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BY

SIR W. J. HOOKER, K.H., L.L.D., F.R.A., & L.S.

VICE-PRESIDENT OF TO LINNJBAN SOCIETY, AND DIRECTOR OF THE ROYAL BOTANICAL GARDENS OF KEW.

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NOTES

ON THE BOTANY

OF

THE ANTARCTIC VOYAGE,

CONDUCTED BY

CAPTAIN JAMES CLARK ROSS, R.N. F.R.S. &c. &c. &c.

IN HER MAJESTY'S DISCOVERY SHIPS

EREBUS AND TERROR;

WITH OBSERVATIONS ON

THE TUSSAC GRASS

OF THE FALKLAND ISLANDS.

BT

SIR W. J. HOOKER, K.H. L.L.D. F.R.A. & L.S.

DIRECTOR OF THE ROYAL BOTANIC GARDENS OF KEW.

ICONES PLANTARUM.

VOL. III. NEW SERIES,

OR VOL. VII. OF THE ENTIRE WORK.

ICONES PLANTARUM;

OR

FIGURES,

WITH

BRIEF DESCRIPTIVE CHARACTERS AND REMARKS,

OF

NEW OR RARE PLANTS,

SELECTED FROM THE AUTHOR'S HERBARIUM.

BY SIR WILLJAM JACKSON HOOKER, K.H.,

L.L.D., F.R.A., AND L.S.
VICE-PRESIDENT OF THE LINNiBAN SOCIETY,
MEMBER OF THE IMP. ACAD.. NAT. CUR., ETC., ETC.* ETC.
HONORARY MEMBER OF THE ROYAL IRISH ACADEMY, OF THE ROYAL MEDICAL AVI*
CHIRURGICAL SOC. OF LONDON[1], ETC., ETC.
AND
DIRECTOR OF THE ROYAL BOTANICAL GARDENS, KEW.

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FRIESIA RACEMOSA. *A. Cunn.*

Dioica, foliis cordato-ovatis acuminatis longe petiolatis serratis, racemis compositis axillaribus, ramulis foliisque juirioribus pubescenti-hirtis, stigmate 4-lobo.

Friesia racemosa. *A. Cunn. in Ann. Nat. Hist. v.* **4,** *p.* **24.**

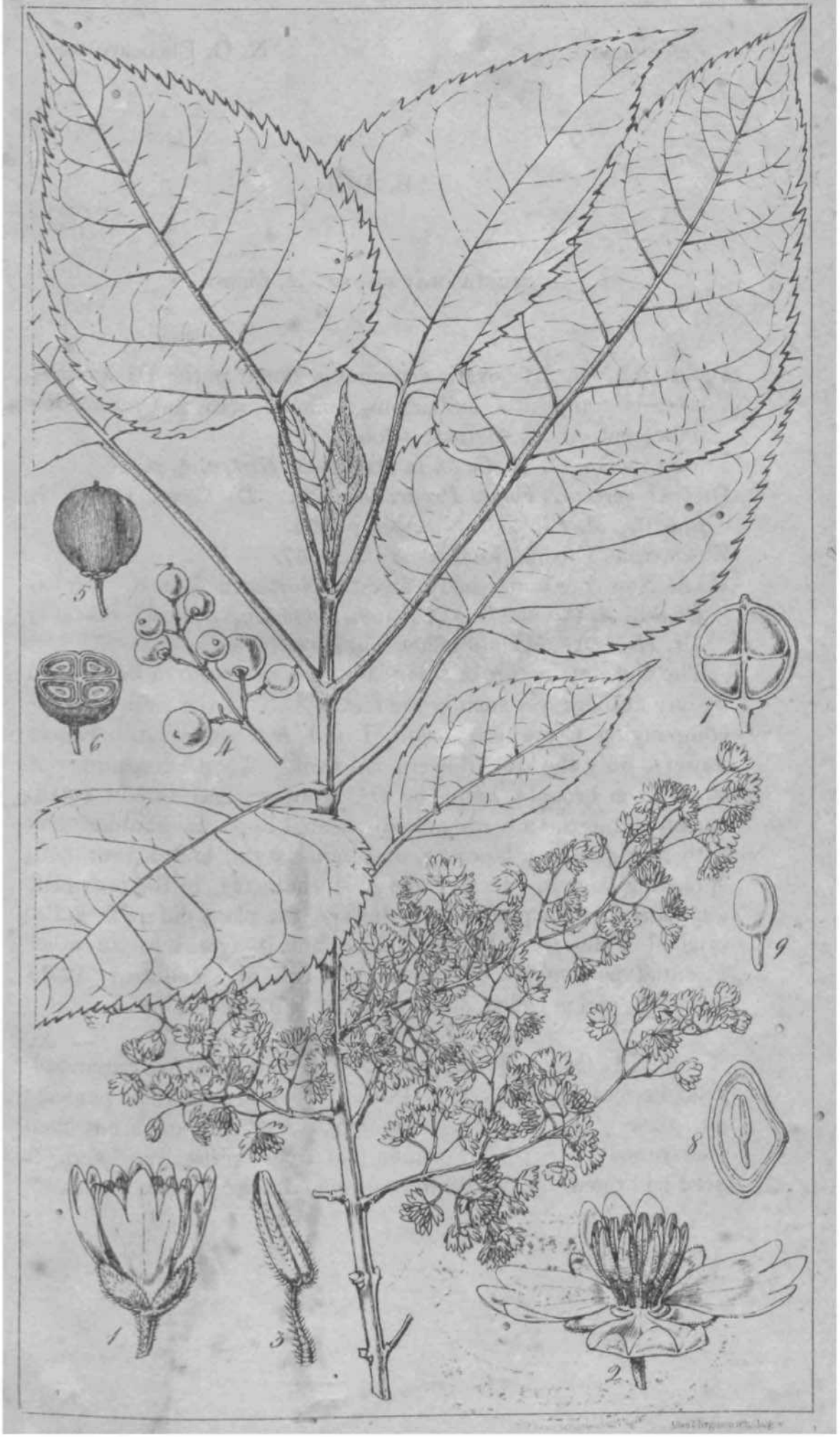
Dicera? serrata. *Forst. Prodr. n. 227. De Cand. Prodr.* **1,** *p.* **520.** *A. Rich. Fl. Nov. Zel. p.* **304.**

Elaeocarpus Dicera. *Vahl, Symb.* **3,** *p.* **67.**

HAD. New Zealand, shady forests, Northern Island. *Sir J. Banks, A. Cunningham, Colenso, Edgerley, Bidwill, Sinclair, Dr. Hooker.* **Middle Island,** *G. Forster.*

The dioecious nature of this plant does not seem to be noticed by any author: yet such is the fact. And at the time the accompanying figure was made, I did not possess the female flowers, only the male flowers and fruit. They have, however, since been brought home by Dr. Hooker; and exhibit small, barren stamens, an ovate germen, seated upon an annular disk with four glands, a tapering, deciduous style, and a four-cleft, spreading stigma. In this dioecious character, in the four-cleft stigma and in the paniculated flowers, the plant differs from the original *Friesia* of De Candolle; but it agrees in all other essential particulars. It forms a shrub or small tree, 12-15 feet high, and is called *Mako-mako* by the natives.

Fig.* 1. Male flower. /. *2.* The same, more expanded. /. 3. Perfect stamen. /. 4. Portion of a fructiferous panicle; *nat. size. f.* 5. Fruit; a *bacca sicca.* /. 6. The same,cut open transversely. /. 7. The same, laid open vertically. /. 8. A seed laid open. /. 9. Embryo :—*magnified.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TAB. DCI1.

ELJEOCARPUS HIXAU. *A. Cunn.*

Foliis alternis petiolatis oblongis basi attenuatis coriaceis superne serratis subtus adpresso-sericeis nervis prominentibus, nervorum in axillis saepe foveolatis superne bullatis, racemis axillaribus simplicibus, petalis trilobis, antheris apice ineequaliter bilabiatis, ovario biloculari, loculis biovulatis, drupa ovali monopyrena.

Elseoca^-pus Hinau. *A. Cunn. in Ann. Nat. Hist. v.* **4,** *p. 23.*

Ekeocarpus dentatus. *Vahl. Symb. 3, p.* **67.**

Dicera dentata. *Forst. Prodr. n. 226, De Cand. Prodr.* **1,** *p.* **520.** *A. Rich. Fl. Nov. Zel. p.* **303.**

HAB. New Zealand, Northern Island, *Sir /. Banks, A. Cunningham, Colenso, Edgerly, Dr. Hooker.—" Hinau"* **of the natives.**

Of the genus *Dicera* of Forster, founded upon the present plant, but to which Forster added doubtfully, the *Dicera? serrata,* the *D. dentata* is by Vahl correctly referred to *Elceocarpus,* and the *D. serrata* by De Candollc to *Friesia* (See TAB. DCI.) ; so that the only plant now remaining in *Dicera* is the very dubious *Craspedium tectorum,* of Loureiro. Of the plant here figured, Mr. Cunningham has given a very accurate description; but he describes the ovary as 5-celled, which I find to be 2-celled. The solitary fruit I possess is a drupe with one perfect seed. "The wood of the *Hinau* is remarkable for its whiteness; but it is almost useless, on account of the way in which it splits when exposed either to wet or warmth. Its chief use is that it makes an excellent dye, either a light brown, puce, or dark black, not removable by washing. The natives employ the outer skin of the bark for the purpose of dying the black thread of their garments."— *Yates.*

Fig.* 1. Flower. /. *2.* The same, with the petals removed. /. 3. Stamen, *f.* 4. Pistil. /. 5. Ovary, cut through vertically. *f.* 6. The same, cut through transversely:—*magnified.


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TAB. DCIIL

MELICOPE TERNATA. *Forst.*

Foliis oppositis petiolatis trifoliolatis, foliolis obovatis obtusiusculis integerrimis pellucido-punctatis glabris, paniculis axillaribus trichotomis petiolo longioribus.

Melicope ternata. *Forst. Prodr. p.* 166. *Char. Gen. t.* 28. *De Candolle Prodr.* 1, *p.* 723. *A. Rich. Fl. Nov. Zel. p.* 293. *A. Cunn. in Ann. Nat. Hist.* 3, *p.* 315.

Entoganum leevigatum. *Sol. Mst. Gaertn. Fruct,* 1, *p.* 331, /. 68.

HAB. New Zealand, Northern Island. *Sir J. Banks. A. Cunningham, Colenso.*

Of this likewise, an accurate description is given by Mr. Allan Cunningham in the " Annals" above quoted. I have, therefore, only to remark here, that it is the type of the genus *Melicope;* and whether or not the *M. simplex* A.C. and of us in the Sixth Volume of this Work, TAB. DLXXXV. is of the same genus, remains to be ascertained by an examination of more perfect specimens than we, at present, possess.

Fig. 1. Portion of a leaflet. /. 2. Flower. /. 3. The same, from which the petals are removed. /. 4. Perfect fruits; *nat. size. f.* 5. Single fruit. /. 6. The same, the seeds escaping from the cell. /. 7. Carpel laid open. /. 8. Seed laid open:—*magnified.*


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TAB. DCIV.

SEDUM WALLICHIANUM. *Hook.*

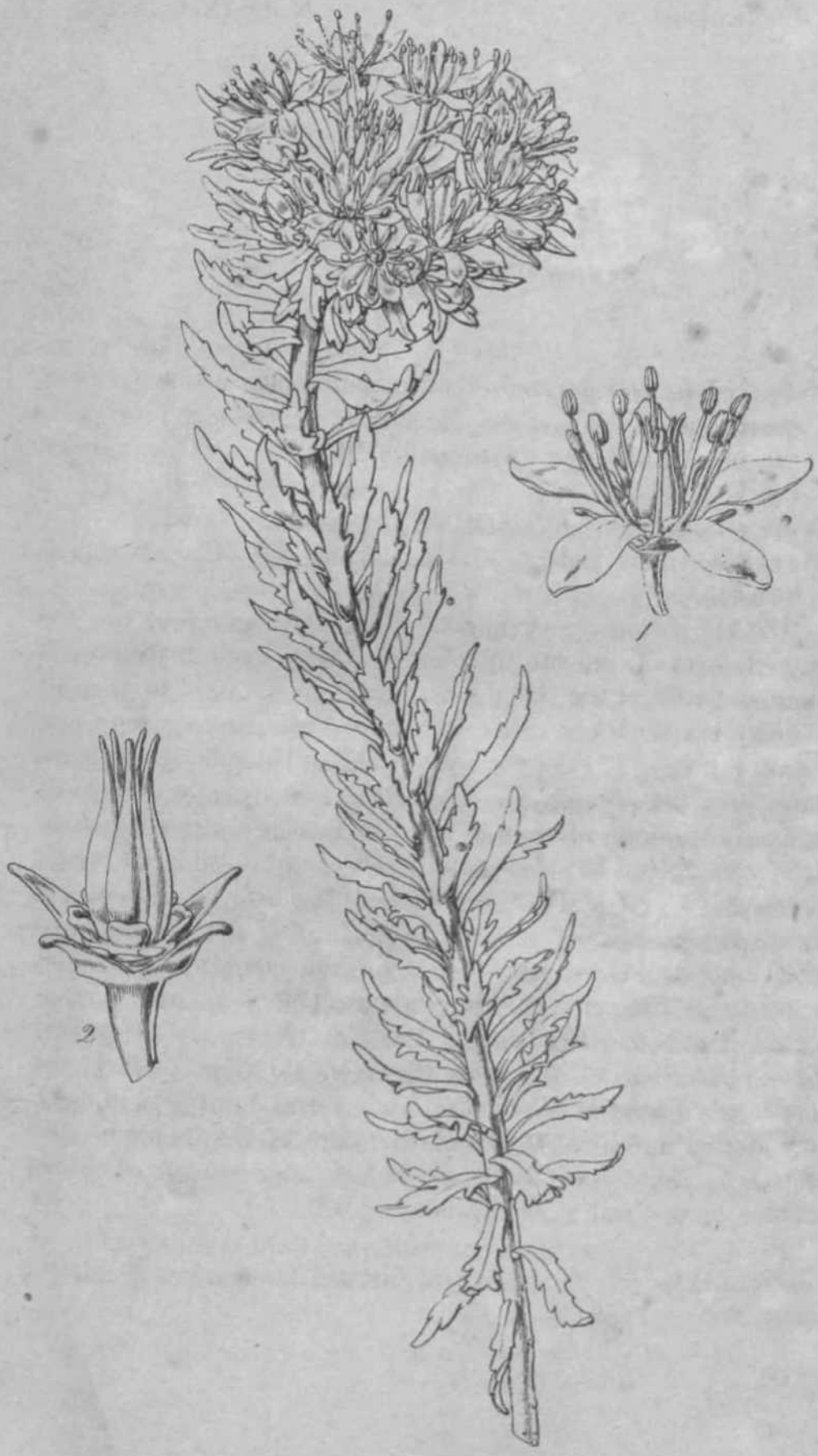
Radice crassa elongata subtuberosa multicipite, caulibus erectis simplicibus foliosis, foliis lanceolatis acutis planis carnosis grosse serratis, cyma terminali foliosa, floribus pentameris (flavis).

Seaum Asiaticum. *Wall. Cat. n.* **7329 (not De Cand.)**

HAB. Northern India. Gossain-Than, and Kamoun. *Dr. Wallich.*

The Herbarium specimens of this succulent plant are too imperfect to figure, and therefore I gladly avail myself of a flowering root in the Royal Gardens of Kew, raised from Seeds sent by Dr. Royle; and from that the accompanying representation is taken. Eight or ten such erect and simple, leafy stems, arise from the summit of a very thick, woody root, or, more properly speaking perhaps, rhizoma. Leaves scattered, lanceolate, acute, plane but fleshy, and very coarsely and irregularly serrated. Cyme much branched and leafy, forming a broad, hemispherical head of yellow flowers, bearing small leaves upon the branches. Calyx of 5 deep segments. Petals 5, lanceolate, spreading. Stamens 10. Hypogynous glands 5, large, emarginate. Pistils 5. The habit of this plant is very similar to that of our *Rhodiola rosea {Sedum Rhodiola,* De Cand.) It is the *Sedum Asiaticum* of Wallich's Catalogue n. 7329 (according to my Herbarium); but it is not the plant of De CandoUe (the *Rhodiola Asiatica* of Don), which has linear-ligulate, entire, obtuse, leaves, and a few-flowered umbel.

Fig.* 1. Flower. /. 2. Calyx, pistils, and hypogynous glands:— *magnified.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TABS. DCV., VI.

SCYTANTHUS CURRORI. *Hook.*

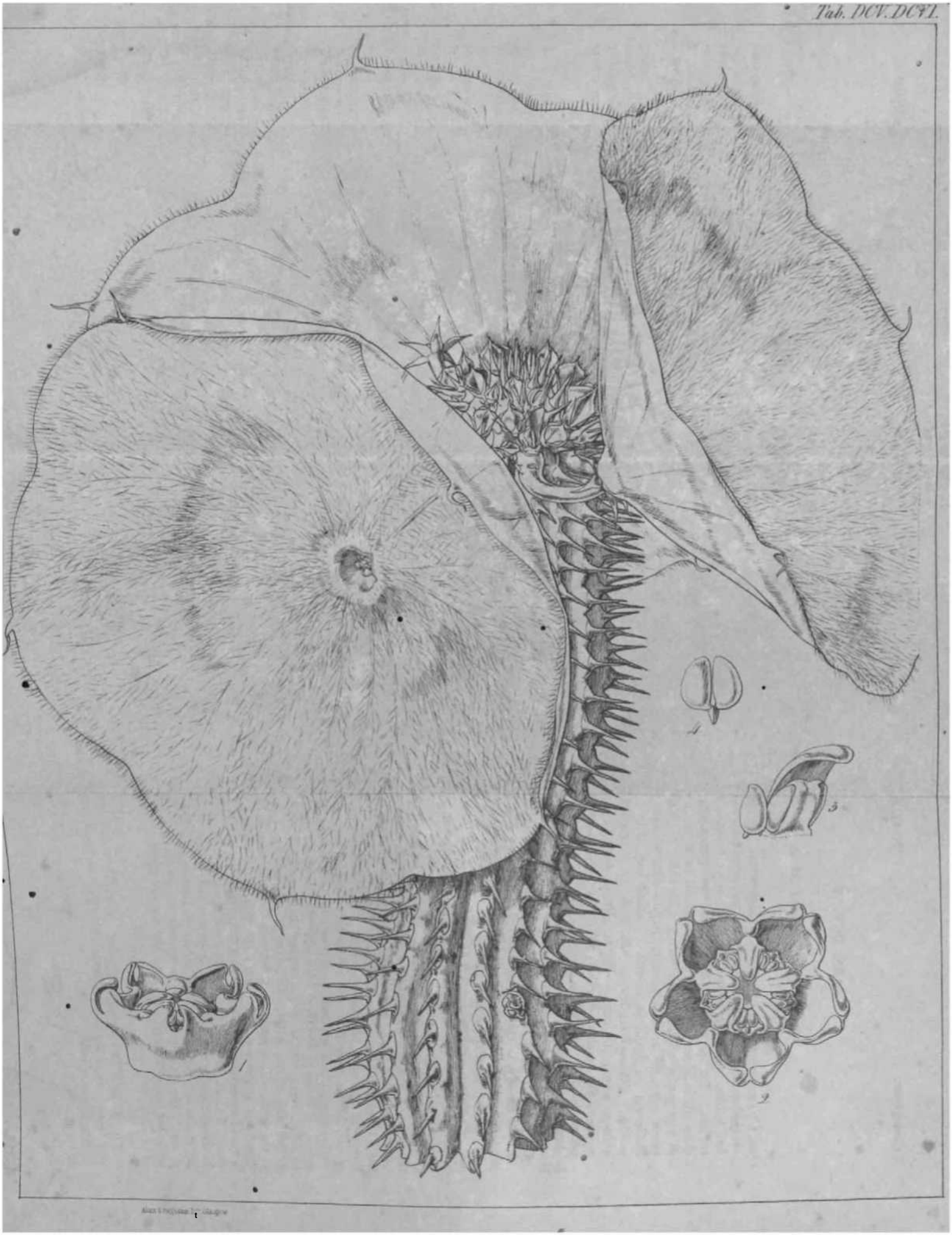
GEN. CHAR. **Scytanthus, *Hook.—Cal.* 5-partitus. *Corolla* rotata, tubo brevissimo, limbo maximo dilatato concavo membranaceo nervoso obsolete 5-lobo, lobis dente aristiformi terminatis. *Columna fructificationis* inclusa. *Corona staminea* duplex; *exterior* quinquefida, lobis rotundatis erecto-incurvis obtusis bifidis, laciniis denteque in sinu inflexis; *interior* pentaphylla, foliolis e basi gibbosa oblongis obtusis in summitatem columnae arete adpressis, laciniis exterioribus alternantibus. *Anthera* apice simplices, obtusss. *Pollinia* basi affixa, erecta, ovata, sessilia. *Stigma* muticum. *Folliculi* 2 (immaturi) cylindracei utrinque acuminati, lseves.—Plantae *Africa Australis carnosa aphylla mullangulatcR ramosce, angulis aculeatis, aculeis basi dilatatis; versus apicem florifera.* Corolla *amplissima.***

Scytanthus *Currori;* corolla ciliata intus tota pilosa.

HAB. Barren, sandy mountains, but sparingly, at Elephant's Bay, West Coast of Africa, lat. 14 deg. S. *Dr. A. B. Curror.* R.N. 1840.

I have already, in the London Journal of Botany, v. 2, p. 166, taken occasion to mention the re-discovery, by Mr. Burke, on the banks of the Orange river, South Africa, of that most remarkable plant, *Stapelia Gordoni,* of Masson's " *Stapelia,"* Tab. XL; which was only known to Naturalists by the figure there given, and was drawn on the spot by Colonel Gordon, and no specimen was preserved. This will be found represented at our TAB. DCXXV. of the present Volume. Still a correct knowledge of the organs of fructification was a desideratum which could not be gained from dried specimens; and it was with no small degree of pleasure that I received from Dr. Curror, of H.M.S. Water-Witch, a noble flowering specimen of another but nearly allied species, preserved in spirits, with* a stem so much resembling that of some *Cactus* (of the *Cereus* group) that without the flowers, it might readily be mistaken for such. It is this plant that is here figured, and it is at once distinguished by the larger size of the stems and of the corolla, and the copious hairy lining of the latter. It attains a height of two feet and upwards in the stem, with a diameter of between two and three inches, the barren stems not unfrequently branched at the top. The whole plant is full of a viscid mucilaginous juice, which tastes like starch. There can be no doubt, I think, of the propriety of this, together with the *S. Gordoni,* Masson, constituting a distinct genus, which I have named, from the large size and general shape of the corolla, *(TKVTOS,* a *shield,* and avflos, a *flower.* The specific name is in compliment to its discoverer, who has collected many interesting plants and animals while on the West Coast of Africa.

Fig.* 1. Staminal crown; *side view, f.* 2. The same, seen from above. *f.* 3. Segment of the inner crown, with anther and pollen-masses. /. 4. Pollen :—*magnified.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TABS. DCVII, DCVIII.

ACIPHYLLA SQUARROSA. *Forst.*

GEN. CHAR. **Aciphylla,** *G. Forst.—Calycis margo* **5-dentatus dentibus deciduis vel demum obsoletis.** *Petala* **quinque, ovata, acuta, unguiculata, apice acumine inflexa.** *Fructus* **oblongus, sectione transversali subteres.** *Mericarpia* **dissimilia, hinc jugis 4, illinc jugis tribus, omnibus altealatis, lateralibus marginantibus.** *Valleculte et commisura* **multivitattae.—Herba** *elata, robusta, erecta, simplex (?), foliis repetitim digitato-diviiispubescentibus rigidis, laciniis elongatis longissime linearisubulatis pungentibus plants striatis, petiolis dilatatis.* **Umbellee** *copiosce axillares composites in spicam densam foliosam longissimam crassam; foliis floralibus minoribus plerumque quinato-divisis, lacinia media duplo triplove majore validiore, arete reflexa.* **Flores** *polygami.*

Aciphylla *squarrosa. Forst. Gen. t.* **38.**

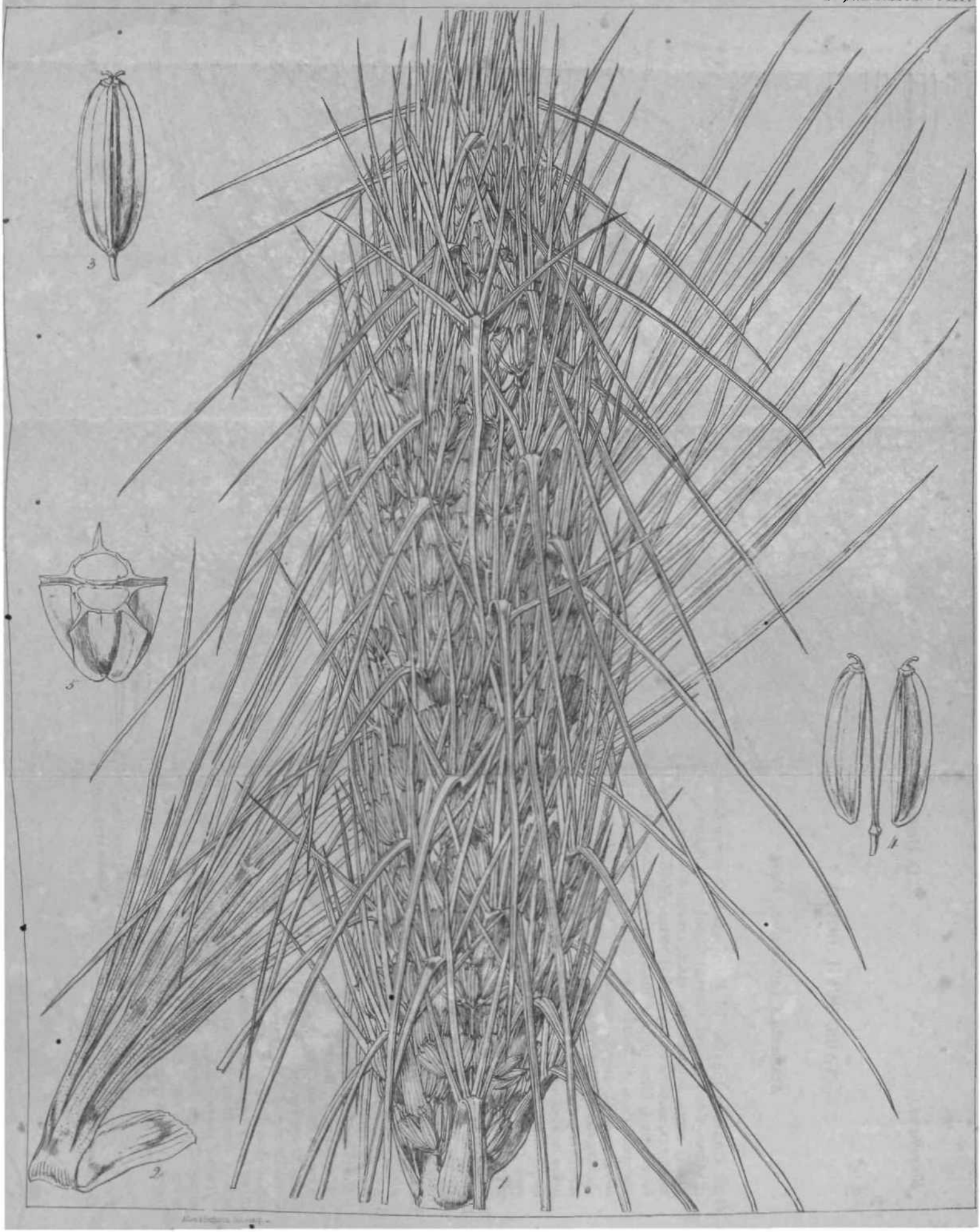
Ligusticum Aciphylla. *Spreng. in Schult. Syst. Veget. 6₉p.* **554.** *Be Cand. Prodr.* **4,** *p.* **159.** *A. Rich. FL Nov. Zel. p.* **274.** *A. Cunn. in Ann. Nat. Hist.* **2.***p.* **212.**

Laserpitium Aciphylla. *Linn. Fil. Suppl.p.* **181.** *Forst. Prodr. p.* **22.**

HAB. New Zealand, Middle Island ; Shores of Queen Charlotte's Sound; G. *Forster.* **Southern extremity of the Northern Island, in great abundance; and the alpine interior;** *Mr. Bidwill.* **Roratonga ;** *Mr. Colenso.*

One of the most remarkable of umbelliferous plants, with a dense flowering spike, often four feet high. Sprengel and De Candolle say of the fruit, *" mericarpia tricostata."* **In all the fruits that I have examined, one mericarp has 3 wings, the other four, or in other words, one wing is suppressed on one side of the fruit, 2 on the other; and Forster^s character is,** *"Jructus pentagonus,"* **which is quite correct; the approximate marginal jugae forming together two out of the five angles or wings. This circumstance, together with a peculiar habit, has induced me to restore the old genus** *Aciphylla.*

Fig. **1. Fructified spike. /. 2. Lower leaf;** *nat. size. f.* **3. Fruit,** *f.* **4. The same, separating. /. 5. Transverse section of the mericarps :—***magnified.*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TAB. DCIX.

LEPIDIUM ROTUNI>UM. *De Cand.*

Glabrum, bienne, caule erecto basi ramoso, foliis lineari-spathulatis obtusis, floribus parvis demum racemosis, sepalis obovatis obtusis petala subaequantibus, siliculis orbicularibus plano-convexis lato-alatis profunde angusto-emarginatis, lobis obtusis, stylo libero sinu breviore.

Lepidium rotundum. *De Cand. Prodr.* l.jp. 205.

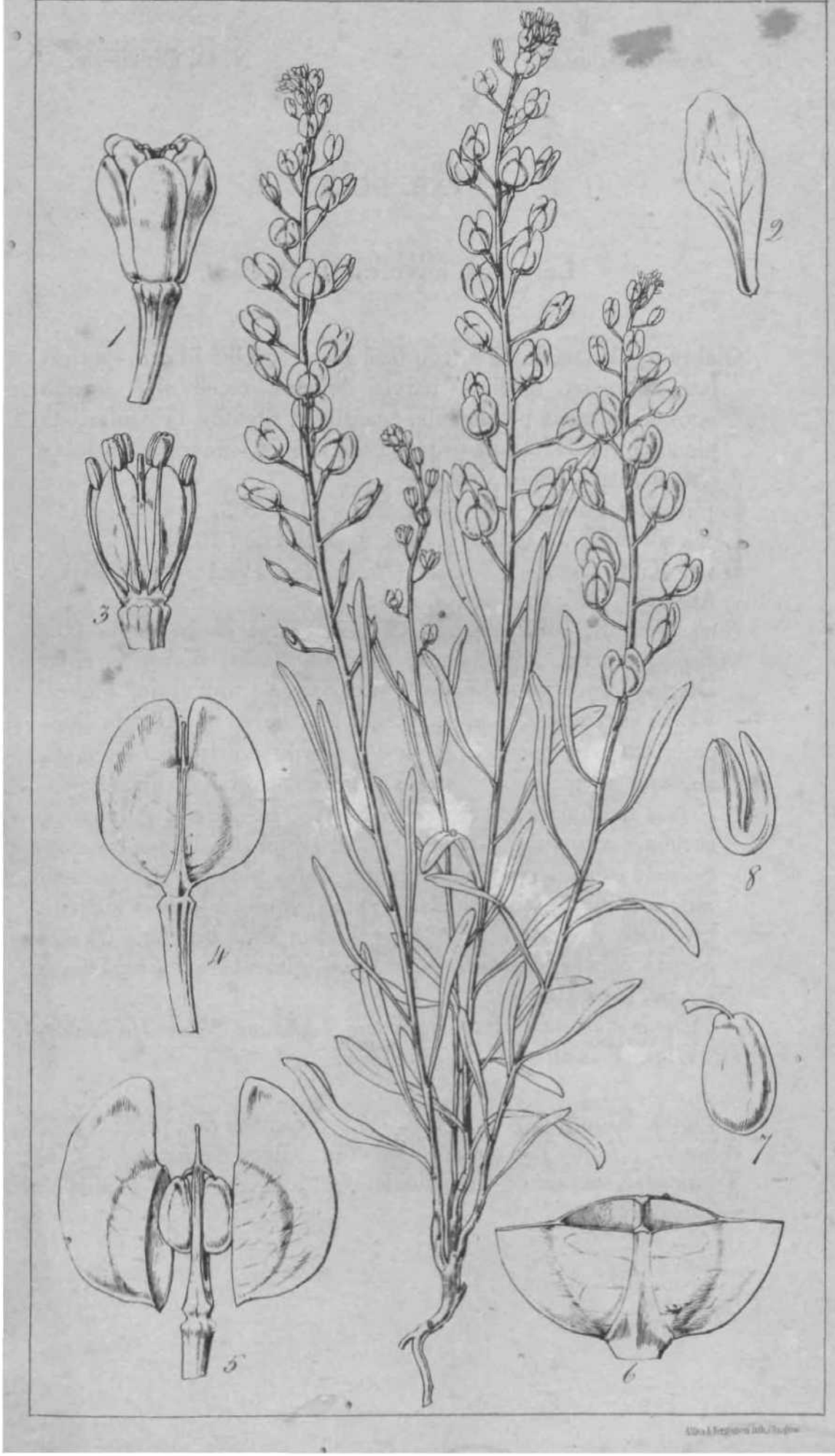
-Lepia rotunda. *Desv. Journ. Bot. 3, p. 166 and* 181.

HAB. King George's Sound, *(Herb. Mus. Par.)* Swan River, Australia, *Mr. Drummond. n.* 4.

Radix biennis, subfusiformis, flexuosa, superne in ramis plurimis, erectis, simplicibus, vel ad basin, divisa. *Folia* alterna, lineari-spathulata, integerrima, uninervia, glabra. *Flores* corymbosi, demum, planta fructifera, in racemis elongatis extensi, parvi. *Pedicelli* breves, demum elongati, superne incrassati. *Sepala* obovata, obtusa, glaberrima. *Petala* spathulata vix calyce longiora. *Stamina* 6, didynama, corollam aequantia. *Ovarium* obcordatum staminibus brevius. *Siliculce* orbiculares plano-convexeB (hinc planae v. subconcavae inde convexse) latissime alatae, apice usque ad loculos anguste profunde emarginatae. *Stylus* liberus sinu brevior. *Semen* quovis loculo unicum, pendulum, obovatum. *Cotyledones* ovate, incumbentes.

This is quite different from the *Lepidium Nova Hollandi®,* Desv. which is allied to *L. Pisddium.*

Fig. 1. Flower. /. 2. Petal. /. 3. Stamens and pistil. /. 4. Silicula. /. 5. The same with the valves separated. /. 6. Transverse section of the silicula. /• *J.* Seed. /. 8. Embryo : —*magnified.*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TAB. DCX.

STENOPETALUM ? PROCUMBENS. *Hook.*

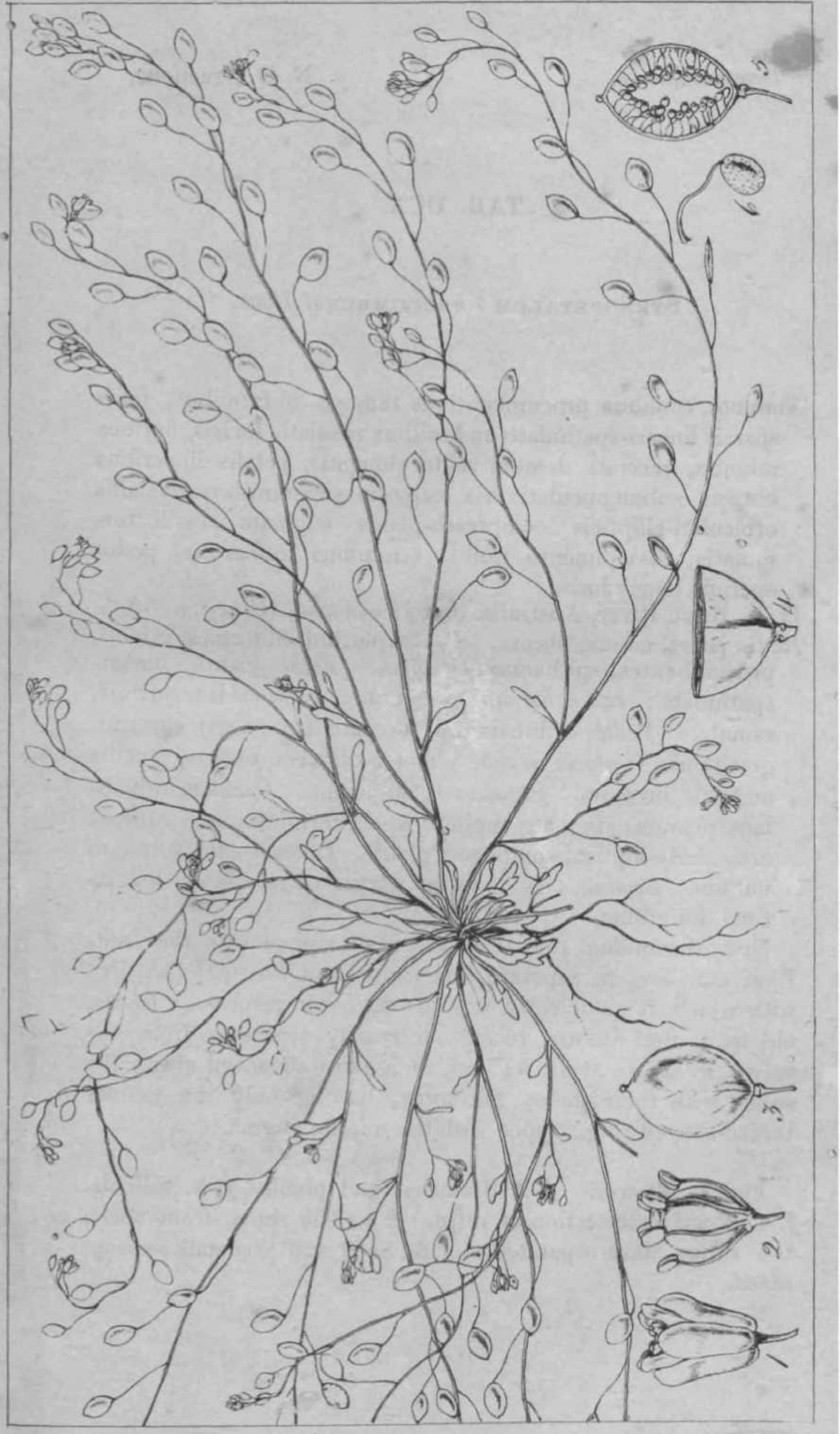
Annuum, caulibus procumbentibus ramosis filiformibus, foliis sparsis lineari-spathulatis radicalibus rosulatis incisis, floribus minutis, racemis demum valde elongatis, petalis linearibus obtusis subunguiculatis vix calycem superantibus, siliculis orbicutari-ellipticis compresso-planis stigmate sessili terminatis; dissepimento nullo, seminibus numerosis, podospermis longissimis.

HAB. Swan River, Australia. *Jew, Drummond, (Crucif. n.* 3.)

Radix parva, annua, fibrosa. *Caules* plurimi, filiformes, ramosi, procumbentes, spithameei et ultra. *Folia* glabra, lineari-spathulata; *radicalia* inciso-dentata; *caulina* integerrima, remota. *Pedicelli* brevissimi, demum (fructiferi) elongati, gracillimi. *Calycis sepala* oblongo-obovata, obtusa, petalis angustis breviora. *Stamina* 6', didynama. *Ovarium* orbiculare, planum, stigmate capitate sessili terminatum. *Silicula* orbiculari-elliptica^ compressa, glabra. *Dissepimentum* omnino nullum. *Semina* (vix matura) parva. *Podosperma* longissima, filiformia.

Notwithstanding the absence of dissepiment to the fruit, I am unwilling to separate this plant from *Stenopetalum,* Br., with which it sufficiently accords in other respects. In the old fruit, the filiform receptacle readily separates from the valves, as shown at fig. 5; and, in a more advanced stage, the seeds, with their stalks, fall away, leaving only the slender thread-shaped ring, tipped with the minute stigma.

Fig. 1. Flower. /. 2. Stamens and pistil. /. 3. Silicula. /. 4. Transverse section of ditto. /. 5. The same, from which the valves have separated. /. 6. Seed and seedstalk:—*may nified.*



TAB. DCXI.

EUCALYPTUS SPATHULATA. *Hook.*

Operculo cylindraceo obtuso ovario turbinato triplo longiore, foliis lineari-spathulatis acutiusculis minute punctatis, pedunculis brevibus latis compressis 3-5-floris, floribus brevi-pediuellatis.

HAB. Swan River. *Jas. Drummond, (SuppL Coll. n.* 20).

***Frutex* ubique glaber. *Rami* teretes fusci, ramulis angulatis. *Folia* opposita, bi-triuncialia, lineari-lanceolata, obtusa, basi attenuata, viridia, obscure uninervia, utrinque sub lente punctulata. *Pedunculi* solitarii, axillares, semiunciam longi, dilatati, compressi^ apice umbellatim 3-5-flori. *Flores* brevi-pedicellati, pedicellis incrassatis sensim in ovarium turbinatum truncatum intense fuscum dilatatis. *Operculum* (siccitate) pallide fuscum, cylindraceum, obtusum, ovario triplo longius. *Stamina* numerosa, primum erecta, demum patentia. *Filamenta* subincrassata, fulva. *Anthera* parvae. *Stylus* rectus, staminum longitudine. *Stigma* simplex.

A species of *Eucalyptus*, not distributed, I believe, in the valuable sets lately sent to his subscribers from the Swan lliveF settlement by Mr. Drummond, but forming part of a supplementary set transmitted to the Author. It is very different from any species with which I am acquainted, or can anywhere find described.

Fig. 1. Flower, still partially covered by its operculum. /. 2. Ovary and style :—*magnified.*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TAB. DCXII.

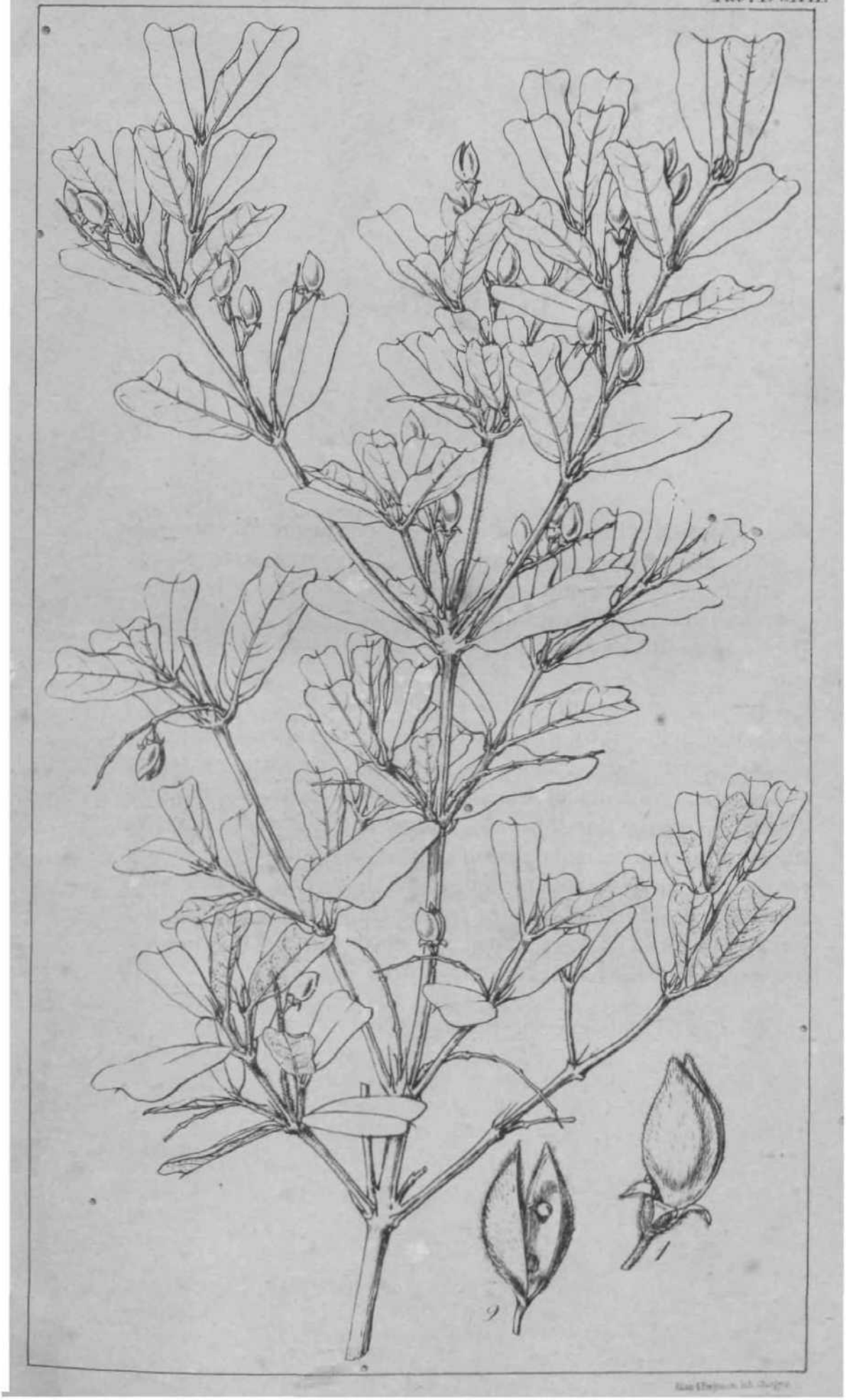
OXYLOBIUM BATILLUM. *Hook.*

Foliic oppositis elliptico-cuneatis apice truncato-retusis coriaceis, supra glabriusculis impresso-punctatis, subtus arete reticulatis mucronatis ramulisque (Jense pubescentibus, legumine ovato-acuminato hirsuto dispermo.

