* reached me, where that admirable botanist has given it under his Genus *Keerlia* (so named after a Mexican traveller, *F. W. Keerl*). Three species are there brought under it: and under one (*K. linearifolia*) is doubtfully introduced (and not only there but also under *Aphanostephus ramosissimus*) *Brachycome xanthocomoides*, Less., a plant which may probably be safely referred to the *Bellis integrifolia* of Michaux. With the second species of *Keerlia* (*K. ramosa*) I am unacquainted. The third is our present plant, remarkable for the base of the tube of the corollas (both the tubular and ligulate ones) becoming singularly thick, indurated, and corky. The pappus is a cup-shaped border to the achenium, thin and somewhat membranaceous at the margin, thick and corky at the base, as is also the achenium itself, especially the radial one.

Fig. 1. Radial floret. *f.* 2. Achenium of the same. *f.* 3. Central floret. *f.* 4. The same, with the corolla laid open.


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TABS. CCXLI. CCXLII.

Baccharis platypoda.

Fruticosa glabra resinoso-viscosa (?), ramis striato-angulatis, floridis ancipiti-compressis, foliis petiolatis obovato-cuneatis obtusis grosse dentatis coriaceis uninerviis venis hinc inde innumeris pennatis subreticulatis, capitulis ad apices ramorum florid. dense aggregato-corymbosis, involucri squamis ovato-oblongis obtusis. *DC.*

Hab. Brazil. Marianna, in Minas Geraes. *Vauthier.* Sphagnum-bog on the Organ Mountains, about 5500 feet above the level of the sea. *Mr Gardner* (2d Coll. *n.* 515).

A glabrous, diœcious shrub, from 4-6 feet high: the stem clothed with pale brown bark: the branches acutely angular, those bearing the flowers compressed and almost ancipitate. Leaves confined to the ends of the branches, from 2-4 inches long, shortly petioled, obovato-cuneate, coriaceous, very coarsely and obtusely serrated, mostly in the upper half, with very copious oblique reticulated nerves; there is also a distinct nerve running round the leaf, just within the margin. The leaves of the male plant are smaller and less obovate (more ovate). Heads of flowers collected into dense corymbs; more compound, and with longer branches in the male plant. Involucre ovate; its scales closely imbricated, oval-oblong, very obtuse, resinous. Male plant: florets with a very distinct corolla, protruded stamens, and a short, wavy, pale red-brown pappus.—Female: florets with a narrow, indistinct corolla, a protruded style, a striated fruit, and a spreading red-brown pappus.

This is perhaps one of the most distinct and well-marked species of this extensive Genus. The leaves of the female plant are often four inches long.

Fig. 1. Flower. *f.* 2. Stamens. *f.* 3. Single stamen separated from the rest. *f.* 4. Pistil. *f.* 5. Transverse section of the young fruit:—*magnified.*

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TAB. CCXLIII.

ANTHOPTERUS RACEMOSUS.

GEN. CHAR. *Calyx* ovario adhærens, turbinatus, alto-5-alatus, 5-dentatis, dentibus ovatis erectis. *Corolla* monopetala, conico-urceolata, 5-alata, 5-dentata, dentibus acuminatis erectis v. erecto-patentibus. *Stam.* 10. *Filamenta* brevia in membranam connata, calyce ad basin corollæ inserta. *Antheræ* biloculares, loculis longissime rostratis, rima elongata ad apicem introrsum dehiscentibus. *Ovarium* 5-loculare, pluriovulatum. *Fructus* subbaccatus, 5-alatus, indehiscens, 5-locularis, dentibus calycinis coronatus.—Frutex *parasiticus, glaber, habitu* Thibaudiæ *et* Macleaniæ. Rami *stricti.* Folia *lanceolata, coriacea, trinervia.* Flores *majusculi, racemosi.* Pedicelli *elongati, basi unibracteati, medium versus bibracteati.*

Anthopterus *racemosus.*

HAB. Province of Moyobamba, Peru; parasitic on trees. *Mathews;* received in 1838.

In *Macleania*, figured at t. 109, vol. II., of this work, we have an instance of a plant of the *Vaccinieæ* which has a 5-winged calyx: here we have the still more remarkable circumstance of the corolla also having 5 broad wings, corresponding with the 5 teeth of the corolla; in which respect, as well as in the different shape of the corolla, of the calyx, and in the different structure of the stamens, and in the long racemes of flowers, it differs from *Macleania*, and, as far as I know, from all of the natural order. The leaves are from 4-5 or almost 6 inches long, sessile, and the racemes equal to them in length. The fruit, in our specimens, is not quite ripe, and can scarcely be called a berry; but the pericarp is thick and coriaceous, and apparently indehiscent.

Fig. 1. Flower. *f.* 2. Stamens. *f.* 3. Single stamen. *f.* 4. Calyx and pistil. *f.* 5. Section of a scarcely mature germen:—*magnified.*

TAB. CCXLIV.

Lycopodium compactum.

Caule erecto dichotome ramoso, ramis crassis obtusis, foliis plurifariam imbricatis arctissimis ovatis obtuse subacuminatis patenti-incurvis glanduloso-serratis basi obtuse carinatis intus concavis infimis sublinearibus, capsulis axillaribus.

Hab. Pillzhum, one of the Quitinian Andes. *Prof. W. Jameson.*

In size, in the ramification, and in the shape and outline of the branches, this species so much resembles our *L. rufescens* (Tab. XXXVI. of the present work), that at first sight the two might be mistaken for the same species; but on the slightest inspection of the leaves they will be found to be abundantly different. The colour, too, of the present one is greener, though considerably tinged with red. The lowermost leaves are almost linear and reflexed; but they soon become broader and moderately patent, and always more or less incurved towards their apex.

Fig. 1. 1. Apex of a branch, with capsules. *f.* 2. Back view of a leaf, with its capsule. *f.* 3. Front view of do.:—*magnified.*


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TAB. CCXLV. A.

Entosthodon obtusifolius. *J. Hook.*

Dense cæspitosus, foliis elliptico-lanceolatis obtusis integerrimis, capsula (cum apophysi) anguste pyriformi.

Hab. Moist places, Lomas of Amancaes, near Lima, Peru. *Mathews* (*n.* 958).

Fig. 1. Single plant. *f.* 2. 2. 2. Leaves. *f.* 3. Portion of do. *f.* 4. Peristome. *f.* 5. Operculum. *f.* 6. Calyptra. *f.* 7. Teeth of the peristome:—all more or less *magnified.*

TAB. CCXLV. B.

Entosthodon Mathewsii. *J. Hook.*

Laxe cæspitosus, foliis late oblongo-lanceolatis acuminatis serratis, capsula (cum apophysi) anguste pyriformi.

Hab. Near Lima, Peru. *Mathews.*

Fig. 1. Single plant. *f.* 2. 2. Leaves. *f.* 4. Portion of the capsule and peristome. *f.* 5. Teeth of the peristome:—all more or less *magnified.*

TAB. CCXLV. C.

Entosthodon latifolius. *J. Hook.*

Laxe cæspitosus, foliis obovatis acuminatis serratis, capsula (cum apophysi) lato-pyriformi.

Hab. Near Lima, Peru. *Mathews.*

Fig. 1. Single plant. *f.* 2. 2. Leaves. *f.* 3. Peristome. *f.* 4. Operculum. *f.* 5. Teeth from the peristome:—all more or less *magnified.*

That portion of Mr Mathews' collection of plants which was gathered in the neighbourhood of Lima, has afforded 3 species of Moss, having all the characters and habit of Schwaegrichen's Genus *Entosthodon:* and all different from the Europæan *E. Templetoni;* although one, our *E. obtusifolius,* comes so very near to it, that were it not for the constantly very blunt apex of the leaf, and the rather narrower form, I should have been disposed to consider it the same. In all there is the same thin, but lax, cellular structure in the foliage, the same general form of the capsule (pyriform), and the same flattened operculum, with a minute, but more or less distinct umbo. (*J. Hooker.*)


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TAB. CCXLVI.

Andromeda Katagherensis.

Fruticosa glaber, ramis subtriquetris striatis, foliis brevi-petiolatis coriaceis ovalibus serratis acutis obtuse mucronatis reticulatis subtus ad venas fusco-glanduloso-punctatis, racemis axillaribus solitariis simplicibus, pedicellis tribracteatis, corolla ovali calycem partentem duplo excedente, ore parvo, antheræ loculis sublonge acuminatis, stigmate truncato.

Hab. Kataghery, in the Nylgherry hills, East Indies. *Dr Schmid.* (*Sir F. Adam, Bart.*)

I am indebted for this fine new Indian *Andromeda* to the kindness of Sir Fred. Adam, Bart., late Governor of Bombay, who obligingly presented me with a collection of plants from the Nylgherry hills, made there by a German botanist, Dr Schmid.

The species seems to form a rather tall glabrous shrub, with large leaves, 3 inches and more long, evergreen, coriaceous, oval, on short petioles, acute at both extremities, serrated at the margin, tipped with a blunt mucro, somewhat glossy above, reticulated on both sides, but more especially beneath, where the colour is paler, and where the veinlets are spotted with brown, in consequence of numerous glands, which appear to be resinous, but are scarcely at all prominent. Racemes much shorter than the leaves, axillary, solitary, bearing flowers to the very base. Each pedicel has a bractea more than half its length at its base, and two others near the middle. Calyx large in proportion to the size of the flower, of 5 ovato-acuminate spreading segments, more than half the length of the oval corolla, which latter has a very contracted mouth, and a limb of 5 small rounded, reflexed lobes. Stamens 10, inserted on the receptacle, much shorter than the corolla. Filament short, curved. Anthers oblong-ovate, each cell with a long acumen bent back, in which is the elongated opening, or pore. Germen globose, 5-lobed, wrinkled. Style shorter than the corolla, longer than the stamens. Stigma obtuse, truncated.

Fig. 1. Flower. *f.* 2. Calyx and pistil. *f.* 3. Stamen :—*magnified.*

TAB. CCXLVII.

Sabicea cana.

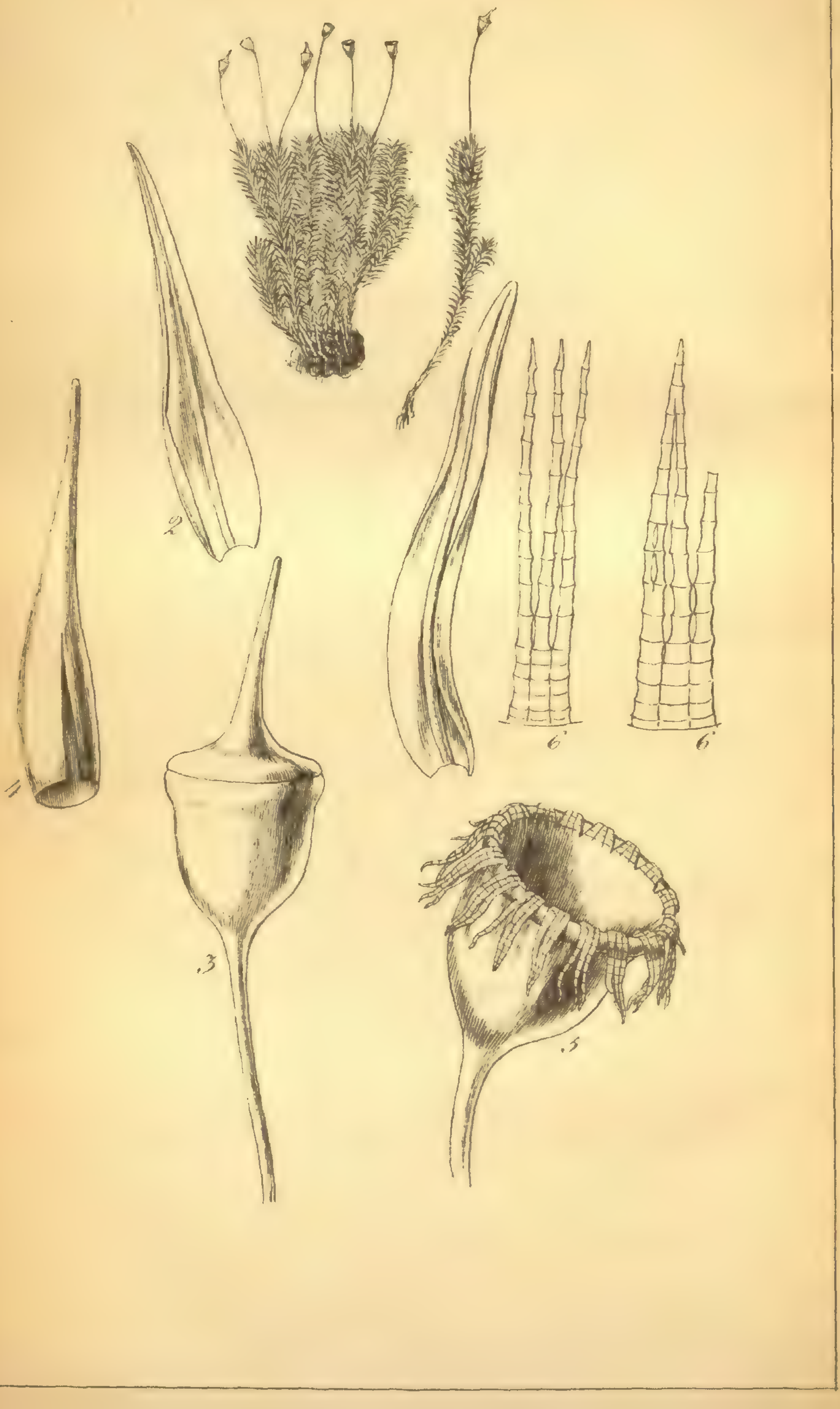
Foliis elliptico-ovatis integerrimis petiolatis basi apiceque acutis supra laxe arachnoideo-lanatis, subtus ramis stipulisque latocordatis densissime canescenti-tomentosis albis, calyce tubuloso 5-dentato; corollæ laciniis ovatis acutis, stigmate 4-partito.

Hab. Province of Moyobamba, Peru. *Mathews* (last coll. 1838).

