

This very remarkable genus, with the texture of foliage of a coarse *Cyperus*, a good deal resembles *Sparganium* in its perianth, whilst* in the structure of the flower, ovary, ovules, and seeds is unlike any known to me. In *T. Jenmani*, of which flowers only are seen by me, I find sometimes one ovule in each cell with a long funicle, at others 3 superposed and sessile. In *T. sphmrocephala*, of which I have seen fruits only, I find one seed only, or one abortive ovule in each of the cells, which are separated by septa of extreme tenuity. The abortive ovules of this species present the curious appearance figured at t. 1407, f. 7. The mature contents of the cells, figs. 8 and 9, are most cnrious, and resemble nucules with an enclosed pendulous seed; repeated examination of them obliges me to regard them as seeds in which the albumen, clothed in a thin integument, hangs freely from the top of the cavity of the cartilaginous testa, which is produced into an apical and basal rigid barbed spine. Materials are, however, wanting for tracing the development of the ovary, fruit, and seeds, and thus explaining satisforily their structure.

The genus (and one of its species) is named in commemoration of the services rendered to Botany by Mr. E. F. im Thura when Curator of the Museum at Georgetown, Demerara, and of Mr. G. S. Jenxnan, Superintendent of the Botanical Garden of that town, who travelled together and made very valuable collections in British Guiana.—
J. D. H.

Plate 1407. *T. spharocephala*.—Fig. 1. Capsule, perianth, and bract. 2. Bract. 3 and 4. Perianth segments. 5. Anther and top of filament. 6. Capsule. 7. Partially developed ovules attached to the axis of an abortive fruit. 8. Ripe seed. 9. The same cut vertically, showing the pendulous albumen in its integuments. 10. Albumen.] 1. Section of end of ditto, showing the embryo. *All enlarged.*

Plate 1408. *T. Jenmani*.—§\g. 1. Flower. 2. Top of filament and anther. 3. Ovary. 4. Ovules on lower portion of ovary. 5. Ovule. *All enlarged.*

PLATE 1409.

ERYTHROPHLCEUM FORDII, *Oliv.*

LEGUMINOSJS, § DIMORPHANDBE-E.

E. Fordii, *Oliver, sp. nov*; arbor, ramnlis ferrugineo-pnberulis glabratisve, pinnis trijugis 9-13-foliolatis, foliolis alternis ovato-ellipticis obtuse acurninatis glabris supra nitentibus breviter petiolulatis, racemis spiciformibus paniculatis ferrugineo-pubescentibus, pctalis calycis lobis subdnplo longioribus.

HAB. China, Kwangtung prov., on the Loting river, *C. Ford.*

Arbor 20-30-pedalis. *Folia* ampla, alterna, bipinnata, glabra, pinnis suboppositis 8-12 poll, longis, foliolis 2-3 poll, longis 1-1½

poll, latis, venulis supra prominentibus. *Racemi* 4-6 poll, longi. *Calyx* pilosulus, lobis oblongo-lanceolatis obtusis. *Petala* oblanceolata, intus et ad marginem tomenteila, sactivatione anguste imbricata. *Stamina* giabra, petalis duplo longiora; anther© elliptic©, dorso prope basin affix©. *Ovariwrn* breviter stipitatum, dense pilosum, 10-12-ovulatum.

One of Mr. Ford's most interesting additions to the Chinese flora. The genus waR previously known to us only from Tropical Africa, Madagascar, North Australia and - Queensland. *E. Fordii* nearly resembles *JE. guineense*, from which, indeed, in the absence of legumes of the former, there is little besides the relatively longer petals and more numerous ovules technically to distinguish it. The bark of the African tree is said to be powerfully poisonous, and used by native tribes as an ordeal. It is, indeed, the *Mavea judivialis* of Bertoloni. The properties of the Chinese species may deserve inquiry.—D. OLIVER.

Fig. 1. Flower, enlarged. 2. Anther, front and back. 3. Pistil. Ovary laid open (I find 10-12 ovules). All enlarged.

PLATE 1410.

ARISTOLOCHIA SOYAUXIANA, *Oliv.*

ARISTOLOCHUCE^.

A. *Soyauxiana*, *Oliver, sp. nov.*; glabrata v. ramulis ultimis foliisque Bubtus obsolete puberulis, foliis late ellipticis integris basi rotundatis apice abrupte et breviter acuminatis, subtus valde nervosis, perianthii leviter curvati utriculo gibboso inflato tubo cylindraceo ore ciliato, limbo explanato tripartito, segmentis basi cordato-lanceolatis elongato-attenuatis, lobo dorsali angustiore.

HAB. Gaboon river, *H. Soyaux*.

Folia 6-7 poll, longa, 4£ poll, lata, subcoriacea, trinervia, nei*vis venulisque subtus validis; petiolus 1^2^ poll, longus. *Flores* fasciculati, bracteis brevibus squamiformibus; pedunculus cum ovario 2 poll, longus. *Perianihnim* utriculo 1 poll, longo; tubo cylindraceo 1^2^ poll, longo, lobis limbi 5-7 poll, longis.

Unfortunately our specimens, dried and much pressed, kindly communicated by Dr. Ascherson on the part of Mr Soyaux, to whom we are indebted for so many interesting species from West Tropical Africa, do not permit me satisfactorily to complete this description by an analysis of the genitalia. A near ally of *A. Soyauxiana* is *A. triactina*, Hook, f., which differs in its trilobate cordate-based leaves and the much shorter segments of the perianth-limb, which barely exceed the tube in length.—D. OLIVER.

PLATE 1411.

SIBANGEA ARBORESCENS, *Oliv.*

EuPHORBiACEiE, Tribe PHYLLANTHE^:

Sibangea, *Oliver*, *gen. nov.* Flores dioici, apetalii. Fl. tf : *Sepala* 3-5, subsequilonga, inaequilata, interiora angustiora, 89Stivatione imbricata. *btamina* 3 ciroa discnm centralem camosam concavum margine nndnlatnm affixa; tilamenta libera, lineari-subulata, carnosula; antheraj rotundatae, basi cordatte, apice emarginatse, dorsifixae, biloculares longitudinaliter dehiscentes. *Ovarii* rudimentum 0. Fl. \$: *Sepala* 5-6 maBqnalialia, sub-biseriata, ovata v. oblongo-ovata, carnosula. *Discus* pñanus, annulatns, hypogynus. *Ovarium* ovoideum, glabram, 1-loculare, biovulatnm; stylus brevis, crassus; stigma subpeltatum, leviter obliquum, centro depressum.—*Arbor parva*. *Folia alterna, petiolata, oblmgo-elliptica, acuminata, undulata v. obsolete denticulata*. Flores *flavi, axillares, fasciculati, breviter pedicel!ati*.

S. arborescens, *Oliver*. (*Species unica*.)

HAB. Sibange Farm, Gaboon river, *H. Soyaux*.

Arbor parva, 10-12-pedalis, glabra. *Folia* submerabranacea, basi plus minus rotundata v. cuneata, venis subtus prominulis, 4-8 poll, longa, 1^3^ poll, lata-; petiolus £ poll.

Another of Mr. Soyaux's important additions to the West African flora; allied to the genus *Hemicyclia* of the Indian and Australian region.—D. OLIVER.

Fig. 1. Staminatfi flower. **2.** Pistillate flower. **3.** Same, the perianth removed. **4.** Longitudinal section of ovary. *All enlarged.*

PLATE 1412.

GYMNOCLADHS CHINENSIS, *Baill.*

LEGUMINOS^:, Tribe EUC^SALPINIEJ:

G. chinensis, Baillon in Bull. Soc. Linn. Paris, 1875, No. 5, pp. 33,34.

HAB. China, prov. Kiukiang, *Mr. Maries*; prov. Fokien, *Mr. Bourne*.

Arbor ramulis ultimis hornotinis ferrugineo-puberulis mox glabratis. *Folia* bipinnata, alterna, 9-12 poll, longa, rhachide puberula; pinnis alternis suboppositisve multifoliolatis; foliolis alternis oblongis sericco-

pilosis obtusis vel obtusiusculis breviter petiolulatis; *stipulce* subnullre. *Inflorescentia* racemosa, terminalis, brevis, pubescens; floras longiuscule pedicellati, bracteis minutis v. obsoletis. *Calyx* tubo infundibulari-cylindraco longitudinaliter 10-nervoso, segmentis tubo brevioribus subulatis. *Petala* ovali-oblonga, obtusa, hirtella, calycis lobis longiora. *Stamina* alternatim breviora; filamenta lineari-subulata, parce pilosula; anther^o ovat^o, obtusas, dorsifixaa. *Ovarium* glabrum, pauci- (circ. 4-) ovulatum; stylus crassiusculus, ovario equiloDgus; stigma leviter obliquum, decurvatum, capitatum. *Legumen* sessile, oblongum, crassum, apice breviter apiculatum, 2-4-spermum, valvis convexis hevibus. *Semina* subglobosa, leviter compressa, albuminosa, funiculo arcuato stipitata.

The leaves in our specimens are barely at maturity, the leaflets scarcely exceeding at time of flowering $\frac{1}{2}$ in. in length. M. Baillon describes the base of the petiole as dilated, so as to form a conical sheath enclosing the axillary bud, as in the Plane tree. This *Gymnocladw* is the second arborescent genus, recently discovered in China, previously regarded as homotypic and peculiar to Eastern North America; the other being *Liriodendron*, collected in Kiu-Kiang by Dr. Shearer and Mr. Maries. The Chinese *Gymnocladus* differs from *G. canadensis* in the more numerous and much narrower leaflets which are not acuminate, and in the thick but slightly compressed legume, obtuse at each end, though with a short abrupt terminal apiculus.* The legume is 3-4 in. long, 1¹-1¹ in. in diameter; the pericarp hard and horny, but capable of swelling up greatly in water. M. Baillon speaks of it as the * plante à la gousse à savon,' so called by Father Heudes, who supplied the flowers to him which enabled him to identify the genus; and Mr. F. S. A. Bourne, of H.M. Consular Service in China, says the fruit is * used for washing purposes. Outer shell is steeped for two days in water, and the liquid resulting is used as soft soap, or it can be dried into hard soap.' The seeds are well figured by the late Mr. Hanbury in his * Notes on Chinese Materia Medica' (reprint in his ' Science Papers,' p. 238, fig. 5). He there states: ' Of the origin and application of this " drug " I have no information.' He gives the name *Fe-tsaou-tow*, and suggests they belong to the genus *Dialium*. They are rightly identified by Dr. Bretschneider in his ' Notes on some Botanical Questions connected with the Export Trade of China,' p. 14, who says, * the pods and seeds are brought from Szechuen and Kiangsi to Hankow and Kiukiang.¹ I have not tested the seeds, but probably the testa partakes of the collenchymatous character of the pericarp. I believe it is through an error that *Gymnocladus chinensis* is stated by M. Baillon (l. c.) as ' croissant magnifiquement à Shanghai, où il devient un arbre aussi beau, à ce qu'il paraît, que le *G. dioica*⁹ (*canadensis*).—D. OLIVER.

Fig. 1. Detached flower, about twice natural size. 2. Calyx-tube laid open, showing petals inserted in mouth of tube and insertion of stamens. 3. Anther, back and front. 4. Pistil. 5. Legume. 6. Separate valve of same with attached seeds. All enlarged.

PLATE 1413.

XEROCHLAMYS PILOSA, Baker.

CHLJSNACE2E.

X. pilosa, *Baker in Trimen Journ.* 1882, p. 45. (*Species unica.*)

HAB. Central Madagascar; bleak stony hills of Betsileo-land and Imerina, *Baron* 134, 947, 1873.

m *Arbuscula* parva, ramosissima, ramulis gracilibus teretibus lignosis pilosis. *Folia* alterna, breviter petiolata, oblonga vel obovato-oblonga, integerrima, obtusa, subcoriacea, facie viridia calvata, dorso pins minus pilosa. *Flores* ad axillas foliorum superiorum subsessilis, solitarii. *Involucrum* campainlatum, subcoriaceum, dense pilosum, uniflorum, dentibus 5-10 deltoideis vel lanceolatis. *Sepala* 3, obovata, pilosa involucro subaequilonga. *Petala* 5, rubella, obovato-spatulata, glabra, calyce duplo longiora. *Stamina* 20-30, intra urceolum campanulatum inserta, petalis aequilonga, filamentis liberis applanatis ad urceolum baud adnatis, antheris parvis subglobosis. *Ovarium* sessile, dense pilosum, triloculare, ovulis in loculo paucis; stylus cylindricus, stigmatibus capitato obscure trilobatis. *Capsula* globosa, loculicide trivalvis, rigida, dense pilosa, magnitudine pisi, seminibus obovoideis turgidis nigris rugosis.—J. G. BAKER.

Fig. 1. Involucre. 2. A sepal. 3. A petal. 4. Fertile stamens, and staminodial uroecium. 5. An anther. 6. Pistil. 7. Immature capsule and involucre. *All enlarged.*

PLATE 1414.

HENONIA SCOPABIA, Moq.

AMARANTHACEAE, Tribe CELOSIEAE.

H. Scoparia, *Moq. in DO. Prod.* xii. ii. 237; fruticulus erectus scoparius glaberrimus, ramis ramulisque gracilibus, foliis linearibus obtusis basi angustatis, floribus parvis spicatis.

HAB. Madagascar, *Lyall, Bojer*, *Baron*, 914, 916.

Fruticulus ut videtur 2-3-pedalis, floribundus, basi lignosus, caulibus ramisque erectis teretibus striatis, junioribus foliisque novellis puberulis, ultimis elongatis gracilibus strictis apiculatis. *Folia* 1-1.5 poll, longa, 1/2 poll, lata, sessilia, nervia, costa tenui, integerrima, viridia. *Flores* in

spiculas breves strictas secus ramulos aphyllas alternas laxè dispositi, rhachi gracillima, -xV~i P°H- l°n gi» flavescens. *Bracteae* et *bracteolae* minutae, ovatae, obtusae, scariosae, persistentes. *Perianthii* scariosi segmenta oblonga v. rotundata, obtusa, concava. *Stamina* 5, inclusa, filamentis subulatis ima basi connatis; antherae minutae, apiculatae. *Ovarium* ovoideum ellipsoideum v. oblongum, stigmatibus 3 revolutis; ovula numerosa, funiculis elongatis. *Utriculus* oblongus, stigmatibus coronatus, exsertus, scarioso-coriaceus, demum longitudinaliter ruptus, 1-oo-spermus. *Semina* oblique lenticularia, testa atra nitida lasevi; embryo semi-annularis, albumen farinaceum cingens, radícula infera. —J. D. H.

Fig. 1, 2. Flowers. 3. Utricle laid open. 4. Stamens. 5. Perianth and utricle. 6. Seed. 7. Embryo. *All enlarged.*

PLATE 1415.

EPHIPPIANDRA MYBTOIDEA, Dene.

MONIMIACEJ.

E. myrtoidea, Dene, in *Ann. Sc. Nat. ser. iv. vol. ix. p. 278, t. 7.* (*Species unica.*)

HAB. Central Madagascar, in forests of the province of Imerina, *Ooudot, Dr. Parker, Baron 1263, 1355.*

Arbuscula ramosissima, monoica, 10-12-pedalis, facie Myrti, ramulis lignosis teretibus gracilibus obscure pilosis. *Folia* opposita, breviter petiolata, ovata, acuta, integerrima, rigidula, glabra, venis primariis paucis obscuris intra marginem anastomosantibus. *Flares masculi* ad axillas foliorum superiorum 1-lj-ni, breviter pedicellati, perianthioprimum globoso, segmentis 4 parvis deltoideis imbricatis, flore expanso ad basin 4-partito, antheris ad segmentorum facies sessilibus. *Flures feminei* solitarii, terminales, receptaculo patelliformi, carpellis 5-15 sessilibus. *Fructus* receptaculo convexo carnosissimo, circa carpellorum basin in cupulas campanulatas truncatas producto. *Carpella* ovoidea, nigra, glabra, magnitudine pisi, seminibus solitariis.

The additional material gathered recently by our English collectors supplies the fruit, and shows that the plant is not dioicous as Decaisne supposed, but monoicous.—J. G. BAKER.

Fig. 1, 2. Male flowers in bud. 3. Expanded male flower. 4. A fruit-carpel. 5. A vertical section of the seed. 6. An embryo.

PLATE 1416.

INDIGOFERA KIRKII, *Oliv.*LEGUMINOS[^]., Tribe GALEGEJE.

I. Kirkii, *Oliver, sp. nov.*; frutex diffusus, hirsutus, ramulis dense tomentosus, foliis simplicibus coriaceis ovali-oblongis oblanceolatisve apiculatis acuminatisve hirsutis breviter petiolatis costa nervis primariisque subtus prominentibus, stipulis persistentibus rigidis lanceolato-Kubnatis nervosis, inflorescentia breviter raremosa axillari, floribus brevissime pedicellatis v. subsessilibus, calyce hirsuto profunde 5-fido lobis lanceolatis corolla brevioribus, leguminibus brevibus rectis teretibus ellipsoideis v. cylindratis apiculatis hirsutis 3-2- v. 1-spermis.

HAB. Baeramoya, Zanzibar, *Sir John Kirk*.

Folia ^-1 poll, longa. *Racemi* foliis subquiloni v. longiores, hirsuti; bracteis lineari-subulatis deciduis. *Calyx* lobis subaequalibus intus glabris. *Corolla* 2-3 lin. longa. *Vexillum* obovato-rotundatum, dorso hirsutum. *Carina* obtusa. *Legumen* 2-4 lin. longum.

This curious *Indigofera* is but one of the many undescribed *Papilionaceae* received from Tropical Africa since the publication of the second volume of the 'Flora.' It is allied to *I. erythrogramma*, Welw., of Angola, but differs in its shrubby habit, and, conspicuously, in the legume.—D. OLIVER.

Fig. 1. Flower. 2. Vexillum. 3 and 4. Alse and carina. 5. Anthers. 6. Pistil. 7. Legume. 8. Same, open. All enlarged.

PLATE 1417.

LOBCJPETALUM SUBCORDATUM, *Oliv.*

HAMAMELIDEJE*

L. subcordatum, *Oliv.*; frutex 3-4-pedalis, foliis ellipticis v. ovato-ellipticis breviter acuminatis obsolete glanduloso-denticulatis basi rotundatis subcordatisve, floribus pentameris capitatis, capitulis breviter pedunculatis axillaribus, calycis lobis ovato-ellipticis extus tomentellis, petalis elongatis anguste linearibus. *Tetrathyrium subcordatum*, **Benth.** VI Hongkong, 133.

HAB. Hongkong, on the Black Mountain: 'a bush once seen/ *Witford*; and 'several scraggy bushes, about 4 feet high, growing in the rocky bed of a dry (except in rains) watercourse,' on what is supposed to be the 'Black Mountain' referred to above, *Chas. Ford*.

Folia 2J-4(-5) poll, longiora. r>nri?u»pa, glabra, subtus reticulata; potiolus

♂ poll, longus. *Capitula* 15-20-flora (petalis exclusis), 4-5 lin. diam.; pedunculi 2-3 lin. longi. *Petala* 6-8 lin. longa, apice bidentata. *Stamina* 5, perigyna, filamentis anthera aequilongis; antherse loculis dehiscentia bivalvatis connectivo apice producto apiculatse: staminodia (v. disci lobi) 5, crassiuscula, retusa v. emarginata, staminibus antheriferis alternantia. *Gapsula* lignosa, semisupera, dehiscentia bivalvis, valvis breviter bilobis, endocarpio intus nigrescente. *Semina* solitaria, albninosa, embryo albuminis longitudine, cotyledonibus plano-compressis radicle sublongioribus.

The re-discovery, by Mr. Charles Ford, Superintendent of the Botanic Garden, Hong Kong, of this rare Hamamelid, of which he has forwarded an excellent specimen in flower, as well as detached fruit and seeds, enables us to complete the description given in 'Flora Honkongensis,' from the only specimens then available. From these the petals had fallen, so that the short staminodia (or disk-lobes) were regarded as representing the corolline whorl. In the capitate inflorescence this plant is similar to *Mainaya* of Malacca, in which, however, the calyx-limb is wanting, and conspicuous staminodia* are present.—D. OLIVER.

Fig. 1. Flower. 2. Stellate hair from the calyx. 3. Flower, the calyx-lobes and petals removed. 4. Anther. 5. Apex of ovary and incurved styles. 6. Vertical section of ovary. 7. Fruit after dehiscence. 8. Seed. *All enlarged.*

PLATE 1418.

TRIASPIS NELSONI, *Oliv.*

MALPIGHIACEAE. Tribe **Hypericaceae**.

T. Nelsoni, *Oliver, sp. nov.*; ramulis teretibus cinereo-tomentellis, foliis parvis ovatis obtusis mucronatis tomentellis subsessilibus, umbellis pedunculatis axillaribus, pedunculis folio saepe brevioribus, pedicellis gracilibus pedunculo aequilongis, samaris orbiculatis saepe reduplicatis, ala radiatim nervosa medio dorso leviter longitudinaliter cristata.

HAB. Transvaal, Prastoria, *W. Nelson.*

Folia (superiora) 1-1.5 poll, longa, subcoriacea, subtus reticulata. *Flores* 5-6 poll. diam. *Calyx* profunde 5-fidus, lobis ovatis obtusis parce pilosulis. *Petala* longiuscule nnguicnata, lamina cordato-rotundata fimbriata. *Samarce* 1-3, margine undulatse, 1-1.5 poll. diam.

The other Cape species, *Triaspis hypericoides*, Burch., differs in its linear or linear-lanceolate leaves, which are distinctly petiolate. It is, moreover, quite glabrous.—D. OLIVER.

Fig. 1. Flower, the petals removed. 2. Pistil. 3. Insertion of seed. *All enlarged.*

PLATE 1419.

RIEDELIA CURVIFLORA, *Oliv.*

ScITAMINEE, Tribe ZINGIBEREJB.

Biedelia, *Oliver, gen. nov.* Flores falcato-recurvi, racemosi. Calyx tubulosus, spathaceo-fissas, apice attenuatas, minute tridentatus, deciduus. Corolla tubo brevissimo, lobis lineari-lanceolatis calycem subaequantibus postico paullo latiore. *Staminodia* linearia, lateralia inaequalia nno mterdum minimo v. obsoleto altero basi pins minus label lo adnato : labellum angustum, bifidum, corolla brevius, *Anthera* linearis inappendicnlata, loculis distinctis contiguus. *Ovarium* oblongo-clavatum, triloculare, loculis ao -ovulatis; stylus filiformis, stigmatum parum obliquo dilatatato ciliato; stylodia carnosa, crassa, obtusa, basin styli amplectentia. —Canlis *eredus, foliatus, glaber.* FJores in racemo simplici terminali recurvo numerosi; bracteae minutes. Perianthium cum staminodm post anthesin caducissimum.

R. curviflora, *Oliver. (Species unica.)*

HAB. Buru, Indian Archipelago, *Mr. Riedel* (communicated through *Dr. Meyer).

Folia superiora ovali-oblonga, acuminata, sessilia, margine nndulata, glabra, longitudinaliter venosa, vaginis elongatis striatis glabris. *Hacemus* terminalis, simplex, pedunculatus, recurvus, 6-7 poll, longus; pedunculus 4-5 poll, longus. *Pedicelli* rigidi, 3-4 lin. longi, persistentes. *Ovarium* clavatum, 1-^ poll, longum. *Perianthium* 1^-1J poll, longam. *Fructus* . . .

Allied to *Alpinia*. But a single specimen was received, in the description of which Mr. Bentham allowed me the use of his notes prepared for the Addenda to the current volume of 'Genera Plantarum.'—D. OLIVER.

Fig. 1. Perianth laid open. 2. Anther. 3. Stylodia and base of style. 4. Stigma. 5. Ovary, after fall of perianth. 6. Transverse section of same. AU enlarged.

PLATE 1420.

PETBJEOVITEX RIEDELII, *Oliv.*

VERBENACEJE, Tribe VITICEJ:.

Petraeovitex, *Oliver^ gen. nov.* *Oalyx* brevissimus, campanulatus, 5-dentatus, post anthesin auctus, tubo multinervoso, lobis elongatis oblanceolatis obtusis rigidnlis costatis reticulatis. *Corolla* obliqua, postice fissa, limbo explanato 5-lobo, lobis obtusis apice incurvis.

Stamina 4, subcquaHa, lobis alfcernantia iisdem longiora; antherse parvse, subdidymee. *Ovarlum* obovoideum, imperfecte biloculare, marginibus ovnliferis carpel lor urn per paria intrusis. *Styhts* gracilis; stigma bifidum. Fructus (immaturus) parvus turbinatus,—Arbor vel frntex, ramulis ferrugineo-puberulis glabratis. Folia opposita, c&mposita, petiolata, foliolis biternatis petiolulais ovato-elliptids acumine breviter apicutoto mucroTmlato. Inflorescentia ter-mvn-alt*, paniculata, ampla, ramw pvherulia patentibus, bracteis mbulatis. Florea inimiti, brevissivie pedicellati.

P. Hiedelii, Oliver. {Species unica.}

HAB. Burn Island, Indian Archipelago, Mr. Eiedel (commnioated through favour of Dr. Meyer).

Folia 9-foliolata; petiolus communis 2-3 poll, longns; pet. secundarii \—1| poll, longi; foliola intermedia basi obtnsa v. subcordata,]|~2^ poll, longa; petiolulus ^-§ poll.; foliolal ateralia pauUo minorji, breviter petiolulata. *Fanicula* subpedalis, pedunculata. *Flares* 2-3 lin. lati. *Calyx* tomentosus, intus glaber; fructiferus lobis ^ poll, longis.

With the general aspect of a very small-flowered *Vitex*, we have an accrescent calyx resembling that of *Peircea*. The corolla-tube is very short, and deeply divided behind. Two remarkable new genera (this and the preceding), in a packet of about forty species, indicates the existence of a comparatively unknown flora in Burn. Anything Mr. Kiedel may be able further to send us from thence will be examined with great interest.—D. OLIVEH.

Fig. 1. Flower, greatly enlarged. 2. Pistil. 3. Fruiting calyx. 4. Fruit. 5. Transverse section of ovary (or immature fruit). All enlarged.

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PLATE 1421.

TOXANTHERA NATALENSIS.

CUCUBBITACEJE, Tribe CUCUMERINEJ.

Toxanthera, Hook. l., nov. gen. Flores monoici? Fl. \$ racemoBi. *Calycis* tubus breviter campanulatus, lobis 5 triangnlari-ovatis. *Corolla* rotata, segraentis ovatis. *Stamdna* 3, filamenti3 brevissimis medio connectivo (ventre locnli) affixis; anthenB duae 2-loculares locnlis omnino discretis, tertia 1-lornlaris, loculis omuilnis elongatis incurvo-arcuatis; pollen sphericum, leeve. *Ovarii* rudimentum 0. Fl. \$ solitarii. *Caltjx* niais. lobis subulatis. *Corolla* maris. *Stcmwtum* rudimenta filiformia, curva. *Ovmiwni granite*, superae in rostrum attenuatum, 2-pln^pntiferum; stylus columnaris, disco 0; stigmata 2, magna, flabelliformia, deflexa, **papiBosa**; ovuln **plurinna**, horizontalia. l. » » » » »

fusiformis, carnosus, indehisoens, polyspermus. *Semina* globosa, testa pallida Crustacea Isevi; cotyledones hemisphserici.—Herba *gracilis, alte scandens, parce scaberula v. fere glabra. Folia petiolata, reniformi orbiculann, haud profunde h-7-loba, lobis rotundatis, remote setuloso-denticulata. Cirrhi 2-fidi. Flores inter minores, pubescentes, flavi, \$ minute bracteolati. Fructus 2-pollicari8, Icevis.*

T. natalensis, Hook, f.

HAB. Natal, *W. T. Gerrarcl* (n. 1192, *excl. fruct.*) ; Inanda and Umhloti bush, *J. M. Wood* (n. 813).

Rami elongati, graciles, superiores ramulique **fills** brevibus sub-scaberulis pubescentes. *Folia* 4-6 poll, lafca, membranacea, basi profunde cordato-2-loba, sinu lata, lobis rotundatis incurvis, petiolo 2-3-pollicari pubescente. Racemi \$ longe pedunculati, multiflori, pubescentes, pedicellis \-| poll, longis filiformibus. *Flores* ^ poll, diametro. Fl. ? '> *Perianthium* masculino subsimile. *Ovarium* pollicare, pubescens.

The affinity of this genus appears to be with *Pisosperma*, Sonder, "which is also South African, and from which it differs in the structure of the anthers, in the stigmas, in the 2-fid tendrils and form of the fruit. Though I have seen several sheets of the plant, none show whether it is monoecious or dioecious. The separation of the cells of the two-celled anthers is complete, bisecting the connective and very short filaments, each cell resembling a free 1-celled anther.—J. I). HOOKER.

Fig. 1. Bud of \$ flower. 2. \$ Flower expanded. 3. Stamens. 4. Bud of ? flower, o: \$ Perianth kid open. 6. Style and stigmas. *All enlarged.*

PLATE 1422.

DITTOCERAS ANDERSONI.

ASCLEPIADE^E, Tribe MARSDENIE^:

Dittoceras, *Hool: /., gen. nov.* *Calyx* 5-partitus, segmentis ovato-oblongis intus basi glandulosis. *Corolla* rotata, tubo explanato, limbo 5-lobo, lobis triangularibus acutis valvatis. *Corona corollina* 0. *Golwmna staminea* parva, antheris minntis; coronse stamineoe processubns otella-tim patentibus oblongis obtnsis depressis basi obscure tuberculatis; anther arm apices breves, incurvae; pollinia in loculis solitaria, ellipsoidea, corpusculo parvo sessilia. *Stigma* inclusum, pentagonnm. *Folliculi* crassi, cylindranei, obtusi, recurvi. *Semina* znagna, elongata, obovato-oblonga, crassiuscula, coma brevi.—Frutex *volubilis, scandens, pubescens v. subtomentosus, ramis gracilibtis. Folia louge petiolata, ovata, acuta v. acuminata, membranacea. Flores in fascicules axillares dispossitt'i longe pedicellate majusculi.*

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D. Anderson!, *HooJc. f.* (*Species unica*).

HAH. Sikkim Himalaya, in the tropical region alt. 2-4000 feet, *J. I.* II., *T. Anderson*.

Gaules elongati, crassitie pennse anatinao y. anserinse, interdnm subvillosi. *Folia* 4-5 poll, longa, 2[^]-3 J poll, lata, basi rotundata, subtus preecipue pubescentia, pilis siccitate rufescentibus, nervis utrinque 4-6 tenuibus arcuatis; petiolo 1-2[^]-pollicari. *Flores* in fasciculis 6-8, pedicellis 1-1[^]-pollicaribus gracilibus hirsutis. *Sepala* parva, dorso hirsuta. *Corolla* 1[^] poll, lata, extns hirsuta, intns glaberrima, lobis tubo explanato subsaquilongis, tota luride violaceo-purpurea. *Columna staminea* unacum processibus parva. *Folliculi* 5 poll, longi, [^]-| poll, diametro, arcnatim recurvi, crasse coriacei, endocarpio crnstaceo nitido. *tfemina* pollicaria, J poll, lata, inferno alata; coma densa, semine requilonga v. brevior, pilis irregularibus patenti-recurvis.

The affinity of this genus is with *Heterostemma*, from which it differs in the singular follicles and the very large seeds. It was discovered by myself in the tropical forests of the outer ranges of the Sikkim Himalaya in July 1848, and has since been collected by the late Dr. Anderson (then Superintendent of the Royal Botanic Garden of Calcutta) and by others.—J. D. H.

Fig. 1. Calyx. 2. Sepal seen from inside. 3. Staminal column and coronal processes. 4. Top of staminal column. 5, 6. Pollinia. 7. Follicle. *All but fig. 7 enlarged.*

PLATE 1423.
LYGISMA ANGUSTIFOLIA, *Hook.f.*

AscLEPIADEiE, Tribe MARSDENIE,E.

Lygisma, *Hoolc. l.*, *gen. nov.* *Calyx* 5-partitus, segmentis oblongis obtusis intus eglandulosis. *Corolla* rotata, tubo intus pubescente; lobi lineares, obtusi, contorti, dextrorsum obtegentes et in alabastro abrupte inflexi. *Corona corollina* 0. *Columna staminea* minuta, cupularis, 5-loba, lobis antheris respondentibus; corona staminea e dentibus minimis obtusis dorso antherarum appressis; anther© obtusse, sipicibus membranaceis brevissimis; pollinia in quoque loculo solitaria, cylindraceo-clavata, corpusculo elongato subsessilia, erecta. *Stigma* inclusum. *Fructus* . . .—Frutex *volubilis, puberula, gracilis, diffuse ramosa, foliosa*. *Folia opposita, hreviter petiolata, lineari-lanceolata, at-uminata*. *Flores parvi, cymis numerosis axillaribus paniculceformibus r. corymbiformibus laxe dispositis, breviter gracile pedicellati*.

L. angustifolia, *Hook. f.* (*Species tmica*).—*Marsdenia angustifolia*, *Wight, Contrib.* 40 ; *Wall Cat.* 8172 ; *Dene, in DC. Prod.* viii. 614.

HAB. Burma; hills near Prome, *Wallich*.

Bamuli gracillimi, plus minus bifariam puberuli. *Folia* 1-2 poll, longa, $\frac{1}{2}$ poll, lata, utrinque sed subtus precipue puberula, demum glabra, costa obscura, nervis paucis valde obliquis, basi 3-nervias. *Pedunculi* $\frac{1}{2}$ poll, longi, capillares, ad ramos ramulosque 2-bracteati, pedicellis $\frac{1}{2}$ poll, longis. *Alabastra* truncata. *Sepala* pubescentia. *Corolla* J poll, diametro; tubo calyce vix longiore, lobis glaberrimis.

A very singular genus, allied to *Marsdenia*, but differing from it and from every other Indian ones of the Order known to me in the doubling down inwards of the corolla-lobes in bud, as in *Ichnocarpus* and other genera of *Apocynace*. The column is excessively minute.—J. D. H.

Fig. 1. Flower. 2. Sepal. 3. Corolla laid open. 4. Stairinal column. 5. Pollinia. *All greatly enlarged.*

PLATE 1424.

IPOMELIA RIEDELIANA, Oik.

CONVOLVULACEÆ, Tribe CONVOLVULÆÆ.

I. Riedeliana, *Oliver, ssp. nov.*; glaberrima, ramulis teretibus leavibus, foliis ovato-cordiformibus acuminatis margine leviter undulatis, petiolis lamina brevioribus, cymis panicifloris axillaribus pedunculatis, pedicellis sub flore dilatatis, sepalis subsequialibus coriaceis rotundatis concavis mucronatis, corolla campanulata limbo haud explanato breviter 5-lobulato lobis dorso et infra dense pilosis, ovario glabro disco annulari cincto biloculare, loculis 2-5-ovulatis.

HAB. Island of Buru, Indian Archipelago, *Mr. Riedel* (communicated through Dr. Meyer, of Dresden).

Folia 3-4 poll, longa, 2-3 poll, lata, membranacea, glabra; petiolus 1-1 $\frac{1}{2}$ poll, longus. *Flores* 1-1 $\frac{1}{2}$ poll. diam.; pedicelli 1-1 $\frac{1}{2}$ poll, longi, sursum valde incrassati. *Sepala* f poll, longi. *Corolla* calyce duplo v. subtriplo longior. *Stylus* elongatus, gracilis; stigma capitatum, bilobulatum. *Fructus* . . .

A singular plant which I cannot identify, presenting the exceptional character of more than 2 ovules in at least one of the two cells of the ovary. I have not seen ripe seeds.—D. OLIVER.

Fig. 1. Base of corolla, laid open, with the stamens. 2. Pistil and disk. 3- Transverse section of ovary. (The ovules are basal and ascending : I am not sure that 4 occur in each cell. I have, however, found δ in one. an aberration unusual in *Ipomelia*). *All enlarged.*

PLATE 1425.

TREUTLERA INSIGNIS, *Hook. f.*

ASCLEPIADEA; Tribe MARSDENIA.

Treutlera, *Hook. l.*, *gen. nov.* *Calyx* 5-partitus, intus basi minute glandulosus, segmentis ovatis subacutis. *Corolla* ampla, rotata, tubo explanato, limbo 5-lobo, lobis triangulari-ovatis obtusis leviter contortis dextrorsum obtegentibus. *Corona corollina* 0. *Columna staminea* oblonga, erecta; coronae processibus oblongis obtusis dorso antherarum adnatis apicibus infra appendicem antherae brevis rotundatae membranaceae liberis obtusis; pollinia in loculis antherarum solitaria, cylindracea, caudiculis brevibus corpusculo parvo affixa, erecta. *Stigma* hemisphaericum, apice 2-dentatum. *Fructus* . . . —Frutex vohihilis, alte scandens robustus, ramulis novellis foliisque junioribus superne sparse puberulis. Folia oblonga v. elliptica, acuminata, coriacea, penninervia. Flores inajusculi, pallide purpurci, umbellis axillaribus pedunculatis laxifloris dispositi, pedicellis basi bracteatis.

T. insignis, *Hook. f.* (*Species unica.*)

HAB. Sikkim Himalaya, in the temperate region, alt. 6-9000 feet, J. Z. H., Dr. Treutler, &c.

Bami teretes, crassitie penne an serini. Folia 3-6 poll, longa, 1 1/2-3 lata, coriacea, basi v. apice oblonga v. elliptica, acuminata, ravinoblancoiata v. oblongo-rotundata et cuspidata, supra (precipue secus costam nervosque) puberula, subtus glaberrima, basi acuta v. rotundata. nervis utrinque 5-8 arcuatis v. fere horizontalibus; petiolo 1-1 1/2 poll. longo, glabro v. pubescente. Pediculi 1-2 poll, longi; pedicelli subrequiongi, basi bracteati, bracteis parvis, ovatis obtusis. Flores odori. Sepala 1/2 poll, longa, glabra v. pubescentia. Corolla coriaceo-earnosa, 1 1/2 poll, lata, purpurea, infcus flavescens, lobis tubo cequilongis glabris v. obscure ciliatis. Columna staminea 1/2 poll, longa, virescens.

A very handsome and distinct genus of *Asclepiadeco* remarkable for the great elevation at which it grows. It was discovered in damp oak and laurel forests on Tonglo and Sinchul, mountains of Sikkim, by myself in September 1848. It is allied to *Marsdenia*, from which it differs in the large rotate corolla, like that of a *Hoya* or *Heterostemma*. I have named it in compliment to W. J. Treutler, M.D., F.L.S., a native of Sikkim, who presented to Kew a valuable collection of the plants of that country, amongst which were fine specimens of this species.

Fig. 1. Sepal, seen from within. 2. Staminal column. 3. Back of anther, with coronal process. 4. Side view of the same. 5. Stigma and pollinia. 6. Pollinia. *Ml enlarged.*

IOONES PLANTARUM.

PLATK 1420.

PENTABOTHRA NANA, *Bool: f.*

ASCLEPUDEJE, Tribe CTNANCHEÆ.

Pentabothra, *Hook. l., gem., nov.* Sepala oblonga, intas minute glandulosa. *Corolla* campanulata, profunde 5-loba; lobis ovato-oblongis dextrorsum obtegentibus. *Golumna* erassa, ovoidea; corona exterior e sacculis ad basin columnas antheris alterantibus; interior e processibus carnis a latere compressis dorso antherarum adnatis, apicibus liberis obtusis, *Antheræ* magnas, corneas, apicibus rostratis, membranis; pollinia in loculis solitaria, elongata, compressa, falcata, pendula, cerea, pedicellis elongatis. *Stigma* depressogonicum, 5-gonum, inclusum.—Herba v. suffrutex, *parvula erecta, profrusta, glaberrima. Folia opposite, loriformia, breviter petiolata, basi cordata.* Flores in cymis axillares umbelliformes breviter dispositi.

P. nana, *T. Toth. f. Fl. Brit. Ind.-iv.* 19 (*Species unica*). Cynanchum, *Ham. in Wall. Cat.* 8230; *Wight Contrib.* 59.

HAB. Northern Camrup, at Saunyashikafce, on grassy hills, *Hamilton* (April 7, 1809).

Herba v. suffrutex e specimine unico tantum viso percipitur, caule rigido basi nudo flexuoso, sparsifolioso. *Folia* 4-pollicaria, ^\ poll. lata, patentia, subacuta, coriacea, costa crassa, nervis tenuibus patentibus, **petiolo** 1 poll. longo. *Flores* ½ poll. diam.

This remarkable plant is one of the very few contained in the **Walkchian** Herbarium, which has never been collected since this was

formed, and there is only one specimen of it, from which flowers were sent to Dr. Wight, and are preserved in his Herbarium (now in K. 5\ v). I have not been able to ascertain the position of Sannyashikate, which is probably in Assam.—J. D. HOOKER.

Fig. 1. Flower. 2. Interior surface of sepal. 3. Column. 4. Dorsal view of anther and processes. S. Ventral view of anther. 6. Pistil. 7. Pollinia, *All enlarged.*

PLATE 1427.

ADELOSTEMMA GRACILLIMUM, *Hook. f.*

ASCLEPIADEA, Tribe CTSASCHEA.

Adelostemma, *Hook. f.*, *gen. nov.* *Sepala* lanceolata. *Corolla* campanulata breviter 5-loba. *Columna* breviter stipitata, conico-5-gona; corona 0. *Antherarum* apices elongati, oblongi, membranacei; pollinia in quovis loculo solitaria, ovoidea, pedicellata, cerea, corpusculis oblongis. *Stigma* lavatum obtusum, exsertum.—Canles *graciles, volubiles glaberrimi*. Folia *opposita, longa, petiolata, cordata*. Florea *hi cernat cortjibiforfnes axillares pedunculatas impositi, parvi*.

A. gracillimum, *Hook. f. (sp. nov. unica)*. *Cynanchum gracillimum*, *Wall, in Wight Contrib. 57, and Oat. 8227.*

HAB, Barma; at Segain, *Wallich*.

Folia $1\frac{1}{2}$ poll, longa, 1-1¹ lata, membranacea, acuminata, simbasali profundo lobis rotundatis incurvis, nervis tennibus, petiolo gracillimo 1-1X poll, longo. *Ovary* puberulo, pedunculis petiolis brevioribus, pedicellis $\frac{1}{2}$ - $\frac{1}{4}$ pollicaribus. *Sepala* corolla dimidio breviora. *Corolla* 1 poll, longa, puberula, glaberrima.

The campanulate corolla and total absence of a corona remove this plant from *Cynanchum*. I find no trace of the 5-tid tubular corona described by Wight as existing at the base of the stipes of the column.—J. D. HOOKER.

Vig. 1. Flower. 2. Column. 3. Back, and 4, Front view of anther. 6. Pistil and pollinia. G. Pollinia. *All enlarged.*

PLATE 1428.

ZATARIA MULTIFLORA, » *nth.*

LABIATE, Tribe SATUREINAE.

Z. multiflora, *Boissier, Dial.* i. No. 5, p. 18. Fruticulus rarnossissimus ramulis puberulis hirtisve, foliis late ovatis v. ovato-reun-
 *atis late acutatis obtusisve glabrisve punctatis rigidulis
 •etulis, cinulis globosis ovoideisve sessilibus v. inferioribus breviter
 pedunculatis spicatis, bracteolis **elKpticis** calycibus subaequantibus alyce
 lentibus deltoideis birtis **corolla** tubam »quante.

HAB. Persia australis, *Anther. h\VI*; Inter Jesd et Ispahan,
Bung Beloochistau, *6locks*; Afghanistan (var. *bracteata*, Boiss.j,
Griffith,

Folia > a j [- ^ poll, longa. *Flores* | poll, longi, *Nitiditate* parvie ovoidete
 BVJBS.—D." OLIVER.

Fig. 1. Rower. 2. Corolla laid open. 3. Stamens. 4. Ovary and style. I. Flower
 after stage. All enlarged.

PLATE 1429.

PLAGELLARIA GIGANTEA, *Hook. f.*

FLAGELLARIAE.

F. gigantea, *Hook. f. (sp. nov.)* in **alto Bcandens**, foliis **2** **tolibus**
Vgato-lanceolatis **iii cirrum** planis cartilagineis; **in** **enm** attenuatis basi
 rotatis v. **nuriculato-conclatis** **ibideroque** **era** **sse cartilagineis**,
 floribus **Bui** **globosis**, **drupa** **1-0-pyrena** **i** **2-3** **-loba**, v. **1-sp** **nv**
 latere rostrata, pyrenis ossibus oblongo-**^igmoideis**, transver **se rugosis**.

HAB. Fiji Islands (*U. Expl. Exped.*); **V:lnna** **Le^*** **Mac**
Gillivray and Mi **S** • ; Upolo, Samoa Islands, *Whitmore*.