HAB. Swan River settlement. *Jas. Drummond, (Suppl. Coll. n.* 32.)

I possess no flowers of this species ; but there can be little doubt of the genus to which it belongs. The leaves are coriaceous, cuneate but rounded at the base, truncate or retuse at the apex, mucronate, the angles rather obtuse, the margins a little recurved; the upper side glossy and slightly pubescent, rough with numerous depressions, paler beneath, there closely reticulated, and, as well as the young branches, downy with short dense hairs. Legumes small, chestnut-brown, slightly hairy, 2-seeded. I have named the species *Batillum* from the resemblance of the leaves to a fire-shovel.

Fig. 1. *2.* Legume:—*magnified.*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TAB. DCXIII.

RHODOPLEXIA PREISSII. *Harv.*

GEN. CHAR. *Frons* spongiformis, rubra, e filis articulatis, reticulatim connexis, versus superficiem liberis constituta. *Sphcerosporce* spheericfle, apicibus liberis filorum insidentes, pedicellate perisporio hyalino. *Harv.*

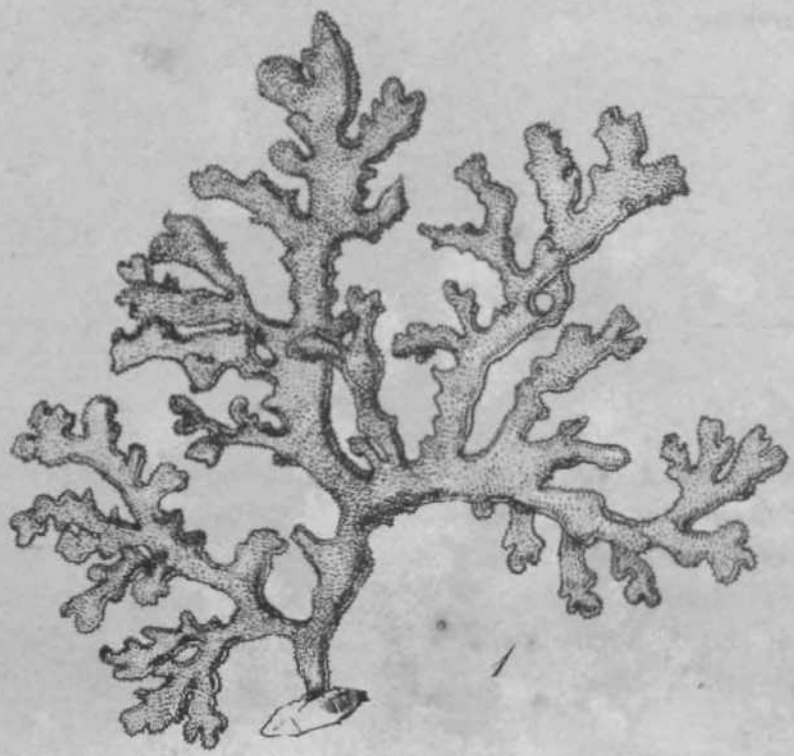
Rhodoplexia *Preissii. Harv. 'MSS.*

HAB. In the Sea. Swan River colony, New Holland. *Mr. Preiss.*

Frons compressa, 2-4 uncias longa, 4-6 lineas lata, \ linese crassa, spongiosa, mollis, nee gelatinosa, irregulariter laciniato-ramosa, ramis plus minus dichotome divisis, axillis rotundatis, tota filis articulatis constituta. *Fila interna* in reticulo denso conjuncta, in modo subflabelliformi longitudinaliter disposita; *externa* v. *superficiaria* incurva, simplicia v. parum ramosa, lineam longa, e reticulo passim exeuntia et idem vestientia. *Color* fusco-ruber. *Sphcerospora* omnino *Callithamnii.*

A highly remarkable plant, forming another genus of retiform *Alga,* allied to *Dictyurus, Hemitrema* and *Claudea,* especially to the first j but here there is no stem, the whole plant being composed of a sponge-like network. W. H. H.

Fig. 1. Plant: *natural size.* /. 2. Transverse section of a narrow part of the frond. /. 3. Small fragment, *highly magnified,* to show the capsules, or *sphcerosporce.*



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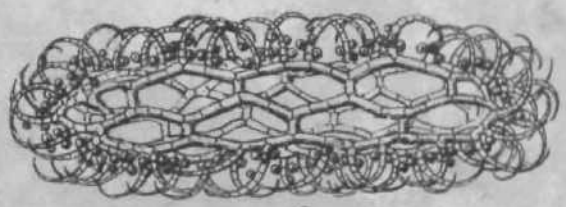

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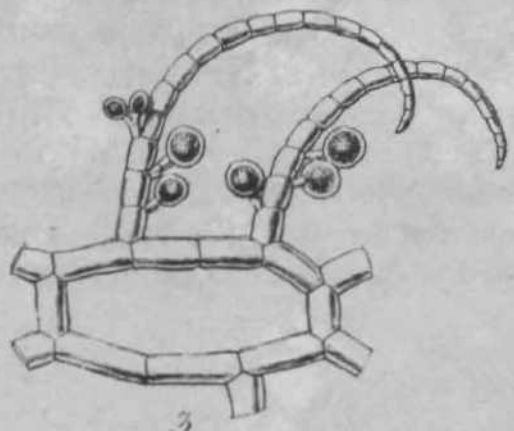

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TAB. DCXIV.

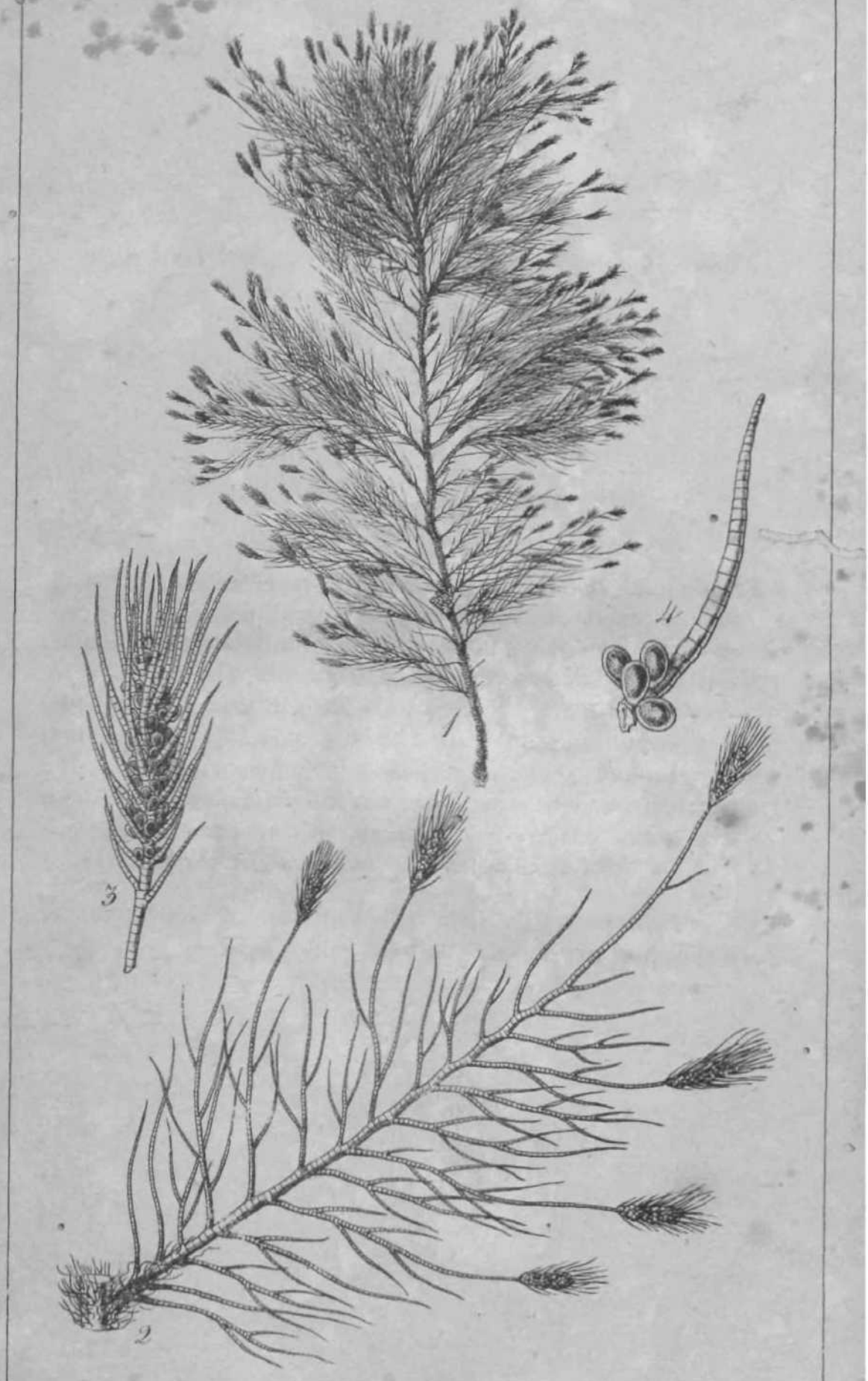
SPHACELARIA HORDEACEA. *Harv.*

Fronde tenui-elongata stuposa, ramis alternis crebris apice fasciculatis subbipinnatis, pinnis pinnulisque spineeformibus; capsularum spicis oblongis aristatis (hordeiformibus) terminalibus.

HAB. Bay of Islands, New Zealand. *Dr. Sinclair.*

A very curious species of *Sphacelaria,* allied to *8, scoparia,* but abundantly distinguished by the spikes of fructification which terminate the branches and ramuli, and under the miscroscope strongly resemble ears of barley or rye. These are composed of thickly set, quadrifarious, setiform ramuli, each with a cluster of 4-5 elliptical capsules at its base. W. H. H.

Fig. 1. Branch. /. 2. Spike of capsules. /, 3. Ramulus of the spike, with capsules at its base *:—magnified.*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TAB. DCXV, DCXVI.

HAHTIGHSEA SPECTAB1L1S. *Adr. JllSS.*

Foliis pinnatis, foliolis 3-4-jugis cum impari petiolulatis obovatis integerrimis glabris, subtus discoloribus, racemis compositis paniculatis e ramis vetustioribus pendulis, floribus 5-floris, ovario (fructuque) triloculari, capsula pyriformi-globosa.

Hartighsea spectabilis. *Ad. Juss. Mém. Mus. v. \9.p.* **228.**

Trichilia spectabilis. *Forst. Prodr. p.* **33.** *B.e Cand. Prodr.* **1.** *p.* **623.** *A. Rich. Fl. Nov. ZeLp.* **306,** *AIL Cunn. in Ann. Nat. Hist. 3. p.* **318.**

HAB. New Zealand, Bay of Islands. *A. Cunningham. BidwilL Colenso. J. D. Hooker** **Wahaĺe.** *Dr. Sinclair.*

A tree, according to Allan Cunningham, 30 to 40 feet high, with large pinnated leaves, the leaflets often unequal at the base, petiolulated, especially the terminal one. Panicle, or compound raceme, large, springing from the older portion of the stem or branch. Calyx of 5 rounded lobes. Corolla of 5 petals, connate at the base. Staminal tube nearly as long as the petals, the mouth a little spreading, 10-crenate. Within the mouth are 10 sessile anthers, each with a gland or swelling at the base, and a short crenate cylindrical cup surrounds the ovary, which latter is conical, hairy, tapering into a filiform style, a little longer than the staminal tube. Stigma much dilated and flat at the top. Fruit a rather large, coriaceous, 3-valved, 3-celled capsule, each cell containing 2 seeds enveloped in an arillus. Mr. Bidwill informs me that the leaves of this tree are used instead of hops, and a spirituous infusion of them is a stomachic.

Fig.* 1. Flower. /. 2. The same, the corolla spread. /. 3. Staminal tube laid open, to show the inner cup surrounding the ovary. /. 4. Anther. /. 5. Ovary and surrounding cflp, laid open vertically. /. 6'. Transverse section of the ovary : *magnified, f.* 7. Fruit:—*natural size.


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TAB. DCXVII.

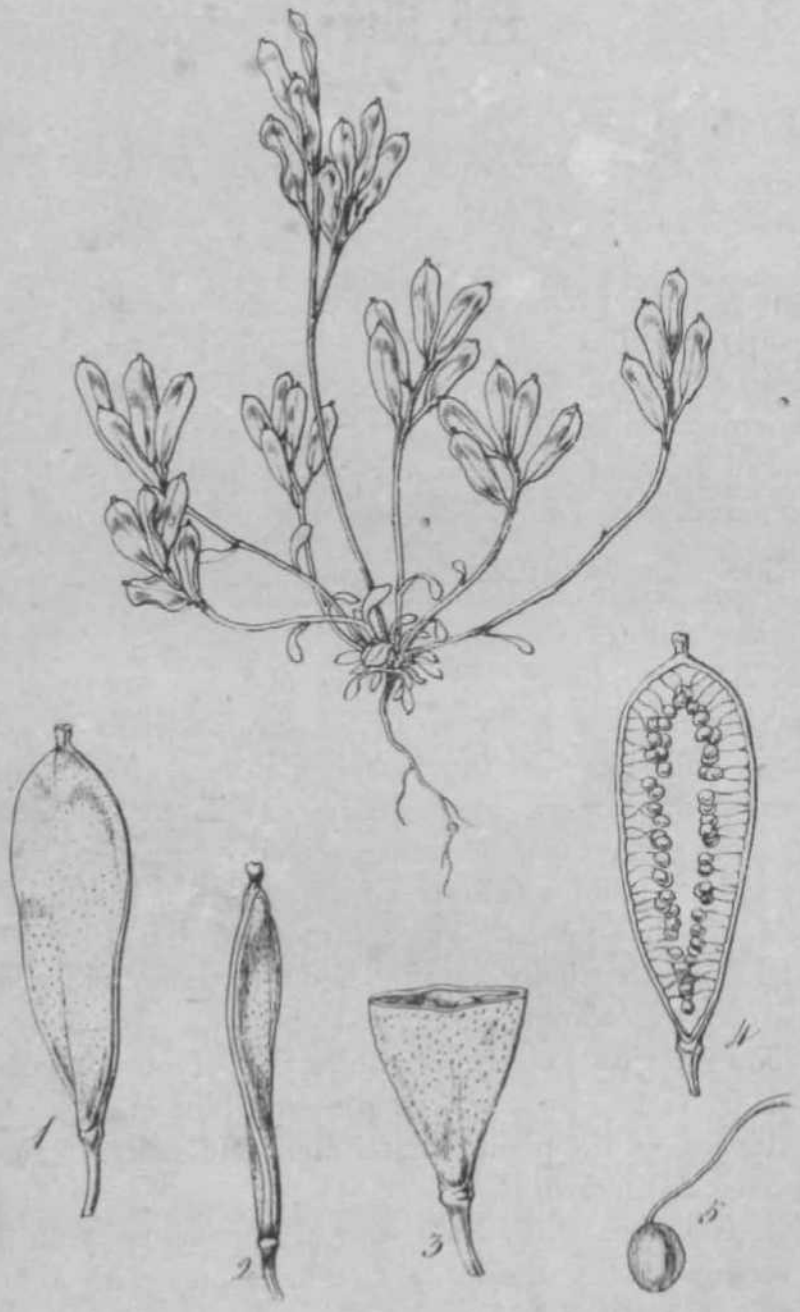
STENOPETALUM DRABOIDES. *Hook.*

Annuum parvum pluricaule, caulibus erectis simplicibus parce foliosis, foliis lineari-spathulatispatentibus glabris integerrimis, racemo 4-5-floro, siliculis oblongo-obovatis compresso-planis subtortuosis unilocularibus (dissepimento nullo) minutissime puberuli-granulatis dorso basi obsolete uninervi stylo brevissimo terminatis, seminibus numerosis, podospermis longissimis.

HAB. Swan River settlement, Australia. ***James Drumrnond,*** *(Crucif. n.* 3.)

A small annual plant, (the flowers of which are unknown to me,) with quite the habit of *Draba* (or *Eriophila) verna;* but the leaves and stems are everywhere glabrous. Nor is the fruit in external appearance very dissimilar; larger, indeed, and longer, more coriaceous, becoming sensibly broader above, and slightly twisted; but within its structure is widely different, the membranous dissepiment, so common to the *Crucifer<e* in general, being here wholly wanting, and the numerous seeds being attached to exceedingly long podosperms. In these latter particulars the fruit exactly resembles that of our *Stenopetalum procumbensy* (TAB. DCX. of the present volume), from which, again, the size of the plant, stouter stem and shape of the fruit, will at once distinguish it.

Fig.* I. Siliculse. / 2. Side view of the same. /. 3. Transverse section of the same. /. 4. The same, with the valve removed. /. 5. Seed and seedstalk '.—*magnified.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TAB. DCXVIII.

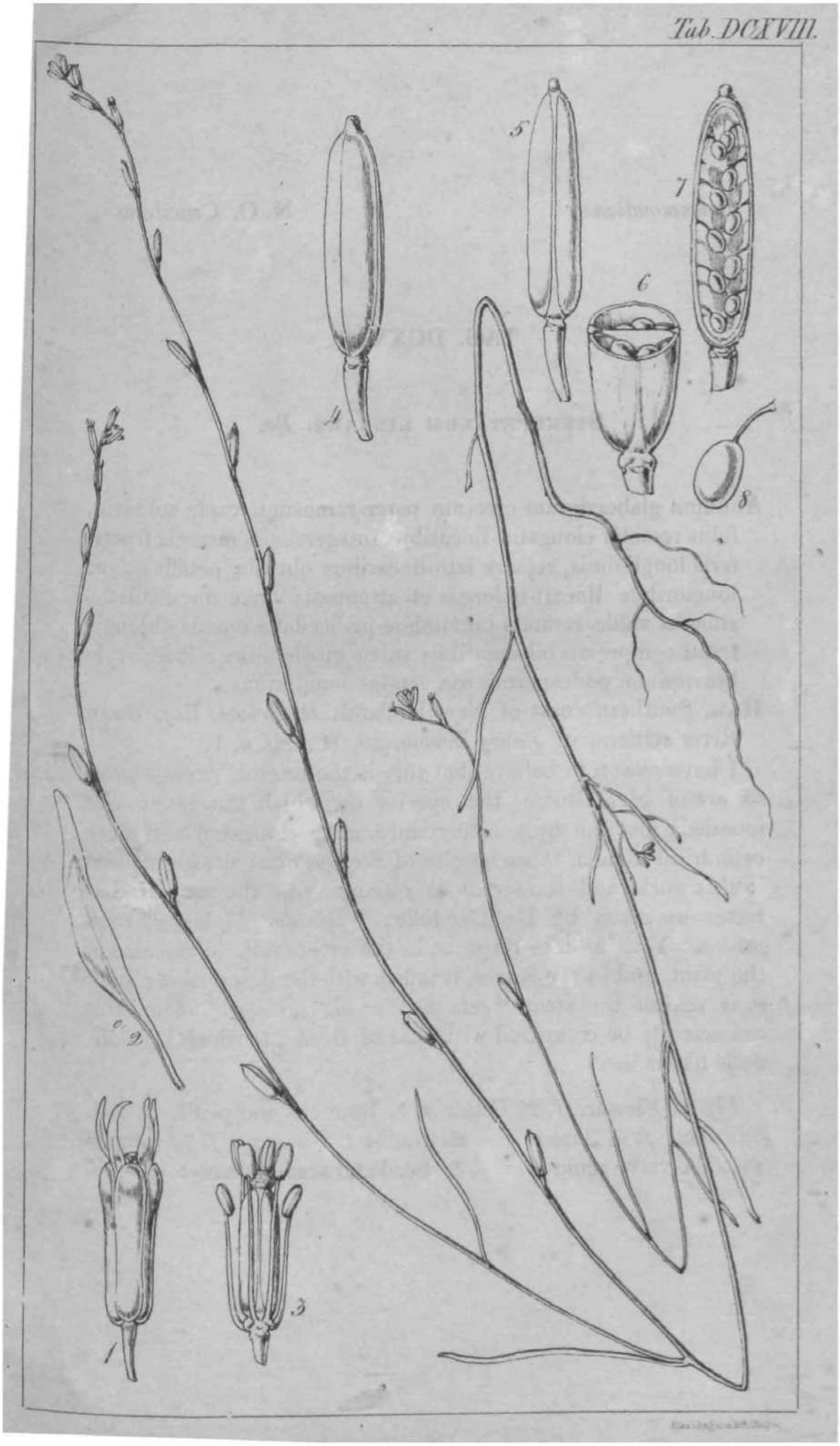
STENOPETALUM LINEARE. *Br.*

Annuum glaberrimum erectum parce ramosum, caule solitario, foliis remotis elongatis linearibus integerrimis, racemis fructiferis longissimis, sepalis lato-linearibus obtusis, petalis calyce longioribus lineari-oblongis et attenuatis longe unguiculatis, siliculis valde remotis brevissime pedicellatis erectis oblongis tereti-compressis bilocularibus valvis medio uninervibus, stylo brevissimo, podospermis vix semine longioribus.

HAB. Southern coast of New Holland. *It. Brown, Esq.* Swan River settlement. *James Drummond, (Crncif. n.* 1.)

I have reason to believe that this is the original *Stenopetalum lineare* of Mr. Brown, the species on which the genus was founded; but the fruit is- certainly more elongated and more cylindrical than in those species of *Stenopetalum* already figured in this work, and somewhat at variance with the generic character as given by De Candolle; " *silicula ellipsoidea, compressa.* Yet, in other respects, in the erect fruit, in the size of the plant, and in the leaves, it tallies with the description; only it is said of the stem " *seta porcina vix crassior."* Our fruit can scarcely be compared with that of *Draba,* to which De Candolle likens it.

Fig. 1. Flower. /. 2. Petal. /. 3. Stamens and pistil. /. 4,5. Siliculae. /. 6'. Transverse section of the same. /. 7« Silicula with the valve removed. /. 8. Seed and seed-stalk *'.—magnified.*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TAB. DCXIX.

EUCALYPTUS MACULATA. *Hook.*

Arbor excelsa, trunco maculato, foliis alternis petiolatis lanceolatis longe acuminatis pellucido-punctatis purpureo-marginatis, nervis copiosis distinctis oblique patentibus, paniculis axillaribus terminalibusque parce ramosis folio brevioribus, operculo duplici, ext. conico-hemisphserico mucronato cupula subangulata breviore, int. (corolla) hemisphserico membranaceo nitido.

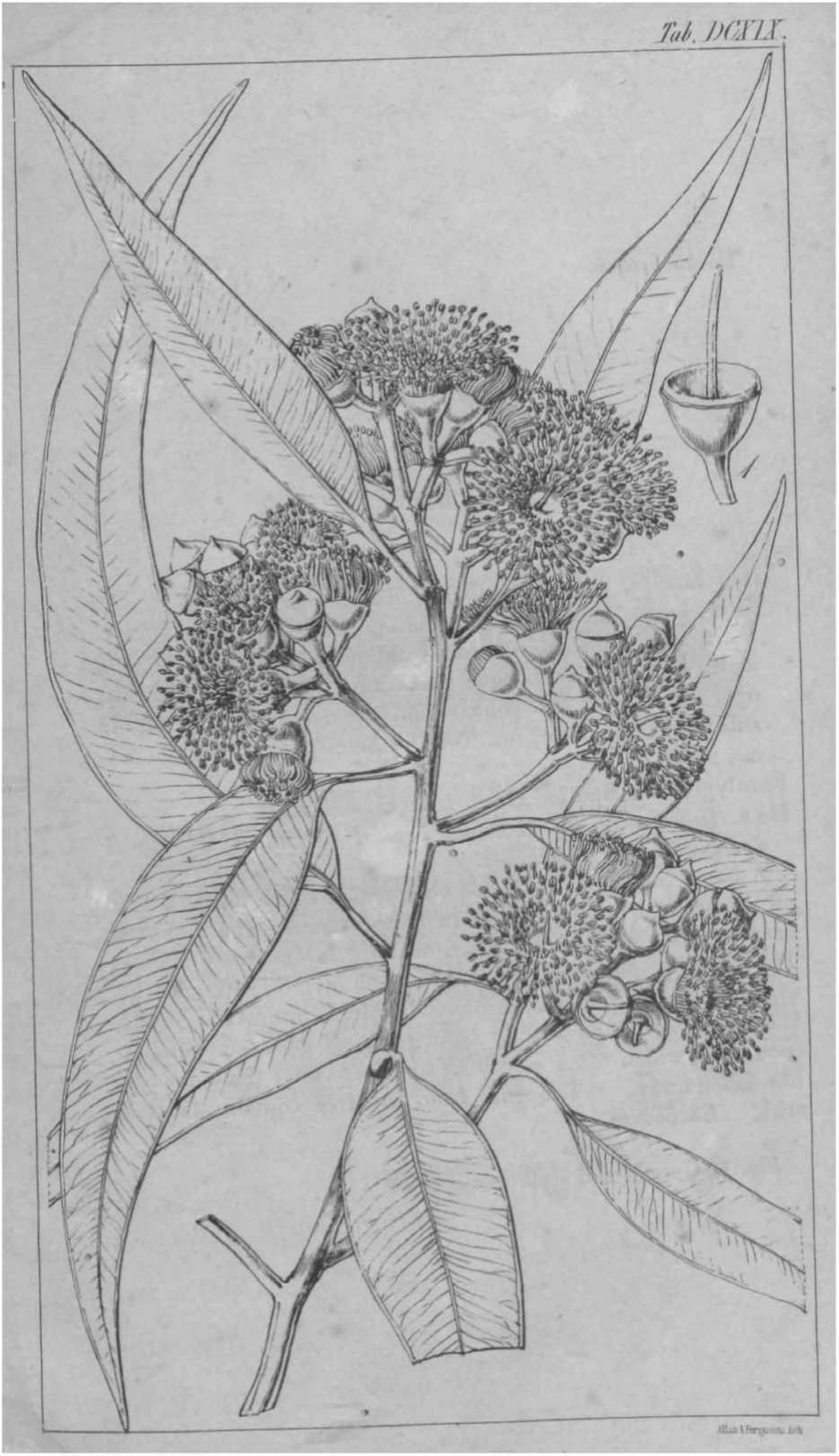
Eucalyptus sp. Spotted Gum. *Backh. mst. n.* 37.

HAB. Interior of N. Holland. *Fraser.* Maitland, Liverpool and Newcastle. *Backhouse.*

A large tree, Mr. Backhouse observes, of which the bark falls off in patches, giving it a spotted appearance. The timber is nearly equal to oak, but the sap or outer layers decay rapidly. The lid or operculum is double, inner one membranaceous; this inner one has justly been considered by Mr. Brown as the corolla, and it here forms an exactly hemispherical glossy membranaceous cup, which often continues to adhere after the outer one has fallen away. " The gum from the tree contains benzoic acid." *Backhouse**

Fig. 1. Cupula and style:—*magnified.*

Tab. DCXLX.



TAB. DGXX.

STENOPETALUM RODUSTUM. *Endl.*

Erectum virgatum superne ramosum parce foliosum, foliis inferioribus interrupte lyrato-pinnatifidis laciniis linearibus subobtusis, superioribus elougatis linearibus integerrimis v. remote inaequaliter dentatis, petalis unguiculatis e lata basi longissime subulatis flexuosis acuminatis, siliculis obovatis nutantibus pedicello longioribus.

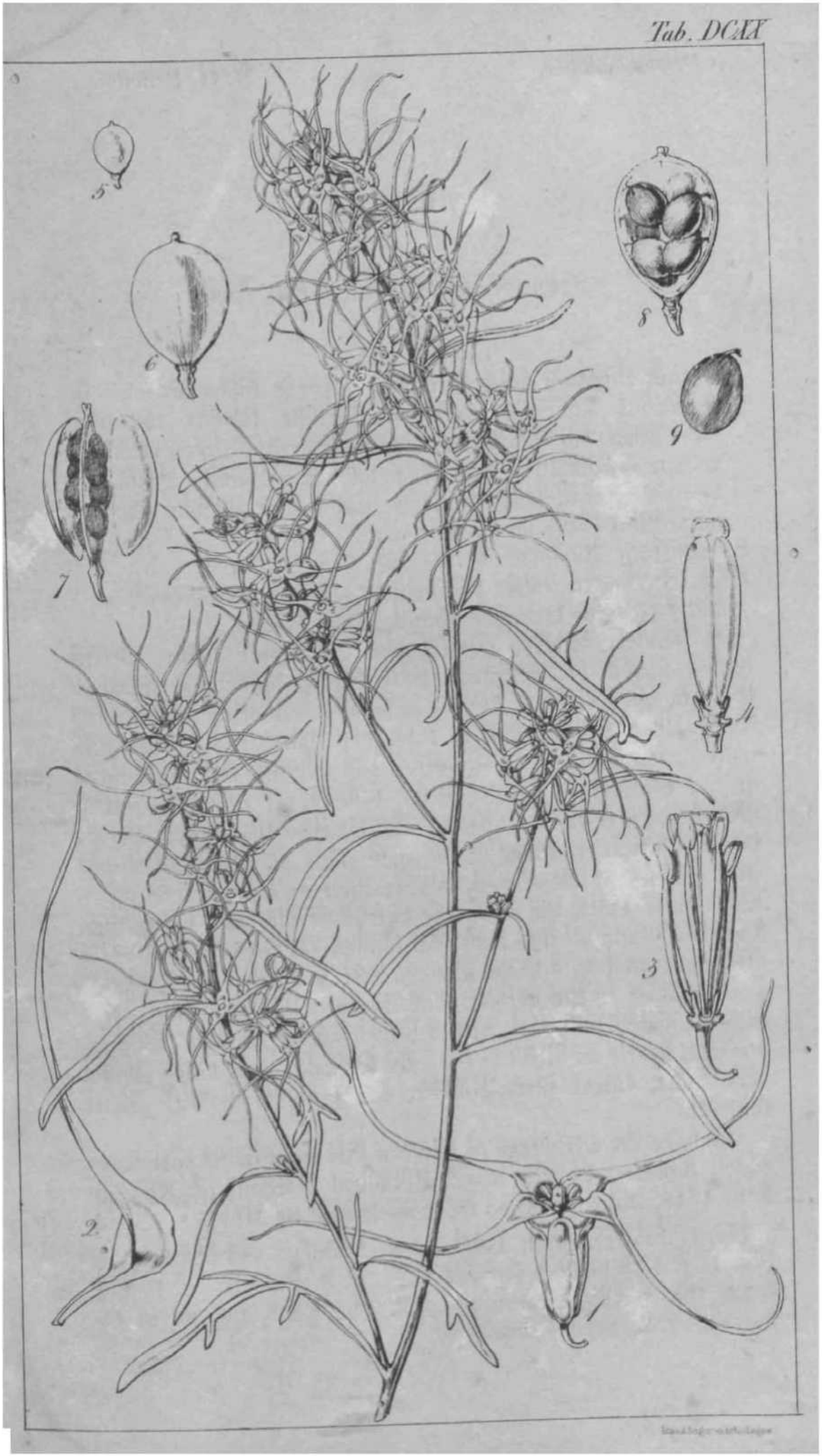
S. robustum. ***Endlicher in Hilgel pL Nov. Holl. p.*** **4.**

HAB. S. W. Australia, Freemantle ***{Hilgel). Drummond, (n.*** **5 and 70 King George's Sound,** ***(Mus. Paris.)***

A slender, twiggy, annual plant, 1-2 feet high. Stems terete, naked or sparingly leafy below, branching upwards, the branches erect. Leaves generally withering before the seeds ripen, rather fleshy, 1-1^ inch long, the lower ones more or less divided, bright green and shining, the upper more or less toothed or quite entire. Flowers at first erect, then drooping, on pedicels which are shorter than the calyx. Sepals linear-elliptical, rounded at the apex, pale coloured and tipped with green. Petals orange yellow, their apices paler, or sometimes quite white, the claw very narrow at the base, expanding, and then produced into a slender lamina 4-5 lines long. Shorter stamens seated on 2 broad glands, having 2 other erect glands pressed close to the germen, one on each side of them. Germen elongated, elliptical, with a broad, sessile stigma. Siliculae obovate, nearly as broad as they are long, 3-5 lines long; stigma very short, valves plano-convex, seeds about 4, with short funiculi.

We have the advantage of figuring this from living specimens which flowered at the Royal Botanical Gardens of Kew, in June 1843, and were raised from seeds sent by Mr. Drummond.

Fig. **1. Flower. /. 2. Petal. /. 3. Stamens and pistil. /. 4. Pistil. /. 5. Silicula :** ***natural size. f.*** **6. Silicula. /. 7. The same, the valves separating. /. 8. The same, the valves removed,** ***f.*** **9. Seed:—*magnified.***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TAB. DCXXI.

PlTTOSPORUM RH0MBIF0L.1UM. *A. CuitTl.*

Arbor, foliis coriaceis rhombeo-ovatis basi cuneatis in petiolum attenuatis grosse sinuato-serratis, floribus cọrymbosis, petalis ellipticis patentibus, ovario basi piloso in stipitem attenuate.

Pittosporum rhombifolium. ***A. Cunn. MSS. in Herb, nostr.***

H AB. Forests of the Brisbane River, ***Allan Cunningham.***

This, according to Mr. Cunningham, to whom we are indebted for a knowledge of the plant, as well as the possession of it in the Royal Botanical Gardens of Kew, attains a height of ȯ0-80 feet. In our greenhouse, cramped in a garden pot, it becomes a flowery shrub, in the course of many years only reaching a height of 4 or 5 feet. The flowers are white, arranged in corymbs, axillary and terminal, at first sight not much unlike those of a ***Cornus.*** **The germen, or ovary, has tufts of hairs in the broadest part; below that, it gradually tapers into a short stipes, apparent also in the fruit, which is globoso-compressed, 2-celled and bursting open into 2 valves. The species is remarkable for the coarse toothing of its leaves, and the small and densely corymbosė flowers.**

Fig. **1. Flower. /. 2. Pistil. /. 3. Section of the ovary:—** ***magṇified, f.*** **4. Fruits:—*natural size.***


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TAB. DCXXII.

HEMITELIA? ALTERNANS. *Hook.*

Inermis, frondibus pinnatis v. bipinnatis, pinnis remotis petiolatis alternis oblongo-lanceolatis coriaceo-membranaceis acuminatis profunde pinnatifidis segmentis oblongis subacutis vix serrulatis, venis liberis basi furcatis, soris in venulas supra furcaturas (rarius axillaribus) seriatim dispositis inter marginem et costam, involucro peltato tenui-membranaceo subintegro.

Hemitelia ? alternans. *Hook. Sp. Fil. p.* **29.**

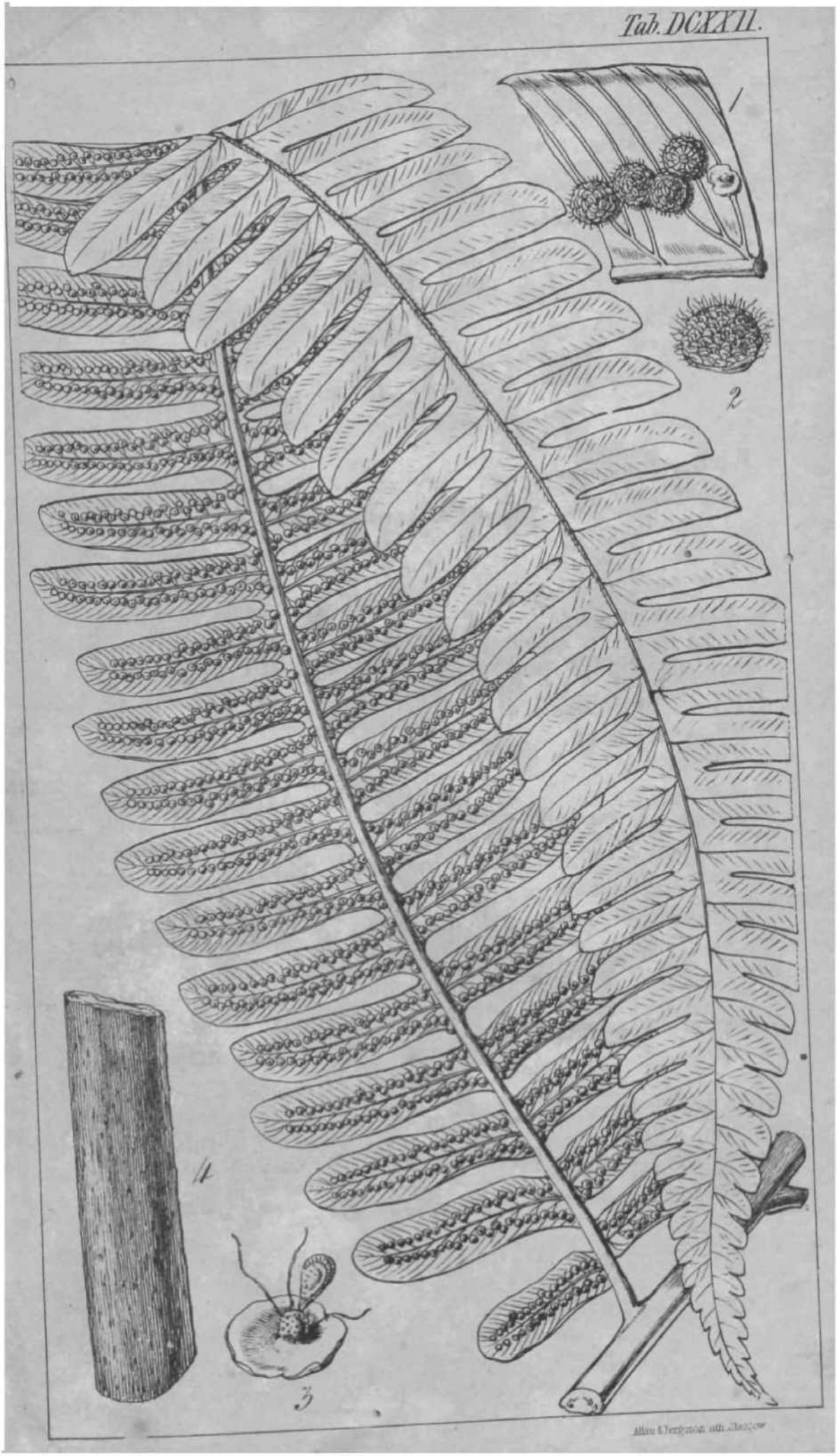
Polypodium alternans. *Wall. Cat. n.* **329.**

HAB. Penang. *Dr. Wallich. Lady Dalhousie.*

The Ferns, composing the family or group of *Cyatheacea*, present so many forms of fructification, as regards the involucre, that it seems hardly possible to limit the generic distinctions. The present does not possess the deep cup of *Cyathea*, nor the lateral and dimidiate one of *Hemitelia*. As a species, it is a very fine and distinct one, discovered by Dr. Wallich in Penang, and subsequently by Lady Dalhousie in the same island. The pinnee are very large, deeply pinnatifid, and exhibiting fructifications in a line or series between the margin and costa of the segments. The receptacles produce copious hairs among the capsules.

Fig.* 1. Portion of a segment of the pinna with sori, showing the veining. /. 2. Sorus, covering the involucre. /. 3. Involucre, most of the capsules and hairs being removed from the sorus: *magnified.—f.* 4. Portion of the stipes: *natural size.

Tab. DCXXII.



TAB. DCXXIII.

CYATHEA BEYRICHIANA. *Presl.*

Stipite aculeato, fronde bipinnata, rachide etcosta subpubescentibus, pinnulis lanceolatis acuminatis ad rachin pinnatitidis, segmentis lineari-oblongis acutis obscure serratis subfalcatis, soris copiosis, involucro demum hemisphserico amplo.

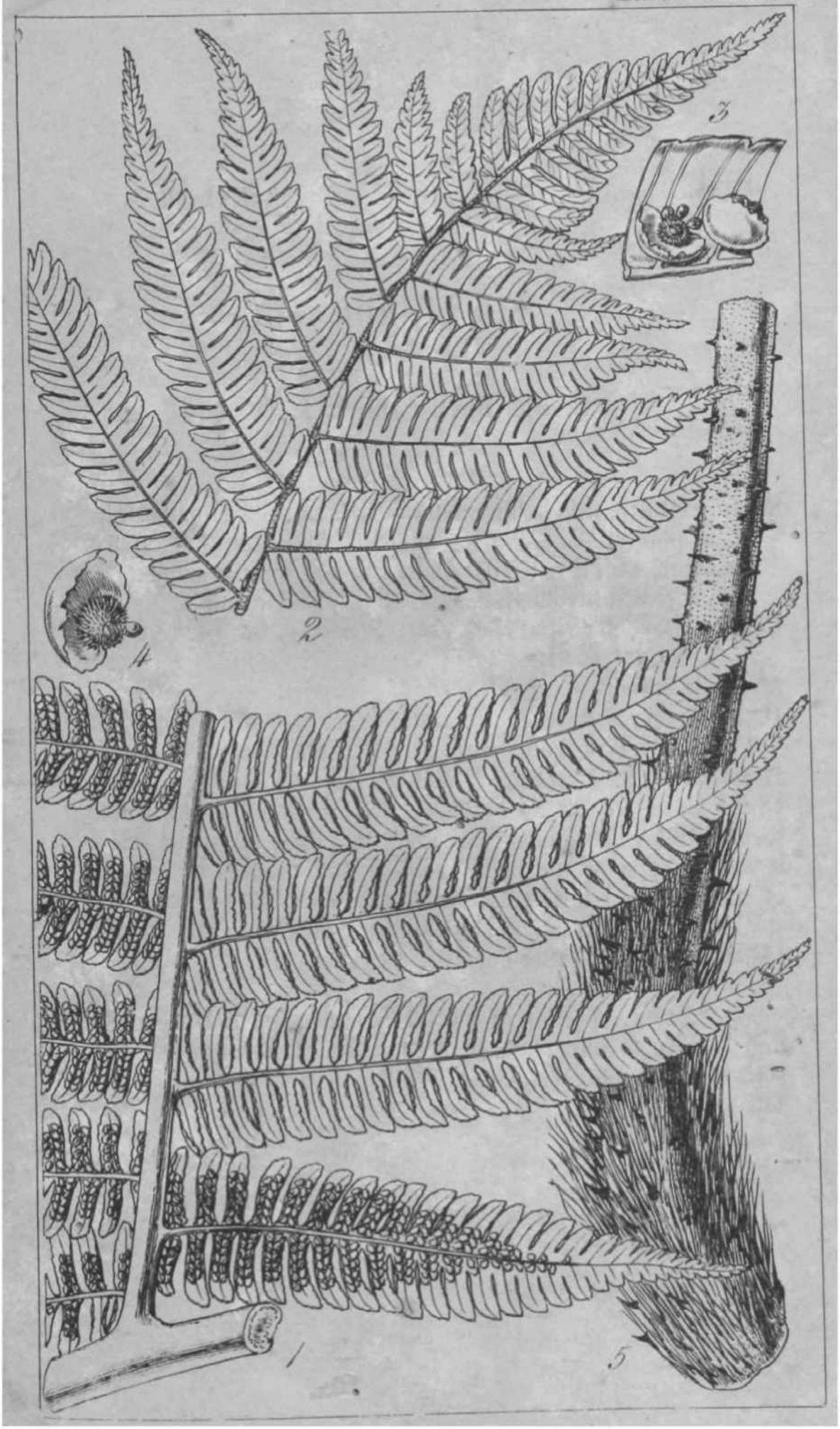
Cyathea Beyrichiana. *Presl, Tent. Pterid. p.* 55 *(name only). Hook. Sp. Fil.p.* 21.

Alsophila stipulacea. *Beyrich, Herb.*

HAB. Brazil; *Sellow^ Beyrich.* Rio Janeiro, *Gardner* > *(n.* 135).

This again is a Fern, with as much claim to be placed in *Hemitelia* as in *Cyathea.* Could we see the involucre in its young state, we should probably find it covering the whole sorus with a globose membrane: but, in a more advanced stage, it is quite open on the outer or upper side, towards the margin of the segment; but still covering the sorus like a hood. We shall have occasion to observe a similar structure in the Ceylon *Cyathea JValkerce.—(See* our TAB. DCXLVII.)

Fig. 1. Lower portion of a primary pinna. /. 2. Upper portion of ditto : *nat. size.—f.* 3. Portion of a. segment, with sori. /. 4. Sorus: *magnified.*—/. 5. Base of a stipes: *nat. size.*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TAB. DCXXIV.

PODOCARPUS PURDIEANA. *Hook.*

Foliis lanceolatis superne latioribus obtusis cum mucrone obtuso basi attenuatis sessilibus utrinque concoloribus, pedunculis solitariis unifloris, drupa receptaculi bifidi longitudine subglobosa apiculo obtuso vix obliquo.