Caulis fruticosus. *Rami* teretes, dense albo-tomentosi. *Folia* opposita, petiolata, elliptico-ovata, omnino integerrima, subcoriacea, basi apiceque acuta, parallelo-nervosa, subtus reticulata, nervis copiosis oblique cuneatis, supra laxe arachnoideolanata, subtus petiolisque dense compacte canescenti-tomentosa, alba. *Petioli* subunguiculares. *Stipulæ* magnæ, cordatæ, subtus albo-lanatæ. *Flores* in axillis et intra stipulas glomerati, sessiles, bracteati; *bracteæ* ovatæ, concavæ, extus (floresque) lanatæ. *Calyx* tubulosus, superne liber, obtuse 5-dentatus. *Corolla* infundibuliformis, fauce dense lanata; limbo 5-fido, laciniis ovatis, acutis, patenti-recurvis. *Stamina* 5, inclusa, prope medium tubi inserta. *Ovarium* 4-loculare. *Semina* numerosa, compressa, obscure reticulata. *Stylus* corolla brevior, disco rotundato carnoso insertus; *stigma* 4-partitum. *Fructus* vix, ut videtur, baccatus.

This, I believe, is a true species of *Sabicea;* though the fruit can scarcely be considered a berry, but rather an almost dry and coriaceous indehiscent capsule, densely woolly. The stamens are much disposed to become united and monstrous.

Fig. 1. Flower. *f.* 2. Bracteas and calyx; the latter in part laid open. *f.* 3. Corolla laid open. *f.* 4. Section of a young fruit:—*magnified.*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TAB. CCXLVIII.

Tridontium Tasmannicum. *J. Hook.*

Seta terminalis, exserta. *Capsula* turbinata. *Peristomium* simplex; dentibus 16 elongatis, siccitate reflexis; singula e ciliis tribus articulatis magis minusve connexis formata. *Calyptra* mitriformis, hinc fissa.—Muscus *aquaticus.* Caules *elongati, parce* (*nunc innovationibus*) *ramosi, rigidi, flexuosi, laxe cæspitosi.* Folia *laxe undique disposita, patentia, linearilanceolata, opaca, obtusa, nervo valido fusco fere ad apicem attingente, supra canaliculata, margine omnino integerrima:* perichætialia *angustiora, subacuminata: textura compacta, cellulis minutissimis.* Seta capsulaque *intense fuscæ rigidæ.* Operculum *conico-longe rostratum.* Calyptra *fusca, rigida, oblongo-acuminata, hinc basi usque ad medium fissa.*

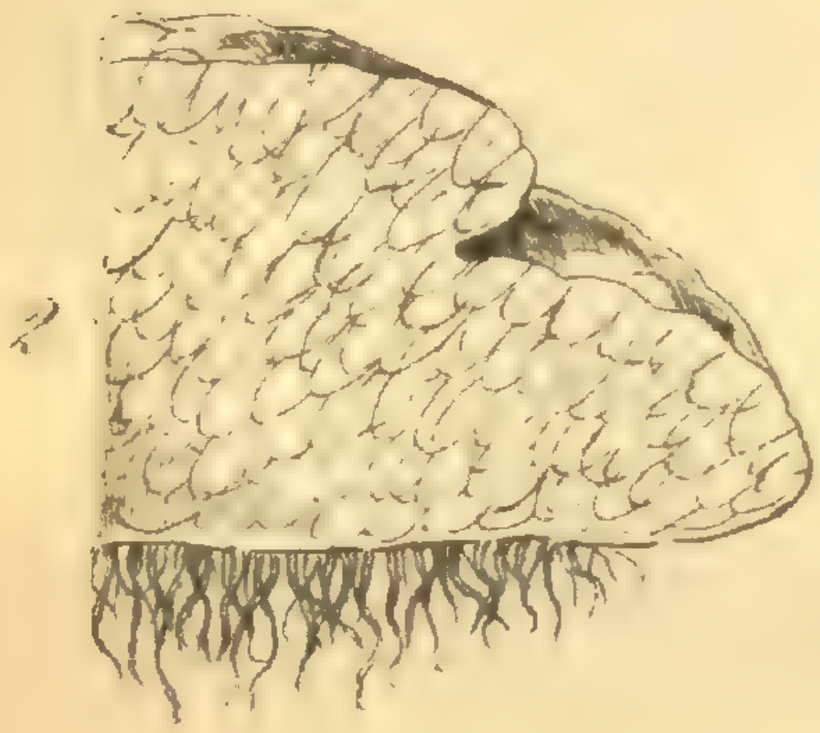
Tridontium *Tasmannicum.*

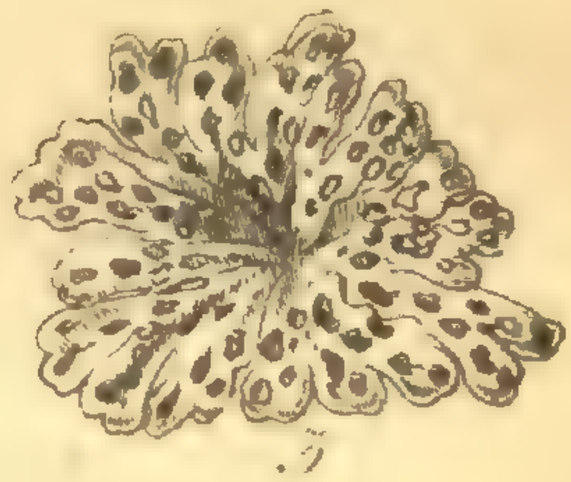
Hab. Ben Nevis, Van Diemen's Land. *Ronald Gunn, Esq.*

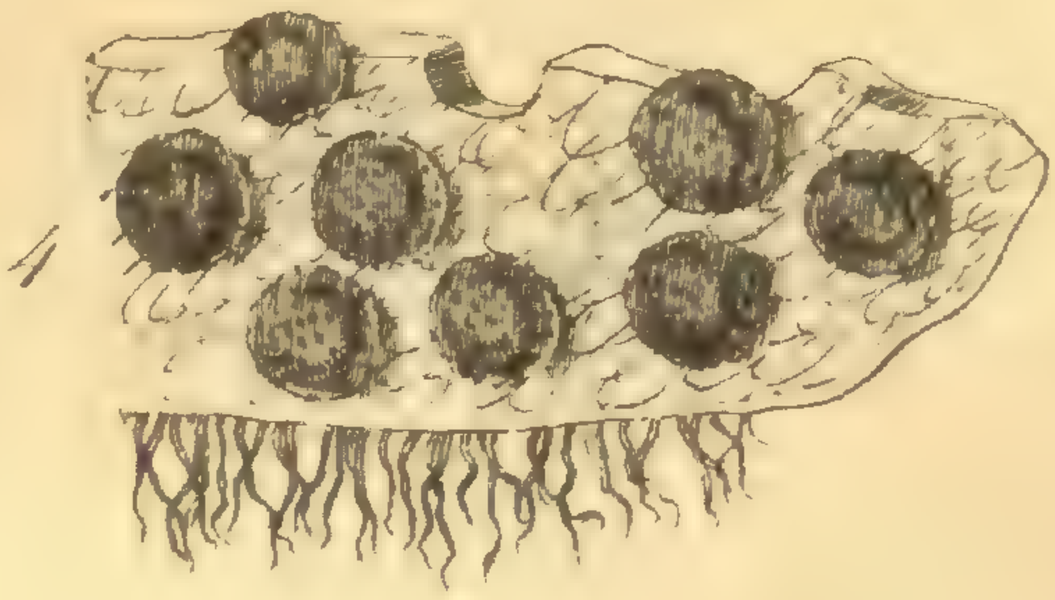
This remarkable Moss has been sent to me, by Mr Gunn, with many others, from Van Diemen's Land. It was growing in a creek at a considerable elevation on Ben Nevis, the water trickling over it; in such a locality that it must have been submerged for nine months in the year. Its habit in this respect approximates it to *Scouleria* and *Wardia,* with which it further agrees in the dark-brown colour and rigid texture of the capsule.

J. Hooker.

Fig. 1. Leaves. *f.* 2. Perichætial leaf. *f.* 3. Capsule and operculum. *f.* 4. Calyptra. *f.* 5. Capsule and peristome. *f.* 6. Teeth of the peristome:—*magnified.*







TAB. CCXLIX.

Riccia velutina.

Terrestis subtus copiose radiculosa velutina, fronde orbiculari crassa celluloso-succulenta convexa lobata, lobis imbricatis cuneatis subifidis, laciniis incrassatis obtusis, capsulis copiosis immersis demum superficialibus, sporulis aterrimis.

Riccia *velutina. W. Wilson, mst.*

Hab. On the ground, Texas. *Drummond.*

The appearance of the well-dried specimens of this plant, when the surface is not broken up by the fructifications, is exactly that of a piece of bright yellow-green velvet, occasioned by the numerous raised points of the cellules catching and reflecting the light. Fructified specimens have a very different appearance. In a young state, the capsules, exactly globose, and formed of a thin membrane, filled with dark-coloured sporules, seem to occupy all parts of the internal cellular mass; in age becoming superficial, and then, the sporules escaping, the upper surface exhibits a number of little pits or hollows, and the beautiful velvety hue of the more perfect specimens has entirely vanished. I see no appearance of an apiculus or style, as it has been called, to the capsules; but much allowance must be made for our being able to examine only the dried state of the plant.

Fig. 1. Single barren plant:—*nat. size.* *f.* 2. Section of a portion of the same. *f.* 3. Fructifying plant. *f.* 4. Section of a portion:—*magnified.*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TAB. CCL.

Eriogonum multiflorum.

Monoicum v. polygamum? caule erecto elato ramoso, foliis oblongo-lanceolatis undulatis dentatis supra arachnoideo-subtus albo-lanatis, pedunculo elongato apice 2-3-chotome ramosissimo corymboso, involucris turbinatis 5-dentatis demum nudiusculis plurifloris, perianthii laciniis ext. basi biauriculatis, int. minutis.

Eriogonum *multiflorum. Benth. in Linn. Trans. v.* 17. *p.* 413.

Hab. Texas. Between Brazosia and San Felipe de Austin, Texas. *Drummond* (2d Coll. *n.* 235. 3d Coll. *n.* 351).

This is perhaps the tallest species of a Genus which has been lately admirably illustrated by Mr Bentham, and to which Messrs Douglas and Drummond have added so many new ones by their researches in the western parts of N. America. I believe they are exclusively confined to that country, no species having been found to the east of the Mississipi River.

Of the present, the foliage is large and crowded in the lower part of the plant, gradually smaller and more distant upwards. The long peduncle is quite naked. The leaves are cobwebby above, but this woolly substance is more dense from certain points, so that at a little distance they look as if spotted with white. Flowers very numerous. Involucre with about 6-9 flowers, woolly within. The outer segments of the perianth are remarkable for their base being extended into two auricles: the inner ones are very small, linear. The inside of each flower is also woolly. Stamens 9: anthers red. Pistil of the male flower abortive: of the female (which has abortive filaments), ovato-acuminate, acutely triquetrous, with three long styles.

Fig. 1. Involucre with flowers. *f.* 2. Female flower. *f.* 3. Male flower. *f.* 4. Young fruit:—*magnified.*






TAB. CCLI.

Gossypianthus rigidiflorus.

Gen. Char. *Perianthium* profunde 5-partitum densissime lanuginosum; laciniis lanceolato-acuminatis. *Stamina* 5. *Filamenta* dilatata, omnino libera. *Anthera* terminalis, oblonga, unilocularis. *Germen* ovatum, 1-ovulatum. *Stglus* brevis. *Stigma* bifidum. *Utriculus* stylo stigmate coronatus, monospermus, pendens, ex apice funiculo filiformi.—Radix *perennis.* Caules *herbacei, procumbentes, flexuosi, lanati, præcipue apicem versus.* Folia *radicalia, elongata, spathulata;* caulina *multo minora, subsessilia, opposita, ovata, omnia integerrima, magis minisve sericeo-lanata.* Flores *in axillis foliorum caulinorum dense aggregati sessiles, lana copiosissima tecti, basi tribracteati;* bracteis *late ovatis membranaceis scariosis glaberrimis.*

Gossypianthus *rigidiflorus;* perianthii laciniis profunde striatis rigidis.

Hab. Texas. *Drummond* (Coll. II. *n.* 262).

I have in vain endeavoured to refer this plant, and a nearly allied species from the same country, to any of the genera of *Amaranthaceæ* which have been established or confirmed by Martius. Its nearest affinity is with *Iresine* and *Rosea*, but there are differences in the flowers, and still more in the habit, which would make me very unwilling to unite them. As in *Oplotheca* of Nutall, the flowers are most curiously enveloped in, and concealed by, a dense mass of fine wavy silky cotton; afterwards it becomes more lax, but always completely hiding the dense axillary clusters of flowers. The lower leaves, too, are remarkable for being much larger and longer than those of the stem. The same characters now mentioned are equally apparent in the other species to which I have alluded, and which may be thus defined:—

Gossypianthus *tenuiflorus;* perianthii laciniis tenui-membranaceis estriatis.

Hab. Texas. *Drummond* (2d Collection; and 3d Coll. where it has been mixed with *n.* 262, *G. rigidiflorus*).

In this species the habit is exactly that of *G. rigidiflorus*, nor can I point out any other character, save that of the difference in the perianth.


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TAB. CCLII.

Cevallia sinuata. *Lag.*

Gen. Char. *Calyx* ovario adhærens, tubo obovato, limbo subdecempartito, laciniis elongato-linearibus persistentibus erectis. *Cor.* 0. *Stamina* 5, erecta, ad basin laciniarum inserta: *Filamenta* brevissima, libera. *Antheræ* basi affixæ, oblongæ, biloculares, antice longitudinaliter dehiscentes, apice in appendicem subulato-lanceolatam, pubescentem, anthera subduplo longiorem, productæ. *Ovarium* calyci arcte adhærens, 1-ovulatum, ovulo ex apice loculi pendente: *Stylus* brevis: *Stigma* capitatum. *Achenium* calycis laciniis villosissimis plumosis coronatum, monospermum. *Semen* pendulum, exalbuminosum. *Embryo* dicotyledoneus: *Cotyledones* ovatæ, subhemisphæricæ. *Radicala* brevis, ad hilum seminis versa.—Herba *ramosa, pubescens simulque setosa, setis rigidis glandula impositis* (*urentibus ?*). Caulis *ramique cortice albo tenui membranaceo nitido tecti.* Folia *alterna, exstipulata, sessilia, oblonga, sinuato-pinnatifida, costata.* Flores *dense capitati, sericeo-hirsuti.* Capitula *hemisphærica, demum fructifera subglobosa, pedunculata.* Pedunculi *terminales vel laterales, ebracteati.*

Cevallia sinuata. *Lagasca Gen. et Sp. Pl. Nov. p.* 11. *cum Ic.*

Hab. New Spain. *Née* (Lagasca). "Bejar a Austin," Texas. *Berlandier, in Herb. Nostr.*

Of this rare and remarkable plant, it may be said that the stems and foliage resemble those of some *Loasa* or *Bartonia*, the inflorescence that of an *Echinops*, while the fructification, as far as I know, is quite peculiar. Lagasca, the only author I believe who has, hitherto, had the opportunity of examining the plant, refers it doubtfully to *Borragineæ*, Lindley to *Santalaceæ* with equal uncertainty, while our friend Dr Arnott considers it rather a *Thymeleous* plant, or "probably *sui Ordinis*," in which he is very likely correct.