Frutex. *Folia* 2-4 poll. lata, tenuiter coriacea, **rreberime** **stria**^{la},
latiuscula, **vagi** **Paniculae** **ampae**,
fast **compressis** **et** **obtuse** **angulatis**.
costa **subtus** **valida** **basi** **sessiles** **v.** **brevisimo** **pedicellati**; **bractea**
miing **ratim** **ramosa?**, **l-amis** **ramoKsqae** **con** **exteriora** **ovata**, **obtusa**,
 poll, diametro, **D 2**

interiora dupln majora subacuta. *Anliierce* oblongo\ *Stylus* trifidua
Vrupce \$ pell, limgse, edulea, perianthio persiwente immutato stipatn¹

Baspius 1-spermw vertice truncatie uno latere rosh-atae; non rar<
 symmetric® 2-iJ-lobatce et -pyrenro. *Pyrenm* ^ poll. Ion gee, endocarpit
 crasso durissimo profunde snlcato, testa membranacea, albumine^{^nt} >
 furinaceo.

Of this very remarkable **species** the Fiji specimens are in youngiter'
 flower only, and the Samoan **Island** ones are in fruit only, and Vmmuuna
 foliage; I have, however, no reason to doabfc their belonging to onco_{rs0}
 species, as was **concluded** by Mr. Ben Mi am and myBelf when the_{tun-}
 genns was worked up for the 'Genera Plantarum.'—J. D. HOOKER. soli-

Fig. 1. Flower. 2. Xury young stamens. :: & stamen. 4. Style, c- -, iCta.
 6. Seed. All enlarged. 5. Drupe: mu-

PLATE U30.

EENEALMIA AFRICANA, Benth.

SCITAMIXEJE, Tribe ZIHGXBERSJB.

R. africana, Benth. M88,, (sp. nov.); gtaberrima, foliis pedalis
 elliptico-lanceolatis **oblanceolatisve acnminatis** basi in **petiolnm** _{snm}
 vaginam angustata nervis numerosa, raoemis e **rhizomate robusto**
 annulate infra folia ortis **laxe vaginatia simplicibns v. Babramosis,** Oil,
 vaginis cylindraceis **oblottgis** obtusis **Bubinflatit, flotibajsi pedicellat** _{1B} **piii**
 bracteatis **bracteis spathaceis, ovario** oblongo **obtase** 3-gono, calyceS-es
 infndibulari ovario a[^]qtilnngo ore trncato, corolla; 2-labiatce tube
 calyce triplo **longiore, labio superiore** (v. **lobo** postico) oblongo, ini-
 feriore orbiculari **mnltto** latiore basi cordato, Btannnodiis 2 denti
 fortinibus.

HAB. West Tropical Africa; Fernando Po (1860), and Cori_{8cc}^{mp}
 Bay (1862), *Gustav Mann*.

Herba **4-pedalis**. *Rlrizoma* breve v. elongatnm, crassitie **digit]**
 huinani, erectum v. adscendens, cylindraceum, basibus foliomm **delap.** • a
 sornni ammlatuni. *Folia* firma, 2—i poll, lata, costa gracili, nervi- he
 tenuissimis, petiolo 1-3-pollicari; vagina elongata, sulcata, apice **baud** fM
 auriculata. *Uaaemvi* annulis rhizomatis inserli, **6-10** poll, lonrr"
 erecti v. adscendenti-; **peduncnlati, pedunculo** crassitie pennte anatinrō •
 bracteas spathaceae, pollicares v. breviora, dUtantes; bractete florifen : th
 l-S-florre, ceeteris minores; podicelli ? poll, longi. *Qvar'mm* cum
 ealyce f **poll longnm. CoroUaB** tubas rectns, basi gracilis, angusti[^]
 dein subinflatus, cylindraceus; limbus **tubo brevidr,** 2-labiatuB, **labid**
Bopotiore erecto **obtusio, inferiore** deflexu **andalato.**

This very remarkable *Reneahnia* is one of the only two ex*La-
American species of the genus hitherto found, and differs from its con-
veners in the distinctly bilabiate corolla, in which respect it much more
Resembles an *Alpinia* than *Reneahna*.—J. D. HOOKER.

The other, also West African, species may be thus characterised :—

^s K. Tffiannii, *Huok.f.* (*sp. nov.*) ; foliis longe petiolatis elliptico-lanceo-
latis abruptecandato-acrtminatis, vagina longissimK spicia r rhizomate
inl'ra t'nlia ortis strictis erefcis confertifloris^brRcteis.HpAthaceisbrevibNs
iWlate oblongis, floralibus orbiculatis concavis, floribus sessilibos, calycibus
h'taU: fampanulatis.

HAH. West Tropical Africa; Fernando Po, *Gkulav Mann* (1861).

1J • *Rizoma* breve. *Folia* G-9 poll longa, 2-3 lata, pfiulo 2-3-
f"ppollicari; vagina 10-pollicaris, angusta. *Baeemd* cum pedxmonJo 4-
(n)llicares; bractese ^ poll, longee et latsB, inflataj. *Ovar'utm* cum
•^Ocalyce ?,-jinll»care. Cetera desunt.

*^c This differs from *R. afrirana* in the smaller, broader, longer-potiuled
k'iives, short erect strict racemes, with sessile crowded flowers, ami
D: orbicular concave bracts.—J. D. HOOKER.

hⁱ Mg. 1. **Bud.** 2, Portion of corolla tind anther. 3. **Lower** lip. author, and lateral
st; mil nodes. 4. Anther. 5. Top of ovwy and stylodia. 6. Tiausvursa sectu; of
ovaiy'. All enlarged,

PLATE 1431.

PSILOCARYA CORTMBIFOHMIS, *Bentk.*

CTPTSHACSI, Tribe SCIRPEÆ.

P. eorymbifera, *JBentk. in Gen, PL* iv. 1048; culm is 2-8-pedaHbns,
panicli.4 elongatis 7'amis ramulisque elongatis gracillimis, Bpiculia
Bubcorymbosis lanceolatis, glumis numerosis ovato-lanoeolatis iaentis,
floribus diandris, nuce orbiculari compvessa obscure transverse undu-
lata, styli basi trianguhiri rostrata. *Srirpus corymbifertu!*, Wright in
Sauv. PL Cub, 176.

HAD. Cuba, *O. Wright*.

.T« *Annua*, elata, Isevis. *Folia* ^ P⁰H. luta. *SpicuUe* j- poll, longæ,
saepissime ternse, late rales Ion gins pedicellate. *Ghana* M SO, *OBLtn* anæw.
LAB. 11, *Nuces* 1/3 pc41. longre.

This resembles *P. tænsis*, but is of a much more slender habit, with
more numerous narrower spikelets upon longer more slender baranhea
of the panicle, and far more numerous glumes.

Fig. 1. Spikelot. 2. Glume. 3. Flower, 4. Style-arms. 5. Nut. All enlarged.

PLATE 1432. -

UTLERIA SALICIFOLIA, *Beddome*.

ASCLEPIADEJE, Tribe PERIPLOCEIE.

U. *salicifolia*, *Beddome MSS. (Species unica)*; *Hoof. f., Fl. Brit. Ind.* iv. 7.

HAB. Deccan Peninsula; Anamallay Mts., alt. 3-4000 ft., *Col Beddome*.

Arbor parva, glaberrima, ramis crassis. *Folia* ad apices ramulorum conferta, alterna, petiolata, lineari-lanceolata, attenuato-acuminata 7-9 poll, longa, $\frac{1}{2}$ -1 poll, lata, tenuiter coriacea, marginibus incrassati obscure undulatis v. crenulatis, basi acuta, nervis numerosis tenuissimis. *divaricatis*; petiolo 1-2-pollicari, tereti. *Flores* minuti, apices versus ramorum elongatorum; cyma dichotoma, longe pedunculata, laxa ramosa; bractea in ramulis terminalibus cymae numerosae, minute imbricatae, obtusae; pedicelli breves. *Calyx* 5-fidus, lobis ovatis subacutis, intus basi glandulosus. *Corolla* $\frac{1}{2}$ poll, diam., rotata, lobis ovatis subacutis dextrorsum obtegentibus tortisque. *Corona** squamae ad basin filamentorum 5, parvae, subrotundae. *Filamenta* brevia, dilatata: antherae ovatae, apicibus connatis stigmati adhaerentibus; pollinia pulverea, corpusculorum appendicibus dilatatis. *Ovarium* 2-loculare. *Stigma* convexum. *Folliculi* (immaturi) divaricati, teretes, laeves, pugioniformes, longe rostrati, rostro recto.

One of the most remarkable of Indian *Asclepiadeae*, resembling an Apocynaceous rather than an Asclepiadaceous plant, and differing from all other *Periploceae* in the alternate leaves. The fruit, which I had not seen when the plant was described in the 'Flora of British India,' is unripe, and the seeds unformed.—J. D. HOOKER.

Fig. 1. Flower. 2. Calyx and stamens. 3. Sepal viewed from within. 4. Flower and scale. *All enlarged.*

PLATE 1433.

ATHBROLEPIS WALLICHII, *Hook. f.*

ASCLEPIADEJE, Tribe PERIPLOCEIE.

Atherolepis, *Hook. f., (gen. nov.)*. *Calyx* semisuperus, tubo turbinato; lobi breves, triangulari-ovati, intus nudi. *Corolla* rotata, lobis triangularibus dextrorsum obtegentibus. *Corona* squamre ad basin filamentorum 5, subulatae, elongatae. *Stamina* basi corollae inserta,

Plantae brevis distinctis cuius glandulis totidem subglobosis
 ternantibus; n-meris oblonga, apicibus conniventibus et ~~stigmatis~~
Lbaerentibus; pollinia in quovis loculo 2, granulata; **corpuoalorum**
>pendicibus dilatatis. **Ovarium** basi calycis tubo adnatum, **superae**
 arum; stigma minutum, **obtusum**. **Folliculi** rlongato-ellipsoidei,
 si **raid**, sublignosi, post dehiscentiam scapheiformea. **Semini oblongo-**
rata oompl&nata, dorso convexa, facie medio costata.—Frutex <jra<ilis,
 jhibilis, puberulus. Folia **opposita, anguste Unearia r. etongato~Uneari-**
mlonga, acuta, membranacea, nervis rjracciiU,ivaricat.s. Plorefl
vinuti, in-cipnaa<mas axilla/ressessiles disposiUi inibewentes. Folh-
 ;ili S-pollicares, turgit li.

A. Walliehii, **TLook.f. in Wl, Brit. hid. iv. 8, (8pedee unica.)** Athc-
 jithnr;L Walliehii, **Benth.vnOen. Plant, ii. 74A.** Hemidesmths Wallifhii,
 %jht \$• **Arm. Oontrib. 63 ; Wall Cut 8245 ; Dem. in DQ, Prod. viii.**

11M.: **Pegnat Prome, WatM6h | Rangoon, McLellaud; PegaTomali,**
 Kurz in **Kerb. Calcutt.**

Caules gmcillimi. **Folia** 4-8 poll, longa, \~l\ **poll, lata, tenuiter**
 reiuhr;m;ienu, **nervis remotis**, basi subacuta v. rotuudata; potiolo
 racilt I poll, longo. **Cynuv vis.** \ poll, longse, pauciflone. **Flares** $\frac{1}{20}$
 toll, **diamet.**

Since describing this plant in the 'Flora of British India' I have
 received fruiting specimen from the Calcutta Herbarium collected by
 the late S. Km/..—J. D. HOOKER.

Kg. 1. Bud. 3, Flower Inkl qen. 3. **Portion of corolla with stamens and coron***
 ilaments. 4. Ovary. *Ail enlarged.*

PLATE 1434.

CYCLOCAMPE AKUNDIK-ACEA, Benth.

CYPERACEÆ, Tribe RIJYNCHOSPORBE.

• i ti **C. arundiuacea, Benth. (sp. n<>c.)** -, rliizomate ci-asso, foliis 1-2-pedalibus
 I vix j. **poll, bias radicaibua** breviter vaginantibus **mftrginibus revolutaa**
 • **"supra** Icevibus subtus scaberulis, culmis gracilibua foHosis, **Etpiculis V**
 jr)oll. lougis gt-acile jiedicellatis angustis teretiusculis glabris, gluinis
 I: -iM-10 ovato-lanceolatiti, filamentis capillaribus setis plumosisaiquiton^itf,
 mtheris olongatis in rostrum tenue angustatis, stylo filiformi **filamentis**
 ailoiigo, ramis capillaribus, nnce liaeri-oblonga apiculata.

1 la | **C. arundinaeea, Benth. w. Gen. Pi, v. iii, p. 1063.**

re* j
 as, d HAR. 'New Caledonia; presqu'ilcdo Pum, **Deplanche ; l*Iu <>i Pines,**
 Jo i in stony ground, **Milne.**

lthizoma crasaitie digiti minoris, reliquiis fibrosis foliorum veterum opertnm. Culmi 2-3-pedales, foliosi. Folia pedalia et ultimis marginibus sicco ad costam revolutis, apices versus perianthia. Inflorantia pedalis et ultra, anguste oblonga, rachi flexuosa, ramis gracilibus inclinatis. Spiculce numerosissimae, pallide castaneae, stigmatibus apicibus setarum exsertis.

This differs from the *O. elongata*, Benth. (of the Seychelles Island) in the very narrow leaves, and from *Asterochcete nitens*, Kunth (which I have not seen and assume to be a *Gyclocampe*), in the more numerous glumes.—J. D. HOOKER.

Fig. 1. Spikelet. 2. Flower. 3. Nut. All enlarged.

PLATE 1435.

ASTEROCELFFISTE GLOMERATA, Nees.

CYPERACEAE, Tribe RHYNCHOSPOREJE.

A. glomerata, Nees in *Linnaea*, x. 194; elata, robusta, culmis 3-gonis; foliis culmo brevioribus 1 poll, latis, planis coriaceis marginibus sub lente scaberulis, apicibus 3-gonis pungentibus, vaginis elongatis, spiculi in capitula subglobosa pollicaria bracteata dense congestis lanceolatis compressis, glumis ad 5 lanceolatis acuminatis tenuiter coriaceis membranaceis obscure scaberulis, setis scaberulis staminibus styloquifiliformi sequilongis, filamentis antheris lineari-elongatis multo brevioribus, nucis elliptico-lanceolata compresso-3-gona.

HAB. South Africa; in the Uitenhage district, Burchell, &

Culmi 3—4-pedales, foliosi, basi crassitie pollicis humani, omnino laevibus. Folia suberecta, multistriata; praeter margines las via. Panicula pedalis et ultra, elongata, ramulorum angulis obscure scaberulis. Capitula bracteata; bractae breves, spiculas superantes. Spiculce ^ poll, longi pallidas. Nux - ^ - G poll, longa.

A gigantic species compared with its congeners. The leaves are used by the Hottentots for the manufacture of hats.—J. D. HOOKER.

Fig. 1. Spikelet. 2. Flower. 3. Nut. AH enlarged*

PLATE 1436.

GYMNEMA MACEANTHUM, *Soqk.f.*

ASCLEPIADEAE Tribe MARS DENIED.

macranthum, *Hook. f. (sp. nov.)*; caule robusto, foliis obovato-
 acuminatis glaberrimis, cymis corymbosis subumbellatis
 pedunculis crassis petiolo aequalibus v. longioribus, floribus
 lignis ebracteolatis, sepalis elliptico-oblongis obtusis, corolla
 tubo aequali lobis intus pubescentibus, corollae lobis processu-
 ore corollae insertis cum lobis alternantibus parvis villosis.

HAB. Sikkim Himalaya, *Dr. Eng.*

Caulis crassitie pennae anserinae, teres. *Folia* remota, 3-5 poll,
 subcoriacea, basi rotundata v. subcordata, nervis utrinque 3-4,
 petiolo crassiusculo 1-2 poll, longo. *Pedunculi* 2-3 poll, longi, crassi,
 spinis recurvis, apice corymbiferi, corymbis subsimplicibus. *Flaves*
 poll, diam., carnosuli; pedicellis crassis 1/2 poll, longis. *Sepala*
 m. longa. *Corolla* tubas intus glaber, lobi tubo aequali, ovati,
 lobis truncatis, intus medio incrassati. *Columna* crasse stipitata, magna;
 stamineae squamis dorso antherarum adnatis unguiformibus
 junctis; antherarum apices magni, ovato-oblongi, obtusi, membranacei;
 filia oblongo-reniformia, breviter stipitata, corpusculo elongato
 breviter, erecta. *Stigma* crassum, exsertum, obtusum.

I have doubts as to the genus of this fine plant, which is more robust
 and much larger flowered than any of the other *Gymnema*s and has
 very stout peduncles of the cymes. The outer (or corolline)
 scales are reduced to tufts of hairs at the angles of the
 corolla-lobes. The staminal scales resemble those of *Maradevia*. This
 was transmitted to Kew from the Calcutta Herbarium after the publi-
 cation of the *Asclepiadeae* in the 'Flora of British India.'—J. D. HOOKER.

*Fig. 1. Calyx. 2. Corolla laid open. 3. Column. 4. Side view of anther.
 % Pollen and corpuscle. All enlarged.

LAP
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 res

PLATE 1437.

DIDISSANDBA KUFA, *King*.

GESNERACEAE, Tribe DIDYMOCAUPK^.

D. rufa, *King* (*sp. nov.*) ; herbacea, acaulis, scapigera, foliis confc patentibus sessilibus v. crasse petiolatis ovatis ellipticisve obt yinuato-crenatis nervis impressis supra glabris subtus scapo cym: dense lanuginosis, cyma confer tin* ora, calycis semiquinquidi 1 ovatis, corolla? tubocalyce ter longiore extns glabroitnslanato lob anperionbus brevibus 3 inferioribus majoribus rotundatis,

D. rufa, *Dr. King*, MS8. in *Herb. Calcutt.*

HAD. Tibetan province of Chiimbi, between Sikkim and lihol alt. 11,000 feet (*Herb. Calcutt.*).

Rhizoma brevissimum, crassam, radices fibrosas emittens. J'< dense rosnlata, ciusse coriacea, 1-2 poll, longa, inferiora lim^iora petiolum crassum complanatnm angnstata, nervis subtus era <-i vatis, junioribus tomeuto marginatis. *Scapiis* 2-3-pollicaris, fiorentia lana molli sicca bruimea induta, floribus paucis v. numerc breviter pedicellatis, £-5 poll, longis. *Calyx* late campanulatus, tul bio vis. *Corollm* tabus latns, lobis longior. *Stamina* perfecta 4, qaii l'uditnentario. *Discus* creuatus. Ovariam glaberrimum in **styli** brevem attenuatum stigmati simplici. *Capsula* erecta, lineari-oblonj acutniTiata, ^ poll, longa, valvis demum bipartitis.

A near ally of *D. lanuginosa*, Clarke, differing in the stouter sea densely woolly cyme, and much shorter straight capsule.—J. D. HOOK

Fig. 1. Portion of leaf-margin. 2. Calyx. 3. Corolla laid open aDd stam* 4. Authors, o. Ovary. 6. CapsuK 7- Seed. All enlarged.

PLATE 1438.

FALCONEBIA HIMALAICA, *Booh.* /.

SCKOPHULARIMEJ., Tribe YKRONICEJE ?

F. himalaica, *Hook. f.* in *Ft. Brit. Ind.* iv, 319. (*Species uv icaJ*)

HAB. Western Himalaya; Kumaon, *Falconer*; Kadhari jmss, a 8000 feet, *Strachey and Winterbottom* (*Mazus n. 4 in herh.*)

Herbapai*\tila, scapigera, laxe hirsuta. *liliiizoma* breve, fibras cm ss emittens. /'o*(conferta, 3-5 poll, longa, obovata v. oblouga, obtut

petiolum latum angustata, irregulariter duplicato- et grosse crenata, ts minasve puberula, petiolo 1-1[^] poll, longo superne alato. *Scapus* poll, longus, erecto-reeurvns, floribus racemosis snbsecnndis, teia ad basin pedi cello rum parvis obovato-oblongis spatulatjsve. *Abila* subaequalia, posteriore paullo minore, -[^], poll. loDga. *Corolla* Uicaris, glabra, tubo basi decurvo; labio superiore brevi sub- p*cto, inferioris lobis mnltio **majoribnB** subrotundatis rutnsis. *Stant ina* o corollas inserta, filamentis bi*evibus; antherro didymte, sub- see, oculispaullo divergentibns. *Ovarium* obloBgum, glaberriuin ; [^] filiformis, stigmatte capitellato-

•[^], vated in the 'Flora of British India,' I am disposed to refer this at anomalous plant to *Veronice*, and to the neighbourhood of >. Its habit is that of *Mazits*, but it differs from that genns the tribe to which it belongs in the capitate stigma, and in ^{IT} al lobes of the corolla being (I think) outermost in bud. mens arc unfortunately not very good, and I have seen no ⁵ B. HOOKED

ext¹ Calyx. 2. Corolla. 3 and 4. Stamens. B. Pistil. All enlarged*

PLATE 1439.

GENTIANA ROBUSTA, *King*.

' GENTIANEJE, Tribe SWERTIEJE.

. (Chondrophyllnm) robusta ; *King* (*sp. novj*) ; canlo ascendent o nsto simplici, foliis caulinis angusto linearibus paribus basi in i Jim cylindracenm connatis nervis costse parallelis supremis florcs >lucrantibus, floribns sessilibus axillaribus et in capitulum densum jt piuale foliaceum involucreto congestis, calyce spatbaceo mem* haueo corolla dimidio brevior 5-demat dentibusbrevibussubultis, ihW& tubuloso-campanulata, lobis brevibus triangularibus plicis toti- triangularibus ulternantibus,

. robusta, *King*, *M88*. in *Herb. Calculi*.

LAB. Tibetan province of Chumbi, between Sikkim and Bhotan, • 11,000 feet; (*Herb. CalcutL*)

dis 8-12-pollicaris. *Folia* radiealia 0?, canlina fere pcdalia, 1 y. late, crasse coriacea, nervis obscuris, floralia breviora, basi latiora. [res 1[^]-li poll, longi, epunctati, albo-virescentes ? *Calyx* ad medium *MB*, dentibus 5 ectaceis 2 SECpissinic ceteris longicribus. *Corolla* medio ; llo infiata.

Closely allied to *Q. HbeHoa* (plate 1441), and possibly a state of the plant, but smaller, with much longer narrower leaves, and calyx with setaceous teeth. Both these species* were sent to me after the publication of the *Gentianeae* in the 'Flora of British India.'—J. D. Hooker

Fig. 1. Calyx. 2. Portion of corolla laid open. 3. Ovary, All enlarged.

PLATE 1440.

A. GENTIANA LODEKI, Hook. f.

B. GENTIANA BOBHEENSIS, Hook. f.

GENTIANEAE, Tribe SWERTIEAE.

G. (*Chondrophyllum*) *Loderi*, Hook. f. (*nov. sp.*) *l. jlaberririh* *F.* *nis*, ramia prostratis foliosis apicibus ascendens, foliis late *t^{lor}* obtusis sessilibus v. breviter petiolatis 3-nerviis, floribus pollidS? ad apices ramorum solitariis sessilibus, calycis campanulati lobis in *Bnb-fB* quantibus spatuliformibus patenti-recurvis, corolla tubuloso-camp: *l. j* lata cyanea lobis 5 ovato-rotundatis, squamis totidem erectis fimbriatis alternantibus, ovario linearilanceolato in stylo tenuem uttenuj *l. j* stigmatibus minutis.

HAB. Kashmir, Mrs. Charles Itadcliffe.

Caules e radice perennante 3-4-pedunculati, decumbentes, fuscopurpurei, foliosi. *Folia* \ poll. Longa, fere equilatera, jacentia, utriusque obtusa, coriacea, integerrima, viridia et fusco-purpurascens; "Jsupi" floralia vix minora. *Calyx* ^-pollicaris, tubo purpurascens, viridibus coriaceis. *Corolla* lobis cyanea, limbo 1 poll. diam. squamis laciniatis lobis fere minoribus.

A very beautiful little Gentian, quite unlike any Indian species; which I am indebted to E. G. Loder, Ksq., an enthusiastic cultivator of hardy herbaceous plants, who received it from the collector. Madeline is not quite certain of the exact locality in which the [] was gathered, but believes it to have been in the Siix! or Lidar Vn. Like the other Indian species described in this number of the letter it was received after the publication of the Order in the 'Flora of British India,'—J. D. HOOKER.

A, Fig. 1. Portion of corolla laid open. 2. Ovary. Both enlarged.

G. (*Chondrophyllum*) *borneensis*, Hook. f. (*nov. sp.*); caespitibus, dense fastigiatis ramosa, ramis crassis foliis t *l. j* confertis parvis sessilibus jacentibus lanceolatis ovato-hincelatis sobaoutif marginibus inferius ciliolatis, Qoriboa parvis ad &

liirum aubsolitariis, calycia lobis lanceolatis tubum tequantibis,
 illa tubuloso-canipanulata, lobis brevibus anguste ovatis plicis
 i 2-fidia integerrimis alternantibus, ovario stipitato angustato in sty-
 jgracilem attenuate, stigmatibus brevibus, capsula clavata inclusa.

AB. Borneo ; on Mount Kina-Balao, *Sir H. Low*.

nua ?; canles densissime caespitosi, 1-2 poll, longi, undique
 si. *Folia* ^—^ poll, longa, basi imbricata, carnosula, trinervia,
 gribus sicco recurva. *Flores* £ poll, longi. *Corolla* medio paullo
 Jta, lobis parvis. *Atitherce* hastatee.

hi« curious little species formed part of a small collection of
 found on Kina-Balao during the only ascent ever made of
 Remarkable mountain by Mr. (now Sir) Hugh Low, which
 ed in the wonderful discovery of many gigantic species of
 lies. It is interesting as being the only species known to
 in the old world in the wide area between Java and the
 ins of extratropical Australia. It is indeed very closely allied
 the only Javan species, *O. c/uadrifaria*, Bume (*Gr. laxicaulis*, Zoll.)%
 extends from Kashmir to Bhotan in the Himalaya, and is also
 in the Nilgherry Mountains, Ceylon, Burma, and China, which
 has similar corolla. It may prove to be a form of that plant,
 but is much smaller, and of a different habit, and the capsule is
 none.—J. D. HOOKER.

Fig. 1. Leaf. 2, Tip of branch and flower. 3 and 4. Stamens. 5, Ovary.
 'mule. All enter*jed.

PLATE 1441.

GENTIANA TIBETICA, *King*,

GENTIANACEAE, Tribe SWERTIEAE.

1 (Chondroplyllum) tibetica, *King (nov.spJ)* ; caule simplici erecto
 robusto, Polifl caulis 6-pollicaribus lanceolatis in vaginam cylin-
 drum elongatam connatis, supremis sessilibus subverticillatis floras
 ilocantibus, floribus in axillis superioribus aggregatis ses-
 sus, calyce tubuloso-campanulato membranaceo hyalino hinc fissis
 Kto ore minutis Bime 6-dentato, corolla calyce duplo longiore tubu-
 latis nubiiformi, lobis brevibus triangularibus sinuatis vni-
 j, i: instructis, capsula lacinata, aeminibus oblongis testa reticulata.

1. tibetica, *King MSS. in Serb. Oahutt.*

[AB. Tibetan province of Chumbi, between Sikkim and Bhotan,
 / [] i. ini fei {*Herb. Oahutt.*),

Gaul is. IR. pollicaris, ercetus, crassitie penna? **anserine, simplex.**
WoUa vadicalia 0 P; caulina elongata, sessilia, 5-7 poll, longa, **1-14 lata;**
Buperiora Ifitiora in tobum breviorum connata, suprema radiantia ovato-
oblonga v. -lancoolata. *Flares* pollicares. *Corolla* qmnetata, **madia**
paullo inflata. *Ovarium* sessile, stylo brevi, stigmatate 2-1 obo. Oap, *ula*
 sessilis, Hneari-oblonga, apice dehiscens, valvis recurvis.—J. D. **HOOKER.**

A very fine species, closely allied to *G. robusta* (Plate 1439), but distinguished by the calyx and much broader leaves. On the plate the specific name is erroneously spelled *Thibetka*.—J. D. HOOKER.

Fig. 1. Calyx. 2. Part of corolla laid open. 3. **Ovary.** 4. Capsule. 5. Seeds. All enlarged.

PLATE 1442.

SWERTIA KINGII, Hook./.

GENTIANEA, Tribe SWEUTIBJE.

S. (Euswertia) *Kingii*, *Iloocf. (nov. sp.)*; rhizomate perennante foliorum vetustiora coronato, caule elato robusto simplici, foliis Bit radicalibus amplis ellipticis subacutis in petiolum crassum **afcatis**, caulinia oblongo-ovatis **Bessilibus** seniiamplexicaulibus, eyniis laribus et in thyrsum terminalem dispositis, floribus 2 poll, diametriis, sepalis lanceolatis **integerrimis**, corollas segmentis obliquis obtusis glandulis basi binis crinitis, filamentis basi squama filiformi instructis.

HAB. Sikkim Himalaya; at Na Tung. (*Merb. Calculi.*)

Caulis simplex, 2-pedalis, crassitie basi pollicis humani. radicalia, et inferiora 4-6 poll, longa, 2-4 poll, lata, multinervia, partibus 2-3-pollicari in vaginam semi-amplexicaulem dilatata. *Flares* irescentes, mediocriter pedicellati, pedicellis interdum subumbellatis. *Sepala* ^ poll, longa, corollae segmentis £ breviora. *FOSSCB n<ctar* ad basin cujusvis lobi corollae oblongo, undique crinito-fimbriato. *Filamenta* filiformi-subulata. *Ovarium* anguste oblongum, stigmate sessili.

This noble species was transmitted by Dr. King from the Calcutta Herbarium after the publication of the *QmManemva*. vol. iv. of the 'Illustrations of British India.' It is most nearly allied to *S. petiolata*.—J. D. HOOKER

Fig. 1. Portion of corolla with stamens, glands, and scales. 2. Base of segment of corolla and nectaries. 3 and 4, Stamens. 5. Ovary. All enlarged.

PLATE 1443.

OSYRIDOCAKPOS SCHIMPERIANUS, A. DO.

SANTALACEAE.

O. Schimperianus, A. *Becand. Prodr.* xiv. 635; frutex diffusus glaber; ramulis virgatis costatis, foliis ovalibus lanceolatisve **si** **acuminatis**, floribus breviter **pedicellatis**, perianthio 5-costato, **rabo** basi inter costas obscure verrucoso, fructu obovoideo v. subgloboso, pericarpio carnosulo.

HAB. Abyssinia, *Schimper*; Zambesia, *Sir J. Kirk* (1859).

Folia subcoriacea trinervia basi in petiolura angustata, 1-2 poll. longa, 1/2-1 poll. lata. *Florets* axillares v. in **racemis terminalibus** bracteatis dispositi 1/2-1 poll. **tongi**, solitarii bini v. terni, glaberrime **pabernli**. *Fructus* 1/2-1 poll. diara. tuboperianthii persistente coronatus.

Semen

I believe the South African and Natal plant (*O. natalensis*, A. DC.) is not specifically **different from** the above. Dr. Burche's Oape specimens correspond with tropical African ones, and the presence and prominence of the fleshy tubercles on the base of the perianth-tube afford no constant distinction.—D. OLIVKI.

Fig. 1. Flower and pedicels of two lateral flowers, fallen, 2. Perianth-tube laid open, 3. Inferior Ovary and stylo. 4. Ovary laid open, showing the twisted ovules. *Allenborg ed.*

PLATE 1444.

WIGHTIA BORNEENSIS, *Thos.*

SCITOPHULARNEAE, Tribe CHELONEAE.

W. borneensis, *Thos. f.* (*sp. nov.*); ramulis foliisque glaberrimis, **petiolatis** ellipticis obtuse acuminatis, inflorescentia tota terminali calyce hemispherico margine integerrimo.

B* North-Eastern Borneo, *Thos. Lobb* (1857).

20-pedidid. *Folia* 3-4 poll. longa, coriacea, in **petiolis** 1/2-1 poll. Mt-Li ununnta. nervis intrinsecis 1/2-1/3 poll. pefciolo 1/4-pollicari.

Racemi : terminales, 8-10-flori, erecti, rachi glabra; pedicellis k-poll-caribas. *Calyx* \ poll, diain. *Corolla* 2-2 i-po Hie avis, bacoinsafonms, f:ilcata, purpurea, tomento stellato sicco fusco dense obsita; lobis rotundatis, ore modice ampliaio. *Stamina* basiu Terena corollte insorta; filament is gracilibns longe exsertis basi villosis; antherae sagittate. *Stylus* iiiiformis, stignate siraplici. *Ovarium* glabemruum.

A very distinct species, differiug from the Javan and Indian ones in the quite entire calyx limb, fewer nerves in the leaves, comparatively slender pedicels, and mnch longer flowers.—J. D. HOOKER.

Kg. 1. Portion of corolla tnid open, with stamens and pistil. 2. Stellate hairs. las d 4. Anlurs. .i. Transverse section of ovary. All hut fig. 1 enlarged.

PLATE 1445.

TEPHROSIA PLICATA, Oliv.

LL GUMINOÆ, Tribe GALBGEÆ.

T. plicata, Oliver (*sp. two.*); suffrutex J—1-ped, canlibus rigidr\lis diffiHLS liirto-tomenteliis procumbeutibas adscendentibusve, foliis i trifoliolatis brevissinie petiolatis, folio I is rigidnlis anguste ob lance, obatis longitndinaliter nervosis apice mucrone recarvato subtus pubescentPons, floribns minutis axillaribus sa-pius geminata subsessilibus, legun line oblongo hirtio transverse 3-5-plicato.

HAB. Natal, Qerrard (1087); Tranavaal, Dr. R. limann (4922[^].1

Folia poll, longa, v. fob'olo centrab* longiore, snpra glabrat iticis laxe aut appresse pubescentia; petiolas 1-2 lin longus; stjV atis, sabolatae breves. *Calyx* pabescens 5-fidns, lobis lanceolntis ac fcm tabo a?quilongis. *Corolla* calyce loi agior, vex illo obovato snb, pandi ollae formi retnsio ttnguicnlato; alie atque Carina longc unguicula, nrij Let. iwtTien $\frac{3-1}{2}$ P oil. longum, \ poll, latun, 1, intn aa continuum, abr laevi 3-5-plicatum. *Semina* compressa inappendiculata.—D. OLIVER.

Fig. 1. Flower, side view. 2. Vexilltmi. 3. Wing-petiL 4. Carii; a. 5. Staw 6. Ovarj?. 7. Legumo. 8. Seed. 9. Embryo. All enlarged.

PLATE 1446.

BOUCHEA HANNINGTONII, *Oliv.*

VERBENACEÆ, Tribe VERBENÆ.

B. *Hanningtonii*, *Oliver (sp. nov.)*; herba strigosula parce pilosa, foliis ovali-oblongis acutis basi angustatis apicem versus subremote aerea; supra pilis brevibus adpressis parce strigosis subtus praecipue in nervis seto-pilosis, spicis hinc pedunculatis longis multiloricis, bractea ovato-lanceolata longe acuminata calyce parce setoso-pilosulo multo brevioribus, corolla calyce triplo longiore.

HAB. E. Tropical Africa, 2°-7° South latitude, *Mev. J. Hannington.*

Folia 1-1½ (x) *W.* longa, 1-1½ poll. lata. *Calyx* anguste tubulosus, valide 5-costatus dentibus 2 anticis ceteris 2-3-plo longioribus. *Corolla* tubo elongato, 1-1½ poll. longo, glaberrimo; limbo 5-lobato, lobis 2 posticis brevioribus. *Stamina* inclusa.

This is amongst an interesting collection presented to the Herbarium last June by Mr. Hannington and collected by him under very adverse circumstances. One of the most remarkable of his plants is a new Passifloracea, with all the *features* of a miniature Passion-flower, but with the floral structure of *Basaninthe*, from the known species of which genus it is very different in habit. The material unfortunately hardly suffices for a satisfactory figure.—D. OLIVER.

1. Calyx and unusually short bract 2. Corolla laid open. 3. Stamens and filament attachment. 4. Ovary. *Magnified.*

PLATE 1447.

EEIGERON ELLISII, *f. f.*

COMPOSITE, Tribe ASTEROIDEÆ.

Ellisii, *Hod. f. (sp. nov.)*; perennis, hispidulus, robustus, caudice ramoso, foliis inferioribus elongato-obovatis obtusis in petiolum angustatis pauciduntatis, superioribus sessilibus oblongis, corymbosis longe pedunculatis, pedunculis involucrique piloso-hispidulis, bractea inaequalibus subulato-lanceolatis, ligulis

angustissima glaberrimis involucre duplo longioribus erecto-patentibus, acensibus anguste oblongis minutis sericeis, pappo albo.

HAB. Kashmir, *B. Millis, Esq.* (raised from seed in Sort. Kew.)

Stem, stricta, erecta, foliosa, 1-2-pedalis, caule crassitie penne anatinaa sulcato. *Folia* utrinque asperula, radicalia (petiolo incluso) 5—7-pollicaria, laete viridia, interdum grosse pauciserrata, penninervia; superiora oblonga v. obovata, amplexicaulia. *Corymbi* 10-20-flori; pedicelli 3-5-pollicares, nudi v. foliis parvis ovatis acuminatis bracteati, robusti, patentim hispidi et glandulari. *Capitula* 1/2-3/4 poll, longa, subcampanulata; involucre 1/2 poll. In odore, an gustu, bracteis fuscis-purpureis subsquarrosis apicibus stercis tenuibus flexuosis, Flores glaberrimi. *Ligulae* involucre duplo longiores, pluriserialiter, rubro-purpurea). *Fl. disci* angusti. *Achenia* pallida, 1/2 poll, longa; pappo haud copioso 1/2 poll, longo.

This was raised at Kew from Kashmir seed, sent by R. Ellis, Esq., in 1882, and is very distinct from any hitherto described.—J. B. HOOKER.

Fig. 1, Bract of involucre. 2. Ray-flower. 3. Pappus hair, 4. Its style-arms, 5. Disk flower. 6. Its style-arms. 7. Achenium. All enlarged.

PLATE 1448.

GARDENIA STORCKII, *Oliv.*

RUBIACEAE, Tribe GARDENIEAE.

G. Storckii, *Oliver* (n. sp.). Arbor mediocris glabra, foliis ellipticis v. oblongo- v. obovato-ellipticis breviter obtuse acuminatis, basi breviter rotundatis, tenuiter coriaceis ternatione venisoso-nervosis, petiolatis, stipulis connatis coriaceis persistentibus ramulis nitentibus annulatim vaginantibus, calycis segmentis elongatis lineari-spathulatis corollae tubum aequantibus coriaceis persistentibus, corolla hypocrateriformi limbo 7-partito, segmentis ovato- v. oblongo-lanceolatis, fructu levi globoso.

HAB. Fiji, *Mr. Storck*.

Folia 3-5 poll, longa, 1-2 poll, lata, costa subtus venisque primariis utrinque 9-13 prominentibus; petiolus 1/2-1 poll, longus. *Flores* limbo solitarii brevissime pedunculati. *Calyx* segmentis 1-1 1/2 poll, longis longitudinaliter nervosis. *Corolla* limbo 2-3 poll, diam. *Fructus* 1/2-1 poll, latus, limbo calycis persistente coronatus.

Allied to *Q. laitensis*, DC. Vieillard's No. 2748, from New Caledonia, of which we have an imperfect specimen, may prove the same.—
D. OLIVEE.

Fig. 1. Fruit. 2. Same laid open. *About natural size.*

PLATE 1449.

LASIOSTELMA SANDERSON!, *OKV.*

ASCLEHADEJ., Tribe MAKS DEN iE.fi.

L. Sandersoni, *Oliver* («p. **ROV.**); herba erecta flexuosa glabra, foliis oblongo-ellipticis obtusis mucronulatis brevissime petiolatis crassiusculis venulis obscuris, floribus in una axilla 2-4 fasciculatis, pedicellatis, calyce 5-partito corolla brevior lobis lineari-lanceolatis, corolla rotata v. campanulato-rotata 5-fida, lobis ovatis obtusis reticulatis, corona exterior lobis 5 a basi bipartita, segmentis linearibus obtusiusculis gynostegio sequilongis.

HAB. Natal, *J. Sanderson*.

Herba 1-ped. *Folia* plus minusve poll, longa. *Flores* parvi, 1/4 poll. diam.; pedicelli 1/2-3/4 poll. longi.

Nearly related to this, and probably a form "with the leaves scabrid on the midrib beneath and obscurely setulose-serrulate on the margin, is Gerrard's Natal No. 1805. The leaf-margin in Mr. Sanderson's specimen is entire or obscurely setulose.—D. OLIVER.

Fig. 1. Portion of leaf-margin as in Gerrard's 1805, 2. Bud. 3. Expanded flower. 4. Gynostegium. 5. Same, outer corona laid back, 6. Segment of corona, 7. Anther. 8. Pollen. *Enlarged.*

PLATE 1450.

TILOPHORA MICROSTACHYS, *Hook.f.*

ASCLEPIADEJ., Tribe MAHSDERKE.

microstachys, *Hook.f.* (*sp. nov.*); glaberrima, foliis breviter petiolatis lineari-lanceolatis acuminatis, cymis in racemos brevissimos axillares sessiles densifloros reductis, bracteis minimis setaceis, floribus utris breviter pedicellatis, sepalis bracteato-lanceolatis corollam aequantibus, columnam tubum subovoidem, coronas processibus obscuris, tubiculis elongatis pinnatifidis apicibus longe productis.

B'AB. Tenasserim; at Moulmein, *Falconer (in Herb. Cakutt.)*.

Caules tenues, volubiles. *Folia* 2-3 poll, longa, ½-¾ poll, lata, sub-coriacea, costa valida, nervis obscuris. *Jiacemi* ½-¾ poll, longi, oblongi. *Flores* ½-¾ poll, diametro. *Corollae* lobi ovati. *Golumna* majuscula, apicibus antherarum rotundatis. *Folliculi* 2-4 poll, longi, ½-¾ poll, diam., tenuiter coriacei. *Semina* oblongo-ovoidea, ½ poll, longa, concavo-convexa, brunnea, coma ½ poll, longa.

This very singular species was communicated to me by Dr. King, from the Calcutta Herbarium, after the *Asclepiadece* had been published in the 'Flora of British India.' It belongs to the section defined at vol. iv. p. 41 of that work, as having twining branches, glabrous cymes, and coronal processes without free points.—J. D. HOOKER.

Fig. 1. Flower. 2. Stamina! column. 3. Seed. *Ml* enlarged.

ICONES PLANTAEUM.

PLATE 1451.

SPHACOPHYLLUM KIRKII, OUV.

COMPOSITE, Tribe INULOIDEAE, Sub-tribe BUPHTHALME*!

8. Kirkii, OUV. (sp. nov.); frutex v. arborescens, ramulis teretibus nodosis striatis tomentellis, foliis al. termis petiolatis ovatis acutiusculis, margine crenato-lobulatis, supra scabrido-hirtis, subtus reticulatim rugosis tomentellis, petiolis saepe lobis parvis paucisque crenatis utrinque instructis, capitulis breviter pedunculatis in fasciculis corymbiformibus terminalibus subsessilibus folia vix superantibus dispositis, involucri hemisphaerico, bracteis inaequalibus oblongis hirtis rigidulis disco vixaequilongis, paleis receptaculi conduplicatis apice saepius trifidis lobis centrali subulato longiore, radii floribus circ. 15-18 ligulis oblongo-ovalibus recurvis luteis, acheniis curvulis 5-costatis cum costis intermediis, costis basi confluentibus apice disco angustissimo connatis.

AB. Dzomba, Zambesia, 6-7,000 ft. (Sept., 1859), *Sir J. Kirk*.

AB. *ramuli* crassitie pennae anserinae, demum glabrati. *Folia* 1-2 poll. longae; petiolus 1/2 poll, longus. *Capitula* 1 poll, diam., in corymbis (5-)cephalis congesta.

The only hesitation which I feel in referring this plant to *Sphacopphyllum* arises from the reduction of the short coroniform pappus characteristic of previously known species of the genus, to a mere rim or marginal annulus. In other respects the plant approaches *Anisopappus africanus*, O & H., in which, however, there is an evident,

though slightly irregular pappus. In *Sphacophyllum Bojeri*, Benth. (Ic. Plant 1135), the pappus is reduced almost, but not quite, to the condition here figured.—D. OLIVER.

Fig. 1. Scale of involucre. 2. Ray-floret. 3. Disk-floret and palea. 4. Palea of receptacle. 5. Stamens. 6. Style-branches. 7. Achene. *All enlarged.*

PLATE 1452.

ALEPIDEA WOODII, *Oliv.*

UMBELLIFERE, Tribe SANICULEJ.

A. Woodii, *Oliv.* (*jsp. TIOV.*) ; herba \-\\ ped., foliis radicalibus petiolatis oblongo-obianceolatis obtusis setoso-serratis glabris, caulinis sessilibus amplexicaulibus acutis acuminatisve, capitulis parvis corymbosopaniculatis, bracteis 10 ad medium coalitis apicibus liberis o vat is deltoideisve alternatim miuoribus, fructibus sublaevibus longitudinaliter obscure costatis, limbo calycino obtuse lobato.

HAB. Natal, near Byrne; alt. 3,000 ft. (November, 1845), *J. M. Wood.*

Folia radicalia cum petiolo 3-4 poll, longa, 1-1 § poll. lata. *Capitula* 3-4 lin. lata. *Flores* albi.

Allied to *A. amatymbica*, E and Z., but the small involucre very different, the bracts of the latter species being free two-thirds or three-quarters of their length, and the free apices lanceolate.—D. OLIVE*:

Fig. 1. Capitulum and involucre. 2. Staminate flower. 3. Pistillate flower. 4. Tr. Obverse section of mericarp. *Enlarged.*

PLATE 1453.