HAB. Woods on mountain ridges, on the estate of Dunrobin Castle, the property of J. Tasker, Esq. St. Mary in the East, Jamaica; at an elevation of about 2,500 to 3,500 feet above the level of the sea. *Wm. Purdie.*

No one can look at this plant by the side of *Podocarpus coriacea,* (see *Lond.Journ. of Botany, v.* \,*p.* 656, *tab.* xxi.), whether in living or dried specimens, without being satisfied of the propriety of considering them two distinct species: yet it is difficult in words to discriminate them. Both inhabit the same mountain regions in Jamaica, though not at the same elevations : yet Mr. Purdie was at no loss to perceive their differences; and to him, while on a mission as Botanical Collector for the Royal Botanic Gardens of Kew, we are wholly indebted for our knowledge of the present one. Besides the disparity in the form and size of the foliage, Mr. Purdie` says; " While *P. coriacea* only attains a height of 50 feet, and a diameter of 2 feet, this new kind reaches to 120 feet or more, and is really one of the noblest trees in the island. Its growth is rapid. One tree, felled by the proprietor, measured 3 feet 6 inches in diameter, at 6 feet from the ground; and at 39 feet from the ground, 2 feet 9 inches, without a branch up to that height. Many of the branches even afford good timber." Some of the leaves are between 5 and 6 inches long.

Fig. 1. Immature fruit:—*magnified.*

Tab. DCXXIV.

TAB. DCXXV.

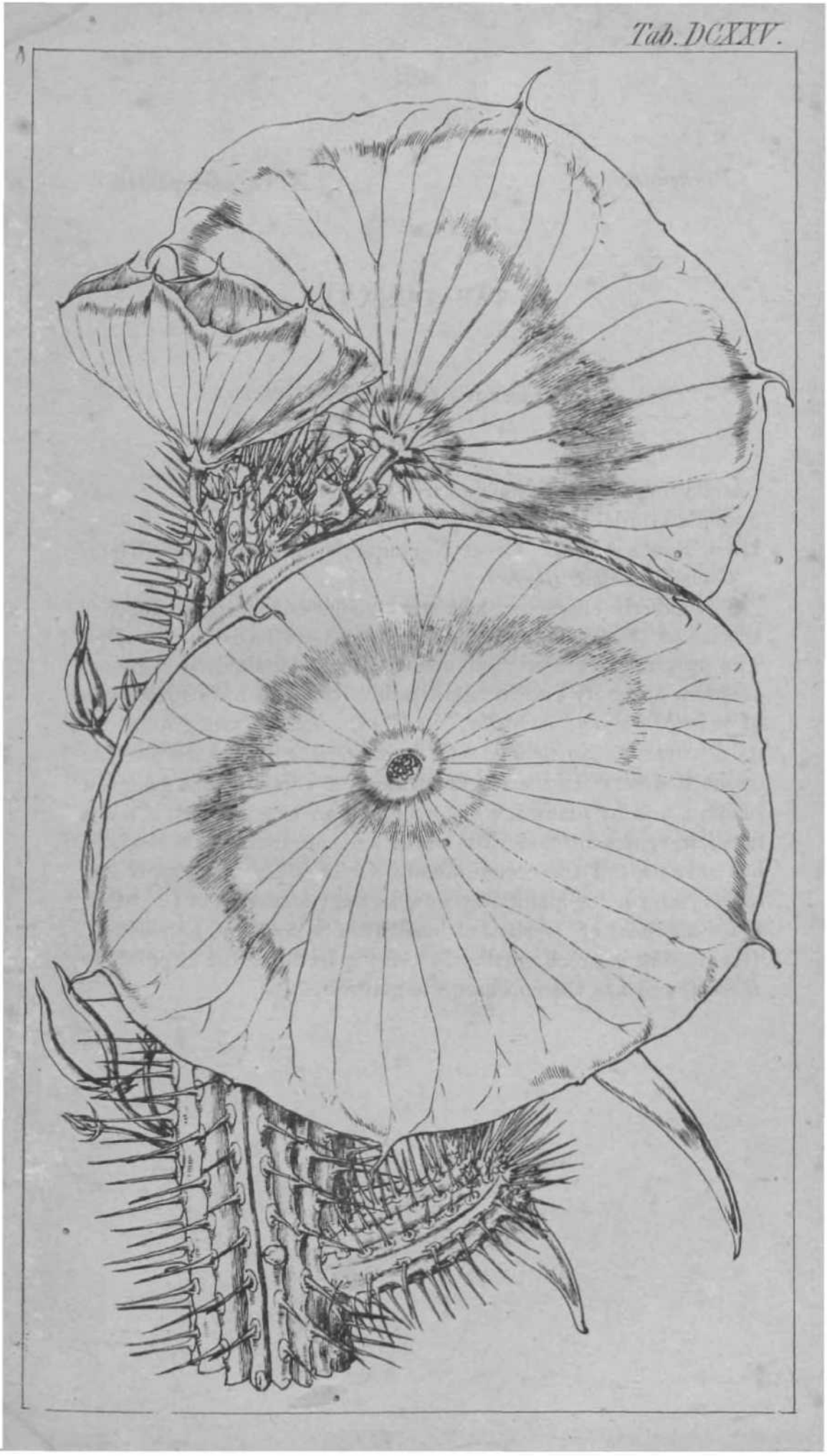
SCYTANTHUS GoRDONI. *Hook.*

Corolla margine intusque glaberrima.

Stapelia Gordoni. *Mass. Stap. t.* 40.

HAB. South Africa. Great Namaqua, near the Orange River. *Colonel Gordon, Burke.*

The generic character, and some remarks relating to another species of this genus, will be found at our TABS, DCV, DCVI. The present is the original species, first detected by Colonel Gordon, and only known to the public through the figure given of it in Masson's *"Stapelice,"* in 1796, from a drawing made by its discoverer. So strange a form of *Stapelia* did not receive the credit it deserved from the cultivators of this singulaB group of plants ; and by many it was considered an exaggerated, if not a fictitious representation. Mr. Burke's recent discovery of it again, has only proved the correctness of Colonel Gordon's representation ; and living plants are now in the possession of the Right Hon. the Earl of Derby, at his seat of Knowsley, Lancashire. The present is much smaller in every part than the *Scytanthus Burkei,* and has the corolla quite glabrous.



TAB. DCXXVI.

PHOLISMA ARENARIUM. *Nutt.*

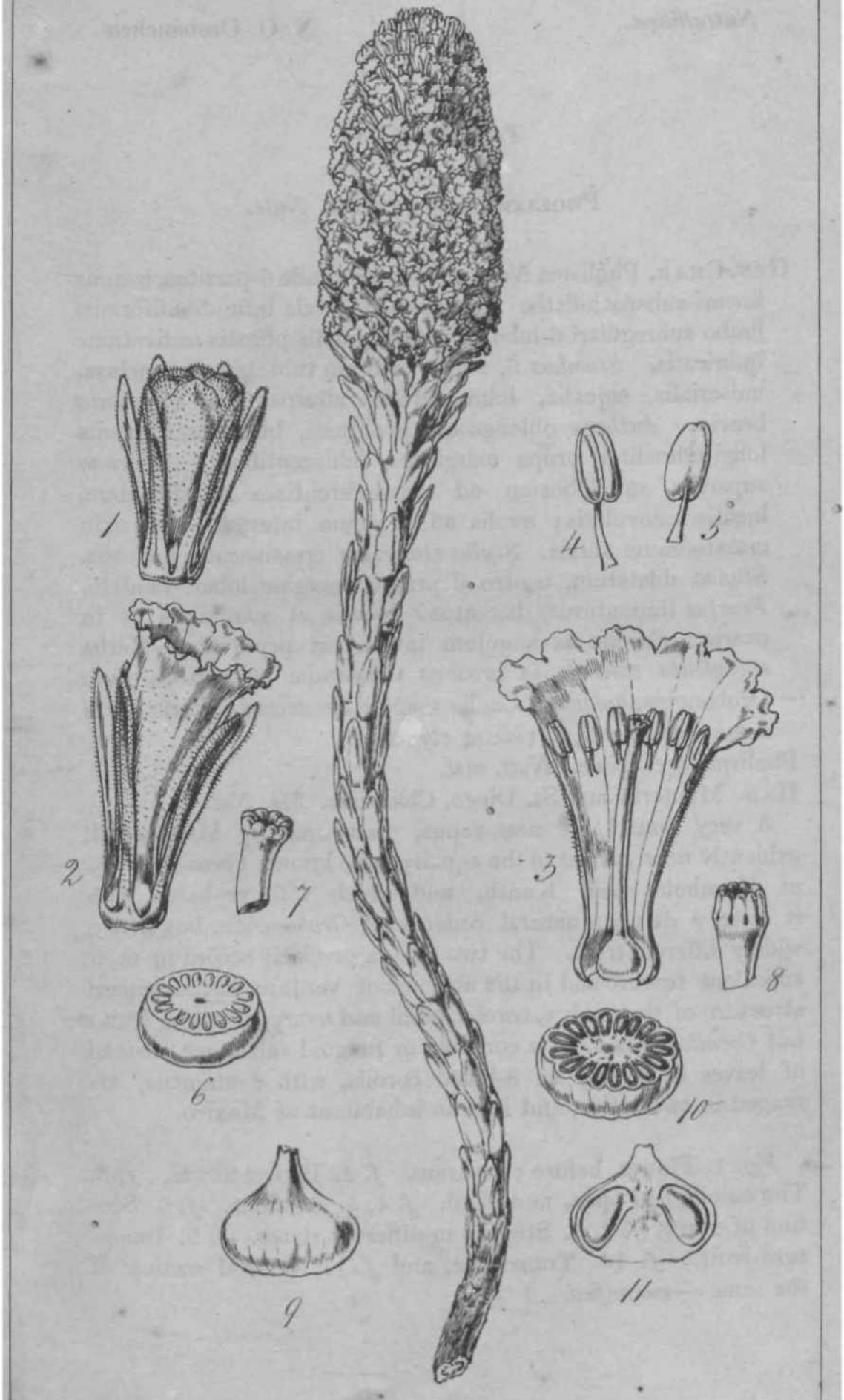
GEN. CHAR. **Pholisma *Nutt.—Calyx* profunde 6-partitus, laciniis lineari-subspathulatis. *Corolla* monopetala infundibuliformis, limbo subregulari 6-lobo, lobis rotundatis plicatis aestivatione imbricatis. *Stamina* 6, supra medium tubi inserta, inclusa, uniserialia, aequalia, lobis corollae alternantia. *Filamenta* brevia. *Anthera* oblongo-ova'tse obtusse, biloculares, loculis longitudinaliter prope marginem dehiscentibus. *Ovarium* superum subglobosum ad circumferentiam multiloculare, loculis uniovulatis; ovulis ad angulum internum circa axin crassissimum affixis. *Stylus* elongatus crassiusculus inclusus. *Stigma* dilatatum, centro depresso, margine lobato-dentato. . *Fructus* (immaturus) baccatus? loculis et seminibus ut in ovario. *Semina* ex angulum interiorem pendentia.—Herba *succulenta colorata in arenosis* California *proveniens, facie* Orobanchis, *aphylla.* Caulis *simplex squamosus** Florcs *parvi densissime spicati, ut videtur ebracteati.***

Pholisma *arenarium. Nutt. mst.*

HAB. Monterey and St. Diego, California. *Mr. Nuttall.*

A very remarkable new genus, discovered by Mr. Nuttall, evidently nearly allied to the equally little known *Corallophyllum* of Humboldt and Kunth, and which will probably with it form a distinct natural order near *Orobanchece,* but with a widely different fruit. The two genera precisely accord in their succulent texture and in the absence of verdure, in the general structure of their calyx, corolla, pistil and ovary, or young fruit: but *Corallophyllum* has a coralloid or fungoid substance, instead of leaves or scales, an 8-lobed corolla, with 8 stamens, arranged in two series, and it is an inhabitant of Mexico.

Fig.* 1. Flower, before expansion. /. 2. Perfect flower. /. 3. The corolla laid open, and pistil. /. 4, 5. Stamens. /. 6. Section of ovary. /. 7? 8. Stigmas in different states. /. 9. Immature fruit. /. 10. Transverse, and /. 11, vertical section of the same:—*magnified.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TABS. DCXXVII, DCXXVIII.

LOMARIA *COLES901.* *Hook.fil.*

Caudice repente squamoso, frondibus longe stipitatis, sterilibus lato-lanceolatis integris v. ovato-lanceolatis profunde pinnatifidis, laciniis utrinque 2-3 late ovato-lanceolatis terminali longiore omnibus acuminatis aiarginatis integemimis, venis approximatis fere horizontalibus bi-trifurcatis parallelis apicibus liberis clavatis, fertilibus pinnatifidis laciniis linearibus acuminatis.

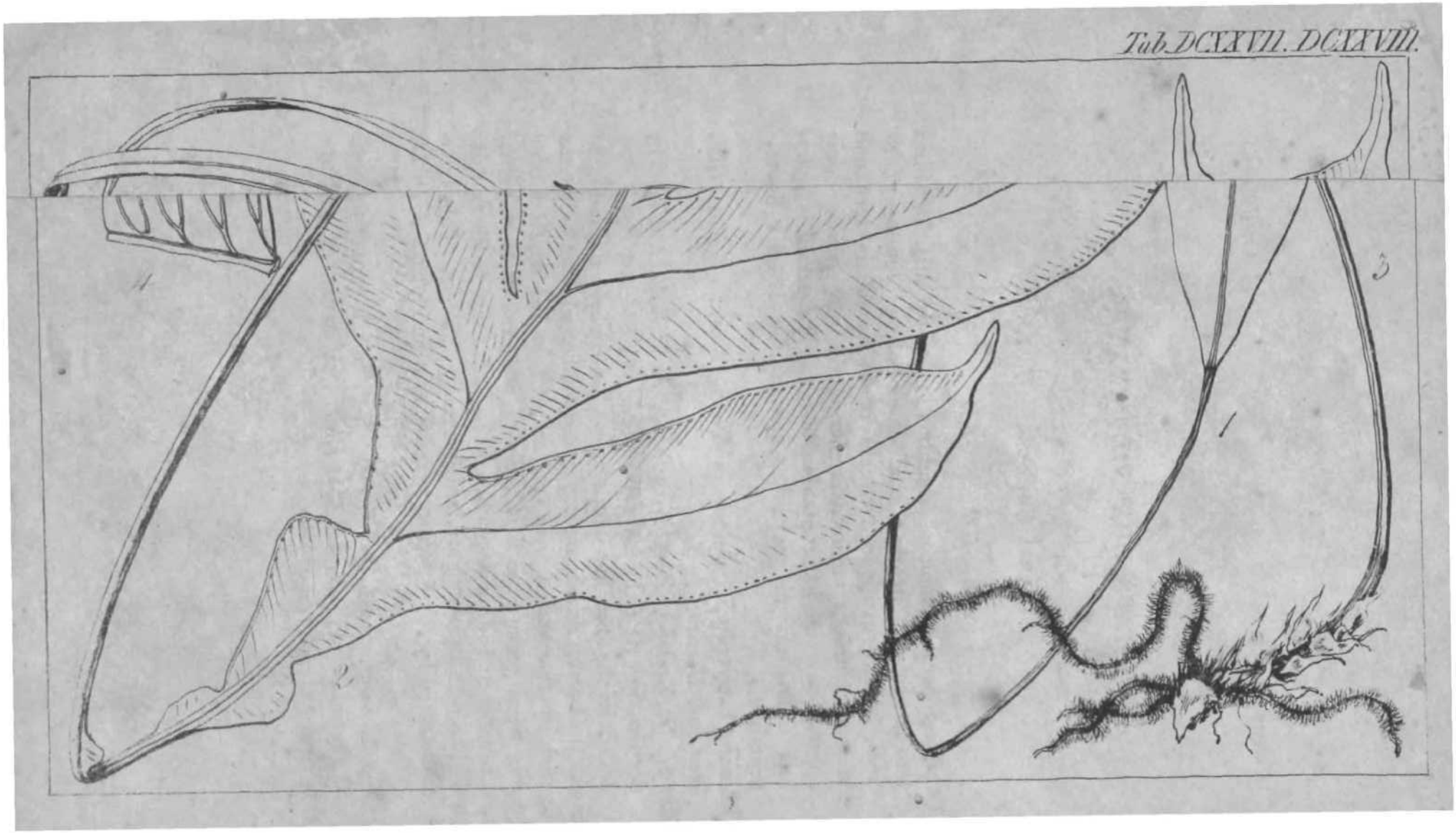
Lftmaria heterophylla. ***Colenso in Tasm. Journ. of Nat. Hist. ined. (not Desvauxf).***

HAB. N. Zealand, Port Nicholson; ***J. T. Bidwill, Esq.*** **In deep woods, near the Lake Waikar£ ;** ***W. Colenso, Esq.***

Allied to the Brazilian ***Acrostichvm heterophyllum,*** **Raddi, so far as the barren fronds are concerned, which are the only ones figured by that author; yet very distinct in the much longer stipes, more coriaceous frond, closer and less distinct veins, and broader and fewer segments. The sterile and fertile fronds, as will be seen by our figure, are extremely different. They have been detected by Mr. Colenso as much as 3 feet long.** ***J. D. H.***

Fig. **1. Sterile undivided frond. / 2. Sterile pinnatifid one, /. 3. Fertile frond;** ***nat. size*** **(but small specimens). /. 4. Portion of the sterile frond:—*magnified.***

Tab. DCXXVII. DCXXVIII.



TAB. DCXXIX,

MYRTUS PEDUNCULATA. *Hook* fit.*

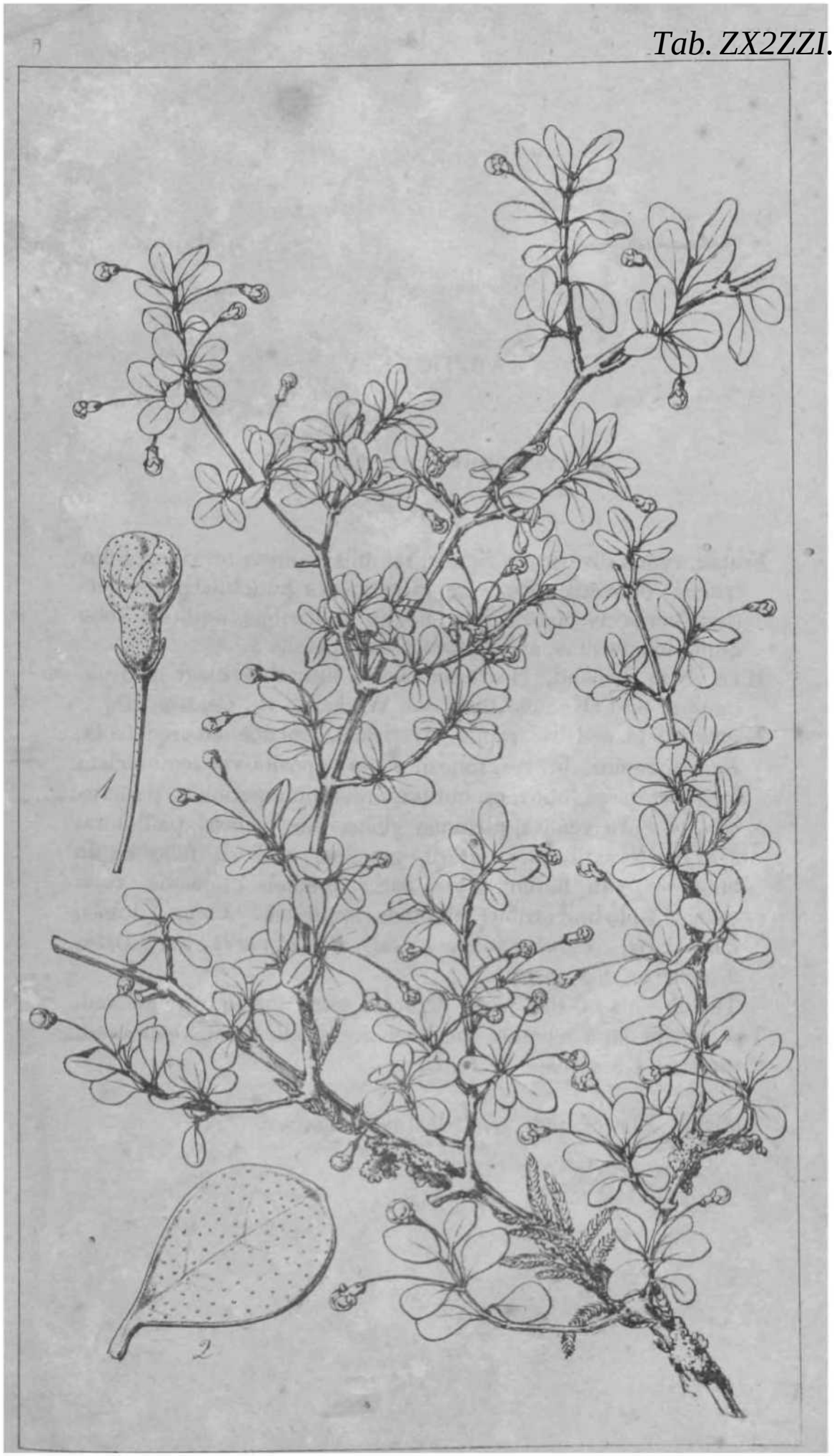
Frutex, ramis divaricatis rigidis, ramulis copiosis brevibus, foliis (parvis) obovatis obtusis brevi-petiolatis punctulatis integerrimis coriaceis glabris, perlunculis axillaribus unifloris folio duplo longioribus, apice bibracteatis, petalis 5.

HAB. New Zealand, Northern Island, near the village of Ruatahuna, and also near the Lake Waikar£. ***W. Colenso, Esq.***

***Frutex* 10-12-pedalis, ramis divaricatis, cortice cinereo tecta. *Ramuli* copiosi, breves, foliosi. *Folia* opposita vix semiunciam longa, coriacea, obovata, obtusa, brevissime petiolata, punctulata, obscure venosa, utrinque glaberrima, subtus pallidiora. *Pedunculi* axillares, solitarii, graciles, uniflori, folio duplo longiores, sub florem bibracteati; bracteis oppositis, tubo calycis 3-plo brevioribus, oblongis, appressis. *Calyx* 5-lobus, lobis latis. *Petala* 5, punctata. *Bacca* parva, aurantiaca, 2-locularis, 4-5-sperma.**

The flowers of the plant figured, were not fully expanded. The berries on a separate specimen are small, orange-coloured, containing 4-5 seeds. /. *D. H.*

Fig.]. **Flower-bud. /. 2. leaf:—** ***magnified.***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TAB. DCXXX.

FAGUS FUSCA. *Hook.fil.*

Foliis remotiusculis coriaceo-membranaceis perennantibus ovatis acutis grosse serratis basi cuneatis integerrimis penninerviis brevi-petiolatis demum fuscescentibus, floribus lateralibus terminalibusque, masc. ternis pedunculatis nutantibus pubescentibus, foemineis sessilibus solitariis, cupulis alatis valvarum dorso basi lamellato-cristatis, fructus angulis la to-alatis apice subhirsutis dentatis.

Betuloides fusca. ***Banks and Soland. mss.***

HAB. New Zealand, Northern Island \ *Banks and Solander*, 1749; *Bidivżll* (masc.); *Dieffenbach.* Wangarei and Poverty Bay ; *Colenso* (foem). Hokianga; *Edgerley.*

A handsome tree, 40-60 feet high, called *"Hutu"* by the natives. Branches striated, red brown. Branchlets clothed with minute pubescence. Leaves about an inch long, quite glabrous, ovate, acute, coarsely, almost incisely, serrated, the base cuneate entire, between coriaceous and membranaceous, at length becoming brownish, the nerves conspicuous. Flowers abundant, lateral and terminal. We possess copious male specimens from Mr. Bidwill ; in these the flowers are ternate, pedunculate, drooping. Perianth turbinate, 5-6 toothed, downy as well as the peduncle. Stamens 5-6 in each perianth. Filament slightly protruded. Anthers oblong. Female flowers mostly terminal on short branchlets. Of the fructiferous plant (see TAB. DCXXXI.) we have fine specimens from Mr. Colenso. The cupule is about the size of a large pea, with longitudinal wings, the backs of the valves crested near the base with transverse lamellae, pubescent. Nut slightly hairy, having 3 longitudinal wings, and toothed at the top.

Fig.* 1. Peduncle, with male flowers :—*magnified.

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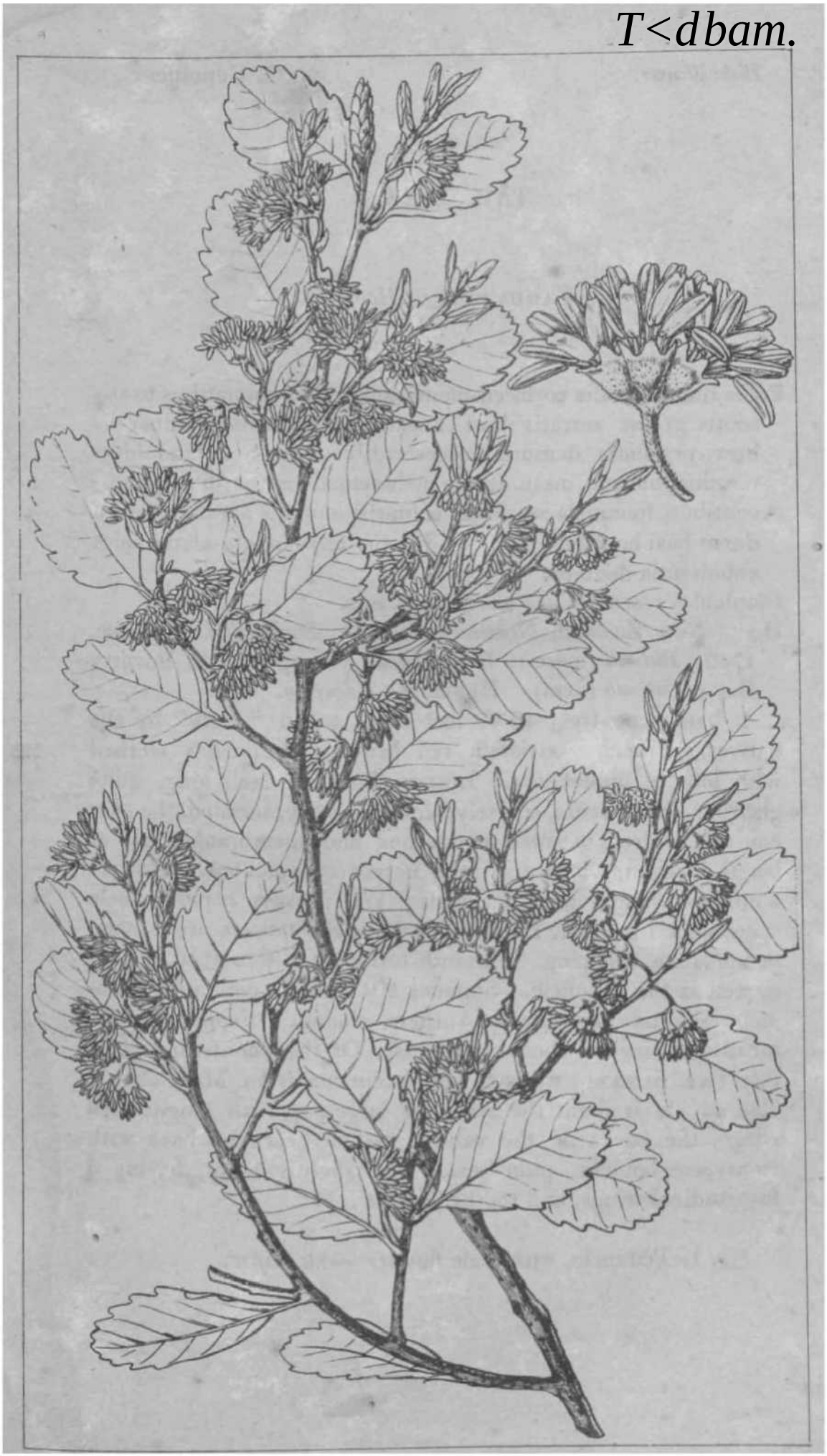

TAB. DCXXXI.

FAGUS FUSGA. *Hook.fil.*

(FEMALE PLANT, with fruit. See the description, under the preceding TAB. DCXXX.)

Fig. 1. Fruit. /. 2. Nucule removed from the cupule:—*magnified.*


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TAB. DCXXXII.

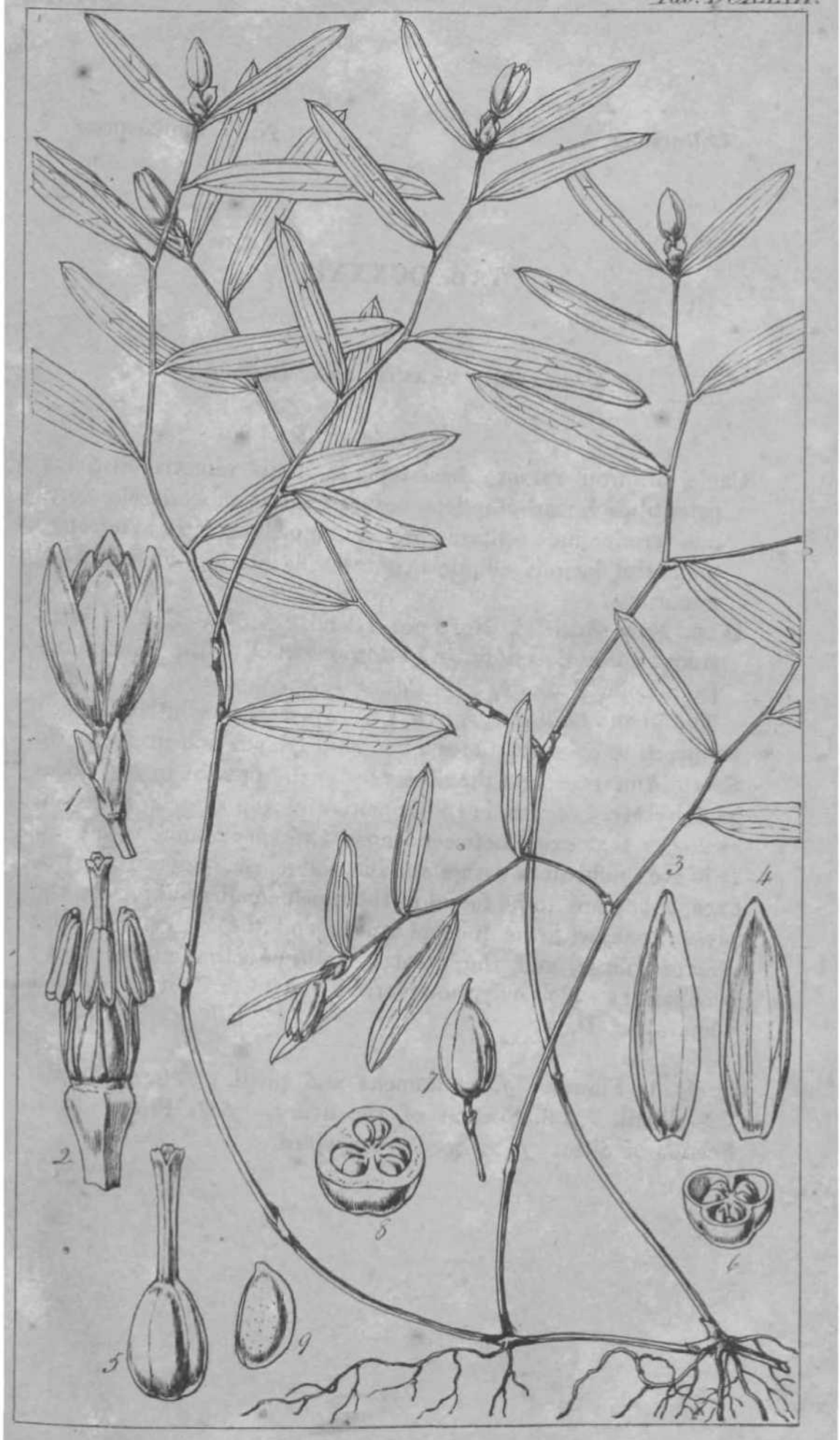
CALLIXENE PARVIFLORA. *Hook. fiL*

Caule filiformi ramoso basi repente, foliis remotis distichis patentibus lineari-ellipticis nervosis acutis subcoriaceis, floribus terminalibus solitariis brevissime pedunculatis bracteatis, perianthii laciniis ellipticis concavis 3 interioribus paululum minoribus.

HAB. New Zealand, Northern Island. At the foot of large trees in the Beech forest, on the ascent of the mountains from Lake Waikare. *TV. Colenso, Esq.*

The genus *Callixene,* and but one species, has hitherto been supposed to exist only in the Falkland Islands and in Antarctic South America; and the discovery of the present in New Zealand by Mr. Colenso, is another proof of the singular botanical analogies that exist between those two very remote countries. It is even difficult to assign specific differences between the two, except they are to be found in the much smaller flowers of the present one, with the unequal sepals, and the larger and more remote foliage, and the greater stature of the entire plant; peculiarities which may, however, be due to the better soil and climate. /. *D. H.*

Fig. 1. Flower. /. 2. Stamens and pistil. /. 3, 4. Sepals. /. 5, Pistil. /. 6. Section of the ovary. /. 7. Fruit. /. 8. Section of ditto. /. *V.* Seed:—*magnified**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TAB. DCXXXIII.

LORANTHUS (DENDROPHTHOE) COLENSOI. *Hook.fiL*

Ramis teretibus, foliis obovato-rhombeis coriaceis obtusis petiolatis subaveniis, pedunculis axillaribus subquinquefloris, floribus longitudine fere foliorum, petalis 4, ungue basi dilatato lamina angusto-ovata 4-plo longiore.

HAB. New Zealand, Northern Island. Abundant, growing parasitically on branches of *Metrosideros tomentosa*, near Lake Waikaré. *W. Colenso, Esq.*

For the knowledge of this fine *Loranthus*, which displays a profusion of scarlet blossoms, we are indebted to Mr. Colenso. It is alliedjto *L. tetrasepalus*, (Linn, fil.) of the same country, and it belongs also to the saiie section; but may be easily recognised by the much larger size of all its parts, by the greater number of flowers on the peduncle, and the decidedly petiolated leaves. We possess another (a third) very distinct species, native of New Zealand. /. *D. H.*

Fig.l. Flower. /. 2. Petal and stamen. /. 3. Pistil.—*magnified.*


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TAB. DCXXXIV.

RANUNCULUS MACROPUS. *Hook. fil.*

Caule elongato erecto gracili glaberrimo parce ramoso, foliis longissime petiolatis flabelliformibus ternatis, foliolis cuneatis profunde 2-3 partitis, segmentis apice crenato-dentatis, pedunculis oppositifoliis elongatis erectis 1-floris, sepalis 5 obovatis petala conformia suberecta duplo superantibus, staminibus paucis, acheniis glaberrimis ovatis in stylo elongato subrecurvo sensim attenuatis.

HAB. Near the Mission Station of Kaupapa, Poverty Bay, Northern Island, New Zealand; found growing almost entirely submersed in marshy pools. ***W. Colenso, Esq.***

Whole plant about 1 foot long, and but little branched. The radical petioles are rather thick, succulent, 8-10 inches long, dilated at the very base. Leaves f inch long by 2 £-3 broad, between flabellate and reniform in their circumscription. Stem about as long as the root-leaves, with 3 or 4 remote, solitary peduncles, each opposite to a cauline leaf, and longer than its petiole. Flowers small, the sepals spreading, slightly concave, 3-nerved. Petals much smaller than the sepals, suberect. Achenia smooth and glabrous, with rather a long, slightly-curved style. A very remarkable plant, from the great length of its petioles, (especially those from the root) and peduncles, and the smallness of its petals as compared with the sepals. ***J. D. H.***

Fig.* 1. Flower. /. 2. Underside of ditto. /. 3. Head of carpels. /. 4. Single carpel:—*magnified.


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TAB. DCXXXV:

GENTIANA BELLIDIFOLIA. *Hoohfil.*

Radice valida fusiformi, caulibus brevibus adscendentibus unifloris, foliis spathulatis inferioribus confertis recurvis petiolatis subenerviis, superioribus brevioribus obovatis obtusis remotis sessilibus, segmentis calycinis ovato-ellipticis acutis, corolla late campanulata v. subrotata profunde 5-fida segmentis ovatis obtusis, ovario brevi-stipitato.

HAB. New Zealand, Northern Island. On Tongariro. /. *T. Bidwill, Esq.*

Stems and branches short, and ascending; the flowering ones only elongated, 4-5 inches in length. Leaves about an inch long, apparently rather thick, their apices rounded. Flowers terminal, solitary; the calyx is 4 lines long. Corolla 7-8 lines long, between campanulate and rotate, yellow, and streaked when dry with darker lines. Anthers from the curving of the apex of the filament, extrorse after the pollen is emitted. Ovarium elongated, stipitate; the stigma bilabiate. Allied to the *G. saxosa,* Forst. from which, according to the drawing in the British Museum, it differs in the much smaller size, shorter leaves, which are broader in proportion, and especially in the shorter and broader corolla. *J. D. H.*

Fig.* 1. Corolla laid open:—*magnified.

TAB. DCXXXVL

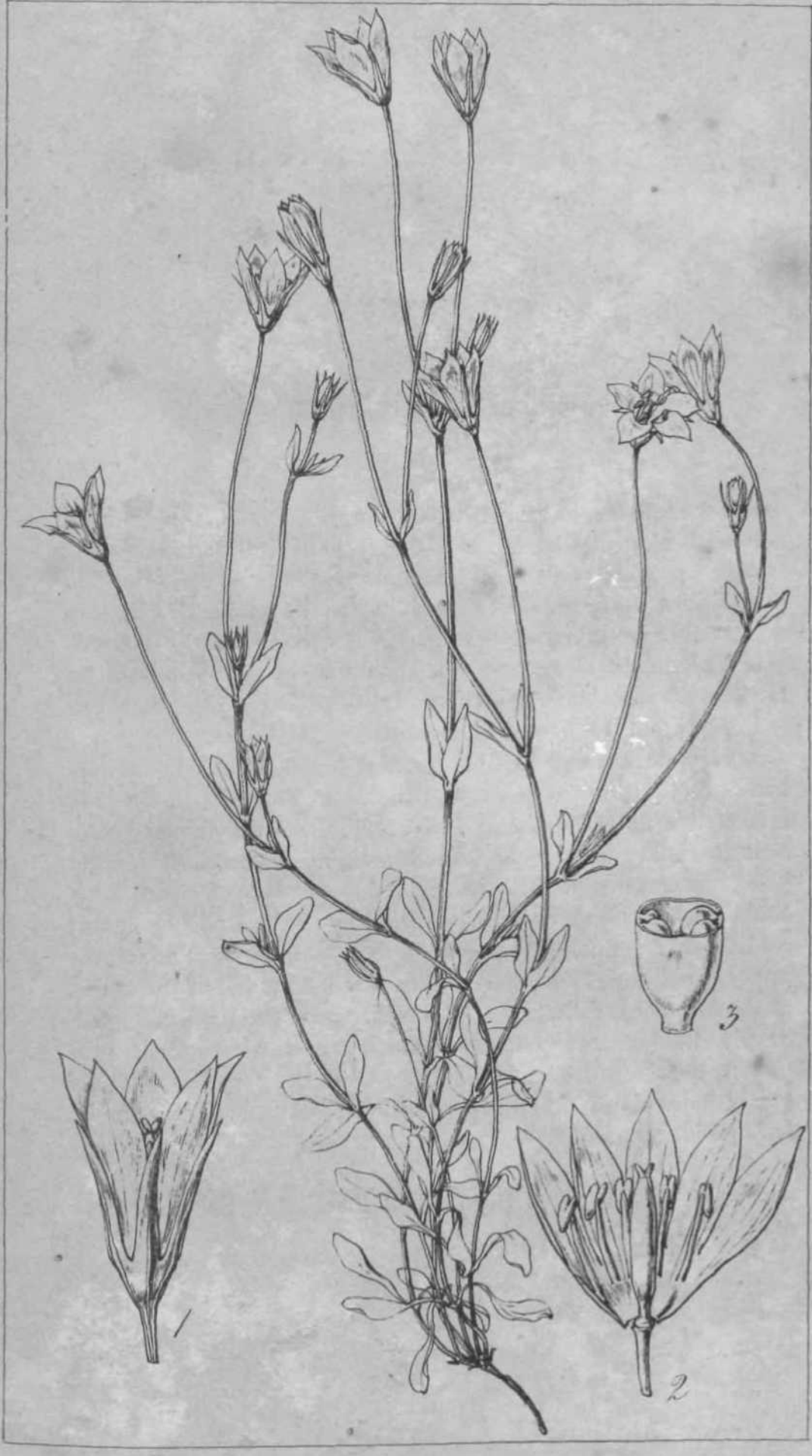
GENTIANA GBISEBACHII. *Hook.fiL*

Aiinua ? caule erecto gracili e basi ramoso, ramis superioribus furcatis elongatis ad apices 1-floris, foliis inferioribus petiolatis spathulatis flaccidis apicibus rotundatis, superioribus sessilibus ovatis subacutis, fioribus erectis, segmentis calycinis linearibus acutninatis dorso nervosis, corolla rotato-campanulata segmentis elongato-ovatis acuminatis, ovario stipitato.

HAB. New Zealand, Northern Island. On downs between Rotuari and the base of Tongariro. ***J. T. Bidwill, Esq.***

A very elegant and distinct species, belonging to Dr. Grisebach's section *Antarctophila,* to which also Forster's G. *montana* is referrible, as well as the Magellanic species, with which the present resembles in habit of growth. Stems cylindrical, slender below, increasing a little in diameter upwards, a span long. Radical leaves none, or perhaps withering as the stems elongate; cauline ones apparently flaccid, £ inch long, *2*\ lines broad, the upper \ inch long. Flowers rather small, terminal at the apices of the branches, solitary. Calyx narrow at the base, 5-angled, deeply divided into 5 linear segments, each with a stout, prominent nerve on the back, \ shorter than the corolla. Corolla £ inch long, yellow when dry, subrotate. Anthers as in the G. *bellidifolia.* *J. D. H.*

Fig.* 1. Flower. /. 2. Corolla laid open. /. 3, Section of the ovary:—*magnified.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TAB. DCXXXVIL

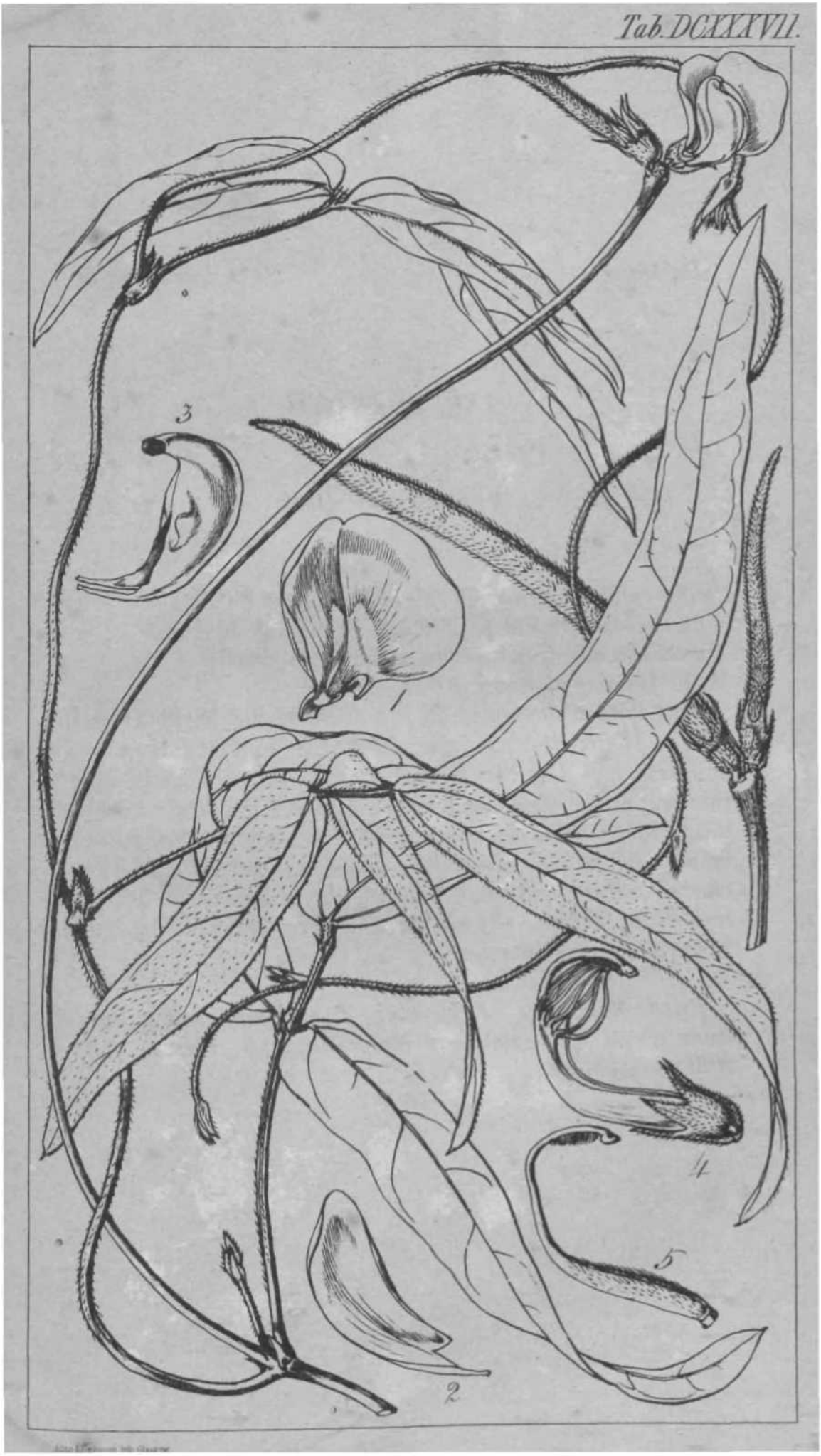
VIGNA HIRTA. *Hook.*

Caule volubili retrorsum hirsuto, foliolis oblongo-acuminatis hirsutis intermedio petiolulato, pedunculo longissimo 2-floro glaberrimo, calyce leguminibusque rufo-villosis.