Fig. 1. Flower. *f.* 2. The same, with a portion of the calyx removed. *f.* 3. Stamen. *f.* 4. Pistil. *f.* 5. Ovule. *f.* 6. Fruit laid open. *f.* 7. Embryo. *f.* 8. Seta or sting from the leaf:—*magnified.*

Alton & Ferguson 3th. 9

TAB. CCLIII.

Visnia Mocanera. *L.*

Mocanera Canariensis. *Juss. Dict. Sc. Nat. v.* 31. *p.* 505.

Hab. Canary islands; whence *Dr Kirkman Finlay* brought the specimen here figured. It inhabits the Laurel region, according to *Mr Webb*, who notices it among those plants of the Canaries "qui sont des monotypes dés genus qui n'ont pas encore des analogues."

Frutex glaberrimus. *Rami* juniores, angulati, fusci. *Folia* alterna, perennantia, subcoriacea, brevi-petiolata, elliptico-lanceolata, obtusa, obsolete serrata, nervosa, nervis indistinctis. *Pedunculi* axillares, bini, breves, recurvati, uniflori. *Calyx* profunde 5-partitus, basi bibracteatus, segmentis ovalibus, obtusis, subscabris. *Petala* 5, obovata, obtusa, patentia, basi coalita staminifera. *Stam.* 20, petalis breviora. *Filamenta* nuda, libera; *Antheræ* basi affixæ, ovatæ, longe acuminatæ, ad margines longitudinaliter dehiscentes. *Ovarium* ovatum, basi constrictum, obscure 10-angulatum, pilosum, 3-loculare; loculis biovulatis, ovulis pendentibus. *Styli* 3, filiformes, suberecti. *Stigmata* obtusa.

The fruit I have not seen. It has been by some writers supposed to be the "*Mocan*" of the Guanches, or ancient inhabitants of the Canaries, who made a kind of syrup of it, which was much used with their daily food and in medicine: hence the specific name applied to it by Linnæus. But Bory de St Vincent seems to think that the fruit of the Carob-tree, or of the *Myrica Faya*, was the famous *Mocan*. We doubt not but that Mr P. B. Webb will discuss the subject with his usual ability, in a forthcoming number of his valuable work on the Canary Isles. The place of the Genus in the natural arrangement has been much questioned; indeed the plant is known, we apprehend, to very few Botanists: but it seems rightly referred to *Ternstrœmiaceæ.*

Fig. 1. Flower. *f.* 2. Corolla. *f.* 3. The same laid open. *f.* 4. Stamens. *f.* 5. Pistil. *f.* 6. The ovary cut through vertically. *f.* 7. The same cut through transversely. *f.* 8. Ovules:—*magnified.*


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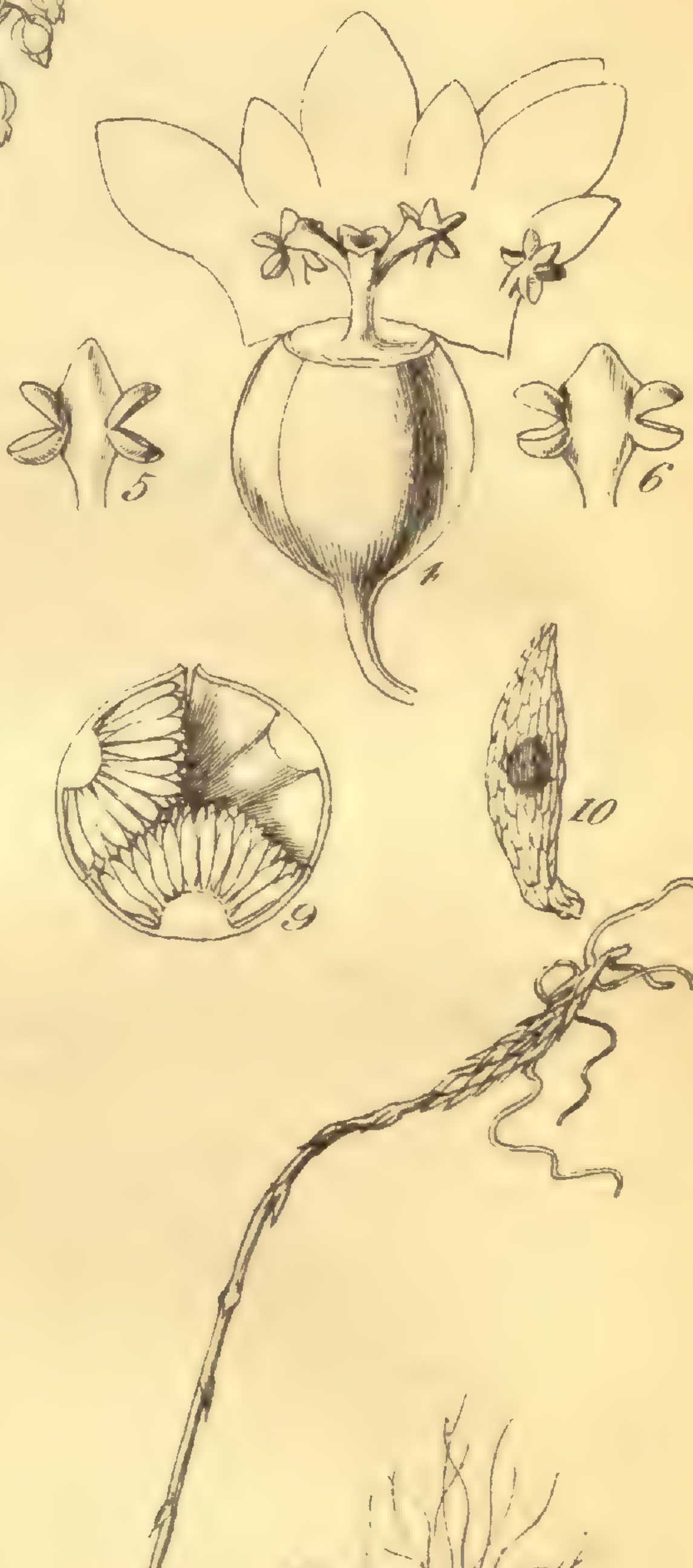
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TAB. CCLIV.

Apteria orobanchoides.

Aphylla, squamis ovatis hyalinis longissime ciliatis, floribus racemosis nutantibus urceolatis.

Dictyostegia orobanchoides. *Miers mst.—Gardner, Herb. Braz. n.* 842.

Hab. Shady woody ranges of the Corcovado mountains in the vicinity of Rio de Janeiro, on decaying timber, at an elevation of 2000 feet. *Mr Miers.*

Radix subfusiformis, fibrosa. *Caulis* erectus subsimplex, spithamæus fere ad pedalem, teres, squamosus, albus; squamis ovatis appressis, membranaceis, reticulatis, longissime ciliatis. *Racemus* terminalis, simplex vel furcatus, pluriflorus, floribus urceolatis, nutantibus, bracteatis. *Perianthium* superum, 6-fidum, segmentis ovatis, erectis, interioribus (seu petalis) minoribus. *Stamina: Filamenta* brevissima, crassa, tubo inserta petalisque opposita: *Antheræ* loculi laterales, bivalves, transversim dehiscentes. *Ovarium* subglobosum: *Stylus* brevis: *Stigmata* 3, patentia, apice dilatata. *Capsula* subglobosa, unilocularis, 3-valvis, stylo mucronata: valvis medio placentiferis, polyspermis. *Semina* minutissima, arillo fusiformi reticulata obtecta.

I am indebted to John Miers, Esq. for the accompanying figure and many accurate details respecting this curious plant, which that gentleman had no means of knowing to be identical (as it proves to be) with the Genus *Apteria** of Nuttall in *Journ. Acad. Philad. v.* 7. *p.* 64. *t.* 9. *f.* 1. Besides its leafless habit, it differs in the wingless flowers from *Burmannia*: but in other respects the structure is very similar to that Genus.

Fig. 1, 2. Scales of the stem. *f.* 3. Flower. *f.* 4. The same with the perianth laid open. *f.* 5, 6. Stamens. *f.* 7. Capsule. *f.* 8. The same burst open. *f.* 9. The same cut through transversely. *f.* 10. Seed:—*magnified.*

* This, the *Apteria setacea* of Mr Nuttall, a native of Florida, may be thus characterized:—Aphylla, squamis ovatis nudis, caule simplici vel ramoso, ramis unifloris, floribus erectis infundibuliformibus. *H.*


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TAB. CCLV.

Melasma? Zeyheri.

Gen. Char. Melasma. *Benth.*—*Cal.* laxus, foliaceus, dein inflatus, apice 5-fidus. *Cor.* infundibuliformi-campanulata, limbi lobis brevibus latis. *Stam.* subdidynama, corolla breviora. *Antheræ* omnes fertiles, loculis basi apiculatis.—Herbæ *Americanæ v. Capenses; foliis sæpius oppositis; pedunculis axillaribus unifloris bracteatis subracemosis. Benth.*

M? *Zeyheri;* foliis ovatis subtrifido-laciniatis scabris, floribus in axillis supremis foliorum bibracteatis, laciniis calycinis lanceolatis, antheræ loculis longissimis recurvis, ovario hinc gibboso.

Hab. Uitenhage. S. Africa. *Zeyher.* (Zeyher, Herb. Uitenh. n. 375.)

I refer this temporarily to *Melasma* till I can have Mr Bentham's further opinion upon it. From a casual glance that distinguished Botanist considered it to be not a true *Melasma*, and indeed the structure of the anthers and the long narrow segments of the calyx would confirm this opinion:—though in other characters and in general habit it accords sufficiently with *Melasma scabrum*, Berg. et Benth. (*Gerardia Nigrina* and *Nigrina viscosa*, *L.*), the only South African species yet known to us.

Fig. 1. Calyx with its bracteas, including the pistil. *f.* 2. Pistil. *f.* 3. Stamens. *f.* 4. Section of the ovary:—*magnified.*


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TAB. CCLVI.

Oplotheca Floridana.

Sericeo-subtomentosa, caule erecto vel declinato subrobusto, foliis lanceolatis sessilibus subtus sericeis inferioribus petiolatis, spiculis multifloris superioribus approximatis, perianthio dense lanato, fructifero cristis firmis latissimis fissis dentatisque.

Oplotheca Floridana. *Nutt. Gen. Am. v. 2. p. 79. et in Herb. Hook.—Drummond, Herb. Texas.* II. *n.* 236.

Hab. Florida and Alabama. *Nuttall.* Texas. *Drummond.* Jamaica. *Dr M'Fadyen.*

This Genus is the *Froelichia* of Moench (but not of Vahl, nor Wulf.), and its essential character depends on the curious crests of the perianth, only appearing, however, in the fructified state. I am far from certain that the *Gomphrena interrupta* of Jamaica (L'Hérit. Stirp. t. 3.) *Celosia procumbens* (Jacq. Ic. t. 51.) is not the same species. Certainly my *Jamaica* specimens are by no means different from the plant here figured. Other species, however, are found in Brazil; and a very distinct one also exists in Mr Drummond's 2d Coll. from Texas, n. 244, which may be thus characterized:—

Oplotheca *gracilis;* pubescenti-sericea, caulibus gracillimis basi decumbentibus geniculatis dein erectis, foliis anguste lineari-lanceolatis, spiculis parvis pauci-floris remotis, perianthio tomentoso, fructifero cristis brevibus crassis profunde dentatis.

Hab. Texas. *Drummond.*

Tab. CCLVI. *Oplotheca Floridana. Fig.* 1. Flower and bracteas. *f.* 2. Floral perianth (destitute of crests). *f.* 3. Staminal tube. *f.* 4. Upper portion of the same, seen from within. *f.* 5. Pistil. *f.* 6. Fructiferous perianth with its broad crests. *f.* 7. Another do. laid open. *f.* 8. Utricle. *f.* 9. Seed and seed-stalk:—*magnified.*

TAB. CCLVII.

Anemone crassifolia.

Radice subtuberosa fibris crassiusculis, foliis omnibus radicalibus paucis petiolatis cordatis coriaceo-carnosis trifidis lobis incisis subtrifidis supra pilosiusculis subtus glabris, scapo simplici appresso-piloso superne dense sericeo, involucri diphylli foliolis trifidis incisis, sepalis 6 ovalibus (albis), carpellis ovatis longe rostratis glabris apice uncinatis.

Hab. Abundant near the summit of the Black Bluff mountain, Van Dieman's Land, at an elevation of from 4000 to 4500 feet above the level of the sea, on the ascent approaching from the Vale of Belvoir. Feb. 1837. *Ronald Gunn, Esq.* (*n.* 775.) in company with *Dr. Milligan.*

One of the most distinct of all this extensive and very beautiful Genus, and at the same time perhaps one of the most rare. No locality is yet known for it besides that above given: and though abundant specimens were gathered by one of the two gentlemen above mentioned (Mr Gunn), yet, Mr Gunn observes "I unfortunately left them at a place agreed upon to be picked up by my servant, who was following on foot with my specimen-book:—and I can hardly express to you my disappointment when, on his arrival at the Hampshire Hills, I found that he had passed the spot without thinking of them, and consequently left me without a specimen. Fortunately Dr Milligan had put a few into his pocket-book, and of these he allowed me to partake."

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TAB. CCLVIII.

Cardamine intermedia.

Annua, glabra, caule erecto flexuoso, foliis (præcipue radicalibus) longe petiolatis pinnatis, pinnis 5-7 petiolulatis ovato-cordatis obtusis integerrimis, caulinis superioribus angustioribus, sepalis parvis, petalis late obovatis unguiculatis (albis), pedicellis fructiferis patentibus, siliquis erectis linearibus brevirostratis, seminibus punctatis.

Hab. Western mountains of Van Dieman's Land. *R. Gunn, Esq.* (*n.* 446?).

A solitary specimen alone of this exists in our collection from Mr Gunn, but that is not referrible to any described species. It is allied on the one hand to our C. *lilacina* (*Hook. in Comp. to Bot. Mag. v.* 1. *p.* 72 in note); and on the other to our C. *heterophylla* (*Ic. Plant. v.* 1. *t.* 58.) but is abundantly distinct from both.