OTIOPHORA CUPHEOIDES, . "

RUBIACEJE, Tribe ANTHOSPERME^.

O. cupheoides, *N. E. Br. (sp. nov.)* ; suffmtex erectus, caule bn. hirsuto, foliis brevissime pctiolatis ovato-lanceolatis acutiusculis c. pla-bratis, margine revolutis, racemis torminaiibus densis brevibus, calj 'ci- tubo sub-totncntoso, lobo foliaceo unico Janceolato glabro setulc iso.

ciliato corolla; tabnm aequante, limbo corollas quinquefido lobis anguste lanceolatis.

HAB. Transvaal, Houtbosch, *Dr. A. Rehmavn.*

Oaulis pedalis, inferne nudus. *Folia* semipollicaria, glabra, costa supra subtusque pilosula; stipulse 2-5-fidce, parvre. *Bacemi* subpollicares; pedicelli brevissimi, fructiferi **oapBulam** subaeqnantes. *Calyx* lobo foliaceo *2-3 lin. longo. *Corolla* 2 lin. longa, lobi tubo panllo breviora,—N. E. BEOWS.

Fig. 1. Flower. 2. Corolla laid open. 3 and 4. Stamen*. 5. Style. 6. Fruit. 7. Vertical section of fruit. *Allenlargcd.*

PLATE 1454.

CUSSONIA GERRARDI, *See,*

A&ILUOut.

0. Gerrardi, *Seem. Rev. 11ederaceæ*, p. 74; arbnsnla glabra, foliis palmatifidis basi cordutis, lobis deltoideis acatis v. acutnnutifi **ham-** q m titter glandnoso-deiitatis v. serratis, floribns nml>ellatis am bell is pedunculatis racemosis v. racemosim panicalatis, fructibus lateraliter **liter** *COE* ipressis obovatis lapvibua longitudinaliter leviter costatis.—*Panax Qerrardi*, Harv. Gen. So. Air. PL, ed. ii. p. 147.

II A i. Natal, at Ismont, *Gerr<d>*. N126 4; /. *M. Wood*, (Nov. 1879).

^Via 3-6 poll, longa et lata, snbtus in axillis nervorum ad apicem petjioli interdum barbato-tomentflis; petiolns 2^5 \>o\|. longns. *Racemi* nednnculati, axillares v. terminilef, ln-ack-is deltoideis squa- **Duf'oraubaB; unbeUia** mltifloris **gltbria**, bracteois minutis; pedicellis in »ovario continuis. *Calyx* limbo breviter 5-deuUto, dentibns late dell x>ideo-ovatis. *Petala* ovata, leviter imbricata. *Sti/U* 2, divaricati, denjium reenrvi, *persistentes*. *Fructus* (vix matuiatus) t Ho. longus.

I, think a very doubtful member of the genus *Otusoaitt*. The p(ctals are , imbricate in aestivation, and the ovary and fruit much compressed late rally—D. OLIVER.

Fig. T. 1. Flower. 2-3/ Stamens. 4. Owy, di^lt, and style*. 5. Longitudinal seeti **On** of same. fi. Immature iruit. 7. Young n-ed. *E*lar,ed.*

PLATE 1455.

AGBOSTIS SIMULANS, *Hem si.*

GRAMINEA, Tribe AOROSTIDEA.

A. simulans, *Hemsl.* (*p. nov.); *A. albce* var. *stoloniform* simillima, differt ligula brevior, ramulis inflorescenti© divaricatis glumis multo minus scariosis, etc.

HAB. St. Helena, *Burchell*, 1810; *Hooker*, 1840; *Melliss*, 1863.

This Grass so strongly resembles the stoloniferous variety of *Agrostis alba* in many particulars that it is difficult to draw up a description that would not include the two. The loose inflorescence, with nearly horizontal branches, is the most striking character of *A. simulans*, and the glumes are almost wholly opaque. These differences may be due to local causes; still the late General Munro has marked it 'good species,' and there is nothing among the numerous specimens at Kew, referred to *A. alba*, with which it agrees except in a general way. The only St. Helena plant previously ascribed to *Agrostis* is *A. purpurascens*, Roxb., which is doubtless *Sporobolus indicus*.—W. B. HEMSLEY.

Fig. 1. Upper part of sheath and ligule. 2. Spikelet. 3. Flowering glume. 4. Pajea. 5. Pistil. *All enlarged.*

PLATE 1456.

SENECIO BOLUSII, *Oliv.*

COMPOSITE, Tribe SENECTIONIDEA.

S. Bolusii, *Oliv.* (*sp. nov.*); perennis, glaber, caule e basi decumbraite erecto herbaceo folioso nunc simplici sub-monocephalo nunc in ram-lilis 3-4 monocephalos elongatos apicediviso, foliis angustelineari-lanceolfatis acutis basi in petiolum longiuscule attenuatis denticulatis v. Jub-integris glabris axillis piloso-barbatis, pedunculis remote squaraulosis, capitulis heterogamis majusculis multifloris, involucro 12-15-pHylo ecalyculato disco »quilongo, squamis dorso leviter oostatis acumiitatis alternis late marginatis, achaniis disci papilloso-pilosulis et radii glabris longitudinaliter 5-7-jugatis, jugis in sectione oblique tortis.

HAB. Mitchell's Pass, near Geres, South Africa, *H. Bolus*, 1882, (No. 5321).

Herba 1-2-pedalis. *Caulis* decumbens, axillis foliorum exceptis glaber, internodiis brevibus leviter angulatis. *Folia* coriacea cum petiolo serai-amplexicaule 3-4 poll, longa, 3-4[^] lin. lata. *Capitula* longe pedunculata, pedunculis f-1[^] ped. longis, squamulis pedunculi lineari-acuminatis herbaceis ½-½ poll, longis; involucri poll, lato glabro, squamis liberis crassiusculis 6-7 lin. longis; floribus radii paucis ligulatis, ligulis late obovato-ellipticis 4-6 lin. longis, achaeniis glabris 2 lin. longis; floribus disci tubulosis acute 5-dentatis; stylo bifido raris truncatis penicillato-papilloso; achaeniis papilloso-hirtis, pappo copioso albo barbellato.

This plant has the *fades* of an *Othonna* or *Othonnopsis*, but as the disk florets appear to be fertile and their styles bifid, I suppose it must be grouped with *Senecio othonniflorus*, DC., and its allies. The very remarkable 5 to 7 prominent jug^o of the achenes would appear to be simply an extreme development of the longitudinal ridges, often more or less marked, of the achenes of *Senecio* and its allies.—D. OLIVER.

Fig. 1. Ray-floret. 2. Seta of pappus. 3. Achene. 4. Disk floret. 5. Stamen. 6. Style-branches. 7. Achene. 8. Transverse section of same. *All enlarged.*

PLATE 1457.

SONERILA FORDII, *Oliv.*

MELASTOMACEÆ, Tribe SONERILEJE.

{}. *Fordii*, *Oliv. (sp. nov.)*; herba 1-2-pedalis, foliis petiolatis ovato-ellipticis acuminatis, basi anguste cordatis, dentibus incurvis serratis quinupli-nerviis, cymis terminalibus pedunculatis bracteatis, bracteis alabastris fiquilongis tenuiter membranaceis coloratis obovatis late rotundatisve margine glanduloso-denticulatis caducis, floribus tetrameis, calycis lobis tenuibus ovatis petalis ovatis apice setuloso-apiculatis brevioribus, staminibus 8 inaequalibus oppositipetalis brevioribus anteris (luteis) oblongo-lanceolatis 1-porosis obtusiusculis, oppositiseptilis antheris elongatis leviter incurvatis 1-porosis basi obtuse bilobis, ovario squamis membranaceis late rotundatis coronato.

HAB. Lo Fan Shan, South China, 3,100 ft., *O. Ford*, 1883 (No. 95).

J-folia, 3-4 poll, longa, 1J-2 poll, lata, glabra v. supra setulis minutis utrinque 1-2-seriatis intramarginalibus. *Calyx* in pedicellum angustatus, sparse glandulosus, glandulis tenuibus clavatis.

I leave this plant in *Sonerila*, notwithstanding the tetramerous symmetry of its flowers and dimorphic biseriate stamens. It is allied to that section of the genus to which *S. heterostemon*, Naud. and *S. Bemoni*, Hk. f., belong.—D. OLIVER.

Fig. 1. Calyx-lobe. 2. Petal. 3. Calyx-tube laid open. 4. Sepal-opposed stamen. 5-6. Back and front view of petal-opposed stamen. *All enlarged.*

PLATE 1458.

PSEUDOCARAPA CHAMPIONII, *Ihnisl.*

MELIACEJE.

Pseudocarapa, *Hemsl. (gen. nov.)*; *Calyx* brevis, irregulariter 4 dentatus, dentibus latis. *Petala* 4, libera, valvata vel apice leviter imbricata. *Tubus stamineus* cylindriens, crenulatus; anther^o ssepius 9, uniseriatae, inclusre. *Discus* carnosus, obsolete lobatus, ovarium semi-includens. *Ovarium* 4-loculare, 4-costatum; stylus tubum stamineum sequans, stigmatate parvo snbeapitato; ovula in loenlis 2, collatenxlia, pendnla. *Fructus* drnpaceus pyriformis vel subglobosus, abortu paaci-spermus, ut videtur tarde irregulariter dehiscens; semina exa'' - minosa, testa nigra nitida, arillo parvo; cotyledones crass^o, carne LJD, radicala minuta.—*Arbor. Folia paripinnata. Flores mediocres, racem^oosi.*

P. Championii, *Hemsl. (Species unica)*. *Dysoxylon Championii*, *Hook f. et T. in Thwaites Enum. Zeylan. Plant p. 61*; *Amoora Championii*, *Hook.f. in Benth. et Hook. Gen. Pl. i. p. 333.*

HAB. Ceylon, Central Province np to an elevation of 4,000 feet, *Walker, Thwaites, 1193, 2504.*

This genus combines some of the characters of various genera of the *Trichiliece*, but is perhaps, on the whole, nearest *Dysoxylum*. In foliage it so closely resembles *Garapa (Xylocarpus)* that Kurz (*Journ. Asiatic Soc. xxxix. 2 (1870), p. 72*) places it in that genus.—W. B. HEMSLEY.

Fig. 1. Bud. 2. Staminal tube. 3. Pistil and disk. 4. Transverse section of ovary. 5. Fruit. 6. Seed. 7. Cotyledon, transverse section. *All enlarged, except fruit.*

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PLATE 1459.

MENODORA HETEROPHYLLA, *Moric.*

OLEACEÆ, Tribe JASMINES.

¹**M. heterophylla**, *Morinand*; *DO. Prodr.* viii. 316 (*sp. africanum*); fruticulus 4-5-poll., caulibus costatis sparse papilloso-scabridis, foliis alternis breviter latiuscule petiolatis v. subsessilibus in costis tribus decurrentibus tripartitis, lobo medio longiore sæpe trifido, lobis lanceolatis v. linearilanceolatis acutis, calyce profunde 10-fido y. 10-partito ejusdem segmentis linearibus scaberulis, corollas lobis obovato-oblongis v. -ellipticis obtusis interdum breviter apiculatis.

HAB. Transvaal, Matebe Valley, *Dr. Holub* (also in North Mexico and Texas).

Although we have no fruiting specimens from South Africa, yet there seems no ground to doubt the identity of this Transvaal plant, which my colleague, Mr. Brown, finds amongst the interesting collections presented to the Royal Gardens by Dr. Holub, the determination of which has recently occupied him, with North American specimens of which we have an ample series.

The occurrence of this little genus in regions so far apart as Mexico, the Andes of Mendoza, and South Africa, is not new to botanists, and now the interest of the case is heightened by Dr. Holub's discovery of a second South African species actually conspecific with a North American one. The old Cape species differs from this in its bipinnatipartite, narrowly segmented, almost muscoid leaves. It is figured in *Ic. Plant*, t. 586.—D. OLIVER.

ftg. 1. Leaf. 2. Calyx. 3. Corolla laid open. 4. Pistil. *Enlarged.*

PLATE 1460.

PRISMATOCARPUS TENELLUS, *Oliv.*

CAMPANULACEÆ;

P. tenellus, *Oliv. (sp. nov.)*; herba glabra caulibus gracillimis divisis 1-3-ped. 2-3-chotome divisis 4-angulatis parce foliatis, foliis oppositis brevibus linearibus acutis remotis, floribus gracile pedicellatis laxè paniculatis, pedunculis patentibus, calycis lobis subulatis, *

corolla infundibulari 5-fida lobis ovatis, capsula teretibus spiraliter tortis glabris, seminibus oblongis minute tuberculatis.

HAB. In montibus supra Worcester, Cape of Good Hope, Dr. A. Behmatm (No. 2477).

Folia 2-3 lin. longa. *Pediceles* divaricati, 3-5 lin. longi. *Corolla* 2-3 lin. longa, limbo calycis 2-3-plo longior. *Capsula* \ poll, longa.

A very slender herb, sparingly di-trichotomously branched below, with widely divaricate lax inflorescence, remarkable in the genus from its strictly opposite leaves, though in distant pairs, and the spiral torsion of the capsule, as in a small-fruited *Streptocarpus*.—D. OLIVER.

Fig. 1. Flower. 2. Stamens. 3. Stigmas. 4. Fruit. 5. Seed. All enlarged.

PLATE 1461.

DICOMA ARGYROPHYLLA, Oliv.

COMPOSITE, Tribe MUTISUCEJB.

D. (§ Pterocoma) *argyrophylla*, Oliv. (*sp. nov.*); caulis pediculis erectis simplicibus v. basin versus parce ramosis, ramis floriferis ascendentibus dense foliatis, foliis dimorphis, superioribus (bracteis pedunculatis) laxe irabrieatis vel inferne patentibus rigidiusculis lanceolatis spinoso-acuminatis integris minute ciliolatis pagina glabris subius splendens, foliis primordialibus paucis oblanceolatis v. obovatis obtusis acute apiculatis v. acuminatis, basi in petiolum angustatis, membranaceis supra glabris subtus tenuiter cano-tomentosis, capitulis majusculis solitariis, terminalibus sessilibus bracteis superioribus involucris discoideis homogamis, achaeniis dense pilosis pappo copioso plerumque plumoso coronatis.

HAB. Natal, Gerrard (No. 1906); 2000 to 2500 ft., grassy hills between Umlaas and Camperdown, M. Wood (No. 1825); Farkk p, Dr. Bekmann (No. 7656).

Folia inferiora membranacea, 2-3 poll, longa, 1-1 poll, lata; superiora gradatim majora, intermedia 1-1 poll, longa, 1-1 poll, lata. *Capitula* 1-1 poll, lata, bracteis longioribus involucrantibus brevior. »"

The erect flowering branches, often a foot in length, are densely clothed with rigid spinescent leaves (more strictly bracts) as to resemble twigs of *Araucariu imbricata* or *A. Bidtvillii*.—D. OLIVER.

Fig. 1, Floret. 2. Seta of pappus. 3. Stamens. 4. Apex of style. All enlarged.

PLATE 1462.

EUPATOBIMUM BALLII, *Oliv.*

COMPOSITE, Tribe EUPATORIACEJE.

E. Ballii, *Oliv.* (*sp. nov.*); fruticosum, ramulis glanduloso-tomentellis, foliis lineari-ovalibus utrinque attenuatis obscure crenulatis margine vervatione plus minus revoluta supra rugulosis puberulo-hirtellis subtus tomentellis areolato-reticulatis, capitulis multifloris majusculis pedunculatis in cymis pleiocephalis terminalibus dispositis, bracteis involucri pluriseriatis exterioribus ovato-ellipticis acutis striatis parce piloso-tomentellis, interioribus oblongo- v. lineari-lanceolatis acuminatis disco paullo brevioribus, acheniis gracilibus 5-costatis glabris inferne angustatis, pappo uniseriato setaceo.

HAB. Near Chida, Peruvian Andes, alt. 12-13,000 ft., *J. Ball* (1882).

Folia 1-2 poll, longa, 3-5 lin. lata (in ramulis floriferis) ; petiolus brevis. *Capitula* plus minus 1 poll. diam.; involucre campanulato bracteis rigidiusculis imbricatis.—D. OLIVEE.

Fig. 1. Floret 2. Seta of pappus. 3. Anther. 4. Style-branches. *All enlarged.*

PLATE 1463.

LOPHIOCARPUS BURCHELLII, *Hook.f.*

CHENOPODIACEJE, Tribe CHENOPODIEJE.

Lophiocarpus Burchellii, *Hook. f. in Gen. PL* iii. 50; fruticosus glaberrimus, foliis acicularibus, spicis filiformibus, floribus minutis, perianthii segmentis 5 oblongis obtusis, staminibus 4, 3 segmentis oppositis quarto segmento opposito, ovario subgloboso, stigmatibus 4 per paria dispositis filiformibus, fructu late obovoideo paullo compresso costato.

HAB. South Africa, Klaraarwater, *Burchell* (No. 1934) ; Bechuana country, *Dr. Em. Holub.*

Fruticulus ramosus, ramis ramulisque teretibus. *Folia* sparsa et

fasciculata, ^-£ poll, longa, sessilia, teretia, subacuta, sicca flava. *Spicce* 2-4 poll, longa. *Fhres* -^ poll, diam., fasciculati, sessiles; bractee floribus breviores, ovate persistentes; bracteolae obtuse 3-lobae. *Perianthii* segmenta 5, exteriora minora, suberecta, incurva. *Stamina* 4-5, situ subvaria, unico (ut videtur semper) segmento exteriori perianthii opposite, cetera segmentis alterna v. subalterna; filamentis perianthio longioribus filiformibus; antherse parviff, extrorsum dehiscentes. *Ovarium* ovoideum, substipitatum, stigmatibus per paria divaricatis. *Fructus* subglobosus, paullo compressus, perianthii segmentis longior, 8-costatus. *Semen* erectum, obovoideum, compressum; embryo fere annularis, radícula infera.

The genus *Lophiocarpus* of Turczanimow (*Wallinia*, *Moq. in DC. ProdW.* xii. pt. ii. 143) has hitherto consisted of two species, both South African,* of which the first known, *L. polystachyus*, has been collected by Drege alone, and is described as having 5 perianth-segments and as many stamens, characters repeated in the *Oenera Plantarum*. In preparing the plate of the second species for this work, the artist, Miss Smith, pointed out to me that 4 was a prevalent number of its stamens, which induced me to examine many flowers of both species, with the result that 4 is a common number in both, and that they are irregularly inserted in both; as also that 4 unequal perianth-segments with 3 stamens occur in some of the upper flowers, at any rate of *L. polystachyus*. In both species, indeed, one segment is always smaller (and external, I think) to the others. Then, as regards the positions of the stamens, as a rule they are not symmetrically placed, one being always opposite the small perianth-segment, while the other three) or four are approximately alternate with the other segments. This strong tendency to alternation of the staminal with the perianthial whorls, raises the question whether *Lophiocarpus* should not be transferred to *Phytolaccaceae*, an order of which only two species (*Phytolacca str'cta*, Hoffm., and *P. abyssinica*) have been found in South Africa. |i it can be pointed out that there is any genus of that order to which it was at all allied, or even a tribe into which it could be placed, I should recommend its transference. As it is, however, it differs in most important characters from all those tribes—from *Rivineae* in the embryo; from *Euphytolaccem* in the solitary carpel with free stigmas; and from the Australian *Gyrostenioneae* in the bisexual flowers and perianth. Under these circumstances *Lophiocarpus* will perhaps continue to be regarded as an anomalous member of the tribe *Ghenopodiecn* of *Ch[enopodiaceoB]*, with which it has most characters in common, whilst differing

* To these must now be added a fourth, which invalidates the generic character*[†] IT in being annual, in having minute erect stigmas and tubercled fruits without ribs** It may be thus characterised :—

L. tenuissimus, *Hook. f. (nov. sp.)*; annua, foliis filiformibus, spicis gracilissimis, floribus minimis, perianthii segmentis valde inaequalibus, stigmatibus minutis erectis, fructu obovoideo muricato. *Tab.* 1463, fig. 10, 11.

HAB. The Transvaal, at Pretoria, *Dr. A. Behmann* (Herb. No. 4018).

in the abnormal position of the stamens relatively to the perianth-segments.—J. D. BOOKER.

Fig. 1. Diagram of flower. 2. Top of spike. 3. Flower bract and bracteoles. 4. Perianth laid open. 5. Ovary. 6. Fruit and perianth. 7. Fruit. 8. Seed. 9. Embryo. *All enlarged.*

PLATE 1464.

LORANTHUS RXJBROVIRIDIS, *Oliv.*

LORANTHACEÆ.

L. rubroviridis, *Oliv. (sp. nov.)*; ramulis tomentellis, foliis lanceolatis ovato- v. oblongo-lanceolatis obtuse acuminatis basi cuneatim in petiolo angustatis coriaceis trinque scabrido-hirtellis, floribus umbellatis, umbellis pedunculatis axillaribus 15-18-floris bracteis ovalibus kerbaceis involucratis, corolla fere a basi fissa 5-loba lobis involutis extus hirtellis, filamentis apicem versus leviter incrassatis apice geniculatim et abrupte constrictis, antheris oblongis apice connectivo obtuse et brevissime producto coronatis.

HAB. Zambesi, opposite Senna, Sir J. Kirk (1859, the plant figured). A variety of the same with much shorter bracts, Bechuana country, between Nagatatollo and Henry's-pan, *Dr. Holub.*

Ramuli annotini teretes, lenticellis tuberculatis rugulosi. *Folia* 3-4 poll, longa, 1-1½ poll, lata; petioli 3-5 lin. longus. *Pedunculi* axillares, ½ poll, longi, tomentelli; pedicelli 1-1½ lin. longi; bractee ovales v. oblongo-ovales, 4-7 lin. longae; bracteolae 0. *Calyx* limbo angustisiroo subintegro. *Corolla* rubra, ½ poll, longa.—D. OLIVER.

Fig. 1. Bud and subtending bract. 2. Flower. 3-5. Stamens. 6. Ovary. *All enlarged.*

PLATE 1465.

ANTHOPTERUS WARDII, *Ball.*

VACCINIACEÆ.

^1. Wardii, *Ball (sp. nov.)*; suffrutex epiphytiens, glaberrimus, foliis alternis ovatis obtusiusculis subsessilibus basi rotundatis vel subcordatis, marginibus integerrime subrevolutis, subtus elevatis nervosis, floribus 5-3 in racemo brevi subcorymbosis, pedunculis fere pollicaribus basi

bracteatis nudis, calyce cum pedunculo pulchre coccineo sub anthesi obconico late alato, alis in pedunculum decurrentibus, segmentis liberis ovato-triangularibus tubo subsequilongis venosis, corolla nuceolata quinque-alata saturate rubra fauce constricto breviter dentata, filamentis connatis.

HAB. On trunks of trees in the forest near Buenaventura, coast of Columbia, *Ball*.

This beautiful plant, conspicuous from a distance owing to the brilliant red colour of the inflorescence, was obtained for me by my friend, Richard Ward, Esq., to whose assistance in collecting plants during a short excursion in the Peruvian Andes I feel much indebted. It was seen on the trunk of a tree about 40 feet high. It is widely different from *A. racemosus*, Hook., figured at tab. 243, vol. ill. of this work, and still more so from *A. mucronatus*, Benth., PL Hartw. p. 221. It is, however, nearly allied to a plant collected in Peru by Maclean, of which there is an unnamed specimen in the Kew Herbarium. Another specimen in the same collection from New Granada—No. 2716 of Triana's collection—is probably referable to the same species as Maclean's plant, but is in bad condition and scarcely determinable. In both the peduncles are much shorter than in the Buenaventura specimens; the wings of the calyx are less broad, and apparently not decurrent on the peduncle. Neither do they appear to be of the same brilliant red colour which the specimens have continued to communicate to the paper long after they have been thoroughly dry.—J. BALL.

Fig. 1. Corolla. 2, 3. Stamens, front and back. 4. Vertical section of ovary. *Enlarged.*

PLATE 1466.

OIANTHUS BEDDOMEI, *Hook. /.*

ASCLEPIADACEÆ, Tribe MARSDENIEÆ.

Oianthus Beddomei, *Hook./, in FL Brit. hid. iv. 49*; frutex volubilis, ramulis petiolis pedicellisque patentim tomentosis, foliis longe petiolatis late ovatis acuminatis basi rotundatis v. subcordatis, nervis preberrime reticulatis, petiolo gracili, cymis brevissime pedunculatis multifloris, sepalis lanceolatis acuminatis, corolla disciformi, lobis centro disci minutis.

Deccan Peninsula; in the Beigvor forests, Wynaad, *Col. Beddome*.
Ramuli graciles. *Folia* 4-5 poll, longa, 2-2[^] poll, lata, brevissimiiv 3 in

petiolum 2-3-pollicarem angustata. *Cymce* axillares, 10-12-flores; pedunculo robusto $\frac{1}{2}$ — $\frac{1}{3}$ poll, longo, bracteolis minutis subulatis aucto, pedicellis $\frac{1}{2}$ — $\frac{1}{3}$ poll, longis. *Sepala* ciliata. *Corolla* $\frac{1}{2}$ poll, diam., orbicularis, depressissima, peltiformis; lobiparvi, late triangulares, disco reflexi. *Columnina* minuta, depressa, coronas lobis late ovatis acuminatis, antherarum apicibus brevibus inflexis obtusis *Stigma* depresso-pentagonum.

In the 'Flora of British India' I adopted the unusual course of naming and describing a new plant from a drawing only, for the justification of which course I here produce a facsimile of the material, the specimens of which were, as Colonel Beddome informs me, unfortunately lost. This drawing, prepared evidently with great care under Colonel Beddome's eye, represents a most curious plant, undoubtedly referable to the remarkable genus *Oiantkus* of Bentham, which, as I have stated in the 'Flora,' may possibly prove to consist of abnormally-flowered forms of *Heterostemma*, Wight & Arn.—J. D. HOOKER.

Fig. 1. Cyme. 2. Back view of flower. 3. Corona and its processes. 4. Corolla seen from above. 5. Pollen-masses. 6. Calyx and ovary. 7. Vertical section of ovary. *All enlarged.*

PLATE 1467.

ACEOTOME INFLATA, *Benth.*

LABIAT;B, Tribe STACHYDE-E.

ped.
versk* inflata, *Benth. in DC. Prodr.* xii. 436; herbacea, erecta, villosolitenentosa, foliis petiolatis ovato-lanceolatis a medio ad apicem late serratis, verticillastris multifloris densis, bracteis anguste linearibus pilosis floribus paullo brevioribus, calycis dentibus 5 deltoideo-subulatis.

HAB. Zaurebergen, *Btvrhe*; Transvaal and Bechuana country, *Dr. Hoiub.*

Folia 1[^]-2 poll, longa, $\frac{1}{2}$ —1 poll, lata, utrinque piloso-hirtella; petiolus $\frac{3}{4}$ —1 poll, longus. *Calyx* fructiferus tubulosus, basi turbinatus, $\frac{1}{2}$ poll, longus. *Corolla* tubum calycis aequans, labio superiore erecto obtuse bidentato, inferiore trilobato, lobo centrali majore rotundato aatice crenulato. *Filamenta* pilosa; antheras loculis divaricatis confluentibus.—D. OLIVER.

Fig. 1. Flower. 2. Portion of tube of corolla with stamens. 3. Ovary and style. 4. Fruiting calyx. 6. Nut. *Enlarged.*

PLATE 1468.

GOMPHOSTEMMA CHINENSE, *Oliv.*

LABIATE, Tribe PRASIEÆ.

G. chinense, *Oliv. (jsp. nov.)*; stellato-tomentellum, caule erecto, foliis ellipticis v. ovato-ellipticis obtusis basi cuneatis rotundatisve longiuscule petiolatis, cymis plurifloris e basi caulis quasi radicalibus pedunculatis bracteatis, bracteis calycem sequantibus lanceolatis acuminatis intus glabratis extus stellato-tomentosis, calyce infundibulari 5-fido lobis lanceolatis acuminatis, corollæ tubo elongato exserto gracili euperne leviter curvato infundibulari-dilatato ore bilabiato, labio superiore concavo subintegro inferiore trilobato, staminibus inclusis.

HAB. Amoy—interior, *Swinhoe*: Lo-fan-shan Mts., East River, *Rev. M. Faber*.

Stem 1-2-pedalis obtuse tetragonus v. inferne subteres incano-tomentosus. *Folia* membranacea undulato-denticulata supra stellato-pubescentia cum pilis simplicibus sparsis, subtus reticulata cano-pubescentia. *Calyx* 4-6-lin. longa, steliato-pubescentia. *Corolla* 2 poll. longa, glabrata v. puberula.—The specimen was communicated by Mr. Ford of the Hong Kong Gardens. A second Chinese species (*G. insuave*) is described by Hance (*Lond. Journ. Bot.*, 1884, p. 2ft.)—D. OLIVER.

Fig. 1. Fragment of leaf showing stellate and scattered simple hairs of upper surface. 2. Calyx and subtending bract. 3-4. Stamens. 6. Ovary.

PLATE 1469.

GALIXTUM CRYPTANTHUM, *Hemsl.*

RUBIACEÆ, Tribe GALIEJÆ.

G. cryptanthum, *Hemsl. (sp. nov.)*; perenne? sparse mollitei^{que} hirsutum, caulibus angulatis gracilibus, foliis breviter petiolatis, ternatis ovato-oblongis vel obovatis minute apiculatis trinerviis, floribus hermaphroditis minutissimis umbellulatis, umbellulis paucifloris : inaequaliter bibracteatis pedunculatis, pedunculis folium sa>pins s;nb-lequantibnn, pedicellis fructu longioribus vel brevioribus, corollæ tubo

tubo brevissimo, lobis ovatis subobtusis, fructu glabro punctulato, mericarpiis oblongo-ovoideis. *G. vernnm*, *Hook. l. in Fl. Brit. Ind. iii.* p. 209, non Scop. •

HAB. Western Himalaya: Chumba, 9000 feet, *O. B. Clarke*; Jumnotri, 10-11,000 feet, *Duthie*.

Apparently a very distinct species, in inflorescence like *G. capitatum*. The name *cryptanthum* is given to it because * the minute flowers develop with the leaves, and are only found in the uppermost whorl or two. It was referred, in the 'Flora of British India,' from a very imperfect specimen, to *G. venum*, of which it has the habit and foliage.—**W. B. HEMSLEY.**

Fig. 1. A flower seen from above. 2. A flower seen from the side. 3. A pistil. 4. An umbel of fruit. 5. A fruit. 6. Vertical section of the same. *All the figures much enlarged.*

PLATE 1470.

APONOGETON HOLUBII, *Oliv.*

NAIADACEJE, Tribe APONOGETONE-E.

A. Holubii, *Oliv. (sp. nov.)*; foliis oblongo-ellipticis apice breviter obtusiuscule acutatis basi rotundatis anguste cordatis petiolis elongatis, pedunculis crassiusculis, spatha caduca, spadice bipartito ramis apicem versus attenuatis multifloris, floribus hermaphroditis dense unilateraliter spicatis, bracteolis lateralibus 2 oblongis v. obovato-oblongis obtusis subasqualibus floribus paullo brevioribus, staminibus circ. 6, carpellis 3-6, seminibus 6-8 oblongis teretibus longitudinaliter 6-8 costatis.

HAB. Bechuana country, Henry's Pan, *Dr. B. Holub*.

Folia 5 poll, longa, 2 poll, lata, papyraceo-membranacea, venulis obscuris. *Spadix* ramis floriferis 2| poll, longis, fructiferis accrescentibus 3-3^ poll, longis. *Flores* dense spicati. *Stamina* filamentis anguste lineari-subulatis; antheris rotundato-ellipticis inappendiculatis.—**D. OLIVER.**

Fig. 1. Two flowers and a portion of spadix. 2-3. Bracteolae (perianth-leaves?). 4. Carpels. 5. Ovary, laid open. 6. Fruit-carpel. 7. Seed. 8. Embryo. *All enlarged.*

PLATE 1471.

A. APONOGETON NATALENSE, *Oliv.*B. AFONOGETON BEHMANNI, *Oliv.*

NIADACEJE, Tribe APONOQETONE^.

A. natalense, *Oliv. (sp. nov.)*; foliis elongato- v. lineari-ovalibus acutis acuminatisve lamina utrinque angustata, spatha decidua, spadice bipartito ramis multifloris, floribus \$ confertis 3-2-bracteolatis, bracteolis lineari-oblongis obtusis inaequalibus y. subsequibus, staminibus 6-7, antheris late rotundatis apice basique emarginatis, carpellis saepe 3.

HAB. Natal, York, *McKen*; between Karkloof and Umgeni, *Dr. Rehmann (No. 7429)*.

Folia 3-6 poll, longa, ^—\$ poll. lata. *Spadix* bifurcatus, ramis §—IJ poll, longis.—D. OLIVER.

A. Rehmanni, *Oliv. (sp. nov.)*, foliis oblongo-ovalibus acutiusculis subapiculatisve, spadice bipartite ramis dense floriferis, floribus dioicis (\$ tantam notis), bracteolis ovato-oblongis acutiusculis, carpellis 8-9 paniculatis fractiferis mono- (v. di-) spermis, seminibus oblongis at videtur ecostatis.

HAB. Transvaal, Bosh veld, *Dr. Rehmann (No. 4835)*.

Folia 1-1f poll, longa, 3-5 lin. lata. *Spadix* bifurcatus, ramis circ. | poll, longis.—D. OLIVER.

A. Fig. 1. Flower and bracteoles. 2. Carpel. 3. Ovary, laid open. 4. Fruit-carpel. 5. Seed.

B. Fig. 1. Flower and bracteoles. 2. Carpel. 3. Fruit-carpel. 4. Seed. 5. Embryo. *All enlarged.*

PLATE 1472

GOMPHOSTIGMA INCANUM, *Oliv.*

LOGANIACEAE.

G. incanum, *Oliv. (sp. nov.)**; suffrutex incanus divaricato-ramosus, foliis oppositis et in axillis congestis parvis ellipticis ovalibusve dense reticulato-lepidotis, racemis terminalibus, floribus oppositis glabris bracteatis, bracteis late ovatis pedicello brevioribus, calyce 4-fido lobis ovatis

obtusis tubo corollae duplo brevioribus, corolla 4-fida lobis obovatis integris, staminibus exsertis antheris deinde recurvis.

HAB. South Africa, Colesberg, near the Orange River, *W. KnoeL Frutex* divaricatus, ut videtur \wedge -1-pedalis. *Folia* 1-2 lin. longa. *Flores* diam. fere \wedge poll. *Gapsula* (immatura) exserta, ovoidea, retusa v. emarginata.

Very different in appearance from the old species, *G. scoparioides*, Turcz., with linear leaves and virgate habit.—D. OLIVER.

Fig. 1. Lepidote squamae of leaves. 2. Bud. 3. Corolla laid open. 4-5. Anther, back and front, b. Pistil. 7. Transverse section of ovary. 8 Young fruit. All enlarged.

PLATE 1473.

NORTHEA SEYCHELLANA.

SAPOTACEJ.

Northea, *Hook. f. (gen. nov.)*. *Calyx* profunde 6-lobns, lobis 2-seriatis, 3-4 exterioribus majoribus ovatis obtusis, 2-3 interioribus trulliformibus. *Corolla* tubuloso-campanulata, 6-loba, lobis integris imbricatis obtusis brevissime unguiculatis basi utrinque appendiculis minntis laceris setiformibusve auctis. *Stamina* 6, lobis corolla opposita, filamentis latinscnlis compressis apicibus recurvis; anthero dorsifixiae, ovato-oblongae, obtusse, rimis lateralibus dehiscentes; staminodia 0. *Ovarium* conico-ovoideum, angulatum, villosum, in stylum elongatum glabrum attenuatum, 6-loculare, stigmatate punctiformi. *Frutex* magnus. *Semina* magna, oviformia, testa crasse Crustacea nitida, hilo maximo deraso osseo; embryo amygdalinus, exalbuminosus.—*Arbor data, ramulis crassissimis nodosis. Folia hreviter crasse petiolata, anguste oblonga, obtusa v. retusa, crasse coriacea, supra nitidapilisfurcatis \wedge suhtus ferrugine—tumentella, costa crassa, nereis creherrimis tenuissimis horizontalibus. Flores ad nodos ramulorum fasciculati, ehracteati et ebracteolati, hreviter pedicellati, unacum pedicelUs tomentellis. Calyx crasse coriaceus. Corollee lohi exsertL Semina magnitudine ovi gallinacei.*

N. seychellana, *Hook. f. (species unid)*. *Mimusops?* Horneana, *liartog in Journ. Bot.* 1879, 358 (name only).

HAB. Three Brothers Island, Seychelle Archipelago, *Home; Miss North*. Vernac. name 'Capucin.'

Arbor 60-80-pedalis, umbrosa, speciosa. *Ramuli* crassitie pollicis humani, cortice fusco-brunneo tecti, nodosi, nodis situs florum et fructuum indicantibus. *Folia* versus apices ramulorum inserta, pedalia

ad bipedalia, 3-5 poll, lata, sicca dura, basi in petiolum \wedge -1 \wedge -polli-
carem angustata. *Calyx* | poll, longus, lobis erectis. *Corollae* tabus
calyce sequilongus, glaber; lobi patentes, ovati, obtusi, dorso tomen-
telli. *Stamina* petalis breviora; anthers filamentis subaequilongse.
Stylus calyce longior. *Fructus*, integer a nobis non visus.

This noble tree is noticed in Baker's 'Flora of Mauritius and the
Seychelles' as probably a sixth species of the genus *Sideroxylon* (p.
194), of which leaves were sent by Mr. Home, but flowers were want-
ing. It was subsequently alluded to by Mr. Hartog in a paper en-
titled 'Notes on Sapotaceae' published in the 'London Journal of
Botany' as a doubtful *Mimosaops*. Nothing further was known of it till
the return of Miss North from the expedition she made to the
Seychelles for the purpose of adding views of its principal trees, &c,
to the unique gallery of portraits of plants in their homes, with which
she has so munificently endowed the establishment at Kew, when,
amongst other treasures, she brought with her a painting of the foliage
and fruit of the Capucin, and made arrangements for flowers being sent
home when these should appear. These, which she kindly transmitted
to Kew, have enabled me to determine that the Capucin is neither a
Sideroxylon nor a *Mimosaops*, but very near to the large genus *Chry-
sophyllum*, from which it differs in the biseriate lobes of the calyx;
and I have hence the satisfaction of dedicating the new genus to the
accomplished lady to whom the public are so deeply indebted.—J. D.
HOOKER.

Fig. 1. Diagram of* flower. 2. Hair from leaf. 3. Two inner and one outer lobe
of calyx. 4. Back view of three corolla-lobes. 5. Corolla laid open. 6 and 7.
Stamens. 8. Ovary and pedicel. 9. Transverse section of ovary. 10. Seed. All
but fig. 10 enlarged.

PLATE 1474.

IPOMJEA SHIRENSIS, Oliv.

CONVOLVULACEJE.

I. shirensis, Ouy. (*sp. nov.*); frutex scandens, ramulis puberulis
tomentellisve, foliis cordiformibus obtusis obtusiusculis mucronatis
integris supra pubescentibus deinde glabratis subtus appresse cano-
tomentosis, floribus in paniculis folio longioribus multifloris axillaribus
dispositis, sepalis sericeo-tomentoais ellipticis obtusis accrescentibus
persistentibusque, corolla lilacina infundibulari calyce duplo lomriore,
calyce fructifero capsulam monospermam dense tomentosam globosam
2-3-plo superante.

HAB. Zambesi, 2-4,000 ft. alt., and near Lake Shirwa, *Sir J. Kirk*; Shiri highlands, *Mr. Buchanan* (No. 262).

Folia 2[^]-3 poll, lata; petiolus 1—2 poll, longns. *Paniculce* 5-10 poll, long[©]; pedicelli fructiferi ad [^]-| poll, longi. *Flores* J-1 poll, longi, lilacini. *Calyx* fructiferus [^]-f poll, longns.—D. OLIVER.

Fig. 1. Base of corolla-tube and stamens. 2. Pistil and disk. 3. Transverse section of ovary. *All enlarged.*

PLATE 1475.

HOLUBIA SACCATA, *Oliv.*

PEDALINEJE, Tribe **PEDALIEÆ.**

Holubia, Oliv. (gen. nov.). Calyx 5-partitus, segmentis subulatis. *Corolla* tubo postice profunde saccato-gibboso sperne angustato, ore in limbo amplo obliquo 5-lobato leviter bilabiato expansa, lobis 2 superioribus paullo minoribus. *Stamina* didynama, inclusa, antherarum loculis subparallelis v. apice conniventibus, connectivo glandula depressa coronato; stamen posticum ad staminodiam reductum. *Ovarium* in disco obliquo carnosio impositum, liberam, lateraliter compressum marginibus utrinque bicarlnatis, ovulis in quoque loculo circ. 8 biseriatis; stylus elongatus gracilis; stigma bilamellatum, lobis ovatis. *Fruotus*—Herba, foliis oppositis petiolatis palmatilobulatis. Flores axillares, solitarii, breviter pedunculati.

H. saccata, Oliv. (sp. unica). *Folia* deltoideo-cordiformia sinuato-lobulata ssepe leviter trilobata lobis obtusis, glabrata, 1 $\frac{1}{2}$ —1[^] poll, lata atque longa; petiolus |—1[^] poll, longus. *Flores* 3—3[^] poll, longi, corollae limbus 1J poll, latus; pedunculi |—| poll, longi.—D. OLIVER.

HAB. Transvaal, *Mr. Todd* (communicated by Rev. J. Buchanan); Marika district, *Dr. Holub*.

Fig. 1. Calyx and pistil. 2. Stamens, and their insertion. 3-4. Anthers, back and front. 5. Ovary and disk. 6. Longitudinal section of ovary. 7. Transverse section of same.

ICONES PLANTARUM.

PLATE 1476.

DIOSMA FLAVESCENS, OUV.

RUTACEÆ, Tribe DIOSMEA.

D. flavescens, OUV. (*sp. n.*); glaberrima, fascigiatis ramosa, ramulis strictis gracilibus, foliis erectis linearibus obtusiusculis canaliculatis dorso convexis vix carinatis internodiis sæpe duplo longioribus floribus in cymulis paucifloris (1-4-floris) terminalibus dispositis subsessilibus, calycis lobis ovatis acutiusculis minutissime ciliolatis dorso subcarinatis, petalis calyce duplo longioribus obovato-ellipticis obtusis, staminibus corolla brevioribus, antheris glandula capitata sessili terminatis.

Boiss. & Heldr. Fl. Ped. Arab. Sin. 1: 106. Gooden. Pl. Tulbagh, near Ceres, H. Bolus (Herb. No. 5317).

Frutex verosimiliter 1-2-pedalis, internodiis 1-2 pedibus. *Folia* 2-3 lin. longa, alterna. *Flaves* 2 lin. lati. *Cocci* in polline, longi, breviter et obtuse oblique apiculati. *Semina* testa nigra tenaciter crustacea, 2-2.5 lin. longa.—D. OLTVER.

Fig. 1. Leaf. 2. Flower. 3. Petal. 4. Calyx and disk. 5. Stamen. 6. Pistil.
7. Fruit. 8. Seed. 9. Embryo. Enlarged.

PLATE 1477.

ALYSSUM SAMARIFERUM, *Boiss. and Hausskn.*

CRUCIFERÆ, Tribe ALYSSINEÆ.

A. samariferum, *Boiss. and Hausskn.* in *Boiss. Pl. Orient*, i. 272; frutescens, ramorum sterilium foliis confertis linearibus acutiusculis basi angustatis conduplicatis lepidoto-argenteis, ramis floriferis erectis glabris enim foliis sparsis strictiusculis, racemis fructiferis contractis, siliculis amplis orbiculatis v. obovato-rotundatis stylo brevi apiculatis planis glabris pedicello patenti-reflexo saepius longioribus, seminibus compressis apteris.

HAB. Berytdagh, Cataonia, 6,000-8,000 ft. (*JEaussh.* Iter Syriaco-Armen.) ; El Jebel el Ahmar, No. Syria, Dr. *Post*

Fruticulus 1-1¹ pedalis. *Folia* 1/2-1 poll, longa, 1-2 lin. lata. *Siliculus* 5-7 lin. long[©] atque latse.—D. OLIVER.

Fig. 1. Loaf. 2. Lepidoto hair. 3. Siliculo. 4. Seed. 5. Embryo. *Enlarged.*

PLATE 1478.

IETHIONEMA SPICATUM, *Tost.*

CRUCIFERÆ, Tribe LEPIDINEÆ.

A. spicatum, *Tost (sp. nov.)*, caulibus tortuosis infere rimbrosius, foliis obovatis truncatis vel retusis superioribus oblongis acutis, floribus . . . , racemo fructifero dense imbricato ovato-oblongo, siliculis orbicularibus basi et apice retusis, alis loculis oculatis, stylo sinu multo brevioribus.