HAB. Interior of South Africa. *Burke.*

This species blossomed in the stove of the Right Hon. the Earl of Derby, and was raised from seeds sent from the interior of South Africa by Mr. Burke. The leaves are of a peculiarly thin and membranaceous texture, many of the leaflets are 5-6 inches long; the stipules are small, ovato-sagittate; the flowers moderately large, pale yellowish-green; the style is densely ciliated on the underside beneath the stigma; the pods 4-5 inches long, and, equally with the calyx and young stems, clothed with ferruginous hairs.

Fig.* 1. Vexillum. /. 2. Ala. /. 3. Carina. /. 4. Flower, from which the petals are removed. /. 5. Pistil. /. 6, A fruit:—*magnified.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TAB. DCXXXVIII.

CYATHEA INTEGRA. /. *8m.*

Inermis, frondibus 2-3-pinnatis,pinnislato-lanceolatis acuminatis pinnatifidis, segmentis lato-ovatis acutis subserratis glabris, soris plerumque rachin versus, involucris membranaceis primum hemisphaericis apice evanescentibus tlemum in lobis 4-5 subregularibus patentibus fissis.

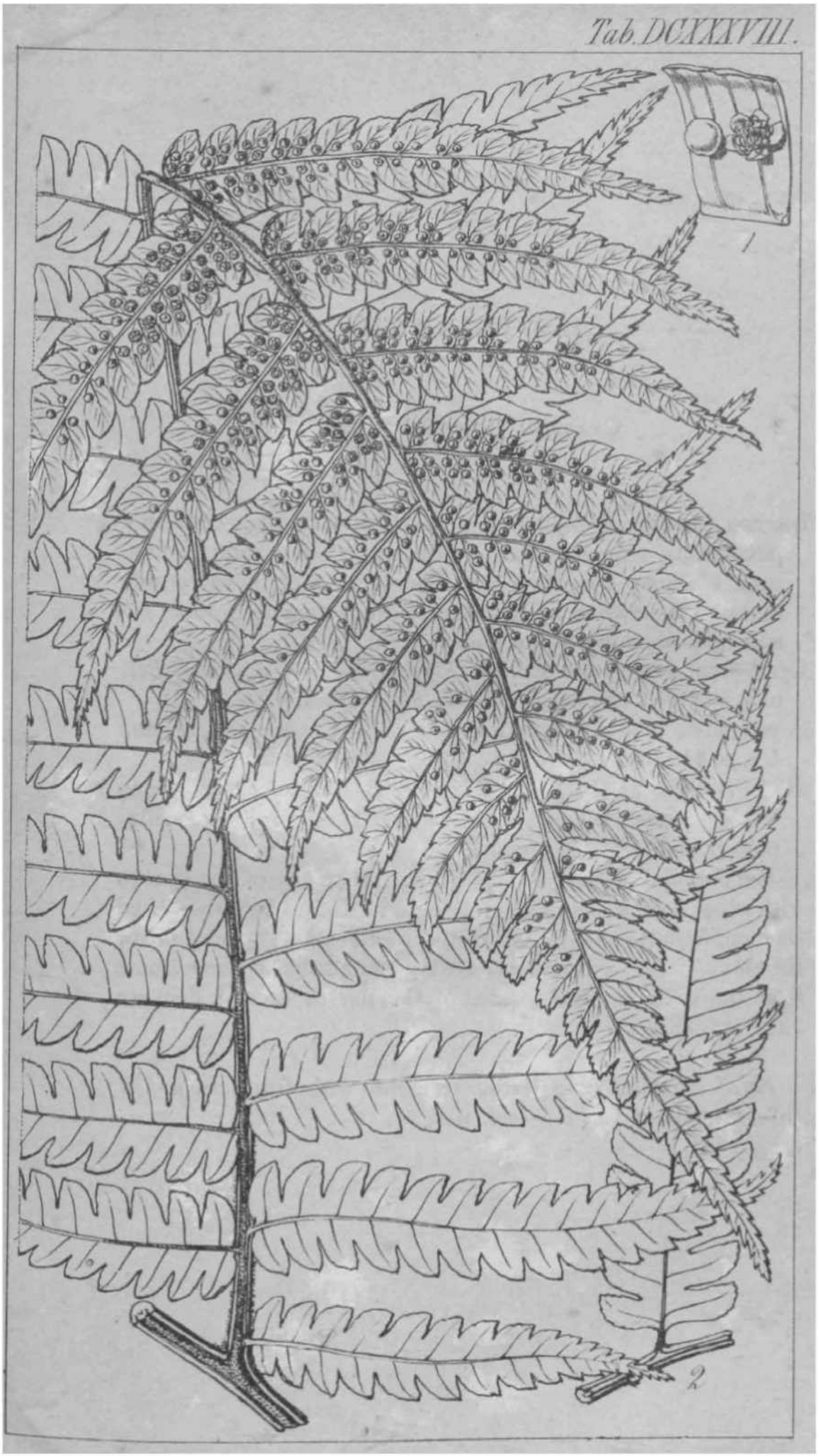
Cyathea Integra. /. *Sm. En. Fit. Philipp.in Hook. Journ. ofBot. v.* 3,*p*. 419 *(name only). Hook. Sp. Fil.v. \,p. 26.*

/3. *petiolata;* pinnulis ssepissime petiolatis. C. petiolata. *J. Sm. L c.p.* 419 *(name only).*

HAB. Amboyna; *(Herb. Hook.from P. B. Webb, Esq.)* Lujon; *Cuming Herb. Philipp. n.* 120.—/3, Isle of Mindora, Philippine Islands; *Cuming no.* 359.

The pinnules are less deeply divided than any of the species with which I am acquainted, and might be said to be rather lobed than pinnatifid; so that much of the fructification is placed below the sinus, between it and the costa, and all the sori are remote from the costa, as the forking of the nerves is at a distance from it.

Fig. 1. Portion of a fertile segment, with fruit; *magnified, f.* 2. Pinnule of var. /3:—*nat. size.*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TAB. DCXXXIX.

FAGUS SOLANDRI. *Hook.fil.*

Ramis nigro-fuscescentibus, ramulis pubescentibus foliosis, foliis undique subdistichis breviter petiolatis parvis oblongo-ellipticis utrinque rotundatis margine integerrimo siccitate recurvo, inferne appresse pubescenti-tomentosis cinerascentibus, floribus (immaturis) $ aggregatis sessilibus.

Myrtilloides cinerascens. ***Banks and Sol. mss. in Herb. Banks.***

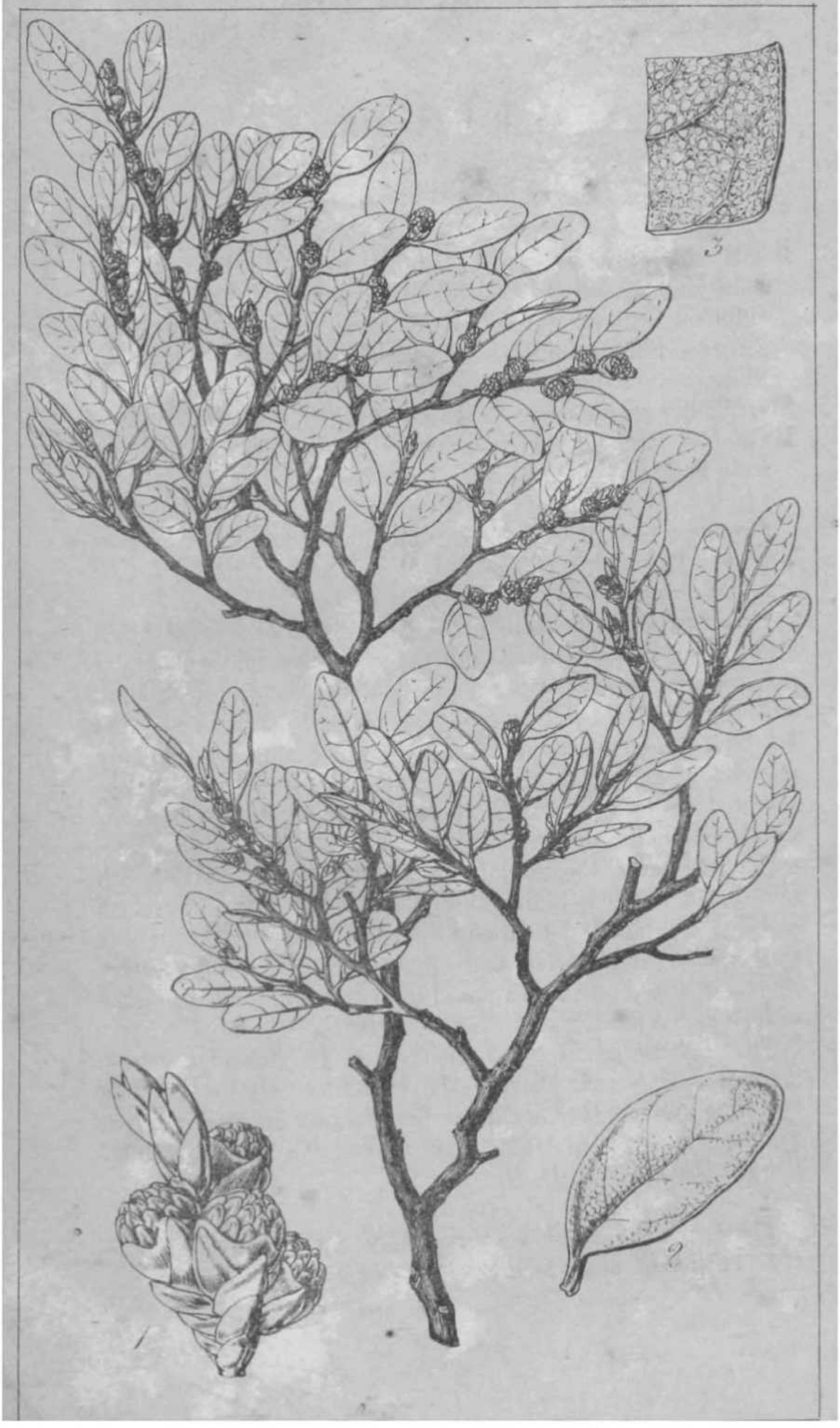
HAB. New Zealand. First discovered, but without flower or fruity at Totara Nui, by *Sir J. Banks* and *Dr. Solander, in* 1769. Waiwatu; Port Nicholson. *J. T. Bidwill, Esq.* forming a tree 100 feet high. Mount Egmont; *Dr. Dieffenbach.* Tapatahi, a village near the E. coast, forming a tree 30-60 feet high ; *W. Colenso, Esq.*

Branches slightly warted, of a dark-brown or fuscous black colour, their apices covered with yellowish, apparently glandular pubescence. Leaves rather loosely placed, plane and horizontal, stiff, the petioles 1 line long, pubescent, dark-coloured; lamina \-\ inch long, the upper surface scarcely shining, minutely reticulated, pale greenish-brown when dry; under surface ash-coloured with a very closely appressed tomentum, not however wholly concealing the reticulated venation. Male flowers clustered, 3 or more together, nearly sessile, densely clothed with red-brown, shining, imbricating, scariose bracteee. Perianth cup-shaped, about 5-toothed, 5-angled, and 10-nerved; the teeth somewhat irregular, and often acute, the peduncle very short and hairy. Stamens 8, red-brown, \ lin. long, filaments as long as the perianth. Anthers exserted.

First discovered by Sir J. Banks and Dr. Solander, whose ms. name is quoted above. Mr. Dryander, after examining flowering specimens of a similar but distinct species, brought by Mr. Menzies from Dusky Bay, altered the name to *Cliffortioides oblongata* J. D. H.*

Fig.* 1. Cluster of flowers, not fully expanded. /. 2. Leaf. *f.* 3. Portion of ditto, seen from the underside:—*magnified.

Tab. DCXXXIX.



TAB. DCXL.

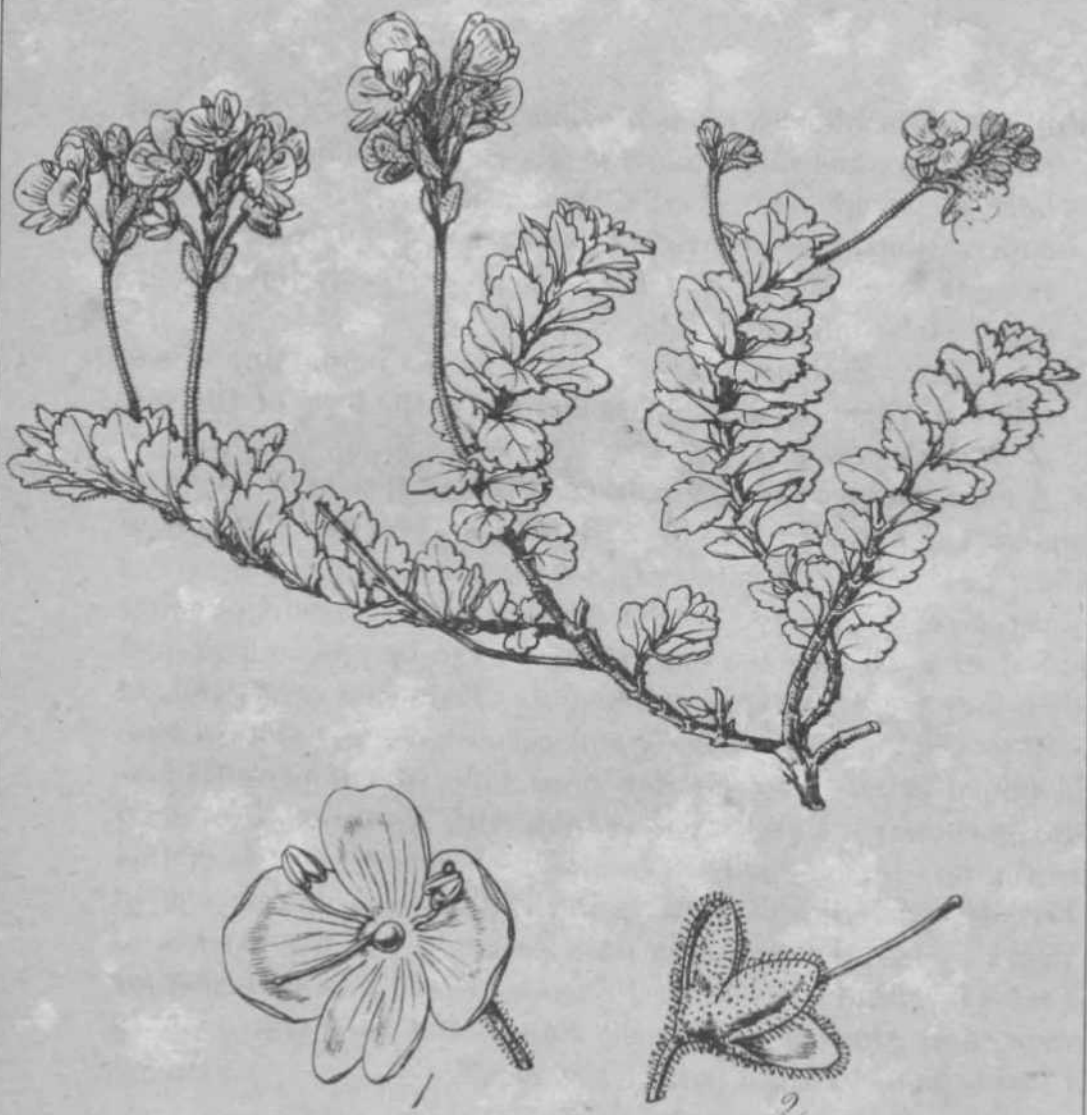
VERONICA NIVEA. *Hook. fit.*

Fruticosa procumbens, ramis brevibus, foliis confertis decussatis patentibus mine subsecundis ovatis rigidis brevissime petiolatis inciso-crenatis glabris, pedunculis lateralibus ramos superantibus, bracteis ovatis calycibusque glanduloso-hirsutis, racemis corymbosis 4-6 floris segmentis calycinis ovatis, corollce lobo inferiore bifido.

HAB. New Zealand. On Tongariro, a mountain, whose altitude is estimated at 6,200 feet above the level of the sea. «/. *T. Bidwill, Esq.*

A most distinct and well-marked fruticose species of *Veronica,* and very alpine in its locality. The stems are, for the size of the plant, stout, procumbent, 4-6 inches long; the branches short, ascending, leafy. Leaves closely placed, spreading on four sides, except when the branch happens to be procumbent, and then they point upwards, subsecund. Peduncles erect, and, as well as the bracteas, pedicels and calyces, densely clothed with glandular hairs. Pedicels 2-4 lines long, the upper ones gradually shorter. Corolla pure white, with the lower lobe bifid in the flower examined, (possibly by accident). It is of this *Veronica* Mr. Bidwill speaks, when describing his ascent of Tongariro, in his Rambles in New Zealand : " A few patches of a most beautiful snow-white *Veronica,* which I at first took for snow, were growing among the stones, but they ceased before I had ascended a third part of the way."

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



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TAB. DCXLI.

CABOMBA PIAUHYENSIS. *Gardn.*

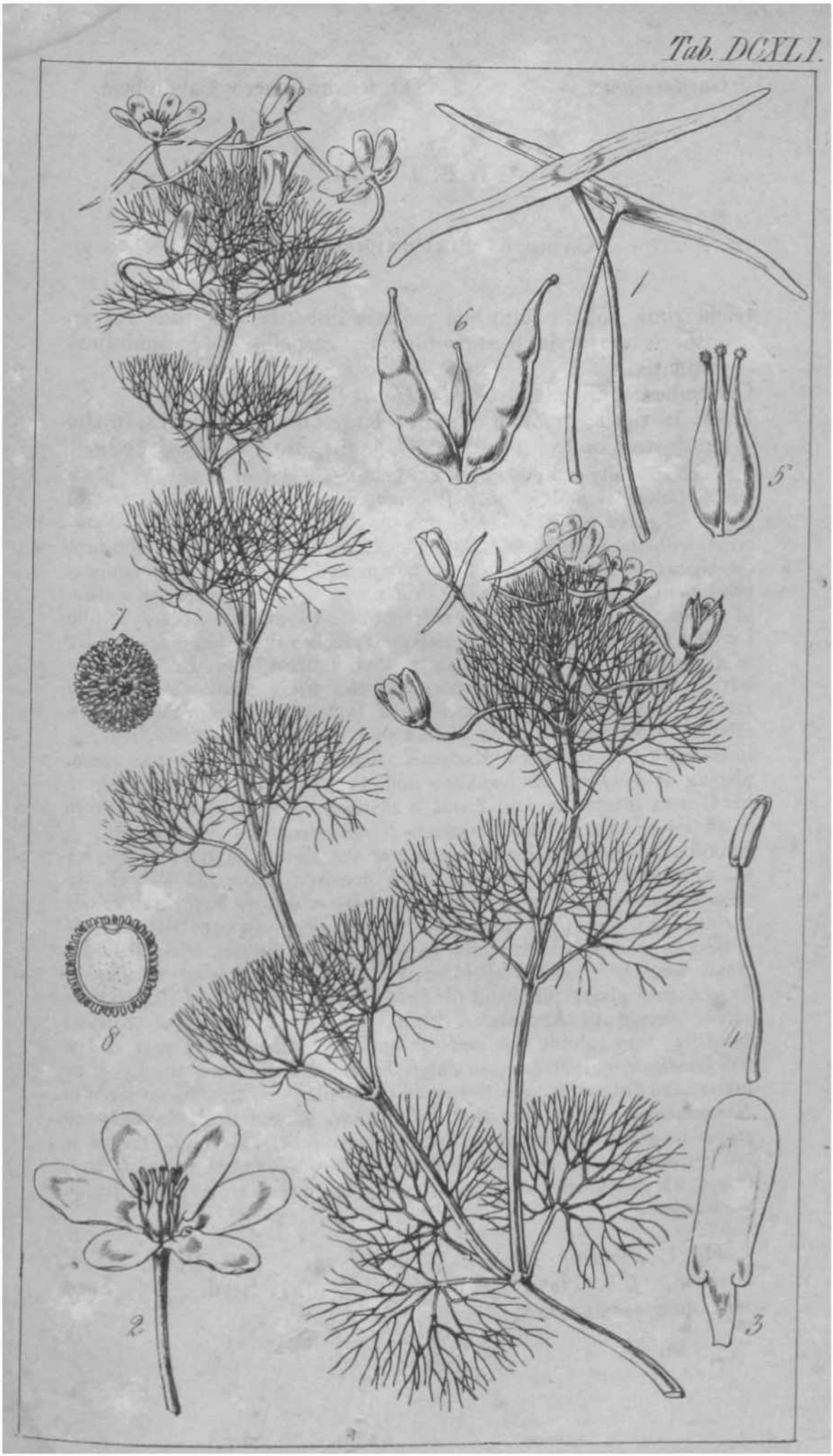
Glaberrima, foliis natantibus peltatis linearibus, fioribus roseis, antheris extrorsis lineari-oblongis, carpellis 2-3, seminibus echinatis.

Cabomba Piauhyensis. ***Gardn. Herb. FL Bras. n.*** **2478.**

HAB. In the stagnant waters of a large lake at Algadoẽs, in the south-west of the province of Piauhy, Brazil. July, 1839.

Much diversity of opinion has existed among Botanists as to the place which *Cabomba,* and its ally *Brasenia*% ought to hold in the natural series. Jussieu put *Cabomba* among his *Junci,* by the side of *Scheuchzeria,* with the remark, " An Ranunculis affinior ?" Richard, who first established a distinct order of the two genera, considered them monocotyledon ous. De Candolle, in his " Prodromus/' regards them as a section of *Podophyllea,* doubting if they may not be a tribe of *Nymphaacea,* while Lindley, in his Natural System of Botany, makes them form a subroder of *Nymphaacea,* remarking that they only differ from that order in having definite seeds and distinct carpels, while *Brasenia* is closely related to *Caltha.* In his Elements of Botany he elevates them into a distinct order between *Podophyllete* and *Cephalotacea.* in the Albuminous section of dissolved Exogens. Torrey and Gray do the same, placing it between *Berberidacete* and *Ceratophyllacea.* Endlicher, in his Genera Plantarum, also forms a distinct order of them, and gives it an intermediate station between *Nymphteacea* and *Nelumbonea.* A careful examination and consideration of the flowers of the four species of which the genus *Cabomba* now consists, have led me to an opinion somewhat at variance from all those which we have been considering regarding their affinities. To me they appear true Ranunculaceous plants, which ought to constitute a distinct tribe between *Ranunculea,* DC, and *Hellebores,* DC, for the following reasons.— In the first place, the habit of *Cabomba* is quite that of the *Batrachium* section of *Ranunculus,* while *Brasenia* has that of *Caltha:* secondly, they exhibit the *extrorse* anthers of the greater part of the *Ranunculacece,* not *introrse,* as stated by all authors : and thirdly, they present the distinct carpels, the pendulous ovules, and albuminous seeds of *RanunAtlacecE.* It is true that the structure of the ovule in *Cabomba* rather resembles *Nymphaacea* than *Ranunculacecc,* but the difference is not greater than is observable between that of *Nymphaacea* and *Nelumbonea,* which scarcely can be considered as more than tribes of one group. *G. Gardner.*

Fig. **1. Floating leaves. /. 2. Flower. /. 3. Petal. /. ' Stamen. /. 5. Pistil. /. 6. Carpels. /. 7. Seed. /. 8. Seed laid open :—*magnified.***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TAB. DCXLII.

CABOMBA CAROLINIANA. *A. Gray.*

Foliis natantibus peltatis ellipticis vel lineari-oblongis, petiolis pedunculisque subpubescentibus, floribus albidis, antheris extrorsis rotundato-ellipticis, carpellis 3-4 puberulis, seminibus glaberrimis.

Cabomba Caroliniana. *Gray, in Torr. et Gray, Fl. N. Am.* 1, *p.* 55. *Walpers's Repert.* \,*p.* 105.

Cabomba Aubletii. *Mich.FL l,p.* 206.

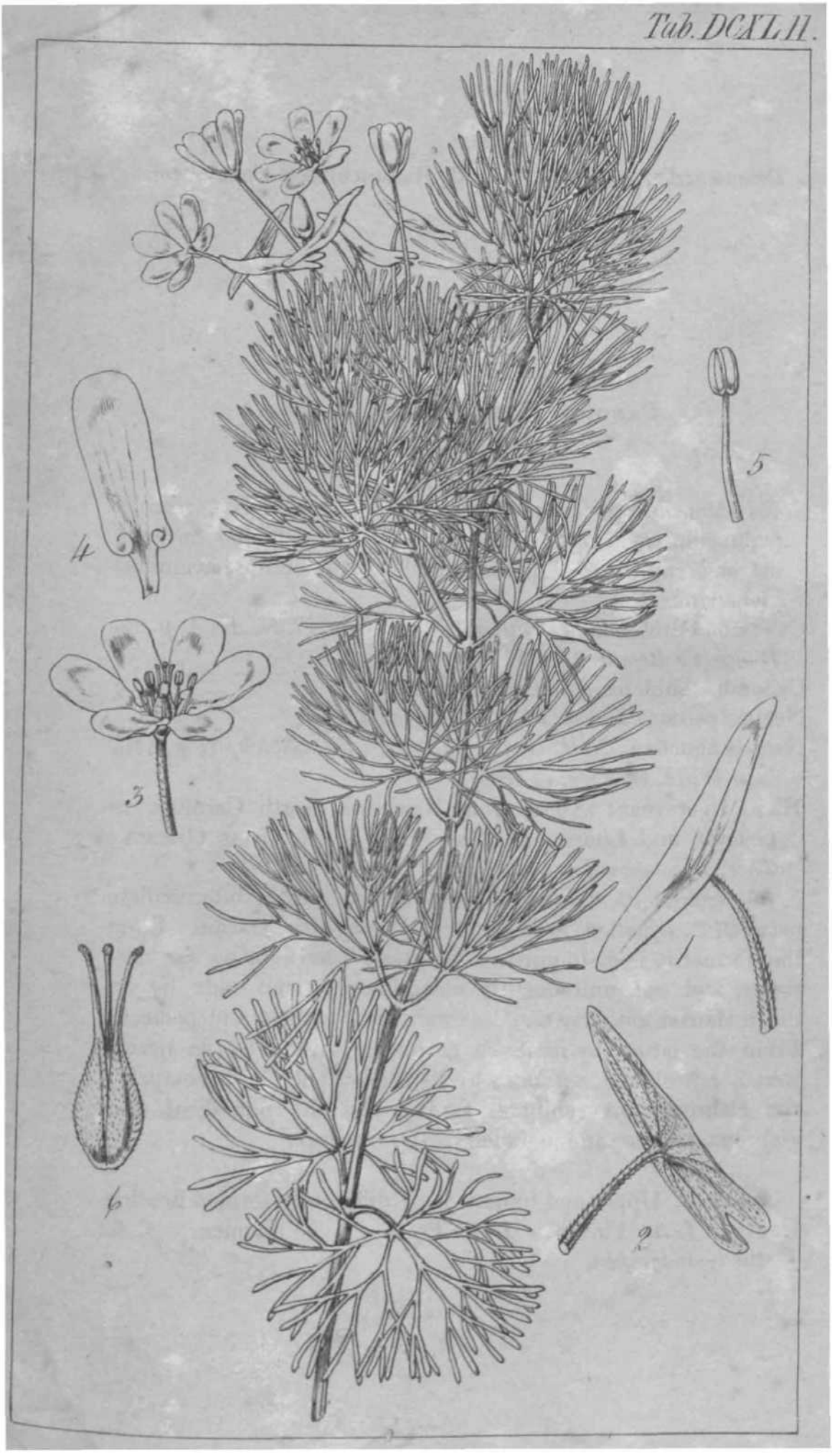
Nectris peltata. *Pursh,FL I, p.* 239 *(excl syn.)*

Nectris aquatica. *NutU Gen.* 1, *p.* 230. *Ell. Sketch,* 1, *p.* 416. *(non Willd. ex Torr. et Gray).*

HAB. In stagnant waters, from Newburn, North Carolina, to Georgia and Louisiana; *Torr. and Gray.* New Orleans; *Thos. Drummond, n.* 47.

As regards its floating foliage, this species is intermediate between *C. aquatica,* Aubl., and *C. Piauhyensis,* Gardn. From the former it is distinguished by these leaves being far narrower, and not unfrequently emarginate at one end; *by* its much shorter anthers, and less pubescent carpels and pedicels. From the latter, by its much narrower leaves; by its nearly round, not oblong, anthers; by its thicker and shorter carpels; the glabrous, not echinate, seeds; and the pubescent, not glabrous, petioles and peduncles. *G. Gardner.*

Fig. 1, 2. Upper and underside of differently formed floating leaves. /. 3. Flower. /. 4. Petal /. 5. Stamen. /. 6, Pistils *i—magnified.*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TAB. DCXLIII.

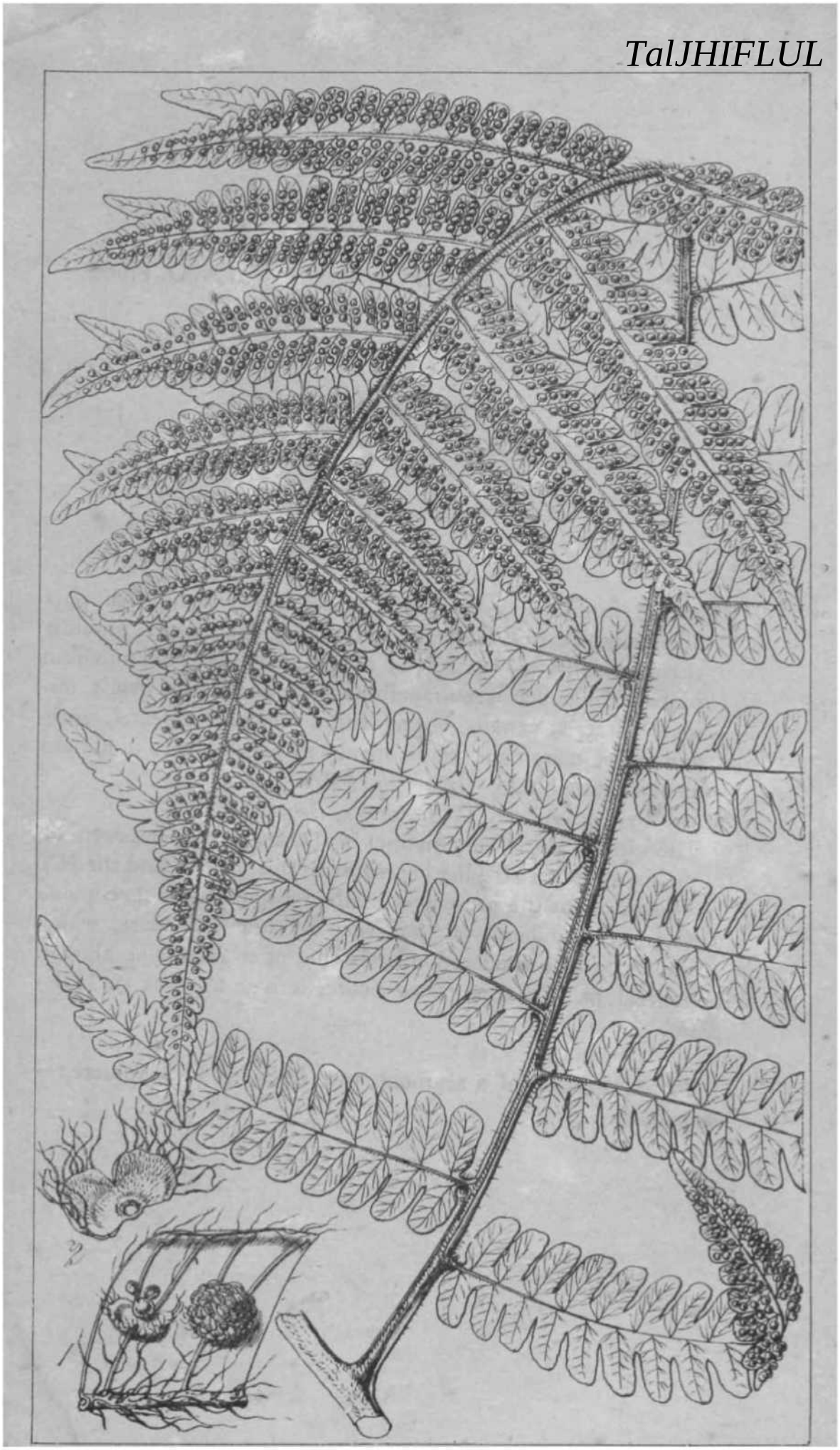
HEMITELIA? PARKERI. *Hook.*

Inermis ? frondibus 2-3-pinnatis, rachi costa venulisque pilis divergentibus obsitis, rachi inter pinnulas alata, pinnulis sessilibus oblongo-lanceolatis obtuse acuminatis ad medium pinnatifidis subcoriaceo-membranaceis, segmentis ovatis obtusis integris, venulis liberis supra medium furcatis, soŕis axillaribus marginem versus, involucre* parvo ciliato dimidiato seepius eetate bifido. *Hook. Sp. FiL v. l,p.* 32.

HAB. British Guiana. *C. S. Parker, Esq.*

The winged rachis, very distinct in the upper part between the pinnules, affords a striking character to this species and the *H. ? Guianensis;* but the present is easily recognised by its copious hairs, more abundant sori, and very different involucre, which I think may be considered entirely that of a *Hemitelia,* though in general habit it approaches nearer a true *Cyathea* or *Alsophila.*

Fig.* I. Portion of a segment, with fruit. /. 2. Involucre:—*magnified.



TAB. DCXLIV.

APODANTHES CALLiANDRiE. *Gardn.*

Bracteis 2-3-seriatis, serici interioris sepalisque basi subconnatis, sepalis ovato-rotundatis.

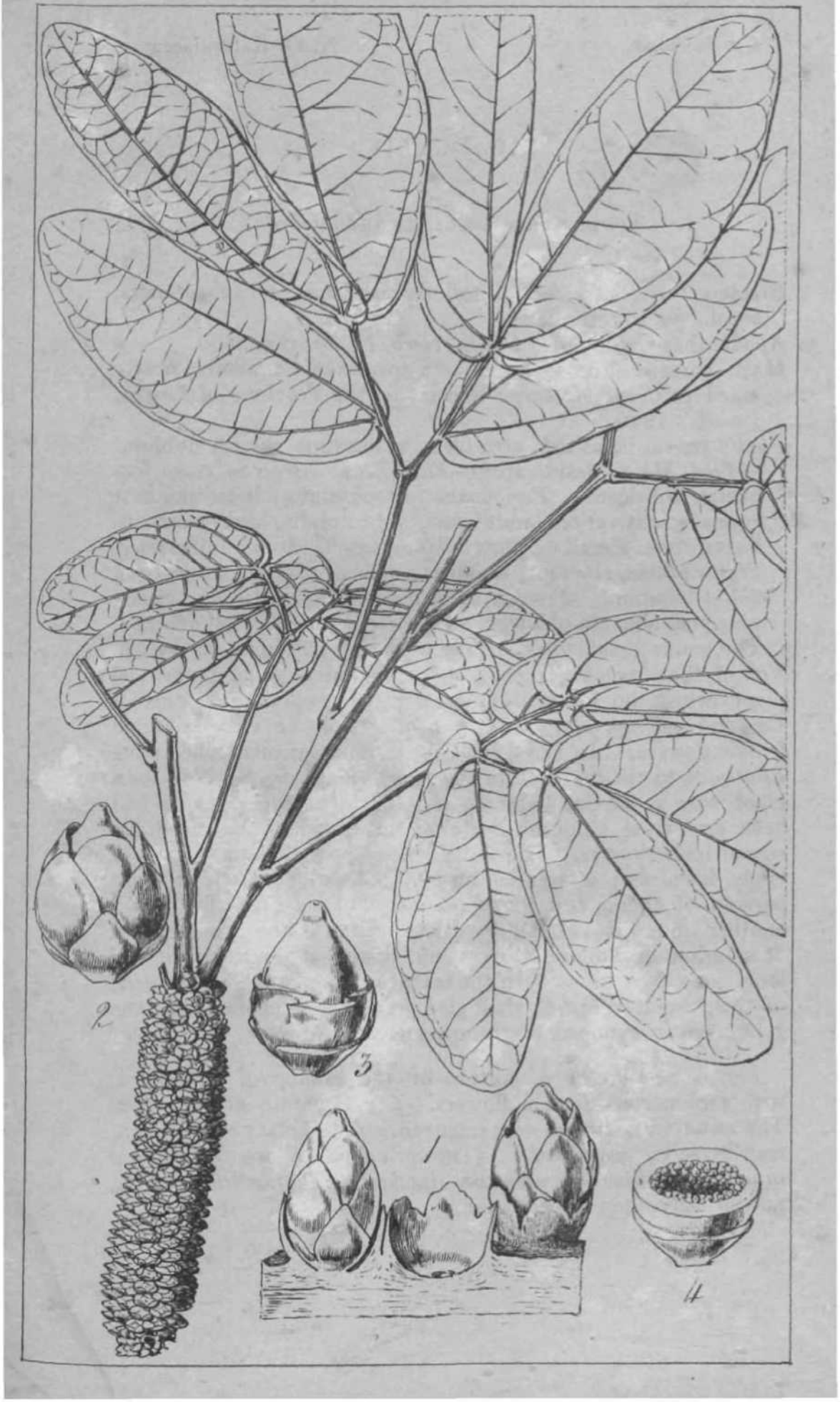
Apodanthes Calliandne. *Gardn. Herb. FL Bras. n.* 3639.

HAB. Parasitical on the stems of a species of *Calliandra,* nearly allied to *C.cylindrocarpa* Benth., in the Province of Goyaz, Brazil. 1840.

***Planta* parva, parasitica, atro-fusca, glaberrima, dioica, uniflora. —*Flos Masc.* desideratus.—*Flos Fcem. Bractece* 6-8, latè ovatse, imbricatae. *Perigonium* tetraphyllum foliolis ima basi connatis, aestivatione imbricatis, subrotundis, basi ovario adhserentibus. *Pseudocarpium* ovatum, subbaccatum, uniloculare. *Stylus* brevis, cinereus, crassus, conicus. *Stigma* truncatum, sub-4-lobatum. *Fructus* subcarnosus, indehiscens. *Sporm* plurimae, obovato-oblongae, ad parietem pseudocarpii affixee.**

The genus *Apodanthes* was* established by Poiteau in the 3rd Vol. of the *Annales des Sc. Nat.* (1824) on a small parasitical plant, which he found in Guiana, growing upon the stems of *Casearia macrophylla,* Vahl., but of which he only obtained female flowers. In 1834, M. Guillemin constituted the genus *Pilostyles,* in the 2nd Vol. of the *Nouv. Annal. des Sc. Nat.* for a plant with a similar habit to that of *Apodanthes,* which had been sent from Chili by Bertero \ but of which he only possessed male flowers. The female flowers of that species have lately been sent to this country by Mr. Bridges; and a comparison of them, and those of the plant here described, and another found in Brazil by Blanchet, with the drawing and description of Poiteau, leaves no doubt as to their all belonging to one genus. In the text* to the plate, TAB. DCLIII. **of the present Work, I shall give an amended character of the genus, and a synopsis of the species. *G. Gardner.***

Fig.* 1. Section of a portion of the branch of *Calliandra*^ with two perfect female flowers. /. 2. Separate flower. /, 3. The same, with the bracteas removed. /. 4. Ovary cut through, transversely: *magnified.* (The principal figure exhibits a branch of *Calliandra*^ with the *Apodanthus Calliandra* growing parasitically upon it: *nat. size.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TAB. DCXLV.

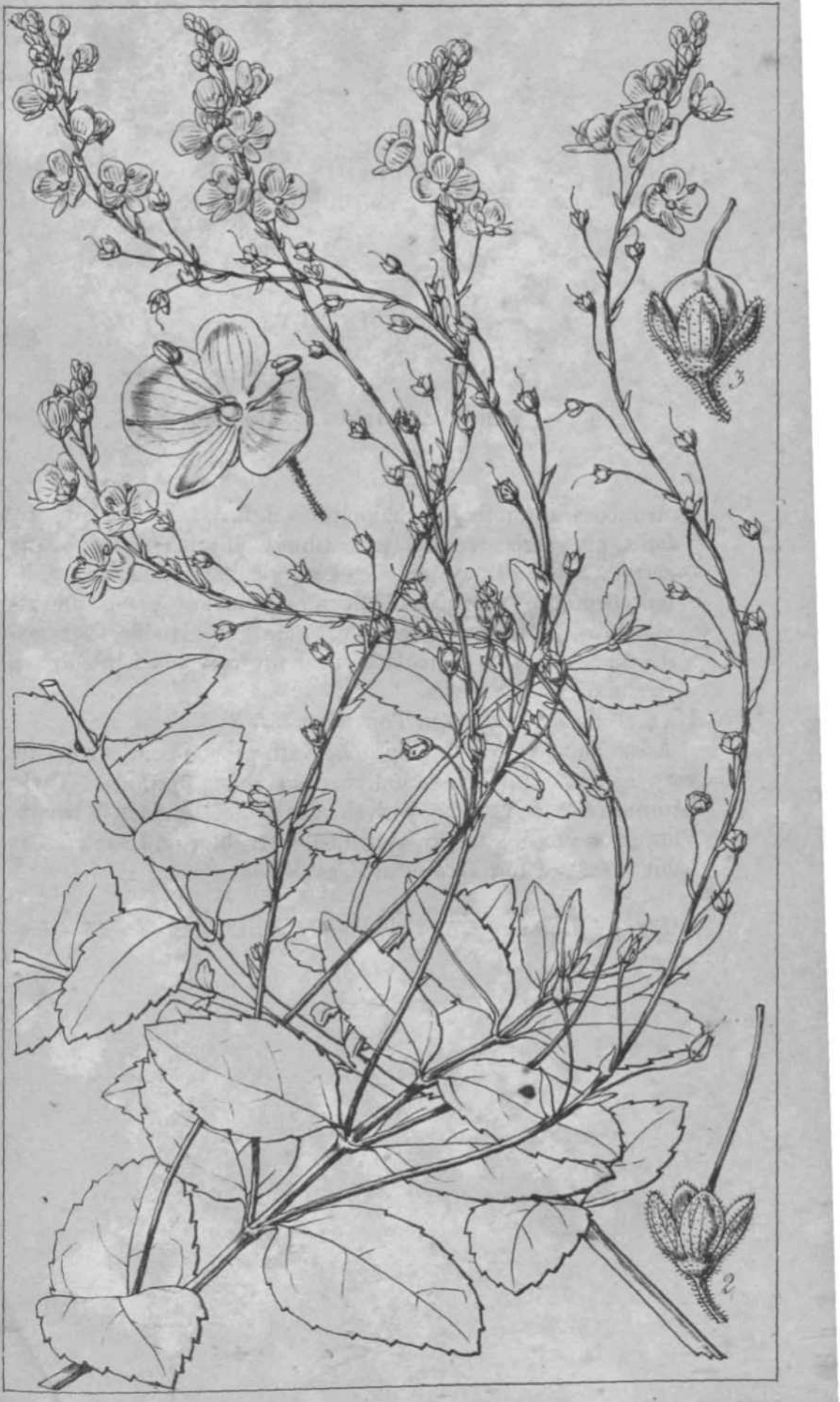
VERONICA DIFFUSA. *Hook.fil.*

Suffruticosa, caulibus procumbentibus diffusis, ramis elongatis, foliis per paria remotis patentibus elliptico-ovatis acutis serratis subsessilibus ghbris carnoso-coriaceis, racemis axillaribus oppositis longissimis flexuosis, bracteis parvis linearisubulatis, pedicellis elongatis calycibusque glanduloso-pubescentibus, capsulis orbiculatis segmenta calycina lato-elliptica paulululn excedentibus.

HAB, New Zealand. On Tongariro. *J. T. Bidwitt, Esq.*

A spreading, straggling species, with procumbent stems, its very long and opposite lateral racemes rising upwards. These latter are 6-8 inches long, with slender pedicels an inch in length. Flowers, according to Mr. Bidwiirs notes, blue and white. The habit is that of our European *V. prostrata.*

Fig. 1. Flower. /. 2. Calyx and pistil /. 3. Fruit:—*magnified.*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TAB. DCXLVI.