Fig. 1. Flower. *f.* 2. Calyx, stamens, and pistil. *f.* 3. Pistil. *f.* 4. Siliqua. *f.* 5. Seed :—*magnified.*


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TAB. CCLIX.

Arabis gigantea.

Glabra elata ramosissima, foliis lanceolatis acutis serrato-dentatis basi attenuatis, petalis obovatis unguiculatis (albis) sepala acuta vix duplo superante, pedicellis fructiferis siliquisque linearibus rostratis patentibus, valvis (sub lente) reticulatis, seminibus punctatis.

Hab. On the Bluff of Circular Head, Van Dieman's Land. *R. Gunn, Esq.*

A species possessing little beauty indeed, but remarkable for its large size. "I found it," Mr Gunn observes, "very abundantly in one small spot of rich soil near the sea on the Bluff of Circular Head. It grows there among Ferns, Nettles, the *Sambucus Gaudichaudiana*, &c., to the height of 3 feet."

Fig. 1. Flower. *f.* 2. Sepal. *f.* 3. Petal. *f.* 4. Stamens and pistil. *f.* 5. Stamen. *f.* 6, 7. Siliquæ. *f.* 8. Seed:—*magnified.*

TAB. CCLX.

Ranunculus pimpinellifolius. *Br.*

Patenti-hirsutus, foliis radicalibus longe petiolatis pinnatis foliolis 5 ovatis cordatisque brevi-petiolulatis incisis terminali trifido v. tripartito, caulinis tripartitis v. integris, caule seu scapo paucifolio unifloro floribus inter minores, petalis 5 flavis, calyce membranaceo setoso-piloso, carpellis ovato-rotundatis compressis lævibus glabris stylo uncinato breviusculo terminatis.

α. laxe pilosus, scapis petiolisque elongatis gracilibus. R. pimpinellifolius. *Hook. in Bot. Journ. v.* 1. *p.* 243.

β. vestitus ; dense pilosus, scapis petiolisque brevioribus. (Tab. nostr. CCLX.)

Hab. *α.* Moist places, with *R. lappaceus*, and *β.* abundant on the edge of a stream called Blackman's river, near Hobart Town, Van Dieman's Land. *Ronald Gunn, Esq.*

I was at first disposed to consider this as distinct from *R. pimpinellifolius.* It is, however, probably the more perfect form of that species; that which I first described, rather appearing as if it had grown crowded and drawn up among other plants.

Fig. 1. Petal. *f.* 2. Carpel :—*magnified.*

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TAB. CCLXI. CCLXII.

LAWRENCIA* SPICATA, *Hook.*

GEN. CHAR. LAWRENCIA. *Hook.*—*Calyx* monophyllus, subinflatus, 5-fidus, bractea trifida stipatus. *Petala* 5, lanceolata, basi coalita. *Stamina* 15-20, filamentis in tubum longum coadunatis, basi cum petalis unitis: *Antheræ* 1-loculares. *Ovaria* 5, lato-ovata, acuta, in orbem circa styli basin congesta læviter coalita, 1-ovulata. *Stylus* 1, brevis: *Stigmata* 5, filiformia, exserta. *Carpella* unilocularia, indehiscentia, monosperma. *Semen* reniforme, suspensum. *Embryo* curvatus. *Radicula* cylindracea, ad hilum seminis versa. *Cotyledones* crassæ inæquales, duplicatæ.—Herba *Australasica glabra.* Radix *crassa, annua? pluriceps.* Caulis *erectus, simplex, crassus, herbaceus, medullosus,* 1-*ped. ad* 3-*ped. et ultra.* Folia *stipulata, subcarnosa, ovali-spathulata subtrinervia obscure serrata:* radicalia *longe petiolata; summis sessilibus multoties minoribus, arctissime imbricatis numerosissimis, floriferis.* Flores *parvi, sessiles, bracteati, foliis floriferis tecti, in spicam longam densam arctissime congesti.*

L. *spicata.*

HAB. Port Arthur, Van Dieman's Land; and at Port Fairy, South Australia, growing on the side of a salt-water inlet, where the ground was marshy. *Ronald Gunn, Esq.*

This is another of the many new and undescribed plants which I have received from my valued friend and correspondent, Mr Gunn. I am quite unable to point out any Genus of the Order, to which it is here referred, with which in habit it has any close affinity. The whole plant is singularly thick and fleshy, shrinking a good deal in drying; and when dried, both the leaves and flowers become so much distorted that it is difficult to represent the structure of the latter with entire accuracy. I think, however, the analysis here given may be depended upon.

Fig. 1. Flower and bractea. *f.* 2. Flower. *f.* 3. Corolla, with the staminal column and stigmas. *f.* 4. Pistil, in a nearly ripe state. *f.* 5. Calyx, from which the five capsules have fallen away, leaving the persistent base of the style to which they were attached. *f.* 6. Ripe carpel. *f.* 7. The same laid open, to show the seed. *f.* 8. Seed laid open, showing the embryo surrounded by an inner coat. *f.* 9. The seed laid open, showing the embryo itself. *f.* 10. Embryo:—*magnified.*

* So named after the late R. W. Lawrence, Esq., of Van Dieman's Land, a most enthusiastic Botanist, to whom I am indebted for my first Van Dieman's Land collections, and from whom Mr Ronald Gunn imbibed his ardent thirst for science.—*Laurencia* of Lamour. is *Chondria.*

TAB. CCLXIII.

Ophioglossum Bergianum.

Pusillum, scapis nudis (!), frondibus radicalibus linearibus angustissimis subcarnosis, radice fasciculata.

O. Bergianum. *Schlecht. Adumbr. Pl. p.* 10. *Kunze, Acot. Afr. Austr. p.* 7.

Hab. At the base of the Lion's Mountain, Cape of Good Hope. *Bergius.* Near the same locality. *Hon. W. H. Harvey.*

This pretty and very distinct species of *Ophioglossum* was detected by Bergius at the Cape, and described by Schlechtendal: and though not seen (as it appears) by the indefatigable collectors, Drege, and Ecklon, and Zeyher, it was nevertheless discovered by my lynx-eyed friend, Mr Harvey. Indeed, he suspects it not to be of rare occurrence, though being very small and growing in a scattered manner it is easily overlooked. "Its whole appearance," Mr Harvey observes, "led me, when first I espied it, to fancy I had found a very simplified Aroideous plant."

Fig. 1. Spike of capsules:—*magnified.*


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TAB. CCLXIV.

TETRACARPÆA TASMANNICA.

GEN. CHAR. *Cal.* 4-sepalus, parvus, persistens. *Petala* 4, subrotunda, unguiculata. *Stam.* 8, hypogyna, 4 pistillis opposita; 4 iis alternatia. *Filamenta* filiformia, æqualia, persistentia; *Antheræ* ovales, ad margines longitudinaliter dehiscentes. *Connectivum* conspicuum. *Pistilla* 4. *Ovarium* oblongum, in stipitem brevem attenuatum, apice in stylo crassiusculo brevi acuminatum. *Stigmata* obtusa. *Fructus: Folliculi* 4, subfusiformes. *Semina* numerosa, parva, ad suturas sita.—Frutex *Tasmannicus, humilis, glaberrimus; ramis subangulato-alatis.* Folia *alterna, exstipulata, simplicia, sempervirentia, obovato-lanceolata, nitida, coriacea, inciso-serrata, subtus pallidiora, costata, oblique nervosa, basi in petiolum breviusculum latum attenuata.* Flores *racemosi, albi:* racemi *capsuliferi anni præteriti persistentes.* Pedicelli *bracteati.*

Tetracarpæa *Tasmannica.*

HAB. First detected in 1833, near the source of the Meander (or Western) River, Van Dieman's Land. (*n.* 293) *Ronald Gunn, Esq.:* afterwards gathered on the Hampshire Hills by *Dr Milligan*, from whose specimens the accompanying figures were made.

This beautiful little shrub is altogether new to me: but much as it differs in certain characters, both of the foliage and fructification, from the Order *Cunoniaceæ*, I think it may safely be referred to it. The 4 carpels, which have suggested the Generic name, are perfectly free even in the earliest state of the ovary. The seeds are numerous and very small: but I regret that my specimens do not afford any in a fit state for examination.

Fig. 1. Flower. *f.* 2. Stamens and pistils. *f.* 3. Anthers. *f.* 4. Carpels with the persistent calyx and filaments. *f.* 5, 6. Separate carpels or follicles. *f.* 7. A carpel cut transversely:—*magnified.*

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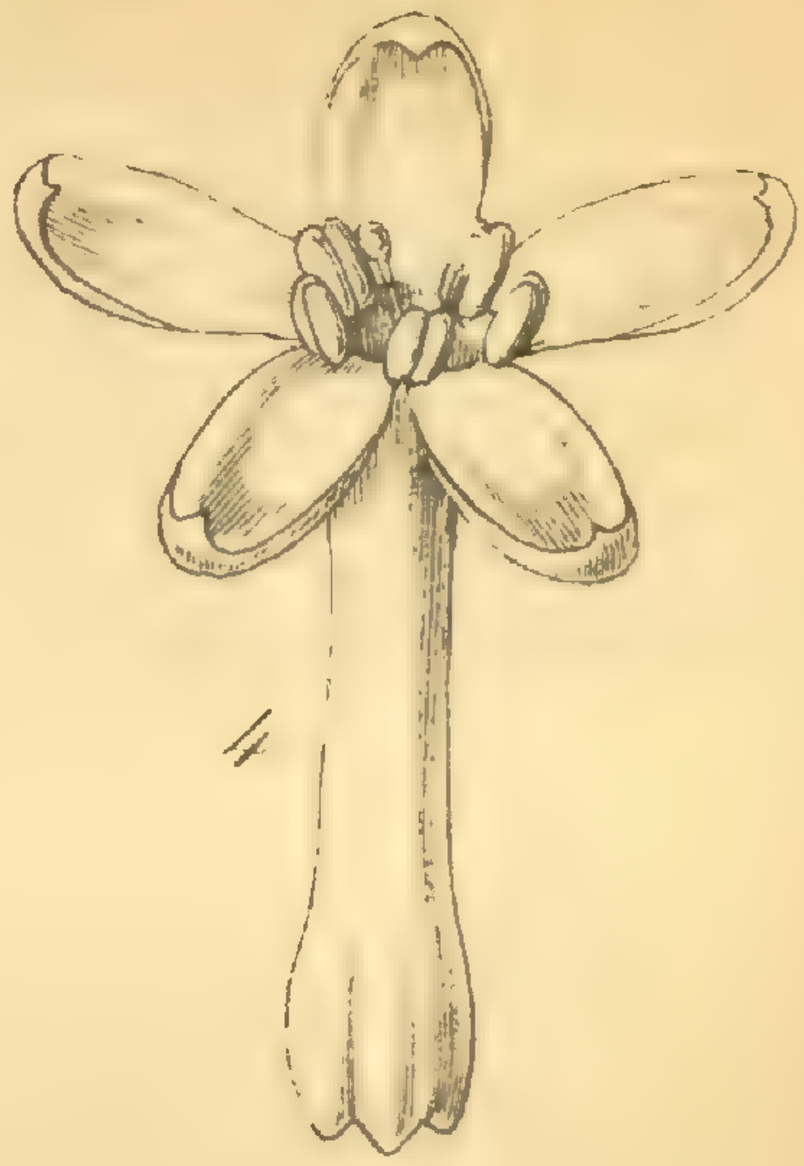

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TAB. CCLXV.

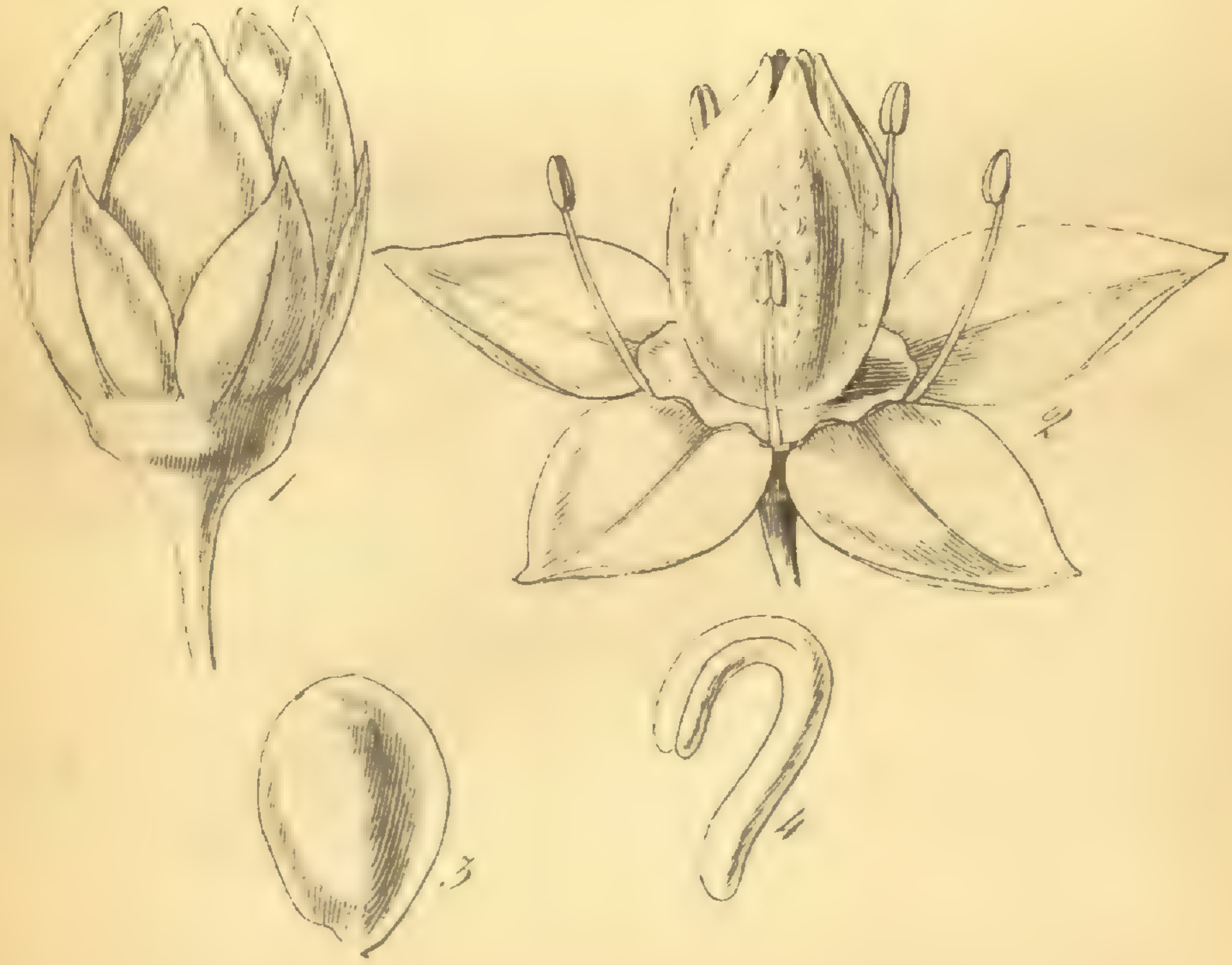
Frankenia cymbifolia.