HAB. El Jebel el Ahmar, 2,800-3,200 ft. (in pinetis), No. Syria, Dr. *Tost.*

Fruticulus 6-10 poll, altus, ramulis fragilibus. *Folia* opposita carnosula 1/2 poll, longa. *Spicum* fructiferum 1/2-1 poll, long[©], 1/2 poll. latas. *Siliculus* alis pallide carneis viridicantibus.—G. E. POST.

Fig. 1. Silicule. 2. Replum with valve removed. 3. Embryo. *Enlarged.*

PLATE 1479.

CRATEROSTIGMA NANUM, *Benth.* var. ? elatior.

SCROPHULARIACEÆ, Sub-tribe VANDELLIEJE.

C. nanum, *Benth. in Gen. Plant*, ii. 954, var. *P. elatior*; foliis radicalibus rosulatis ovato-lanceolatis oblanceolatisve obtusis v« obtusiusculis in petiolum latiusculum angustatis faciebus parce pilosulis glabrisve ciliatis, scapo elongato (J-1 pedali) erecto pilosulo pauci- v. plurifloro (3-15), bracteis erectis oblongis, pedicellis erectis flore suboequilongis, calyce hirtello.

HAB. Transvaal at Mac Mac, *C. Mudd* (flowers 'rose, tinged with yellow '); Houtbosh, *Dr. Rehmann*, No. 5979.

Folia f-1j poll, longa, tenuiter coriacea, nervis obsolete. *Corolla* tubo calycem superante v. cequanto, limbo j poll. lato.

I may be wrong in supposing this a variety of *G. nanum*, of which we have only two dwarf examples collected by Drège; but from a general view of the allied tropical forms I can well believe this species to be sufficiently variable to include this tall form with pedicelled flowers.—
D. OLIVER.

Fig. 1. Flower. 2. Posterior Up of corolla. 3. Stamens. 4. Pistil, 5. Stigma. *Enlarged.*

PLATE 1480.

TRICHOCLADUS GRANDIFLOBUS, *Oliv.*

HAMAMELIDEA.

T. grandiflorus, *Oliv. (sp. nov.)*; frutex ramosus, ramulis glabris novcllis stellato-puberulis, foliis alternis tenuiter coriaccis ovato-lanceolatis acuminatis glabris reticulatis petiolatis, inflorescentia terminali v. axillari breviter pedunculata, floribus capitatis congestis breviter spicatisve subsessilibus v. brevipedicellatis, calycis limbo activatione clauso mox 3- v. 2-fido intus glabro extus pilis ferrugineis stellatis sparsis pubescente.

HAB. Transvaal, 'Berg Plateau,' *C. Mudd*.

Frutex 4-10 pedalis. *Folia* 2½-3 poll, longa, ¼-½ poll, lata; petiolus ½ poll, longns. *Alabastra* obovoidea. *Petala* plana, elongato linearia, 1-1½ poll, longa, 1½-2 lin. lata. *Stamina* calyce breviora; antheriu apiculatse filamento scepius longiores. *Ovarium* apice hirsuto libero.

A very interesting addition to our knowledge of a small but interesting Natural Order, which I leave in *Trichoclads*, notwithstanding the difference in the calyx and the depth of adhesion of the ovary, which differences bring it very near to the Malayan genus *Maingaya*. I have not seen any fruit of *T. grandiflorus*. With a further knowledge of Malayan and perhaps South African members of this Order, a consolidation of some of the linear-petalled genera may become advisable.—D. OLIVER.

Fig. 1. Bud. 2. Calyx. 3. Stellate hairs of same. 4,5. Stamens, fi. Ovary and base of calyx-tube. 7. Vertical section of same. *Enlarged.*

PLATE 1481.

GARNOTIA POLYPOGONOIDES, *Munro*.

GRAMINEÆ, Tribe TRISTEGINEJE.

G. polygonooides, *Munro*, *MSS. in TEerh. Kew.*; erecta v. decumbens, foliis anguste linearibus basin versus laminis paucis et longe pilosis, panicula scepius racemiformi moderate effusa, spiculis scepius geminatis inaequaliter pedicellatis basi pilis paucis ascendentibus cinctis, glumis exterioribus vacuis trinerviis anguste linearibus lanceolatis in aristam gracilem productis, gluma tertia subnervis apice aristata bifida, arista inter lobos tenui elongata flexuosa.

HAB. East India, Nepal (Wall. Cat. 8884), Sikkim and the N.W. Himalaya; also in Wight's Herbarium unlocalised.

Caulis gracilis 1-1½ pedalis, nodis glabris pilosisve. *Folia* plana v. complicata, glabra v. cum pilis sparsis praecipue versus basin et faucem vaginarum. *Panicula* 3-6 poll, longa, strictiuscula, ramis erectis, primariis solitariis e basi ramosis. *Glumae* exteriores vacuae longe aristatae; arista gracillima gluma 2-4-plo longior.—D. OLIVER.

PLATE 1482.

CALLILEFIS SALICIFOLIA, *Oliv.*

COMPOSITE, Sub-tribe BUPHTHALMEA:

C. salicifolia, *Oliv. (sp. nov.)*; herbacea 1-2-pedalis, glabra., canlibus erectis longitudinaliter valide striatis, foliis alternis adscendentibus anguste linear-ovalibus utrinque attenuatis acutissimis remote serrulatis uninerviis, capitulis solitariis terminalibus pedunculatis, involucri bracteis pauci-scriatis subsequibus linearibus v. linear-lanceolatis acuminatis.

HAB. Sabia River, South Africa, *C. Mudd.*

Folia 1J-3 poll, longa, superiora gradatim minora atque angustiora arrecta, J-£ poll. lata. *Capitula* circ. 1[^] poll, diam., floribus radii eburneis, disci purpureis; ligulis involucro duplo longioribus. *Palee* conduplicatse acuminatse floribus disci paullo breviores. *Pappus* paleis 2 ovato-lanceolatis rigide acuminatis carinatis, carina anguste alata, ovario sequilongis.—D. OLIVER.

Allied to *G. leptophylla*, Harv.; the capitula similar, but different in the leaves.

Fig. 1. Ray-floret. 2. Disk-floret. 3, 4. Pales of receptacle. 5. Stamens. 6. Stigmas. *Enlarged.*

PLATE 1483.

SENECIO SEGMENTATUS, *Oliv.*

COMPOSITE, Tribe SENECONIDEJS.

S. segmentatus, *Oliv. (sp. nov.)*; erectus foliosus, foliis reniforini-rotundatis sessilibus amplexicaulibus carnosulis integris cartilagineo-marginatis glabris glaucescentibus internodiis longioribus, in florescentia terminali ampla divaricatim ramosa, bracteis ovatis v. ovato-lanceolatis acutis, capitatis pauci- (5-7) floris, ecalyculatis, discoideis, luteis.

HAB. Natal, 1,000 ft., *l. M. Wood*, No. 1935.

Herba verosimiliter 2-4-pedalis glaberrima glaucescentia. *Folia* numcrosa marginibus breviter dcurrontibus, 1-1[^] poll, longa, 2-3 poll. lata. *Gapitula* pedunculata; involucrum 5-G-phyllum campanulato-tubulosum, squamis lineari-oblongis acutiusculis aoquilongis, interioribus mcmbbranaceo-marginatis, flores subicquantibus. *Corolla* glabra, tubo cylindrico limbo campanulato 5-fido.

With the habit, though with very different leaves, of *Otlionna amplexicaulis* Thunb., and its allies; but involucral scales distinct.—D. OLIVER.

Fig. 1. Capitulum. 2. Floret. 3. Seta of pappus. 4. Stamons. 5. Stylobrandies. *Enlarged.*

PLATE 1484.

TBYPHOSTEMMA HANNINGTONIANUM, *Must.*

PASSIFLORACE2E.

T. Hanningtonianum, *M. T. Masters* (in Report on Mr. Johnston's Kilimanjaro plants, *ined.*); herbacnm scandens cirriferum glabcr-rimuni glancescens; foliis pctiolatis tripartitis segmentis oblanceolatis oblongisvo mucronnlatis, stipnlis angnstissimis, pcdnnculis folio subssquilongis rectiusuulis 2-1-floris cirriferis, pedicellis gracillimis, sepalis oblongis obtusis, pctalis calyce brevioribus, corona gamophylla broviter cylindracea ore longe fimbriata, marginc tubi denticulis minntis inflexis ornato, filamentis basi faciei interiori disci hyalini hypogyni annulati adnatis.

HAB. Kwa Chiropa, E. Trop. Africa, *Bev. J. Hannington*; Maungu, IT. II. *Johnston*; Mainland W. of Zanzibar, /. *T. Last.*

Folia 1-1 | poll, longa, in ramulis floriferis interdum multo minora, mombranacea, lobis lateralibus interdum lobnlo dentiformc munitis. *Flores* £ poll. lati. *Stamina* inclusa. *Styli* 3 graciles ovario ajquilongi. *Fructus* pericarpio tenuiter chartacco, ovoideus G-8 lin. longus.

The nearest ally of this pretty miniature Passion-flower is *T. zanzu baricum*, *M. T. M.*, an ontirc-leaved species.—D. OLIVER.

tfig. 1. Flower. 2. Same, calyx and petals removed. 3. Tart of corona. 4. Stamen and portion of annular disk. 5. Pistil. 6. Transverse bection of ovary. *E urged.*

PLATE 1485.

ONCOBA LASIOCALYX, *Oliv.*

BIXACEJSJ.

O. lasiocalyx, *Oliv. (jsp. nov.)*; ramnulis puberulis glabratis ultimis stipulis rigidiusculis persistentibus vaginatis, foliis pctiolatis obovato-ellipticis oblnsis basi cordatis truncatisve, denticulo-serrulatis utrinque fulvo-pubescentibus, pedunculis 1-3 floris bracteatis, calyce tripartito segmentis intus glabris extus setis mollibus pubescentibus erinitis, petalis pluribus calyce longioribus, antheris elongato-linearibus basiifixis, ovario crinito.

HAB. Kilwa, E. Trop. Africa, *Sir J. Kirk.*

Folia 2-3 poll, longa; 1-2 poll, lata, costa nervisque lateralibus subtus conspicuis; petiolus hirtellus 1-2 poll, longus. *Stipulae* lineari-lanceolatae v. oblongae acuminatae pubescentes coriaceae 3-5 lin. longa). *Flares* 1-2 poll, diam. pedicellati. *Petala* oblanceolata-oblonga, extus pilosa. *Stamina* parce pilosula; antherae anguste lineares filamentis gracilibus ssepius longiores. *Ovarium* 1-loculare placentis 3 parietalibus multiovulatis; stylus gracilis; stigma minutum.

Uemakabla in the softly setose calyx and ovary. Allied to *O stipulata*, *Oliv.*—D. OLIVER.

Fig. 1. Stamens. 2. Pistil. 3. Transverse section of ovary. *Enlarged.*

PLATE 1486.

HYOBANCHE ATROPURPUREA, *Bolus.*

SCROFHULARIACEAE, Sub-tribe HYOBANCHEAE.

H. atropurpurea, *Bolus (sp. nov.)*; herba parasitica, aphylla, minute glanduloso-pubescentis, 3-4-pollicaris. Spica subterminalis. Bractea oblonga vel linguiformis, obtusa, undulata, apice patens; bracteolae lineares acuminatae erecto-patentes, omnes 2 cm. longae. Calyx aequaliter partitus venosus, bracteolis sequilongis, segmentis linearilanceolatis acuminatis tubo triplo longioribus. Corolla cucullata, ore obovato late aperto, lobis lateralibus triangularibus, antico subulato;

venosa, 2*5 cm. longa. Stylus apice breviter bilamellatus, stigmatoso-incrassatus. (v. v.)

HAB. In clivis saxosis montis Tabularis pone Klassenbosch, alt. circa 300 metr. mense Dec. legit *Hugh Welby* (anno 1884), if. *Bolus* No. 4987 in *Eerb. Kew*.

This is quite distinct from *H. sanguinea*, Thunb., the only species hitherto known, by its oblong tongue-shaped bracts; its acuminate bracteoles; its equally divided calyx, with lanceolate acuminate segments; its differently shaped corolla; its indumentum; and to some extent probably also in habit, for the only specimen we possess at present has the upper bracts empty. The upper part of the flower and bracts is a deep claret red, shading off below into rose, with yellow at base. Mr. Welby found two specimens, but unfortunately lost one, and a search for more was unavailing by reason of a large bush-fire which immediately succeeded.

I have never seen the glabrous var. of *H. sanguinea* referred to by Bentham (DC. Prodr. x. 506), and described by Presl (Epimel. Bot. p. 249) as a new genus under the name *Hcematobanche*, Bentham, who in the earlier work above quoted was inclined to think it might prove to be a distinct species, came to the conclusion later (Gen. Plant, ii. 968), that it was nothing more than a glabrous form of *H. sari' guinea*. It is sufficient to compare Presl's full description with our plant to recognise their considerable differences.—H. BOLUS.

Fig. 1. Flower with bract and bracteoles. 2. Corolla and calyx. 3. Calyx, laid open. 4. Corolla. 5. Same laid open. 6, 7. Stamens. 8. Pistil: (a) anterior, (b) posterior, (c) obliquo view of stigma. 9. Section of ovary. *Enlarged*.

PLATE 1487.

BEGONIELLA ANGUSTIFOLIA, *Oliv.*

BEGONIAGEJ.

B. angustifolia, *Oliv.* (*sp. nov.*); caulibus gracilibus glabratis, foliis distichis breviter petiolatis elongato- vel lineari-lanceolatis acuminatis duplicato-serratis, nervo medio supra appressa setuloso scitisque in lamina utrinque 7-10 exceptis glabris, perianthio exteriori bilobato lobis rectis, interiori brevissimo (fl. <?) stamina sequante.

HAH. Novita, New Granada, *R B. White*.

Folia 3-5 poll, longa, 6-11 lin. lata; pctiolus 1-2 lin. longus. *Stipula* membranaceo lanceolate acuminatae erectsc petiolo longiores, 2-5 lin. longa. *Flores* coccinei, •§ poll, longi. *AnthercD* 4i obovataa emarginatce, connective) inter locnlos membranaceo. *Stigma* inaequaliter multifidum.

A very distinct species in foliage from those which I have previously described; sent us by the discoverer of the genus, Mr. White, who describes the leaves as of a transparent vivid emerald green, setae pink, bracts white, and flowers scarlet.—D. OLIVER.

Fig. 1. Staminate flower laid open, showing inner perianth (corolla). 2. Stamens of same. 3. Detached anther. 4. Pistillate flower, the perianth removed. 5. Multifid stigma. *Enlarged.*

PLATE 1488.

HYMBNODICTYON PAB.VIFOI.IUM, *Olio.*

RUBIACEA:, Tribe CINCHONEJS.

H. parvifolium, *Oliv. (sp. nov. *)*; ramulis divaricatis ultimis hornoninis puberulis, foliis oblanceolato-ellipticis oblanceolatisve obtusis basi in petiolnm angustatis glabris tenuiter coriaceis, paniculis thyrsoideis terminalibus multifloris, sessilibus, floribus breviter pedicellatis, pedunculis pedicellisquo puberulis, calycis limbo 5-6-partito segmentis lineari-subulatis ovario subbrevioribus, corollas tubo glabro superne abrupto dilatato breviter 5—6-dentato lobis incrassatis incurvis.

HAB. Mombasa, E. Trop. Africa, *Rev. Thomas Wahefield.*

Folia 1-1£ poll, longa, §-f poll, lata, venulis obsoletis; petiolus i5-1P⁰^, l^on^gus« *Stipulce* ovataB deciduae. *Flores* congesti \ poll, longi. *Capsula* oblongo-ellipsoidea § poll, longa. *Semina* ala reticulata circumdata.

In this species the flowers are thyrsoid as in Privet; in the other tropical African species they are spicate.—D. OLIVER.

Fig. 1. Flower. 2. Same, corolla removed. 3. Corolla, laid open. 4. Vertical section of ovary. 5. Seed.

PLATE 1489.

TUBB2SA WAKEFIELDII, *Oliv.*

MELIACEJ.

Tj^Wakefieldii, *Oliv.* (*Sp. nov.*); foliis papyraccis petiolatis rliomboidoo-cllipticis obovatisve breviter obtusiuscule apiculatis basi cuncatis glabratis, floribus in cymis umbelliformibus axillaribus sabsscillibas 3-9-floris, breviter pedicellatis, calycis pabescentis canipatulati 5-dentati dentibus deltoideis, petalis clongato-linearibus extus minntissimo puberulis, tabo stamiiiio apice 20-fido laciniis linearibus antheris apiculatis 2-3-plo longioribas, ovario tomontoso basi disco annulato circumdato circ. 12-loculare.

HAB. Mombasa, E. Trop. Africa, *Rev. Thomas Wahefield.*

Bamili primum puberuli dein glabri. *Folia* 3-3^ poll, longa, 1^2 poll, lata; petiolas ^ poll, longas. *Pedicelli* calyco 2-3-plo longiores pubcscentes. *Flores* 2 poll, longi. *Stylus* longe exsertus.

Related to *T. Vogelii*, Hook, f., differing in the leaves and subsessile very much longer flowers.—D. OLIVER.

Fig. 1. Bud. 2. Stiiminal column, laid open. 3. Anther and tooth of same. 4. Ovary and disk. 5. Stigma. 6. Trausvorso section of ovary. *Enlarged.*

PLATE 1490.

A. POLYGONUM PEBPUSILLUM, *Ilook.f.*B. POLYGONUM ACAULE, *Ilook.f.*

POLTQONACB^!, Tribe EuPOLTGONBJB.

P. (**Bistorta**) **perpusillum**, *Ilook.f.* (*sp. nov.*); glaborrimum, rhizomate crasso, foliis radicalibns subsessilibus linearibus obtusis marginibus revolutis enerviis caulinis subsolitariis, scapo gracillimo, floribus capitatis cemuis 2-3-andris, nuce trigona v. biconvexa stylis elongatis.

HAB. Alpine Himalaya, alt. 14-15,000 ft.; Garwhal and Kumaon, *Strachey and Wuiterbottom, Dutkic; SLkkim, J. D. IlooJcor.*

Subcaespitosum: rhizoma breve, crassitie pennae anserincae, simplex v. divisum, vestigiis oculicarnum corona turn. *Folia* pauca, pollicaria, $A_{\rightarrow r} V P^{0 \wedge - * a * a}$ coriacea, marginibus saepius ad costam revolutis. *Scapiis* 1-2-pollicaris. *Capitulum* globosum, pauciflorum, floribus pedicellatis $T(T)$ poll, longis, albis v. roseis, saepius 4-fidis, lobis elliptico-oblongis obtusis inaequalibus. *Stamina* perfecta 2-3, inclusa, staminodiis totidem alternantia. *Styli* ima basi connati.

A very distinct little species, the smallest of the genus known to me, nearest to *P. sphairostachyum* Wall., having like it drooping flowers.—J. D. HOOKER.

F. (*Aconogonon*) acaule, *Hook. f.*; humile, dioicum, laxe hirsutum, rhizomate multicipiti, foliis breviter petiolatis oblongis obtusis utrinque molliter hirsutis, scapo erecto nudo v. unifoliato, floribus minutis in ramos brevis paniculato elongates erecto dense congestis perianthii glabri subglobosi segmentis 4-5 intimis rotundatis, staminibus 5 brevibus, nucula trigona substipitata, stylis 3 brevibus, stigmatibus simplicibus.

HAB. Sikkim Himalaya; alt. 16-17,000 ft., J. D. Hook & r.

Rhizoma descendens, elongatum, lignosum, 3-5-pollicare, ramis brevibus erectis basi vestigiis ochrearum tectis. *Folia* ad apices ramorum rhizomatis fasciculata, patula, pollicaria, longe patula molliter hirsuta, nervis inconspicuis demum superne impressis. *Scapus* 1-3-pollicaris, robustus, paniculam laxam erectam angustam gerens. *Flores* \wedge_{σ} poll, diametro, cernui, fusco-purpurei; pedicello brevi infra perianthium incrassato. *Perianthii* segmenta inaequalia. *Antherae* minutae. *Nux* inclusa, pallida, angusta, angulis obtusis.

A very singular little species, most nearly allied to *P. sibiricum*, and the most reduced form of the section *Aconogonon*.—J. D. HOOKER.

A. Fig. 1. Leaf and stipule. 2. Diagram of flower. 3. Perianth, laid open. 4. Ovary. 5. Fruit. All enlarged.

B. Fig. 1. Diagram of flower. 2. Male flower. 3. Stamen. 4. Female flower. 5. Young fruit. 6. Mature ditto. All enlarged.

PLATE 1491.

ANEMONE THOMSONI, Oliv.

RANUNCULACEAE, Tribe ANEMONES.

A. (§ *Pulsatilloides*) **Thomsoni**, Oliv. in *Journ. Linn. Soc. Bot* xxi. 397; foliis longiuacule petiolatis triternatim sectis segmentis cuneato-obovatis lobatis ultimis obtuse acutatis paginis glabratis parce ciliatis, petiolo gracili glabro, scapis 1-2«pedalibus gracilibus parce pilosulis,

involucro 2-pariis segmentis trifidis lobis linearibus, pedunculo apice dense piloso, sepalia 14-20 linearibus v. oblongo-spathulatis extus parce pilosulis glabrisve, carpellis (floriferis) dense hirsutis.

HAB. Kilimanjaro, 9-10,000 ft., *Mr. J. Thomson*; 9-13,000 ft., flower 'white tipped with pink,' *H. Johnston*.

Near *A. ccupensis*, which has bifid acutely pointed narrower leaflobes. The genus is new to the Tropical African Flora.—D. OLIVER.

Fig* 1. Stamen. 2, 3. Back and front of carpel. *Enlarged.*

PLATE 1492.

UEBELINIA ROTUNDIFOLIA, Oliv.

CARYOPHYLLACEJE, Tribe SILENEJE.

U. rotundifolia, Oliv. in *Journ. Linn. Soc. Bot.* xxi. 397; foliosa procumbens, caulibus pilis reflexis seriebus duabus longitudinaliter hirsutis, foliis (j poll, latis) suborbiculatis inucronulatis scaberulis sublacvibusve setuloso-ciliolatis crassinervis subsessilibus v. breviter latioscule petiolatis, floribus quasi axillaribus folio brevioribus solitariis, calyce 5-fido lobis ovatis apiculato-acutatis, petalis linearispathulatis calyce sublongioribus, staminibus 9-10, ovario ellipsoideo, stylis 5-4 distinctis, seminibus paucis (4-5).

HAB. Kilimanjaro, 9-10,000 ft., *Mr. J. Thomson*.

A very interesting addition to the hitherto monotypic genus to which it is here referred, notwithstanding the difference in the number of stamens. How many are normally antheriferous I cannot be sure without additional material.—D. OLIVER.

Fig. 1. Pair of leaves. 2. Flower. 3. Fetal. 4. Stamens. 5 Pistil. *Enlarged.*

PLATE 1493.

STRUTHIOLA THOMSONI, *Oliv.*

THYMELACEÆ.

S. Thomsoni, *Oliv. in Journ. Linn. Soc. Bot.* xxi. 404; frntex, ram is erectis pilosulis superne dense foliatis, foliis enerviis imbricatis verticillatis Bessilibus lanceolatis v. ovato-lanceolatis snbancntis concavimarginatis paginis glabris pilosulo-ciliatis, bractoolis lineari-ovalibus conduplicatis foliu dimidio brevioribus, floribus folio ooqnilongis v. loviter exsertis, tubo perianthii glabro apice dilatato, fauce sctoso, limbi lobis ovato-lanceolatis acutis, glandulis 8 setis subaoquilongis perianthii lobis 4-5-plo brevioribus.

HAB. Lykipia, Masai Country, G-8,000 ft., *Mr. J. Thomson.*

Folia internodiis longiora, 4-5 lin. longa. Allied to Struthiola ovata of the Capo Flora.—D. OLIVER.

Fig. 1. Bud and bracteoles. 2. Flower and subtending leaf. 3. Perianth, laid open. 4. Pistil. 5. Longitudinal section of ovary.

PLATE 1494.

CROTALARIA THOMSONI, *Oliv.*

LEGUMINOSÆ, Tribe GENISTEJE.

C. Thomsoni, *Oliv. in Journ. Linn. Soc. Bot.* xxi. 399; frnticulus ramosus, caulibus gracilibus ultimis hirtis, foliis petiolatis trifoliolatis, foliolis ellipticis obovatisve obtnsis mncronatis reticnlatis pilis setisve paucis appressis pagina snperiore v. utrinque onnstis, floribus majusculis pednnculatis solitariis (v. geminis ?), peduncnlis folio oppositis v. quasi terminalibus medio articnlatis bracteatis apice bibracteolatis, bracteolis lineari-subnclatis tnbo calycis snbasquilongis, calyce parce et appresse hirtello profunde ft-fido lobis lanceolatis acutis, vexillo purpureo striato dorsi medio hirsuto oalyce fere duplo longiore.

HAB. Kapté plateau, Masai Country, *Mr. J. Thomson**

Folia pctiolo liirto gracili stricto J poll, longo v. breviorc, foliolo centrali J poll, longo. *Flores* J-§ poll. lati. *Legwnicn* turgidnni appresse hirtellum utrinque attenuatum, apicc stylo persistente falcato terminatnm.—D. OLIVER.

Fig. 1. Flower, the potals and stamens removed. 2. Vexillum. 3. Ala. 4. Carina. 5. Staminal sheath.

PLATE 1495.

LEUCAS MASAIENSIS, *Oliv.*

LABIATJE, Tribe STACHYDE-E.

L. masaiensis, *Oliv. in Journ. Linn. Soc. Bot.* xxi. 403; herba decumbens, caulibus pilis brevibus decurvatis birtellis, foliis petiolatis obovato-rotundatis obtusis late crenatis basi late cuneatim angustatis rotundatisve, verticillastris solitariis longiuscule pedunculatis multifloris, bracteolis anguste linearibus calycem subaoquantibus, calycc tubuloso campannlato ore subaBqnali 12-dentato, dentibns brevibus subulatis, coroilse labio antico 3-partito lobo centrali rotundato-obovato retuso, tnbo calycem oequante.

HAB. Lykipia, 6-8,000 ft., Masai Country, *Mr. J. Thomson.*

Folia J-1 poll, longa, hirtcella. *Flores* ^ poll, longi.—D. OLIVER.

Fig. 1. Calyx. 2. Corolla. 3. Same laid open. 4. Stamens. 5. Pistil. *Enlarged.*

PLATE 1496.

WUNDERLICHIA MIRABILIS, *Biedel*

COMPOSIT-E, Tribe MUTISIACEiE.

W. mirabilis, *ltiedel*; ramulia crassis rugosis dense lanosis, foliis sessilibus obovatis, involucro dense lanoso, corolla) tubo segmentis longioribus aebsenio piloso.—*Itieiel in Herb, llort. Petrop.*; *Baker in Mart Flora Bras.* vol. vi. pt. iii, 343.

HAB. Central Brazil, on the mountains of the province of Minas Gerães, *Bicdel, Glaziou, 14941.*

Arbuscula 10-12-pedalis, ramulis ultimis lignosis 9-12 lin. diam. *Folia* ad apices ramorum conferta integra coriacea, juniora utrinque dense albido-pannosa, seniora 5-6 poll, longa et lata, facie calvata, dorso tenuiter pilosa venis venulisque exsculptis. *Involucrum* campanulatum 3 poll, longum, et latum, densissime lanosum, bracteis rigidulis multiseriatis, exterioribus ovatis, centralibus lanceolatis dorso persistenter pannosis, intimis linearibus glabris. *Corollae* glabrae tubo 15 lin. longo, segmentis lanceolatis. *Antherae* stramineae 7-8 lin. longae). *Achenia* cylindrica 4-4½ lin. longa. *Pappus* stramineus 15 lin. longus cito deciduus, paleis in anulum basalem concretis.

This, the original species on which this very curious genus was founded, has now been rediscovered by Dr. Glaziou.—J. G. BAKER.

Fig. 1. Bract of involucre. 2. Single floret. 3. Inner bracts of involucre. 4. Stamens. 5. Stigma. *Except JS' o. 1, enlarged.*

PLATE 1497.

SICKINGIA ERYTHROXYLON, Willd.

RUBIACEAE, Tribe CINCHONACEAE.

S. Erythroxylon, Willd., DC. Prodr. iv. 621; foliis amplis membranaceis late rhomboideo-ellipticis acutis basi anguste cordatis rotundatisve, nervis lateralibus utrinque 19-21 subtus prominulis venis intermediis transversis subparallelis, paniculis terminalibus breviter pedunculatis pyramidatis multifloris pedunculis secundariis ascendentibus parce pubescentibus, floribus cymosim congestis, calycis limbo campanulato breviter 5-lobato lobis rotundatis saspinis dein lateraliter fisso, corolla late tubuloso-campanulata lobis brevibus revolutis, capsula globosa.

HAB. Originally cited as from Caracas. Our figure is from specimens of uncertain origin, included amongst South Brazilian species, sent us by M. Glaziou (No. 14938).

Folia 9-15 poll, longa, 6-10½ poll, lata, costa subtus pilosula excepta, glabra repanda v. integra; petiolus f-1 poll, longus. *Panicula* 6-10 poll, longa, 5-7 poll, lata; bracteis ovato- v. elliptico-oblonga) deciduae. *Flores* ½-1 poll, longi 5- vel 4-meri. *Stamina* exserta;

filamenta et tabus corollas intus hirfoi; anther® oblongo-elliptico? obtusao. *Stylus* exserfcus, lobis 2 crassiuscnlis obtusis. *Capsula* globosa bivalvis 1 poll. diam. *Semina* (ala inclusa) 8-11 lin. longa, ala obtusa nucleo aequilonga.

The stipules arc fallen. We have identified this plant by aid of a tracing, taken by Sir Joseph Hooker from a specimen in the Berlin herbarium; I think, with little risk of mistake. Both the young wood and leaves assume more or less of a reddish colour when dry.—D. OLIVER.

Fig. 1. Unexpanded flower. 2. Same open. 3. Calyx and style. 4. Corolla laid open. 5. Longitudinal section of ovary. 6. Seed. 7. Embryo. *Flowers and embryo enlarged.*

PLATE 1498.

SICEINGIA LONGIFOLIA, Willd.

RUBIACEA; Tribe CINCHONEJS.

S. longifolia, Willd.; *DC. Prodr.* iv. 621; foliis elongato-oblancoelatis v. obovato-oblongis obtusis breviter apiculatis basi obtusissimis srepius anguste cordatis integris glabris breviter petiolatis, stipulis scariosis ovato-lanceolatis longe acuminatis, paniculis plurimis in axillis superioribus pedunculatis multifloris puberulis folio brevioribus, pedunculis secundariis ssepius brevibus, floribns pedicellatis congestis, calycis limbo breviter et obtuse 4-lobato lateraliter spathaceo-fisso, corolla} limbo breviter 4-lobato lobis rotundatis SDstivatione concavis late imbricatis, tubo dein irregulariter fisso, filamentis exsertis inferne hirtis, capsula compresso-globosa.

HAD. Also originally from Caracas, sent to Kew by M. Glaziou, with the foregoing (No. 14939).

Folia 10-15 poll, longa 3[^]-5 poll, lata, submembranacea nervis lateralibus utrinque 21-23 prominulis; petiolus §-| poll, longus glaber. *Stipulce* 1[^]-1 J poll. longa3. *Floras* circa | poll, longi, corollis omnibus ut videtur irregulariter fissis. *Anth&rce* lineari-oblonga?, ^iorso longitudinaliter incrassato, prope basin affixed. *Capsula* 2| poll. diam. *Semina* horizontalia 1[^]-2 poll, longa | poll, lata macroptora.

Identified, as the above, by aid of a tracing from a specimen preserved at Berlin.—D. OLIVER.

Fig. 1. Bud. 2. Calyx. 3. Flower. 4. Corolla, laid open. 5. Longitudinal section of ovary. 6. Capsule. 7. Seed. *Exccptimj capsule and seed, enlarged.*

PLATE 1499.

PSYLLOTHAMNUS BEEVORI, *Oliv.*

ILLECEBRACE-E.

Psyllothamnus, *Oliv.* (*gen. nov.*); flores bracteati capitati, capitulis pedunculatis; bractea scariosa) apiculatao. *Perianthium* 5-partitura, tabus brevissimis ore inter stamina incrassatus 5-lobulatus, limbi segmenta 5 lineari-oblonga obtusa v. emarginata tenuiter petaloidea v. hyalina longitudinaliter venulosa bracteis involucrantibus breviora. Stamina 5 perigyna, fauci tubi perianthii inserta segmentis alterna eisdem breviora; anthera parva late elliptica dorsifix; staminodia 0. Ovarium liberum depresso-oonicum, stylus brevis bifidus lobis recurvis; ovula 2 anatropa v. hemianatropa, sub apice placentas centralis crassiuscule pendula opposita. *Semen* solitarium erectum ellipsoideum compressum utriculo tenui conforme, albuminosum; embryo subannularis albumenfarinaeum cingens, radiculainfera.—Frutex suffrutex, ramis divaricatis nodosis teretibus cortice durescente obductis. **Folia in nodis fasciculata (in ramulis elongatis verosimiliter crassiora opposita) carnosa angustissime linearia obtusiuscula glabra [^]—1 poll, longa. Capitula pauciflora pedunculata, pedunculis reotis rigidis folio longioribus, 8, bractea involucrantes late ovate obtuse apiculatae v. in floribus abortivis demum aristatis squarrosis, marginibus scariosis.**

HAB. With a parcel of specimina from Aden and thereabouts, *Dr. Hugh Beevor*.

Folia 1-1 poll, longa. *Capitula* 1 poll. diam.

The numerous leaves on our specimen are nearly all fascicled on opposite abbreviated branches, so that I can only infer their arrangement on elongating branches from the opposition of the fascicles. At the base of the fascicles are very minute ovate brownish free squamce, which may be, and probably are, stipular.

The plant in general character recalls *Gymnocarpus*, of Forskal. Dr. Bayley Balfour describes from Socotra two new genera of this Natural Order: *Haya*, an annual herb with solitary basilar ovules; and *Loohia*, frutescent, but flowers not involucrate, and also with a solitary ovule suspended from a basilar funicle. Probably a rearrangement of the tribes of the Order may become necessary in view of these additions.—D. OLIVER.

Fig. 1. *Capitulum*. 2. Single flower, laid open. 3. Pistil. 4. Same, vertical section, 5. Single flower with its involucre. 6. Fruit. 7. Seed. 8. Embryo. All enlarged.

PLATE 1500.

RCEPEROCHARIS BENNETTIANA, *Reichenb. fil.*

OBCHIDACEAE, Tribe OPHRYDEAE.

It. Bennettiana, *Reichenb. fil.*, *Otia Bot. Hamb.* 1881, p. 104; foliis arrectis infra energetice trinerviis lineari-lanceolatis ad 5, vaginis squamosis superpositis 3—4, racemo densifloro cylindraco usque spithameo, bracteis lanceolatis flores subasquantibus, sepalo impari ovato-triangulo, sepalis lateralibus curvatis oblongis acutis arrectis, tepalis a basi semiovata triangulo uncinatis, apice convolutis antrorsum curvatis, labello tripartito, partitionibus linearibus lateralibus ascendenti-curvatis, calcarum cylindraco obtuso ovario paulo breviori, stigmatum brachiis superioribus ligulatis apice lobulatis.

HAB. EX Tigre v. Begember, *Scrimper* (No. 1327).

Caulis validus 1[^]-3-ped. v. altior.

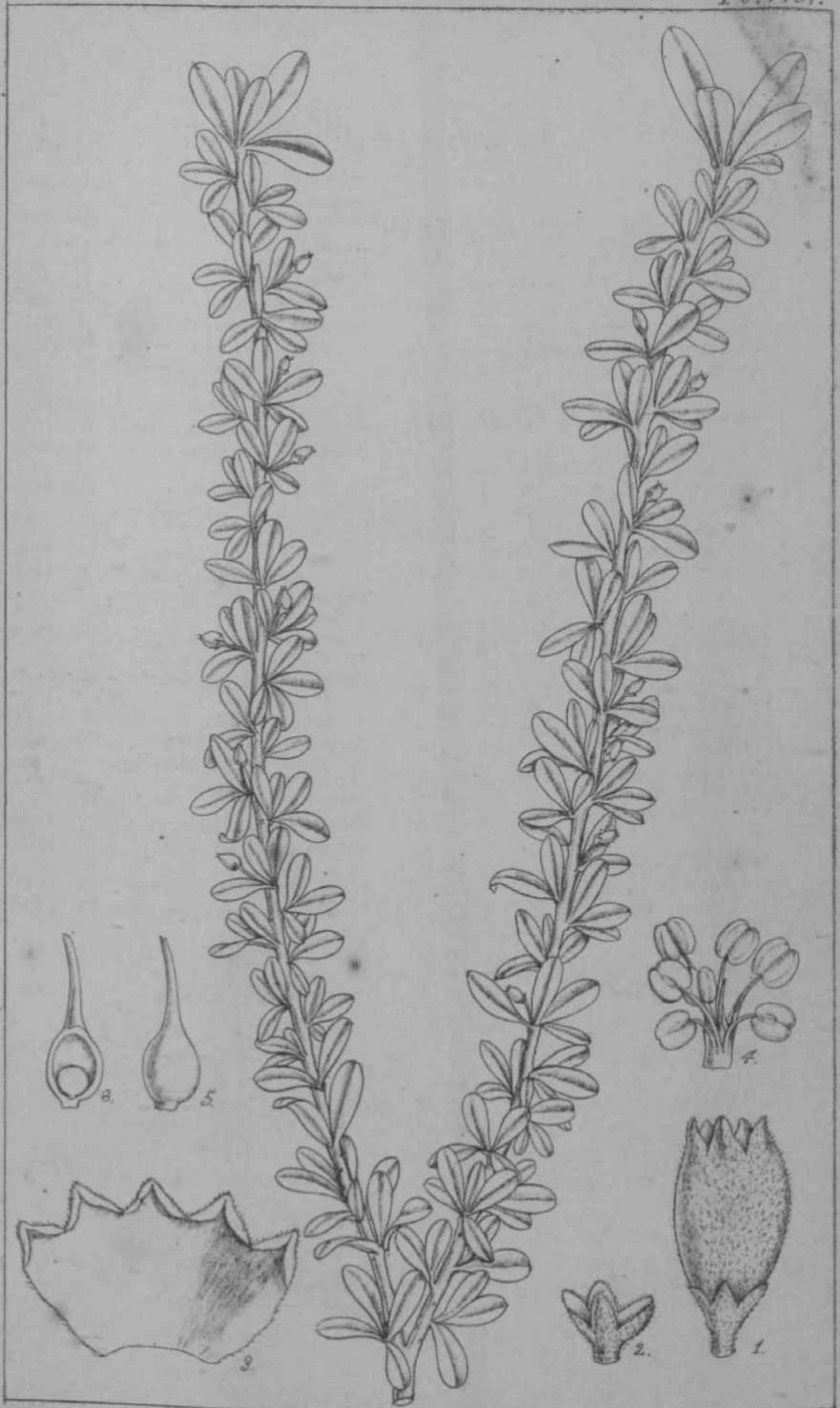
As my colleague, Mr. N. E. Brown, points out, Mr. Bentham was in error in referring this plant to *Disa* (*Gen. Plant*, iii. 627), probably through misapprehension as to origin of the spur. Dr. Reichenbach's generic diagnosis runs thus:—"Affine *Habenariae*: columna latissima, anthero loculis antice abruptis sine canalibus, rostello latissimo laminari antice in lacinias triangulas descendente, stigmatis cruribus utrinque, deorsum et sursum porrectis, hinc bicurvis." The specific description is nearly in Dr. Reichenbach's words.—D. OLIVER. *

Fig. 1. Side view of flower. 2. Front view of column, lobes of labellum cut short. 3. Pollen-mass.

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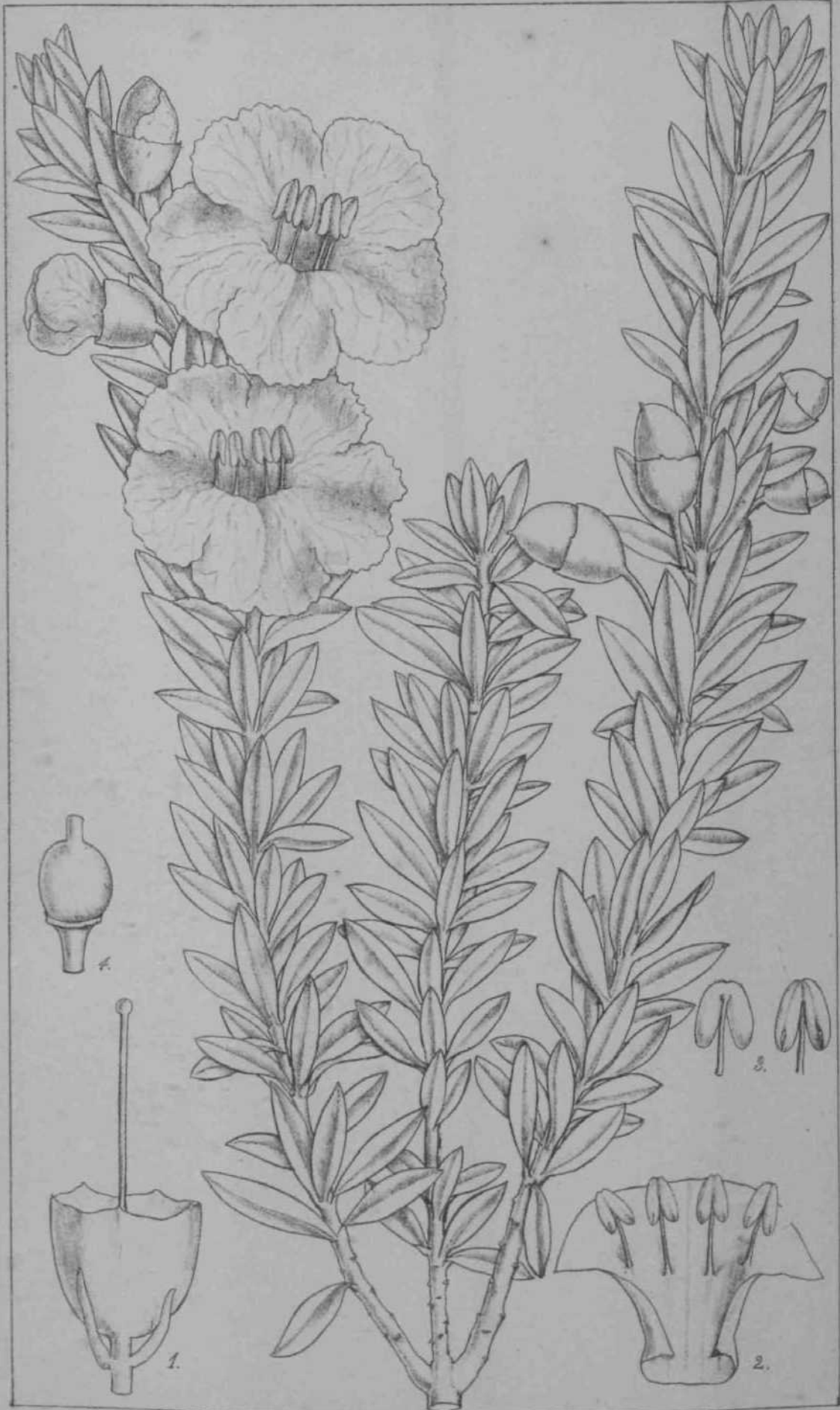
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M.S.del.

Eggersia buxifolia, Hk. fil.