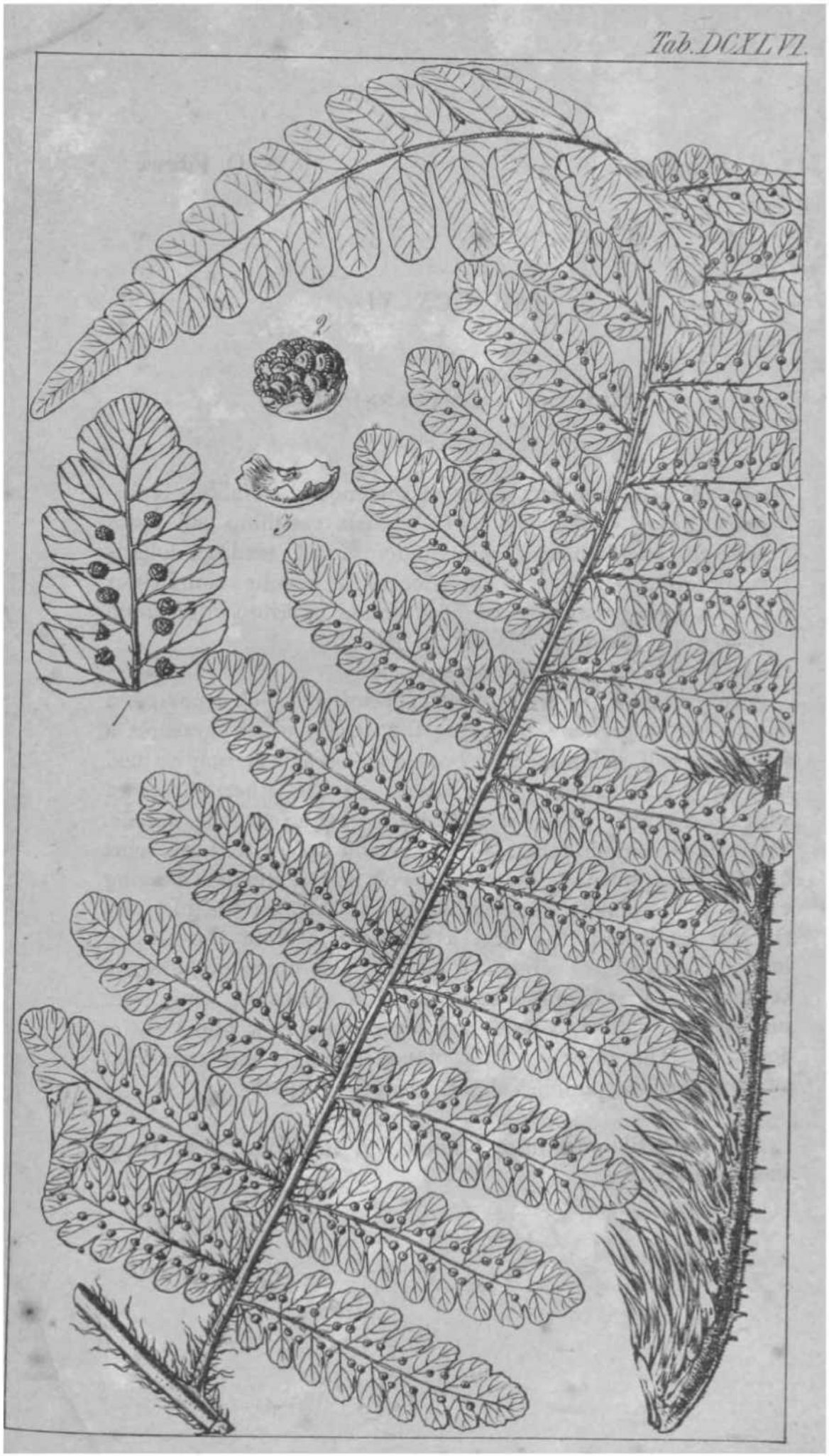
HEMITELIA HOSTMANNI. *Hook.*

Stipite ad basin aculeato rachique squamosis, frondibus bipinnatis, pinnulis oblongis valde obtusis sessilibus ad basin cuneatis membranaceis pinnatifidis v. ad medium lobatis superioribus coadunatis decurrentibus, venulis simplicibus liberis, soris remotis, ad medium venulee inferioris inter sinum v. rachin. *Hook. Sp. Fil. v.l,p.* 31.

HAB. Dutch Guiana. *Hostmann, n.* 64.

A very distinct and well-marked species, of which I possess a frond about 4 feet long, including the stipes, which measures a foot and a half, rich mahogany brown, on one side densely clothed with long, dark brown, glossy scales, on the other muricated with short aculei. Pinnae remote, the largest a foot long, sessile. Pinnules pinnatifido-lobate, of a thin and flaccid texture, veins of each lobe pinnated, only the lowest pair of veinlets bearing each near the middle a solitary sorus ; so that on the pinnules the sori are distant, and form a line remote from the margin, half-way between the sinus and rachis. The upper pinnules are confluent, at first simply combined by a decurrent wing, then united into a lobed margin, and terminating in a blunt, entire acumen. The rachis of the pinnae is rough and somewhat scaly, that of the pinnules slightly strigoso-hispid.

Fig.* 1. Fertile portion of pinnule. /. 2. Sorus. /. 3. Involucre :—*magnified.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TAB. DCXLVII.

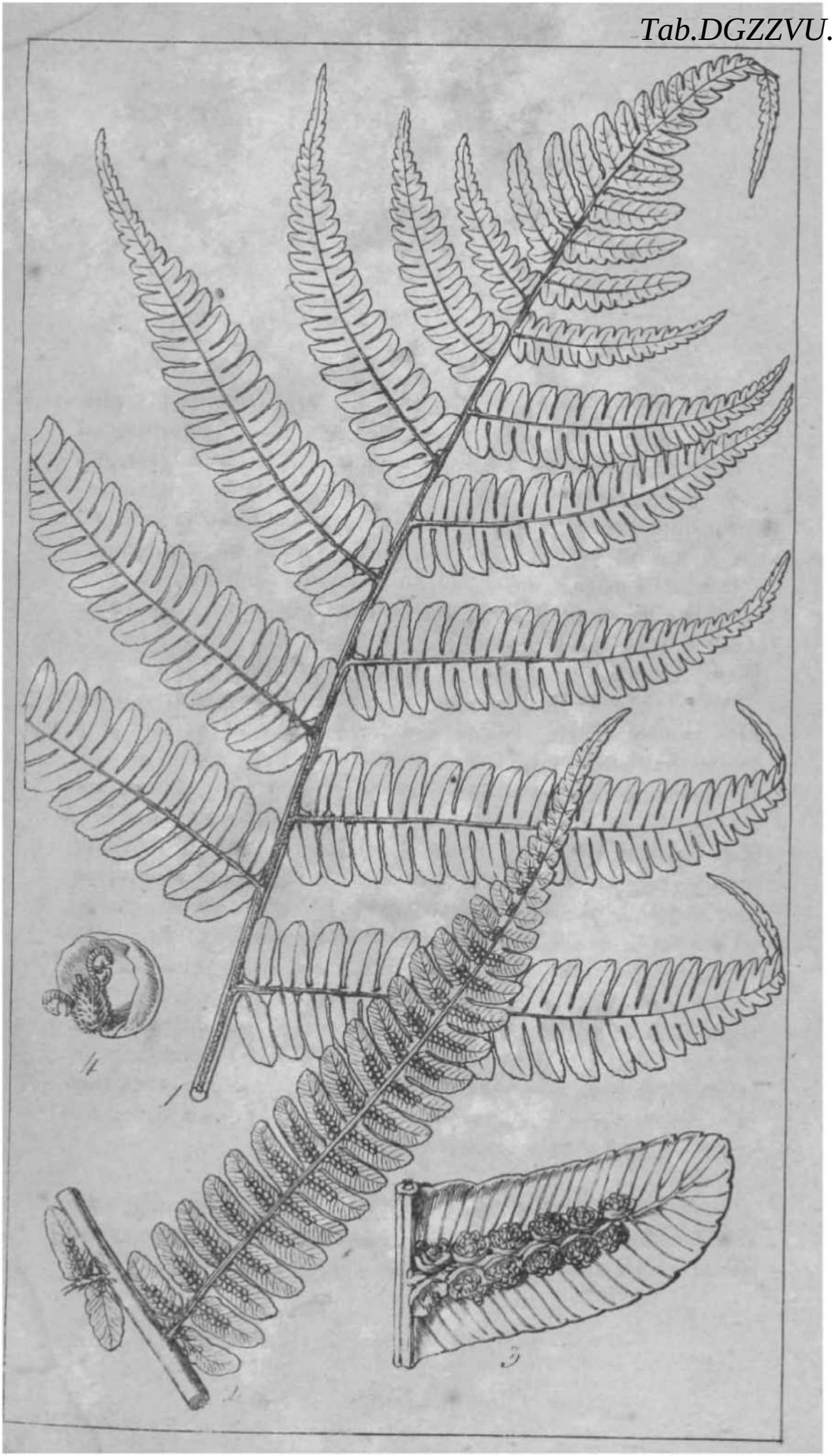
CYATHEA WALKERiE. *Hook.*

Inermis, frondibus bipinnatis, pinnulis crassis coriaceis profunde pinnatifidis inferne pinnatis, pinnulis superioribus ad basin contractis segmentisque oblongis valde obtusis integris v. parum crenatis, costa inferiore plerumque squamosa, squamis deciduis, venis copiosis depressis basin et ssepe ad medium furcatis, soris ad furcaturas infimas costee proximis, involucris magnis opacis ad latus superius solummodo quasi dehiscentibus in costam reflexis cuculliformibus. *Hook. 8p. Fil. v.\,p.* 24.

HAB. Adam's Peak, Ceylon. *Mrs. Col. Walker.*

A very well marked species, which we have received from Mrs. Walker alone. Stipes and main rachis of a mahogany colour, flattened and grooved above when dry, naked, or with small deciduous scales below. Pinnules, as it were, jointed on the rachis, at the base pinnated, the pinnules being distinct, contracted at the base, hence elliptical. Texture firm, rigid, coriaceous, rich brown when dry, paler beneath. Involucres membranous, but firm, apparently bursting rather unequally, on the superior half vertically, and thus irregularly 2-lobed; this large, broad involucre, is reflected on the costa, and still covers in a measure the sorus, on the lower side, as with a hood. My specimens being advanced in fruit, I cannot certainly say that the involucre wholly surrounds the sorus when young: it is probable it does, and that the structure is analogous to that of *C. Beyrichiana,* Presl.—I do not look upon it as a dimidiate involucre, or I should place it in *Hemitelia.*

Fig. 1. Portion of a pinna, upper side. /. 2. Pinnule, with fructification, seen from beneath: *nat. size. f.* 3. Segment of pinnule, with sori. /. 4. Involucre and receptacle :—*magnified.*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TAB. DCXLVIII.

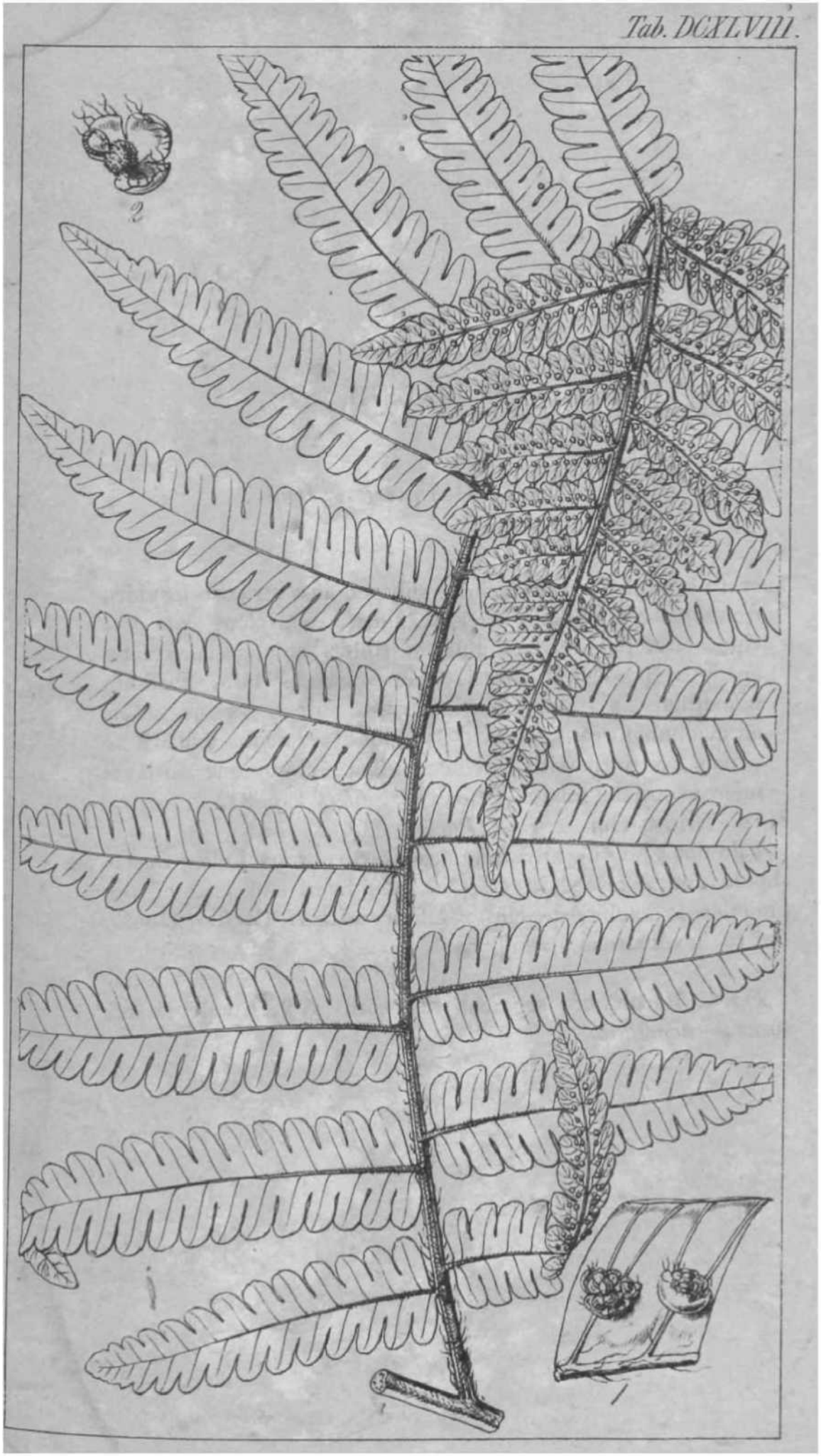
HEMITELJA? GUIANBNSIS. *Hook.*

Inermis ? rachi costaque inferne subsquamosa strigoso-hispidis, frondibus 2-3-pinnatis, rachi secundaria conspicue alata precipue inter pinnulas, pinnulis sessilibus oblongo-lanceolatis apicibus productis obtusis membranaceis infra medium pinnatifidis, segmentis ovatis obtusis integris, venis liberis ad medium furcatis, soris 2-3 quoque segmento axillaribus versus marginem sitis, involucro ciliato plerumque ad latus inferum sori 2-3 lobato. ***Hook. Sp. Fil. v. \,p.*** **31.**

HAB. British Guiana. C. ***S. Parker, Esq.***

I do not find this anywhere described, nor am I clear that it should not be placed in ***Cyathea.*** **In habit and form of the pinnules, it exhibits the closest affinity with** ***H.Parkeri,*** **Hook., but the involucre is dissimilar.**

Fig. **1. Portion of a segment with sori.** ***f.*** **2. Involucre and** AOTUS **:—*magnified.***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TAB. DCXLIX, DCL.

SCHIEDEA NUTTALLII. *Hook.*

Paniculis amplis ratnosissimis, ramis capillaribus elongatis patentissimis, foliis brevi-petiolatis ovato-lanceolatis obscure penninerviis, sepalis pedicellisque glabris.

Eucladus suffruticosus. *Nuft. Mst.*

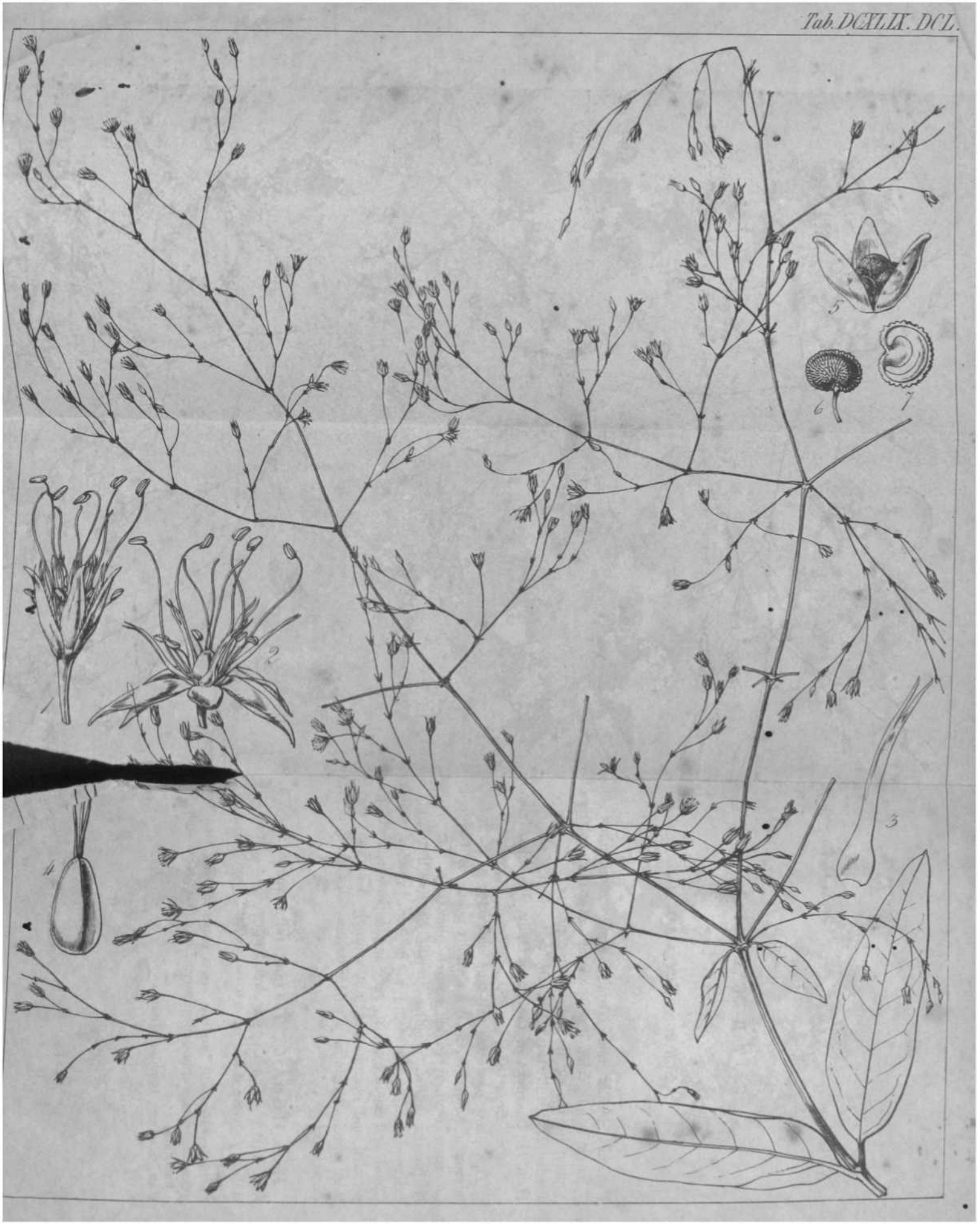
HAB. On the rocks of the Parri, Oahu, Sandwich Islands. *T. Nuttall, Esq.*, 1834.

This plant possesses the true cháracter of *Schiedea*, (Chamisso and Schlechtendahl) a shrubby genus of Caryophylleous (or some have it Portulaceous) plants, as far as we can at present know, peculiar to the Sandwich Islands. It is extremely different from the only described species, *S. ligustrina*, Cham, and Schlecht. in its very ample panicle, smaller flowers, petioled and penninerved (not strongly 3-nerved) leaves. A third species exists in my Herbarium, which may be called *S. Menziesii.**

Fig.* 1. Flower. /. 2. The same, fully expanded. /. 3. Petal. /. 4. Pistil. /. 5. Capsule, burst open. /• 6. Seed and seed-stalk. /. 7- Seed laid open:—*magnified.

*** Schiedea *Menziesii*; panicula erecta coarctata, foliis sessilibus anguste lanceolatis longe acuminatis trinerviis, calycibus pedicellisque pubescenti-tomentosis.**

HAB. Sandwich Islands; *Menzies.*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TAB. DCLI.

EUPLOCA. *Nutt.*

GEN. CHAR. *Calyx* 5-partitus, persistens. *Corolla* subrotato-infundibuliformis, limbo piano plicato quinquangulato, fauce nuda, genitalibus inclusis. *Anthera* sessiles, intra faucem supra stigma conniventes, apice barbatae. *Ovarium* conicum, integrum, 4-ovulatum. *Stylus* elongatus, filiformis, deciduus. *Stigma* annulatum apice barbatum. Fructus: *Drupa* exsucca, tetrapyrena, demum quadripartibilis. *Pyrena* subtrigonae, dorso convexae, monospermae: dissepimento centrali, ut videtur, nullo.—Herba *annua Arkansana, ramosa, tota etiam corolla externe pilis simplicibus incano-hirta; floribus axillaribus solitariis: corolla limbo plicato convolvulaceo. Nutt.*

Euploca *convolvulacea, Nutt. in FL of Arkans. in Ams. Phil. Trans, v. b.p.* 189.

HAB. Sandy plains of the Arkansas, *T. Nuitall, Esq.*

A remarkable Boragineous plant, distinguished, as a Genus, by Mr. Nuttall, to whom I am indebted for the specimens here figured. That able botanist remarks that its flowers have an agreeable odour, and open towards sunset as in *Mirabilis.* He contrasts the Genus with *Arguzia ;* and Mr. Bentham has pointed out its near affinity with *Schleidenia,* Endl. *(Preslea,* Mart. Nov. Gen. Bras. 2, p. 75, t. 164. The resemblance is very close indeed; but the latter genus has a deeply lobed corolla, with 5 appendages or little hooked scales in the sinuses, and 5 tufts of hairs in the tube, filaments to the stamens, a short persistent style, and a small conical apex to the stigma, instead of a tuft or pencil of hairs.

Fig. 1. Flower. /. 2. Corolla. /. 3. Lower part of the corolla laid open, showing the stamens and pistil. /. 4. Stamen. /. 5. Pistil. /. 6'. Scarcely mature fruit. /. 7- Transverse section of the same. /. 8. Vertical section:—*magnified.*


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TAB. DCLII.

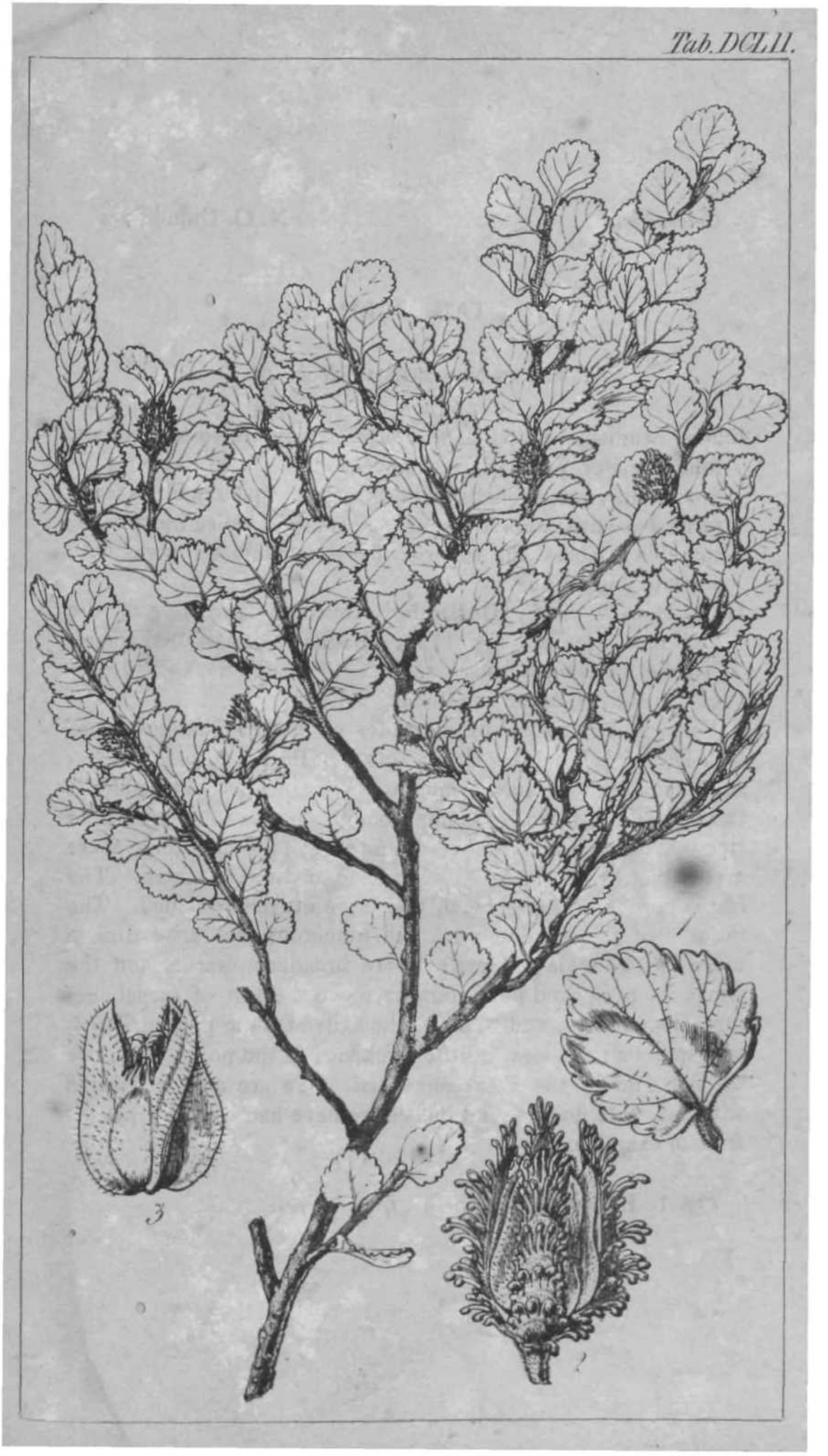
FAGUS MENZIESII. *Hook. fil.*

Ramis brunneis subpubescentibus, ramulis fulvo-tomentosis, foliis breviter petiolatis subrhombeo-cordatis coriaceis rigidis grosse duplicato-crenatis venosis, cupulis pedunculatis solitariis 4-partitis fimbriato-squamosis fimbriis apice incrassatis, carpellis trialatis alis superne falcato-acuminatis stylo persistente longioribus.

HAB. New Zealand; Dusky bay, southern extremity of the group, *A. Menzies, Esq.* 1791. Banks of the Lake Waikare, Northern Island, *W. Colenso, Esq., T. Bidwill, Esq.—" Taivai"* of the natives, according to Mr. Colenso.

Very similar to some of the states of our *F. Cunninghami* of Van Diemen's Land (see Hook. Journ. of Bot. v. 2. p. 152. t. 7.): so much so that we have sometimes been inclined to consider it the same: but besides the improbability of the same species of tree inhabiting islands so very remote from each other, there are characters that appear sufficient to distinguish them. The leaf is here more rhomboidal, and more distinctly veined. The fimbriae of the cupules are more numerous and arise from a more decided scale; the carpels are broader upwards, and the wings are prolonged much further above the top of carpel, are more acuminated, and have, in the axils of these prolongations, soft spinous processes, a little thickened at the point, which we do not find in the *F. Cunninghami.* We are not acquainted with the male flowers, and indeed we have had only one perfect fruit to examine.

Fig. 1. Fruit bursting open. /. 2. *carpel.*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TAB. DCLIII.

TROPiEOLUM TUBEROSUM. R. & P.

Glaberrimum scandens, petiolis cirrhiformibus, foliis reniformibus 5-7-lobatissubtusglaucis, lobis latis retuso-truncatis glandula triangulari apiculatis, pedunculis longissimis (subspithamaeis), calycis limbo erecto-patente in calcar longum subulato-cylindraceum obtusum apice constictum attenuate, petalis obovato-rotundatis breviter unguiculatis subcequalibus calycem paulo superantibus,

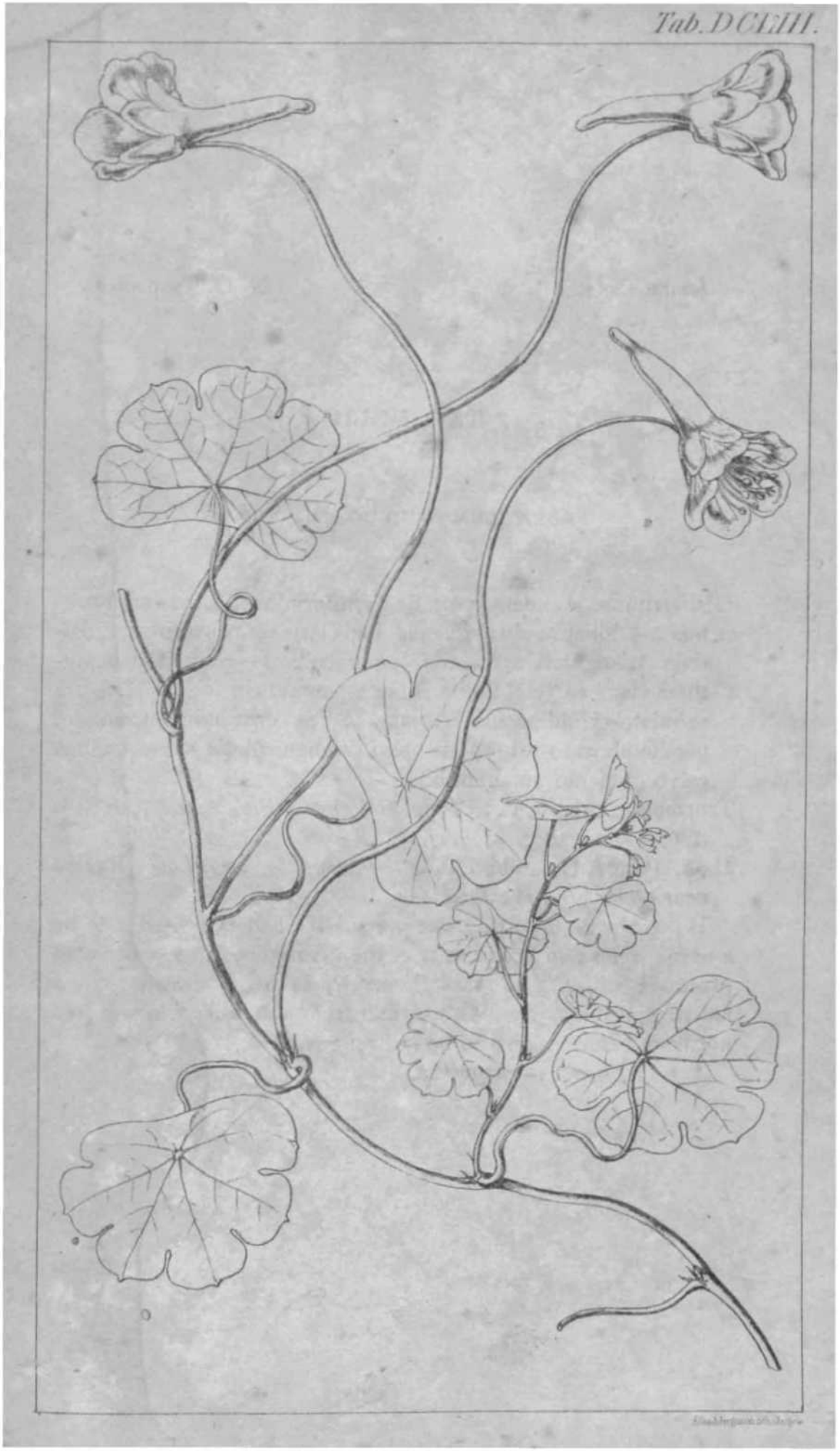
Tropaeolum tuberosum. *Ruiz, et Pav. Fl. Per. 3, p.* 77* *t.* **314, /. 6.** ***Hook. Bot. Mag. t.*** **3714.**

HAB. Peru & Columbia, *Ruiz* §• *Pavon, Hartweg, Lobb.* Ravine **near** ***Quito, Dr. W. Jameson.***

When the plate of this was prepared I had supposed it to be a new species; so little has it of the luxuriance of the cultivated plant. I suffer it to pass, however, as being drawn from a native specimen, from Quito, and from a locality where it had not been before known to be indigenous.

Fig. **1. Flower:—*magnified.***

Tab. DCLIII.



TAB. DCL1V.

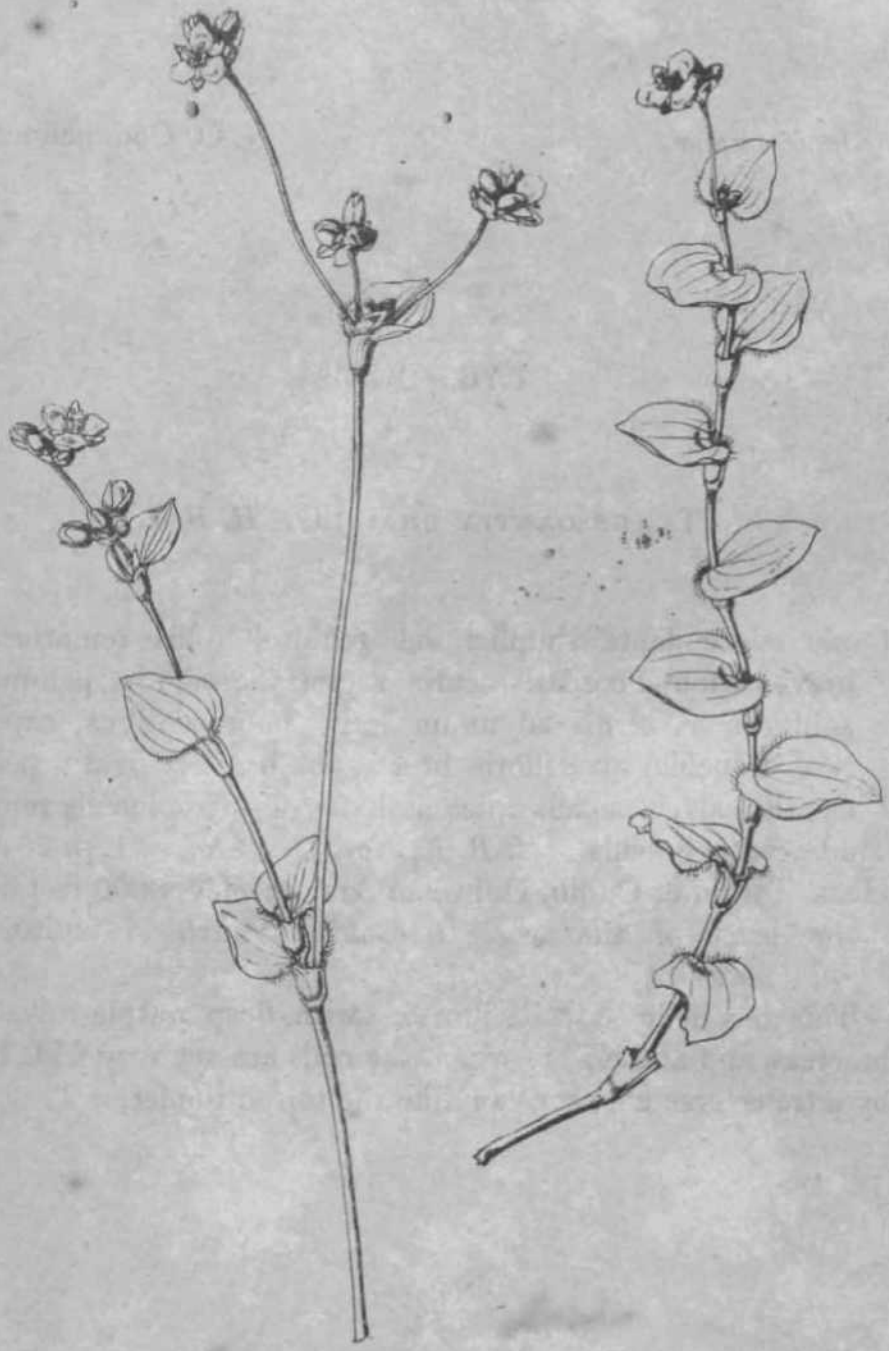
TRADESCANTIA GRACILIS. *H. B. K.*

Caule adscendente simplici vel ramoso, foliis remotiusculis brevi-vaginatis cordatis acutis vaginisque ciliatis, pedunculis solitariis v. ternis ad unum latus pubescentibus, capitulis (vix umbellis) paucifloris bracteatis, bracteis ovatis peltatis ciliatis, calycis sepalis apice barbatis, antheree loculis remotis.

Tradescantia gracilis. *H. B. K. Nov. Gen. Am. v.* **1.** *p.* **261.**

HAB. Tarqui et Chillo, Quitinian Andes: elev. 8000 feet above the level of the sea, *Humboldt.* **Morro of Quito, Dr.** *W. Jameson.*

This has delicate white flowers, with deep purple calyx and bracteas, and anthers, of which the cells are set very wide apart by a transverse connectivum like the top of the letter T.



TAB. DCLV.

APODANTHES. *Poit. AnnaL Sc. Nat.* 3. 421, /. *26, f.* 1.—PILOSTYLES. *Guilt. Nouv. AnnaL Sc. Nat.* 2. 21, *t.* 1.—FROSTIA. *Bertero Msc. Endl. Gen. Plant, n.* 725.

CHAR. GEN. *Flores* dioici.—MASC. : *Perigonium* tetrapliyllum, foliolis ima basi connatis, aestivatione imbricatis. *Synema* columnare, vertice pileolare, papillosum. *Antherce* infra verticem sessiles, horizontales, t/iseriatae, contigude, uniloculares, apice apertae. *Ovarii rudimentum* nullum.—FCEM. *Perigonium* tetraphyllum, foliolis basi ovario adheerens. *Pseudocarpium* subbaccatum, uniloculare, indehiscens^ multiovulatum, ovulis ad superficiem parietum pseudocarpii affixis. *Stylus* brevis, conicus. *Stigma* truncatum, sublobatum.—Herbulae *Americana, atro-fuscce.* Flores *minimi bi-tri-lineares, e cortice ramulorum aliorum stirpium prorumpentes; bracteis bi- vel tri-seriatis$_9$ seriei interioris interdum valde connatis, calycem simulantibus.*

1. Ap. *Casearice;* bracteis biseriatis, seriei interioris connatis 4-lobatis, lobis obtusissimis, sepalis discretis rotundatis basi subcordatis.

Ap. Casearise, *Poit. AnnaL des Sc. Nat.* 3, 422, *t.26,f.* 1.

HAD. In Guiana, on the stems of *Casearia macrophylla,* Vahl.

2. Ap. *Berterii;* bracteis biseriatis, seriei interioris sepalisque basi subconnatis, sepalis oblongis obtusis. (TAB. NOSTR. DCLV. A).

Pilostyles Berterii, *Guill. Nouv. AnnaL Sc.+Nat.* 2. 21, *t.* 1.

Frostia parasitica, *Bertero Msc.*

HAB. In Chili, on the stems of an *Adesmia. Bertero. Bridges, n.* 1273.

3. Ap. *Calliandrce;* bracteis 2-3-seriatis, seriei interioris sepalisque basi subconnatis, sepalis ovato-rotundatis. *Gardn. supra t.* DCXLIV.)

HAB. In the Province of Goyaz, Brazil; on the stems of a species of *Calliandra.*

4. Ap. *Blanche tit;* bracteis 2-seriatis ciliatis, seriei interioris sepalisque basi subconnatis, sepalis rotundatis ciliatis. (TAB. NOSTR. DCL.V. B).

HAB. Serra de Acurua, Brazil; on the stems of an entire-leaved species of *Bauhinia. Blanchet. n.* 2861.—G. *Gardner.*

TAB. DCLV. A. *Apodanthes Berterii. Fig.* 1. Female plants; *nat. size.* /. 2, 3. Plants; *magnified, f.* 4. Section of a plant. /. 5. Transverse section of the ovary; *more magnified.*

TAB. DCLV. B. *Apodanthes Blanchetii. Fig.l.* Female plants; *nat. size. f. 2.* Single plant, *f.* 3. Section of ditto, *f.* 4. Transverse section of the ovary '.—*magnified.*

A.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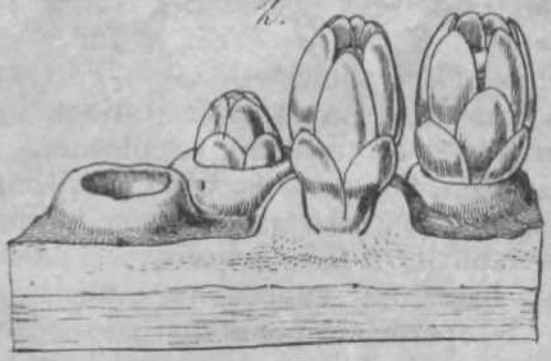
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5.

B.


1.


2.


3.


4.

TAB. DCLVI.

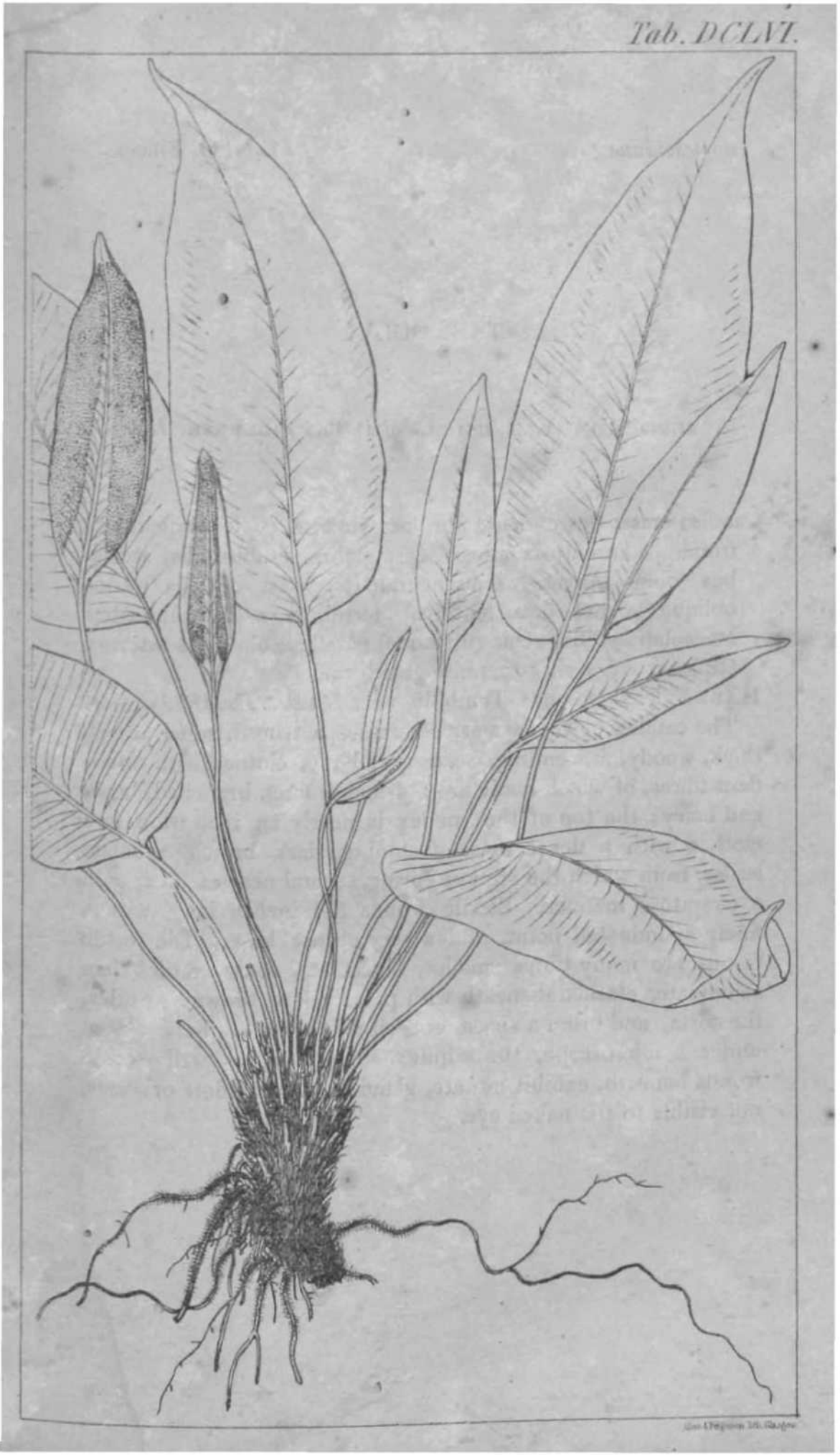
ACROSTICHUM (ELAPHOGLOSSUM) TAMBILLENSE. *Hook.*

Caudice crasso descendente fibrilloso superne copiose squamoso, frondibus caespitosis subcoriaceis glabris nudiusculis, sterilibus oblongo-ovatis tenui-acuminatis basi obtusis rarius oblique leeviter decurrentibus, fertilibus 6-ties minoribus lanceolatis acutis, venis (utrinque) parallelis obsoletis internis, stipite frondes vix superante gracili nudo.

