HOOKBE'S

ICONES PLANTARUM;

OR,

FIGURES, WITH DESCRIPTIVE CHARACTERS AND REMARKS, OF NEW AND RARE PLANTS,.

SELECTED FROM THE

KEW HERBARIUM.

FOURTH SERIES.

EDITED FOR THE BENTHAM TRUSTEES BY

DANIEL OLIVER, F.R.S., F.L.S.

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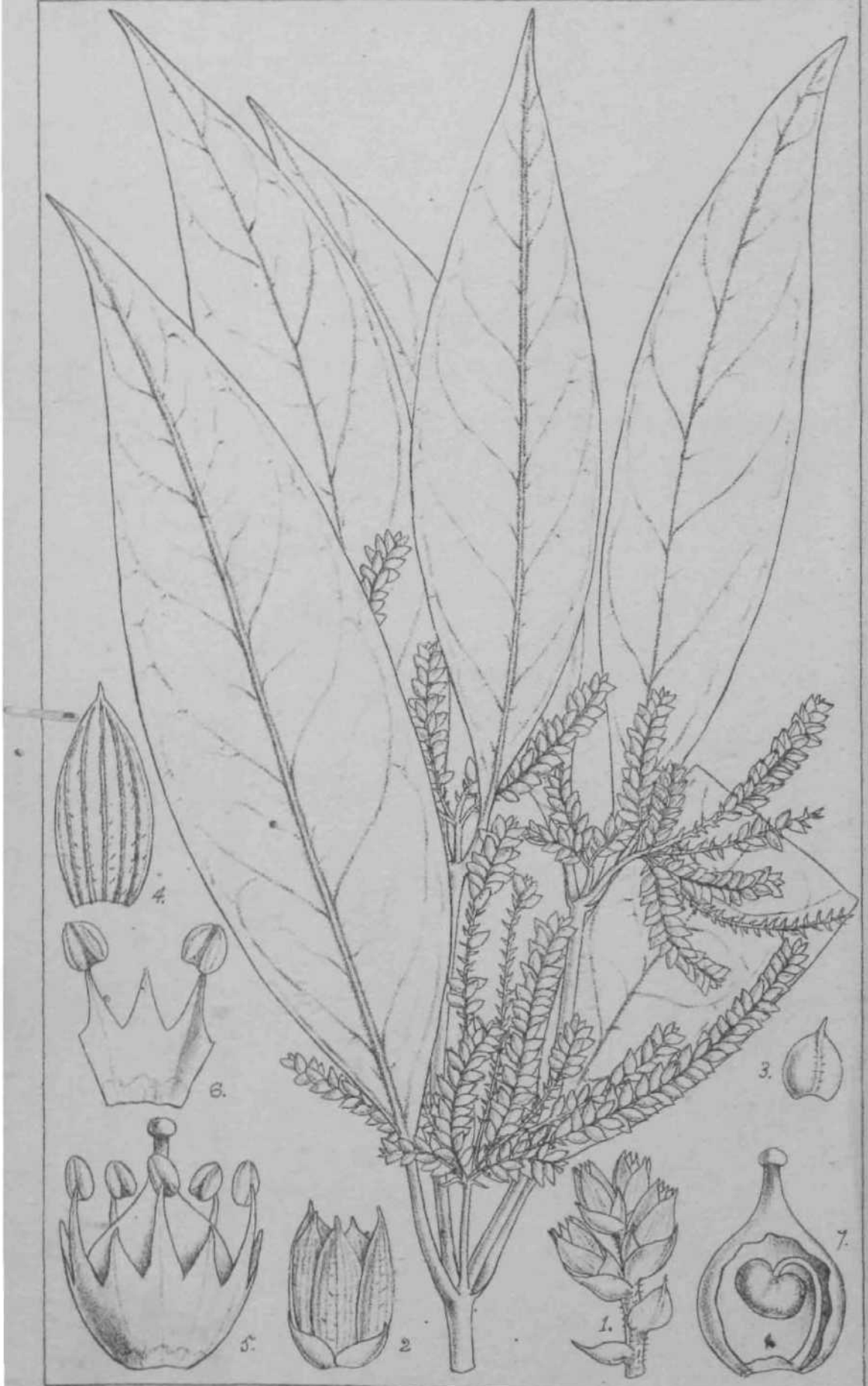


M.S. del. et lith.

Ærua Curtisii, Oliv.

PLATE 2201.

-ffiRUA CURTISII, *Oliv.*

AMAKANTACE^E. Tribe AMARANTE^E.

JE. **Curtisii,** *Oliv. (up. vov.)*; herba, caule pilosulo, foliis oppositis membranaceis oblongo-lanceolatis sensim acuminatis basi in petiolum angastatis supra obs >lete pilosulis scabriusculis subtas sparse molliter pilosis nervis distinctis utrinque circa 7, floribus r? laxiuscule spicatis, spicis subumbellatim aggrcgatis, inflorescentiis terminalibus breviter pcdunculatis ex dichotomiis superiorihus ortis, bracteis scariosis parvis late ovatis persistentibus, bracteolis conformibus oequilongis, perianthio bractea 3-5-plo longiore 5-partito segmeitis stramineis rigidiusculis fere giabris oblnngo-lanceolatis acatis apiculntisve longitudinaliter valide nervosis, filamentis basi in cupuiam coalitis deltoideo-subulatia staminodiis totidem (5) interpo&itis, stylo brcvi, s tig mate capitato, utriculo obovato-oblongo, semine oblique reniformi.

HAB. Malaya, Perak, *Curtin* (No. 2,712).

Folia 4-5^ poll. longa,l-l^ poll, lata; petiolus ^-J poll, longns. *InflottiHcentia* foliis brevior ; pedunculus ^-\ poll, lougus ; spicao 1-1J poll, lougee. *Flores* £ poll, longi.

The comparative absence of the characteristic indumentum, and more especially the all but glabrous and somewhat coriaceous perianth-segments, renders this a marked species in *Mrua,* bat the floral diameters are those of that genus. A careful analysis of the flower was made by Dr. Stapf when compaiing a considernble Malayan collection from our valued correspondent Mr. Curtis. He failed t,o identify it in the Kew Herbarium.—D. OLIVER.

Fig. 1. Extremity of floworing spike. 2. Detached flower. 3. Bract. 4. Perianth-segment. 5. Stamens and pistil. 6. Poition of staminal tube, with two anthers. 7. Vertical section of ovary. ***All enlarged.***

Terminalia Gliveri, Bra:dis.

PLATE 2202.

TEBMINALIA OLIVERI, *Brandts.*

COMBRETACEiE. Tribe COMBRETEiE.

T. Oliveri, *Brandts (sp. nov.)* ; arbor grandis, ramulis et foliis subopppositis, foliis integerrimis superne punctulatis longiuscule petiolatis ovato-ellipticis basi subinaequalibus acutis apice breviter aeuminata submucronata, janioribas molliter sericeis, adultis glahrescentibus, nervis lateralibus (fortioribus) utrinqne 8-10, venis plurimis eleganter rcticulatis, floribas sessilibas hermaphroditis paniculatis luteolis, paniculis supra-axillaribus sericeo-pubescentibas folium requantibus, bracteis linearibus flores apertos fere eequantibua longios persistentibus demiim deciduis, ovario obscure 5-costato glaberrimo, calyce tenuiter membranaceo ad tertiam fere partem 5-fido extas glabro, ii»tus in fundo piloso, segmentis triangularibus, staminibus 10, in fundo calycis circa discum pilosum dispositis sepalis alternis altias insertis, stylo exserto, stigma punctiforme, fruotibns 5-alatis, alia mem bran ace is, radicula supera, cotjledunibus convolutis.

HAB. Upper Burma, Pak6kka district.—/. *W. Oliver.*

Folia 1^-2^ poll, longa, 1-1^ poll, lata; petiolns ^ poll, longus parce pilosulus; glandules null©. *Fructus* J poll, longus.

This species is very similar to two species described by Presl in his ' Epimelise Botanic©,' pp. 213-214, from specimens collected by H. Cuming, viz. : *T. polyantha* (No. 1516) and *T. parviflora* (No. 1439), both said to have come from Prov. Batangas, Luzon, Philippine Islands. Both, however, have tetramerous flowers, with four very indistinct calyx-segments (o£ *T. paruiflcyra,* Presl says *\floribus obtuse quinquefidis* '), and minute early deciduous bracts. The (ripe) fruit of *T. parviflora* is 2-winged; that of *T. polyantha* (immature) is 4- sometimes 3-winged.

Mr. J. W. Oliver, the Conservator of Forests in Upper Burma, who sent me the specimens here figured, found the tree in flower in May 1891.

Mr. H. C. Hill, Conservator of Forests in Burma, who lately acted as Inspector-General of Forests, Lidia, *h»s* kindly furnished me Y^^^he following notes regarding the appearance and geographical distribution of this interesting tree:—

A moderate-sized tree, attaining 40-50 feet, with a girth of 4-5 feet. Stem irregularly shaped, often channelled, somewhat like the Hornbeam: bark greenish grey. During the dry season the leaves turn red before falling. The bark is thick and brittle; its cells contain an abundance of starch and calcium-oxalate crystals, but, apparently, no tannin. The decoction of the bark gives a light-coloured extract which has been largely used to adulterate cutch (the extract of the heart.wood of *Acacia Catechu),* but is believed to be entirely ineffective as a tanning material.

It is a very common tree in the dry region of the Irawaddi valley, which commences north of the 19th degree N. lat., and extends as far as Mandalay. It is also found in the lower part of the Ghindwin valley, and near the head waters of the Sitang valley. In this extensive dry region, with a mean annual rainfall of only 20-30 inches, *Terminalia OUveri* is associated with Gutch in a thin open forest, from -which the Gutch, being the more valuable tree, has been much cut out. The other trees found in this forest are: *Tectona Hamiltoniana, Shorea siamensis,* and *Terminalia tomentosa.*

From the Indian species of the section *Pentaptera* this tree differs in a remarkable manner in the small size of the leaves and fruit.—D. BRANDIS.

Fig. 1. Two flowers, attached. 2. Calyx-tube, laid open. 3. Ovary. 4. Vertical section of same. 6. Fruit. *Excepting No.* 5, *all enlarged.*

M.S. del et lith.

Cacoucia paniculata, Laws.

PLATE 2203.

CACOUCIA PANICULATA, *Laws.*

COMBRETACE^:. Suborder COMBBETE^S.

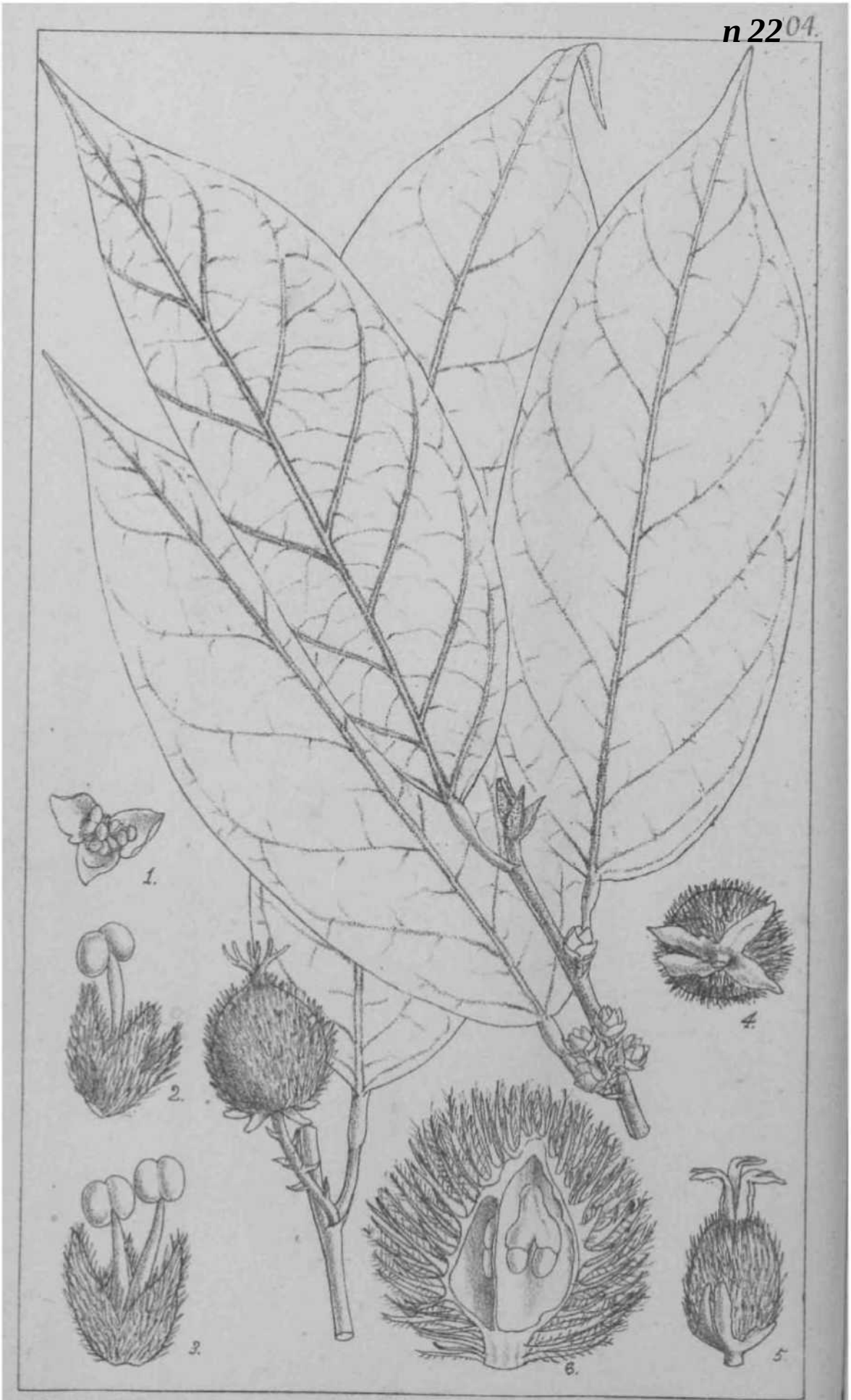
C. **paniculata,** *Lawson in Oliv. Fl. Trop. Afr.* ii. 434; frutex scandens, foliis oblongo-ellipticis breviter acuminatis basi plus minus rotundatis glabris breviter petiolatis, paniculis amp]is terminalibus ram is simplicibus divergentibus recurvisve cano- v. cinnamomeo-iomentellia, bracteis lanceolatis acuminatis pilosulis v. pubescentibus brevissime petiolatis, floribus pedicellatis, calycis tubo oblique tubulari-campanulato pubescente dentibus ovato-deltoideis acutis, petal is calycem paullo snpcrantibus ellipticis unguiculatis acutiusculis plus minus pubescentibus, staminihus antipetalis lougioribus, filamentis superne glabris, stylo basi disco plicato margine ciliato circumdato, ovario sulcato tomentoso-pabescente, ovulis c. 4 longe funiculatisj, fructibus siccis pentapteris late ellipticis alis c^riaceis margine raembrauaceis.