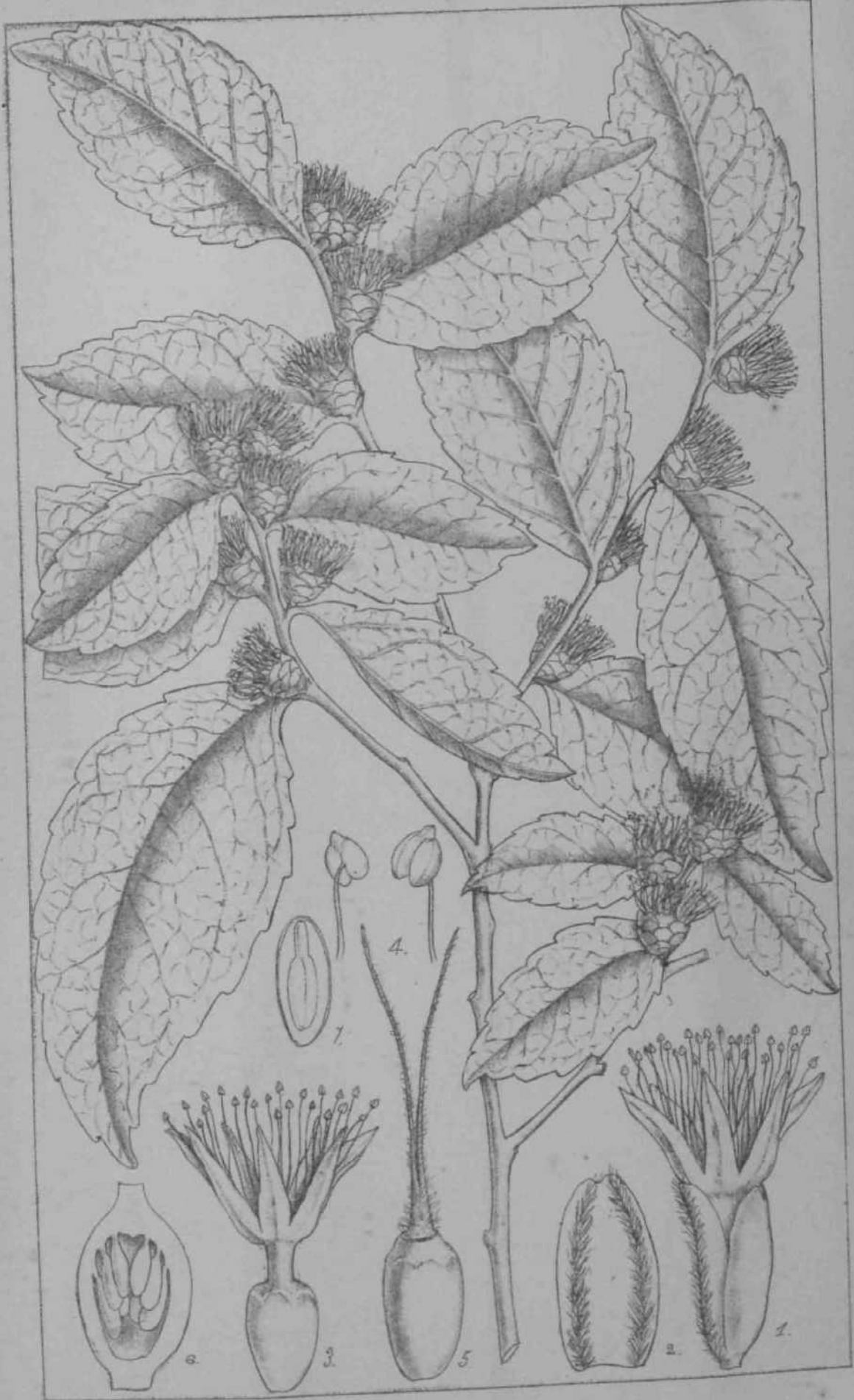
MS.del.

Rhapsispermum gerardioides Benth.



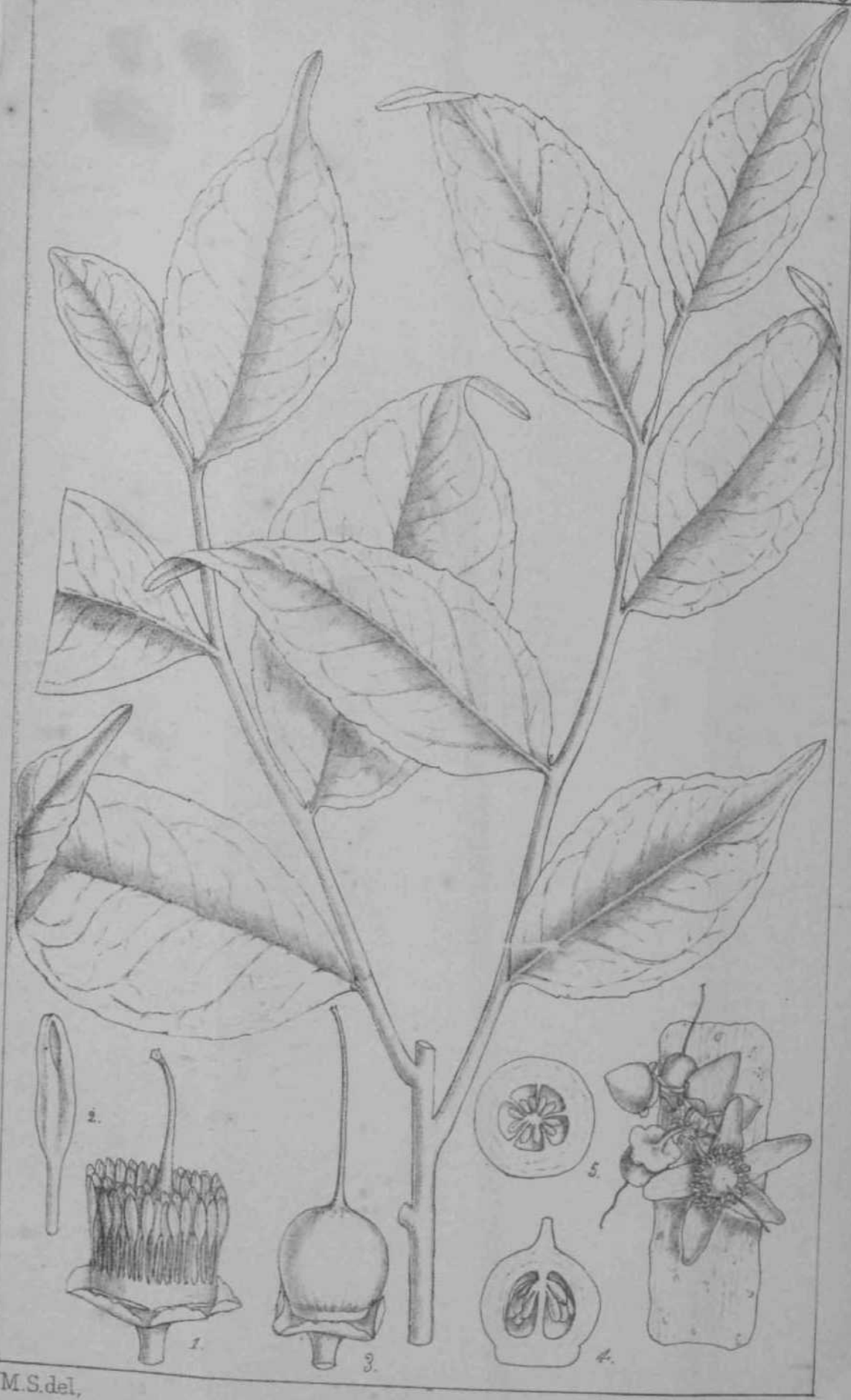
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Cardiochlamys tnadagascariensis Oliv.



M.S. del

Bembicia axillaris, Oliv.



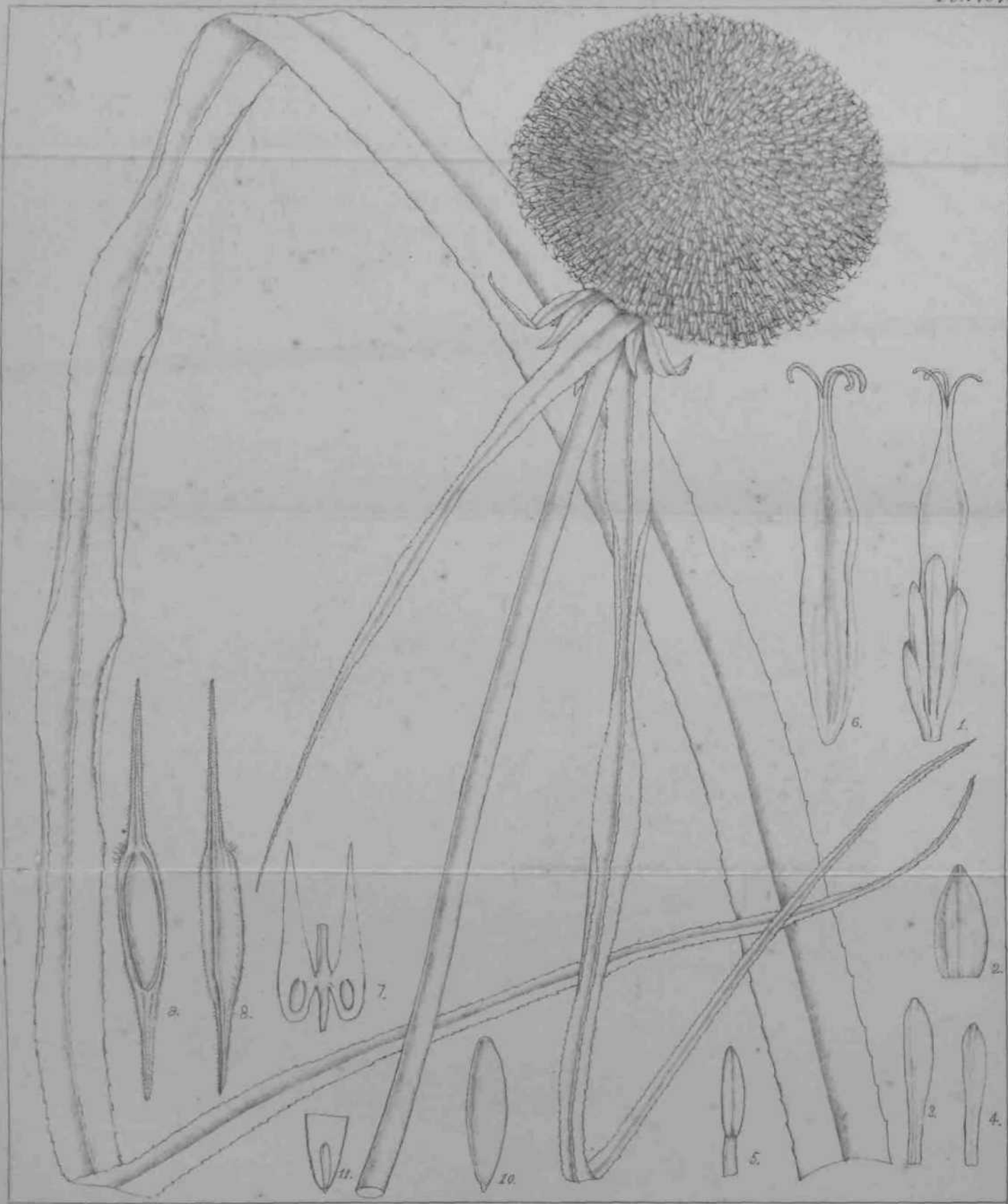
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Rhapsopetalum Soyauxii, Oliv.



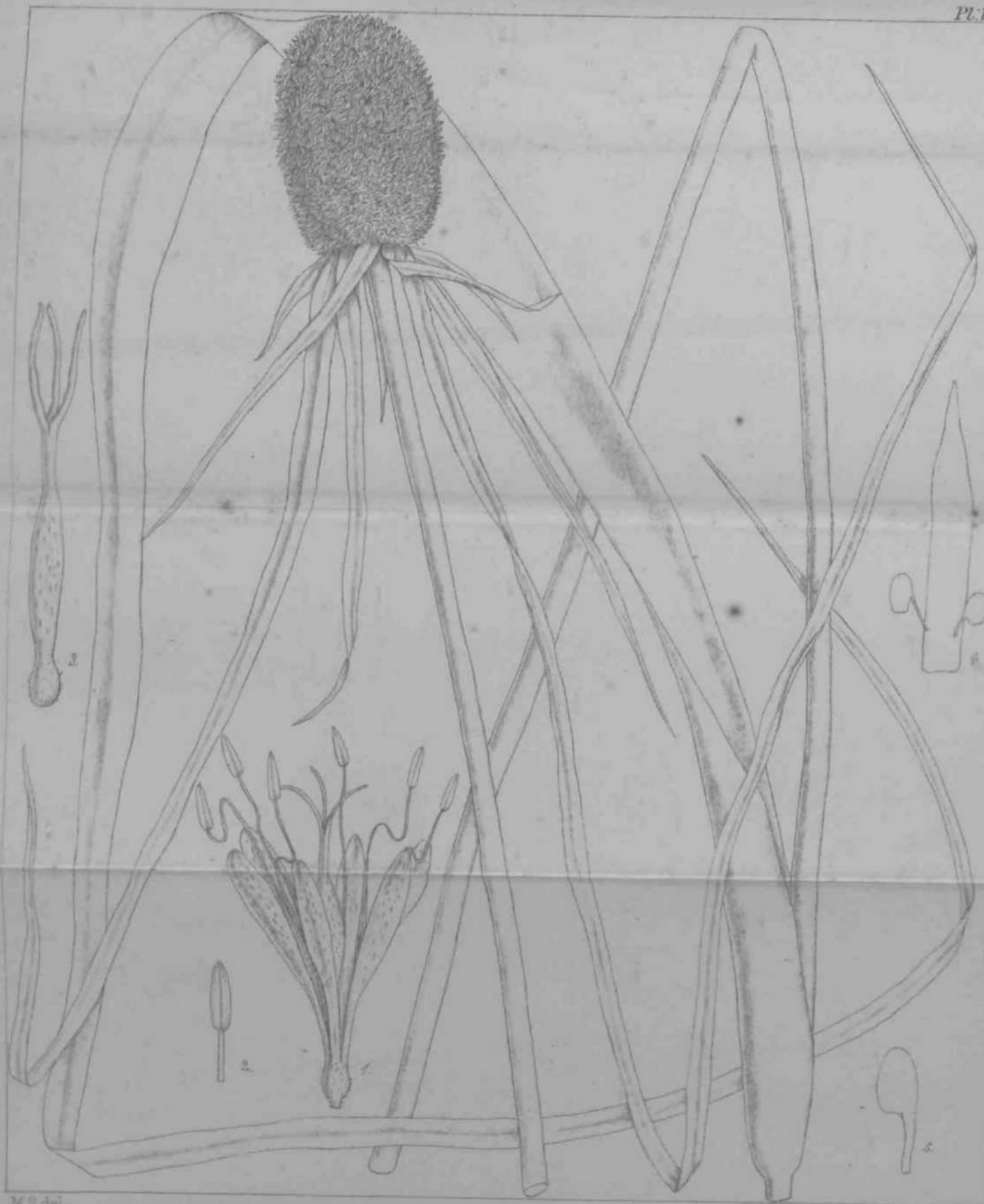
M.S. del

Radamaea montana. Benth.



H.S. del

Thurnia spærocephala, Hk. f



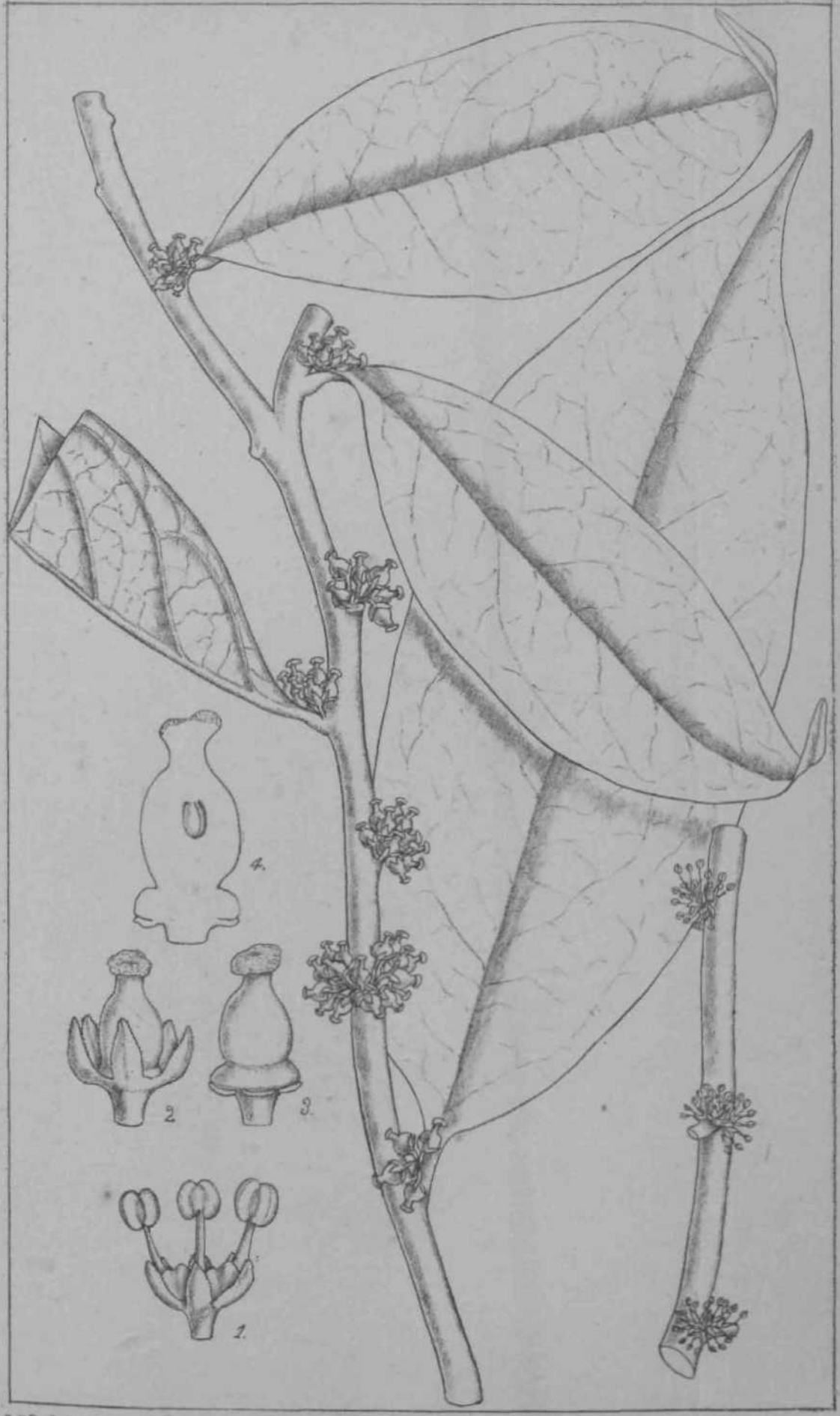
MS del.

Thurnia Jenmani, Hk. f.



M.S. del.

Erythrophloeum Fordii, Oliv.



M.S.del

Sibanea arborescens, Ohv.



Gymnocladus chinensis, Baill.



M.S.dd

Xerochlamys pilosa, J.G.B.



M.S.deL.

Henonia scopana, Moq.



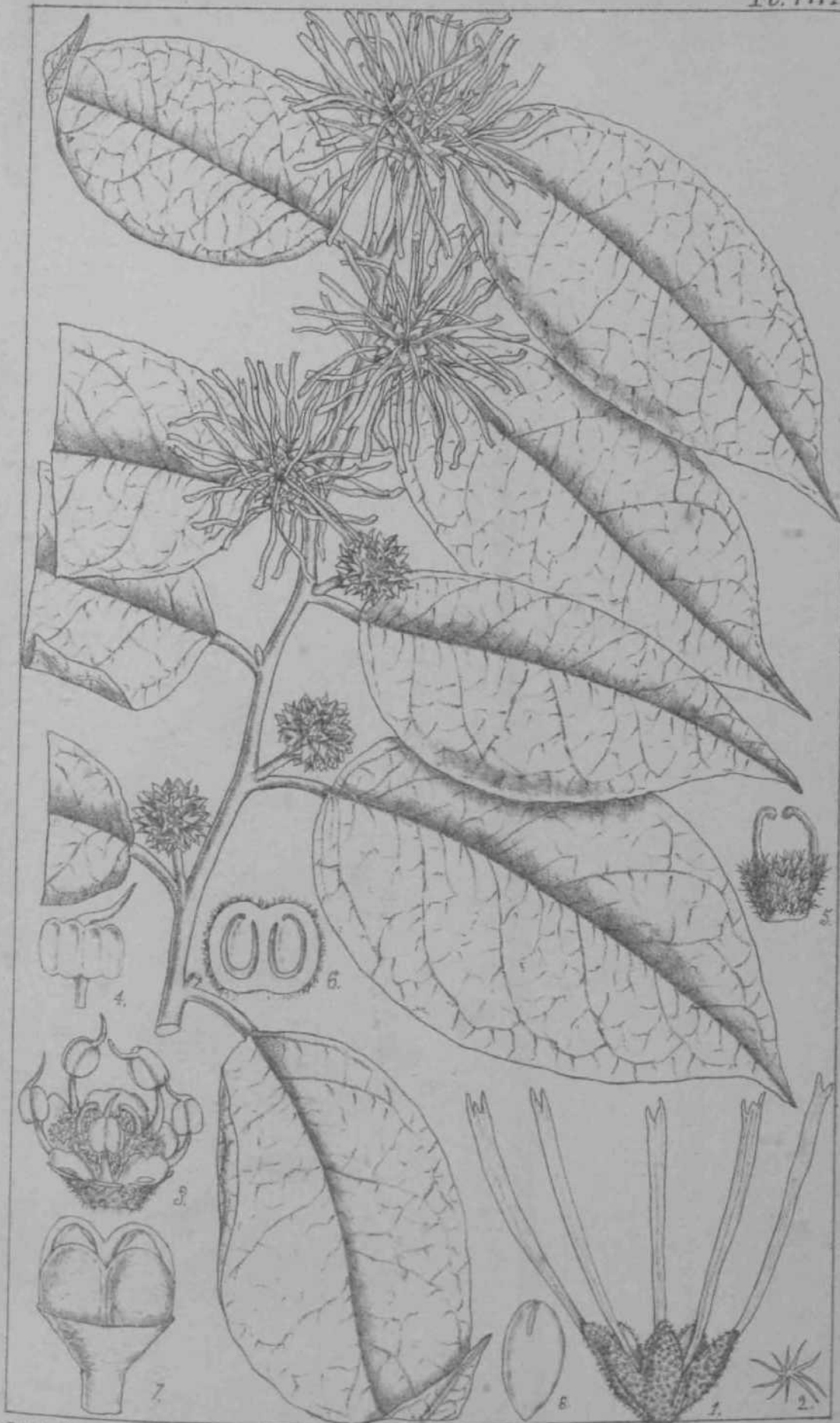
M.S. del.

Ehippiandra myrtoidea, Dcne.



M.S. del.

Indigofera Kirkii, Oliv.



M.S. del.

Loropetalum subcordatum, Oliv.



M.S.del.

Triaspis Nelsoni, Oliv.



US.de;

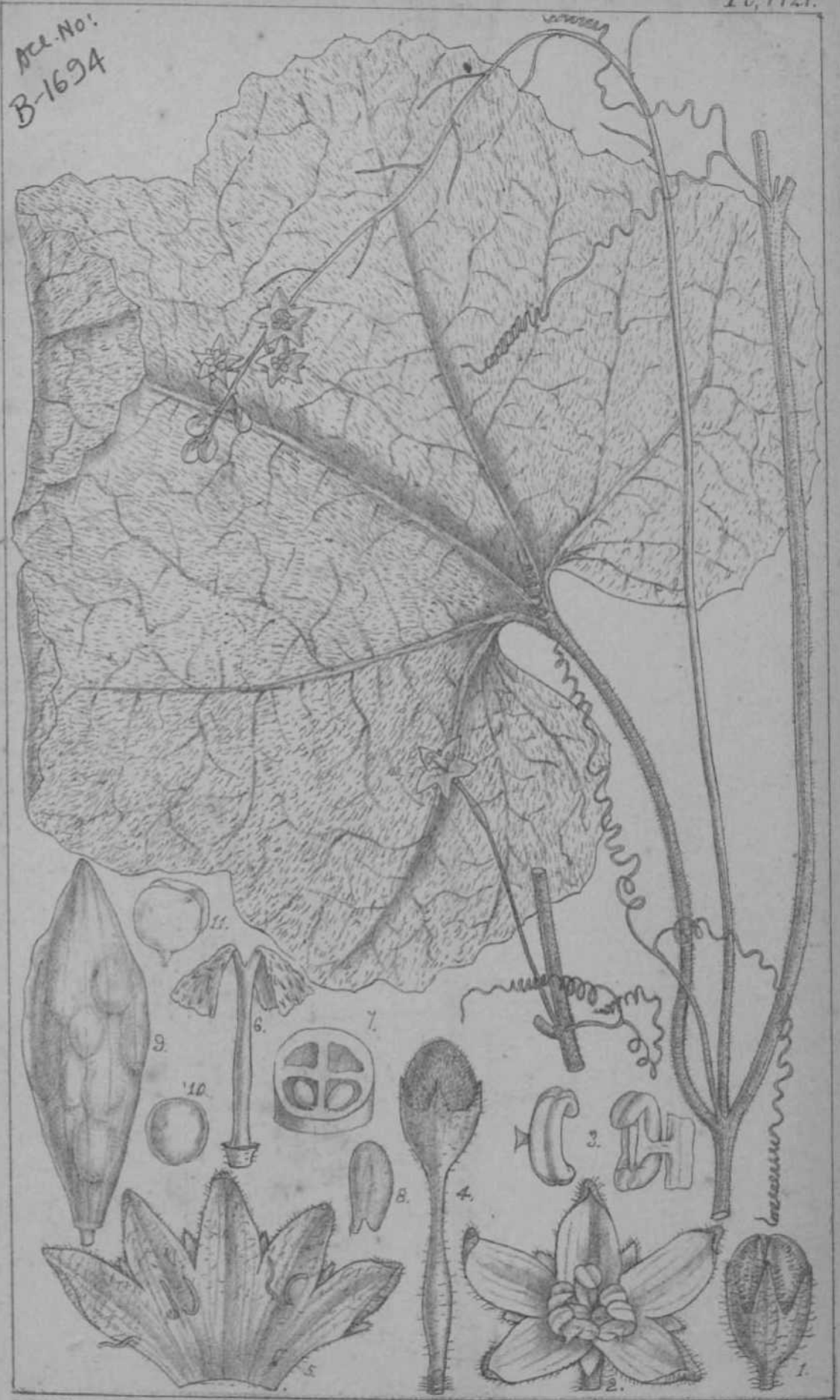
Riedeha curviflora Oliv.



M.S.del.

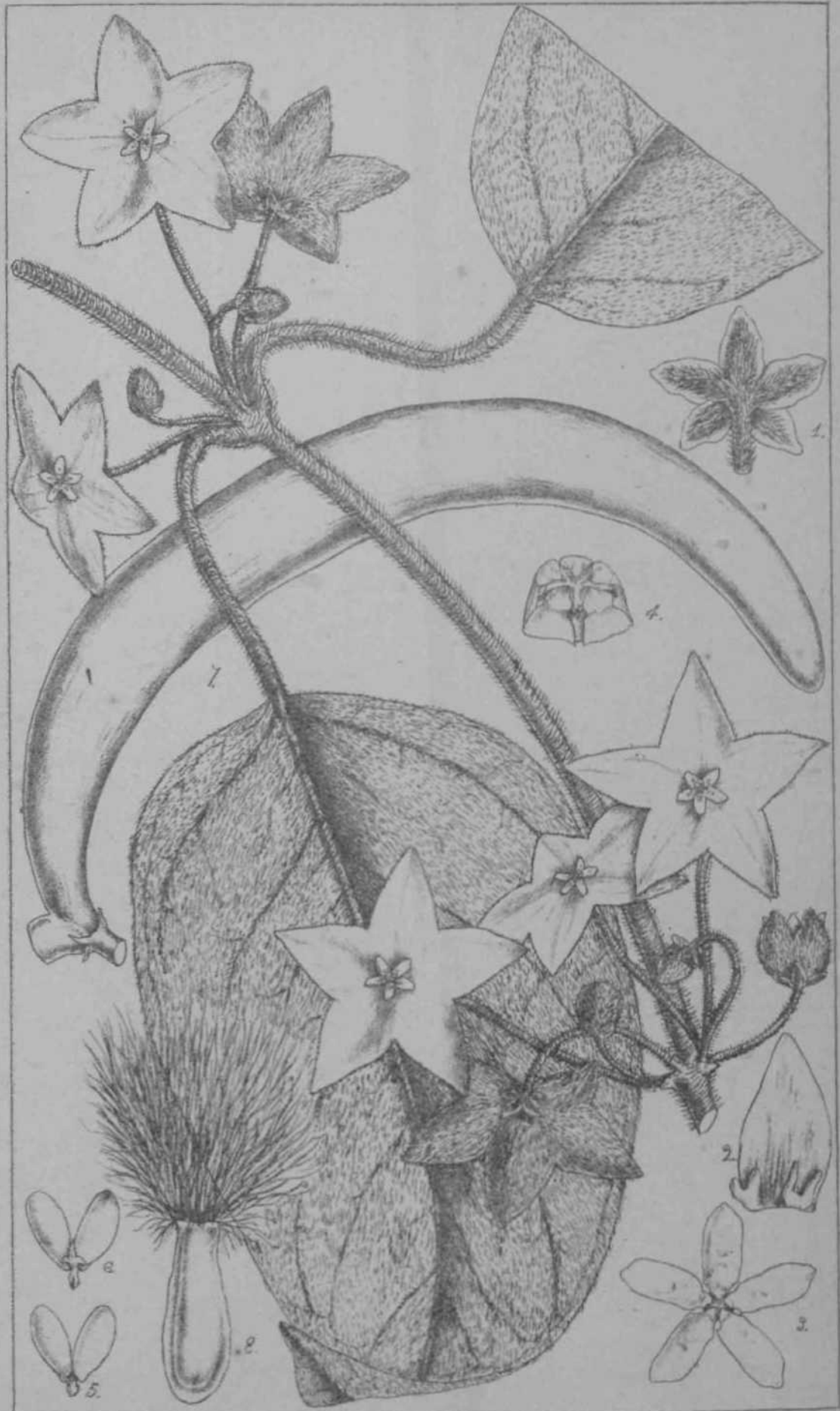
Petraeovitex Riedelii, Oliv.

Acc. No:
B-1694



M.S.del

Toxantheva natalensis, Hook. fil.



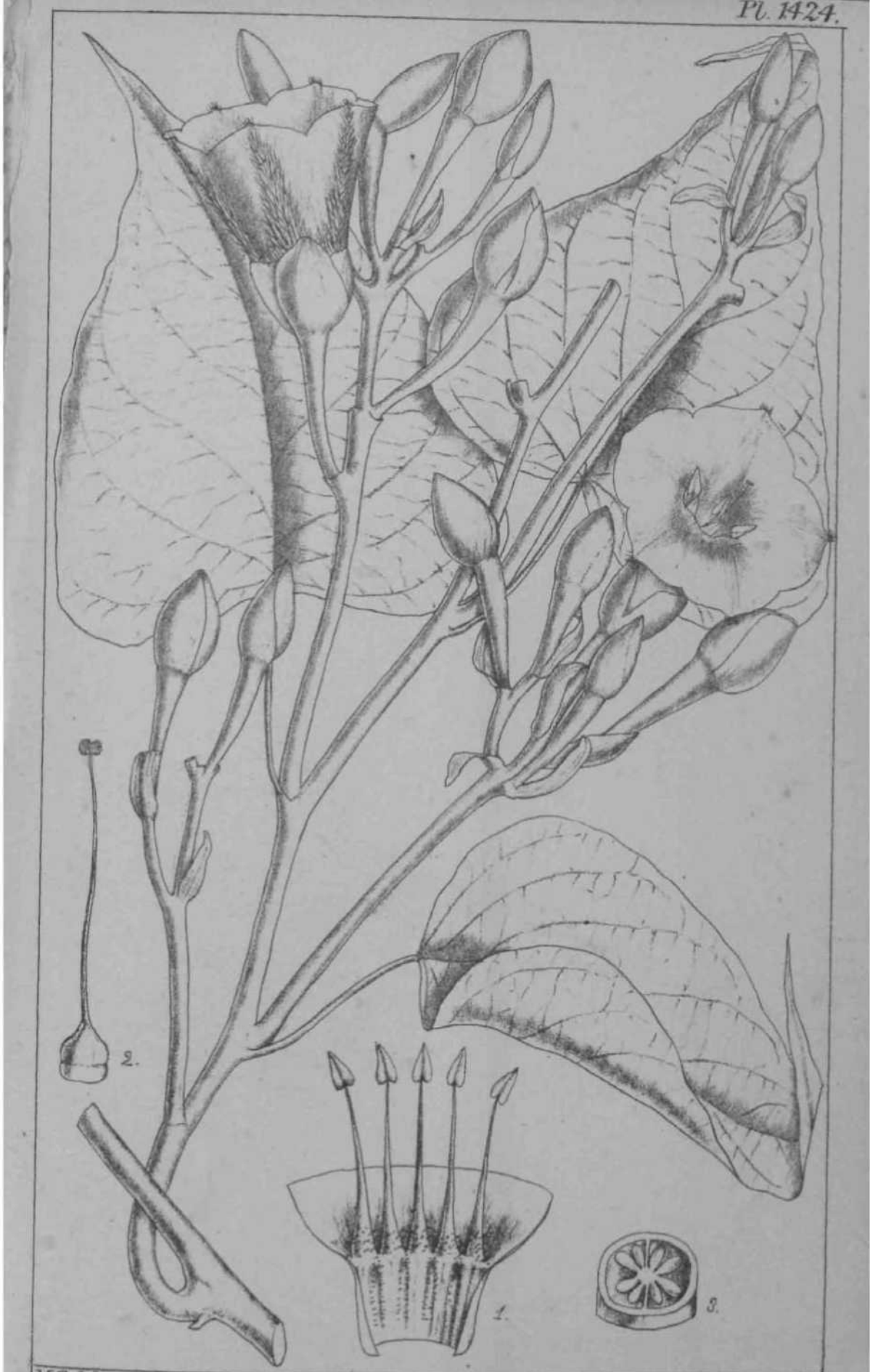
M.S.del.

Ditioceras Andersoni, Hook. f.



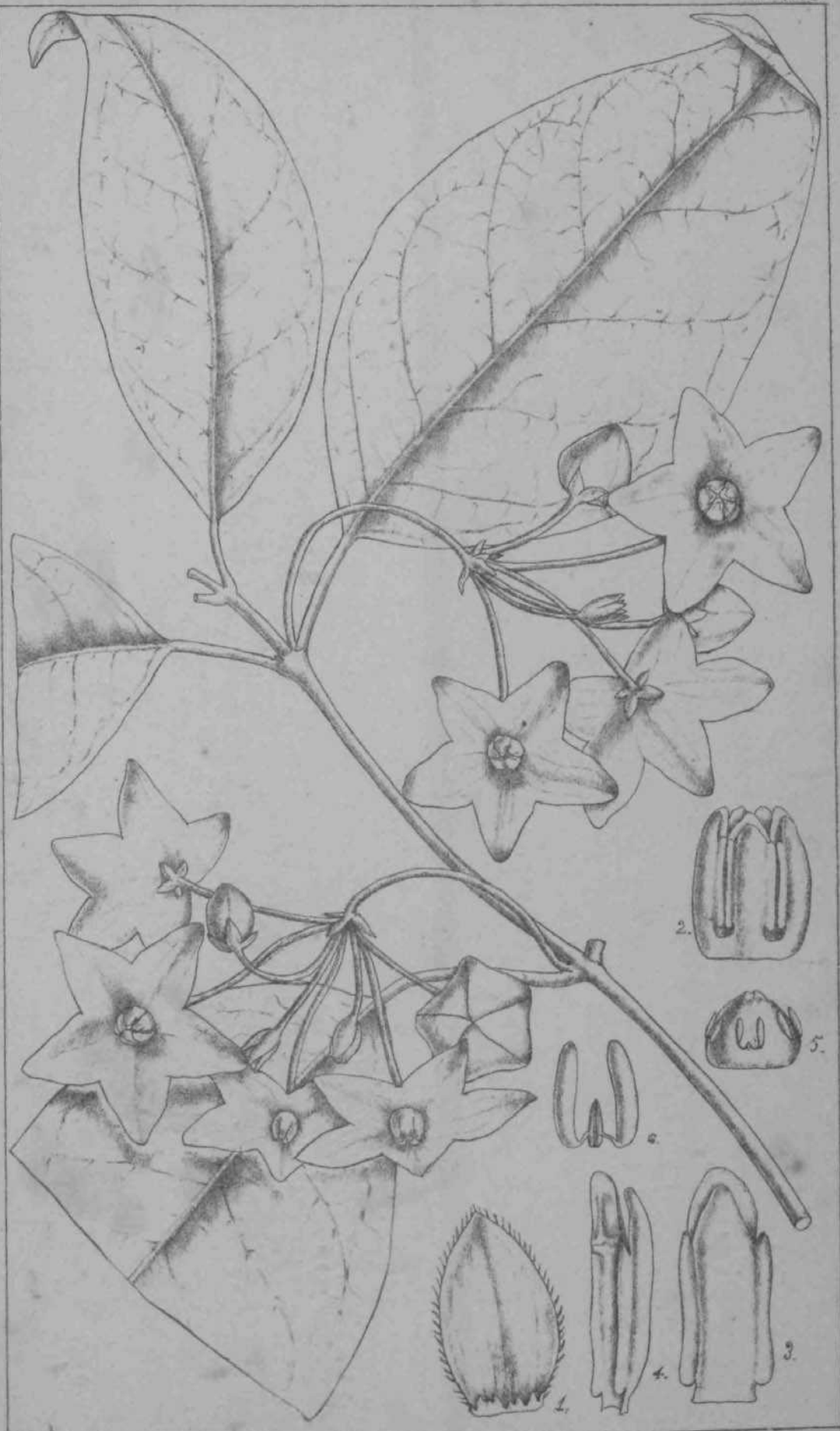
M.S. del

Lygisma angustifolia, Hook. f.



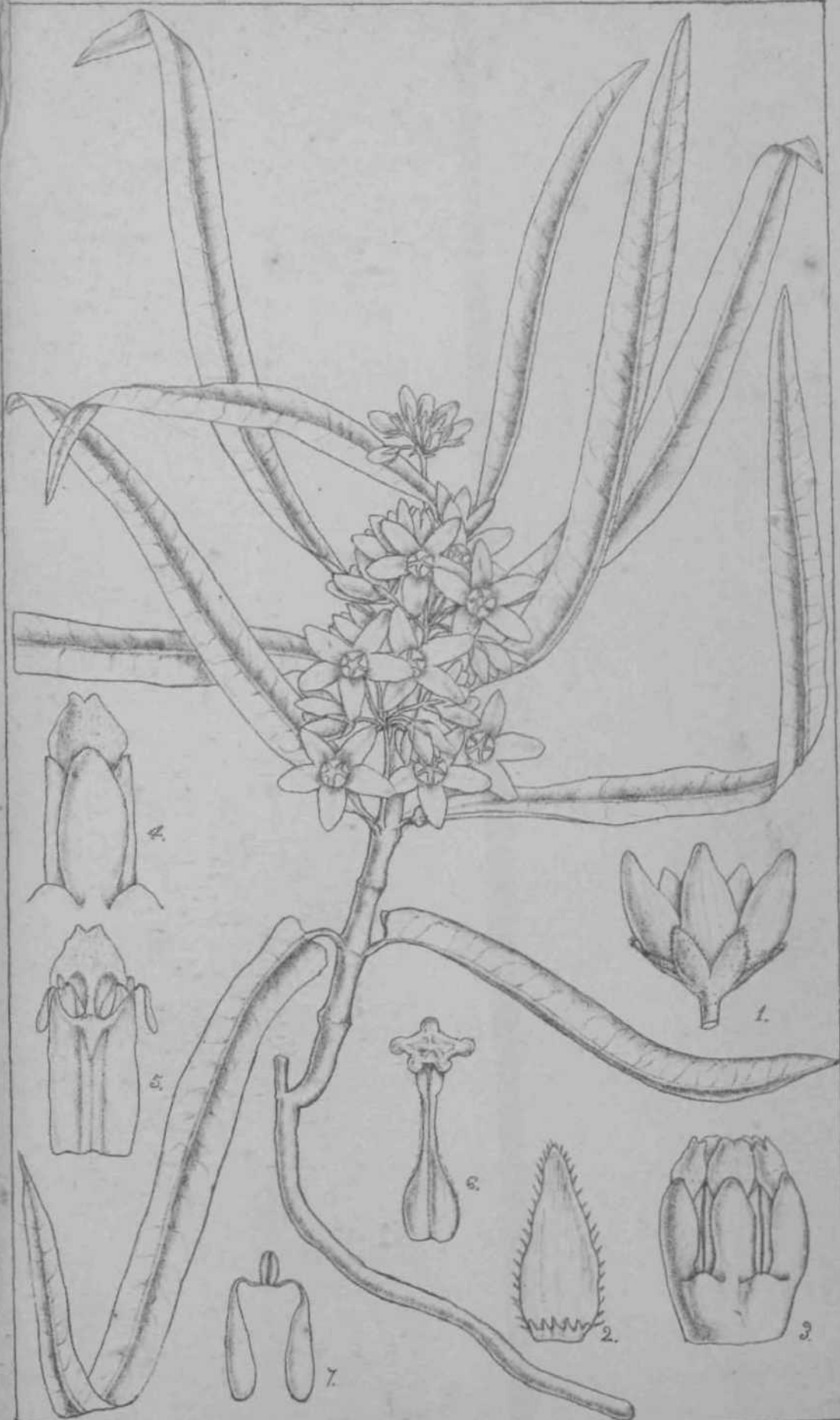
M.S. del.

Ipomaea Ri e deli ana. Oliv.



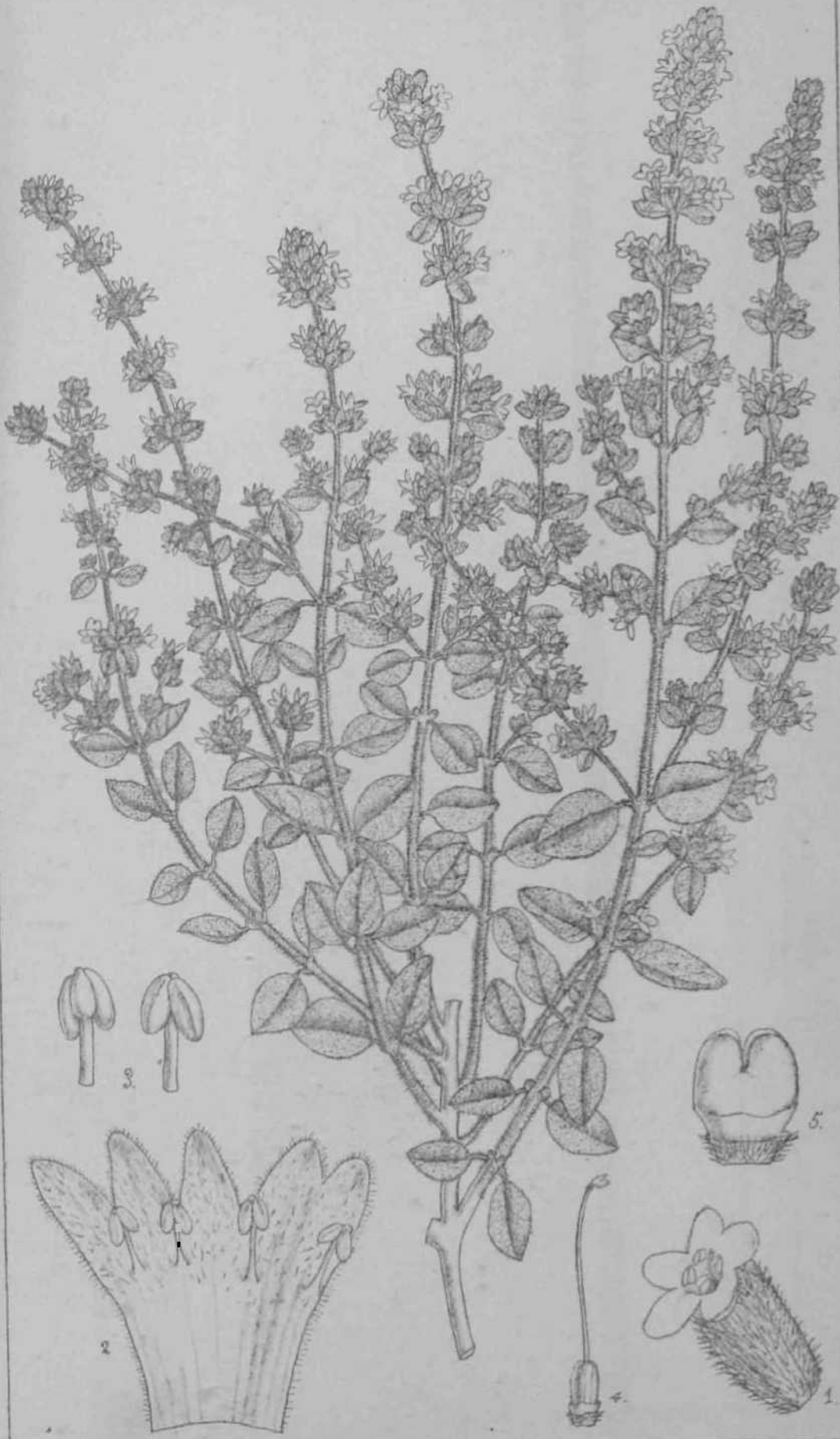
M.S. del

Treutlera insignis, Hook. f.



M.S. del.

Pentabothra nana, Hook. f.