HAB. Sides of ravines, Tambillo, near Quito. Dr. *W. Jameson.*

The caudex of this species resembles a true rhizoma, short, thick, woody, descending, scarcely oblique, clothed with abundant fibres, of which many are 2-4-inches long, branched, black and hairy; the top of the caudex is nearly an inch wide, and clothed with a dense mass of shining, dark brown, subulate scales, from which the stipites spring, several near each other in a csespitose manner. Sterile fronds 3-4 inches long, with a finely acuminated point, and a very obtuse base. The fertile fronds are many times smaller, lanceolate, acute, rather than acuminate, clothed beneath with pale, yellow brown capsules, the costa, and often a space on each side the costa bare. Seen under a microscope, the stipites sometimes, as well as the fronds beneath, exhibit minute, glandular, brown dots or scales, not visible to the naked eye.

Tab. DCLVI.



TAB. DCLVII.

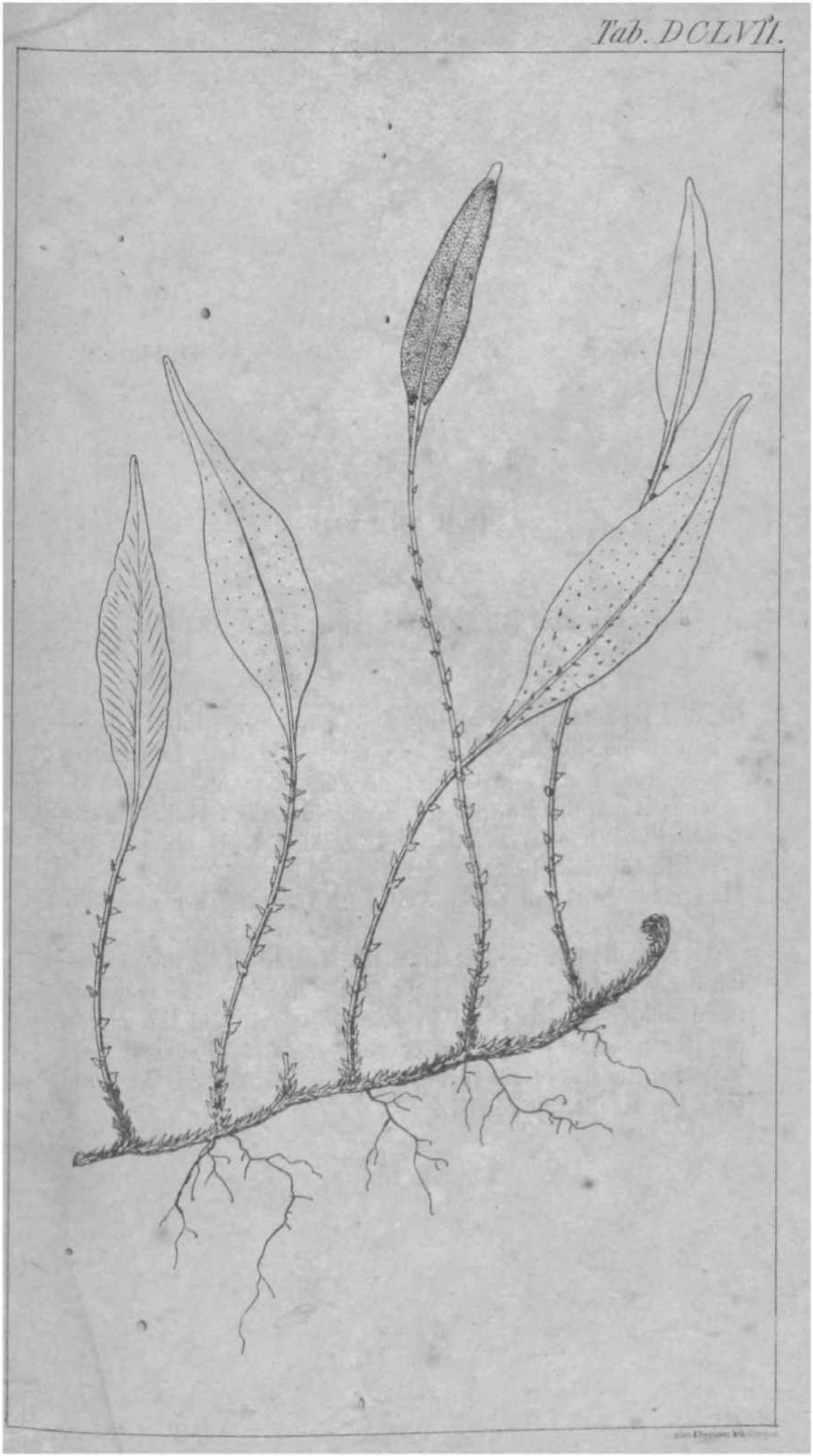
ACROSTICHUM (ELA^HOGLOSSUM) LLOENSE. *Hook.*

Caudice repente squamoso, frondibus remotis, sterilibus lanceolatis submembranaceis glabris nudisculis basi in stipitem longiorem parce squamosum decurrentibus apice longe attenuatis margine integris vel obscure crenatis, fertilibus multo minoribus lato-lanceolatis obtusiusculis, vepis obliquis parallelis internis obscuris.

HAB. On trunks of trees, Valley of Lloa, El Equador. *Dr. W. Jameson.*

An elegant, but small species, remarkable for its long creeping stipes, and the peculiar shape of the fronds. The veins are more oblique than is usual in *Elaphoglossum*, and the margin is often obscurely lobed, or coarsely crenate. The scales are large, for the size of the plant; on the stipes, and on the frond are a few smaller appressed ones.

Tab. DCLVII.



TAB. DCLVIII, DCLIX.

CYPRIPEDIUM GAUDATUM. *LindL*

Elatum ferrugineo-pubescens 3-4-florum, foliis——? sepalis lanceolato-acuminatis inferioribus omnino connatis, petalis lanceolatis in caudam longissimam fere pedalem attenuatis, labello glabro ore hirsuto, stamine sterili obtuso utrinque ala subtriangulari retusa ascendente apice pilosa, bracteis ad basin pedicellorum latis complicatis obtusissimis glabris.

Cypripedium caudatum. ***Lindl, Gen.et Sp. Orchid, p.*** **531.**

HAB. Interior "of Peru, ***Ruiz*** **and** ***Pavon,*** **in Herb. Hook.,** ***Mr. Lobb.***

An injured flower is all that was known of this plant when its necessarily imperfect character was drawn up by Dr. Lindley; and that flower was derived from an Herbarium left by Ruiz and Pavon in Peru, and preserved in my collection. Mr. Lobb while collecting for Mr. Veitch of Exeter, in the Andes, east of Lima, in the far interior, had the good fortune to meet with it, and sent home dried specimens, and brought living roots of it with him as far as Jamaica; but they perished while he was there confined with a malignant fever. From one of the two above-mentioned specimens, for which I am indebted to Mr. Veitch, the accompanying figure was made; but here again I have to regret the absence of foliage, so that I cannot be sure it has a scape like the species of Northern India, or, as is most likely, a leafy stem like our European and the North American and other Mexican species. In the latter case, the species must be a very stately one, for the upper portion, without the trace of a leaf is more than a foot long, everywhere clothed with a compact ferruginous down except on the bracteas, the lip, and the inside of the petals and sepals. The lower of the bracteas is *2* inches long, striated, broadly oval, very obtuse, folded double so as to embrace the pedicel and the main stalk; the upper ones are gradually smaller. There are 3 flowers, and a trace of a fourth, larger than those of any known species, the structure of which will be better seen by the figure than any description in words.

TAB. DCLX.

APTERIA SETACEA. *Nutt,*

Caule gracili ramoso, foliis paucis squamiformibus acutis erecto-patentibus, perianthio urceolato-tubuloso, laciniis exterioribus 3 late ovatis obtusiusculis, interioribus 3 ligulatis obtusissimis.

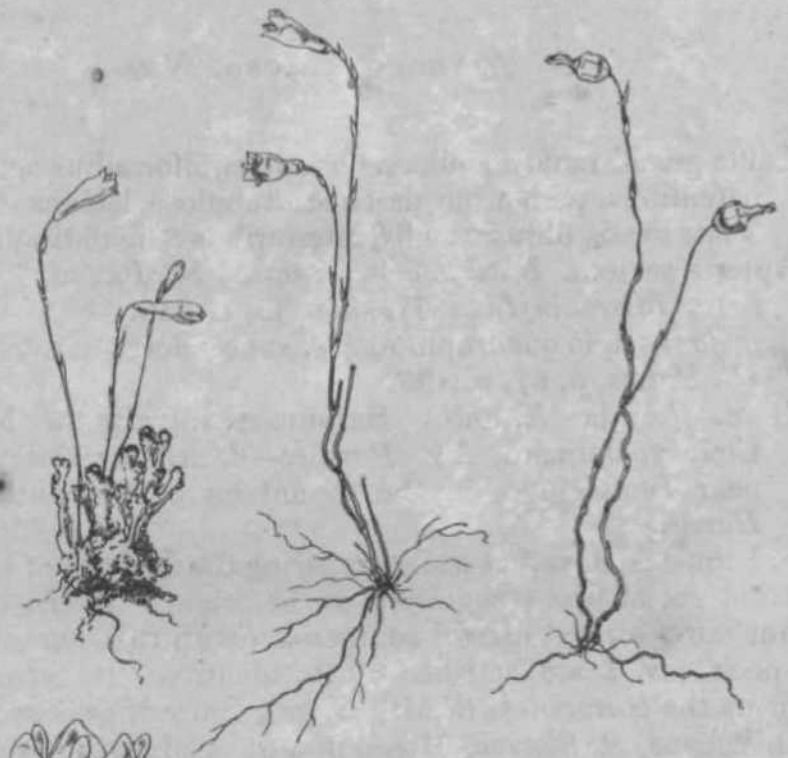
Apteria setacea. ***Nutt. Journ. Acad. N. Sc. Philad* 7> p. 64, /. 9, /. 1. Miers, in Linn. Trans, v. IS,p. 546.***

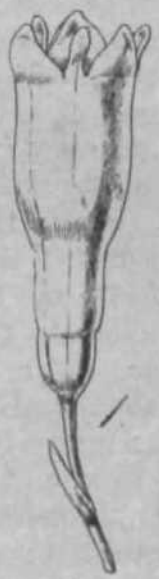
13. major; **triplo quadruplo major, subsexflora. A. setacea,** ***Benth. PL Hartw.p. 67, n.*** **495.**

HAB. Florida, ***Nuttall.*** **Savannas, interior of Manchester County, Jamaica,** ***Mr. Purdie.*** **—/3. Among decayed leaves, near Teotolcingo, in the mountains of Chinantla, Mexico.** ***Hartweg.***

I must confess that while preparing the analysis of this species, I did not at first recognize it as the original *Apteria* of Nuttall; but after a most careful comparison with that author's original specimens, I am satisfied of its identity. Its structure confirms the correctness of Mr. Miers's figure of a second species of this genus, *A. lilacina*$_y$ Miers, in a most admirable and profound paper on a new group of *Burmanniacece,* published by that gentleman in the 18th vol. of the Transactions of the Linnasan Society; and I am glad to have this opportunity afforded me to acknowledge my error, so ably pointed out by Mr. Miers, in uniting his genus *Dictyostegia* with *Apteria,* (in this Work, TAB. CCLIV.) which I should never have done, had I then understood the structure of *Apteria. A. lilacinay* of Mr. Miers, found in Brazil, is assuredly very nearly allied to the present species, which has a pretty extensive range; but it is well distinguished by Mr. Miers, in the sharp but acuminated segments of the perianth; the flower too is much larger; it droops in both species. *A. setacea* varies considerably in size. Our original specimen from Mr. Nuttall, and those from Jamaica, are from 2-4 inches high; but Mr. llartweg's Mexican ones are 8-10 inches high, and bear as many as *6* flowers upon a stem ; and they are thrice as large as in the usual state of the plant, but different in no other respect.

Fig. **1. Flower,** ***f.*** **2. The same, with the perianth laid open, showing the style and stigmas, and the 3 hollow sacs in which the curious stamens are lodged. /. 3, Sac and stamen :—*more or less magnified.***





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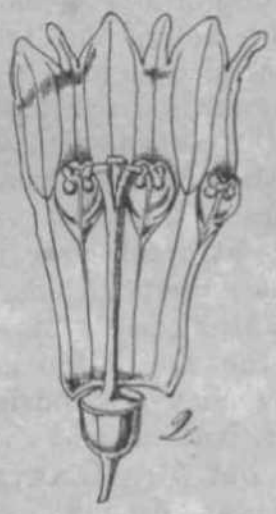


2.

3.

TAB. DCLXI.

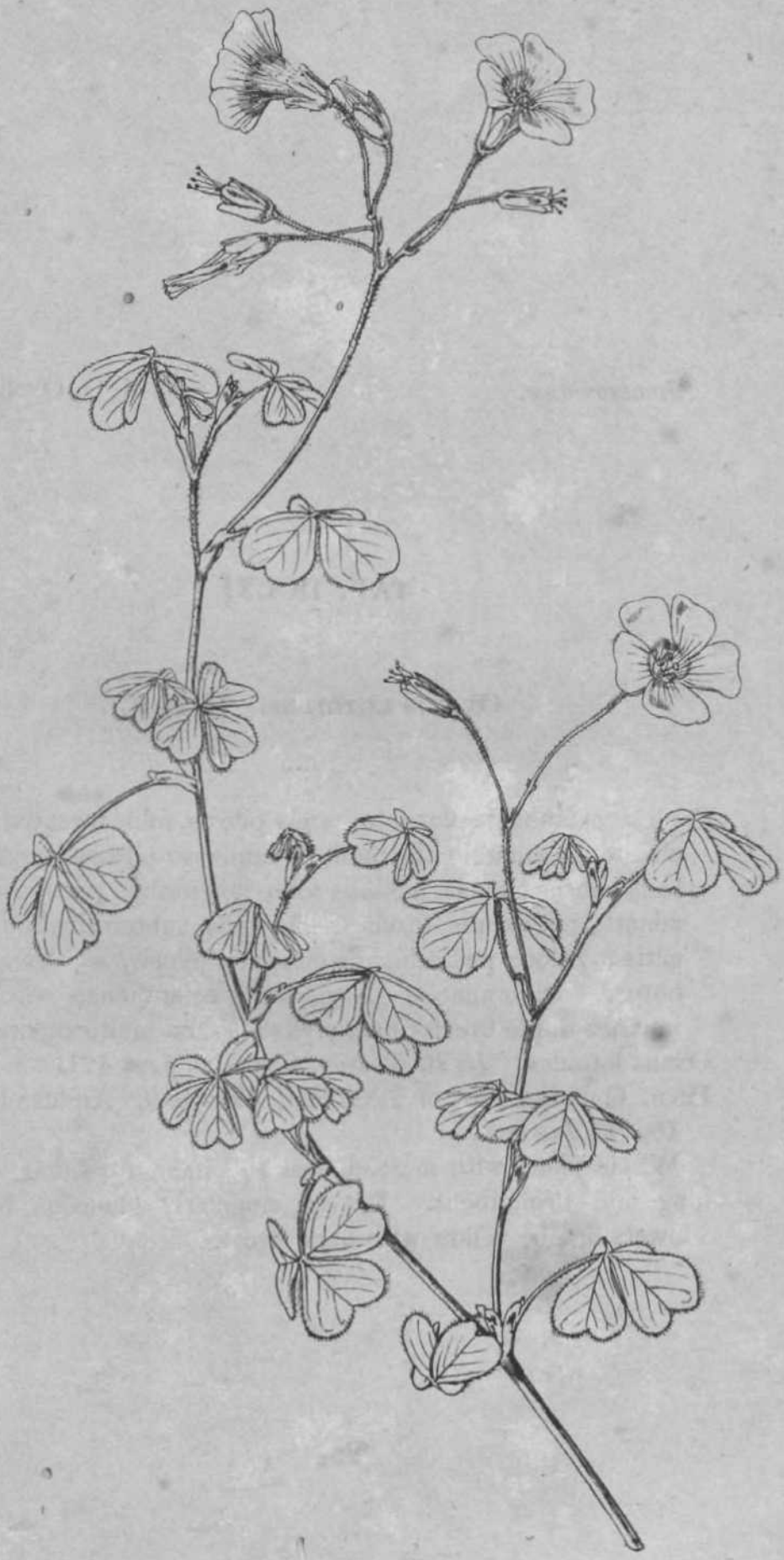
OXALIS LOTOIDES. *H. B. K.*

Caule procumbente elongato, ramis pilosis, foliis ternatis, foliolis obcordatis emarginatis molliter appresso-pilosis margine villosis subtus glaucis, petiolis folio longioribus pilosis, stipulis adnatis majusculis fuscis, pedunculis subterminalibus elongatis 3-7 floris pedicellisque elongatis pilosis, sepalis oblongis obtusis membranaceis glabriusculis eglandulosis corolla aurantiaca duplo brevioribus, stylis stamina multo superantibus.

Oxalis lotoides. *H. B. K. Nov. Gen. Am.* 5, *p.* 421.

HAB. Quindhij elev. of 7200 feet, *Humboldt.* Andes of Quito, *Dr. W. Jameson.*

Whole plant with a good deal the habit of *Lotus.* Stems long and decumbent. Leaves singularly glaucous beneath. Flowers orange yellow with dark streaks.



TAB. DCLXIT.

THAMNOCARPUP. *Harv.*

GEN. CHAR. *Frons* teres, ramosa, incus diaphragmatibus divisa, carnosa; caro interna e fibris articulatis, longitudinalibus, implexis, externa e cellulis minutis composita. *Sphterosporce* in stichidiis floccosis, ramosissimis, articulatis, penicillatim e frondis glandulis superficiariis ortis, nucleo triangulatim quadripartito.

T. Gunnianus. *Harv.*

HAB. Port Arthur. Van Diemen's Land. *Ronald Guan, Esq.*

Frond 3-4 inches high, nearly half a line in diameter, much and very irregularly branched; *stem* generally simple, and rather naked below, above frequently divided into several principal branches, which are densely set in an alternate or more generally secund manner with others which are shorter, but in other respects similar, and these again are once or twice divided and furnished with short ramuli; all the branches and lesser divisions erect, or erecto-patent, with acute axils; apices acute, but frequently broken off, and appearing truncate. Sometimes the frond is excessively branched and bushy, with tufts of ramuli issuing from the broken tips of old branches. *Substance* cartilaginous when moist, horny when dry. *Colour* a fine, clear, red, discharged in fresh water. *Structure; the axis is* hollow, but divided into a series of cells by transverse cellular diaphragms; the flesh of the periphery very thick, its outer surface composed of minute cellules irregularly packed together, its inner substance formed of interwoven, longitudinal, jointed fibres. The *fructification* consists of *sphcerospores* (or *tri-sporous capsules}* exactly similar to those of *Callithamnion,* borne on little pencils of much branched, confervoid, articulated filaments, which issue from glands scattered on the surface of the branches and ramuli; each pencil about a line long, divided into 3 or 4 principal branches, which are clothed with pinnate ramuli (or plumules) and produce an abundance of *sphmrospores* on the ultimate divisions.—A very distinct genus, and quite worthy of New Holland, the land of puzzles, presenting as it does a frond outwardly resembling *Gigartina plicata* or *Griffithsia,* with a fructification which is in itself a perfect miniature *Callithamnion* (/), thus offering a new instance of the justice of Agardh*s remark, that " the lower algae are the organs of the higher.'* The only other genus of *Floridete* with an analogous fructification is *Heterocladia* of Decaisne, with which our plant will form a well-characterized sub-family, called indeed by that Author HETEHOCLADIE^E, and which may almost be regarded as the analogue among *Floridece* of *Sporochnoidea.—W. H. H.*

Fig. 1. *Thamnocarpus Gunnianus; nat. size. f.* 2. Apex of a branch in fruit; *magnified, f.3.* Pencil of fructification ; *highly magnified, f. 4.* Ramulus of the pencil, with sphoerospores; *highly magnified, f.* 5. Longitudinal section of stem; *magnified.*

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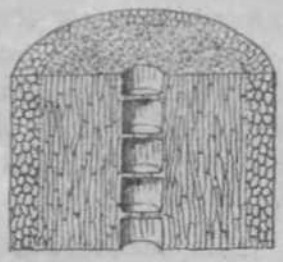


5.

TAB. DC]LXIII.

LOASA RUPESTRIS. *Gardn.*

Hispida, caule erecto infra inflorescentiam simplici supra paniculato-racemoso, foliis alternis petiolatis tfvato-oblongis sinuato-lobatis grosse dentatis basi cordatis, racemis pedicellisque elongatis, lobis calycis late ovatis acutis, petalis obovatis obtusis concavis, capsula ovata.

Loasa rupestris. ***Gardn. Herb. Bras. n.*** **2413.**

Causancao, ***nom. vulg.***

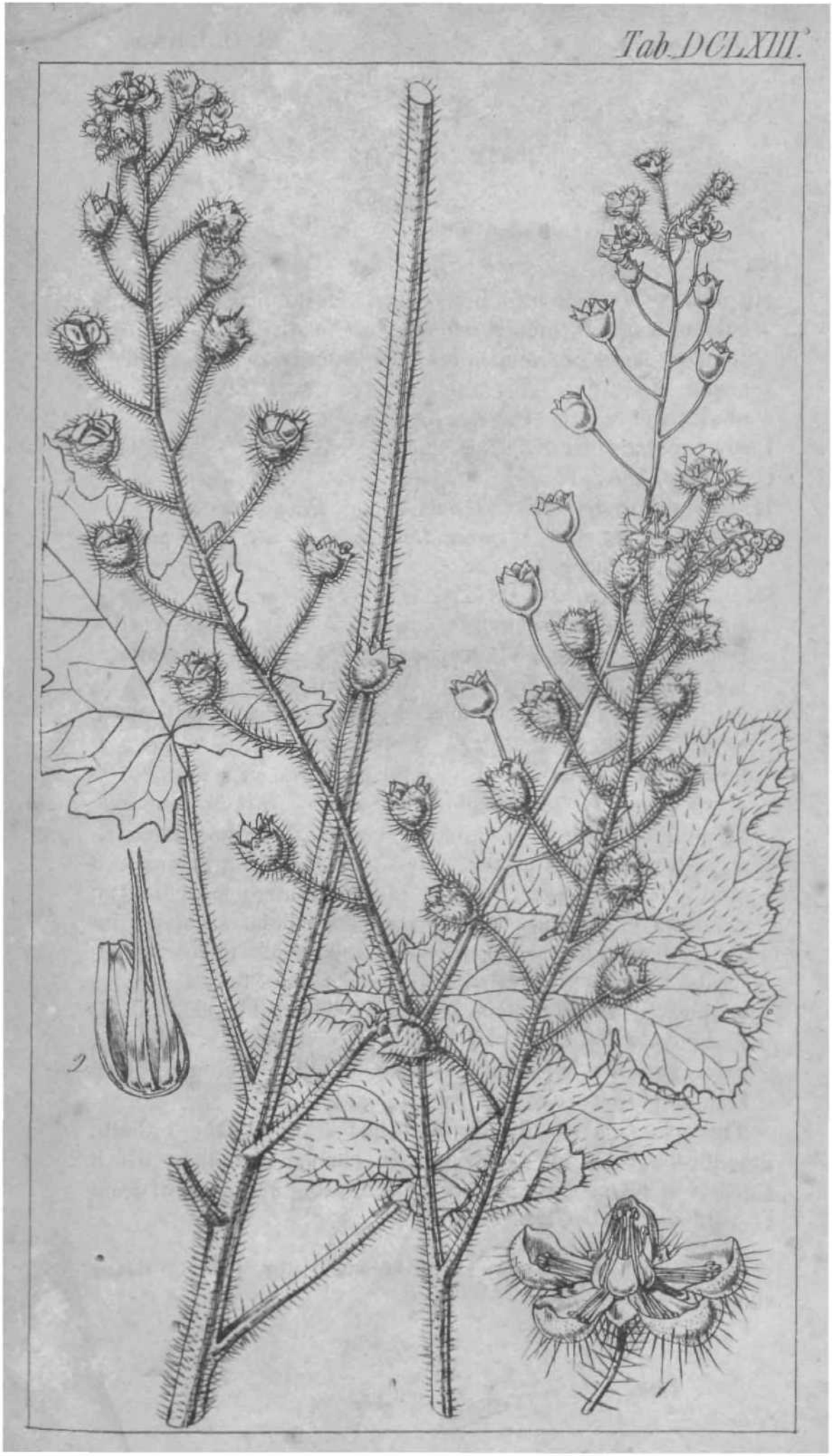
HAB. Rare, in dry rocky places between Cachoeiras and Marmaleiro, near the Western boundary of the Province of Brazil; February, 1839.

Herbacea, hispida, 2-3 pedalis. Caulis erectus, infra foliosus, supra paniculato-racemosus, aphyllus. Folia alterna, petiolata, ovato-oblonga, obtusa, sinuato-lobata, grosse dentata, basi cordata, 4-4| poll, longa, 2-2\ poll, lata: petioli 1|-2J pollicares. Panicula racemosa. Flores parvi, albi, pedicellati. Pedicelli 8 lin. circiter longi. Calycis tubus ovario adhasrens^ limbus persistens 5-partitus eequalis, segmentis late ovatis acutis petalis brevioribus. Petala obovata, obtusa, concava-Squamse 5,petalis alternee,ovate, concavce, trinerves, dorso trisetse, truncatae, in conum conniventes et basi intus filamentis 2 sterilibus instructea. Stamina plurima, cum petalis inserta, exteriora 10, sterilia, lineari-lanceolata, ciliata, 1-nervia; interiora fertilia in phalanges 5-18-andras petalis oppositas disposita. Antherae erectae, subrotundes, biloculares. Stylus simplex. Stigma trifida. Capsula ovata, hispida, calycis limbo coronata, unilocularis, vertice breviter exserto, trivalvis, valvis cum nervis placentiferis, tandem liberis, alternantibus. Semina plurima, obovata^ compressa, echinata.

This plant is readily distinguished from all the hitherto described species of *Loasa* by its elongated panicle, which consists of about 5 branches, each forming a raceme of from 10-14 flowers.—*G. Gardner.*

Fig.* 1. Flower, *f.* 2. Scales from the flower, with the sterile utamens:—*magnified.

Tab. DCLXIII.



TAB. DCLXIV.

ToVARIA PENDULA. *R. fy P.*

GEN. CHAR. *Cal.* 8-sepalus, s?palis lineari-laneeolatis patentibus, persistentibus. *Petala* 8, disco elevato carnoso inserta linearioblonga. *Stam.* 8, disco elevato carnoso inserta, erectopatentia. *Filamenta* subulata. *Anthera* ovato-sagittatae antice pilosulee, longitudinaliter ad marginem dehiscentes. *Ovarium* ovatum, disco carnoso parvo impositum, 6-loculare, multiovulatum; *ovulis* minutis dissepimenta tota tegentibus. *Stylus* brevissimus, crassus. *Stigma* dilatatum, 6-lobum, lobis recurvis, glandulosis. *Bacca* (vix matura) globosa, stigmate 6-lobo coronata, 6-locularis, polysperma. *Semina* parva, reniformia, exalbuminosa ? *Embryo* curvatus.—Herba Americee Meridionalis, *ramosa, glabra.* Folia *alterna, trifoliolata;* foliolis *petiolulatis, lanceolatis, anguste acuminatis, penninerviis, integerrimis,* Racemi *elongati, terminates, braeteati.* Flores *mqjusculi, albu* Bacca *magnitudine* Pruni avium* *Odor totius plantce* Apii graveolentis.

Tovaria pendula. *Ruiz et Pav. Ft. Peruv.p.* 73,^.306. *Don in Ed. New Phil. Journ.* 1828.

Bancroftia diffusa. *Macfad. Ft. Jam. p.* 112.

HAB. Woods between Chinchao and Pati, Peru; *Ruiz and Pavon.* Jamaica, Moore's Gap, St. George's; *Dr. Macfadyen, Purdie.* Caraccas, *Linden, n.* 244.

My first knowledge of this plant was from specimens sent by our Collector for the Royal Gardens, Mr. Purdie, from St. George's, Jamaica, where Dr. Macfadyen gathered it some years previously; and having no means of comparing it with Ruiz and Pavon's little-known Peruvian plant, *Tovaria,* and not finding it to agree with any described genus in books which were accessible to him, that gentleman constituted of it a new genus, which he dedicated to l)r. Bancroft, and detailed its characters very carefully. I have since again received the same plant from the Caraccas.

Fig. 1. Flower. /. 2. Petal. /. 3. Front, and /. 4. Back view of a stamen. /. 5. Flowers, with the petals and stamens removed, *f.* 6. Section of ovary. /. 7. Scarcely mature leaves, *f.* 8. Transverse section of ditto; *nat. size. f.* 9. Seed. /. JO. Section of the same, yi 11. Embryo:—all more or less *magnified.*

TAB. DCLXV.

TRADESCANTIA HIRSUTA. *H. B. K.*

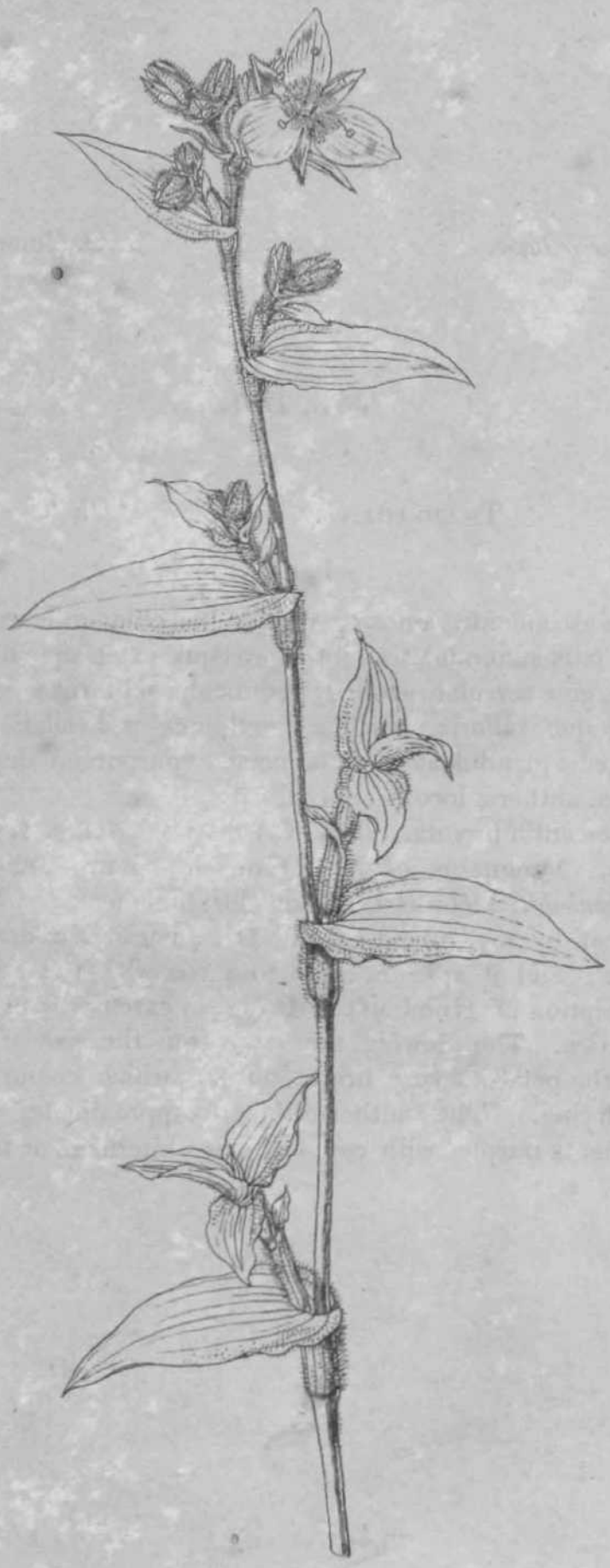
Caule ascendente ramoso glabro, foliis oblongo-lanceolatis acuminatis subundulatis subtus preecipue vaginisque hirsutis laxis margine serrulato-scabris, pedunculis solitariis v. geminis plerumque bifloris, floribus brevissime pedicellatis bracteatis, sepalis glanduloso-hirsutis petalis (purpureis) duplo minoribus, antherse loculis approximatis.

Tradescantia hirsuta. *H. B. K. Nov. Gen. Am. v. I. p.* 263.

HAD. Mountains of New Grenada, about 6000-7300 feet, *Humboldt.* Pichincha, El Equador, 9000 feet, *Dr. W. Jameson.*

Sent by my valued friend, Dr. Jameson, under the above name; and it appears quite to agree with the character and description of Humboldt. It has an extensive range in South America. The flowers are large for the size of the plant, and the petals a very bright purple, which colour is retained in drying. The anther-cells are approximate, white; the filaments purple, with copious long white hairs at the base.

Tab. DCLXV.



TAB. DCLXVI.

TRICHANTHA MINOR. *Hook.*

GEN. CHAR. *Calyx* semia-inferus? profunde 5-partitus, segmentis in lacinias 3-5 anguste lineares longissimas profunde fissis, longe ciliatis. *Corolla* tubulosa, curvata, hinc subventricosa, crinito-hirsuta, supra basin constricta, limbo 5-lobo, extus 5-appendiculatis, appendiculis lineari-clavatis patentibus, cum lobisaltemantibus; *lobis* rotundatis patentibus, 2 superioribus paulo minoribus magisque approximatis. *Stamina 4,* didynama: *Anthera* per paria connexee. *Fructus—?—*Frutices *scandentes* Caracasani, *radicantes, et, ut videtur, epiphyti, pilosi.* Folia *succulenta, carnosa, ovata, seu obovata, penninervia, opposita, unico minimo.* Flores *hirsutissimi, axillares, aggregate* Pedunculi *unifiori.*

Trichantha *minor;* foliis ovatis acuminatis integerrimis ciliatis supra glabriusculis subtus hirsutis, corollee tubo tereti, caule adpresse piloso.

HAB. Columbia, S. America. *Mr. W. Lobb.*

I know of no Genus to which this can be assimilated; and, though ignorant of the nature of its fruit, and, from the paucity of flowers, unwilling to destroy them for analysis, I venture to constitute of this and the following plant a new genus, which I have named from the copious and long hairj with which every part of the flower is covered.

Fig. 1. Hair, *magnified.*

Tab. DCLXVI.

Allan & Ferguson lith. Glasgow

TAB. DCLXVII.

TRICHANTHA MAJOR. *Hook.*

Foliis obovatis acuminatis ciliatis utrinque hirsutis dentato-serratis, corollee tubo subangulato, caule patenti-piloso.

HAB. Columbia, S. America. *Mr. W. Lobb.*

A very distinct species from the.preceding, with much larger leaves, broader upwards, dentato almost spinuloso-serrate, hairy on both sides, with an angular tube to the corolla, and patent hairs on the stem. The general habit of the two plants is precisely similar, the same texture of leaf, the same deeply cut segments of the calyx, and the club-shaped appendages alternating with the segments of the limb of the corolla. In both, the hairs are beautifully jointed, when seen under a microscope.

Fig, 1. One of the hairs; *magnified.*

TAB. DCLXVIII.

CRYPTOMERIA JAPONICA. *Don,*

GEN. CHAR. *Amenta* mascula spicata: *Squamfc* antheriferse, rotundatre, appresse imbricates, sessiles *Antherarum thecce* 5, connatae! basi squamarum omnino adnatae, antice forairtine amplo dehiscentes. *Ovula* erecta. *Strobili* solitarii, globosi, squarrosi: *squamis* e pericarpio 3-6-dentato bracteaque lanceolata acuminata inferne concretis compositis. *Semina* 4 v. 6, compresso-angulata, vix alata.

Arbor Japonica (et Chinensis) *procera, sempervirens.* Folia *fere omnino* Araucariee Cunninghamii, *5-fariam ordinata*$_9$ *subulata, viridia, verticaliter compressa, vixpollicaria** Amenta *mascula in spicam terminalem aggregata; foeminea solitaria globosa. Don.*

Cryptomeria *Japonica. Don, in Linn. Trans, v.* 18. *p.* 167-*t.* 13,/. 1.

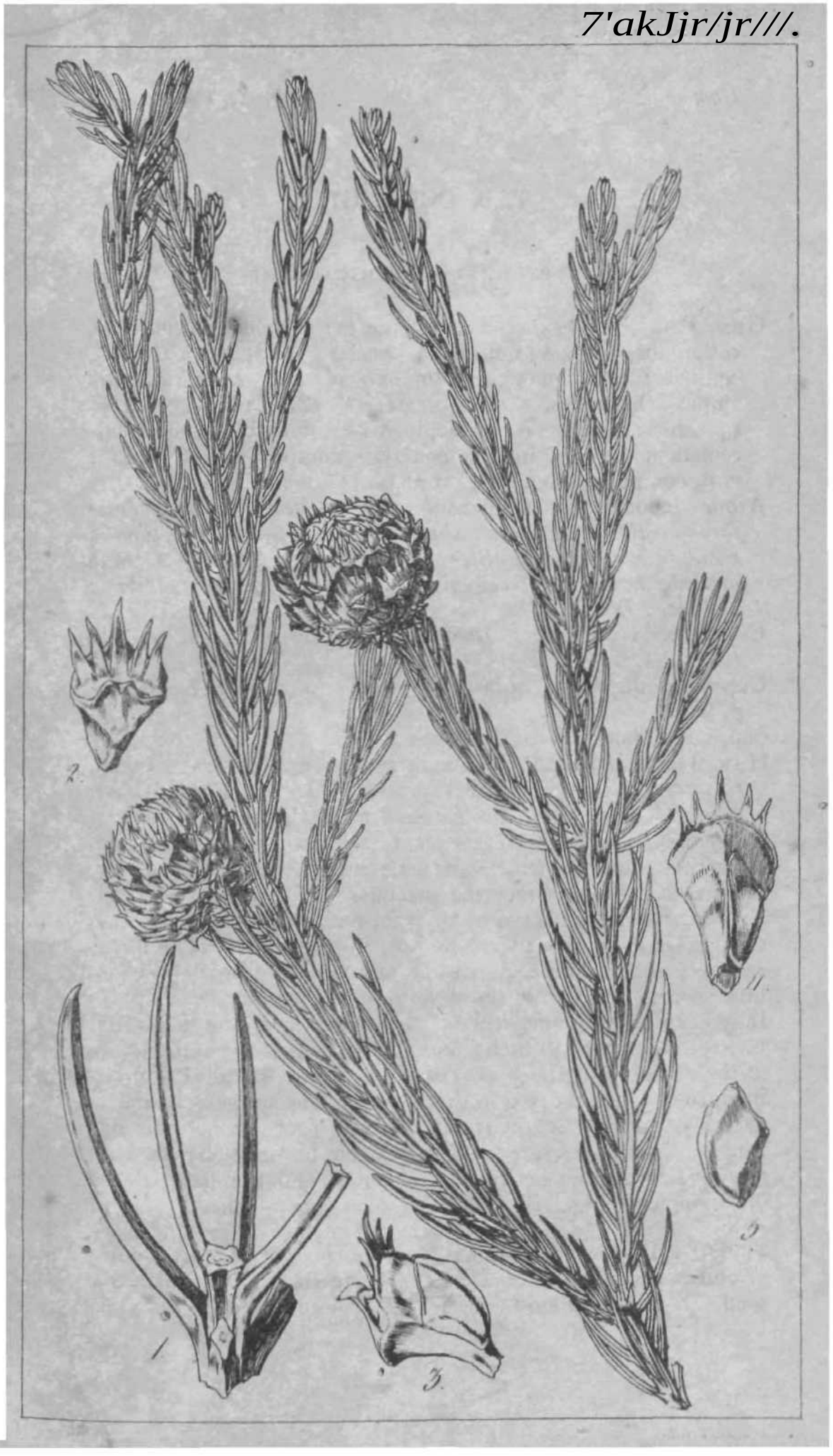
Cupressus Japonica. *Linn. Fil. SuppL p.* 421. *Thunb. Jap, p.* 265.

San, vulgo Sangi. *Kcempf. Amcen. p.* 883.

HAB. Island of Nipon, and mountains about Nangasaki, Japan. *Kcempfer, Thunberg.* China (probably Macao), *Chas. Millett, Esq. ;* Chusan, *Capt. Sir Everard Home,* R. N.

My first knowledge of this plant was from a fine specimen, but without flower or fruit, sent to me by Mr. Millett from Macao. More recently I have received specimens, with cones, from Sir Everard Home, gathered at Chusan, and it is from them that the present figure is made. I do not, however, possess any male catkins; and my female ones, at any rate seed-bearing scales, differ considerably from those represented by Mr. David *Don:* they have a prominent keel on the under side, and I find but two seeds attached to each ; and so similar is the general nature of their strobili to those of *Taxodium,* that I should be almost inclined to place the tree in that genus. The species is unquestionably the same as Mr. Don's, and has probably an extensive range. The leaves are distinctly seen to be 4-angled, with a groove or furrow between the angles, and the base of the lower angle is singularly decurrent upon the branches.

Fig. 1. Portion of a branch with leaves. /. 2. Scale from a strobilus seen from the back. /. 3. Side view of ditto with one seed. /. 4. Under side of scale. /. 5. seed:—*magnified.*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TAB. DCLXIX.

HEMITELIA IMRAYANA. *Hook.*

Inermis ? frondibus bipinnatis glabris, pinnulis amplis late oblongo-lanceolatis acuminatis profunde pinnatifidis fere ad rachin, segmentis lanceolatis acuminatis serratis, sonis uniseriatis prope marginem fere ad rachin attingentibus, venis pinnatis, venulis 2-3, infimis seepe anastomosantibus.

Hemitelia Imrayana. ***Hook, Sp.Fil.*** **1, j9. 33.**

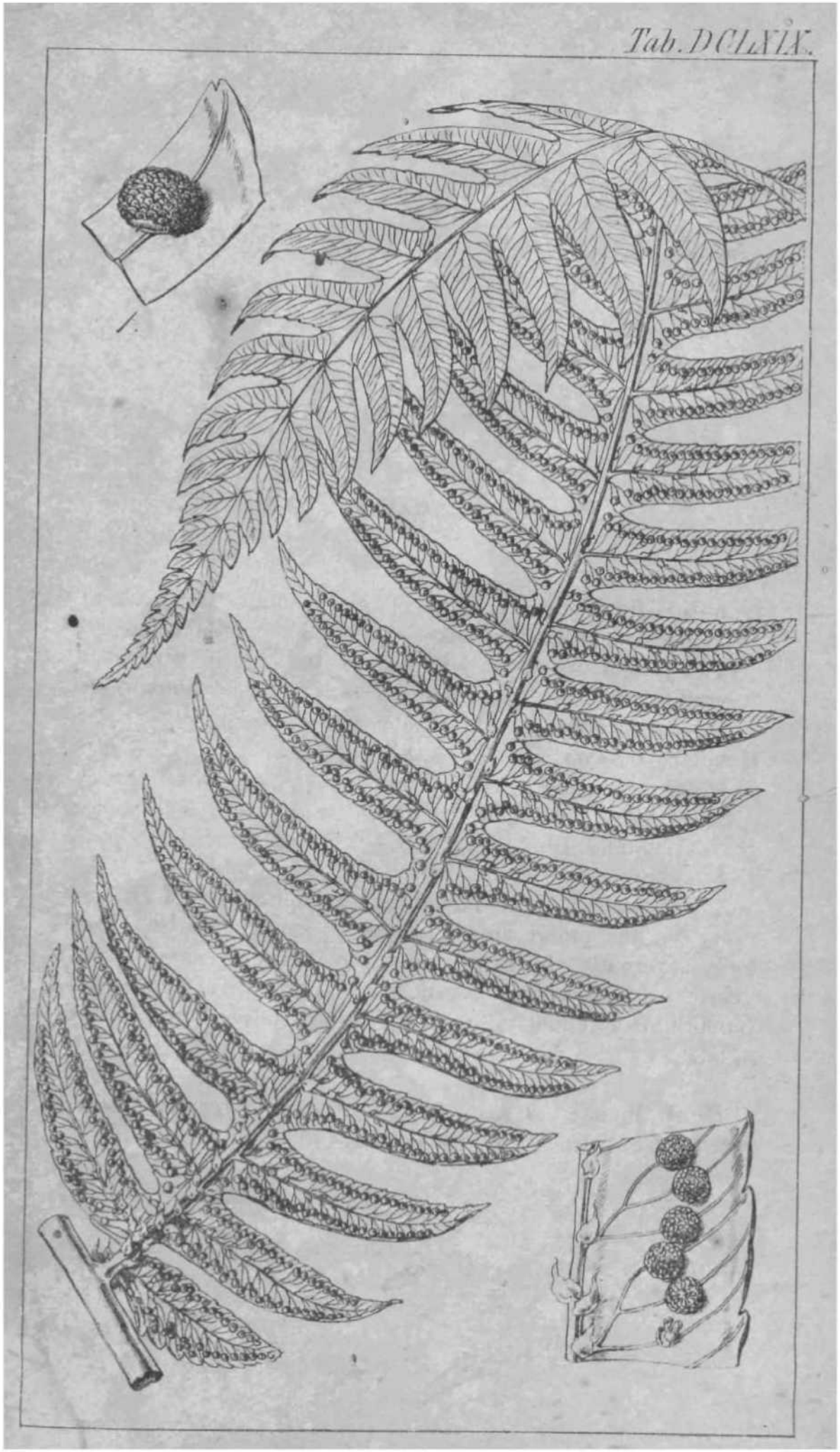
j3. segmentis grosse serratis, ***Hook. I. c. p.*** **34. H. serrata, /.** *Sm. in Hook. Lond. Journ. of Botany, v. I, p. 662 (name only)*

HAB. Dominica, ***Dr. Imray,*** **1839,—/3. Jamaica?** ***Wiles? (Herb.*** *J. Smith).*

At first sight this has a good deal the appearance of ***H. horrida;*** **but the pinnae are far narrower, smaller, 10-12 inches long, apparently always glabrous, the segments serrated, the veins much less copiously branched. The#.** ***serrata*** **of J. Sm. (doubtful as to country) may I think be safely referred to this species.**

Fig. **1. Pinna;** ***nat. size. f.*** **2. Portions of a segment;** ***magnified.*** /. 3, **Sorus :—more** *magnified.*

Tab. DCLXIX.