HAB. W. Tropical Africa, Gaboon River, *Mann, 801/aux* (Nos. 108, 158) ; Expedition to interior of Yoruba, *Millson* (No. 34).

Folia 4-5i poll, longa, 1^-2 poll, lata. petiolus \- J poll, longus. *Paniculcb* 1-2 ped. longae. *Bractece* ^-| poll, longae. *Flores* cum ovario j - 1 \ poll, longi, decurvi.

The fruit of this plant was unknown at the time of its publication *(I.e.),* but specimens since received from M. Soyaux and, recently, through the good offices of H.E. Governor Sir A. Moloney, show a fruit which is very different from that of Aublet's South American species, which has an ovoid or lanceolate-ovoid, more or less 5-angled fruit with corky pericarp, 2-2j inches in length. We have what may be *G. paniculata* from Niamniam-land, communicated by Dr. Schweinfurth. *0. piatyptera,* Welw., MSS. from Angola, I take to be identical.—D. OLIVER.

Fig. 1. Calyx, laid open. 2. Petal. 3. Stamens. 4. Ovary and style. 5. Longitudinal sectiou of ovary. *All enlarged.*



U. S del,et]ith

Aporosa Bourdillorui, Stapf!

PLATE 2204.

APOROSA BOURDIIiLONII, *Stapf.*

EumoRBiACEzE. Tribe PHYLLANTHE^:.

A. Bourdillonii, *Stapf (sp. wov.)*; arbascula, ramulis breviter tomentellis deinde glabrescentibus, foliis oblongo-ellipticis obtusiuscnle acuminatis costa nervisque secundariia puberulis exceptis glabraiis, stipulis caducis, *$* inflorescentia amentacea, amentis solitariis v. parue fascicnlatis axillaribus, perianthio minuto inrequaliter 2-3-lubo membranaceo, staminibaa stepius 2 liberis, ovani rudimento minimo, floribus $ in axillis superioribus solitariis pedunculo bracteato suflfultia, perianthio insequaliter 4-partito segmentis bracteis consimilibus, ovario ovoideo processubns linearibus demum accrescentibus strigiLlosis obsito.

HAB. Travancore; moist forest in the low country, *T. Fulton* ***Bourdillon*** **(No. 9).**

Enmuli graciles crassitie pennro corvinse, annotini brunneo-grisei tenniter rimosi, hornotini foliiferi brunnei. *Folia* alterna petiolata basi rotundata tenuiter coriacea, nervis subtns prominulia secundariis utrinque 7-9, venulis inconspicuis, 4^-6 poll, lunga, 1^-1 J poll, lata ; petiolus \ poll, longus. *Stipulce* oblongsB acuminaLao fulvo-tomentosse, *I*–|. poll. long©. *Flores S* glomerulati, glomerulis in amentis c. 10-12 bracteatis arete approximatis; bracteso ovateD subacntco pallide brunnesB pnberulaB et ciliat©, *1-H* lin. longae. *AnfhercB* globos© loculis contiguis parallelis. *Flores* ?' pedunculati, pedunculo bracteato i—i poll, longo. *Ovarium* a me visum maxime evolutum ^-J poll, lŏnĝum; stigmata crassa profunde bi6da.

This species represents a peculiar type which may well form a new section of *Aporosa,* or even a new genus altogether. The structure of the ovary, however, is, apart from the shaggy indumentum, exactly that of *Aporosa.* Professor Baillon, to whom I forwarded a sketch of the plant and of my dissections, is also inclined to refer this species to *Aporosa.*—O. STAPF.

Fig. 1. Glomerulus of staminate flowers in bud. 2 and 3. SUminato flowers. 4. Pistillate flowor from below. 5. The same, side viow. 6. Longitudinal section ot young fruit.—*All enlarged*.

Englena africana, 0. Hoffin.var.

PLATE 2205.

ENGLERIA APRICANA, 0. *Hoffm.*, var.

COMPOSITE. Tribe ASTEROIDEJ:.

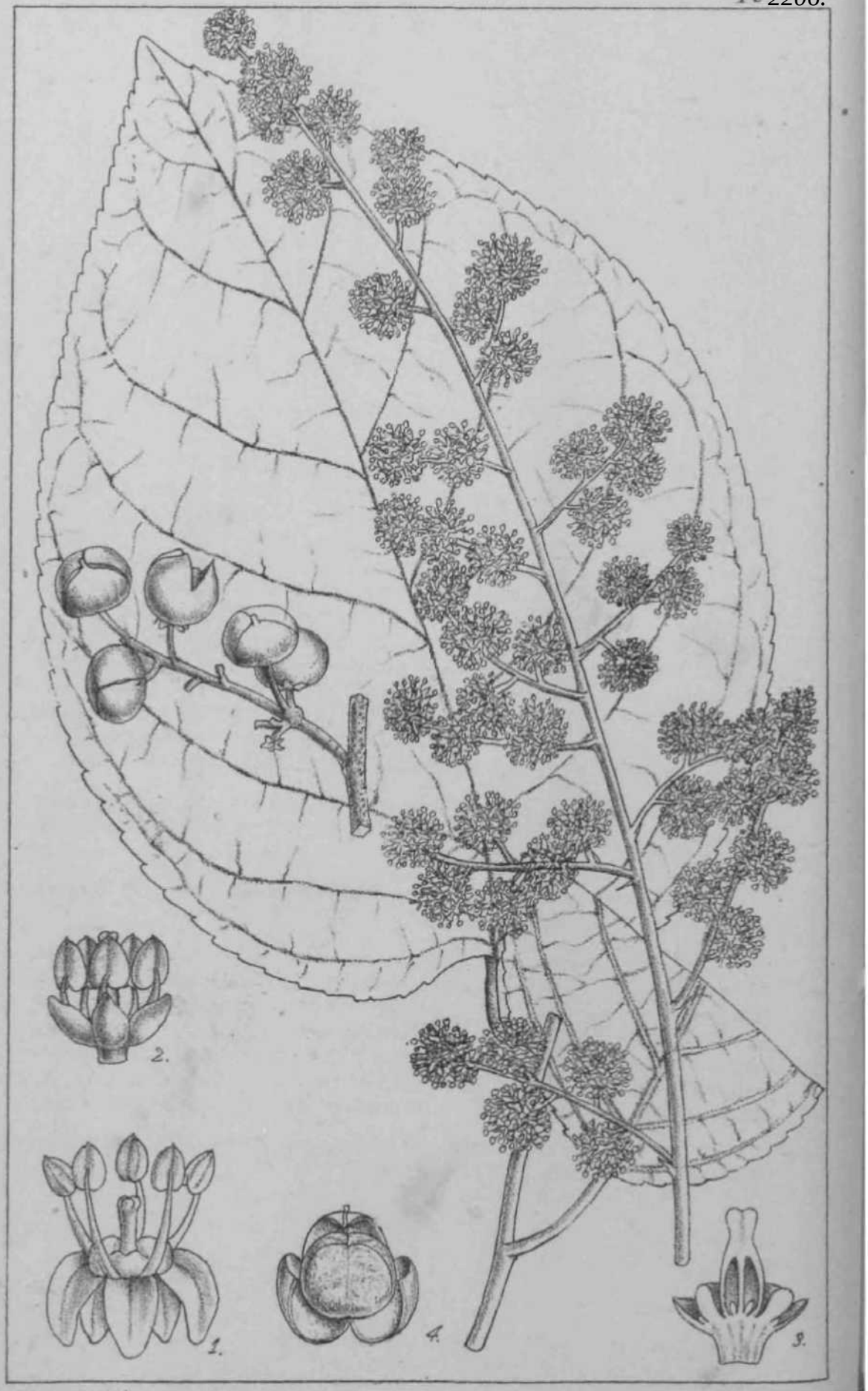
E. africana, *0. Hoffm. in Engl&r, Bot. Jahrh.* x. (1889), 273, tab. ix. A. *var.* radiata, *Oliv.*\ foliis ovatis utrinqae 3-6-dentatis, dentibus oblique deltoideis acutis, capitulia radiatis, ligulis oblongis involucro 2-plo longioribns.

HAB. Trop. Africa, Angola, *Dr. Welwitsch* (No. 3,999).

Herha (v. frutex) ramosa glabra, ramulis teretibus. *Folia* longiuscule petiolata seepius subopposita carnosnia acuta basi nonnunquam rotundata v. trancata, in ramulis fioriferis ^-f poll, longa, 4-6 lin. lata. *Involucrurn* bracteis interioribus anguste linearibus acntis, margme anguste scariosis apicem versus fimbriatis, costa colorata gummifera percursis. *Receptaculum* nudum. *Flores* radii ligulati, ?, ligula 5-6 lin. longa. *Antherce* basi inappendiculatffi, apice connectivo lanceolato ppoducta9; filamentis prope apicem leviter glandulosim incwissatis. *Stylus* ramis longiusculis anguste linearibus crassiusculis obtusiuscuhs papillosis. *Achcenia* setulosa 3-5-costata, costis resiniferis interruptis obtusis.

Of this plant we have a specimen, communicated by the Polytechnic Museum of Lisbon, collected by the late Dr. Welwitsch, who had given it in manuscript the name *Adenogonum decumbens.* It corresponds so nearly with the fignre cited above, and with a small specimen, kindly communicated to the Kew Herbarium by Dr. Engler, collected by Marloth in Herero Land, that I feel bound to refer it to the same species, notwithstanding the presence of conspicuous ray-florets. Ut the colour of the florets I have no note, but should judge them to be homochromous.—D. OLIVER.

Fig. 1. Ray-floret. 2. Disk-floret. 3. Seta of pappus. 4. Anthers. 5. Achone. ***All enlarged.***



MS-deletlith.

Gelastrus latifolius, Heinsl.

PLATE 2206.

CELASTRUS LATIPOLIUS, *Hemsl.*

CELASTRACEJE.

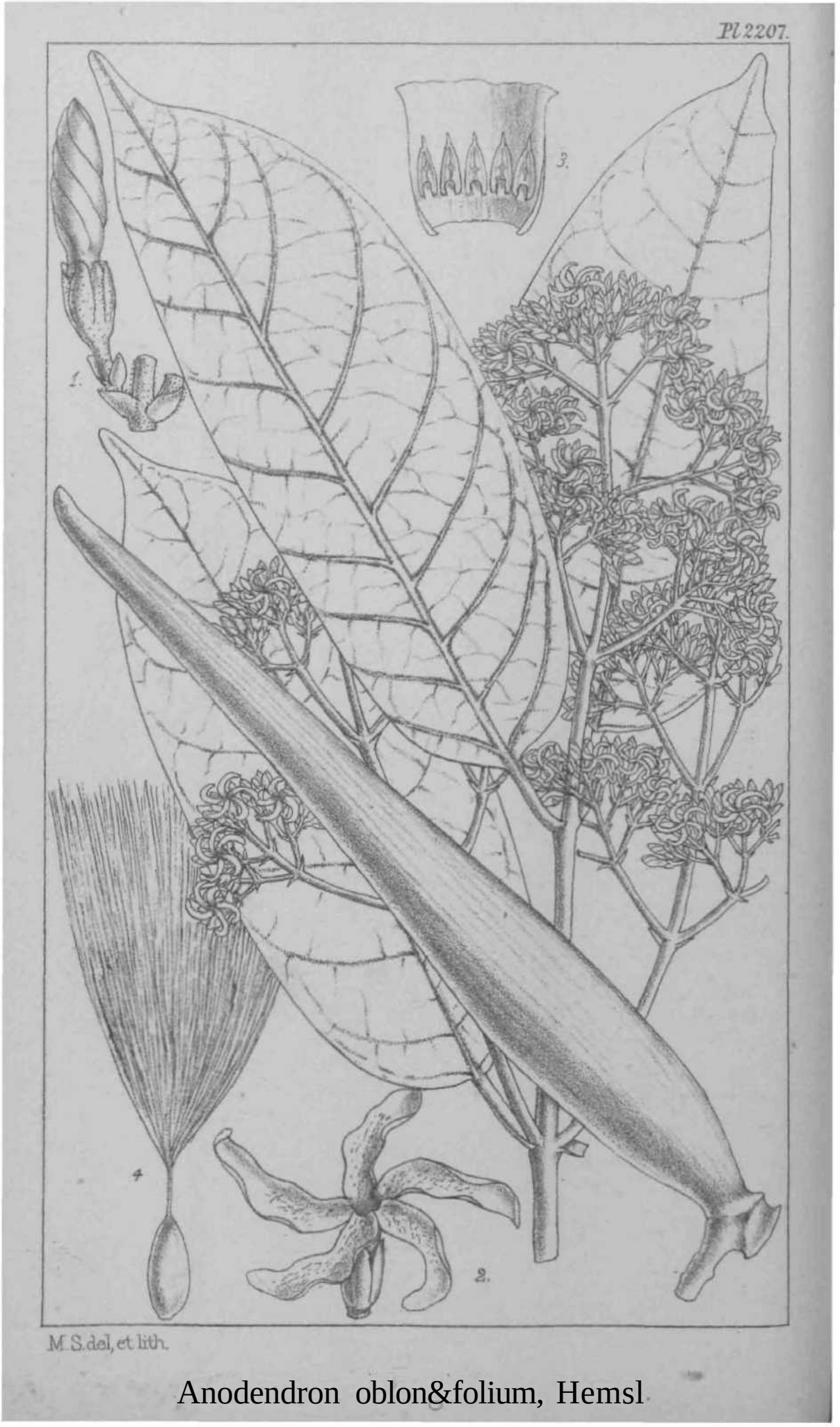
C. latifolius, *Hemsl. in Joum. Linn. Soc.* xxiii. 123; frutex ramulis brunneis purpurascentibusve subteretibus v. ultimis ob lineas decurrentes elevatas subangulatis ssepe crebre lenticellatis, foliis late ellipticis obtuse cuspidatis crenato-serratis glabris v. subtus in costa nervis venulisque parce pilosulis, paniculis multifloris terminalibus ramulis primariis subpatentibus, floribns breviter pedicellatis v. subsessilibus<? et ?, calycis lobis ovatis glabris basi carnosulis, petalis oblongo-ellipticis minutissime erosis recurvis calyce 3-plo longioribus, fl. c? filamentis corolla aequilongis anthera 2-plo longioribus, antbera majuscula ovato-elliptica obtusa, fl. $ filamentis anthera haud longioribus, ovario obtuse 3-gono glabro disco inserto, stylo ovario aequilongo sulcato, capsula depresso-globosa obscure trigona, valvis tenuiter crustaceis lffivibus, seminibus solitariis geminatisve arillatis.