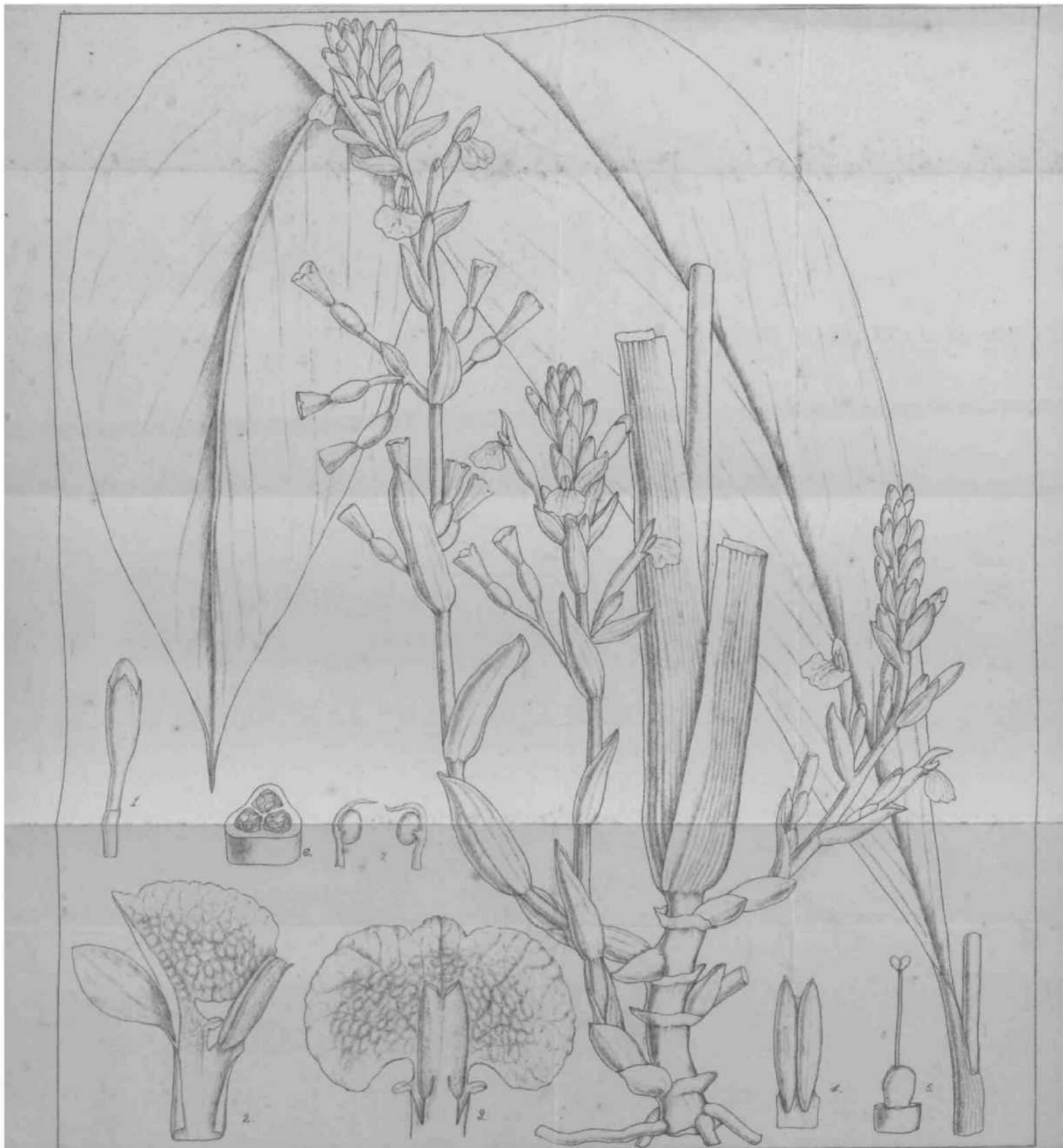
M.S. del.

Zataria multiflora. Boiss.



MS del

Flagellaria gigantea, Hook f.



M.S. del.

Renealmia africana, Benth.

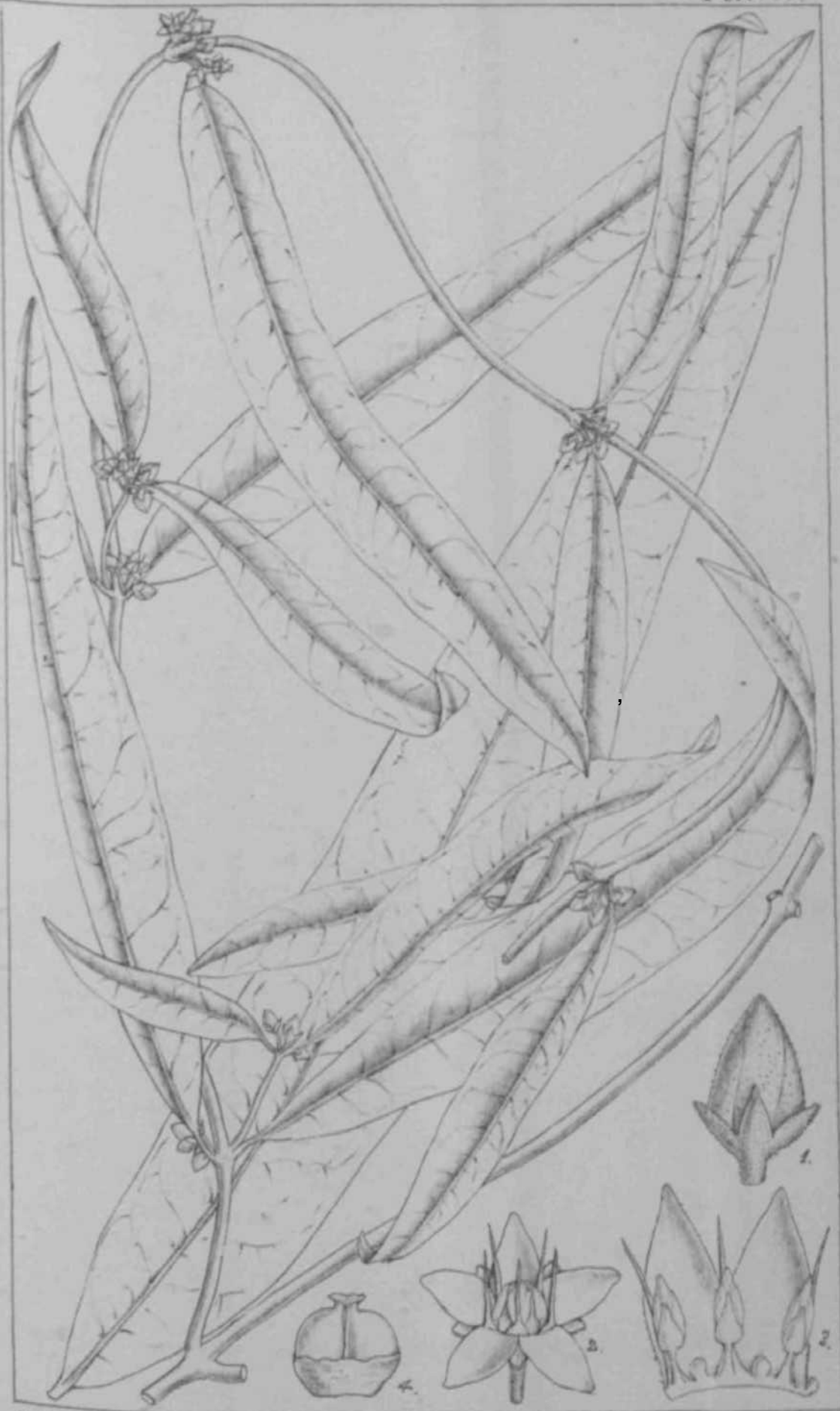


M.S. del.

Psilocarpha corymbiformis, Berth.



Uleria salicifolia, Bedd



M.S. del.

Atherolepis Wallichii, Hook. f.



M. S. del.

Cyclocampe arundinacea Benth.



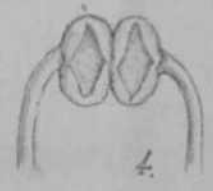
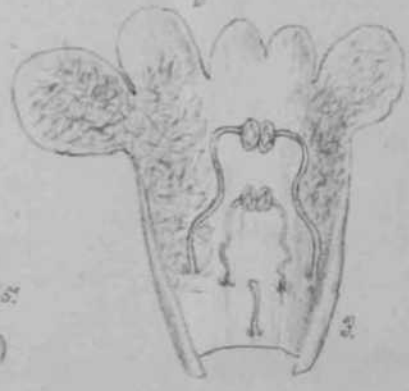
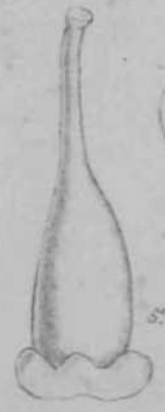
M.S. del.

Asterochaete glomerata, No. 35.



M.S. del.

Gymnema cranthm. Hook. f.



MS. del.

Didissandra rufa Kmg.



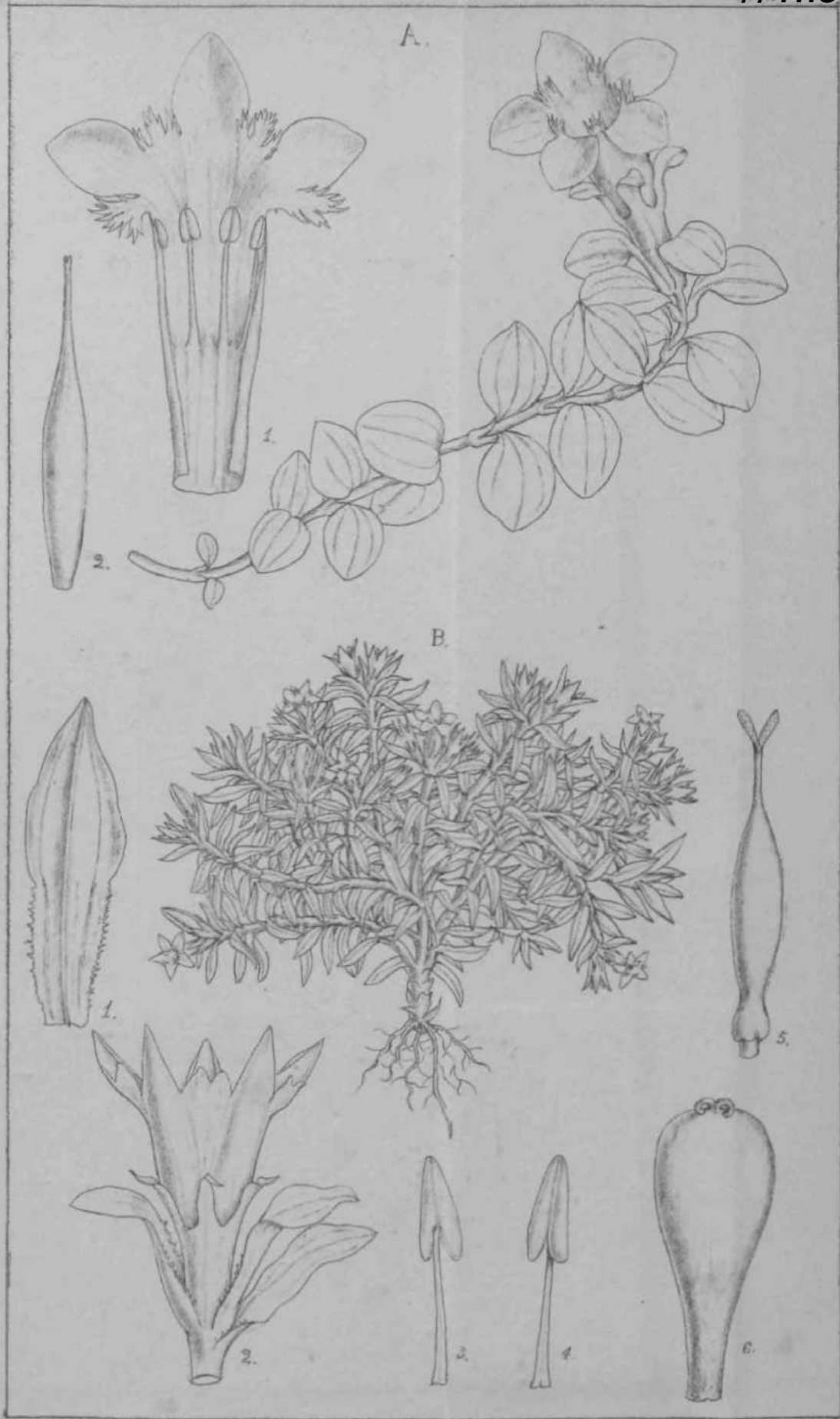
M.S. del.

Falconeria himalaica, Hk.f.



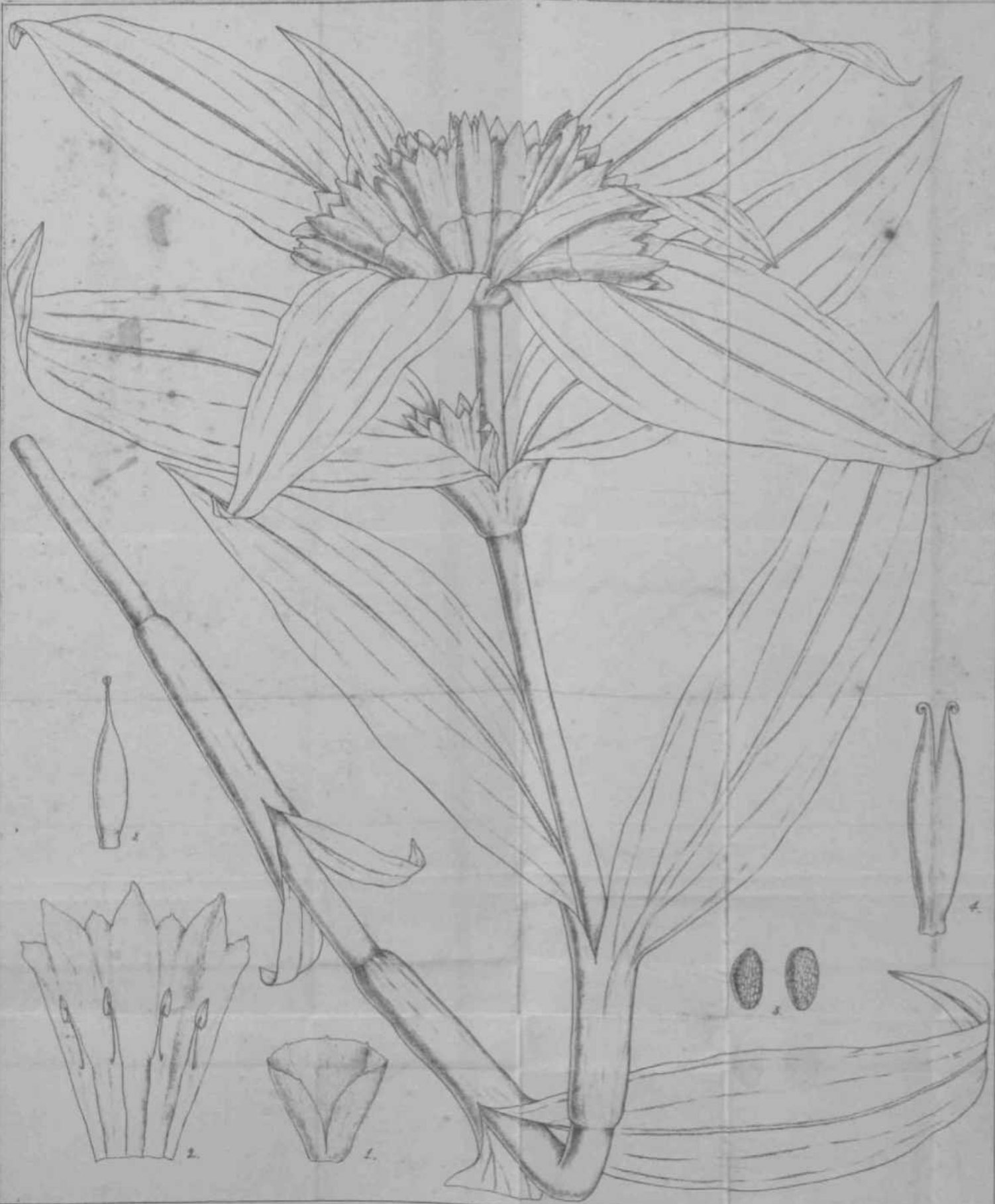
M.S. del.

Gentiana. robusta, King.



US. del.

A *Gentiana Ioderi* Hk.f.
B *Gentiana borneensis* Hk.f.



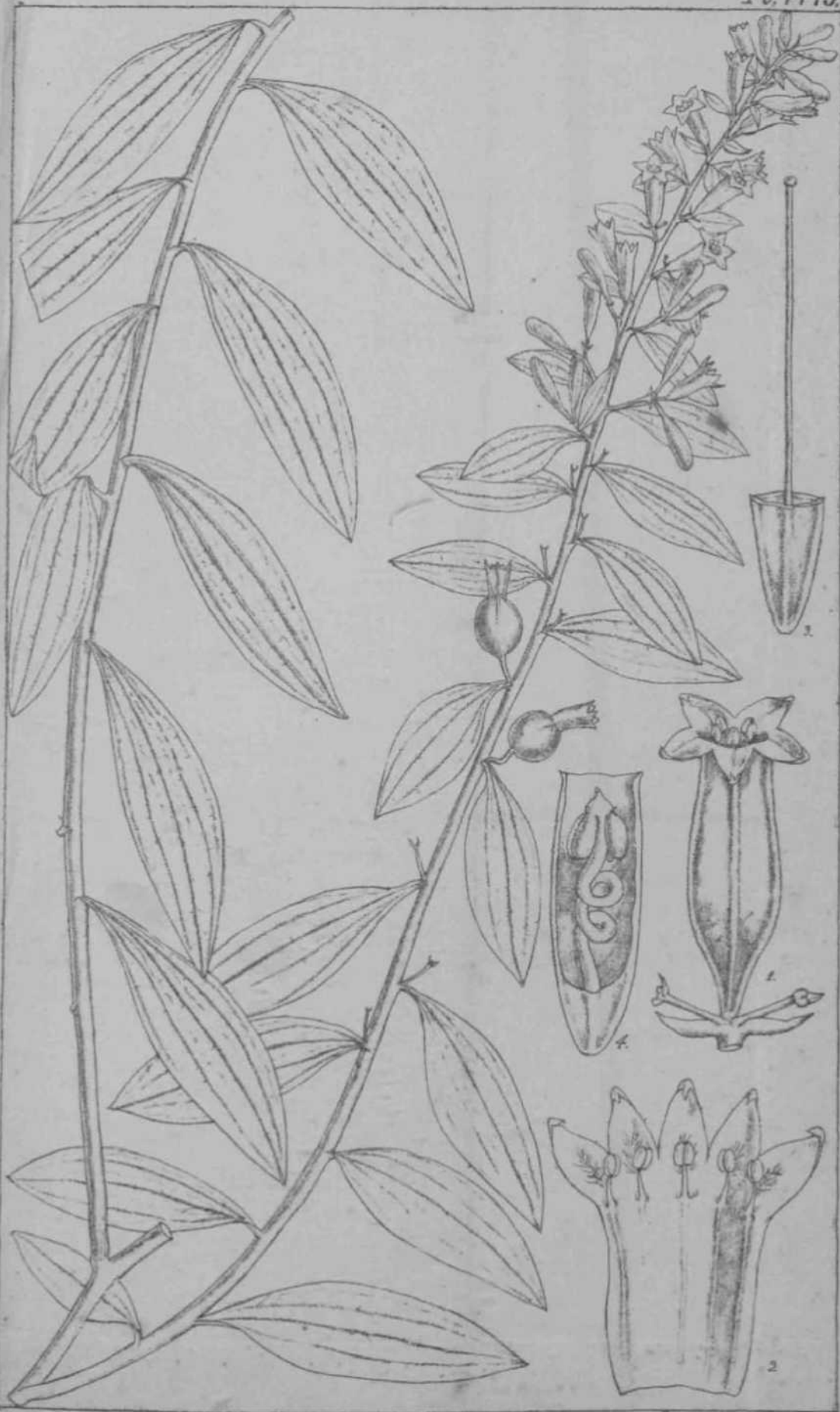
M. S. del.

Gentiana tibetica. King.



K.S. del.

Swertia Kinga, Hk.f.



M.S. 7el

Osyridocarpus Schimperianus. ADC.



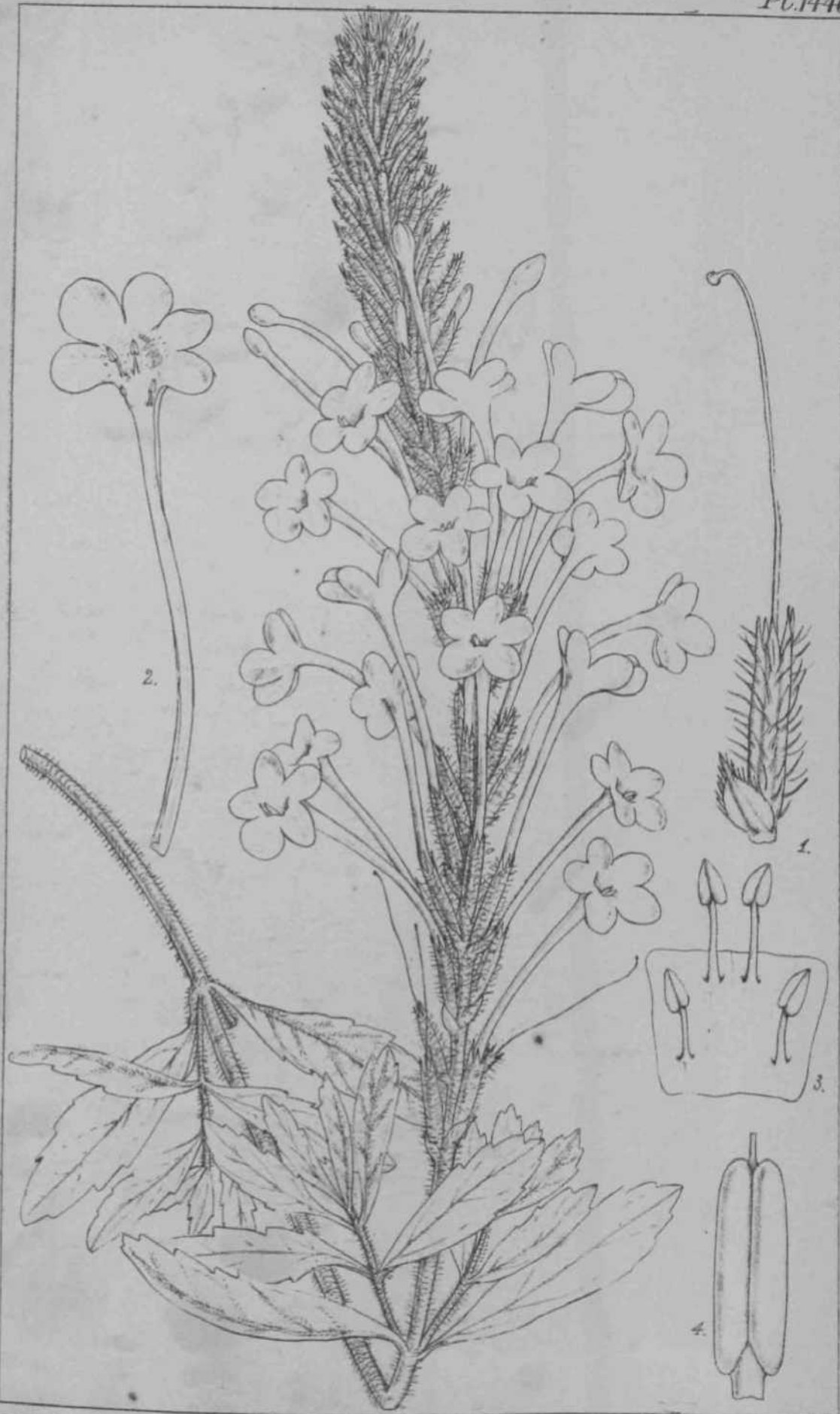
MS.de!

Wightia borneensis. Hk. f



M.S. del.

Tephrosia plicata Oliv.



M.S. del.

Bouchea. HannmgUonii, Oliv.



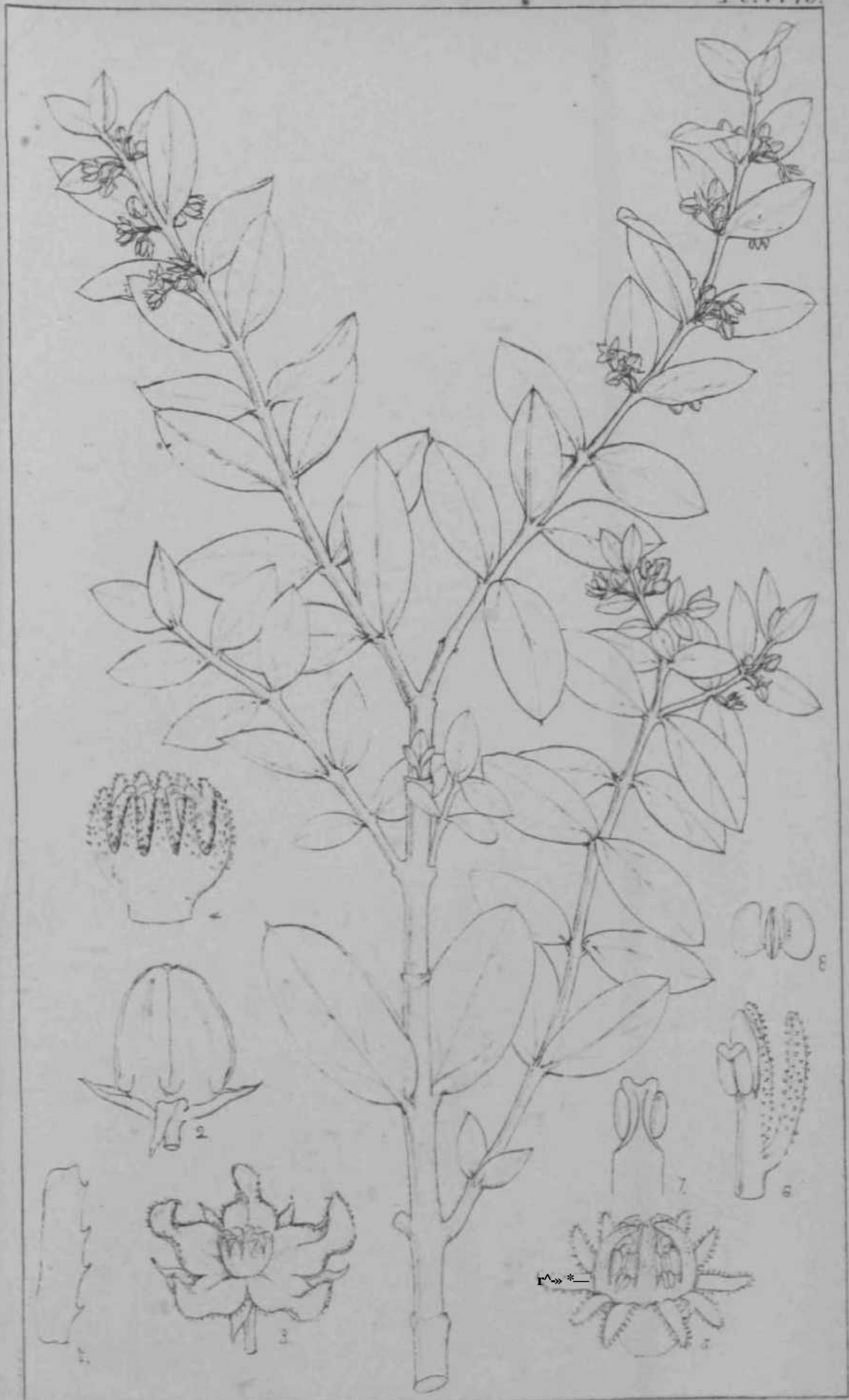
M.S. del

Erigeron Elhisi, Hk f



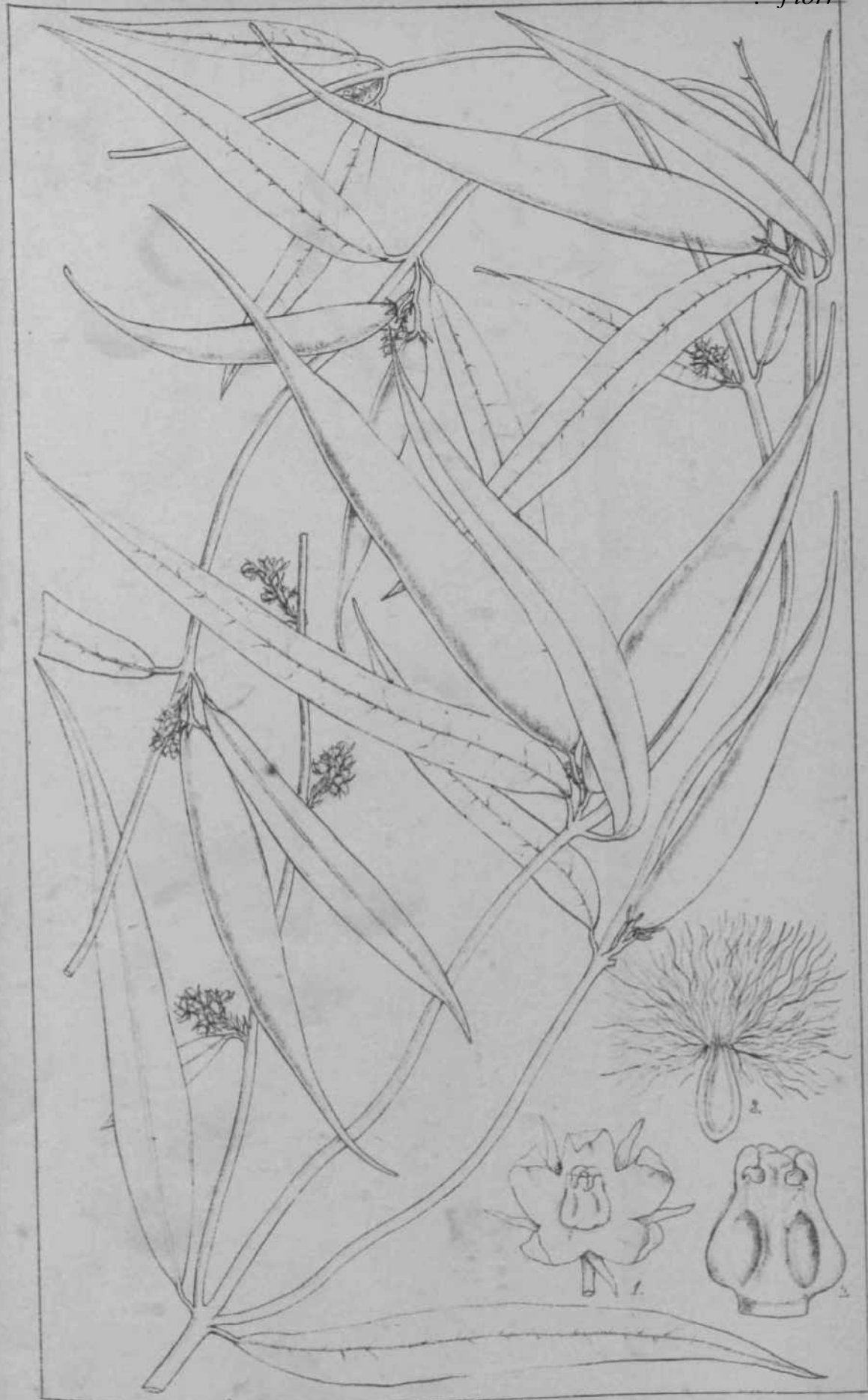
M.S. del.

Gardenia storckii, Ohv.



M.S. del.

Lasiostelma Sanderseni. Oliv.



y.i. del.

Tyloschloa microstachys, Hk.f.



M.S. ad.

Sphacophyllum Kirk; i, Oliv.



M.S. del.

Alepidea Woodii, Oliv.



M. S. del.

Otiophora cmatheoides, I. E. Br.



M.S. del.

Cussonia Geirard: Seem.



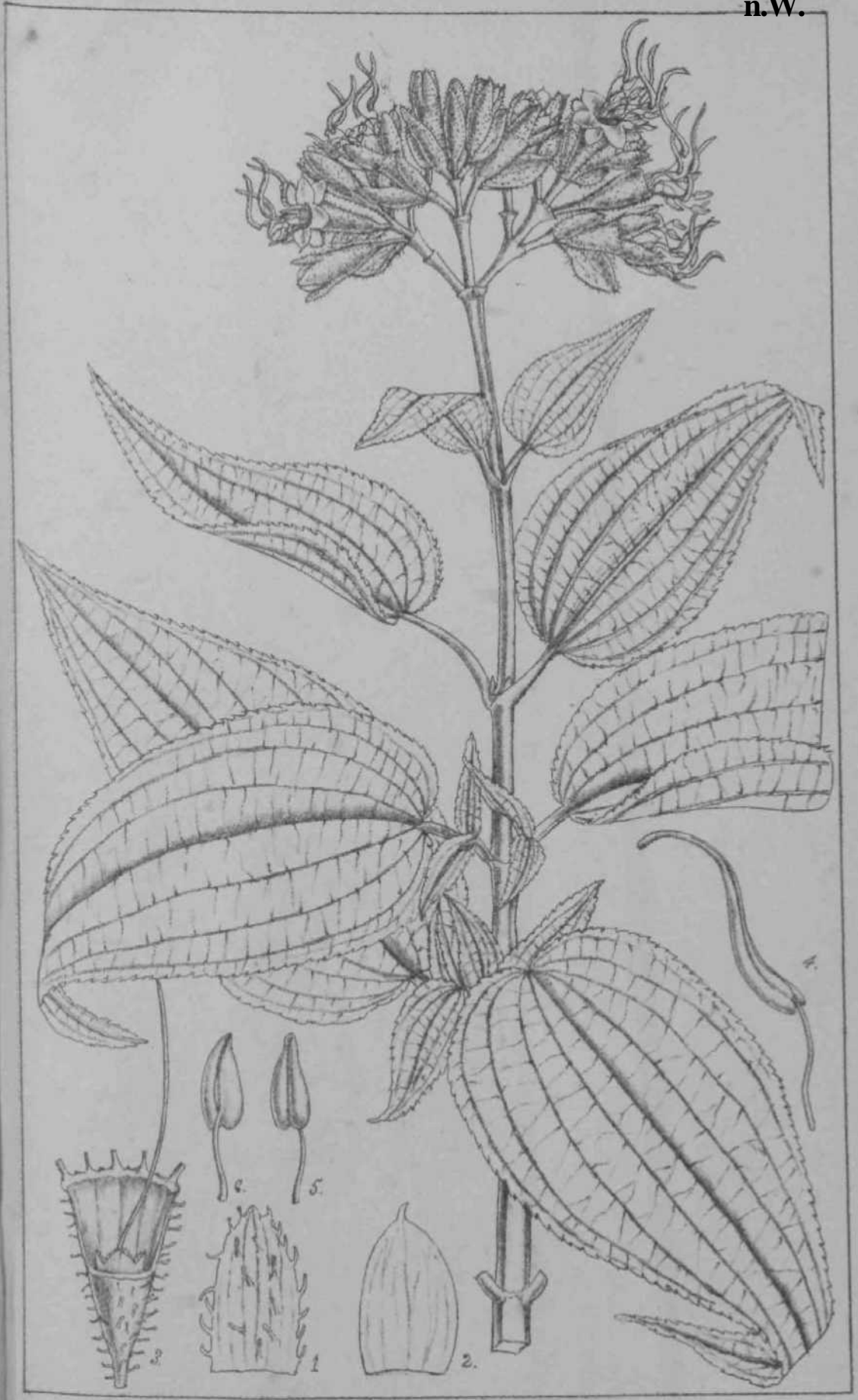
M.S. del.

Agrostis SHD lans, F[emsl]



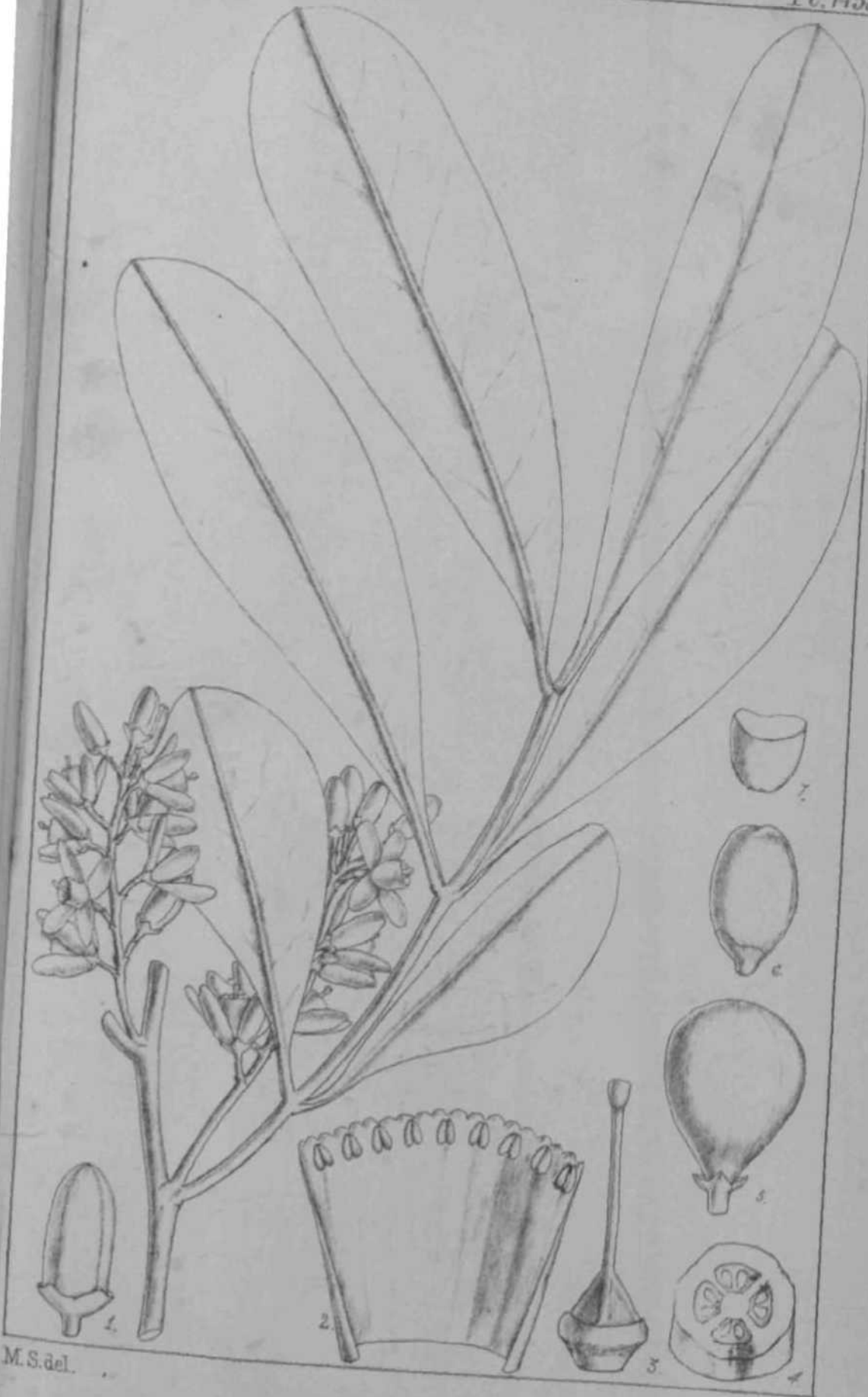
Ks.dd,

Senecio Bolusii, Oliv.



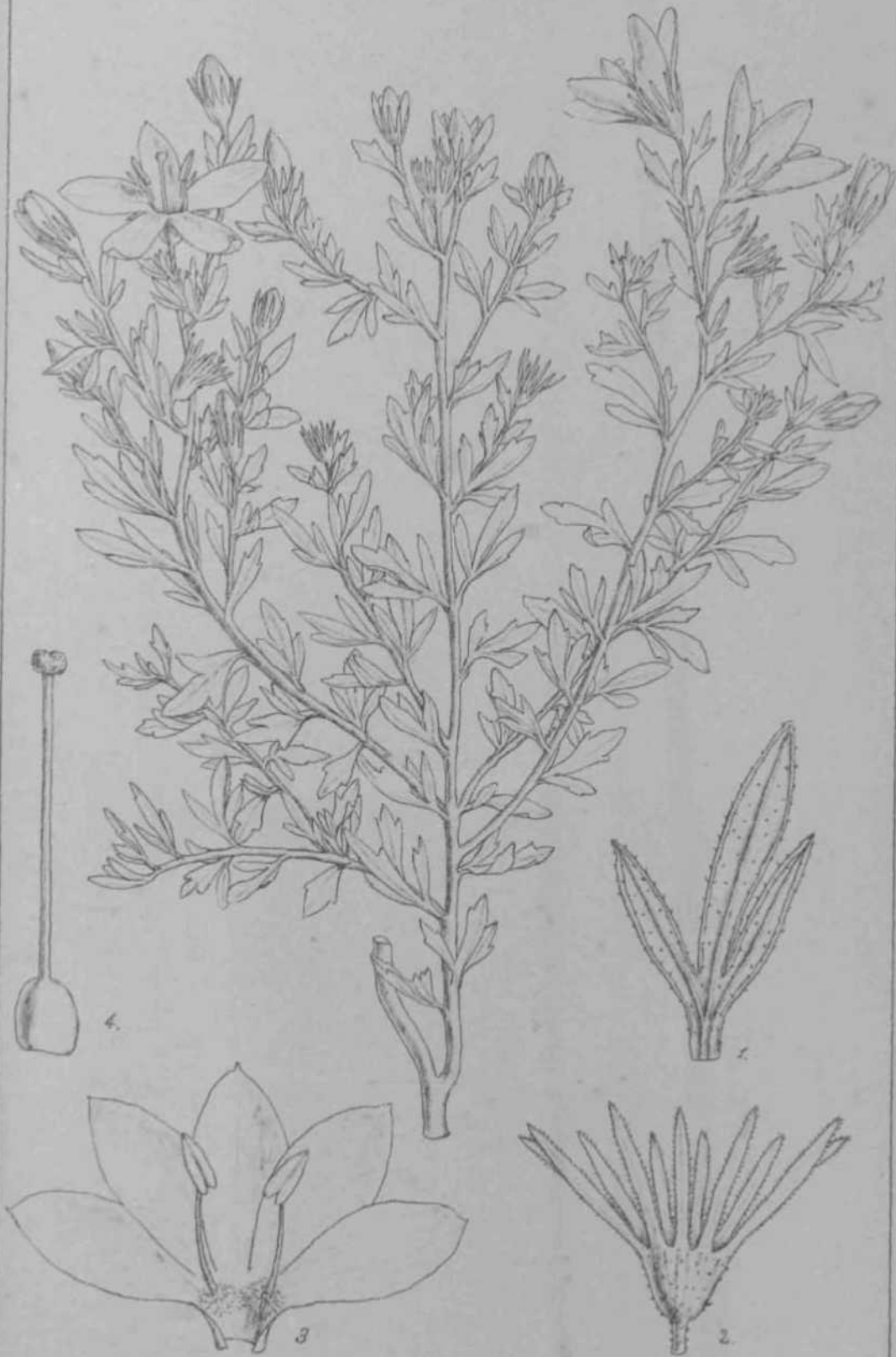
M.S. del

Sonerila Fordn Oliv.



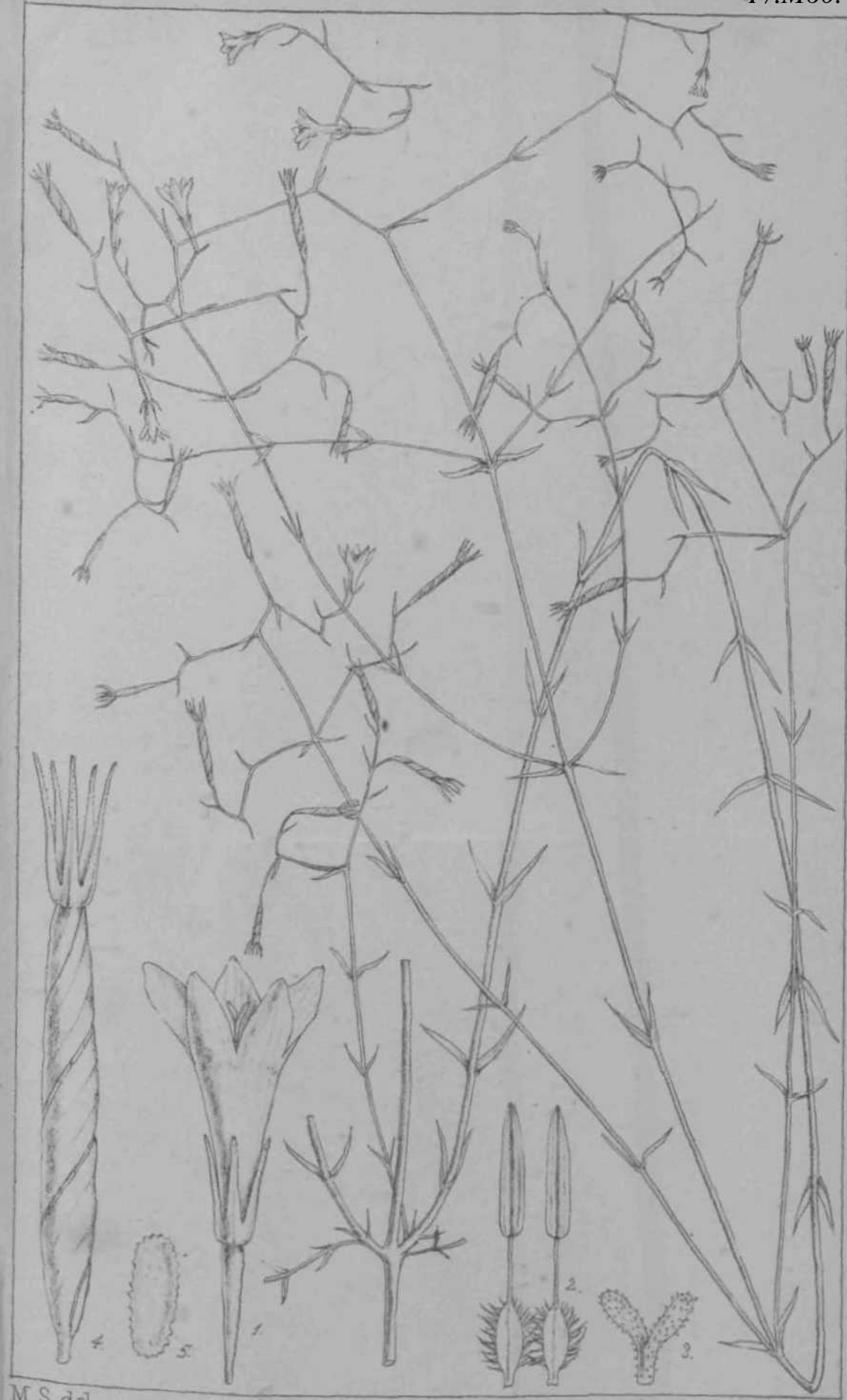
M.S. del.