TAB. DCLXX.

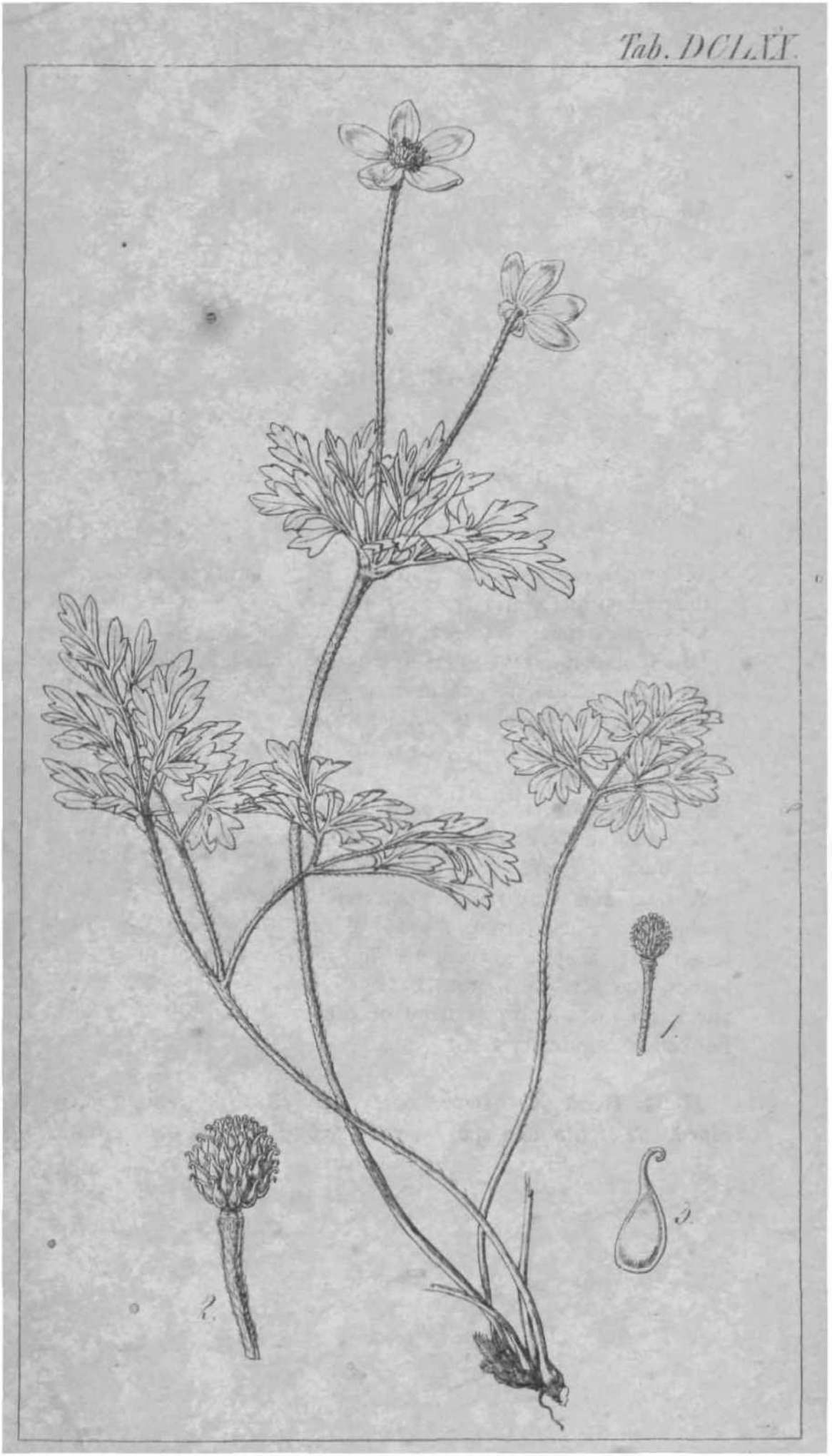
ANEMONE JAMESONI. *Hook.*

Subsericeo-hirsuta, radice repente, foliis omnibus radicalibus longissime petiolatis triternatim sectis, segmentis primariis longi- secundariisque brevi-petiolulatis ultimis cuneatis bi-tai-fidis lobis acutis, involucri foliolis petiolatis triternatim sectis, segmentis oblongis obtusiusculis superne latioribus, pedicellis binis, sepalis 5 ovalibas obtusis extus medio piloso-sericeis, capitulo globoso glabro, carpellis ovatis. stylo subulato apice uncinato terminatis.

HAB. Hitherto found only on the mountain of Pillzum, Andes of El Equador, at an elevation of 12,000 feet above the level of the sea, *Prof. W. Jameson (n.* 86).

A new and very distinct species of *Anemone,* most allied perhaps to *A. triternata;* but differing from it in its much larger size, a span and more high, its petiolated involucral leaves, the few (five, not 10-12) sepals, their figure, and the short, globose, glabrous head of carpels, each tipped with a hooked, subulate style.

Fig. 1. Head of carpels; *nat. size. f.* 2. The same; *magnified. /,* 3. Single carpel:—more *magnified.*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TAB. DCLXXI.

ALSOPHILA CRINITA. *HooL*

Stipite rachique primaria pallidis elevato-punctatis muricatisque, frondibus bipinnatis coriaceis, rachi supra pilosa subtus co$-taque dense paleaceo-crinitis, paleis ntmc brevibus minutis plerumque elongatis appressis, pinnulis sessilibus anguste lanceolatis acurainatis profunde fere ad rachin pinnatifidis, segmentis anguste ovato-oblongis subobtusis paululum falcatis margine (sicco) valde recurvis subtus pallidioribus, costa venisque ssepe pilosis, venis furcatis, soris paginas inferiores fere totas occupantibus paleis crinitis tectis-

Alsophila crinita. ***Hook. Sp. Fil*** **\,*p.* 54.**

HAB. Ceylon. ***Mrs. Gen. Walker.***

A very remarkable species, not like any with which I anfi acquainted. It possesses the dark, minute tuberculations on a pale stipes and main rachis, remarked by me in *Cyathea medullaris.* The main rachis, too, and the rachis of the pinnae, although stout, are waved and flexuose; and they are beneath quite shaggy with copious, pale-coloured scales; these are of two kinds, at least upon the main rachis, some being exceedingly small, but the majority are long, slender, subulate, more or less appressed, gradually smaller on the costae, where they partially cover and conceal the copious fructifications.

Fig.* 1. Under side of a fertile segment. /. 2. Sorus and scales. /. 3. Single scale -.—*magnified.

Tab.DOJj.Wl

TAB. DCLXXII.

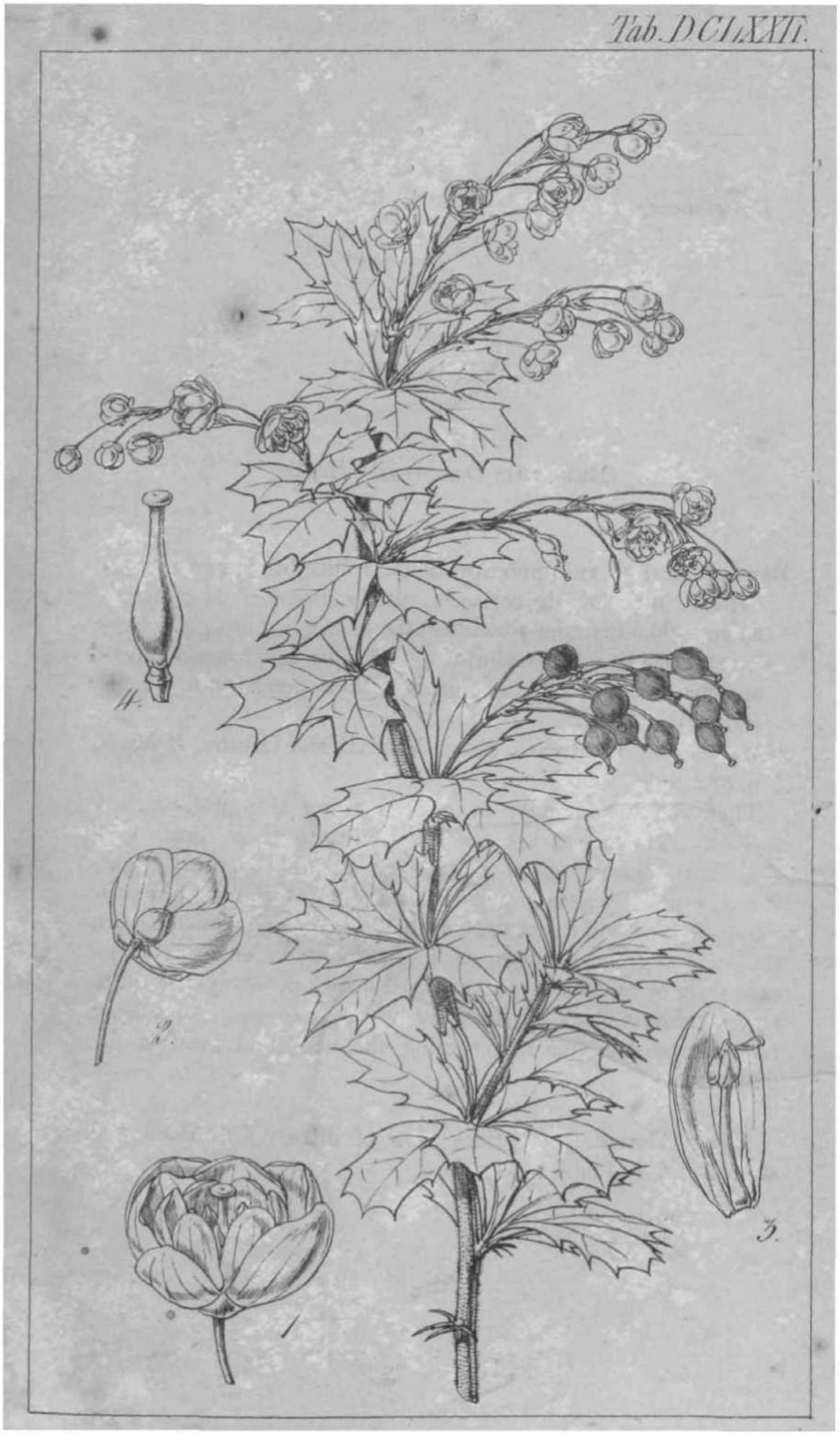
BERBERIS DARWJNII. *Hook.*

Ramis junioribus rufo-pubescentibus, spinis brevibus palmato-partitis, foliis rigide coriaceis nitidis discoloribus cuneatis apice trifidis margine paucidentatis dentibus lobisque spinulosis, racemis folio longioribus, pedicellis flores duplo superantibus gracilibus, baccis (una cum stylo persis tente) lageniformibus*

HAB. Chiloe, *C. Darwin, Esq.* Valdivia and Osomo, *Bridges, n.* 582,585.

There is no difficulty in characterizing this well-marked species. The leaves are very constant to their form, sessile, but tapering more or less at their base, very rigid, glossy, especially above, pale and often rusty-coloured beneath. Peduncles twice or thrice the length of the leaves, reddish, as are the long slender pedicels, each of which has an ovate, concave scale or bractea at the base. Berries, probably not quite mature, almost black, with a glaucous tinge, shaped like a flask, the style and stigma representing the neck and head of the flask.

Fig.* 1. Flower. /. 2. Back view of ditto* /. 3. Petal and stamen. /• 4. Pistil '.—*magnified.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TAB. DCLXXIIL

FAGUS CLIFFORTIOIDES. *Hoohfil.*

Ramis nigro-fuscescentibus, ramulis pubescentibus foliosis, foliis ubique subdistichis breviter petiolatis parvis ovatis acutis margine planis integerrimis, inferne pubescenti-tomentosis, floribus $ aggregatis brevi-pedunculatis.

Cliffortioides oblongata. *Banks and Sol. mss. in Herb. Banks.*

HAR. Dusky Bay, New Zealand, *Mr. Menzies.*

Similar though this is in many respects to our *F. Solandri* (TAB. NOSTR. DCXXXIX.) it is yet quite distinct, and apparently wholly confined to Dusky Bay, at the southern extremity of the middle island of New Zealand, where it was detected by Mr. Menzies. The leaves are truly ovate and acute, always drying of a brown colour on the upper side; the perianth 5-cleft, with rather acute segments. We regret that the fruit is unknown to us of both the species. Small as are the leaves of all the Beeches of the southern hemisphere, these two species have the smallest of all, looking not much unlike those of some *Vaccinium.*

Fig. 1. Leaf, upper side. /. 2. Under side of ditto. /. %S Male flower:—*magnified.*

Tab. DCLXXII.

TAB. DCLXXIV.

CALLIXENE POLYPHYLLA. *Hook.*

a

Elata valde ramosa, foliis copiosis oblongis subovatisve mucronulatis 5-7 nerviis transversimque (sub lente) venosis subtus glaucis, pedunculis folium fere eequantibus seu eo longioribus infra medium articulatis unibracteatis, petalis acutis maculatis, antheris incumbentibus.

HAB. S. Chili. Trunks of trees near Valdivia, where it is called "Asajur," *Bridges, n. 6f9.* Cape Tres Montes, C *Darwin, Esq. n.* 531-8. Isle of Huaffo, *Dr. Eights.*

Our larger specimens of this *Callixene* indicate a truly beautiful plant; they are a foot and a half long (and yet only a portion of the entire plant) with copious foliage, numerous large and probably fragrant flowers, white, it would appear, spotted with orange. It is extremely different from the old *C. marginata* of the Falkland Islands and Cape Horn, and equally so from that of New Zealand, *C. parviflora,* of this Work, TAB. DCXXXIT. Besides the greater size, copious ramifications and leaves, these latter are glaucous beneath, and quite destitute of the silvery lines so conspicuous in the other species, especially in *C. marginata;* the flowers are larger, the peduncles longer, the petals elegantly spotted. In the size and spotting of the flowers, this plant exhibits a still nearer affinity with the *Luzuriaga radicans,* R. and P.; a genus scarcely distinct from the present, except in the anthers being fixed to the apex of the short filament by their base, and not versatile, and in the peduncles being 3-flowered. All the species of the genus have distichous leaves, and Dr. Hooker found them growing frequently at the roots of the trees in Tierra del Fuego, lying flat upon the trunk. The present, from Mr. Bridges' remark, would appear to be an epiphyte.

Fig. 1. Flower. /. 2. Ditto, more expanded. /. 3, 4. Stamens. /• 5. Pistil. /. 6. Section of the ovary:—*magnified.*

Tab. DCLXXIV.

TABS. DCLXXV, DCLXXVI.

HYPODERRIS BROWNII. /. *8m.*

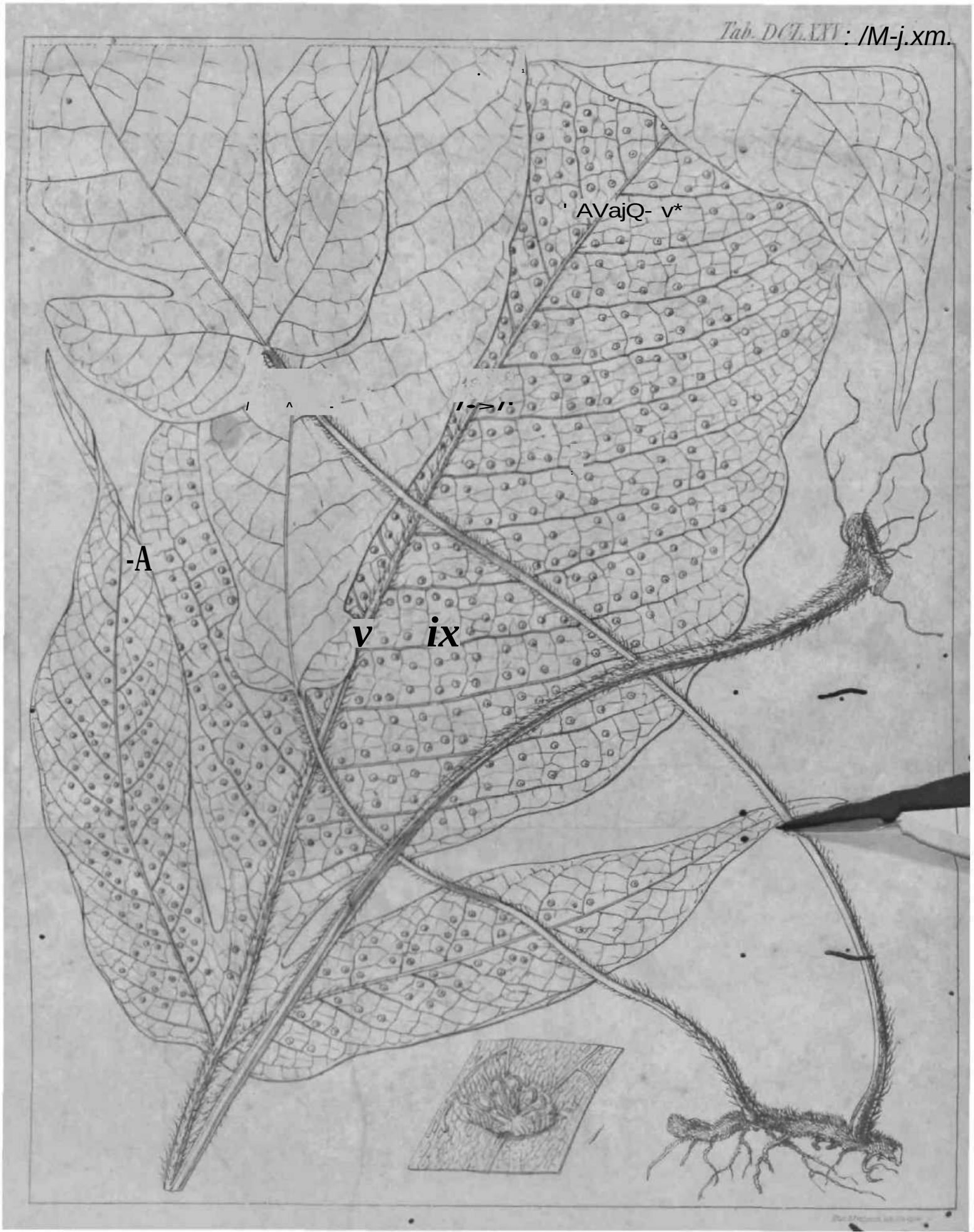
Hypoderris Brownii. /. *8m. in Hook. Gen. Fil. Tab.* 1. *Hook. Sp. Fil. I, p. 57.*

HAB. St. Anne's Valley, Trinidad, *Mr. LockharL*

***Caudex* repens, setaceo-squamosus, crassitie *pennce anserina. Stipes* spithamseus et ultra, setosus. *Frons* spithamsea ad pedalem, ovato-lanceolata, membranacea, supra basin contracta, saepius profunde triloba basi cordata, lobis lateralibus multoties minoribus, lanceolatis, acuminatis; lobo medio, seu terminali, maximo, ovato-acuminato, subsinuato, ubique integerrimo. *Costa* valida. *Fence* parallels, patentes, sinuosee; venulis reticulatis connexis, ultimis nonnunquam liberis. *Sori* globosi, venis prirnariis paralleli, ad angulas confluentes inserti. *Involucrum* inferum, subcyathiforme, membranaceum, reticulatum, margine patente fimbriato, subciliato.**

The essential character of this genus, established by Mr. Brown, consists in the inferior involucre, like that of some *Woodsue,* but arising from anastomosing veins, as in the *Phymatodes* group of *Polypodium,* and in the true *Aspidium* of Presl. This fine plant appears to be quite peculiar to Trinidad, and I have seen no specimens save from Mr. Lockhart.

Fig.* 1, Small portion of the frond with a sorus:—*magnified.


Tab. DCLXVI
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TAB. DCLXXVII.

RANUNCULUS STENOPETALUS, *Hook.*

Humilis dense csespitosus glaberrimus, foliis omnibus radicalibus longe petiolatis cordatis ternatim sectis, lobis foliolisve lateralibus ovatis integris vel inaequaliter bifidis, intermedio obovato-cuneato integerrimo v. tridentato dentibus segmentisque obtusis, scapo folio brevioribus, sepalis 5 rotundato-ellipticis concavis, petalis 5 lineari-lanceolatis prope medium nectariferis.

HAB. Shores of the Bay of Valdivia, S. Chili, growing within tide-mark, *Bridges, n.* 11.

This has a considerable resemblance to *R. biternatus* of the Falkland Islands and Tierra del Fuego, figured at our TAB. CDXCVII, especially in size and general aspect; but in that the leaves are more compound, with their lobes or leaflets distinctly petiolulate, and the petals are 6-8. It approaches still nearer to *R. acaulis,* Banks and Sol., and Hook. fil. Fl. Antarct. Tab. 2, from New Zealand and Lord Auckland's Islands, especially in the form of the leaves; but that species has creeping or stoloniferous, filiform stems, spathulate petals, and a nectary placed above the middle of the petal.

Fig. 1. Leaf. / 2. Flower. /. 3. Outside view of a flower, showing the calyx. /. 4. Petals;—*magnified.*


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TAB. DCLXXVIII.

DlOSCOREA PJSILLA, *Hook.*

Nana herbacea, tubere subrotundo undique fibroso, ramis patentibus diftusis, foliis petiolatis cordatis retusis mucronatis 7-9-nerviis, pedunculis axillaribus, masc. 3-5-floris, foem. subunifloris vix folium superantibus, flore foemineo basi bibracteato.

HAB. About Valparaiso, *Bridges, n.* 166. *Cuming, n,* 686. (or 886 ?)

Radix: tuber subrotundum, copiose fibrosum. Caulis debilis, subpalmaris, filiformis, ramosus; ramis diffusis, vix scandentibus, flexuosis. Folia alterna, petiolata, subrotundo-cordata. Pedunculi axillares, solitarii; *masc.* 2-5-flori, pedicellis elongatis gracillimis, basi bracteatis; *foem.* plerumque uniflori, apice sub ovario bibracteati, bracteis ovatis membranaceis, appressis. Flores parvi, inconspicui: *masc.* perianthium profunde in 6 lacinias ovatas demum reflexas fissum. Stam. 6, singulo ad basin singuloe lacinise: Filamenta brevissima: Antherae subrotundee. Ovarii rudimentum nullum infra perianthium: supra ovarium abortivum crassiusculum, cylin* draceum: Styli 3 patentes subulati.—*Fcem.* Perianthii tubus ovario adnatus, triangularis, elongatus, superne attenuatus; limbus 6-partitus ut in masc. Starninum rudimenfca ad basin limbi calycini. Styli 3 lato-subulati, patentes, basi in columnam uniti.

The smallest of all the hitherto discovered species of this extensive genus, and only known to me from the specimens communicated by the two collectors above-mentioned, and from living plants in Mr. Veitch's Nursery.

Fig.* 1. Female plant; *not. size.* /. 2. Flower. /. 3. Transverse section of ovary, *f.* 4. Vertical ditto. /. 5. Portion of a male plant. /. 6. Male flower.—All but/'. 1 & 5, *magnified.


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TAB. DCLXXIX.

CRYPTONEMIA ? FORBESII, *Harv.*

Caule cylindraceo cartilagineo dichotomo, foliis exacte reniformibus sessilibus amplexicaulibus horizontalibus fusco-rubris coriaceis.

HAB. Dredged in the Mediterranean Sea, 8 miles off the Island of Paros in 50 fathom water, *Prof. Edward Forbes,* 1841.

Stem cylindrical, solid, nearly | a line in diameter, at first simple, about a quarter of an inch long, and expanding at the apex into a horizontal reniform leaf; then lengthening, by the growth of the summit through the base of the leaf (which thus becomes amplexicaul to the new stem,) and expanding into a new leaf; and so it continues alternately lengthening and forming new leaves at intervals of from a quarter to half an inch \ each leaf, which at first was terminal, becoming by the successive growths of the stem, lateral and amplexicaul. As the stem advances, it is forked at every second or third leaf, and this being repeated, an irregularly dichotomous leafy frond is at length formed. Leaves about half an inch asunder, £-J inch in diameter, exactly reniform, somewhat wavy, coriaceo-membranaceous, thickish, without vein or rib, dull brownish-red, of a very dense structure, consisting, *internally,* of a close web of slender, entangled, somewhat coloured fibres, *externally* of a stratum of minute polygonal cellules. *Fruit* unknown.

The genus to which this very remarkable plant belongs is extremely doubtful, and probably, when the fruit is known, it will be found necessary to constitute it the type of a new one. I refer it provisionally to *Cryptonemia,* Ag., on account of a resemblance in the structure of the frond, but its mode of foliation is altogether peculiar, and the colour reminds us more of that of the *lihodomelece,* than of any species of *Cryptonemia.* One drawing is made from a single specimen in the Herbarium of Prof. Forbes.—*W. H. Harvey.*

Fig.* 1. Leaf, slightly *magnified, f. 2.* Transverse section of the same; *magnified.

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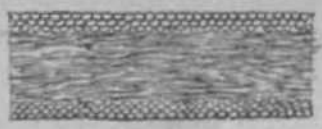

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TAB. DCLXXX.

STELLARIA DECIPIENS, *Hook, fih*

Glabra, caule decumbente dichotome ramoso, foliis recurvis omnibus (etiam supremis) petiolatis obovato-rhombeis acutis apice callosis carnosulis siccitate punctis minutis elevatis asperis, petiolis subciliatis, pedunculis di-trichotomis (rarius unifloris) folia plerumque superantibus ad furcaturam pedicelloque unico medium versus 2-bracteatis, bracteis ovatis acutis scariosis albidis, petalis 5 bipartitis calycem sequantibus interdum brevioribus v. nullis filamentisque ima basi dilatatis fere hypogynis, stylis 3.

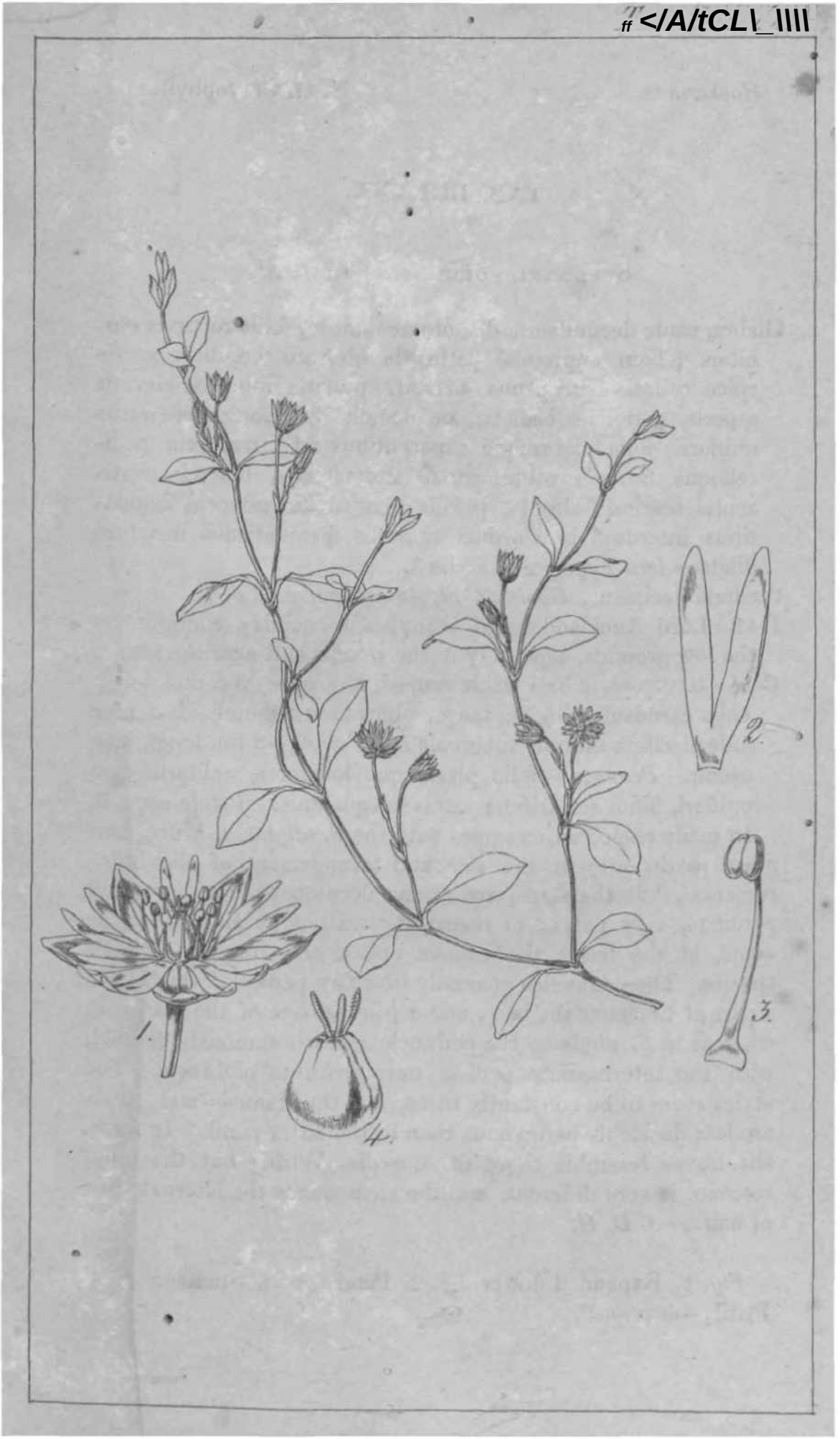
Stellaria decipiens^ ***Hook.fil. Fl. Antarctica, v. \,p.*** **7-**

HAB. Lord Auckland's and Campbell's Islands; common on the low grounds, especially in the woods, and near the sea.

Caules **tetragoni, e basi valde ramosi, filiformes, 3-5 unc. longi. . *Folia*** **carnosula, 3-5 lin. longa, obovata seu rhomboidea, hinc inde siccitate minute tuberculata.** ***Petioli*** **1-3 lin. longi, latiusculi.** ***Pedunculi*** **folio plerumque longiores, solitarii, raro uniflori, bifidi seu trifidi; ramis ineequalibus.** ***Petala*** **saepe 0.**

In many respects this agrees with the S. *uliginosa,* Murr., and more particularly in the size and arrangement of the inflorescence ; but the stems are always decumbent, the leaves all petiolate, very patent or recurved, and not at all broader, or ovate, at the base; the callous apices are common to both species. The peduncles generally bear two pedicels, which have a pair of bracts at the base, and a pair on one of the pedicels; whereas in *S. uliginosa* the peduncle is trichotomously divided, with the intermediate pedicel only destitute of bracts. The styles seem to be constantly three, and the stamens and petals are less decidedly perigynous than in the latter plant. In form, the leaves resemble those of *S. media.* With.; but the inflorescence is very different, and the stem wants the alternate line of hairs.—*J. Z>. H.*

Fig. **1. Expanded flower. /. 2. Petal. /. 3. Stamen. /. 4. Pistil $—*magnified.***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TABS. DCLXXXI, DCLXXXII.

ACROSTHICUM (Campium) PROLIFERUM, *Hook.*

Caudice repente, frondibus pinnatis, pinnis petiolatis sterilibus oblongis basi acutis apice acuminatis acumine serrato terminali longissimo sinuato-pinnatifido apice prolifero bulbifero radicante, fertilibus lineari-elongatis facie superna condupli-catis.

HAB. Bombay, Dr. *Falconer.*

I am indebted to Dr. Falconer for this new *Acrostichum,* which he received from Bombay. It belongs to a group having the veins united by transverse arched veinlets which give out, from the middle, one or more veinlets; of these secondary veinlets the lower ones are free, and the upper ones often unite with the transverse veinlets above, and then they anastomose in greater or less degree towards the margin. This veining constitutes the Genus *Campium* of Presl, and we have examples in the *Acrostichum subcrenatum,* Hook, et Grev. Ic. Fil. 1.110. & *A. vir€ns*$_9$ Ic. Fil. t. 221. From those species ours is abundantly distinct. Indeed, in general appearance it more nearly resembles the *A. flagelliferum* (Ic. Fil. t. 23); but the pinnae are more numerous, and the fertile pinnae and the venation are very different.

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TAB. DCLXXXIII.

LORANTHUS ALBIFLORUS, *Hook.*

Foliis subopposítis lato-lanceolatis acuminatis integerrimis coriaceis basi in stipitem perbrevem decurrentibus, paniculis compactis axillaribus folio brevioribus, ramulis trifloris, bracteis minutissimis squameeformibus, petalis 6 e basi ad medium erectis approximates dein reflexis, filamentis basi liberis, antheris ovatis subsagittatis mucronato-acutis dorso affixis, stylo longitudine staminum apice obliquo.

HAB. Andes of Quito, elev, 8500 feet, *Dr. W. Jameson.*

I do not find this anywhere described. It must, in a recent state, be a very handsome species, loaded with its copious panicles of rather large white flowers, shorter, indeed, than the leaves, but very conspicuous from their number, arising as they do from the axils of all the upper leaves. The anthers are large and versatile, or attached by their back to the apex of the filament.

Fig. 1. Flower. /. 2. Calyx and Pistil. /. 3. Anther;—*magnified.*


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TAB. DCLXXXIV.

CAMPANULA VIDA^II, *H. C. Watson.*

Fruticulosa viscida, foliis imbricatis (ssepius in rosulas terminales confertis) crassis coriaceis glabris spatulato-oblongis crenatis marginibus revolutis, superioribus sparsis lanceolatis subintegris, floribus racemosis cernuis, lobis calycis brevibus triangularibus, corolla campanulato-infundibuliformi supra basin contracta, stigmatibus oblongis.

Campanula Vidaliana, *H. C. Wats., Ms. (No.* 113 *of "Plants collected in the Azores, in* 1842/')

H AB. On an insulated rock off the east coast of Flores, between Santa Cruz and Ponta Delgada, *Capt, Vidal,* R.N.

I was indebted to Capt. Vidal for the very few specimens of this remarkable *Campanula,* distributed with the other plants collected by myself in the Azores. Only fragments were obtained ; and I have seen neither the root, nor the fruit more advanced than the flowering stage. Apparently the generic character is that of *Campanula,* although the leaves and branches differ widely from those of all the other species known to me, and more recall to mind some species of *Saxifraga* or *Sempervivum.* The branches are dichotomous ; each fork terminating in a rosette of leaves, intermediate in texture between coriaceous and succulent, and a similar rosette is sessile between the forks. The branch is thickened where these rosettes occur, and ultimately covered with scales formed by their persistent bases. The flower-stalk shoots up from the tuft of leaves, as in species of *Sempervivum.* Several of the flower-buds are abortive, or else developed later and irregularly. Corolla white or cream-colour, shaded with pink externally.—*H. C. Watson.*

Fig.* 1. Immature fruit; slightly *magnified.* (This, as well as most of the figures, is copied from a faithful drawing by Mr. Watson.) *Ed.

Tab. DCLXXXIV.

TAB. DCLXXXV.

EPILOBIUM CONFERTIFOLIUM, *Hook.fil.*

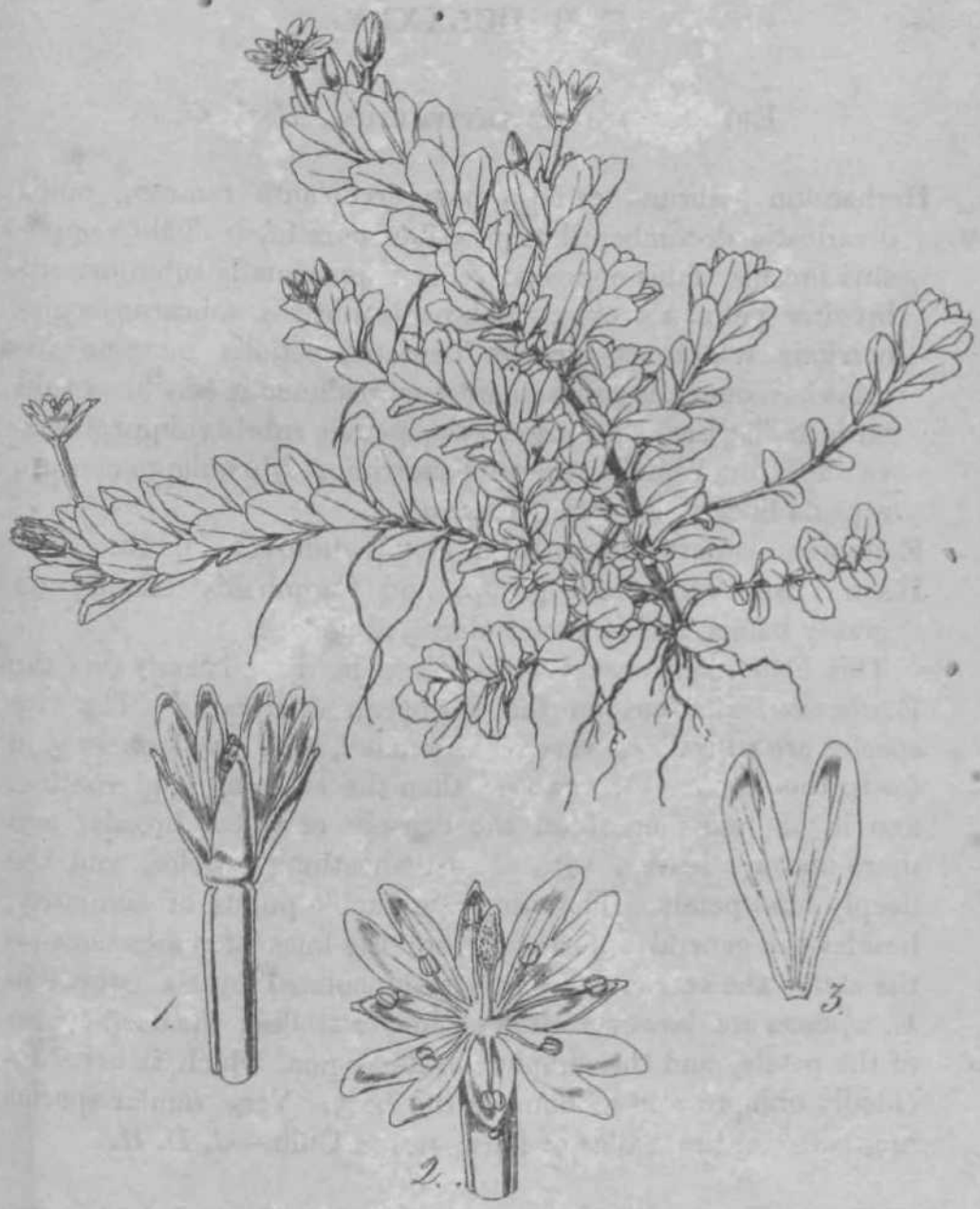
Herbaceum glabrum, caule repente radicante ramoso, ramis divaricatis decumbentibus teretibus cum lineis duabus oppositis incanis, foliis oppositis valdę approximatis subimbricatis breviter petiolatis oblongo-obovatis obtusis subcarnosis glaberrimis remote et obscure dentatis, petiolis margine incanis basi connatis subvaginanHbus, pedunculis sessilibus solitariis axillaribus, floribus erectis, petalis rubris subpurpureisve ad medium bifidis, ovario glaberrimo, stylo oblique clavato, capsula lineari-elongata glaberrima.

Epilobium confertifolium, *Hook.fiL Ft. Antarct.* 1, *p.* 10.

HAB. Lord Auckland's group, and Campbell's Island: on grassy banks, and in moist places, abundant.

This little plant occupies the place in these islands that the E. *alpinum,* L. does on the European mountains. The two species are indeed so very closely allied, that we look in vain for further constant characters than the creeping, and rooting, and much branched stem, the densely crowded, broader and more obovate leaves, with almost sheathing petioles, and the deeply bifid petals. The more remarkable points of similarity, besides the general appearance, are the lines of pubescence on the stem, the sessile or shortly pedunculated ovaria (which in E. *alpinum* are however often on longer stalks), the deep colour of the petals, and the simple clavate stigma, which is here decidedly oblique and gibbous at the base. Very similar species are found on the Andes of Peru, and in Chili.—/. *D. H.*

Fig. 1. Flower, scarcely expanded. /. 2. Expanded blossom. /. 3. Petal;— *magnified.*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TAB. DCLXXXVI.

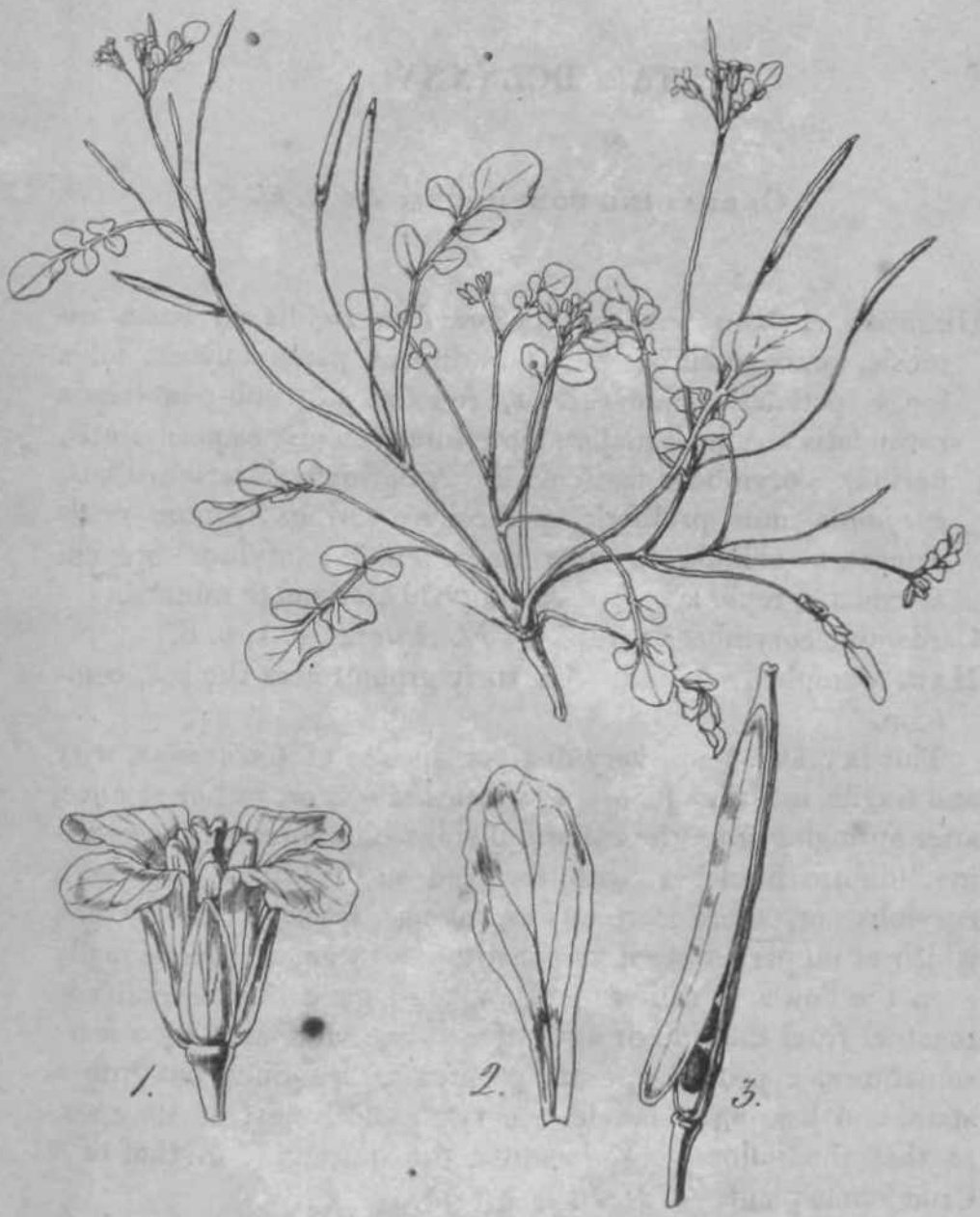
CARDAMINE CORYMBOSA, *Hook.fiL*

Hirsutula v. glabra, caulibus perbrevibus rigidis ad basin ramosis, ramis gracilibus flexuosis difFusis parce foliosis, foliis longe petiolatis pinnatisectis, foliolis 3-5 sub-petiolulatis rotundatis terminali majore lateralibus remotis seepe minutis, floribus corymboso-fasciculatis axillaribus v. terminalibus, corymbis nunc proliferis, pedicellis brevibus demum valde elongatis, siliquis anguste linearibus in stylum brevem attenuatis, replo angusto, valvis planis, stigmate minuto.