HAB. China, Prov. Hupeh, Ichang, Patung district, and * Nan-t'o and mountains to northward,'—Dr. HENRY (NOS. 485, 1,774, 2,084, 3,40ðA, 3,883).

Folia 4-6 poll, longa, 3-5 poll, lata; petiolus J-l poll, longus. *Fructus* £ poll. diam.—D. OLIVER.

Dr. Henry communicates the following:—' *Celastrus latifolius,* Hemsl., is a common shrub about Ichang, being known as *nan-shan-yeh.* The root and also the leaves are used, powdered and mixed with flour, to scatter over growing cabbage, turnips, &c, for the purpose of killing obnoxious insects, grubs, <fcc. I find from one of the Customs publications that the " bark of a tree, called *nan-shao-ken* " occurs in the drug market of Hankow. This is possibly the root-bark of this shrub.'

Fig. 1. Flower. 2. The same, earlier stage, petals removed. 3. Longitudinal section of ovary and disk. 4. Fruit after dehisconce. ***All enlarged.***



Anodendron oblon&folium, Hemsl

PLATE 2207.

ANODENDSON OBLONGIFOLIUM, *HemsL*

APOCTKACBJE. Tribe ECHITIDF^I.

A. **oblongifolium,** *Hemsl. in Ann. Bot.* v. 505 ; frutex alte scandcns, foliis oblongis breviter obtuse acuminatis basi rotundatis glabris nervis lateralibus utrinque 8-10, paniculis multifloris pedunculatis terminalibus et in axillis foliorum superiorum parce puberulis, bracteifl parvis ovatis, floribus breviter pedicellatis, calycis tubo corollas breviore, seginentis ovato-oblongis obtusis, corolla) lobis oblique oblongis obtusis, antheris infra medium tubi insertis apiculatis loculis basi breviter productis, folliculis apicem versus angustatis obtusis longitudinaliter lineatis, coma seminis stipitata.

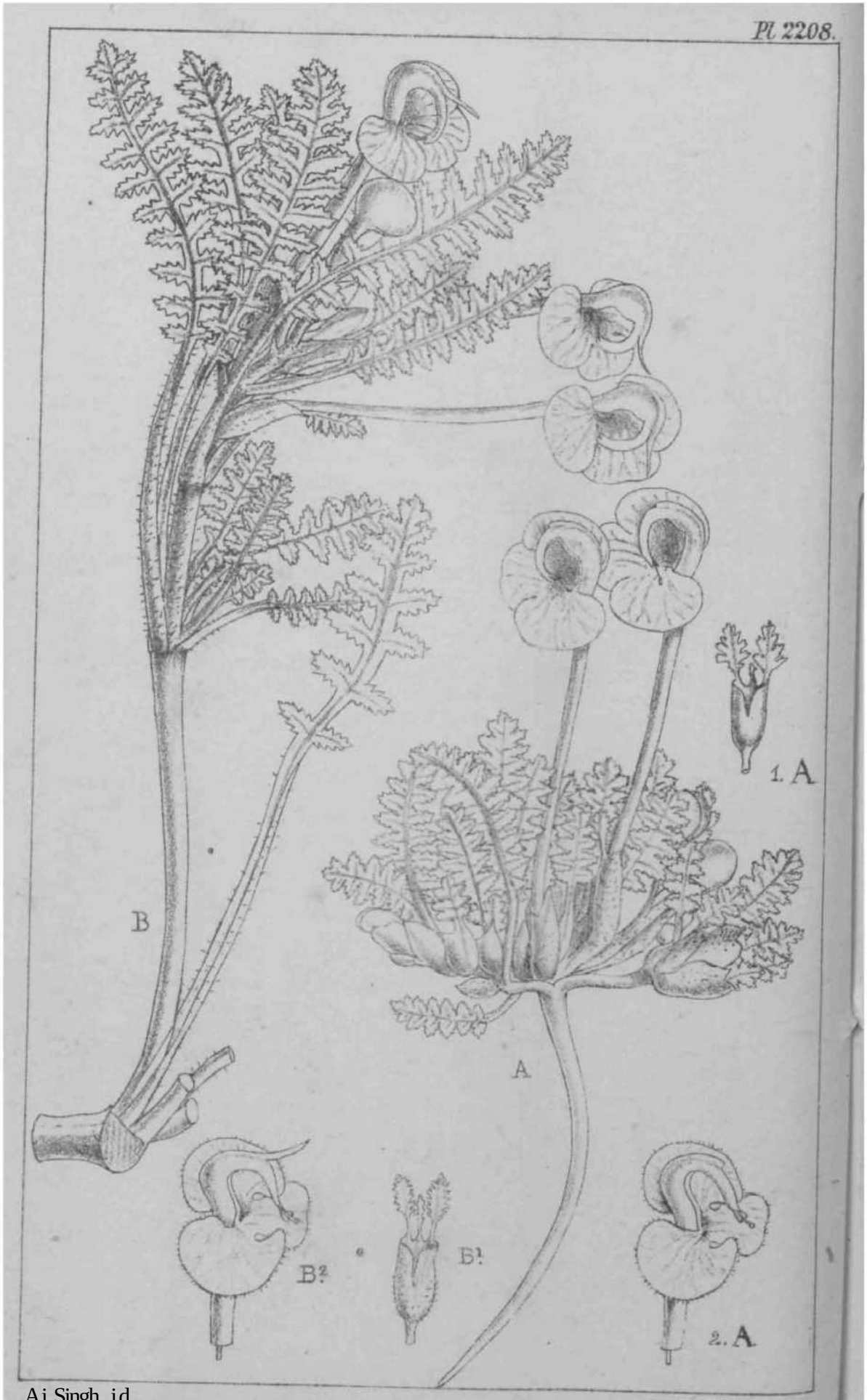
HAB. Solomon Islands; Fauro Island, *Guppy* (No. 189); San Christoval, *Comins* (No. 40).

Folia 4J-6 poll, longa, 1J-2 poll, lata; petiolus 5-6 lin. longus. *Paniculas* foliis breviores pedunculo 1-1^ poll, longo. *Jplores* £-£ poll, diam., flavescentes.

Both Dr. Guppy (wbose specimen was in fruit only, and not determinate with certainty) and the Rev. Mr. Comins note that the tenacious bast of this climber is used by the natives for fishing lines and nets.

Nearly allied to *A. paniculatum,* A. DC, which has a more diffuse inflorescence, its branches and pedicels more slender and longer.—D. OLIVER.

Fiff. I. Bud, attached, showing aestivation. 2. Flower, expanded. 3. Base of corolla-tube, laid open. 4. Seed. ***Excepting No. 4, all enlarged.***



Ai Singh, id.

Pedicularis* cranolopha, Maxim.
A. var, typica: B.var.bngicornLLta.

PLATE 2208.

PEDICULARIS **CRANOLOPHA,** *Maxim.*

SCROPHULARINEJB. Tribe EOPHEASIER.

P. (§ Siphonanthse longiflorse) cranolopha, *Maxim., Mel. Biul.,* x. 85 (1877) et xii. 795, t. 1, *t.* 10 (1888) ; *Prain, Ann. Roy. But. Garden, Calcutta,* iii. *67* (1890); humilis pilosa, foliis lineari-oblongis radicalibus longe petiolatis segmentis lanceolatis serratis, calyce ovato 3-dentato segmento summo lanceolato lateralibus ovato-lanceolatis serratis, corolla lutea, tubo calyce 4-plo longiore, galea cristata, rostro sigoioideo apice emarginato, labii lobo medio emarginato lateralibus fere duplo minore, filament is omnibus hirsatis.

VAR. *tIJpica*; gales crista ad rostri originem usque extensa ibique triincata. P. cranolopha, *Maxim.*

HAD. China; prov. Kansu, *Przewalski !*

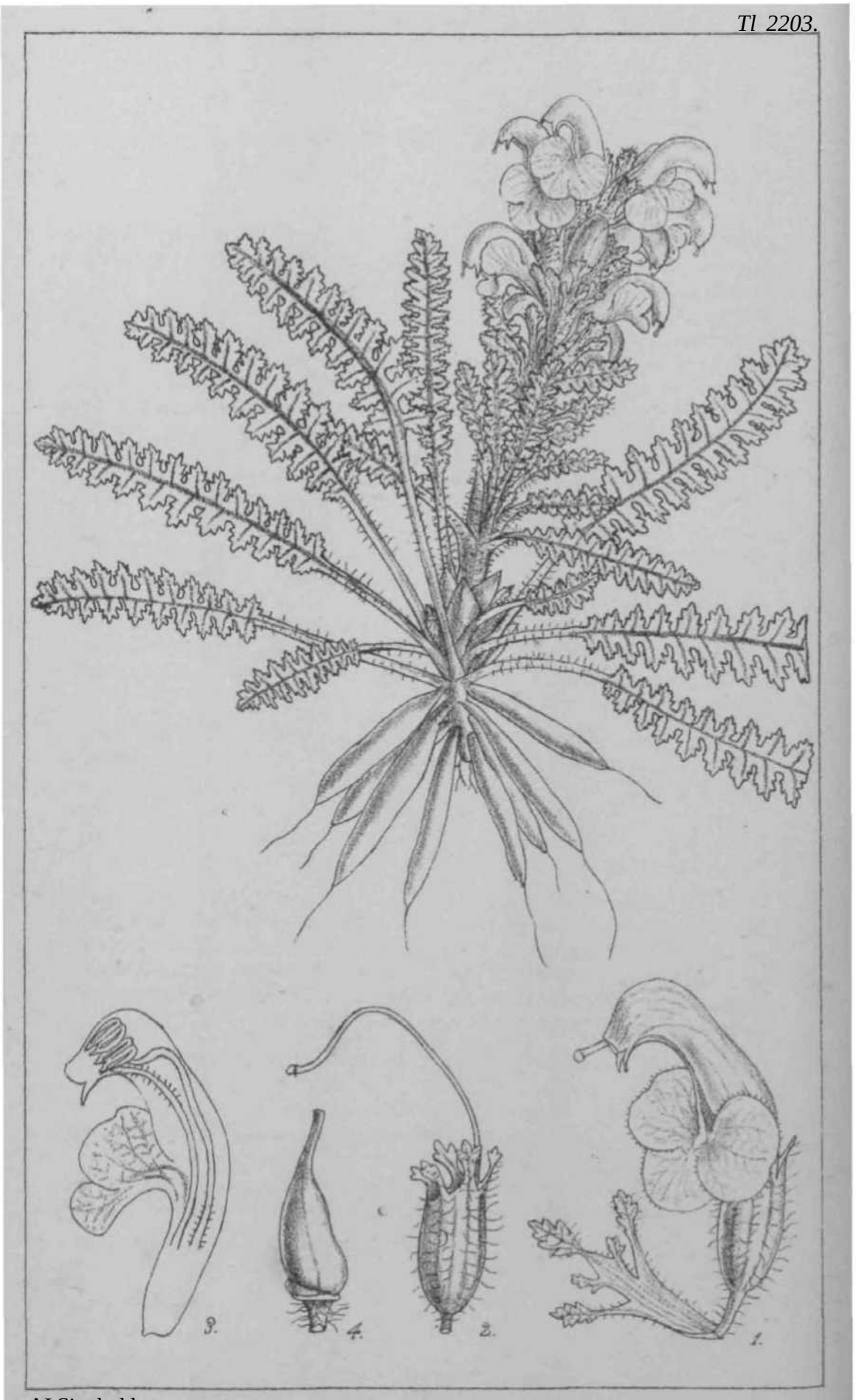
VAR. *htigicomuta* (var. nov.) ; galeae crista ad rostri originem usque extenaa, exinde in cornn rostrnm suboequans producta. P. birostris, ***Bur. et Franch. in Journ. Bat.* v. (1891) 107.**

HAB. China; prov. Szechuen, *Pratt* (No. 167).

This plant of Mr. Pratt's collection, though it has to be referred to an already described species, is the most interesting *Pedicularls* be bas found, and *in,* owing to its curious crest, one of the most interesting forms in this interesting genus. *PedicuJan's cranulopha* is not the only species with a crested palea; the condition occurs in *P. torta,* **Maxim.,** ***P. ox year pa,*** **Frauchet,** ***P. cristata,*** **Maxim.,** ***P. leptorhiza,*** Ruprecht, and *P. Iiegeliana,* Prain. But in none of them does the crest become, as here, prolonged into a free process 4-5 mm. long, almost the length of the true beak. And yet, save for this solitary—though certainly striking—character, there is nothing to separate Mr. Pratt's Szechuen plant specifically irom General Przewalski's Kansu one. Mr. Pratt's specimens are more robust, than those sent to Calcutta by M. Maximowicz, and they show distinctly—what M. Maximowicz and myself had failed to detect in the type—that the margin of the lower lip in this species id ciliate.