Pseudorapa Championii, Hemsl.



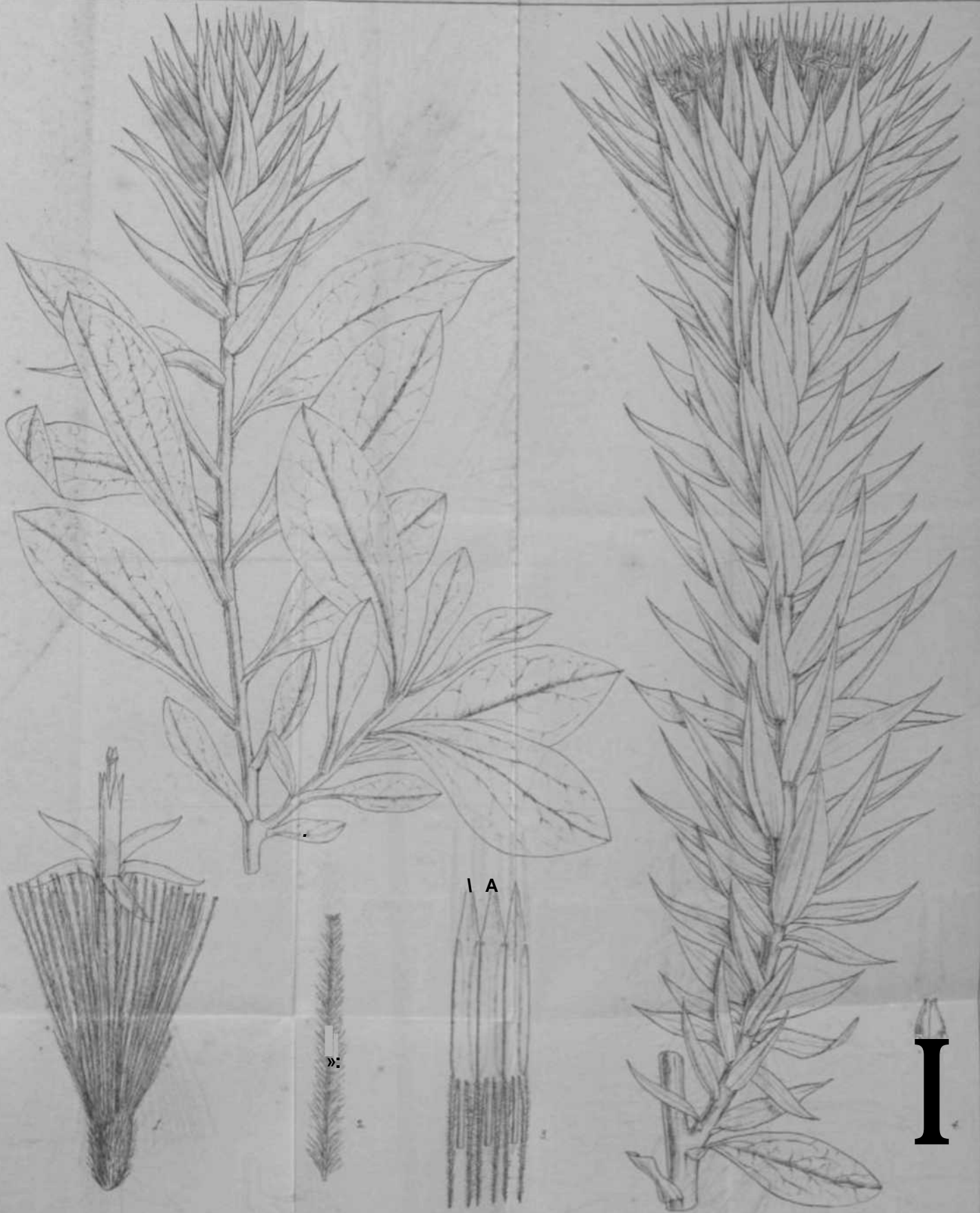
M.S.del.

Menodora heterophylla, Mor.



M. S. del.

Pnsmatocarpus tene, ¹lus, *Ohv*,



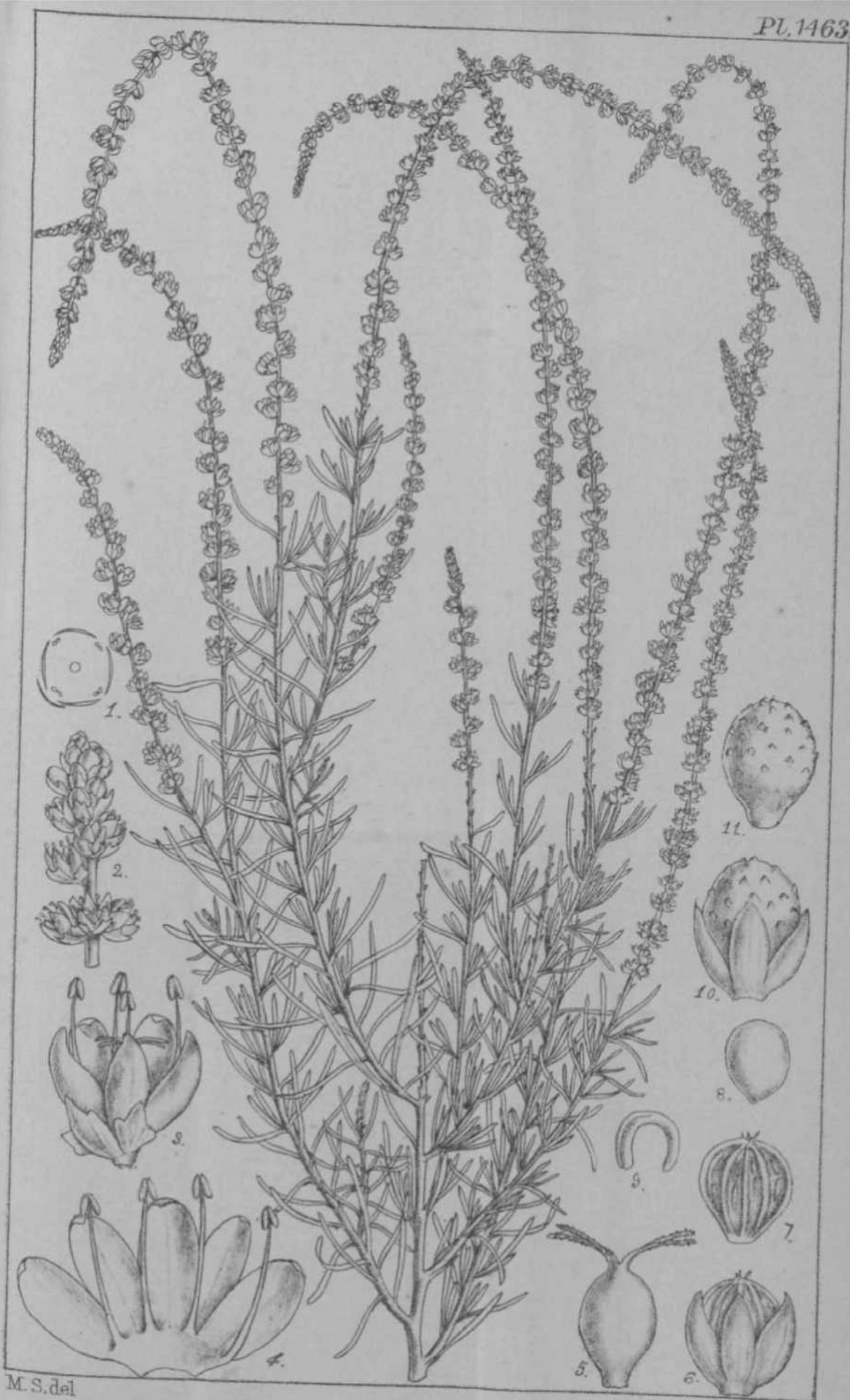
MSdd.

Dieoma argyrophylla, Oliv.



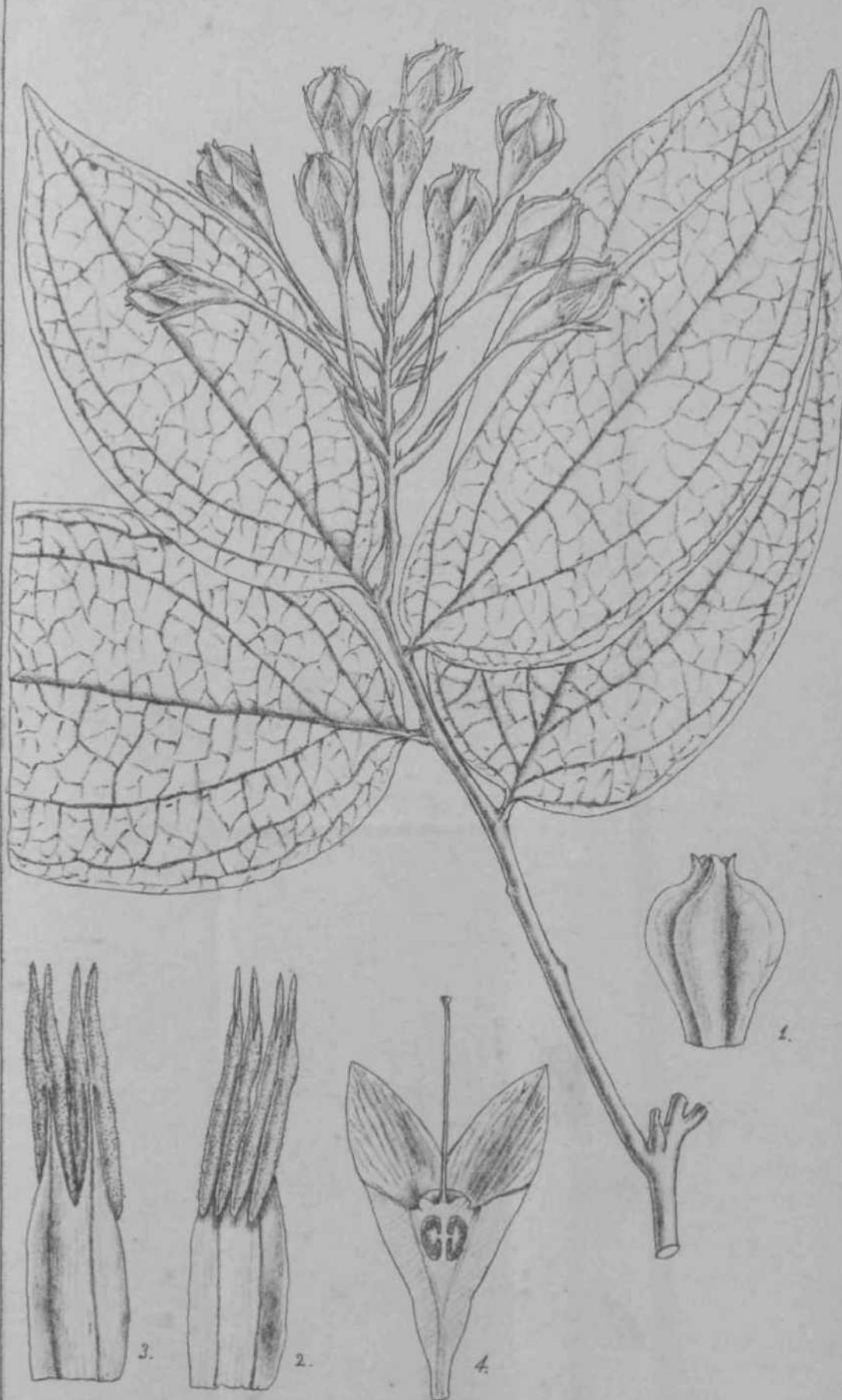
M.S. del.

Eupatorium Ballii, Oliv.



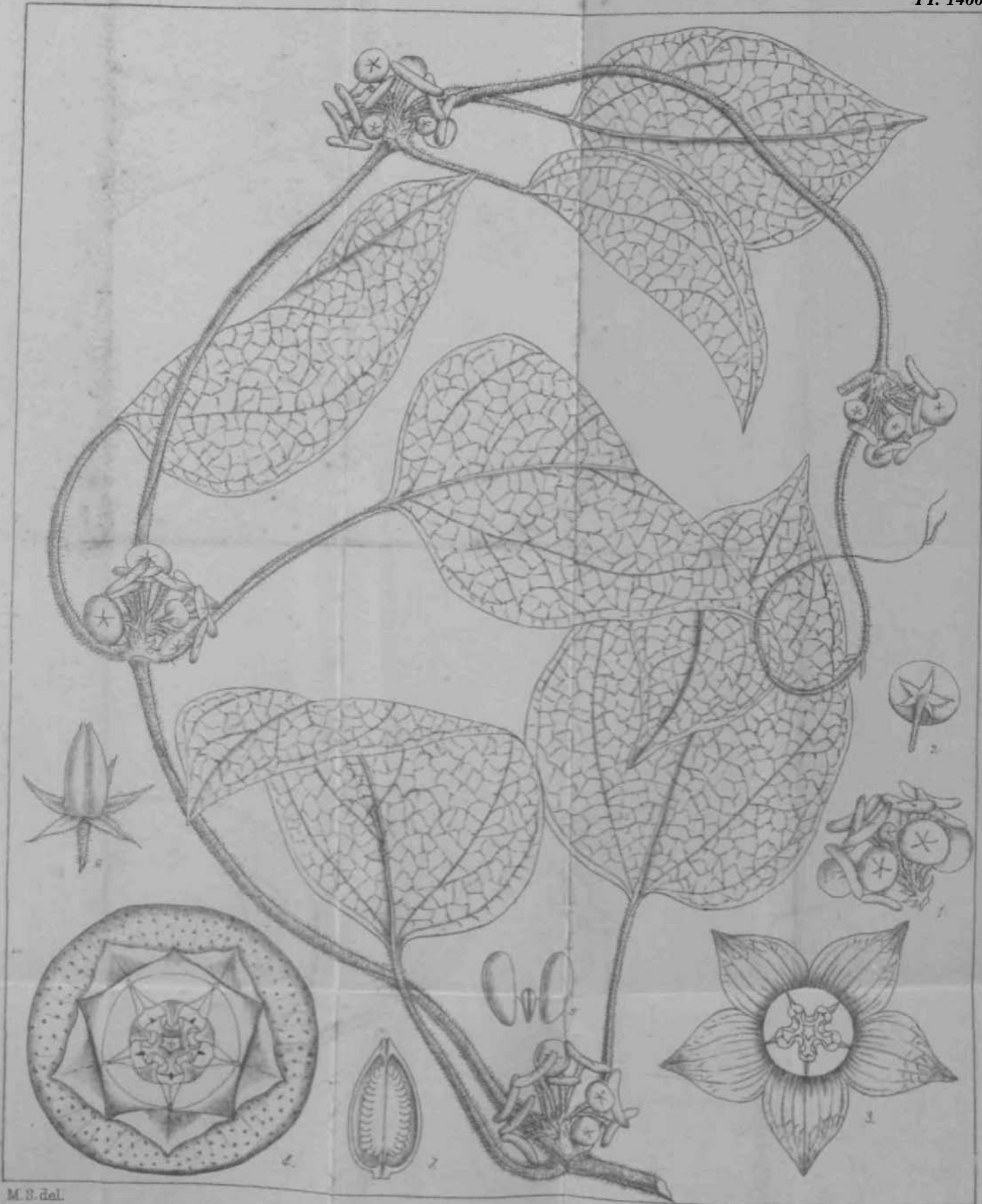
M. S. del

Lophiocarpus Burehelli, Hk £



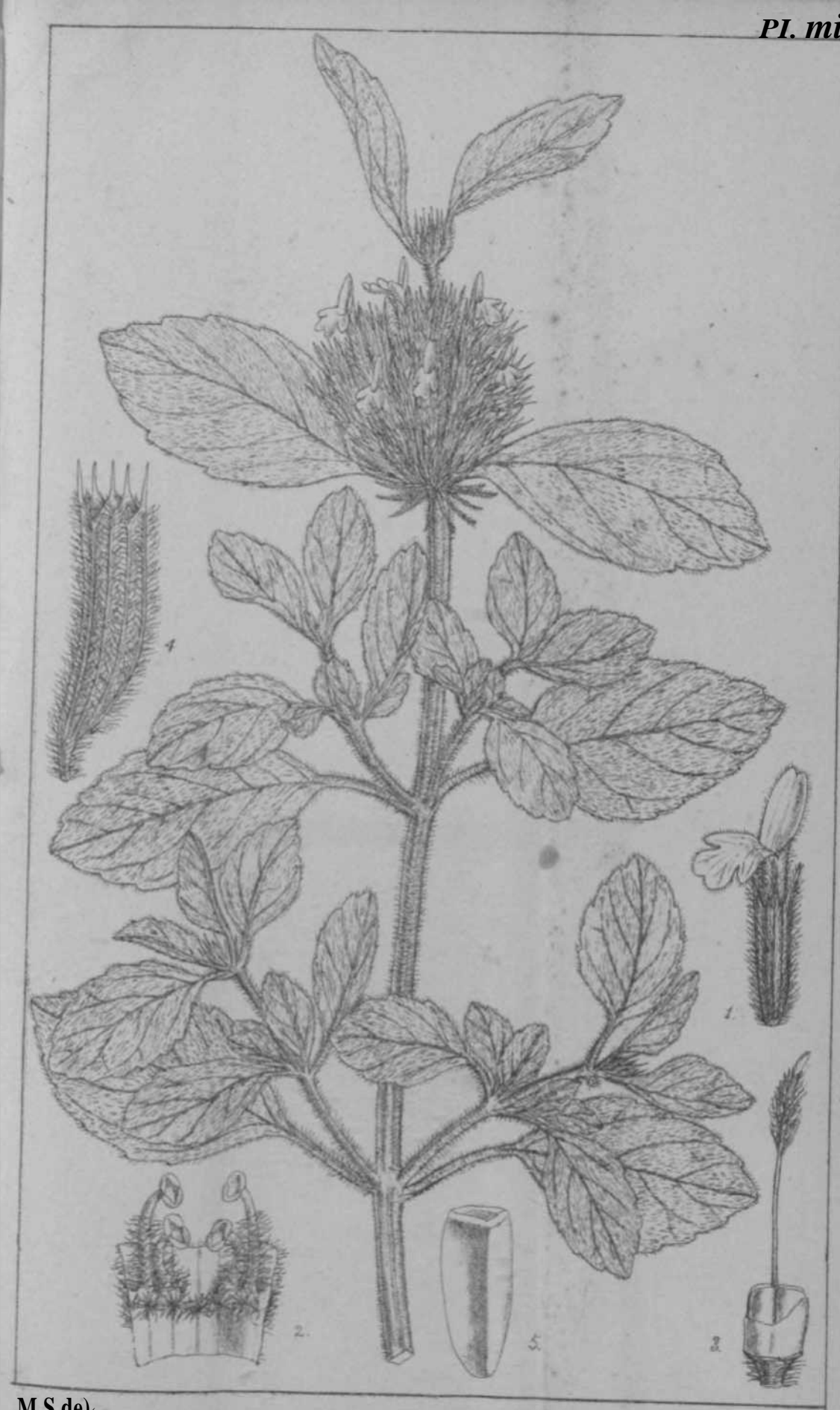
M.S.dcl.

Anthopterus Wardii Ball



M. S. del.

Oianthus Beddomei. Hk. f.



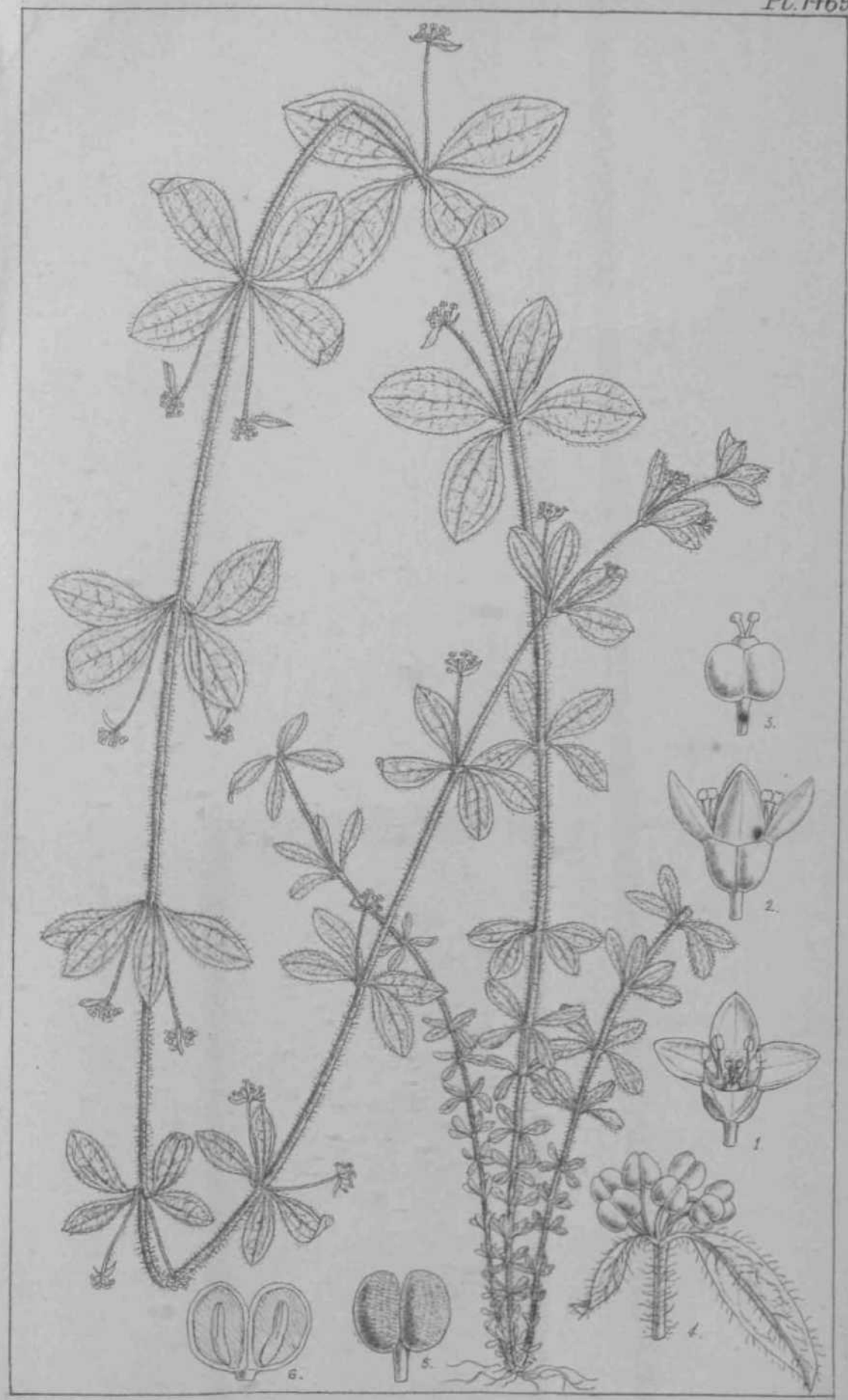
M.S.de).

Arotome inflata, Benth.



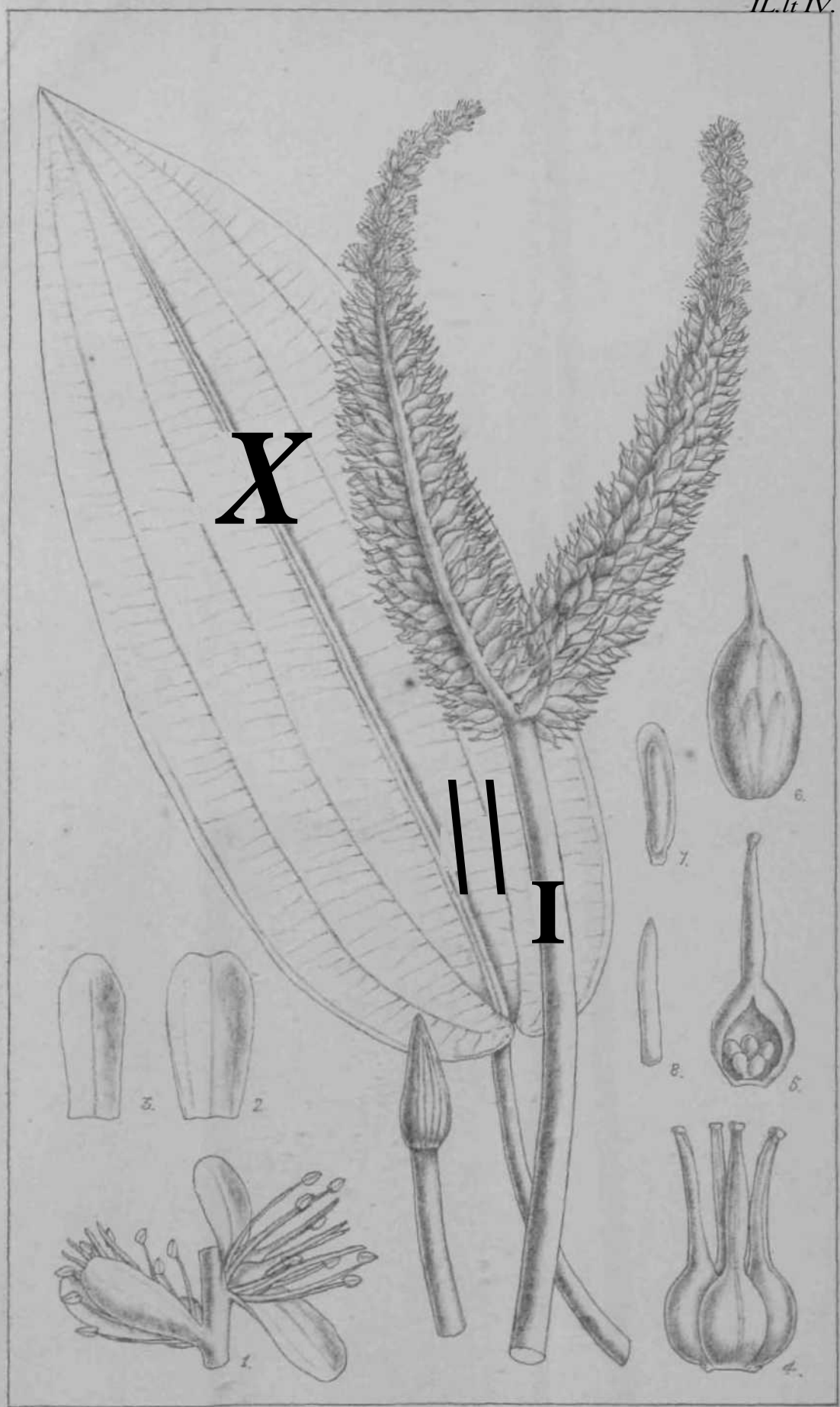
MIS .del;

Gomphostemma chmense, Oliv.



M.S. del. .

Galium cryptanthum, Hemsl.

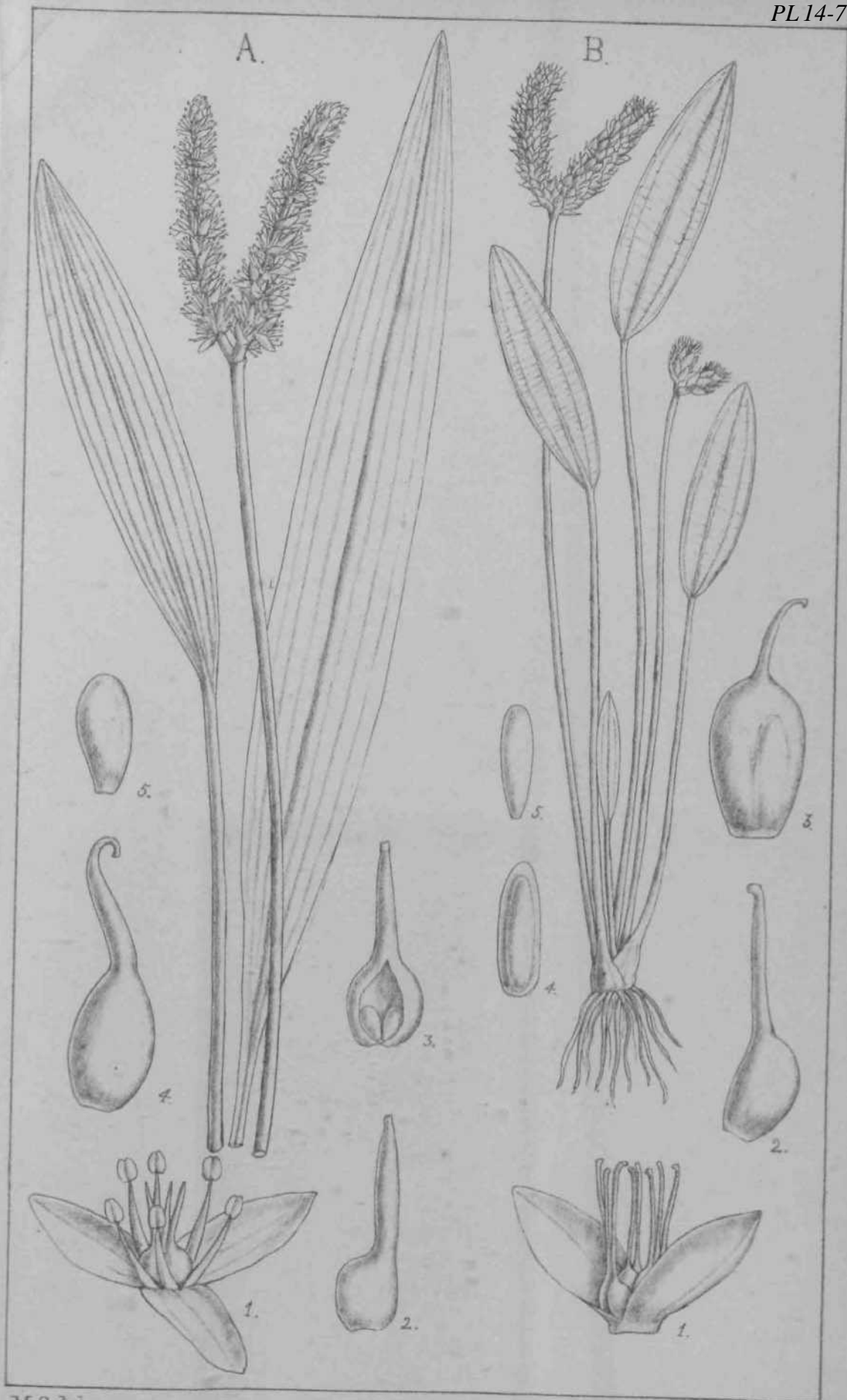


X

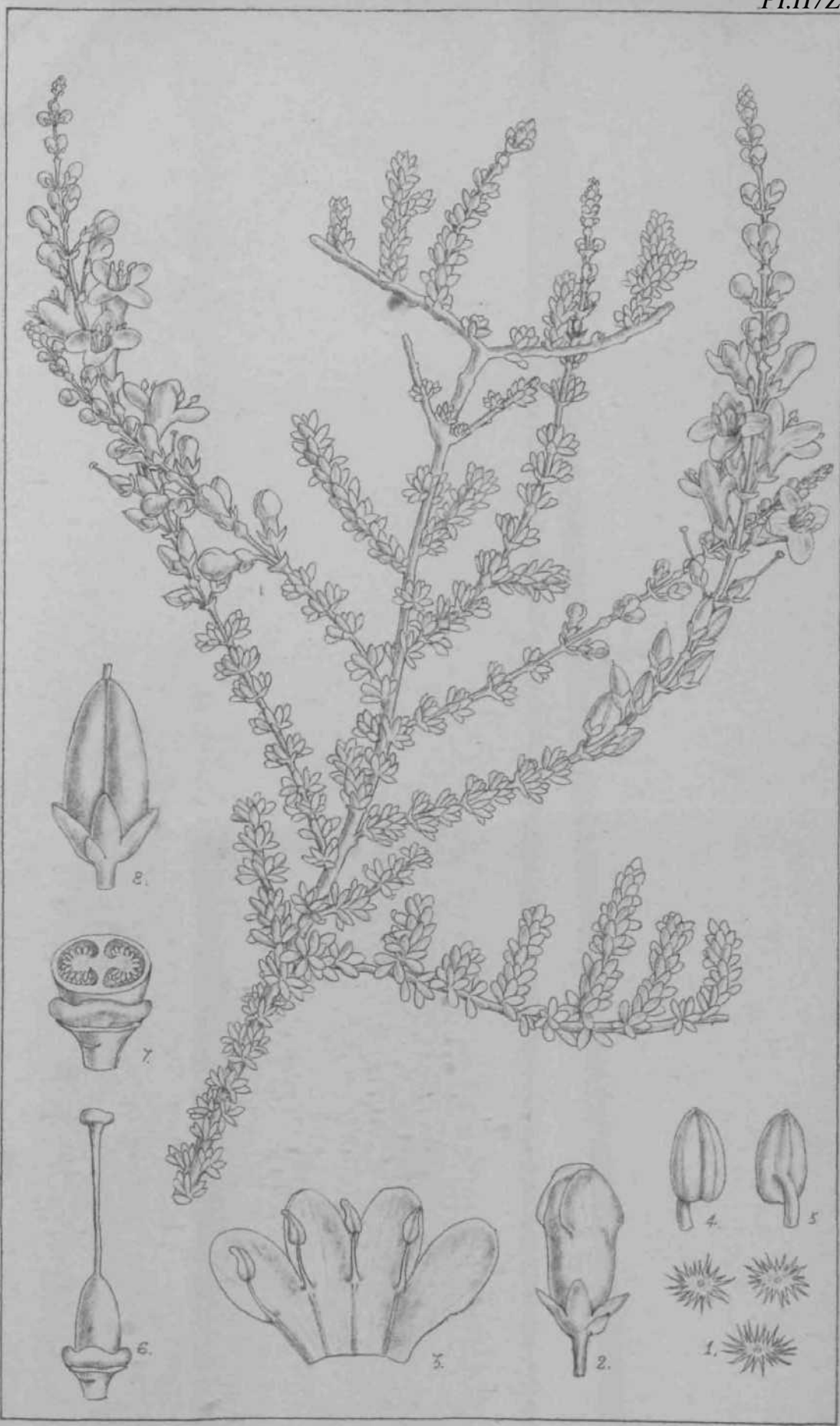
I

M.S.del.

Aponogeton Holu"bn, Oliv.

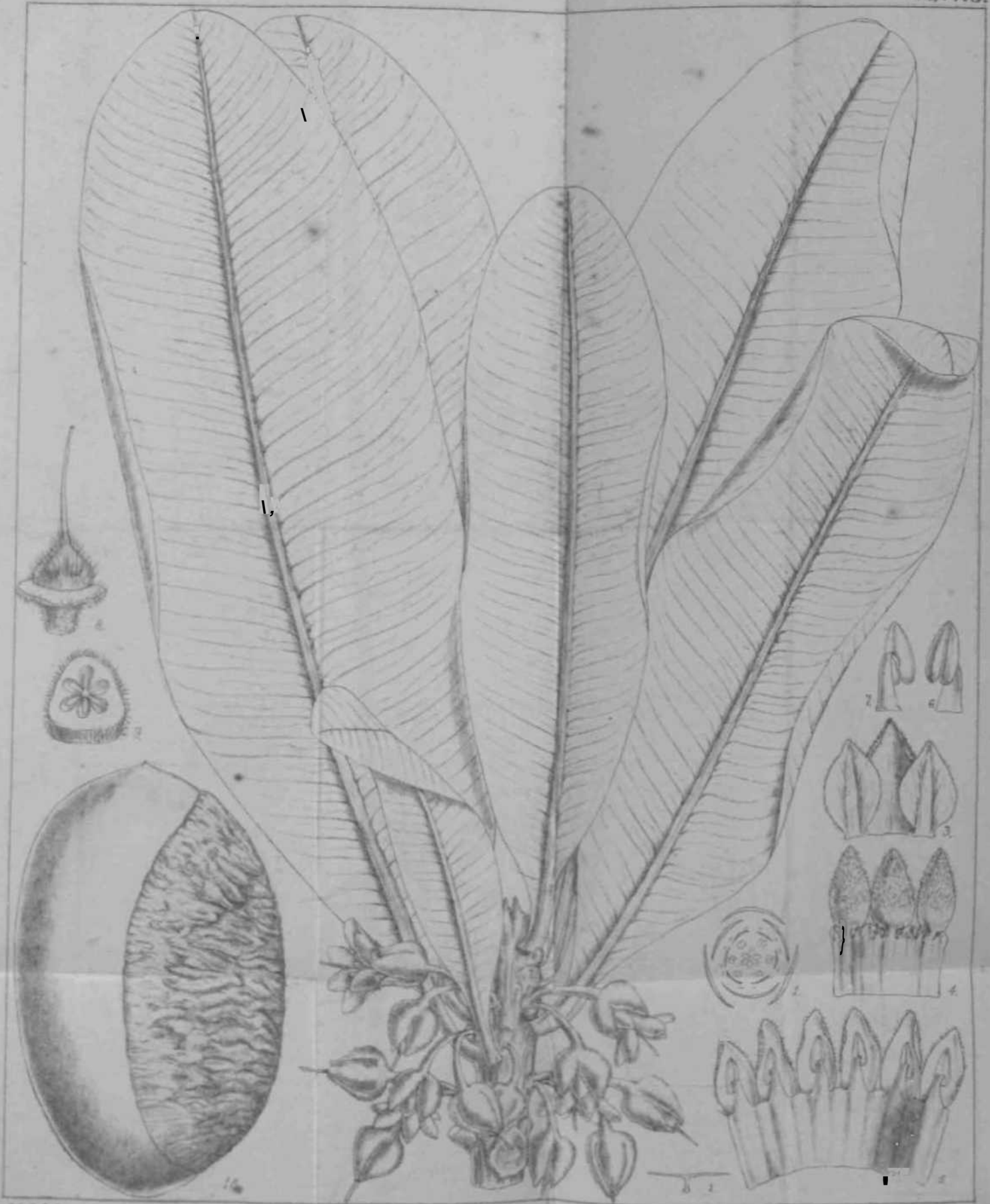


A .Aponogeton natalense, Oliv.
 3 _____ Rehmanni, Oliv.



KS.dd

Gompho stigma mcanum, Oliv.



Northia Seychellana, Hk f.



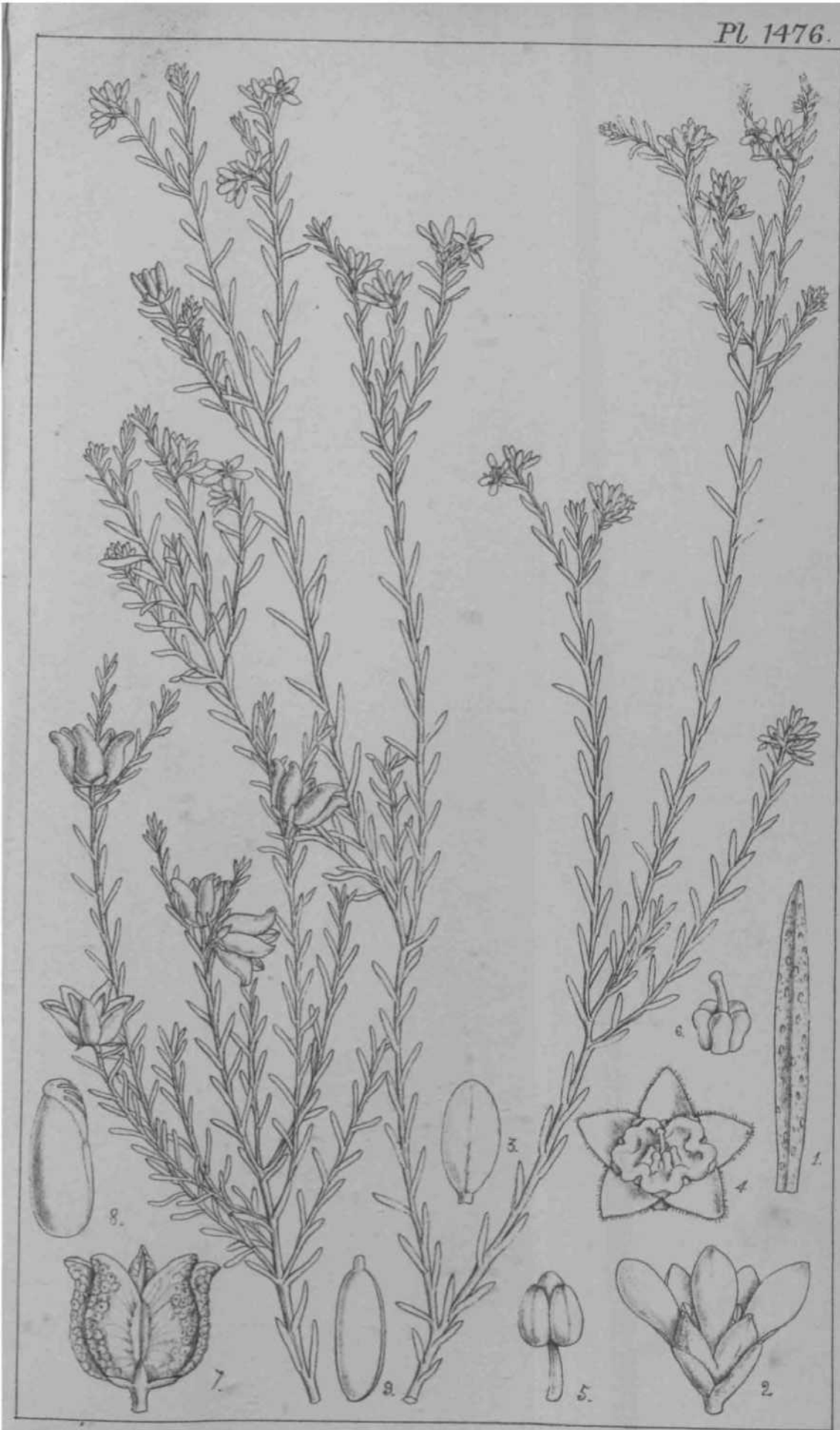
M.S. del.

Ipomæa shirensis, Oliv.



M.S. del:

Holubia saccata. Oliv.