Ramosissima, procumbens, foliis distichis cymbiformibus calycibusque sericeis, floribus terminalibus, petalorum laminis oblongis concavis unguibus in tubum longum connatis, antheris exsertis, stigmate bifido.

Hab. Communicated by *Mr Ronald Gunn*; but gathered by *Mr James Backhouse* at Great Swan Port, east coast of Van Dieman's Land. (*n.* 661.)

The beautifully silky distichous and boat-shaped leaves of this plant will at once distinguish it from every hitherto described species of the Genus. In the pistil the style is distinctly jointed upon the 2-ovuled ovary. The stigmas are capitate.

Fig. 1. Apex of a flowering branch. *f.* 2. Leaf. *f.* 3. Calyx laid open. *f.* 4. The united petals. *f.* 5. Pistil. *f.* 6. Ovary laid open :—*magnified.*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TAB. CCLXVI.

Spergula affinis.

Cæspitosa, subacaulis, foliis oppositis lineari-elongatis attenuatis costatis flexuosis, pedunculis folio longioribus, floribus apetalis petandris, sepalis ovatis acutis capsulum duplo brevioribus.

Hab. Hampshire Hills, Van Dieman's Land. *Ronald Gunn, Esq.* (*n.* 967.)

Nearly allied to *S. apetala, Labill. Nov. Holl. v.* 1. *p.* 112. *t.* 142; having the same densely-tufted mode of growth, the same elongated somewhat grass-like and closely placed leaves, and apetalous flowers. Here, however, the foliage is more flaccid, with an evident mid-rib, the calyx-leaves are broader, less tapering to a point, and in every instance much shorter than the capsule; which latter is shorter than the calyx in *S. apetala.* The hypogynous disk is, in this species, very conspicuous, saucer-shaped, with 10 obtuse lobes, at every alternate one of which a stamen is inserted. Capsule 5-valved.

Fig. 1. Capsule, showing its length relatively with the sepals. *f.* 2. Flower, with the sepals spread open. *f.* 3. Seed. *f.* 4. Embryo :—*magnified.*

TAB. CCLXVII.

Hibbertia virgata.

Glabra v. villosa, ramis elongatis virgatis, foliis lineari-setaceis dense fasciculatis, floribus solitariis sessilibus in apice ramorum perbrevium, sepalis ovatis acutis basi 4-bracteatis, petalis obcordatis, staminibus sub.-12, carpellis 3.

α. ramis foliisque glabris. (Tab. nostr. CCLXVII.)

β. ramis foliisque patentim pilosis.

Hab. Circular Head, Van Dieman's Land. *Ronald Gunn, Esq.* (*n.* 465.) *Fl.* Oct. and Nov.

A small, apparently procumbent shrub, allied to *H. prostrata*, Hook. chiefly differing in its elongated stems, which are about a foot long, but with the branches attenuated and virgate, densely clothed with fascicles of leaves, not inaptly resembling those of the larch. Flowers large and handsome, yellow, nestled, as it were, among the leaves.

Fig. 1. Calyx and bracteas. *f.* 2. Flower. *f.* 3. The same fully expanded. *f.* 4. Flower with the petals removed. *f.* 5. Stamen. *f.* 5. Single carpel :—*magnified.*

TAB. CCLXVIII.

Tetratheca ciliata.

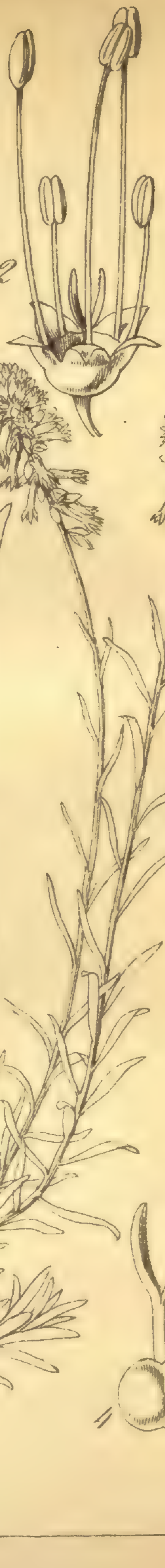
Ramis elongatis subhirtis, foliis alternis oppositis ternisve rhombeo-ovatis subciliatis subtus pallidioribus, racemis terminalibus foliosis, pedicellis nutantibus calycibus ovariisque glanduloso-setosis, petalis obovatis basi attenuatis, antheris fusiformibus.

T. ciliata. *Lindley in Mitchell's Austral. v. 2. p.* 206.

Hab. Abundant at West Head, near the mouth of the Tamar. *Ronald Gunn, Esq.* (*n.* 648.)—Australia Felix. *Major Mitchell.*

Amongst a very considerable collection of species of this beautiful Genus in my herbarium, I find none that will at all correspond with this. There is, however, in Major Mitchell's Travels in S. Australia a species briefly characterized by Professor Lindley; "T. *ciliata*, caulibus erectis tomentosis filiformibus, foliis oppositis verticillatisque obovatis ovatisque ciliatis subtus glabris, pedicellis setosis concavis acutis, petalis obovatis;"—but which in many points sufficiently accords with our plant: and which proves, upon an examination of an original specimen in Mr Bentham's Herbarium, to be identical with it.

Fig. 1. Flower. *f.* 2. The same more expanded. *f.* 3. Flower from which the petals are removed *f.* 4. Single stamen. *f.* 5. The same cut transversely through the anther. *f.* 6. Pistil. *f.* 7. Ovary cut through transversely:—*magnified.*



TAB. CCLXIX.

Stackhousia flava.

Foliis linearibus, racemis spicatis oblongis obtusis, floribus subglomeratis (parvis flavis) deflexis, bracteis brevissimis plurimis pedicellos æquantibus, lobis calycinis obtusis.

Hab. Woolnorth, and on the Harens river near Woolnorth, in a poor sandy soil. Nov. 1836. *Ronald Gunn, Esq.* (*n.* 793.)

A very distinct species, as justly remarked by Mr Gunn. The flowers are considerably the smallest of the species, clustered upon the *raceme* (rather than a spike), drooping, of a yellow colour, (not white as in the other species), with a cluster of very minute bracteas at the base, scarcely so long as the pedicels. The fruit I have not seen. The stamens are 3 long and 2 short. Style single. Stigmas 2 or 3. (*J. H.*)

Fig. 1. Flowers. *f.* 2. Flower, with the corolla removed. *f.* 3, 4. Pistils :—*magnified.*

TAB. CCLXX.

Boronia nana.

Radice fusiformi multicipite, caulibus numerosis brevibus gracilibus simplicibus, foliis breviter petiolatis 3-foliolatis, foliolis lanceolatis acuminatis punctatis, pedunculis axillaribus longitudine foliorum, floribus octandris, filamentis ciliatis stylo hirsuto, carpellis 2.

Hab. On the top of Rocky Cape, Van Dieman's Land. *Ronald Gunn, Esq.* (*n.* 894.)

Radix lignosa, fusiformis, tortuosa, parce fibrosa, superne multiceps. *Caules* plurimi, simplices, breves, foliosi. *Folia* opposita, breviter petiolata, trifoliolata: *foliola* crassiuscula, quasi carnosa, lanceolata, acuminata. *Pedunculi* solitarii, axillares, uniflori, angulati, rubri, foliorum longitudine. *Sepala* 4, persistentia, ovata, acuta, rubicunda. *Petala* 4, persistentia, ovata, obtusa, calycem duplo superantia. *Stam.* 8. *Filamenta* erecta, paululum incurvata; *alternis* brevioribus, omnibus ciliatis persistentibus: *Antheræ* cordatæ. *Ovarium* profunde 4-lobum, disco hypogyno parvo insertum. *Stylus* brevis, pilosus. *Carpella* 2, majuscula, patentia, oblonga, subrecurva, compressa, supra longitudinaliter dehiscentia.

I quite agree with the discoverer of this, Mr Gunn, in considering it an entirely new species. The tallest of the numerous stems never exceed those now figured, and all the specimens possess the characters here given. It is among the smallest, if not the very smallest of its kind. (*J. H.*)

Fig. 1. Portion of the stem with leaves. *f.* 2. Flower. *f.* 3. Stamens and pistil: (the ciliated margin of the stamens, represented in the original drawing, is here by an oversight omitted.) *f.* 4. Pistil. *f.* 5. Fruit, surrounded by the persistent floral coverings. *f.* 6. Carpels, separated from the floral coverings:—*magnified.*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TAB. CCLXXI.

GRAYIA POLYGALOIDES.

GEN. CHAR.—GRAYIA. *Hook. et Arn.*—*Flores* dioici, subracemosi. —MASC. *Perianthium* 5-partitum, laciniis æqualibus inappendiculatis. *Stamina* 5, receptaculi inserta, perianthii laciniis opposita; *squamulæ hypogynæ* nullæ.—FEM. *Perianthium* monophyllum, marginato-alatum, compressissimum, apice emarginatum, muticum, intus supra medium utriculatum. *Ovarium* in fundo utriculi sessile, anguste oblongum, apice attenuatum, uniloculare, uniovulatum. *Stylus* subulatus, basi articulatus; *Stigmata* duo, filiformia, exserta, hirsuta. *Fructus* compressus, orbiculatus, perianthio aucto membranaceo venoso persistente inclusus, styli basi apiculatus. *Semen* verticale, compressum, orbiculatum, pericarpio tenui arcte adhærens; *testa* membranacea. *Embryo* hippocrepiformis, peripheericus, albumen farinaceum cingens. *Radicula* infera.—Fruticulus *erectus, ramosus.* Rami *subspinescentes, cortice albido tecti, juniores pubescentes.* Folia *solitaria v. fasciculata, oblongo-lanceolata, basi connata, juniora puberula et carnosula, integerrima. Hook. et Arn.*

G. polygaloides. *Hook. et Arn. Bot. of Beech. Voy.* 1. *p.* 338.
Chenopodium ? spinosum. *Hook. Fl. Bor. Am.* 2. *p.* 127.

HAB. Interior of California. *Douglas.* Snake Country, near the sources of the Rio Colorado, which falls into the Gulf of California. *Tolmie.*

We had great pleasure in naming this new and very curious Genus, in the Botany of Beechey's Voyage above quoted, in compliment to a very distinguished American Botanist, and our very excellent friend, Dr Asa Gray. We regret that the male flowers were unknown to us at the time our figure was executed, or they would have been added to the plate. They resemble the male flowers of the *Atriplex*, while the female blossoms exhibit a totally different appearance.

Fig. 1. Flower and bractea. *f.* 2. Pistil. *f.* 3. Fructiferous perianth. *f.* 4. Fruit. *f.* 5. The same laid open. *f.* 6. Embryo :—*magnified.*

TAB. CCLXXII.

Ceanothus papillosus. *T. et Gr.*

Ramis teretibus hirto-tomentosis hic illic resinoso-verrucosis, foliis alternis densis oblongis coriaceis penninerviis junioribus stipulatis supra margineque glanduloso-papillosis pubescentibus subtus tomentosis, pedunculis subaggregatis ad apices ramulorum, floribus (cæruleis) capitatis deciduo-bracteatis, ovario lobulis tribus elongatis erectis.

C. papillosus. *Torr. et. Gr. Fl. N. Am. v.* 1. *p.* 268. *Hook. et Arn. Bot. of Beech. Voy.* 1. *p.* 328.

Hab. Near Monterrey, California. *Douglas.*

A very distinct and well-marked species, abounding in resinous exudations which emit a fragrant smell.

Fig. 1. Flower. *f.* 2. Ovary, with its 3 erect lobes or appendages, and surrounded by its hypogynous disk. *f.* 3. Leaf: —*magnified.*


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TAB. CCLXXIII. CCLXXIV.

MEROSTACHYS? CAPITATA.

Ramis verticillatis inferne aphyllis, foliis distichis lato-lanceolatis nervosis, vaginis superne utrinque setis longissimis fasciculatis barbatis, spiculis in capitulum globosum sessile terminale congestis.

HAB. Common in low woods about Rio. *Mr Gardner.* (*n.* 136.) South Brazil. *Tweedie.* (*n.* 1324.)

That so large and so remarkable a grass as the present should be found common in low woods about Rio, and also in South Brazil (thus indicating a very extensive range), and not have found a place in any botanical work, especially in the volume of Martius' Brazilian Grasses by Nees von Esenbech, seems scarcely credible. Yet after a considerable search, I am obliged to come to this conclusion, and to describe it as a new species. Even with the regard to the Genus I am doubtful, and have only placed it provisionally in *Merostachys*, which ought to have a secund spike for its inflorescence. Mr Gardner in his notes says, "This grass attains to a considerable height, climbing among, and supporting itself on, the branches of the shrubs among which it grows. The stem is a slender cane, from the nodi of which whorls of small branches (such as the specimen here figured exhibits) arise." Each spikelet of the capitulum is about $\frac{3}{4}$ths of an inch long, rigid. The calycine glumes are 2, ovato-subulate, nearly equal. Valves of the corolla 2, unequal, exterior ovato-lanceolate, acuminate, very concave, hispid at the margin: inner lanceolate, acuminate, obtuse, and bidentate at the point, the back with a deep furrow forming 2 keels which are hispid, and between which lies an abortive pedicellated floret. Of the perfect floret the hypogynous scale is large, bipartite, ciliate. Stamens 3. Pistil (sometimes wanting) small. Style filiform. Stigmas 2, plumose.

Fig. 1. Spikelet. *f.* 2. Flower expanded. *f.* 3. Outer corolline valve. *f.* 4. Abortive floret from the same. *f.* 5. Scale and stamens and pistil from a perfect floret. *f.* 6. Pistil. *f.* 7. Scale and stamens from a baren floret. *f.* 8. Stamen:—*magnified.*


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TAB. CCLXXV.

Loeflingia Texana.

Pentandra, stylis 3, coadunatis monogyna ramulis subsecundis, foliis subulatis connatis basin versus bisetosis, sepalis supra medium bisetosis, ovario trigono.