The area of distribution of the species is, by Mr. Pratt's gathering, somewhat extended.—D. PRAIN.

Fig. Al. Calyx (var. *typica).* A2. Corolla-lip, hood, and portion of tube (ditto). Hi. Cnljx (vnr. *fongicarnuta).* B2. CorolU-lip, hood, and portion of tube (ditto).



AI.Singh.dd,

Pedicularis rhynchodonta, Biir. <% Franc.

PLATE 2209.

PEDICULABIS EHYNCHODONTA, *Bur. et Franch.*

SCROPHULARINEJE. Tribe EUPHRASIES.

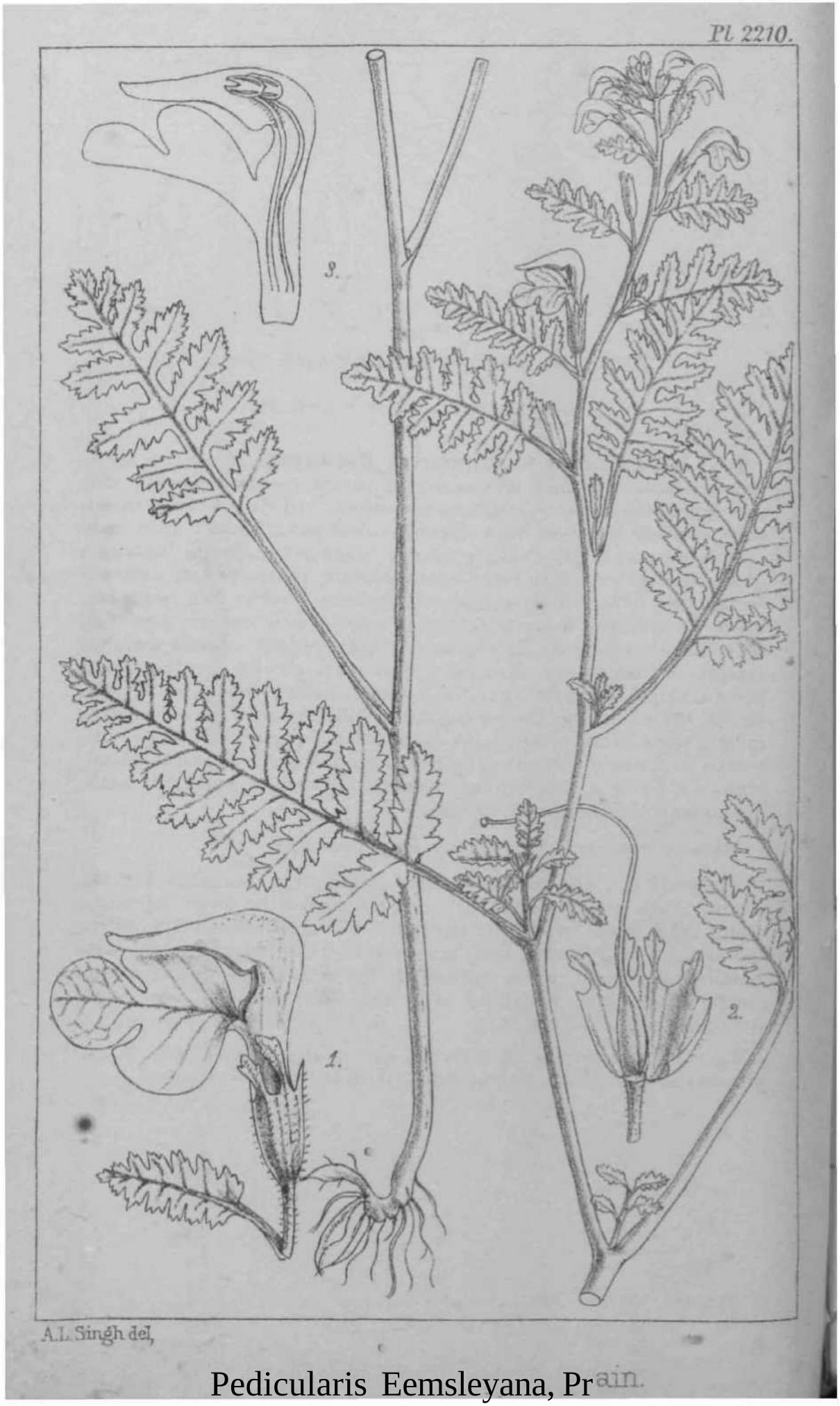
P. (§ Rhynchodontae: series nov. ante Comosas ponenda, humiles, hirsutss, foliis pinnatisectis, spica densa centrifuga, calyce campanulato dentibus sammo excepto serratis) rhynchodonta, *Bur. et Franch. in Journ. Bot.* v. (1891) 108 ; nana, hirsnta, radice valida e fibris plaribus fusiformibus fasciculata, caule digitali basi sqnamis ovatis obtusis suffulto; foliis petiolatis anguste lanceolatis plerisque radicalibus, canlinis minoribus sparsis, omnibns pinnatisectis 15-20-jugis, segmentis subimbricatis ovato-lanceolatis serrato-dentatis, spica densa multiflora centrifnga, bracteis membranaceis laciniatim 3-partitis, calyce breve pedicellate* campanulato, antice vix fisso, 5-dentato, segmento summo lanceolato integro lateralibas oblongis serratis breviore anticisque lanceolatis serratis sequilongo, corollce rubrae tubo adunco calyce vix dimidio longiore labio galea ffiquilongo latissimo sessili niargine ciliolato, lobo medio rotandato lateralibas flabellatim venulosis vix dimidio minore, galea arcaata tabo siibcontinaa eique sequilaia in rostrum latum breve apice undulato-truncatam angalo inferiori atrinqae longe 1-dentatuni abeunte, staminibus medio tubo insertis filamentis anticis triente summo hirsutis, posticis prope insertionem tan turn parce barbatis, ovario ovato-Janceolato, disco antice tamente, stigmate exserto.

HAB. China; prov. Szechuen, *"Pratt* (No. 735). *Caules* 6-8 cm. alti, radicibus 3—4 cm. longis his 0*5 cm. crassis. *Folia* petiolis radicalibus 3 cm., laminis 4 cm. lougis, 1*25-1 5 cm. latis, segmentis 4-7 mm. longis 3 mm. latis, pedicel 1 is 0*5 mm. *Flores* calyoe 12 mm. longo, *> mm. lato, corollas tabo 16 mm. longo, galea 12 mm. longa, rostro 2 mm. longo latoque, labio 12 mm. longo, 16 mm. lato.

The corolla and bracts bring this very close to P. *apodocliila,* Maxim., and P. *rubens,* Steph., but it differs so remarkably in habit and foliage (in which respects it simulates the *Hirsutce* and the *Flammece* among *Anodoiitce)* from all the *Bidentatce* hitherto reported, that it is necessary to recognise it as the type of a new group *(Rhynchodontce)* to be inserted between *Elatce* and the *Comusce.*

Besides differing so markedly in general appearance from both P. *apodochila* and P. *rubeus,* this differs from *P. apudochila* in having the calyx hardly cleft, the lip rather smaller (not longer than the palea), the corolla-beak rather longer and somewhat differently shaped. The beak is almost exactly that of P. *rubens,* but it differs (as P. *apodochila* does) from that species in having a sessile (not stipifcate) lip, and in having serrate (not entirr) calyx-teeth.—D. PRAIN.

Fig. 1. Flover, with bract. 2. Calj-x, with style. 3. Half of corolla, showing Btaminal insertion. 4. Ovary, with disc. 1, 2 *and* 3 *are twice, 4 is four times, natural size.*



Pedicularis Eemsleyana, Prain.

PLATE 2210.

PEDICULABIS HEMSLEYANA, *Prain.*

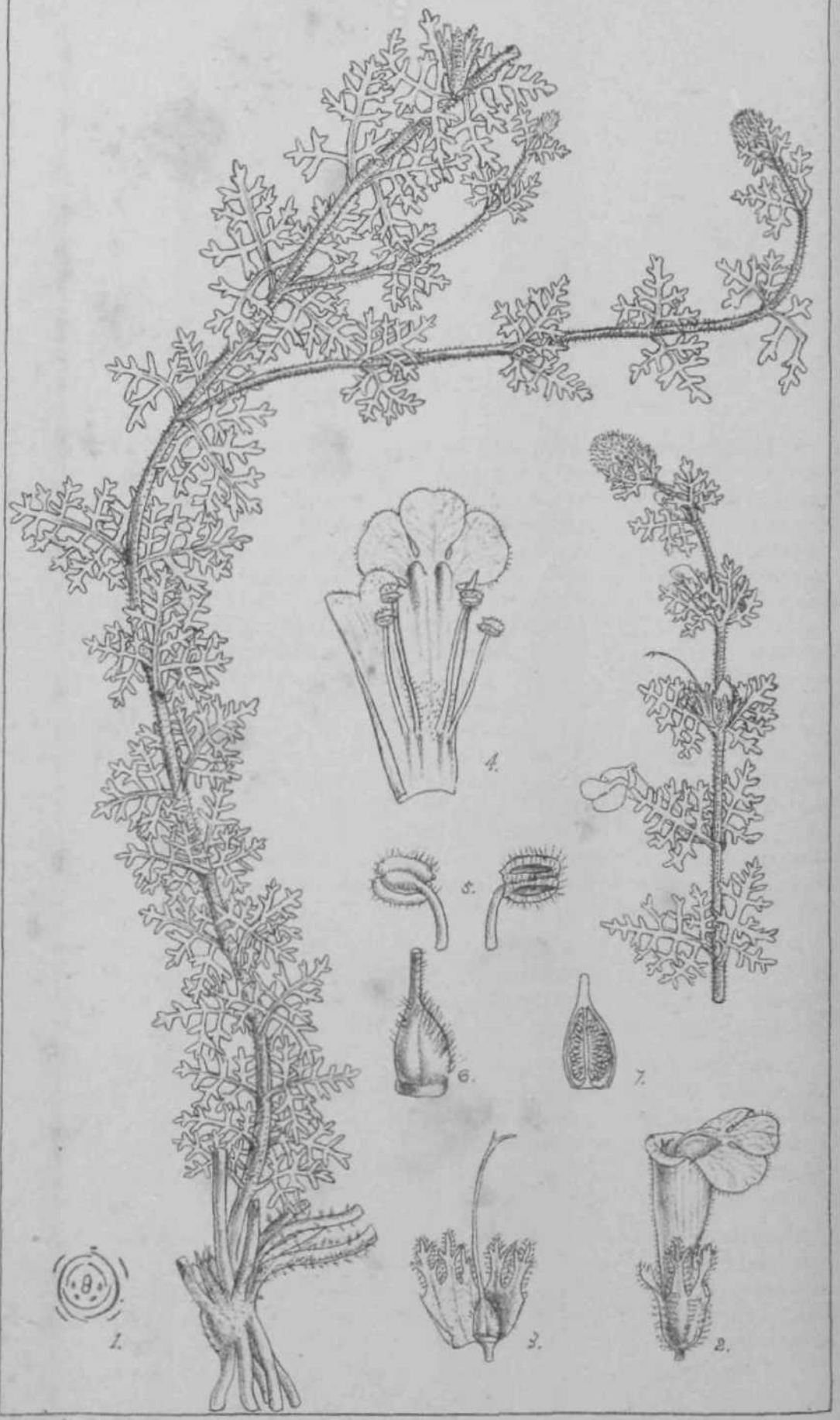
SCROPHULAKINE^. Tribe EUPHRASIES.

I*. (§ **Rhyncholophfle** §§ **Furfurace®) Hemsleyana,** *Prain (sp. nov.)*; elata glabrata rhizomate brevissimo vel parum elongato repent© collo paucisquamato squamis ovatis membranaceis, radicibus fibrosis casspitosis, caulibus elongatis laxis adscendentibus parce foliatis, foliis radical ibus moz evanidis caul in is sparsis longe petiolatis lamina supra glaberrima subtus furfuracea oblongo-ovata pinnatipartita -sectave segmentis 5-8-jugis oblongis serrato-dentatis, floribus Iax3 racemosis, breve pedicellatis, bracteis foliaceis, calycis membranacei nee fissi p-dentati segmentis lanceolatis summo acuto reliquis obtusis omnibus mtegria v. majoribus utrinque 1-2-serratis, corollae punicece tubo sarsum ampliato calyce dimidio longiore, labio 3-lobo lobis integris pvatis sup par ibus medio prominente, galea angulo recto incur va inflata, parte basali erecta fauce 2-auriculata, parte antlierifera horizontali in rostrum porrectum apice acutum integrum producta, sfcamibas ex ad verso medii ovarii insertis, filament is anticis hirsutis, ovario lanceolato, stigmate incluso.

Hab. China ; prov. Szechuen ; *Pratt* (No. 634).

Louies 45 cm. alti, pennee corvin8B crassitudine, radicibus 5-8 cm. longis. *Folia* petiolis 1*5-3 cm. longis, lamina 6-8 cm. longa, segmentis majoribus 2-4 cm. longis, 7-12 mm. latis. *Flores* pedicellis 3 mm., calyce 6 mm. longo, 2*25 mm. lato, corollee tubo 6 mm. longo, galeee parte basali 3 mm. longa, parte horizon tali 3*5 mm. longa, rostro 4 mm. longo, 7*5 mm. lato (lobo medio 4 mm. longo, 4 mm. lato).—D. PRAIN.

of F^' n" ^ower» "^ith bract. 2. Calyx laid open, showing ovary and style. 3. Half corolla seen from within, showing ataminal insertion. ***All 2\ times natural size.***



A L.Siru3i del.

Fhtheir o sp ermura. tet uusecfaim, Bur. 8c Prancli.

PLATE 2211.

PHTHEIROSPERMUM TENUISECTUM, *Bur. et Franch.*

SCROPHULARINEÆ. Tribe EUPHRASIES.