Cardamine corymbosa. *Hook.fiL FL Antarct. v.* l,j&. 6.

HAB. Campbells Island. On turfy ground near the sea, common.

This is a small and very distinct species of *Cardamine*^ wiry and fragile in every part. The stems short, or, rather at once, after springing from the collum, divided into spreading, ascending, filiform branches, with few and small leaves; and with corymbs, or, more correctly speaking, fascicles of flowers, which at no period seem to constitute a raceme. Occasionally even the flower is solitary and axillary; generally, several rise together from the side or apex of a stem, subtended by a leaf; sometimes, a pedicel appears proliferous, running out into a stem, and bearing a fascicle or corymb and a leaf at its apex, so that the inflorescence has little the appearance of that of a Cruciferous plant. /. *D. H.*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TABS. DCLXXXVII, DCLXXXVIIl.

LEIANTHUS UMBELLATUS, *Griseb.*

Arborescens, ramulis herbaceis, foliis obovato-oblongis elongatis acutissimis basi longe attenuatis, petiolis oppositis connato-vagimantibus, pedunculis axillaribus folio brevioribus, floribus umbellatis, umbella bracteis 2-3 amplis involucrata, corollis infundibuliforrai-cylindraceis ore subobliquo, staminibus styloque exsertis.

Leianthus umbellatus, *Griseb. Gen. et Sp. Gent. p.* **199.**

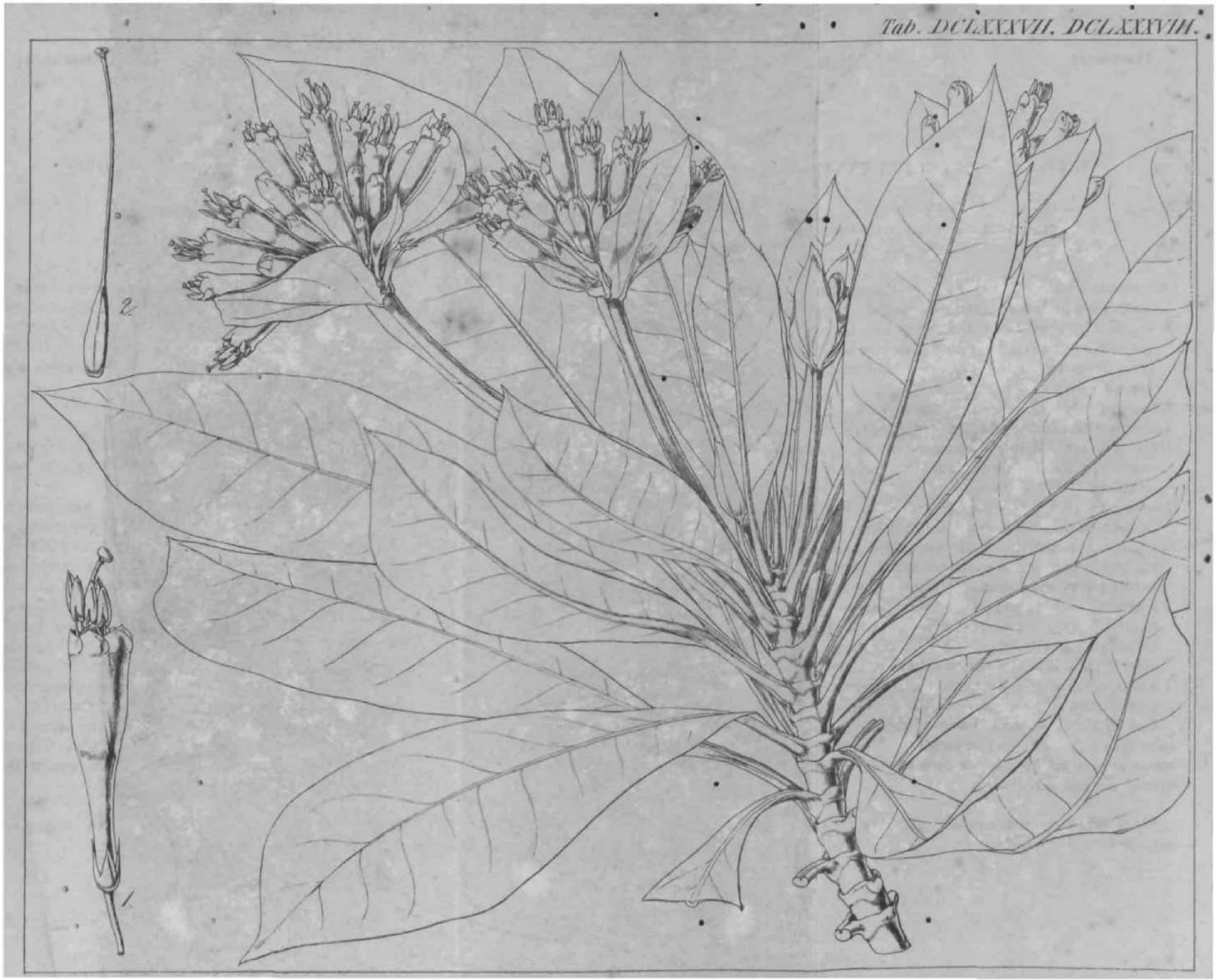
Lisianthus umbellatus, *Sw. Fl. Ind. Occ. l9p.* **350.**

HAB. Jamaica. Lofty mountains of St. Jacob's, *Swartz;* **summit of the Dolphin Mountain, parish of Hanover,** *Dr. Macfadyen, Mr. Purdie.*

***Frutex* seu *Arbor* insignis, 20-pedalis. *Folia* numerosa in ramulos herbaceos, 6-uncialia ad pedalem, coriaceo-membranacea, basi in petiolum longe sensirnque attenuata. *Pedunculi* solitarii, 4 unciales ad spithamseam. *Umbella* 2-3 uncias lata, 8-12-14-flora, involucrata. *Involucrifoliola* 2-3 ampla, umbella longiora, ovata, acuta, unico saepe minore. *Pedicelli* bracteolati (bracteolis parvis subulatis) breves, 2-3 lineas longi. *Calyx* parvu, tubulosus, 5-fidus. *Corolla* unciam longa, ut videtur luteo-alba, ore parum obliquo, 5-fido, lobis rotundatis, acutis, erectis. *Anthera* exsertae, sagittatse, apiculatae, margine utrinqae dehiscentes. *Stigma* dilatato-clavatum.**

One of the most remarkable of the *Gentianece;* a tree or large shrub, 20 feet high ! apparently of great rarity. No one seems to have gathered it since the days of Swartz, except Dr. Macfadyen and Mr. Purdie.

Fig.* 1. Flower. /. 2. Anther. /. 3. Pistil. /. 4. Stigma :— *magnified.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TABS. DCLXXXiX, DCXC.

CONRADIA CALYCOSA, *Hook.*

Fruticosa glabra, foliis oblongis serratis lsevibus petiolatis basi acutis apice acuminatis subtus discoloribus, pedunculis axillaribus solitariis unifloris folio sublongioribus, laciniis calycinis subulatis longissimis corollam obliquam subcampanulatam superantibus, staminibus styloque longe exsertis, capsula elongata cylindraceo clavata sulcata.

HAB. Jamaica; Sedburgh, Manchester, *Mr. Purdie.*

This is a very fine and undescribed species of *Conradia* (Mart, not Nutt.) with large flowers, solitary on each peduncle, remarkable for the great length of the calycine segments, which nuch exceed the corolla, and the very protruded stamens and style. It forms a shrub, 5 to 10 feet high, according to Mr. Purdie, flowing copiously in December. Leaves 46 inches, long, firm, but rathermembranaceous, glabrous, smooth to the touch, pale, and sometimes rather rusty beneath, where the pinnated veins are prominent and darker coloured, and the veinlets are reticulated. Petioles an inch or an inch and a half long. Peduncle rather stout, about as long as the leaf, but including the flower (for the calyx with the tube often measures *2* inches longer.) The club-shaped sulcated capsules, with the long persistent segments of the calyx (resembling the legs of spme insect) have a singular appearance.

TAB. DCXCL

TOFIELDIA (ISIDROGALVIA) SESSILIFLORA, *Hook.*

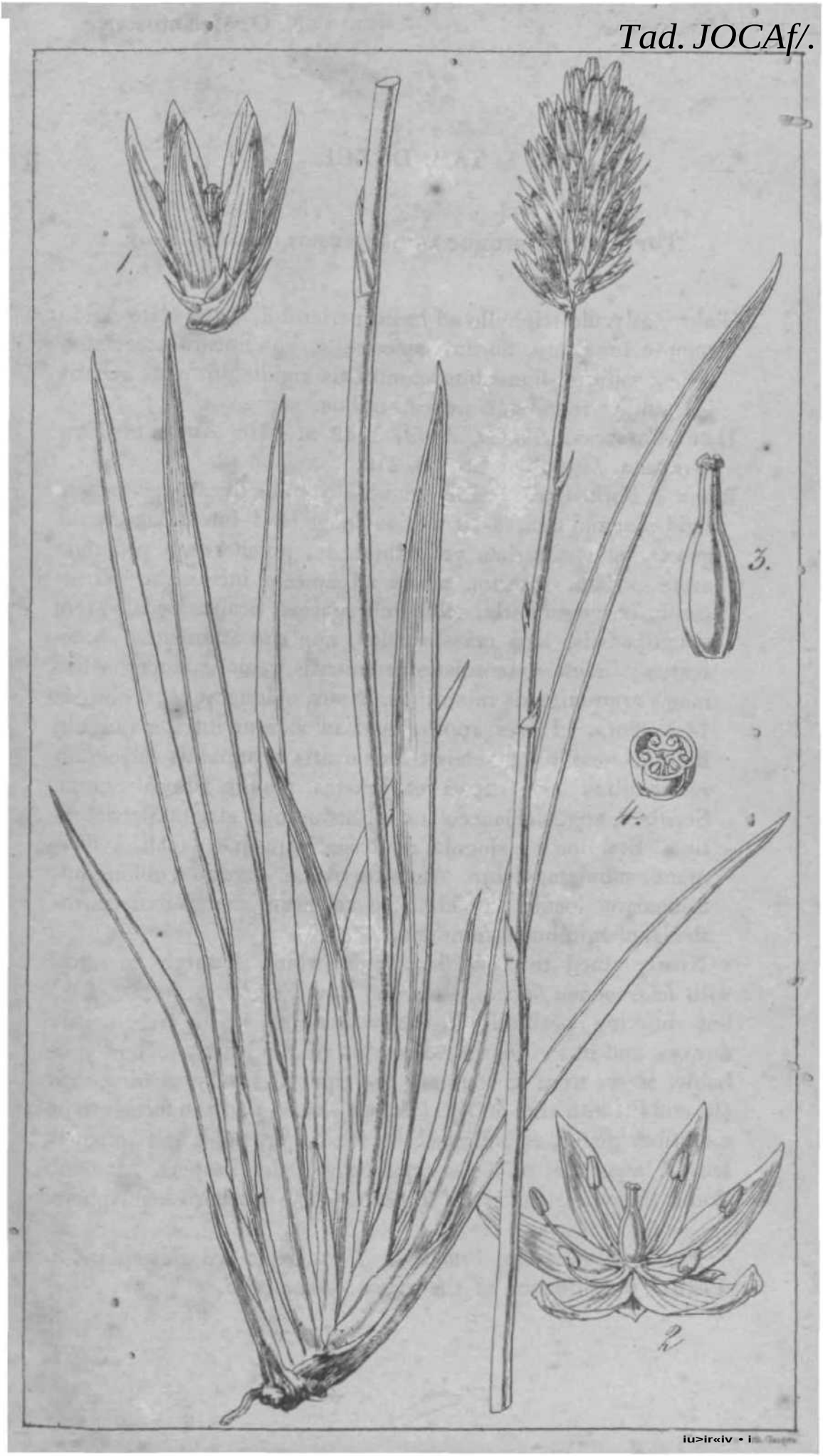
Glabra, calyculo triphyllo ad basin perianthii, scapo elato rigido remote bracteato, floribus spicatis, sepalis lineari-lanceolatis, foliis ensiformi-linearibus acuminatis rigidis profunde striatis marginibus incrassatis pubescentibus.

HAB. Caraccas, *Linden*, April, 1842 *n.* 410; Andes of New Grenada, *Linden* (1842-3) *n.* 410.

Radix e fibris crassiusculis, rigidis. Folia lineari-ensiformia, rigida, acuminata, 5-10 uncias longa, 3-4 lineas lata, pungentia, erecta, stricta vel subfalcata, pulcherrime profunde arete striata, margine usque ad apicem incrassata, pubescentia, basi equitantia, submembranacea. Scapus pedalis, fere sesquipedalis, basi crassiusculus, superne attenuatus, bracteatus ; bracteis lanceolatis acuminatis, remotis, superioribus magis approximatis minoribus. Spica oblongo-ovalis, obtusa, 14-16-flora. Flores approximati ut videtur lutei, majusculi, omnino sessiles, bracteis tribus ovatis acuminatis calyculum referentibus basi stipati et bractea majore sub calyculum. Sepala 6, anguste lanceolata, obtusiuscula, striata^ persistentia. Stamina *6*> singulo ad basin cujusque sepali. Filamenta subulata, glabra. Antherae ovatse. Ovarium oblongum, 3-loculare, loculis ut videtur e valvarum marginibus introflexis, marginibus seminiferis.

Nearly allied to *Tqfieldia frigida* (which is surely identical with *Isidrogalvia falcata*, Ruiz and Pav. Fl. Per. 3, p. 302, f. b.) but differing specifically in the greater size, in the truly sessile flowers, and in the thickened margin of the leaves. It is probable, if we were to compare the ripened fruit of *Isidrogalvia* (R. and P.) with that of *Tojieldia*, we should find the former to be a distinct genus, as indicated by the larger, rigid, and pungent leaves, larger and coloured sepals, and general aspect. It is no doubt the representative of *Tofieldia* in the southern hemisphere.

Fig.* 1. Flower and bracteas, /. 2. Expanded flower, *f.* 3. Pistil. /. 4. Section of the ovary :—*magnified.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TAB. DCXCII.

LEPTONEMA, *Hook.*

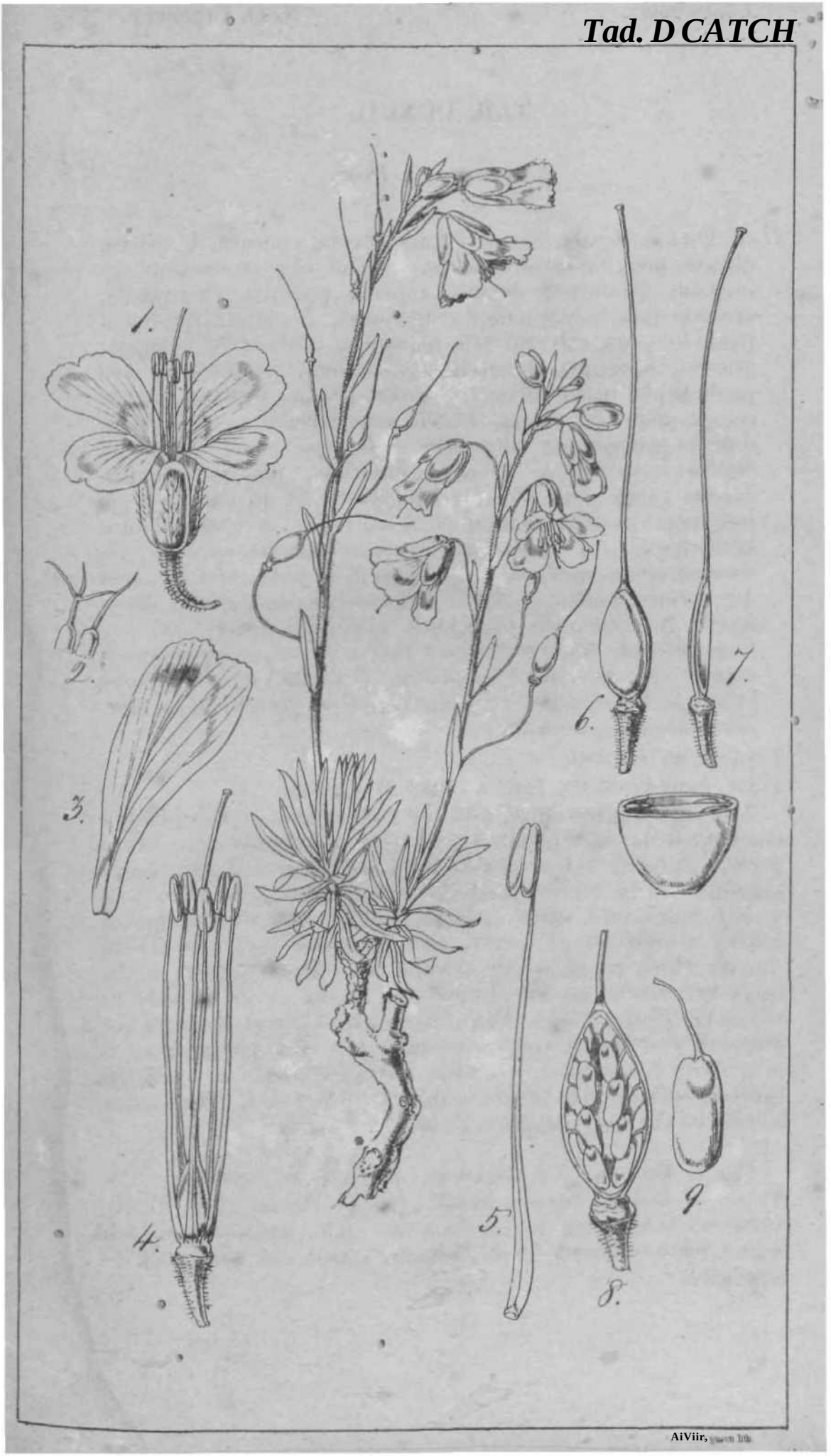
GEN. CHAR. ***Sepala*** **magna, ovalia, erecta, concava, herbacea, obtusa, margine membranacea.** ***Petala*** **obovato-cuneata, in unguem attenuata, demum superne patentia, , e margin ata, eroso-serrata, calycem duplo superantia.** ***Stamina*** **6, quorum 4 paulo longiora, calycem fere aequantia.** ***Filamenta*** **elongata, gracilia, filiformia, edentula, basi latiora.** ***Antherae*** **ovales, paulo supra basin affixes.** ***Ovarium*** **sessile, ovatum, plano-compressum, biloculare,** ***loculis*** **subsexovulatis,** ***ovulis*** **pendulis ;** ***podospermis*** **elongatis.** ***Dissepimentum*** **integrum.** ***Stylus*** **longissimus, gracilis, filiformis, petala superans.** ***Stiff ma*** **capitatum.** ***Fructus*** **immaturus ut in ovario,** ***stylo*** **longissimo persistente terminatus.—Fruticulus** ***lignosus*** **Novse Granatensis. Folia** ***ramulos breves terminantia, linearia^ sub' carnosa, integerrima, glabra; hi*** **ramuli** ***in pedunculos floriferos*** **4-5** ***-unciales prolongati sunt.*** **Flores** ***racemosi, remoti, brae-teati.*** **Bracteae** ***folia simulantes,*** **Pedicelli** ***graciles, demum fere unciales$_9$ erecto-patentes.*** **Flores** ***cernui$_9$ subcylindracei$_9$ magni.*** **Petala** ***in sicco flavicantia.*** **Pedicelli calycesquejoarce** ***pilosiy pilis simplidbus vel apice ramosi$_9$ in glandulam seu vesi-culam oblongam impositi.***

Leptonema ***IAndeni.***

HAB. New Grenada, ***Linden*** **(1842-3)** ***n.*** **1433.**

Although unacquainted with the mature fruit of this plant, I can have little hesitation in considering it a hitherto undescribed genus ; in habit like none that is known to me. In my single specimen (here represented) the lower portion is thick and woody, and even knotted. Above, it divides into short branches having closely-placed leaves, and elongated into racemes of flowers which are of a cylindrical form. The large size of the calyx and corolla are very unfrequent in the natural family to which the plant belongs. The great length of the filaments of the stamens and styles, too, is remarkable. The young fruit is si ngularly compressed, even flattened 5 in that state, perhaps more resembling that of *Draba* than anything else. The name alludes to the long slender filaments and style.

Fig* 1. **Flower,** ***f.2.*** **Hairs and glands from the calyx,** ***f*** **3. Petal. /. 4. Stamens and pistil. /.«6, 7- Pistils. /. 7. Transverse section of an immature fruit. /. 8. Immature silicula with a valve removed. /. 9. Immature seed and seed-stalk :—** *magnified..*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TABS. DCXCIII, DCXCIV.

SLOANEA JAMAICENSIS, *Hook.*

Foliis (amplis) ovatis acuminatis apicem versus obscure sinuato-dentatis, pedunculis axillaribus solitariis uniflo'is pendulis, sepalis 4 petalisque 4 minoribtis incisis extus subpubescentibus intus velutinis, capsula maxima ex apice profunde 4-valvi lignosa 4-loculari extus setis rigidis longis echinata.

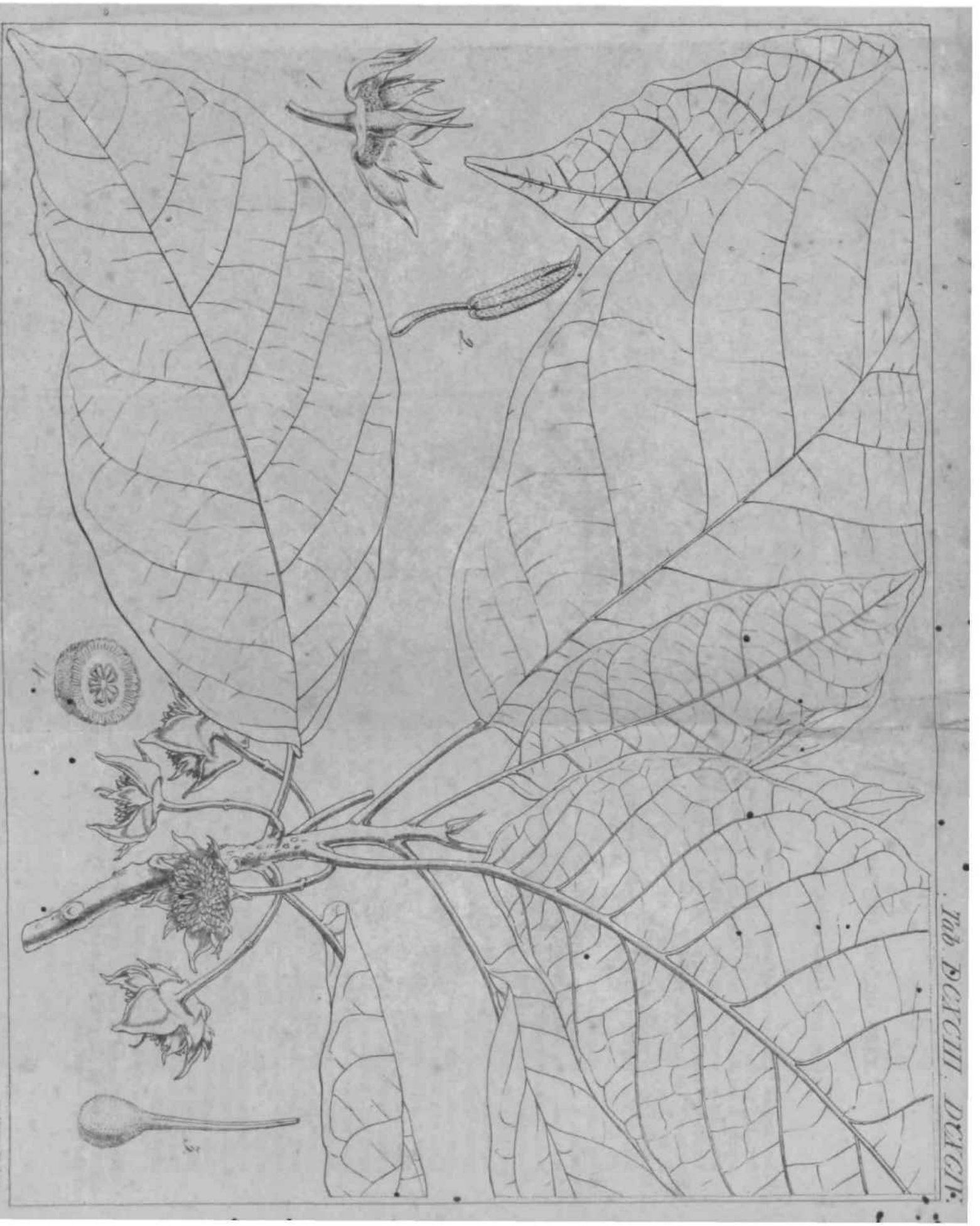
Sloanea ? " The large oval-leafed Sloanea or Brake-axe Tree/' P. *Br. Jam. p.* 250.

HAB. St. Anne's parish, Jamaica *(P. Browne) Mr. W. Purdie.* Also in the districts of Manchester and Hanover, *Mr. TV. Purdie.* Iron-wood of the colonists (not of Lunan.)

Arbor excelsa. Ramuli rugosi, fusci, glabri. Folia alterna, petiolata, 6-8 uncias longa, ovata, rigide submembranacea acuminata, integerrima, v. apicem versus sinuato-dentata, penninervia, reticulatim venosa, nervis venisque subtus prominentibus, utrinque glaberrima. Petioli 1-1 £ unciam longi, teretes. Stipulae parvce, ovato-acuminatae, valde caducee. Pedunculi biunciales, axillares, solitarii, uniflori^ penduli, medio bibracteolati, bracteis deciduis. Flos majusculas, unciam latus. Calyx profunde 4-partitus seu 4-sepalus. Sepala late ovata subanguste acuminata, coriacea, extus puberula, intus cinereo-velutina. Petala 4, cum sepalis alternantia, iis minora, ovata, subacuminata, parce incisa, sub discum hypogynum inserta, textura pubescentia calycis. Stamina numerosa, petalis breviora, pluriserialia, in toro seu disco carnoso lato elevato punctato velutino inter ovarii basin et petala sita. Filamenta brevissima, sericea. Antherae lineares, terminales, erectse, puberuke, apiculatae, biloculares, loculis apice utrinque poro oblongo dehiscentibus. Ovarium conicum, 4-loculare, sericeo-setosum. Stylus subulato-filitormis, stamina superans. Stigma acutum. Fructus: capsula magna subrotundo-tetragon a, crassa, lignosa, 4-valvis, valvis ex apice fere ad basin dehiscentibus, 4-locularis, dissepimentis e centro valvarum, dorso setis longis copiosis rectis echinato. Semina 2-plura in quoque loculo, magnitudine *Amyydali* seminis, ex angulo interiore pendentia, arillo carnoso-pulposo flavescente tecta. Albumen paucum.

{For further remarks see our next Leaf.)

Fig.* 1. Section of • portion of the flower, *f. 2.* The stamens and two of the petals removed. /. 3. Pistil. /. 4. Section of the ovary:—*nat. size.



Tab. DCCIII. DCCIV.

TABS. DCXCV, DCXCVI.

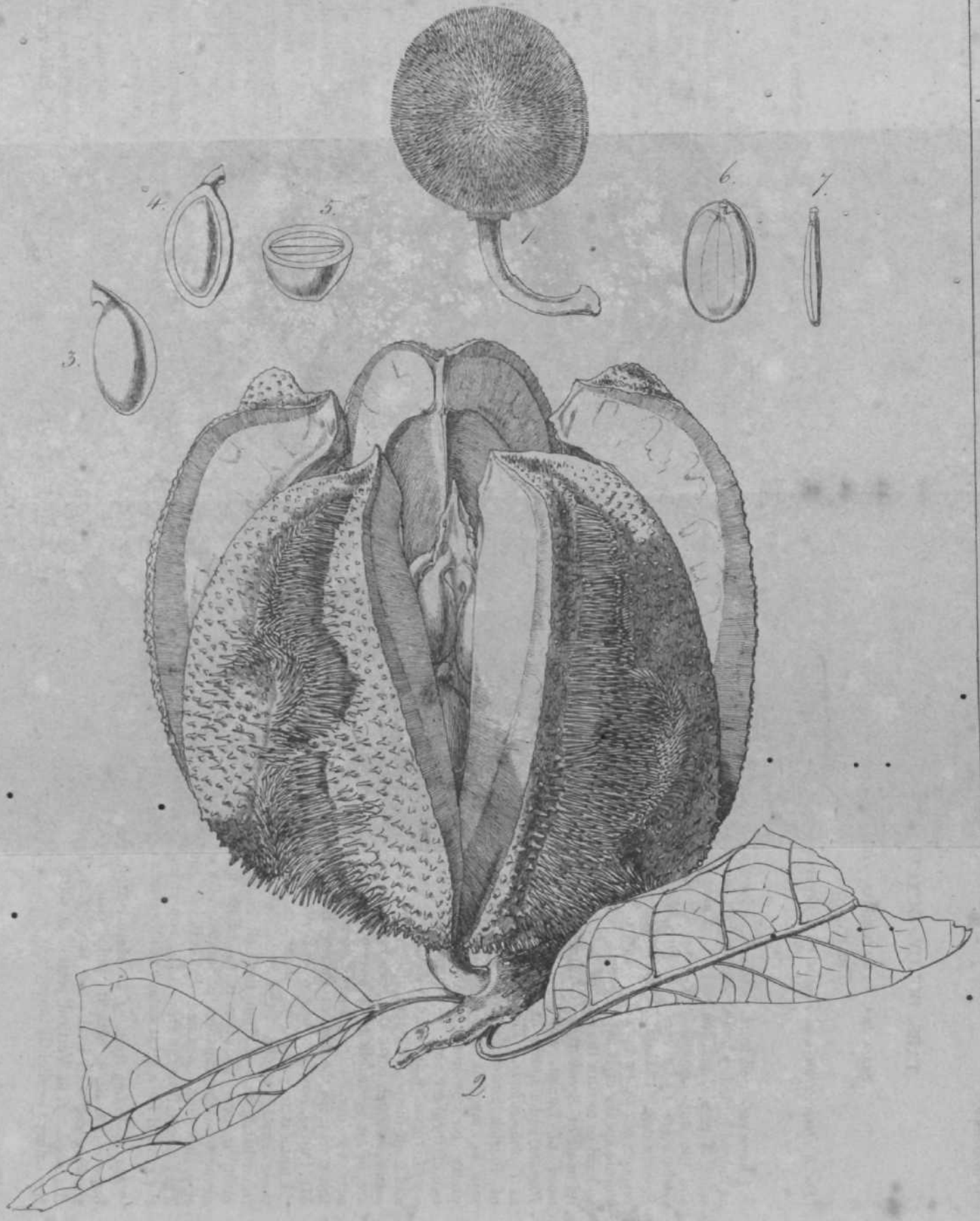
SLOANEA JAMAICENSIS, *Hook.*

FRUIT.

(For a Description and Figure of a flowering specimen, see our preceding PLATE.)

I have ventured to place this fine plant in the genus *Sloanea,* as indeed hinted at by Patrick Browne, notwithstanding the presence of petals, and the anthers opening by pores at the apex, and the one-flowered peduncles. Indeed the limits of the genus seem to be very little understood. My specimens of *Sloanea dentata* exhibit anthers opening by pores, and in other respects our present plant has a very close affinity with that. Mr. Purdie speaks of it as producing one of the hardest of woods, so hard as to turn the edge of the best tempered axe, and hence its name of *Break-axe wood, Iron-wood;* but it is not the *Iron-wood* of Lunan, which includes two plants, the *Fagara Pterota,* and a species of *Ternstrcemia,* allied to if not the same as *T. peduncularis.* The present plant is evidently the *Sloanea ?* of Patrick Browne*s Nat. Hist, of Jamaica, of which he says he saw but one tree; but he was informed " it was pretty common in the mountains of St. Anne's, and esteemed one of the best and largest timbers in the wood; though so very hard that it is found a difficult matter even to cut it down, and from thence its common appellation (Brake-axe tree). The seeds are much coveted by mackaws and parrots, and the kernels are of an agreeable taste enveloped in a soft mucilage of a scarlet colour." It is singular that nothing has been heard of this tree, from the days of Patrick Browne to the present time. Mr. Purdie, however, in a recent letter from Jamaica, remarks, " I think it very unlikely that any bird should break or perforate these capsules to obtain the seeds, not only because of its extreme hardness, but from the well known instinct of the bird, rarely if ever allowing it to attack unripe fruit. I have never seen the capsules perforated. As soon as the fruits are ripe, they burst open and exhibit the delicately flavoured seeds. They then fall to the ground and appear imperishable, covering the ground for a great extent at all seasons of the year.

Fig. 1. Young fruit. /. 2. Mature fruit, the capsule having burst. /. 3. Seed, with its pulpy coat. /. 4. Section of ditto, showing the seed itself; *nat. size. f.* 5. Transverse section of the seed. *f.* 6. Vertical section of ditto, *f.* 7. Side view of the embryo :—slightly *magnified.*



Allan & Ferguson lith. Glasgow

TAB. DCXCVII.

MARTENSIA ELEGANS, *Hering.*

Fronde plana delicata membranacea rosea reticulata, disco avenio, margine processibus veniformibus alatis repetitim anastomosantibus rete elegantissimum formantibus fitnbriato, granulis tetrasporis in soros collectis supra Vrondis discum, vel plus minus sparsis in costas reticuli, " capsulis sphser^cis reticulo affixis sporidia subglobosa foventibus."

Martensia elegans, *Hering, Ann. of Nat. Hist. v.* 8. *p.* 92.
Hemitrema Kraussii, *Brown, ms.—Endlicher, in Gen. Plant. SvppL III. p.* 50.

HAB. Marine rocks, Natal Point, S. Africa, *Mr. Krauss.*

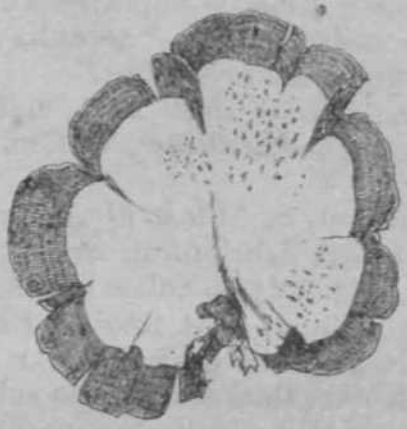
Frond 1-1 \ inch high, at first flabelliform, at length ovate, very delicate, rose-coloured, distinctly reticulate bearing towards the edge sori of quaternate granules. At first the edge is perfectly even; but at a certain stage of growth linear processes are thrown off from it, which are thicker than the substance of the frond. These are furnished with a delicate wing-like border, and anastomose repeatedly with one another in such a way as to form a beautiful network consisting of more or less oblong reticulations, arranged concentrically with the border of the fronds. The edge of the net-work at lengtff becomes lobed; but the margin is tolerably even. It forms, in consequence of the winged border of the processes, a mass very much thicker than the frond. Fructifying tetrasporous granules like those of the frond are scattered over the processes, and sometimes are collected in sori.

Without the net-work the frond and granules are precisely those of *Nitophyllum.* I have not had an opportunity of observing microscopically the capsuliferous individuals. *M. J. Berkeley.*

(In the net-work margin of this most beautiful *Alga,* Mr. Fitch, who made the accompanying drawing, observes that the net-work is double, and the upper and under layer are united by a transverse tissue, and it is in this *transverse* tissue that the sporules, and not in that on either surface are placed. Specimens of this plant were distributed with Mr. Browne*s appropriate and earlier name of *Hemitrema;* and we wish we could have joined with Endlicher in adopting it, consistently with fairness to Mr. Hering. But it was first published under the name we have adopted in the Annals of Natural History.—W. J. H.)

Fig* 1. Portion of the plant. /. 2. Ditto of the reticulated margin. /. 3. Smaller portion of *f.* 2, showing the situation of the fructifications. /. 4. Portion of the disk of the plant with its fructifications, *f.* 5. sporules :—all more or less *magnified.

Tab. DCXCVII.



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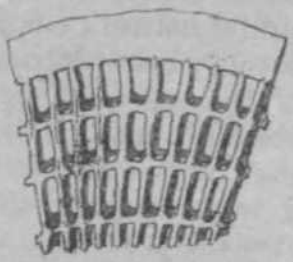

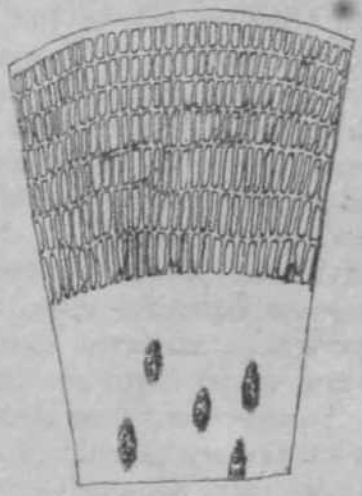

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TABS. DCXCVIII, DCXCIX.

PACHYSTIGMA, *Hook. Gen. Nov.*

GEN. CHAR. *Calyx* subtriphyllus,sepa/is concavis insequalibus sestivatione imbricatis, interiore majore petaloideo. *Petala* 4, libera, subrotunda, concava, alba, impunctata; eestivatione imbricativa. *Stamina* plurima, sub 30, libera, gynophoro rugoso carnoso, majusculo, breviter stipitato, subbiseriatim inserta. *Filamenta* erecta, brevia, lato-subulata. *Anthcrce* ovales, biloculares, antice longitudinaliter dehiscentes. *Ovarium* globosum gynophoro impositum, 8-sulcatum, velutinum, 8-loculare, *loculis* biovulatis, *stigmate* magno carnoso irregulariter lobato deciduo coronatum. *Capsula* denium e cocculis 8 (quibusdam abortientibus), stellatim dispositis, basi coalitis, abortu plerumque monospermis : *epicarpio* sicco, subrugoso, dorso carina lata instructo; *endocarpio* cartilagineo, demum soluto. *Semen* oblique ovatum. *Podospermum* majusculum, carnosum, album.—Frutex *seu* arbor *humilis* Jamaicensis, *valde ramosus; ramulis cortice Icevi, viridi-fusco tectis.* Folia *alterna, exstipulata, trifoliolata,* foliolis *ovatis breviter acuminatis, integerrimis seu obsolete serraiis, copiose pellucido-punctatis, petiolulatis, in petiolum articulatis, penninerviis;* pedunculis *axillaribus folio sublongioribus, parce subtrichotome ramosis,* pedicellis *basi bracteatis,* bracteis *lanceolatis petiolatis foliaceis.* Flores *majusculi, ut videtur^ albi, extus puberuli, fragrantes.* Fructus *maturus sesquiunciam diametro.*

Pachystigma *pteleoides.*

HAB. On the mountains of Santa Cruz, Jamaica, *Mr. Purdie.*

This is another remarkable new plant of Jamaica, for the discovery of which, in 1844, we are indebted to Mr. Purdie, Botanical Collector for the Royal Botanical Gardens of Kew. I am quite unable to refer it to any described Genus. In its unequal and imbricated sepals, and the general appearance of the flowers, it has an affinity with *Aurcntlacece;* but the fruit is truly that of *Dios/nece* among *Rutaceae,* from all the described genera of which this is readily known by its floral coverings, its broad gynophore, its numerous stamens, and large irregularly lobed stigma.

Fig. 1. Petal. /. 2. Stamen. /. 3. Pistil and gynophore. /. 4. The same with the short stipes cut through, *f.* 5. Section of the ovary, /. 6. Seed '.—*magnified.*

Tad. D a \ 17 7/L DCXCJX.

TAB. DCQ.

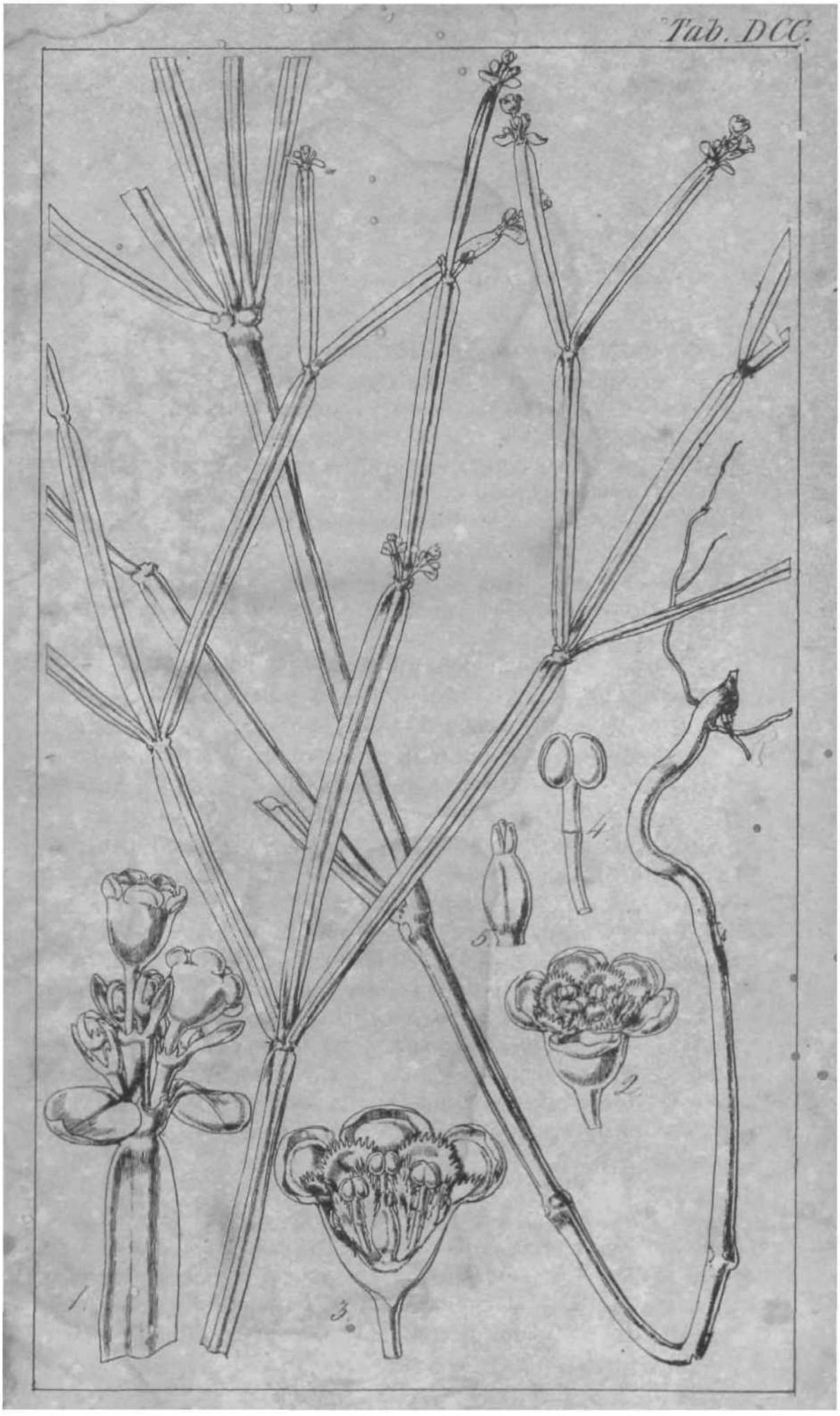
EUPHORBIA ALATA, *Hook.*

Suffruticosa, caulibus erectis di-trichotomis articulatis ramisque gracilibus compresso-planis utrinque alatis glaucis, articulis linearibus elongatis, foliis 2 raris terminalibus ovali-rotundatis deciduis, floribus solitariis utrinque ad genicula, plerumque 3 terminalibus minutis breviter pedunculatis, pedunculis bibracteatis, bracteis in axillo rudimentum floris gerentibus, involucri glandulis 5 squamisque 5 fimbriatis iis alternantibus.

HAB. Rocky woody place above Christiana, Manchester, Jamaica, growing with the *Lagetta lintearia,* or Lace-Bark Tree, *Mr. Purdie.*

Few plants, as is well known, can be more proteous in appearance than the various species of *Euphorbia;* but the most unusual forms are chiefly confined to Africa, the tropical parts of the new world producing but few species; though *there* is found the present very remarkable one, which but for its flowers might rather be taken for some flat-stemmed articulated *Viscum,* or an *Epiphyllum,* among *Cactece.* Our specimen is about a foot high. From a fibrous, but ligneous root, arises a short cylindrical stem, woody at the base, soon becoming herbaceous, glaucous-green, firm and rigid, branched and jointed; the branches and articulations slender, compressed, two-edged with a wing-like border. Two small, shortly petiolated leaves, are seen at the apices of some of the ultimate articulations; but they are quickly deciduous, and the whole plant is very fragile at the joints. Flowers sometimes solitary at the joint, usually three appear together at the apex, and from between the two leaves ; they are small, purplish-brown. The species is probably dioecious.

Fig.* 1. Apex of a flowering branch. /. 2. Involucre with flowers, *f.* 3. The same laid open, showing the fimbriated scales, male flowers, and a solitary imperfect female flower in the centre, *f.* 4. Male flowers removed from the involucre. *f.* 5. Abortive female flower from ditto:—*magnified.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