Hab. Interior of Texas. *Drummond* (3d Coll. *n.* 464.)

Neither the description of authors nor the figures of Cavanilles of the two European *Loeflingiæ* agree correctly with the present, and yet the differences are so slight by which all the three are characterized that it may be doubtful how far they are specifically distinct, and whether the present may not have been introduced by the Spanish settlers from the old World. I have referred the Genus to *Caryophylleæ*, rather than to *Paronychieæ*, in consequence of the absence of stipules, the only really distinguishing character.

Fig. 1. Portion of the stems with leaves. *f.* 2. Flower. *f.* 3. The same laid open. *f.* 4. Sepal. *f.* 5. Pistil. *f.* 6. Capsule burst open. *f.* 7. Seeds :—*magnified.*


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TAB. CCLXXVI.

Stenopetalum incisifolium. *J. Hook.*

Gen. Char.—*Siliqua* ellipsoidea, valvulis concavo-planis, loculis polyspermis. *Stylus* 0. *Semina* in quoque loculo biserialia minima subovata. *Cotyledones* incumbentes. *DC.*

Stenopetalum *incisifolium;* foliis inciso-pinnatifidis, siliquæ valvis concavis, loculis 12-14 spermis.

Hab. Blackman's River, on the road to Hobart Town, Van Dieman's Land. *Ronald Gunn, Esq.* (*n.* 644.) *Fl.* Nov.

Radix annua, parva ramosa; *Caules* plurimi ex eadem radice, suberecti, valde ramosi, graciles, fructiferi spithamei et ultra. *Folia* oblonga, inciso-pinnatifida, basi attenuata, laciniis 3-5. *Flores* ignoti. *Racemi* fructiferi elongati, digitales et ultra, gracillimi, flexuosi. *Pedicelli* erecto-patentes, semiunciam longi. *Siliqua* (fere silicula), duas lineas longi, vix lineam lata, stylo perbrevi terminata, ellipsoidea, glabra: *Valvulæ* concavæ, venosæ. *Loculi* polyspermi: *Semina* sub-13 in quoque loculo, biserialia, obovata. *Radicula* dorso incumbens.

The present plant is probably not generically distinct from *Stenopetalum*, though the valves of the siliqua are more concave than is consistent with De Candolle's character, and the seeds in each cell are more numerous, and the stigma is not sessile. These circumstances, however, together with the deeply cut leaves will keep it specifically distinct from *S. lineare* (Br. in De Candolle). I have to regret that Mr Gunn did not find any flowering specimens. *J. Hooker.*

Fig. 1. Siliqua. *f.* 2. Transverse section of do. *f.* 3. Siliqua with the valves separating. *f.* 4. Siliqua with the valves removed. *f.* 5. Seed. *f.* 6, 7. Embryo:—*magnified.*


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TAB. CCLXXVII.

Hymenolobus divaricatus.

Gen. Char.—Hymenolobus. *Nutt.*—*Silicula* ovata seu elliptica, valvis subtumidis paululum carinatis apteris, loculis polyspermis. *Stigma* sessile.—Herbæ *annuæ, parvæ, graciles, glabræ; caulibus divaricatis; foliis pinnatifidis v. laciniatis. Nutt. in Torr. et Gr. Fl. N. Am. v.* 1. *p.* 117.

H. *divaricatus;* procumbens ramosus, foliis brevibus pinnatifidis, lobis plurimis oblongis, supremis linearibus sæpe integerrimis, silicula elliptico-oblonga obtusa. *Nutt. in Torr. et Gr. l. c.*

Hab. Shady grassy plains of the Oregon, (Columbia) N. W. America, near the junction of the Wahlamet. *Nuttall.*

The specimens here figured are those communicated to me by the kindness of Mr Nuttall. It will be at once seen how very closely this Genus is allied to that of our preceding figure (*Stenopetalum incisifolium*) from Australia. Here the valves of the silicula are keeled, and thence there is an approach to the winged keel of *Capsella*, which has led Messrs Torrey and Gray to make the remark that it is "scarcely different from *Capsella*; with which it is apparently connected through *C. elliptica*, C. A. Meyer, (Pl. Caucas. p. 194.) *Hutchinsia procumbens*, Desv. *Hymenolobus procumbens*, Nutt. mst."

Mr Nuttall describes a second species from the Oregon which I have not seen, but which, he says, grows with the preceding, and very nearly allied to it. It is

"H. *erectus;* caule erecto ramoso, foliis oblongis subpinnatifidis v. integris, silicula lineari-oblonga."

Fig. 1. Flower. *f.* 2, 3. Silicula. *f.* 4. Valve of do. *f.* 5. Dissepiment and seeds. *f.* 6. Seed. *f.* 7. Scarcely mature embryo:—*magnified.*

TAB. CCLXXVIII.

MERIMEA (AN BERGIA?) TEXANA.

Prostrata, foliis obovato-spathulatis serratis basi utrinque stipulatis, floribus brevissime pedunculatis solitariis pentandris, seminibus punctato-lineatis.

HAB. Texas. 2d coll. (*n.* 462.) *Drummond.*

Caules procumbentes, spithamæi fere ad pedalem, ramosissimi, purpureo-fusci, pubescenti-scabri, plerumque oppositi. *Folia* opposita, unciam fere longa, patentia, obovato-spathulata, in petiolum brevem attenuata, serrata, supra glabra, subtus glabriuscula. *Stipulæ* parvæ, ovatæ ad basin petioli. *Flores* axillares, brevissime pedunculati. *Sepala* 5, ovata, acuminata, dorso hirsuto-scabra. *Petala* 5, obovata, calyce breviora. *Stam.* 5, longitudine ovarii. *Antheræ* cordatæ. *Ovarium* subglobosum. *Styli* 5, breves, distincti. *Stigmata* capitata. *Capsula* globosa. *Semina* oblongo-reniformia, punctis elevatis lineata.

I have referred this plant to *Merimea* rather than to *Bergia*, because it is a plant of the New World, (as is *Merimea*,) although the seeds are marked with dotted lines, which is the character of *Bergia* and not of *Merimea*. The exact dehiscence of the capsule I have not been able to detect: for in that particular and the coating of the seeds lie the only distinctions (according to Cambessedes) between the two genera in question.

Fig. 1. Flower. *f.* 2. Nearly mature ovary and stamens. *f.* 3. Seeds:—*magnified.*

TAB. CCLXXIX.

Saxifraga Maderensis.

Surculosa glabriuscula, foliis cordatis subquinquelobis incisis inferioribus longe petiolatis, supremis cuneatis subsessilibus, paniculis terminalibus bracteatis, pedicellis seu ramis elongatis, ovario infero, calycis laciniis lanceolato-subulatis, petalis obovatis.

S. Maderensis. *Don, in Linn. Trans. v.* 13. *p.* 414. *De Cand. Prodr. v.* 4, *p.* 30.

Hab. Madeira. *Masson. Rev. R. T. Lowe. Dr Lippold.*

A very distinct species of Saxifrage, and known in a living state we apprehend to very few botanists. The specimens to which Mr Don had access were probably in very poor condition, destitute of petals, affording very imperfect materials for the description of calyx and ovary, and the leaves do not seem to accord with those of our plant: for they are said to be cuneiform, whereas ours are constantly cordate, except the uppermost ones, which gradually pass into bracteas. The whole plant is of a rigid character: the petioles peculiarly straight, firm, slender, dilated only at the base. Petals large, white.


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TAB. CCLXXX.

Cassipourea elliptica. *Poir.*

Foliis ellipticis utrinque acutis acuminatisve breve petiolatis integerrimis, foliis distincte pedicellatis petalis subpalmato-fimbriatis.

Cassipourea elliptica. *Poir. Suppl.* 2. *p.* 131.

Legnotis elliptica. *Swartz. Fl. Ind. Occ. p.* 966. *t.* 17 (*flos.*).

Hab. Elevated mountains of Jamaica. *Swartz.* Interior of Dominica. *Dr Imray.*

Arbor excelsa, 20-30-pedalis, ramis cortice fusco rimoso tectis. *Folia* opposita, exstipulata, brevi-petiolata, 3-4 uncias longa, subcoriacea, glabra, elliptica, basi apiceque acuta v. subacuminata, integerrima, costata, nervosa. *Pedunculi* axillares, aggregati, petiolo paululum longires, uniflori, basi minute bracteati. *Calyx* brevi-tubulosus, latus, 4-lobus, lobis obtusis. *Petala* 4; obovato-spathulata, unguiculata; lamina longe fimbriata, laciniis pubescentibus. *Stamina* 15 dorso annuli membranacei (imo calycis inserti) affixa, erecta, libera. *Antheræ* subrotundæ, biloculares. *Ovarium* subrotundum pubescenti-hirsutum, 3-loculare, loculis pluriovulatis. *Stylus* elongatus; *Stigma* dilatatum. *Fructus* non vidi.

I am indebted to my intelligent and valuable correspondent, Dr Imray, of Dominica, for specimens of this rare plant. A second species of this genus is in Dr Schomburgk's *Guiana Herbarium* (*n.* 527) which has the leaves twice as large, and in proportion, longer, decidedly serrated, and the flowers larger and sessile. It is perhaps the *C. macrophylla*, De Cand., who described it from Martius' collection, as an inhabitant of Para.

Fig. 1. Flower. *f.* 2. Stamens, with the annular membrane from which they rise. *f.* 3. Petal. *f.* 4. Pistil. *f.* 5. Section of ovary :—*magnified.*


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TAB. CCLXXXI.

Trifolium (Involucraria) obtusiflorum.

Pubescens, caule elongato, foliolis obovato-lanceolatis, spinuloso-denticulatis, stipulis lanceolatis profunde inciso-spinosis, pedunculis axillaribus folio multo longioribus, involucris planiusculis parvis reticulatis inciso-spinosis capitulo laxiusculo majusculo triplo brevioribus, calycis dentibus subulato-spinosis integerrimis longitudine tubi carina obtusa apice subdentata multo brevioribus, ovario oblique obovato subdispermo, stylo longissimo.

T. obtusiflorum. *Hook. et Arn. Bot. of Beech. Voy. v.* 1. *p.* 331.

Hab. Near Monterrey, California. *Douglas.*

This plant is about a foot high, downy. The flowers large in proportion to the size of the involucre. Corollas long, pale-coloured, with a dark spot on the keel, the vexillum very blunt, and at the apex slightly toothed or jagged. Alæ very narrow, almost as long as the vexillum.

Fig. 1. Flower. *f.* 2. Pistil:—*magnified.*


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TAB. CCLXXXII.

Phaca densifolia.

Decumbens subincano-pubescens, caule striato, foliolis 16-18-jugis densis obovato-cuneatis retusis, stipulis connatis ovatis acuminatis membranaceis, pedunculis folio longioribus, racemis ovatis demum reflexis densifloris, bracteis parvis subulatis pedicellos æquantibus, calycis tubo brevi dentibus lato-subulatis brevibus rectis subæqualibus, legumine maximo subbiuniciali elliptico acuto inflato.

P. densifolia. *Sm. in Rees, Cycl.—De Cand. Prodr.* 2. *p.* 274. *Hook. et Arn. Bot. of Beech. Voy.* 1. *p.* 138 *and* 334. *Torr. et Gr. Fl. of N. Am.* 1. *p.* 344.

P. canescens. *Nutt. in Torr. et Gr. l.c.*

Hab. California. *Menzies. Beechey. Douglas. Nuttall.*

A species remarkable for its numerous leaves and crowded leaflets, and for the large size of the inflated pods.

Fig. 1. Flower. *f.* 2. Pistil :—*magnified.*


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TAB. CCLXXXIII.

Mniarum fasciculatum. *Br.*

Caule multiplice procumbente ramoso, ramis tenuissime pubescentibus, foliis per totam longitudinem denticulatis. *Br.*

Mniarum fasciculatum. *Br. in De Cand. Prodr.* 3. *p.* 378.

Hab. Van Dieman's Land. *Brown.* Gathered near Ross and at Circular Head in that country by *Ronald Gunn, Esq.* (*n.* 97.) It forms dense patches on the ground, stones, &c.

A genus very closely allied to *Scleranthus*, and scarcely differing but in the 4 (not 5) divisions of the calyx and 1 stamen (not 5 or 2 stamens). Of this plant there are two varieties in the collection; that here figured with crowded flowers, and a smaller state with the flowers more scattered. Neither agrees with the original *M. biflorum* of Forst., which however only seems to differ from *M. fasciculatum* in the minute (for it is very minute) denticulation being confined to the base of the foliage. The Order *Scleranthеæ* is separated by Linck from *Paronychieæ*, in consequence of the absence of petals and stipules. Professor Lindley considers them more nearly related to *Chenopodeæ*, "from which they chiefly differ in the indurated tube of the calyx, from the orifice of which the stamens proceed, and in the number of the latter often (not in *Mniarum*) exceeding that of the divisions of the calyx."

Fig. 1. Flower. *f.* 2. The same laid open. *f.* 3. Pistil:—*magnified.*

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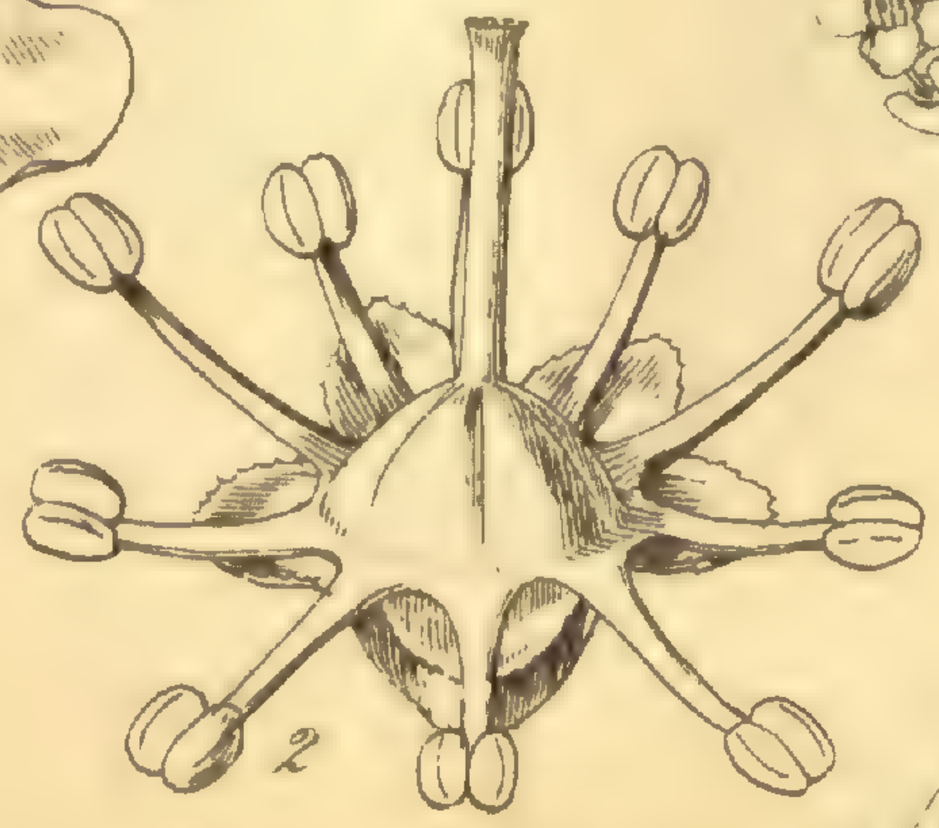

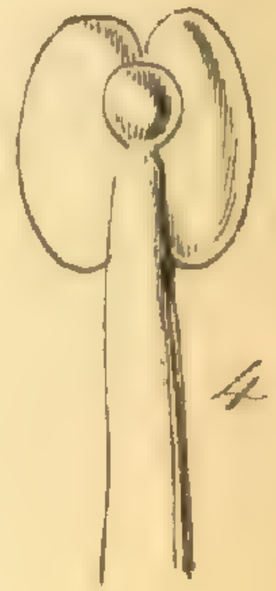

TAB. CCLXXXIV.