P. tenuisectum, *Bur. et Franch. inJourn. de Botanique,* v. (1891) 129; perenne, rhizomate lignoso, multicaule, caulibus simplicibus vel parce ramosis foliisque viscido-pubescentibus, foliis oppositis ambitu ovatis acutis dissectim 2-3-pinnatisectis, floribus axillaribus solitariis ebracteolatis, pedicellis brevissimis, calyce campanulato 5-partito dentibus angustis summo sabulato integro ceteris lanceolatis pauci-dentatis paulo breviore, corollre tubo latiusculo superne ampliato fauce hiante, limbo margine ciliato 2-labiato, labio postico erecto brevi 2-lobo lobis reflexis in alabastro interioribus, antico longissimo patente 3-sectosegmentia obovatis margine truncatia, preefloratione medio basi gibbum lobosque posticos statim amplectente et lateralibus parum majoribus vicissim obtecto, staminibus, sub galea inclusis, filamentis ad versum summi ovarii insertis anticis prope basin parum hirsutis ceterum posticisque prorsus glaberrimis, antheris margine rimarum barbatis loculis sequalibus distinctis parallelis basi submucronatis, ovario ovoideo supra et praBsertim antice piloso, stylo apice dilatato stigmate 2-lobo, lobo antico parum longiore, ovulis in loculis numerosis, capsula (immatura) compressa rostrata, seminibus (immaturis) ovoideis testa reticulatis.

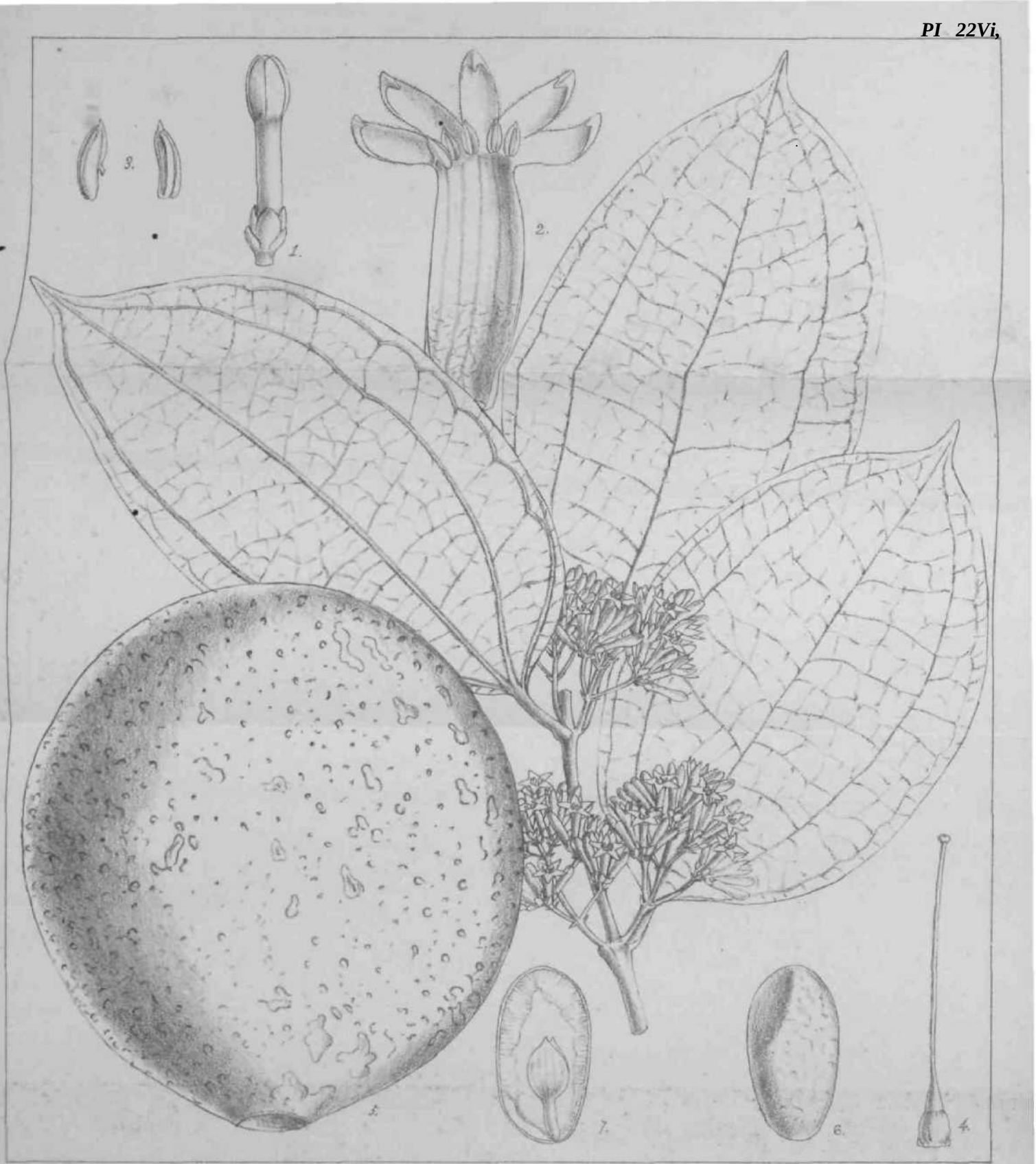
HAB. Himalaya orientali, Tassi-chen-doom, in valle Chumbi, *Herb. Oalcuft.*; Tibet australi, Karoo-la, prope Lhassam, *Herb. Hort. wicutt.;* Szechuen occidentali, ad fines orientales Tibetioe prope Ppidum Ta-chien-lu, Pratt (Nos. 283, 528), *Herb. Eew.*

Caulis 25-35 cm. longi, pennse corvince crassitudine. *Folia* 2 cm. longa, 2*5 cm. lata, segmentis ultimis vix 1 mm. latia. *Flores* calyce 8 mm. longo, 4*5 mm. lato, dentibua 4 mm. longis, vix 1 mm. latis, sinubus obtusis; corolla tubo 14 mm. longo; limbo 7 mm. lato ; labio postico 2*5 mm. longo, 6 mm. lato; labio antico 7 mm. longo, 7*5 mm. lato.

The description of this plant departs from the generic characters assigned to *Phtheirospermum* in the anthers being bearded. There are, however, some hairs preseut on the margin of the rima towards the base of the anthers of *Pktkeirospermum chinense,* Bunge, in *Herb. Galcutt.* Peciniens. The ovary is almost as hirsute (though the individual

hairs are shorter) in P. *chinense* as in the present species. The chief differences are that in P. *chinense* the lower lip is, relatively to the upper, much smaller than in this ; and that in P. *chinense* the aestivation is that normally characteristic of the EUPHBASIEJJ, viz., mid-lobe of lower lip outmost in bud, overlying first one (usually the left), then the other lateral lobe, the upper lip nestling under these. Here, on the contrary, while the lobes of the upper lip are inmost as before, they are immediately overlaid by the mid-lobe of the lower lip, and this in turn is covered by, first, the right, and then the left lateral lobe.—D. PKAIN.

Fig. 1. Estivation. 2. Flower, x 2. 3. Calyx, laid open, x 2. 4. Corolla, laid open, x 2. *b.* Anther, front and back, x 4. 6. Disc and ovary, x 4. 7. Section of ovary, x 4.



M.S. del. et lith.

Strychnos Ignatii, Berg.

PLATE 2212.

STRYCHNOS IGNATII, *Bergius.*

LOGANIACE^].

S. Ignatii, *Berghis, Mat. Med.* i. 146 (1778); scandens, glabra, foliis ellipticis. v. ovato-ellipticis breviter acuminatis cuspidatisve conspicue trinerviis, floribus brevissime pedicellatis subsessilibasve cymosis in paniculis brevibus axillaribns folio mnlto brevioribns dispositis, paniculis breviter pedunculatis, calycis segmentis late ovatis v. ovato-rotundatis, corolla calyce 6-10-plo longiore extus toinentoso-puberula intus glabra v. parce pilosula, lobis limbi ovatis crassiu.-culis tubo 3-4-plo brevioribus, antheris lance corollas tubi insertis sessilibus v- subscssilibus oblongo-ellipticis apice mucronatis, ovario glabro in stylum elongatum attenuatum, bacca qriobosa v. ellipsoidea * c. 4 poll, diam., polysperma.—*Phil. Trans* (1699) xxi. t. i. figs. 4-6.

HAB. Philippines: Mindanao and Samar, *B. Boxall.*

Folia 3^-6 poll, longa, 2-3^ poll, lata; petiolus i poll, longus. *Paniculce* cum pedunoulo 1-1-^ poll. longaB. *Flores* f-f poll, longi, limbo corollaB \^ poll. diam. *Bractece* ovatae acutiusculse concavae, ^jajores 1 Hn. longae. *Stylus* filiformis ovario multoties longior. * *cricarpinm* sublaeve olivaceum crustacenm. *Semitia* in pulpa nidulantia ellipsoidea obtuse angulata 1^-1^ poll, longa, 8-10 lin. lata, pilis brevibns nitentibus appressis sericea.

Mr. Boxall, the collector of the specimens, both in flower and fruit (the latter preserved in spirits), beie figured, says that there is another species of *Strychnos,* known as St. Ignatius's Bean, which is much ^ore plentiful than this plant, and that it is the seeds of this other species which are exported as St. Ignatius's beans. The seeds of the plant here figured are, however, used in medicine in the Philippines *nder the same name.

^by, then, refer this plant to *Strychnos Ignatii,* of Bergius, rather than to the commoner species affording the exported seeds ?

S. *9n<*tii* was based by Bergius, in his 'Materia Medica,' i. 146 (1778), upon the description contained in a letter from Father Camelli, addressed* to John Ray and James Petiver, an abstract of

* Mr. Boxall sajs the form of the fruit is variable, two never precisely alike.

which is given in Phil. Trans, xxi. (1699), No. 250 (and abridged edition, vol. iv. 356). A figure of the leaves, fruit, and seed is given in the unabridged edition, the leaves and fruit being reproduced in Bentley and Trimen's * Medicinal Plants,' iii. t. 179. In the figure cited of the leaves, the lateral nerves are basal in their origin, that is they are tri- or quinque-ncrved, not tripli- or quintupli-nerved (that is, diverging from the midrib above the base). And it is upon this foliar character we are obliged to depend, for the flowers are not intelligibly described,* and there is reason to think the fruits of the two species do not materially differ.

In Camelli's figure of the leaves, the lateral nerves all originate at the base of the lamina. Now there are only two species likely to afford these seeds in the southern islands of tbe Philippine group in the Kew Herbarium, viz., one with the lateral nerves basal (here figured), and *S. multiflora,* Benth., figured in the following plate, in which the lateral nerves next to the midrib are coalescent with it to about ^-Ā inch above the base of the lamina. It is on this ground, therefore, it would seem to be more prudent to regard this plant as probably identical with Camelli's, named by Bergius; while we have, at any rate, a sure name for the other species, viz. that given by Mr. Rentham, *8. multijlora,* one of whose type specimens we figure (PI. 2213).

Owing to the confusion introduced by Linnaeus fil., Suppl. Plant. (1781) 149, who based his description of the flowers of *Ignatia amara* on a *Posoqueria,* as pointed out by Mr. Bentbam (Journ. Linn. Soc. i. 108), and to discrepancies in the description given by other authors, I have not ventured to cite any synonymy in the usual form. But, taking the principal postlinnean references to St. Tgnatius's beans in the order of date, they stand thus: Bergius's ' Materia Medica,' in which the plant was first named, appeared, as cited above, in 1778. *Ignatiaua phiUppinica,* Loureiro, PI. Cochinch. (1790), i. 126, continues the muddle of the (Supplementum,' under slight modification of the generic and complete change of the specific name. He adds *S. Iynatii,* Berg., as a synonym.

Trjnatia amara, Linn, f., is adopted by Blanco in his Flora Filip. (1837), 82, the description of the flowers being taken from Linn. fil.; but in the second edition of this work (ed. 1845, 61), having in the meantime received flowers independently from Bohol, he reverts to the genus *Strychnos,* naming the plant *8. philippensis,* and modifying the description of the flowers in accordance with the new material. The same name is retained in the folio edition of Blanco, by Naves (1877), i. 116, with an additional note on the seeds in the ' Appendix ' (1880), 136.

Bentley and Trimen,' Medicinal Plants,' 1880, iii. 179, adopt Bergius's name, and cite as synonyms Loureiro's name and that given by Blanco in

florem Balaustiae siiuilem.'

his second edition. Their description, however, of the flowers, taken from Blanco and Loureiro, is a compromise between that given by Linn, fil. of a *Posoqiieria* and the corrected description *ot* B!&£co (ed, ii.). They reproduce the leaves, fruit, and seed from Phil. Trans., xxi. (1699), t. i. tigs. 4-6.

Professor Fliickiger and A. Meyer, in the * Pharmaceutical Journal,[1] 1881, vol. xii. (July 2), give a careful account of the fruit of *S. Ignatii,* with full detail of the histology of the seed and curious hairs of the testa. This agrees with our plant, so far as I can see. They also add copious references to the literature of the subject.

Finally, adopting Bergius's name, Vidal, in his Revision de Plant. Vase. Filip. (1886), 450, qnotes Blanco's name from his second edition, and the names given by Linn. f. and Loureiro as synonyms, but figures, in two plates, a short-flowered *Strychnus,* the corolla bearded in the throat, and altogether only twice as long as the calyx, in which characters it agrees with *S. mnltiflora,* Benth., although he figures the leaves as tri-nerved, not tripli-nerved as in that species. As his description, however, definitely states the lateral nerves are given off 5-10 mm. above the base, I can hardly hesitate to regard his figure as intended to represent Mr. Bentham's plant figured in our next plate.

Messrs. C. Ford and W. E. Crow, in the ' China Review,[1] * in their 'Notes on Chinese Materia Medica,' accept Vidal's conclusions referred to above. From seeds forwarded to the Royal Garden?, Kew, by Alexander Gollan, Esq., H.M. Consul at Manila, the plant is now in cultivation, though it has not yet reached the flowering stage. —D. OLIVER.

7. *% 1. Bud. 2. Corolla, laid open. 3. Anthers. 4. Pistil. 5. Fruit. 6. Seed. • Longitudinal section of same, showing ovary. *All enlarged.*

• An extract received at Kew in July 1887, pp. 274-5.