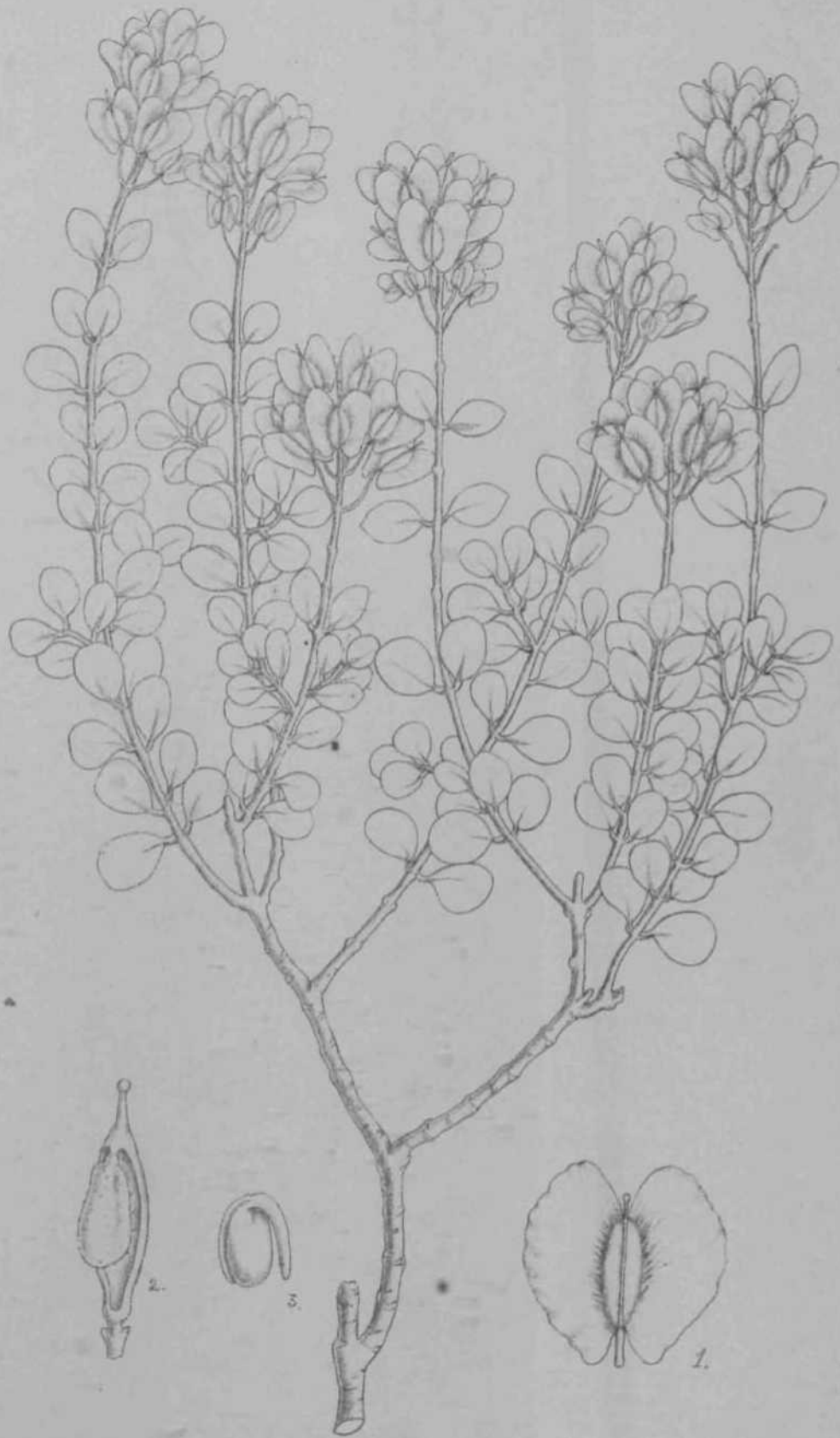
M. 3. del at lith

Diosma flavescens, Oliv.



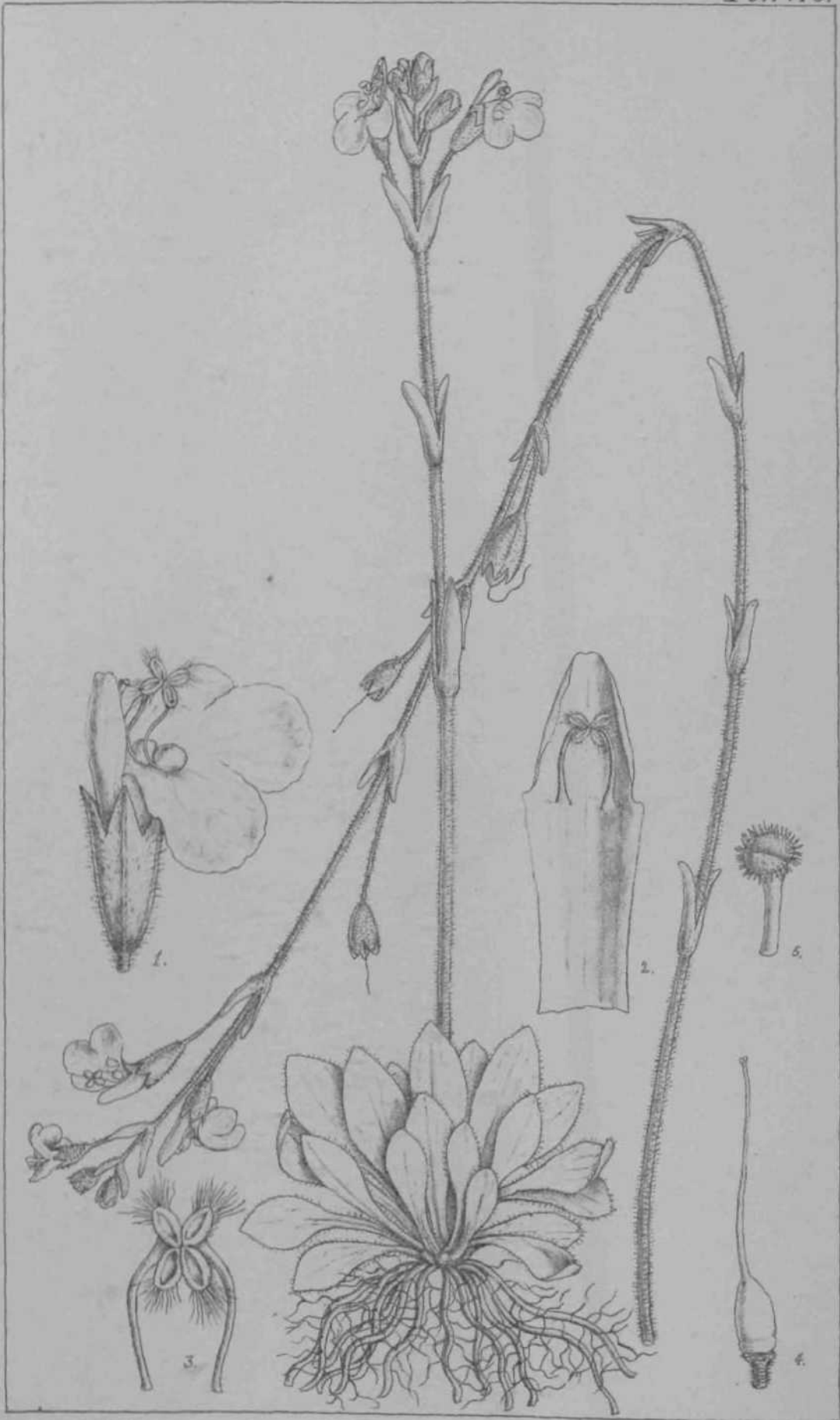
•MS.dd.et life.

Alyssum saniariferum.Uoiss &Hausk.k



M. S. del, tit Utit

Aethionema spicatum Post



M.S.&el ethh

Craterostiema nanum, Benth. var? *elatior*.



M.S.deletlith

Trichocladus grandiflorus, Ohv.



M.S. del. et lith.

Garnoliapolygoides, Murro.



M. S. del, et lith.

Callilepis salicifolia, Oliv.



M.S. id.rt.WIL

Sentcio segmentatus, Oliv.



M.S. del et lith.

Tryphostemma haringtonianum, M. T. M.



MS.dei.ethth.

Oncoba lasiocalyx, Oliv,



Hyobanche atropurpurea, folius.



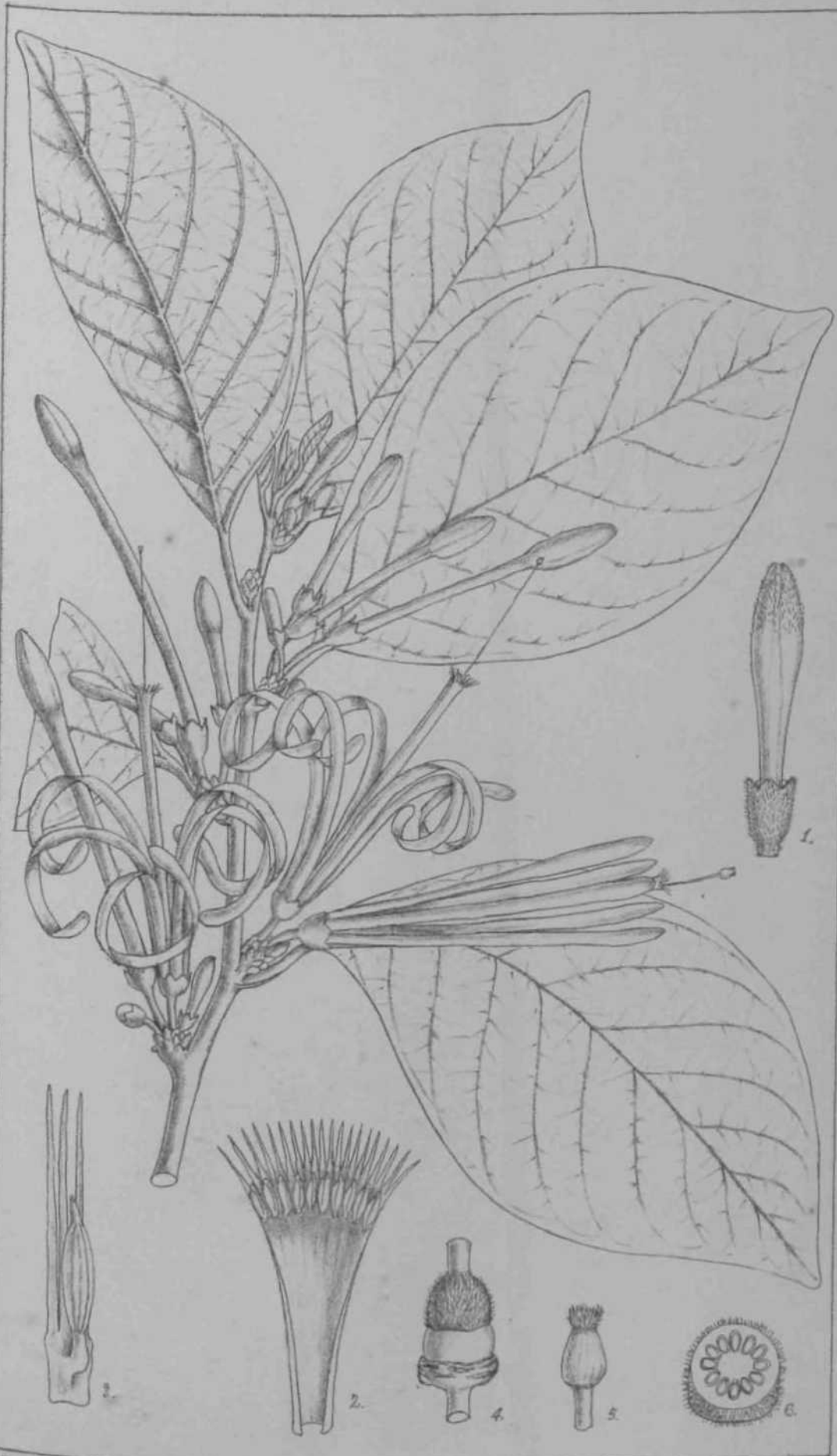
M. S. det. et lith.

Bejgc nie; 7 a~nfuslifolia. Oiiiv.



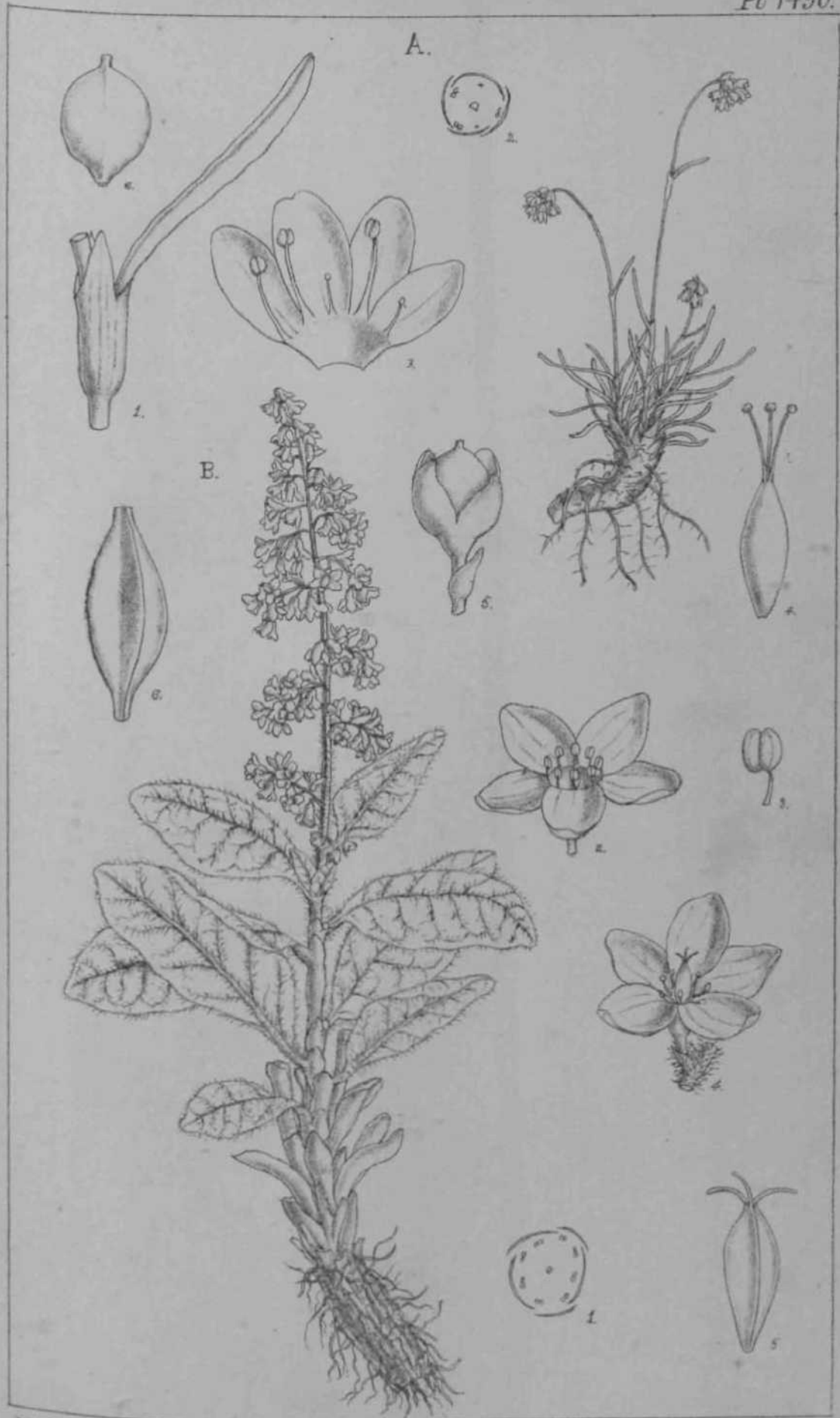
M.S. del. et lith.

Hymenodictyon parvifolium, Oliv.

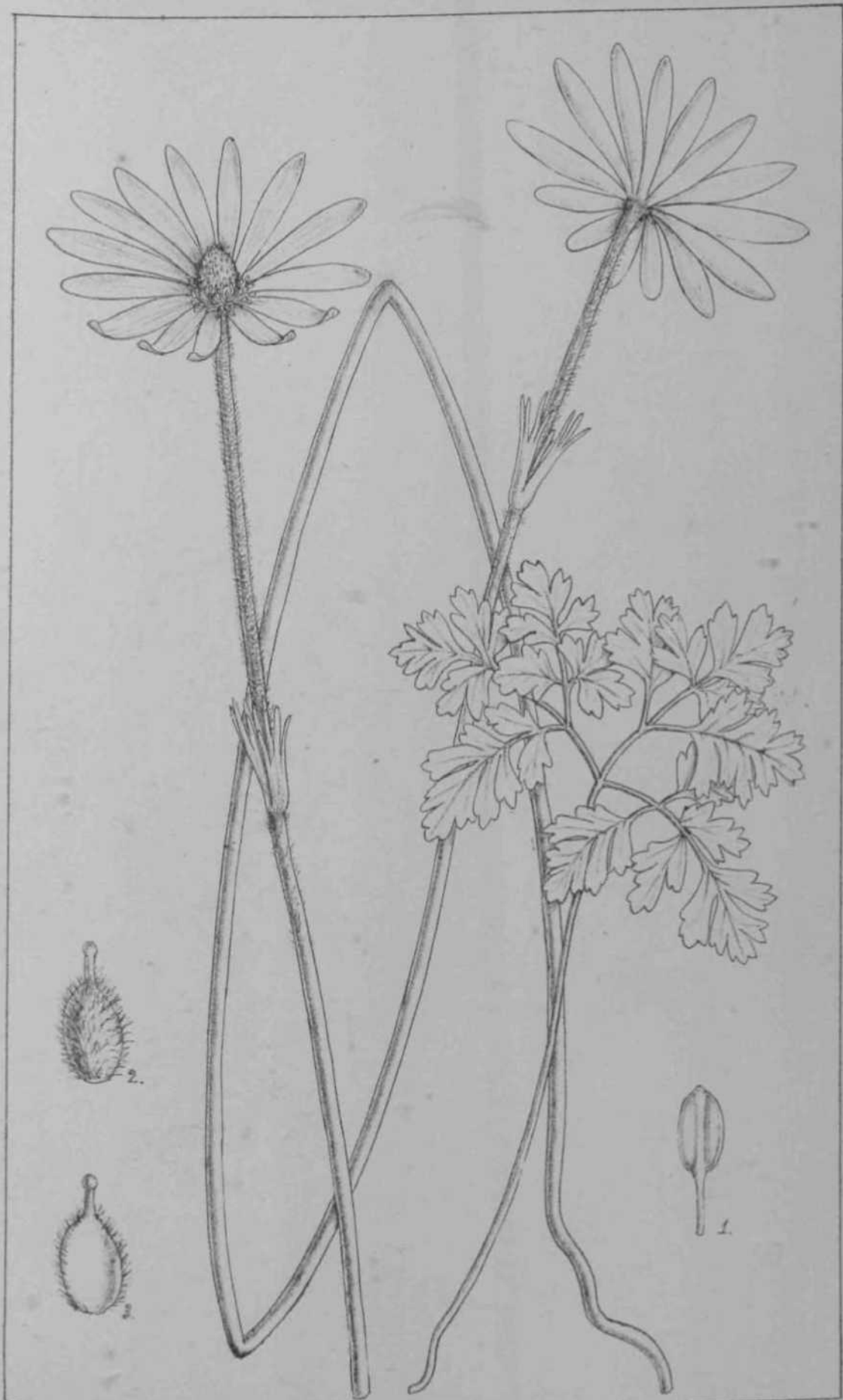


M.S. del, et lith.

Turrasa Wakefieldn. Oliv.

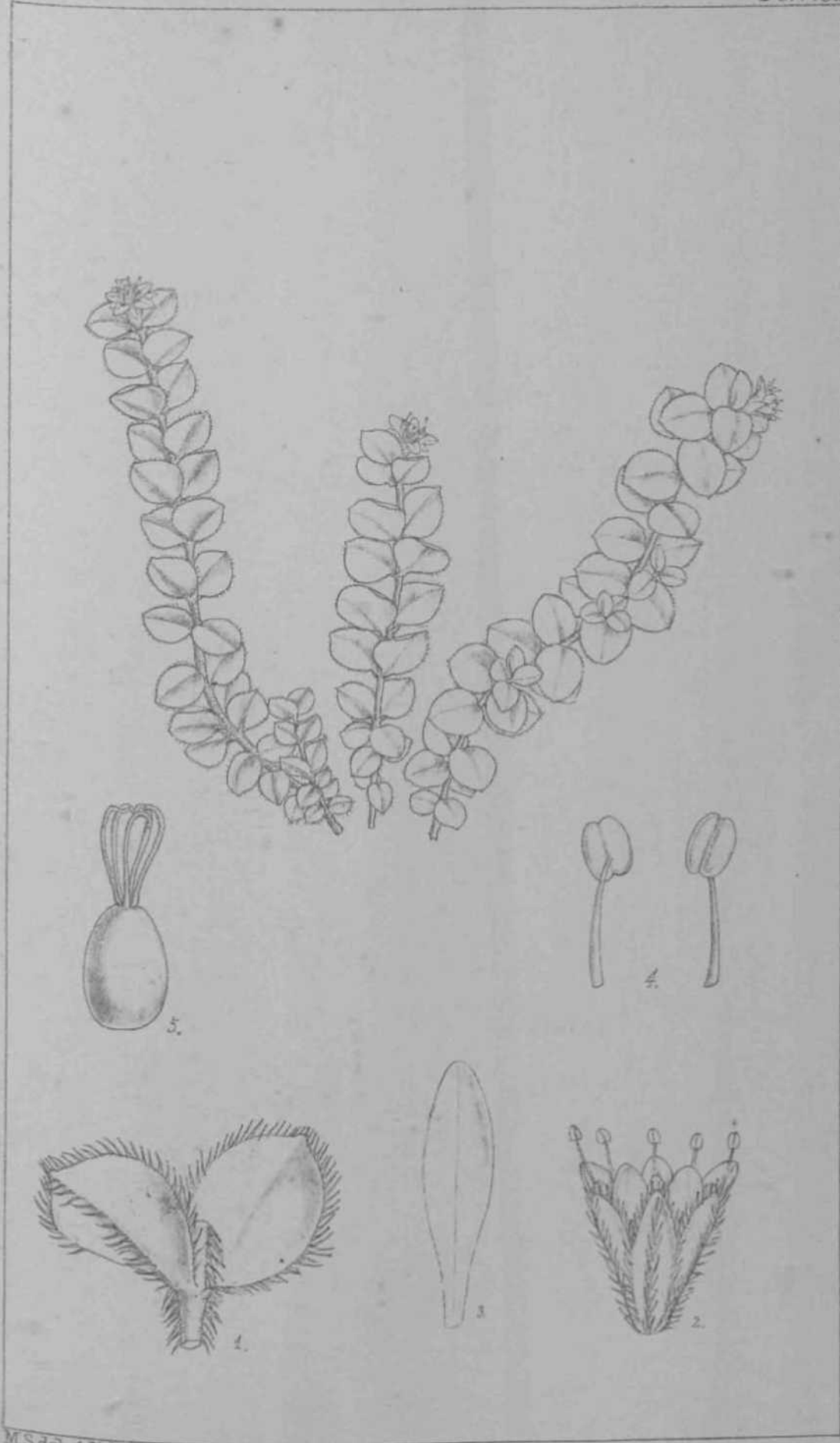


A. *Polygonum perpusillum*, HV. f.
 B. *Polygonum acaule*, Hkf.



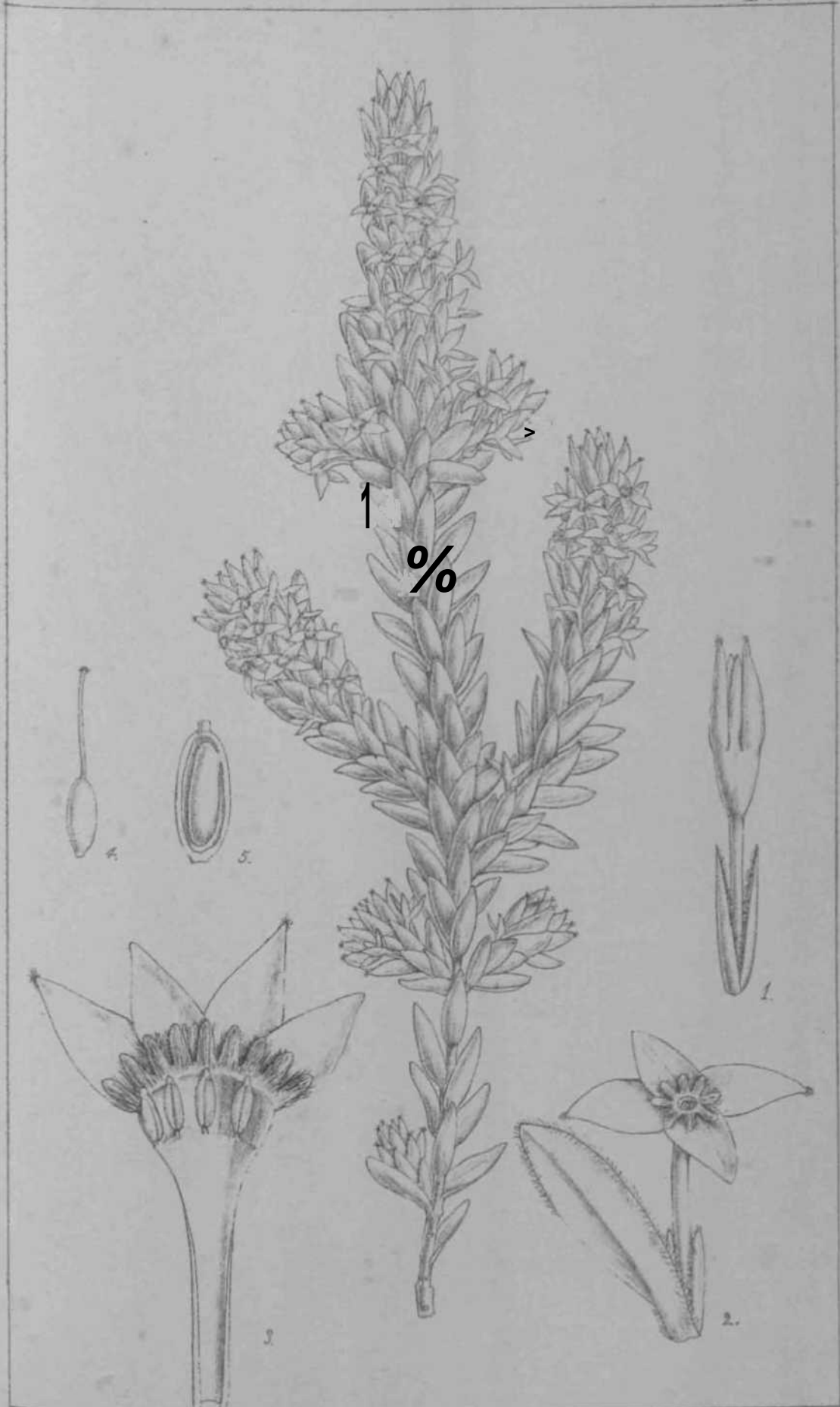
M.S. del, et lith.

Ar Lemone Thomsom, Ohv



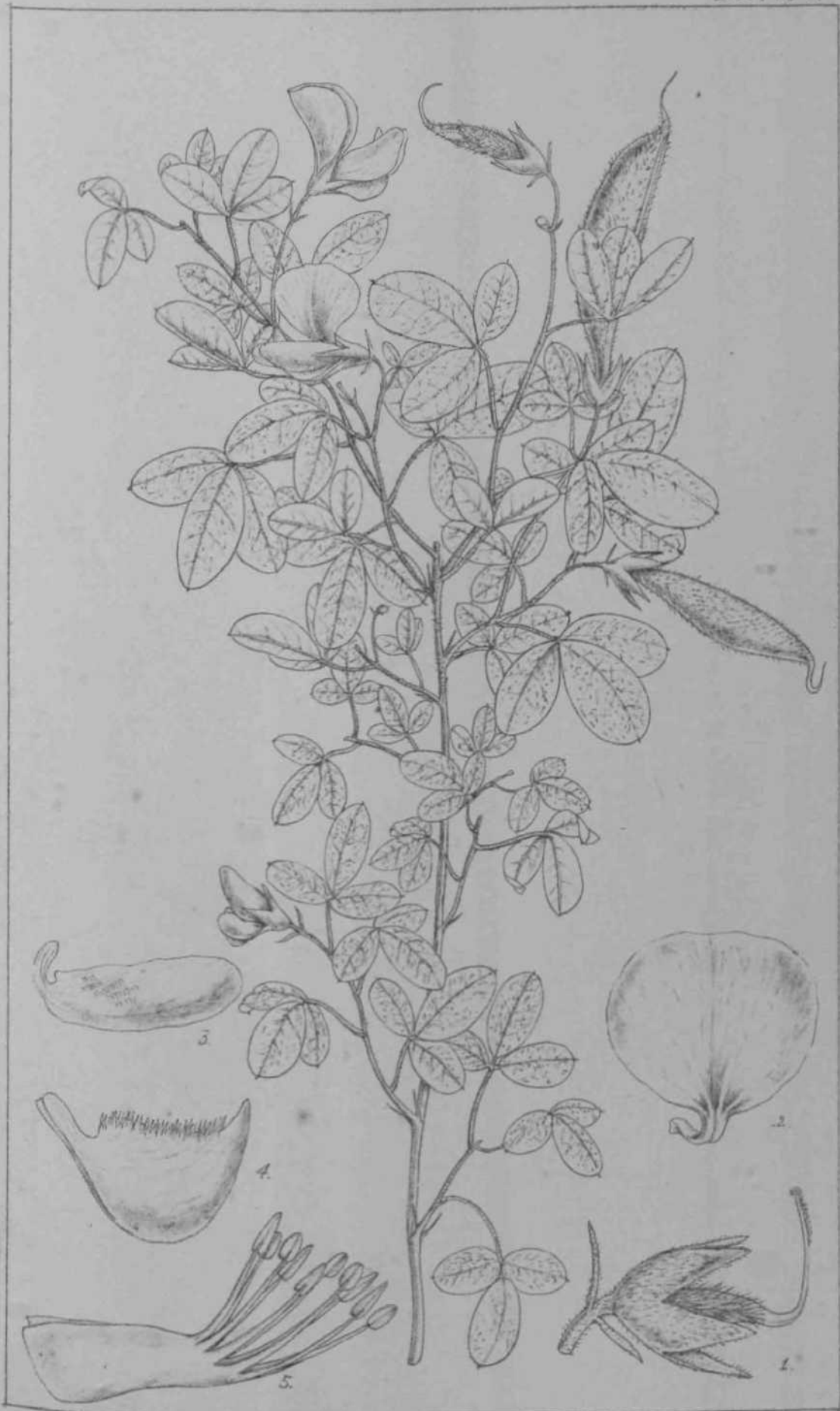
M.S. del. et lith.

Ue Ielinia rotundifolia, Oliv



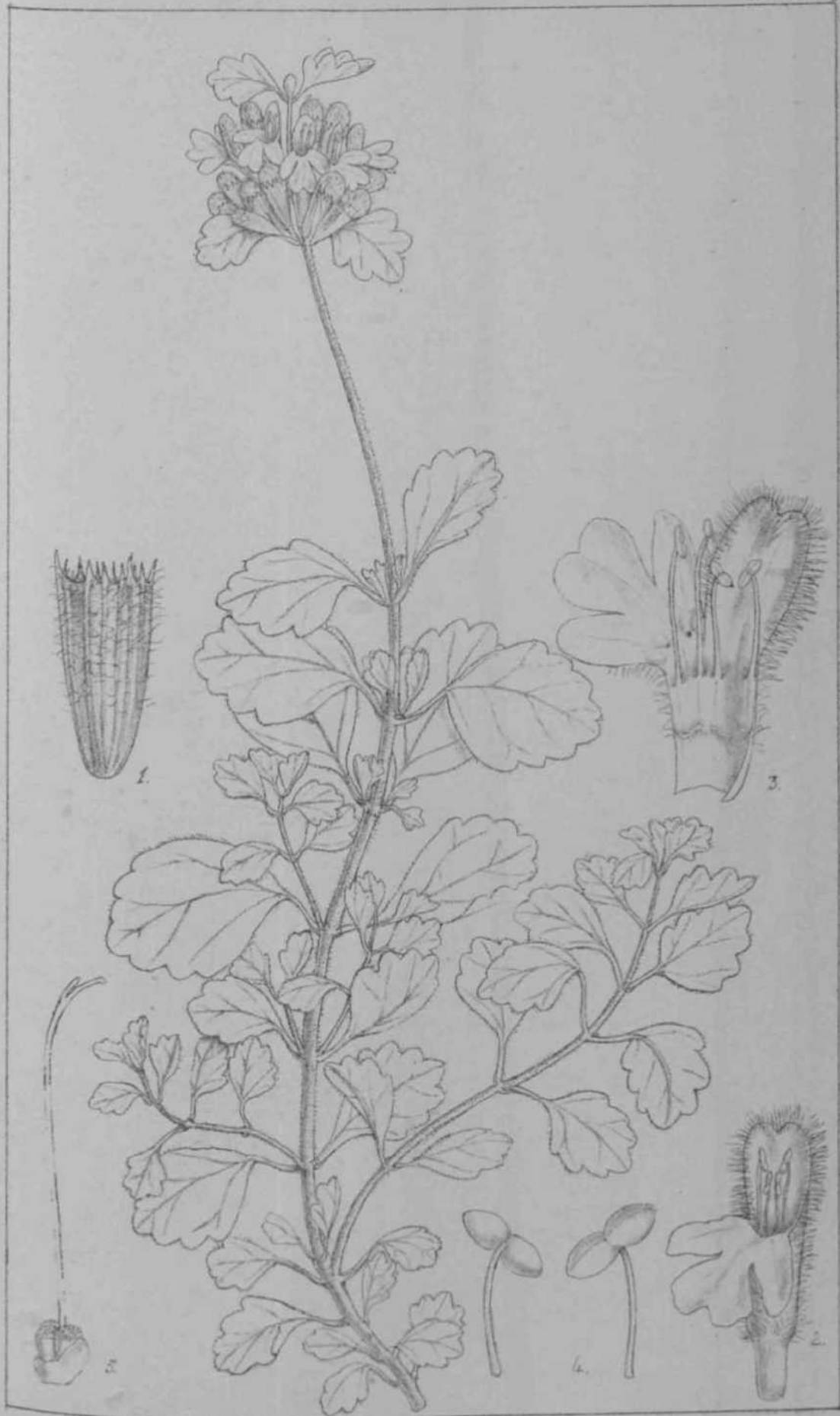
M. S. del. et. lith.

Struthiola Thoncisoni, Oliv.



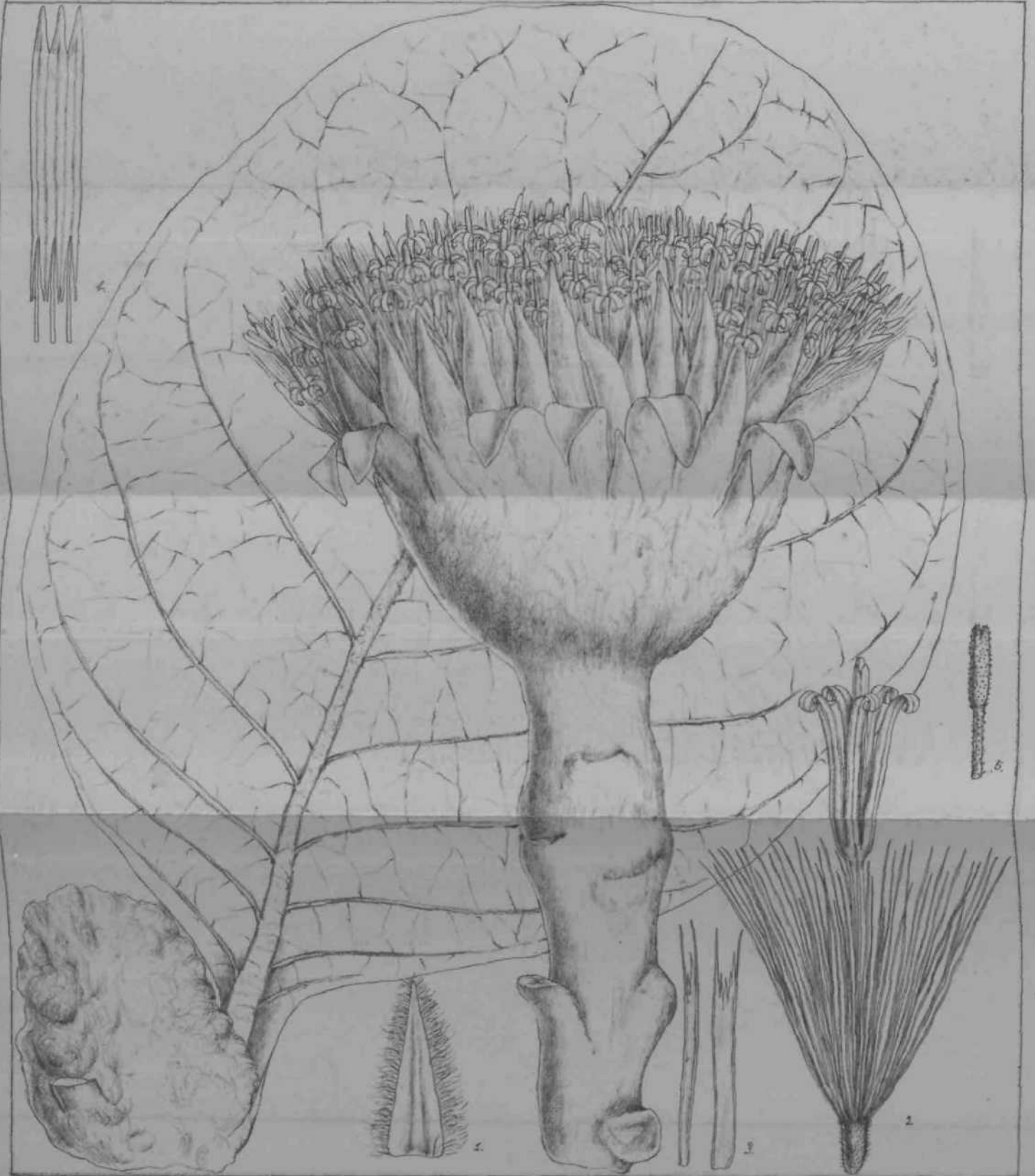
M.S. del et lith.

Crotalana Thomsom. Oliv,



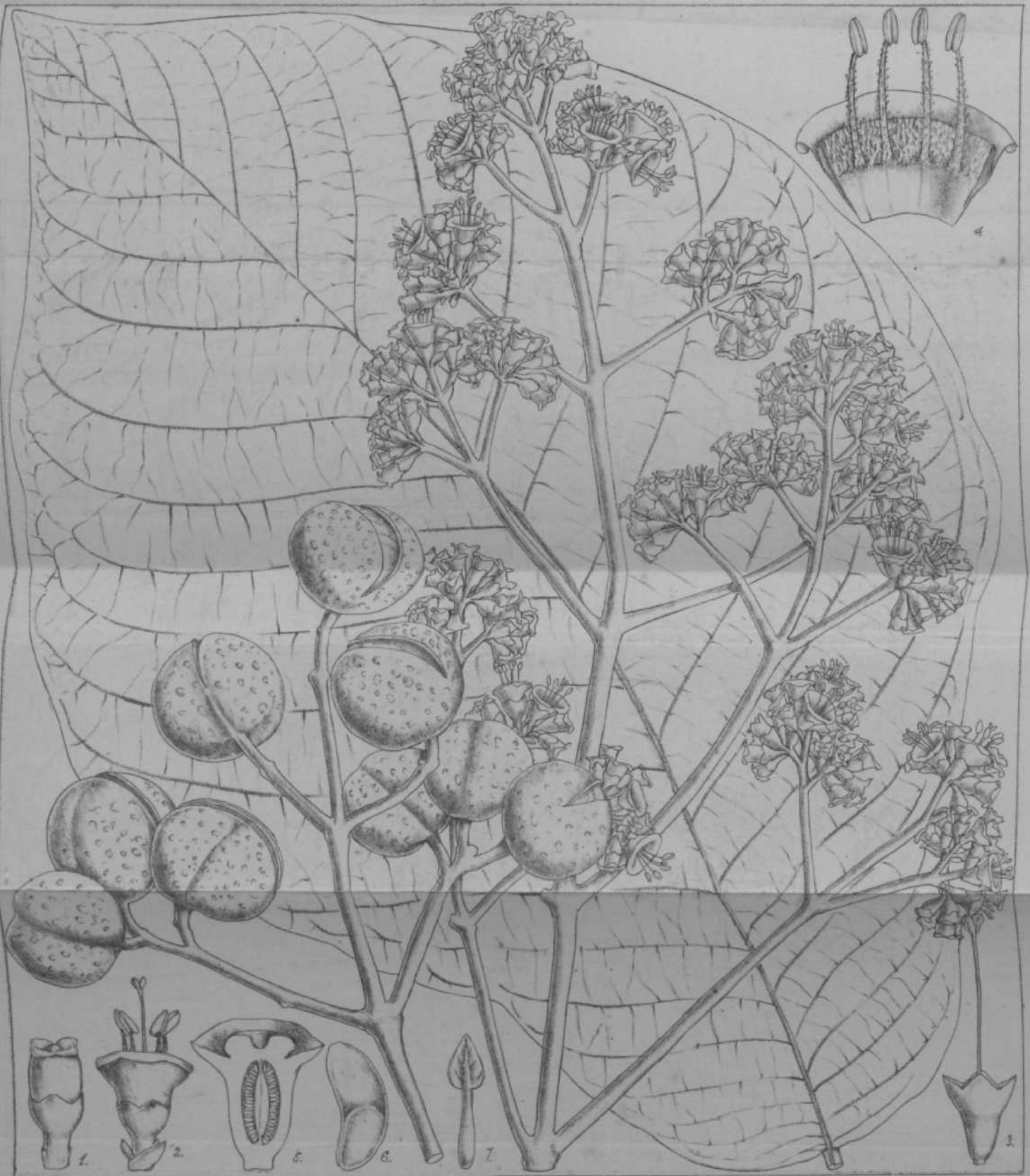
M. S. del et lith.

Leucas masaiensis, Oliv.



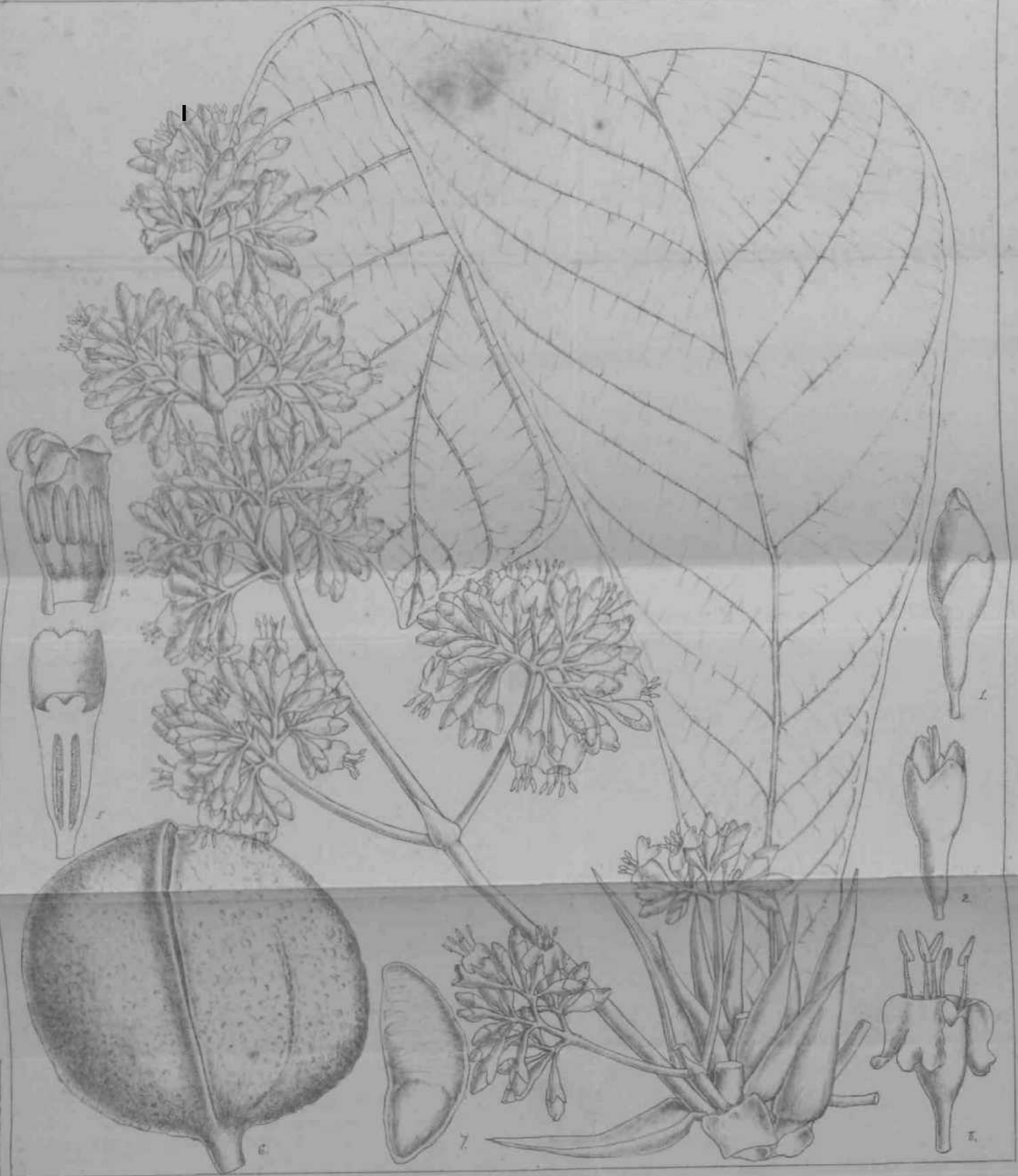
KS.&iat.Mh

Wunderlicia mirabilis Ried.



M.S. del. et lith.

Sickingia erythroxyloides, W.



M. S. del. et lith.

Sickingia longifolia, W.



M.S. del. et lith.

Psyllothamnus Bee vori, Oliv.



M.S. del. et lith.

Roeperocharis Bennettiana, Rchb. f.