(A.)

Bæckia thymifolia. *J. Hook.*

Ramis prostratis, foliis remotiusculis ellipticis obtusissimis superne lineatis, floribus ex axillis foliorum superiorum, pedunculis folia subæquantibus, infra medium bibracteatis.

Hab. Van Dieman's Land, abundant among the stones on the banks of the south Esk, where it makes a very lively appearance. *Mr Lawrence. Ronald Gunn, Esq.*, (*n.* 86.) Port Arthur. *Mr Backhouse.*

A.—B. thymifolia. *Fig.* 1. Flower and peduncle. *f.* 2. Flower, the petals being removed. *f.* 3, 4. Stamens. *f.* 5, 6. Leaves:—*magnified.*

(B.)

B. *prostrata;* ramis prostratis, foliis remotiusculis linearibus lævibus, floribus axillaribus versus apicem ramorum, pedunculo foliis breviore apice bibracteato.

Hab. Circular Head, plentiful there in a sandy tract of land, extending some miles inland from the Peninsula. *Ronald Gunn, Esq.* (*n.* 816.)

B.—*Fig.* 1. Flower and peduncle. *f.* 2. Leaf.

(C. D.)

B. *affinis;* ramis prostratis, foliis remotiusculis linearibus lanceolatisve acutiusculis, floribus ex axillis foliorum superiorum, pedunculis longitudine foliorum medio vel paullo infra medium bibracteatis.

α. foliis linearibus punctatis.

C.—*Fig.* 1. Flower and peduncle. *f.* 2. Leaf:—*magnified.*

β. foliis lanceolatis acutis vix punctatis.

D.—*Fig.* 1. Flower. *f.* 2. Leaf:—*magnified.*

Hab. Bed of the Elizabeth River at Campbell Town, Nov. 1835. *Ronald Gunn, Esq.* (*n.* 683.)

The above three species are undoubtedly nearly allied to each other, yet I think distinct. *J. Hooker.*


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TAB. CCLXXXV.

Trifolium macrocalyx.

Erecta glabra, foliolis obcordatis serratis, stipulis lanceolatis, capitulis subglobosis, calyce amplo ad basin bilabiato reticulato, labio inferiore minimo lineari-subulato, superiore profunde 4-fido subdentato, vexillo vix calycem superante ovato-rotundato sessili apice denticulato, alis bifidis grosse serratis, carina minima inclusa, leguminibus oblongis 7-9-spermis.

Hab. Texas: San Felippe. *Drummond.* Bejar and the Rio Trinidad. *Berlandier.*

One of the most distinctly marked species of this very extensive genus. I am unacquainted with any that at all approaches it in the structure of its flower. The calyx is peculiarly large, deeply and very unequally 2-lipped: the lower lip minute entire, the upper 4-fid, the superior segments shorter and broader, the whole distinctly reticulated, and more or less hairy, as are the pedicels. The petals are as singular in structure as the calyx. The vexillum is sessile, scariose, brown when dry, scarcely longer than the calyx, broadly ovate, the sides deflexed so as to include, almost entirely, the alæ, as they do completely the small carina. Alæ with the lamina bifid, the lobes acute and serrated. Legume oblong, ciliated above, including several seeds.

Fig. 1. Flower. *f.* 2. Front view of the calyx. *f.* 3. Corolla. *f.* 4. Vexillum. *f.* 5. Alæ. *f.* 6. Carina. *f.* 7. Stamens. *f.* 8. Pistil. *f.* 9. Legumen :—*magnified.*


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TAB. CCLXXXVI.

STILOPUS VERNUS.

Stylopus *vernus*. *Rafinesque.*
Stylopus vernus. *Short. Suppl. Cat. Pl. of Kentucky, p.* 599.
HAB. Kentucky. *Dr Short.*

Radix ut videtur perennis, fibris crasiusculis, fuscis. *Caules* plurimi ex eadem radice, erecti, vel adscendentes, pedales ad bipedalem, simplices, superne floribus paniculati, striati, hinc pilosi. *Folia* pilosiuscula, omnia (supremis seu bracteis exceptis) sublonge petiolata: *radicalia* cordata, lobata, obtusa, crenata; *caulina* pinnatisecta, pinnis ovato-cuneatis, incisis, inferioribus sæpe nanis. *Stipulæ* magnæ, semiovatæ profunde inciso-serratæ. *Flores* in ramis brevibus terminalibus, demum (post anthesin) paniculam amplam formantes, erecti, parvi. *Calyx* obconicus basi obtusus, ultra medium 5-fidus, laciniis ovatis, demum arcte reflexis. *Petala* oblonga, flava? vix calycem superantia. *Stamina* plurima, ad oram calycis tubi inserta, persistentia. *Pistilla* numerosa, in capitulum globosum brevi-stipitatum intra calycem congesta, glabra. *Ovarium* ovatum, compressum; *Stylus* filiformis demum elongatus, persistens, apice uncinato-geniculatus. *Fructus* maturi *capitulum* longe stipitatum, stipite e calyce longe exserto. *Carpella* ovata, stylo elongato apice geniculato longe aristata.

Of this rare and little known plant, I have had the pleasure to receive beautiful specimens from my valued friend Dr Short; and it will be seen by the figures and accompanying description, how very closely it is allied to the genus *Geum:* perhaps not generically distinct. I am unable to find that it has yet been described by any author.

Fig. 1. Flower. *f.* 2. Carpel. *f.* 3. Portion of a fruiting panicle, *nat. size.* *f.* 4. Fruit:—All but *f.* 3. *magnified.*


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TAB. CCLXXXVII.

Condalia obovata.

Spinosa, foliis alternis obovato-spathulatis integerrimis, floribus axillaribus aggregatis.

Hab. Texas. 3d Coll. (*n.* 459.) *Drummond.*

Frutex glaber, ramis flexuosis, sæpe spinosis, cortice cinereo tectis. *Folia* alterna, vix unciam longa, obovato-spathulata, in petiolum brevem attenuata, integerrima, tenui-marginata, mucronata, sub lente reticulata. *Flores* parvi, virides, axillares, subaggregati, brevissime pedicellati. *Calycis tubus* perbrevis, intus disco carnoso annulatus, limbo profunde 4-fido, laciniis ovatis, acutis, patentibus. *Corolla* 0. *Stamina* laciniis calycinis alterna, erecta, ad marginem exteriorem disci inserta. *Filamenta* brevia, erecta. *Antheræ* subrotundæ, biloculares. *Ovarium* fere omnino liberum, ovatum, glabrum, in stylo brevi attenuatum; *Stigma* parvum, trilobum. *Fructus* drupaceus, magnitudine *Pisi minoris*, globosus, apiculatus, basi calyce persistente cinctus, monospermus. *Albumen* carnosum. *Embryonis* radicula infera. *Cotyledones* convexæ, carnosæ.

I am at a loss whether to refer this Texian plant to *Rhamnus* or *Condalia*. It seems to agree best with the latter, yet the segments of the calyx are not deciduous, but persistent, remaining when the fruit is ripe.

Fig. 1, 2. Flowers. *f.* 3. Drupa. *f.* 4. The same cut through transversely. *f.* 5. The embryo:—*magnified.*

TAB. CCLXXXVIII.

Amygdalus glandulosa.

Foliis (parvis) elliptico-lanceolatis calycibusque pubescenti-tomentosis marginibus glanduloso-dentatis, floribus solitariis vel aggregatis brevi-pedunculatis.

Hab. Between Laredo and Bejar, Texas. *Berlandier*.

Rami flexuosi, cortice cinereo obtecti. *Folia* pollicaria, alterna, solitaria vel fasciculata, stipulis brevissimis stipata, oblongo-seu elliptico-lanceolata, obtusa, vix petiolata, supra dense pubescentia, subtus subpannosa, pallidiora, marginibus dentato-serratis, serraturis glandula majuscula terminatis. *Pedunculi* axillares, solitarii vel fasciculati, 1-2-lineas longi, pubescentes. *Calyx* dense pubescens: *tubus* globoso-hemisphæricus; *limbus* 5-fidus; laciniis ovalibus, patentibus, marginibus glanduloso-dentatis. *Petala* 5, obvato-subrotunda. *Stamina* 20-25. *Ovarium* liberum, ovatum, pubescens, 1-loculare, 1-ovulatum, ovulo appenso. *Stylus* longe exsertus, filiformis, flexuosus. *Stigma* parvum, capitatum.

This interesting little *Amygdalus*, will undoubtedly rank next to the *A. microphylla*, Humb. and Kunth, *Gen. et Sp. v.* 6. *p.* 191. *t.* 564:—though it differs from it in many particulars: especially in the very downy foliage and calyx, in the glands which terminate every one of the serratures, in the obtuse apex to the leaves, and in the more numerous stamens.

Fig. 1. Leaf. *f.* 2. Flower. *f.* 3. Flower from which the petals are removed. *f.* 4. Pistil. *f.* 5. Ovary cut open to show the position of the ovule:—*magnified*.


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TAB. CCLXXXIX.

MYRIOPHYLLUM VARIÆFOLIUM. *J. Hook.*

Simplex v. ramosum, foliis verticillatis nunc omnibus linearibus simplicibus dentato-pectinatis nunc superioribus linearibus integerrimis intermediis pectinato-inferioribus (submersis) capillaceo-pinnatifidis, floribus axillaribus, fructibus pubescentibus. *J. Hook.*

HAB. Stagnant waters; Lachlan River, N. Holland. *Allan Cunningham, Esq.* Van Dieman's Land. *Ronald Gunn, Esq.* (*n.* 75.)

Caulis erectus, subpedalis, simplex vel dichotome divisus, teres, ad apicem foliosus. *Folia* verticillata, quaterna vel sena, nunc omnino linearia denticulata v. etiam pectinato-dentata, nunc *superiora* linearia, integerrima: *inferiora* pectinata, infimis (submersis) capillaceo-pinnatifidis, segmentis tenuissimis. *Flores* axillares, solitarii v. subaggregati, brevissime pedunculati. MASC. superiores. *Cal.* 4-lobus. *Petala* 4, demum patentia. *Stamina* 8. *Filamenta* brevia. *Antheræ* lineari-oblongæ. FŒM. *Pistilla* 4, in unum coalita, calyci arcte adhærentia, oblonga, basi unibracteata. *Stigmata* crassa, tomentoso-plumosa. *Carpella* 4, subconcreta, pubescentia, stigmatibus coronata.

We have long possessed what we consider the same species as that of Van Dieman's Land from the Lachlan River, gathered by Mr Allan Cunningham. His specimen is however larger, and the leaves are all more or less dentated. But it is well known how variable is the foliage of many aquatic plants.

Fig. 1. Male flower in the axil of a leaf. *f.* 2. Male flower, fully expanded. *f.* 3. Stamen. *f.* 4. Female flower in the axil of a leaf. *f.* 5. Fruit. *f.* 6. Single carpel:—*magnified.*


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TAB. CCXC.

Goniocarpus serpyllifolius. *J. Hook.*

Diffusus minute pubescenti-scaber, foliis oppositis ovatis acutis marginatis integerrimis vel grosse subinciso-serratis, floribus solitariis sessilibus in axillis foliorum supremorum subspicatis, petalis cymbiformibus acutis extus hirsutis.

Hab. Common on open plains of the western parts of Van Dieman's Land, and on the Hampshire Hills. *Ronald Gunn, Esq.* (*n.* 257.)

Caules ramosi, diffusi, graciles, scabriusculi. *Folia* opposita, parva, vix 2 lineas longa, rigida, minute pubescenti-scabra, ovata, sessilia, marginata, enervia, supra convexiuscula, subtus paululum convexa, margine subcartilagineo-pallida, integerrima vel grosse et remote serrata. *Flores* sessiles, solitarii, in axillis foliorum minorum superiorum, et quasi spicati. *Calycis tubus* obovatus, tetragonus, 8-striatus, ovario 4-loculari arcte adhærens: *limbus* 4-partitus, laciniis cordatis acutis marginatis. *Petala* 4, ovario longiora, cymbiformia, acutissima, dorso carinato hirsuto. *Stamina* 8. *Filamenta* brevissima. *Antheræ* lineari-oblongæ, 4-loculares. *Stigmata* 4, sessilia, magna, dense plumosa.

Fig. 1. Leaf. *f.* 2. Flower and floral leaf. *f.* 3. Stamen. *f.* 4. Flower, with the petals and stamens removed. *f.* 5. Ovary laid open vertically, showing two of the cells and the pendent ovules. *f.* 6. Transverse section of the ovary :—*magnified.*


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TAB. CCXCI.

Rubus Gunnianus.

Repens inermis subherbaceus, ramis brevissimis apice foliosis, foliis ternatis (rarius integris simplicibus) foliolis inciso-serratis glabris terminali triplo majore, petiolis dilatatis, flore terminali solitario, pedunculo pubescente foliis breviore, calyce glabro, ovariis subquinque.