Strychnos irultiflareu Bertf th

PLATE 2213.

STBYCHNOS MULTIPLOBA, *Benth.*

LOGAHIACEJE..

S. **multiflora,** *Benth. in Journ. Linn. Soc.* i. (1857)102; glabra, foliis late elliptiois v. ovato-ellipticis breviter et obtusiuscule acuminatis triplinerviis, floribus 5-meris cymosis in paniculis multiflona terminalibus et in axillis foliorum snperiornm dispositis, pedicellia ternis calyce subsequilongis, corolla? rot at© limbo tnbo ajquilongo, tnbo calyce temp, florifero 2-plo longiore ore villoso, limbi lobis ovato-lanceolatis acutinsculis crassiusculis intus (sicco) cano-puberuhs, antheris exsertis, ovario ovoideo piloso stylo elongato 3-4-plo breviore.

HAB. Philippines, Luzon, *Cuming* (Nos. 641, 695, 1,059, 1,482). Luzon, District of Morong, *Vidal* (No. 1,615).

Folia 3-7 poll, longa, lf-3f poll, lata; petiolus £-§ poll, longus. *Flores* J-^ poll. diam. *Calyx* segmentis ovato-rotundatis ciliclatis.

The leaves are 3- or 5-nerved, but the inner lateral nerves coalesce vrith the midrib to £-^ in. above the base.

The only fruits which I have seen are immature, not exceeding an inch or two in diameter. When ripe it is probably globose or ellipsoidal and 3^ to 5 ins. in diameter. Our specimens are destitute of cirrhi.

We have thought it desirable to give an authentic figure of this plant from type specimens, in view of the ambiguity attending the plate, giren by Vidal, of what he considered to be *8. Ignatii,* Bergius. See remarks under preceding plate.—D. OLIVER.

fig. 1. Bud. 2. Corolla, laid open. 3. Pietil. 4. Tranrense section of orary. -«w *enlarged.*

M.S. del. et lith.

Pertya sinensis, Oliv.

PERTYA 8INENSIS, *Ol\9,*

COHPOSIT.K, **Tribe Ifonsucu.**

P. uneniii, *Oliv. (*p. mam.)]* **fbltii oblongo-kooeolatif** in mnmlii 'ii.itntiim aanpe in axillin **fosmonlatu aootiasonlia** MIS int. **oaei inpetaolua breyem aognstato, oapttotM 10 12-floribai** in axilli '•'inreni! **pedaneaktti pedammlo EnroltMra 2 3.pk» tongioi loci** <atlir"**'" o BqtwiniR ^ltihiRtiM **marsioibiii pnberuu extai** brevioribus late **DvatisacatiuBcaluiinterioribnj ob**longis o liLmcpolati obtusis, achæniis **bivolarro ii'ijniloti^ii elonifattfh atrinqiiei lmviter** angustatis **oompn tlia longicodinaliter 10-oostaiii pitta albi** centibus **bum vcrwuB pnrpuniKconiilnih prc«tin w-riiviH, pappi ••** h"nplicihnB ~~:')I:' lo **brertoribas.**

BAB. China, **PfW, llnprli,** Hsingshan, 9,000 feet, *Dr. A.* …ry (No. 6,98 **2).**

1

JV' tli.s, ntmiilis **meilibtUI** annotmitt **r nttkftljp** I*Folia* … poll. lau. / fructii- **II, bnga**

***"tolla* 5.fida *m* is iniKii«li» iicimiin**

•Iin *sr pana OOftUti aim.

A **gcniu new lo** China; **previously** known to UH **from** .liip:ui ;ui<i **the mrrum Valley, A-fffhantaUa. O&r plant ii modi more Dearly allied** . f- lattor M'ninu **thai** **Jl**

P. ***Ai;ct>;»<.,,;*** ***n*** **denoribed (C B. Ctari** ,L -. . . . .*-) a« with M-sKili! capittila, Imt **n tpeoimeni in wbioh duncalateaa in** ***P.*** *tin* \ **marked distin in the sericeous achenc«** of \ nal i

Fig. 1. Floret. 2. Seta of .. 1). on , 3. … 5. Achene. All enlar…

Antlirr-, 4. Sul. Lr.ni> I

M. S. del. et lith.

Lloydia ixiolirioides, Baker.

PLATK 2215.

LLOYDIA IXIOLIRIOIDES, *Baker.*

LILIACEJ:. Tribe TUMPEA.

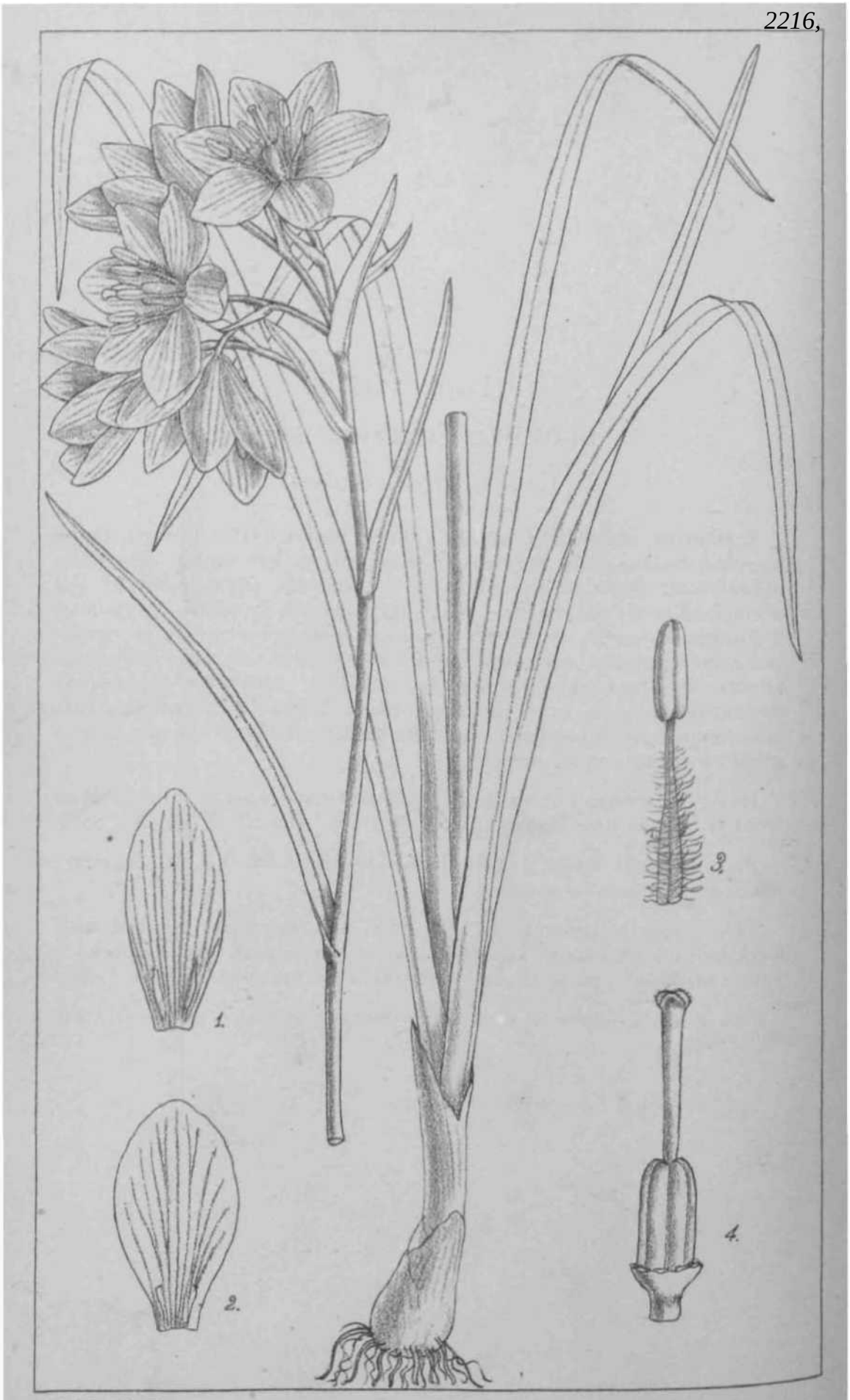
L. **ixiolirioides,** *Baker MSS.(sp. nov.)* ; herba glabral;J-pedaHs,bulbo angusto ovoideo, foliis radicalibus circa 5, canlinis paucis redactja remotisque anguste lineuribus gramincis obtusiuscule acuminatis Bcapo brevioribns, floribns paucis (c. 4) erectis longo pedunculatis laxe corymbosis, perianthii segmeritis exterioribus anguste lanceolatis [a]pice leviter galeatim iuflexis, interioribus ovalibus marginibns tenuissimis basi intus lineis 2 pilosulis utrinqne instructis, staminibua perianthio trieDto brevioribus, filamentia anguste linearibus pilosis antberis oblongis basifixis 3-4-plo longioribus, ovario glabro stylo »quilongo.

HAB. In a collection made in West Szechuen, and on tbe Tibetan frontier; chiefly nearTachienlu,alt. 9,000-13,500 feet, *Pratt* (No. 533).

Folia, radicalia 10-12 poll, longa, li-2 lin. lata. *Flares* 9-10 Hn.

The perianth-segments in tbe dried specimens are darkly lonjritudinally striate and of a deep brownish-purple below and on the median line, the margins below orange-brown, above paler or whitish.—J. D. OLIVER.

Figs. 1 and 2. Outer ami inner iHTmith-segmeiils. 3. StiuiiMi. 4. 1'intih



MS.de!, etlith..

Iloydia tibetica,Eaker

PLATE 2216.

LLOYDIA TIBETICA, *Baker.*

LILIACEJE. Tribe TULIPEA;.

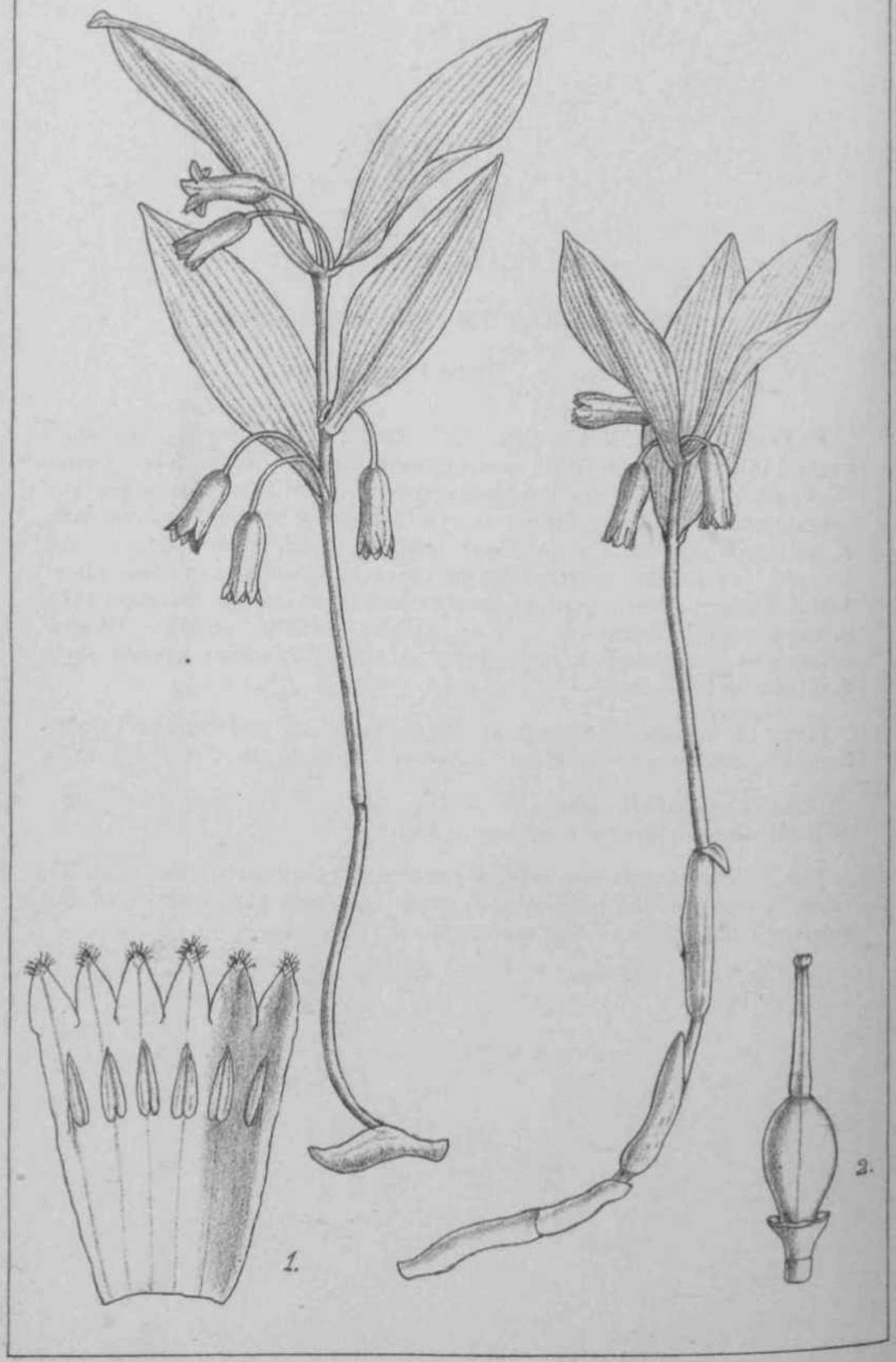
L. tibetica, *Baker MS8. (sp. nov.)*; herba glabra G-10-pollicaris, bulbo angnste ovoideo, foliis radicalibus caule brevioribus erectis linearibus obtosiuscule acuminatis canlinis 0 v. interdum supra medium 1-2 minoribns instructs, floribus pedicellatis, cernuis in cymis corymbosis 2-5-floris dispositis, perianthii scgmentis oblongo-ellipticis v. ovato-lanceolatis obfcusis basi intns haud transversaliter plicatis sed cristis ftdnatis brevibus oblongis breviter piloaulis irstiuctis, staminibus perianthio duplo v. Rubtriplo brevioribus, filamentis lineari-subulatis basi complanatis laxe pilosis, antheris basifixis oblongis obtusis, ovario globro stylo columnari breviore.

HAB. In a collection made in West Szecliuen and on the Tibetan frontier, chiefly near Tachienlu, 9,000-13,500 feet alt., *Pratt* (No. 857).

Folia 4-7 poll, longa, 1-2 lin. lata. *Perianthium 6-7* lin. longum; bracteæ herbacece liueares.

The perianth-segments in onr dried specimens are marked with dark longitudinal strife, especially along the middle, and coloured a yellowish-brown, paler above and towards the margins.—D. OLIVER.

Fig. 1 and 2. Outer and inner periautli-regmeiitfl. 3. Stamen. 4. Pistil.



M.S.dfil,etKh.

Polygonatam Prattii, Baker.

PLATE 2217.

POLYGONATUM PRATTII, *Baker.*

LILIACEÆ. Tribe POLYGONATEJS.

*. **Prattii,** *Baker MSS. (sp. nov.)*; herba 3-5.pollicaris, rbizomate gracile longe repente, caule erecto gracile inferne nudo, foliis pancis (3-4) alternis sessilibus oblongo-lanceolatis v. -ellipticis apice acntatis obtusiusculis, floribus cernuia in cymis 2-floris breviter pedunculatia v- solitariis, periantbio tubuloso breviter 6-tido, lobis quara tubo ^5-plo brevioribus ovato-oblongis apice carnosulis papillosis alter-^atim (interioribas) paululo brevioribus, staminibns inclusis tubo subffiquilongis, filamentis fere ad apicem adnatis, antberis lineari-Janceolatis brevissime mucronulatis, ovario ellipsoideo glabro stylo ^s u¶t o subbreviore.

HAB. In a collection made in West Szechuen and on the Tibetan frontier; chiefly near Tachienlu, 9,000-13,500 feet alt., *Pratt* (No. 28*).

Fylia 1 H ! po.11- loQga» c. 5 lin. lata. *Flores* 4-5 lin. longi; pedicelli flore longiores v. subaequilongi.

The dried flowers are whitish, probably coloured above. The six Vascular cords of the perianth are continued from the insertion of the ailther to the apices of the segments.—D. OLIVER.

IM6- 1. Perianth laid open. 2. Pistil. *Enlarged.*

M.S. del. et lith.

Fritillaria lophophora, Bur. & Fr.

PLATE 2219.

FBITILLABIA LOPHOPHORA, *Bur. et Franch.*

LILIACEJS. Tribe *TVLITEM.*

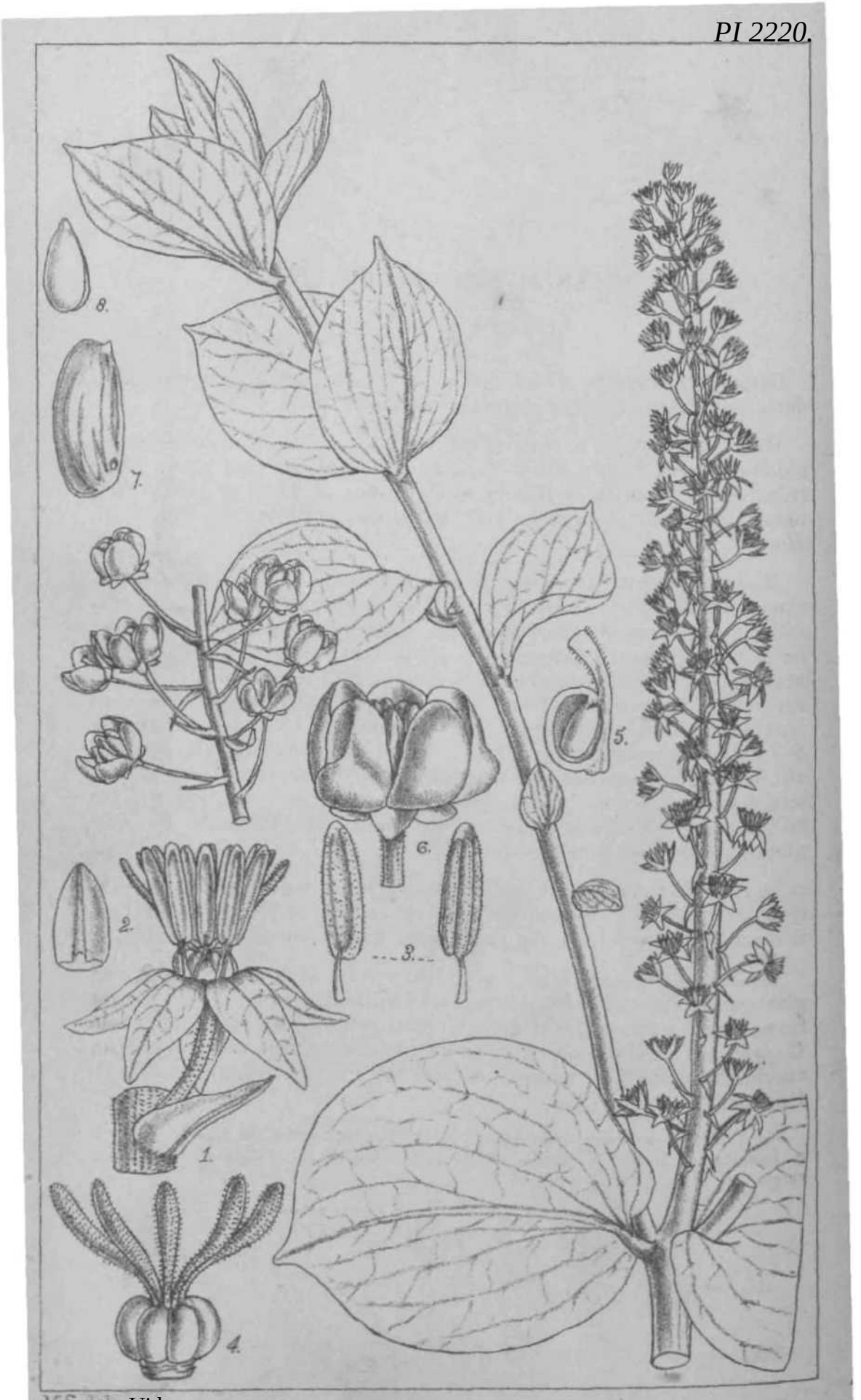
F. lophophora, *Bureau et Francket in Journ. de Botaniqne,* 1891, 153; bulbo squamato sqnamis majusculis erectis oblongo-lanceolatis carnosis tempore florifero laxiusculis, caule 1-2 floro inferne pauci-squamoso, foliis medium versus caul is plus minus confertis alternis ovalj- v. lanceolato-oblongis superioribus acuminatis inferioribus acutiusculis obtusisve, perianthio magno (2-4* poll, diam.) cernuo longiuscule pedunculato, segmeotis subpatentibuslanceolatisflequilongis ®t subseqnilafcis (v. exterioribus paullo angustioribus) longe acuminatis basi secundum costam utriuque fimbriato-cristatis v. cristis interdum posoletis, staminibus perianthio 2-3-plo brevioribus, filamentis glabris uneari-subulatis, anther is linearibus dorsifixis, ovario glabro sfcjloapice ^eviterdilataio 3-lobulato subeequilongo.

HAB. In a collection from West Szechuen and the Tibetan frontier, 5fift fly made near Tachienlu » alfc- 9,000-13,500 feet; *Pratt* (Nos. 261.. ^8) ; Szechuen, between Batang and Litang, If. *Bonvalot and Prince Henry of Orleans* ; Yun-nan, *M. Delavay.*

Bulbi squamaB 1^-2 poll, longae. *Gaulis* ^-lj-pedalis. *Folia* majora 4-5 poll, longa, £-1 poll, lata (forma minor 2 poll, longa, 4-5 lin. lata). *Perianthii* segmenta 1J-3 poll longa.

Intermediate between *Fritillaria,* to which MM. Bureau and Franchet refer it (as the type of a new section of the genus, § *Lopho-Pnora)* and *Lilium.* The flowers are described as yellow, often spotted with red.—D. OLIVER.

Fig. 1. Stamens, back and front view. 2. Pistil. *Enlarged.*



M.S.del. eUith.

Coriaria terminalis, Hemsl.

PLATE 2220.

CORIARIA TERMINALIS, *Hemal.*

CORIARIEJG.

Coriaria terminalis, *Hemsl. (sp. nov.)* ; herbacea, foliis srepius rotunaatis 7-9-nerviis, racemis elongatis terminalibus.

HAB. Tn a collection from West Szechuen and the Tibetan frontier, chiefly near Tachienlu, alt. 9,000-13,500 feet, *Pratt* (No. 820). Also from several localities in Sikkim at elevations of 9,000 to 11,000 feet, gamely Lachen, Ohangtiim and Samdong, collected by *Sir J. D. Hooker.*

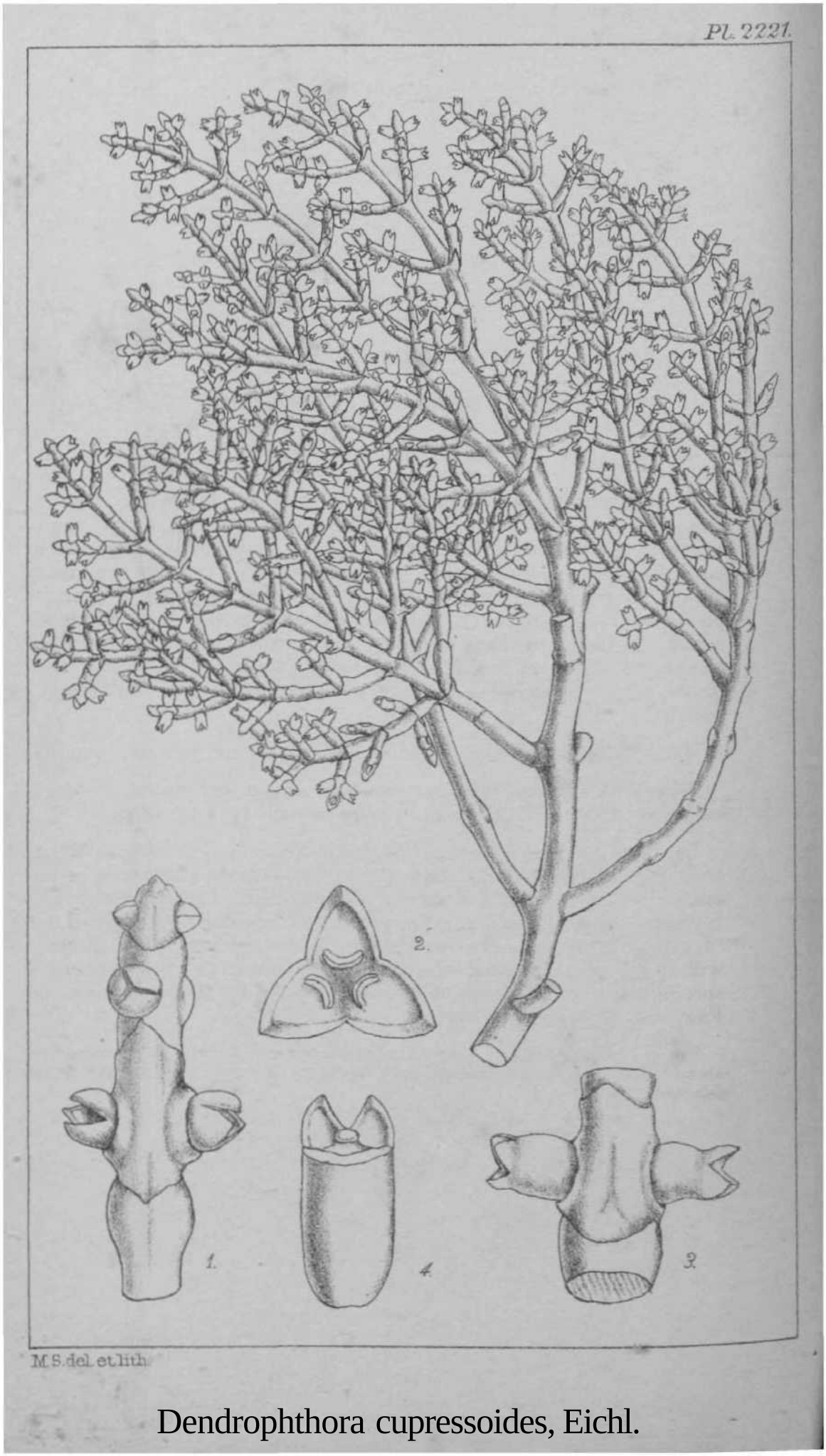
Herba perennis (lit videtur), caulibiis erectis 2-3-pedalibiis paucipamosis crassiusculis. *Folia* opposita vel snbopposita, sessilia vel brevissime petiolata, membranacea, late ovata vel interdnm fere orbicula, vel in ramulis lateralibus oblongo-lanceolata 1-3 poll, longa, obtnipte breviterque acuminata, basi cordata et semiamplexicaulia vel rotundata, 5-9-nervia sed saepissime 7-nervia, subtus prsecipne secus nervos a^perala. *Flares* polygami in raeemos solitarios terminates poll, longos dispositi, pedicellis gracilibus puberulis vel asperalis circiter semipollicaribus, demum patentibus. *Sepala* ovata vel lanceolata obtusa vel acuta. *Petala* per anthesin parva quam sepala niulto minora» post anthesin accrcscentia, iacrassata, iutus carinata. *Garpdla* glabra, carinata, saBpius 2-costata.*

In the ' Flora of British India ' this very distinct species is not distinguished from *C. nepalensis* Wall., though in the Kew Herbarium it is marked *var. sikkimensis* in the handwriting of Sir J. Hooker.

Coriaria nepalensis, Wall., is quite woody, and has three-nerved glabrous leaves and short clustered, lateral racemes. It ranges through south-western India into Central China; and the Japanese specimens in the Kew Herbarium from the Philippine Islands.—W. B. HEMSLEY.