Hab. On the Surrey Hills, Van Dieman's Land, abundantly in fruit in February. It also grows as low down as the Hampshire Hills, but the fruit does not there come to perfection. *Ronald Gunn, Esq.* (*n.* 271.) *Dr Milligan.*

"This forms large patches in exposed situations, covering spaces 2 feet or more in diameter, generally growing on decayed wood, frequent on the rotten end of a tree, of which the other end is still sound. In general, if there be no traces of wood remaining, yet, on examination, I have generally found the soil consisted principally of decayed wood or bark, mixed with other vegetable matter. The fruit, which is large, and nearly of the size of *Rubus saxatilis*, as figured in the *Flora Londinensis*, (to which indeed it bears a great resemblance,) grows beneath the foliage, usually hidden from the light, and partly, sometimes wholly, buried in the light soil in which it grows. The flavour is excellent, being very similar to that of the *Cranberry*. From its growing where snow covers the ground a considerable part of the winter, and where the climate is at all seasons very cold, I think it would succeed well in your country, and be an agreeable addition to your list of esculent fruits."—*Mr Gunn in Letter.*

So interesting a plant, found in a country which is proverbial for being destitute of esculent fruits, richly deserves the name of its inestimable discoverer, who has so successfully exerted himself in making known the vegetable productions of Van Dieman's Land. The species belongs to the same group with *Rubus arcticus, saxatilis, Chamæmorus, &c.*

Fig. 1, 2. Flower. *f.* 3. Calyx laid open :—*magnified.*

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TAB. CCXCII.

Vaccinum Imrayi.

Fructicosum glaberrimum, foliis brevi-petiolatis ovatis utrinque acutis coriaceis subtus reticulatis, corymbis pedunculatis axillaribus terminalibusque, corollis quinquefidis crassissimis, antheris muticis.

Hab. Mountains of Dominica. *Dr Imray.* (*n.* 147.)

Frutex elatus, ramis lignosis, junioribus rufescentibus. *Folia* bi-triuncialia et ultra (in unico exemplari 5-uncialia) coriacea, dura, ovata, integerrrima, acuta, basi in petiolum brevem attenuata, supra lævia, obscure et oblique penninervia, subtus venis prominentibus reticulata. *Pedunculi* folio breviores, axillares vel terminales, apice corymbosi. *Pedicelli* superne dilatati, sub calycem articulati. *Flores* majusculi. *Calycis tubus* subglobosus, limbo brevi, 5-lobo, lobis latis brevi-subapiculatis. *Corolla* longitudine ovarii, subcampanulata, crassissima, limbo 5-lobo, lobis ovatis acutiusculis erectis marginibus involutis. *Stamina* 10, ad basin corollæ inserta. *Filamenta* brevia, dilatata. *Antheræ* ovata, apice attenuatæ, muticæ, poris 2 obliquis dehiscentes.

This is one of the most remarkable species of the genus with which I am acquainted, and one of many fine and beautifully preserved plants of Dominica, for the possession of which, I am indebted to my valued correspondent Dr Imray. Of the present plant the firm coriaceous leaves are, in one specimen in my possession, 5 inches long. The pedicels are, each of them, dilated immediately beneath the ovary or calyx, and there jointed; but the most remarkable feature in the plant is its extremely thick corollas, so thick and so firm, that they are difficult to dissect, even with a very sharp knife.

Fig. 1. Flower. *f.* 2. Calyx and pistil. *f.* 3. Portion of the corolla and two of the stamens :—*magnified.*


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TAB. CCXCIII.

Claytonia Australasica. *J. Hook.*

Cæspitosa, foliis elongato-linearibus subspathulatis, pedunculis 1-bifloris, petalis obovatis calycem quadruplo superantibus.

Hab. Sidmouth and Emu Plains, on the road to Bathurst, New Holland (an aquatic). *Allan Cunningham, Esq., in Herb. nostr.* Wet places, Circular Head, and Hampshire hills, Van Dieman's Land. *Ronald Gunn, Esq.* (*n.* 160.)

This plant is somewhat succulent and so delicate, that it is difficult to distinguish the exact structure of the flowers and the fruit. There can, I think, be no doubt of its being a true *Claytonia*, very different from any hitherto described, and, as far as I can distinguish, the first species that has been detected in Australia, or even in the southern hemisphere. The plant varies much in size, from 1 to 6 or 8 inches in height, generally growing in rather dense tufts, sometimes more straggling, and then the stems are creeping. Leaves from 2 to 4 or 5 inches long, generally alternate. Flowers large (for the genus), pure white. Capsule globose, mucronate, included in the persistent 2-leaved calyx. Capsule 3-valved. Seeds large, about 3.

Fig. 1. Flower. *f.* 2. Petal and stamen. *f.* 3. Pistil. *f.* 4. Fruit. *f.* 5 Capsule, burst open. *f.* 6. Seed :—*magnified.*

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TAB. CCXCIV.

Ilex cuneifolia.

Tetrandra, ramis angulatis, foliis alternis brevi-petiolatis obovato-cuneatis, coriaceis glàbris supra nitidis convexis subtus pallidioribus, pedunculis 1-3 floris, calycibus corollaque crenulatis.

Hab. Jamaica. *Dr M'Fadyen.* (*n.* 26.)

Much as the island of Jamaica has been visited in a commercial point of view, we are satisfied its extensive woods and lofty mountains are not yet explored as they ought to be, by the botanist; and we are glad to find that Dr Macfadyen, limited as his professional engagements allow his excursions to be, seldom undertakes a botanical journey that is not rewarded by some new or little known plant. A future number of this work will exhibit a new and very distinct *Garrya,* which that gentleman has discovered in Jamaica. The present plate is devoted to what we consider a new *Ilex,* although the fruit is at present unknown to us. It does not accord with any described species.

Fig. 1. Flower-bud. *f.* 2. Fully expanded flower. *f.* 3. Corolla laid open. *f.* 4. Pistil:—*magnified.*


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TAB. CCXCV.

TILLÆA VERTICILLARIS.

Caule ascendente basi præcipue ramoso, foliis oppositis lato-lanceolatis costatis venis lateralibus arcuato-deflexis, novellis axillaribus fasciculatis, floribus quadrifidis pedunculatis axilliaribus solitariis v. subverticillatim congestis, squamis hypogynis fasciculatis.

Tillæa verticillaris. *De Cand. Prodr.* 3. *p.* 382.

Tillæa pedunculata. *Sieb. Pl. Exsicc. Nov. Holl. n.* 173. (*non Sm.*)

HAB. New Holland. *Sieber.* Van Dieman's Land; abundant on rocks where there is a scanty soil, being, as it were, the first production after the original *Lichens* have constituted a little soil. *Ronald Gunn, Esq.* (*n.* 91.) King George's Sound. *Mr Fraser.*

Caules palmares ad spithamæam, basi procumbentes ramosi, dein erecti. *Folia* semiunciam fere longa, membranaceo-carnosa, opposita, lato-lanceolata, acuta, integerrima, sessilia, fere connata, costata, nervosa, nervis arcuato-deflexis. *Folia* novella axillaria, fasciculata. *Pedunculi* axillares, vel superiores congesti, sæpe subverticillata, nunc foliis breviores nunc longiores, uniflori. *Sepala* 4, late ovata, acuminata, petalorum ovato-lanceolatorum longitudine. *Stamina* 4. *Squamæ hypogynæ* 4, spathulatæ germini appressæ, staminibus alternantes. *Ovaria* 4, in stylum acuminatum recurvatum attenuata.

This is the largest species of the genus with which I am acquainted. It seems not uncommon in Australia.

Fig. 1. Portion of the stem with leaves and flowers. *f.* 2. Single flower. *f.* 3. The same fully expanded :—*magnified.*

Tab CCXCVI.

TAB. CCXCVI.

Calandrinia calyptrata. *J. Hook.*

Annua, caule ramosissimo ramis valde diffusis, foliis linearispathulatis superioribus minutis bracteiformibus, pedunculis axillaribus post anthesin deflexis, petalis in corollam calyptriformem unitis.

Hab. Circular Head, Van Dieman's Land, where it grows with *Tillæa verticillaris*, usually on the tops of large rocks. *Ronald Gunn, Esq.* (*n.* 128.)

I am doubtful whether to refer this to *Calandrinia* or to *Claytonia*: the numerous seeds rather induce me to place it with the former genus. The singular calyptriform corolla will scarcely suffice to constitute a distinct genus of it. Nuttall's *Calyptridium* (from California) with a similar corolla and habit of *Calandrinia*, or *Claytonia*, has a very different fruit.

Fig. 1. Flower: the 2 sepals including the calyptriform corolla. *f.* 2. Corolla laid open to show the stamens and pistil. *f.* 3. Ripening ovary about to throw off the corolla. *f.* 4. Calyx, including the fruit. *f.* 5. Fruit separated from the calyx:— *magnified.*

TAB. CCXCVII.

Epilobium macranthum. *J. Hook.*

Caule elato terete simplici puberulo, foliis lineari-lanceolatis obtusiusculis dentatis glabris alternis rarius oppositis sessilibus superioribus paululum decurrentibus, calycis pubescentis limbo fere ad basin 4-partito, petalis (magnis) obcordato-bilobis, siliquis longissimis incanis, stigmate clavato inæqualiter bilobo.

Hab. A very common plant in wet places in Van Dieman's Land. *Ronald Gunn, Esq.* (*n.* 252.) *Dr Milligan* (who finds it at Woolnorth, and Circular Head.)

This, Mr Gunn observes, is the finest species in the island, often 3-4 feet high, having a long creeping perennial root. The flowers are of a fine pale purple colour and of an unusually large size for a true *Epilobium*.

Fig. 1. Upper part of the ovary and style:—*magnified.*

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TAB. CCXCVIII.

Bæckea leptocaulis. *J. Hook.*

Ramis erectis virgatis gracilibus, foliis oppositis angusto-linearibus acutis impresso-punctatis, pedunculis in axillis foliorum superiorum binis ebracteatis folio brevioribus unifloris, floribus pentandris.

Hab. Top of Rocky Cape, Van Dieman's Land. *Ronald Gunn, Esq.* (*n.* 817.)

This has the habit of *Bæckea frutescens* from China, and of *B. trichophylla* of Sieber (*Exsicc. Nov. Holl. n.* 280) and of *B. diffusa* of the same author (*Exsicc. Fl. Nov. Holl. n.* 276):— but the foliage and inflorescence will readily distinguish it. The leaves are grooved on the upper side, and semicylindrical on the back.

Fig. 1. Flower. *f.* 2. Calyx and corolla laid open:— *magnified.*

TAB. CCXCIX.

MILLIGANIA CORDIFOLIA. *J. Hook.*

GEN. CHAR.—MILLIGANIA.* *Hook.*—Dioica. MASC. *Spicæ* pedunculatæ. *Flores* subsessiles, monandri, nudi, 1-bibracteati. *Filamenta* brevissima. *Antheræ* (magnæ) subrotundæ, biloculares, ad marginem longitudinaliter dehiscentes.—FŒM. *Flores* capitati, (*capitulum* subsessile) bracteati. *Calyx* ovario arcte adhærens; *tubus* ovatus, subtriangularis, limbo tripartito, inæquali, piloso, unico duplo longiore. *Styli* 2, subulati, pubescenti-hirsuti, æquales, nunc 4 inæquales quorum duæ breviores. *Ovarium* 1-loculare, 1-ovulatum, ovulo pendente ex apice podospermi. *Fructus* drupaceus siccitate rugosus. *Nucula* ovato-triangularis, calyce persistente coronata.—Herba *paludosa, acaulis, radice subfusiformi, fibrosa.* Folia *radicalia, petiolata, patentia, cordata, obtusa, serrata, supra glabra subtus nervis petiolisque glanduloso-hirsutis.* Pedunculus (*seu* scapus) *radicalis.* Flores masculi *spicati*: fœminei *capitalati, bracteati.* Fructus *capitulum rubrum*, Rubi Idæi *magnitudine.*

M. *cordifolia. J. Hook.*

HAB. Burghley and Middlesex Plains, Van Dieman's Land, growing in wet places, in large dense patches, many feet in extent. *Ronald Gunn, Esq.* (*n.* 877.)

"Of this curious plant," Mr Gunn observes, "I could only procure one or two old spikes of male flowers. The fruit is as large and as red as a strawberry." Of the natural family to which it belongs I think there can be no doubt; nor can one fail to observe its close affinity both in habit and structure of its flowers with some *Gunneræ. J. Hook.*

The principal figure represents a male plant *nat. size. Fig.* 1. Capitulum of female flowers. *f.* 2, 3. Single female flowers. *f.* 4. Ovary laid open. *f.* 5, 6. Female flowers, varieties, with 4 styles. *f.* 7. Fruit in a dry state. *f.* 8, 9. Male flowers. *f.* 10. Anther, cut through transversely:—*magnified.*

* So named in compliment to *Dr Milligan*, of Van Dieman's Land, the friend of Mr Ronald Gunn, and his companion in many of his herborizing excursions.

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Allan & Ferguson lithog. Glasgow.

TAB. CCC.

Caldasia argentea. *J. Hook.*

Pulcherrime argenteo-sericea, pedicellis tomentoso-sericeis involucro vix longioribus, fructibus ovatis acuminatis demum glabriusculis.

Hab. Middlesex Plains, Van Dieman's Land. Feb. 1837. *Ronald Gunn, Esq.* (*n.* 823.)

An extremely beautiful species, owing to the silvery silkiness of the whole plant; the fruit only, *when ripe*, being nearly destitute of hairs. It was gathered at Middlesex Plains, by my indefatigable friend Mr Gunn along with *C. eriopoda* DC. and *C. brachycarpa*,* J. Hook. under the following circumstances:—"Middlesex Plains," says Mr Gunn, "were about 35 miles from our head quarters on the Hampshire Hills and from the nearest inhabited house, and over a mountainous country. A very limited means of carrying a large collection of plants had, I regret to say, the effect of reducing the number of each species very considerably. All my specimens, tent, blankets, food, &c., had to be carried on the backs of two men, and mercy toward them induced me to load them with as few specimens as possible. On my return to Circular Head, after an absence of a fortnight, my collection of plants, after being partially dried, weighed 40 lbs., and had to be carried on a man's back from Emu Bay to Circular Head, 60 miles; and the plants in question were carried altogether on my servant's back, about 115 miles before they were half dried."

Fig. 1. Fruit, scarcely mature. *f.* 2. Section of a carpel:—*magnified.*

* C. *brachycarpa;* laxe pilosa, pedicellis piloso-sericeis involucro subduplo longioribus, fructibus ovatis acutis glaberrimis. (*n.* 822.)—C. *eriopoda* (also found at Launceston) is Mr Gunn's *n.* 491 and 824.