Fig. 1.—Portion of flowering branch. 2. Sepal. 3. Anther, back and front view. 4. Pistil, carpal. 5. Longitudinal section of carpel. 6. Persistent corolla enclosing fruit. 7. Fruit 8. Embryo. *All enlarged.*

* **Fruit figured and described from an Indian specimen.**



Dendrophthora cupressoides, Eichl.

PLATE 2221.

DENDROPHTHORA CUPRESSOIDES, *Eichler.*

LORANTHACEJE. Tribe VlSCEJE.

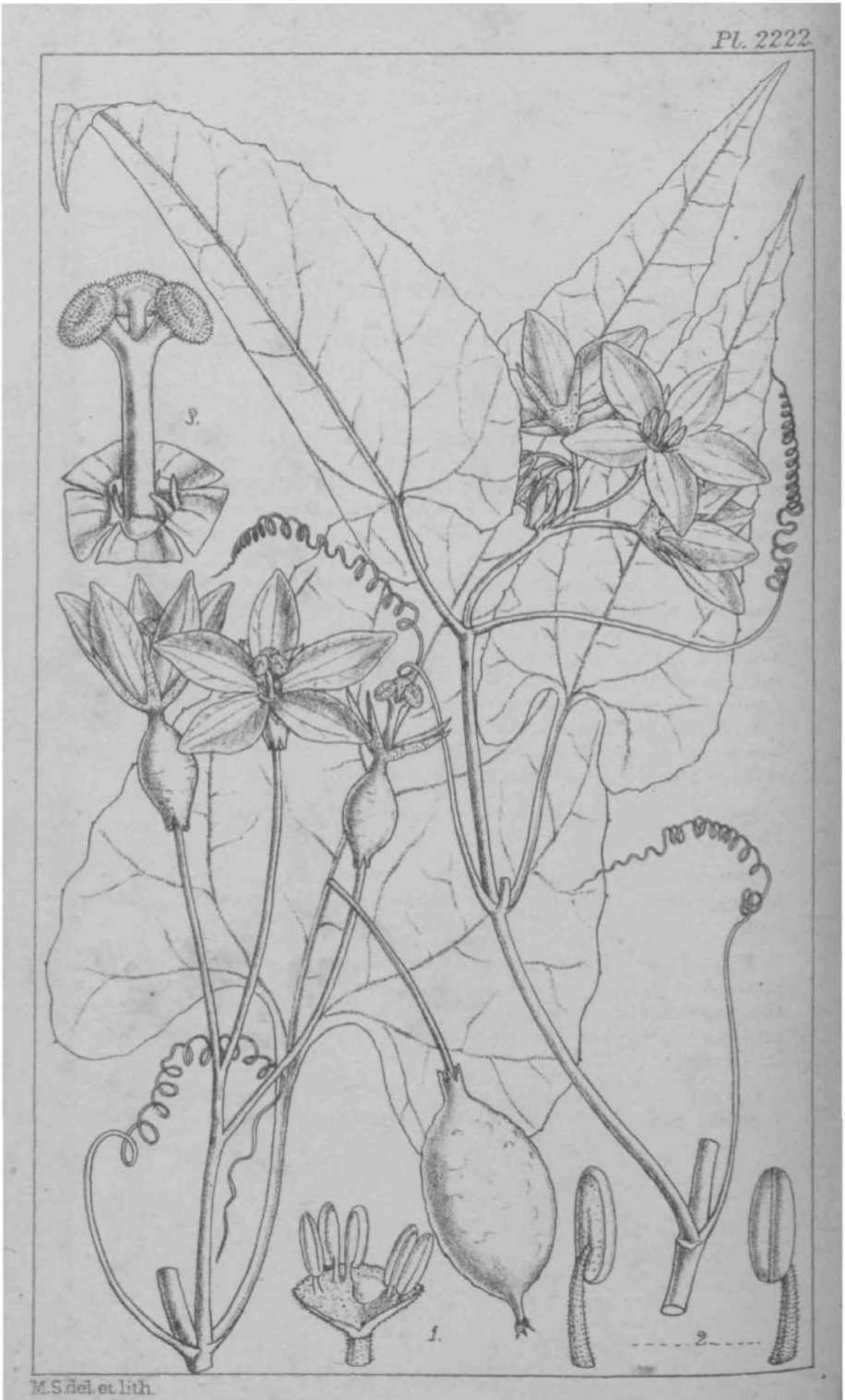
D. Cupressoides, *Eichl. in Mar this, FL Bras. (Loranih.),* v. pt. ii. 103 *(ad not.);* fruticulosa aphylla fastigiatim ramosissima, ramis teretibus papilloso-scabridis, squamis parvis ovato-deltoideis appressis connatis, spicis floriferis saepius 2-4-articnlatis, articulis brevibus, bifloris, floribus monoicis decussatim oppositis, floribus *$* pancis, perianthio 3- (v. interdum 4-)fido, segmentis crassis late deltoideo-ovatis, antberis sessilibns lunulatis basi segmentorum insertis riina transyersa dehiscentibus, fl. ? perianthii limbo 3(-4)-partito sej?-^entis crassis deltoideis. *Arceuthohium ctipressoides,* Gris. Fl. Brit. W. Ind. 315.

HAB. Jamaica, *Macfadyen* (at Castleton), *Mon-is, Fawcett.*

Internodia canlina inferiora crassitie penneB gallinacere, 3-5 lin. longa, snperiora c. 2 lin. longa. *Spicce* articnli 1^-2 lin. longi.

Br. Eicbler cites (1. c), as identical, *Phoradendron aerpyllifolium,* Gris. Pi. Wright, 192, a Cuban species, but I doubt whether it be the same. I have refrained from any description of the ovule and embryogeny, as this would involve prolonged investigation unfitted for 'Icones Plantarum.' We may hope to find some competent observer billing to take in hand the detailed examination of the excellent specimens, preserved in alcohol, commnnicated by Messrs. Morris and fawcett—D. OLIVER.

Fig.]. Portion of iiiflomcence with itaminate flowers. 2. Staminato flowers from aoove. 3. j o i n t of ; n f l o m c c l l c e w j l n ' p i b tillaie flowers. 4. Pistillate flower detached. *All r»h,r<,<*\.*



Thladiantha longifolia, Cogn.

PLATK *t22±*

THLADIANTHA LONGIFOLIA, *Cogn.*

CUC0RBITACE£. Tribe CUCUMERINE£.

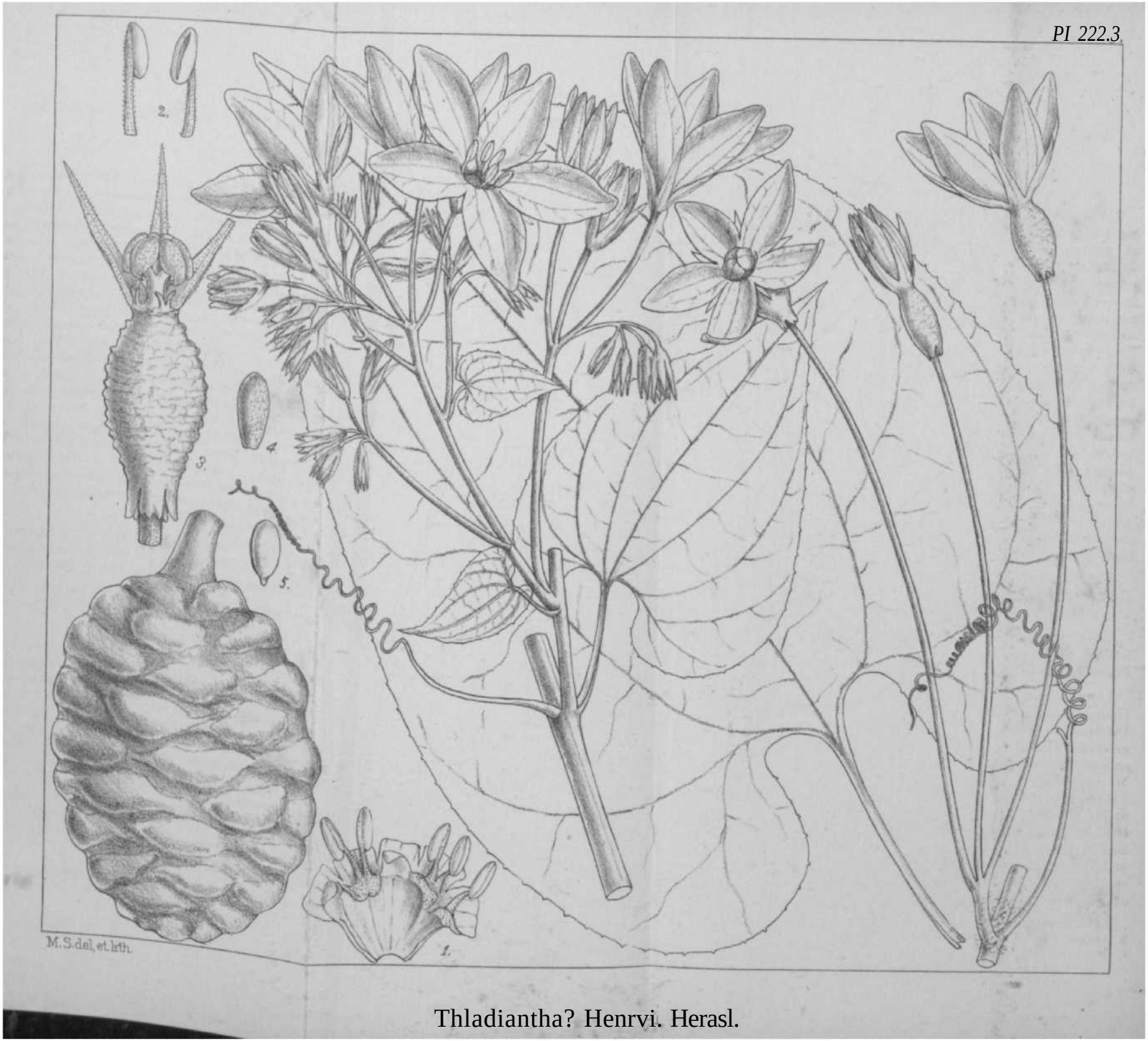
T. longifolia, *Cogniaux MS. in Herb. Kew.*; scandens, caule gracile ftngulato v. profande salcato glabro v. obsolete puberulo, foliis ovato-lailce°latis subacumiuatisapiceobtusiusculis glandulosis basi profande cordatis cum sinu cordato, margine gland uloso-denticulatis supra ficabridis v. lcevibus, cirrhis simplicibus, fl. $ flavidis in cymis P^ucifloris (5-7-floris) breviter pcdunculatis dispositis, calycis tnbo Jurbinato, limbi segmentis tubo aequilongis v. longioribus corolla brevioribus linearibus acutiusculis squama calycina incurva rotundata, corolla^ rotata 5-partifca, segmentis oblongo-ellipticis obtusiusculis \'•n©rviis, staminibus 5 liberis 4 per paria symmetrice approximatis, antheri8 rectis oblongo-ellipticis filamentis aequilongis, fl. ? etiara in cyniis 1-3-floris breviter podunculatis dispositi, longiuscule pedicel-l^t> perianthio maris, ovario utrinque breviter angnstato basi lobu-lato profunde intruso, pubernlo tubercalato-rugoso. stainino diis paw is, ylo eolumnare apice 3-fido stigmatibus dilatatis.

/ V^R ' China, Hupeh, in Patnng and Knei Districts, *Dr. A. Henry* (^.4,767,6,055).

Folia 3-7 poll, longa, basi 1^-3 poll, lata; petiolns \-\'*i* poll. longus longi. *Flon** 1 poll. diam.; pedicelli fl. *t* H P^oll-» ? *lh*^2 P^olh

pub A drie(1 aDd P^ressed immature fruit, about 1£ in. long, is ellipsoidal, th ·e^u\ous»^an^ apparently somewhat transversely plicate-rugose. In e·pistillate flower are three fleshy, pale, slightly prominent, disk-like Injections between the staminodia, at the base of the petals.* • u OLIVER.

2. F g!?' ** Portion of calyx-tube, showing insertion of stamens «nd calycino squama, ^^en, back and front view. 3. Staminodes, fetyle sind fitigmas. *All en/arycd.*



Thladiantha? Henrvi. Herasl.

THLADIANTHA ? HENRYI, *Hem*L*

CucuitBiTACE.E. Tribe CUCUMERINKJE.

T. ? Henryi, *llemsL in Journ. Linn. Soc.* x.xiii. 310; alte scan dens, canle angulato v. profunde sulcato glabro v. in'erdum parce setuloso v. puberulo, foliis cordiformibus acutis v. cuspidatis indivisis fere aequaliter denticulatis basi sinu profundo rotundato excavatis snpra ficabris v. ecaberujis subtus puberulis glabratisve, petiolo eglanduloso m foliis superioribus see pi us quam lamina breviore, cirrhis bifidis v. ramo altero interdum obaoleto, fl. £ luteis in racemis pi a ri Boris axillaribus scepe paniculatim aggregatis dispositis, pedicellis gracilibus flore suboequilongis v. inferioribus Fffipe 2-3-plo longioribas, calycis tubo tnrbinato intns squarais 2 ovato-rotuudatis obtusis incurvis clanso, lobis tubo cequilongis (v. alabastro 2-plo longioribus) Janceolatis acuminatis, corollse ad basin 5-partirae segmentis ovato-oblongis Acuminatis longitudinaliter nervosip, staminibus 5, 4 per paria approximatis, filamentirt crassiusculis anthera oblongo-elliptica recta ceqnilongis, fl. % axillaribus eaepius gem in is ternisve interdum longe pedunculatis, corolla maris, staminodiis 5 parvis Betuloso-hirsutia, stylo brevi crasfeo^ stigmate dilatato 3-fido segmentis medio sulcatis [a]piee obtuse bidentatis, ovario ovali-oblongo basi intruso tomentello-puberulo et interdum etiam parce setuloso-pilosulo, fractu ellipsoideo P^ricarpio transversim plicato, seminibns compressis oblongo-obovoidcis testa Crustacea sublflBve per margines bivalve.

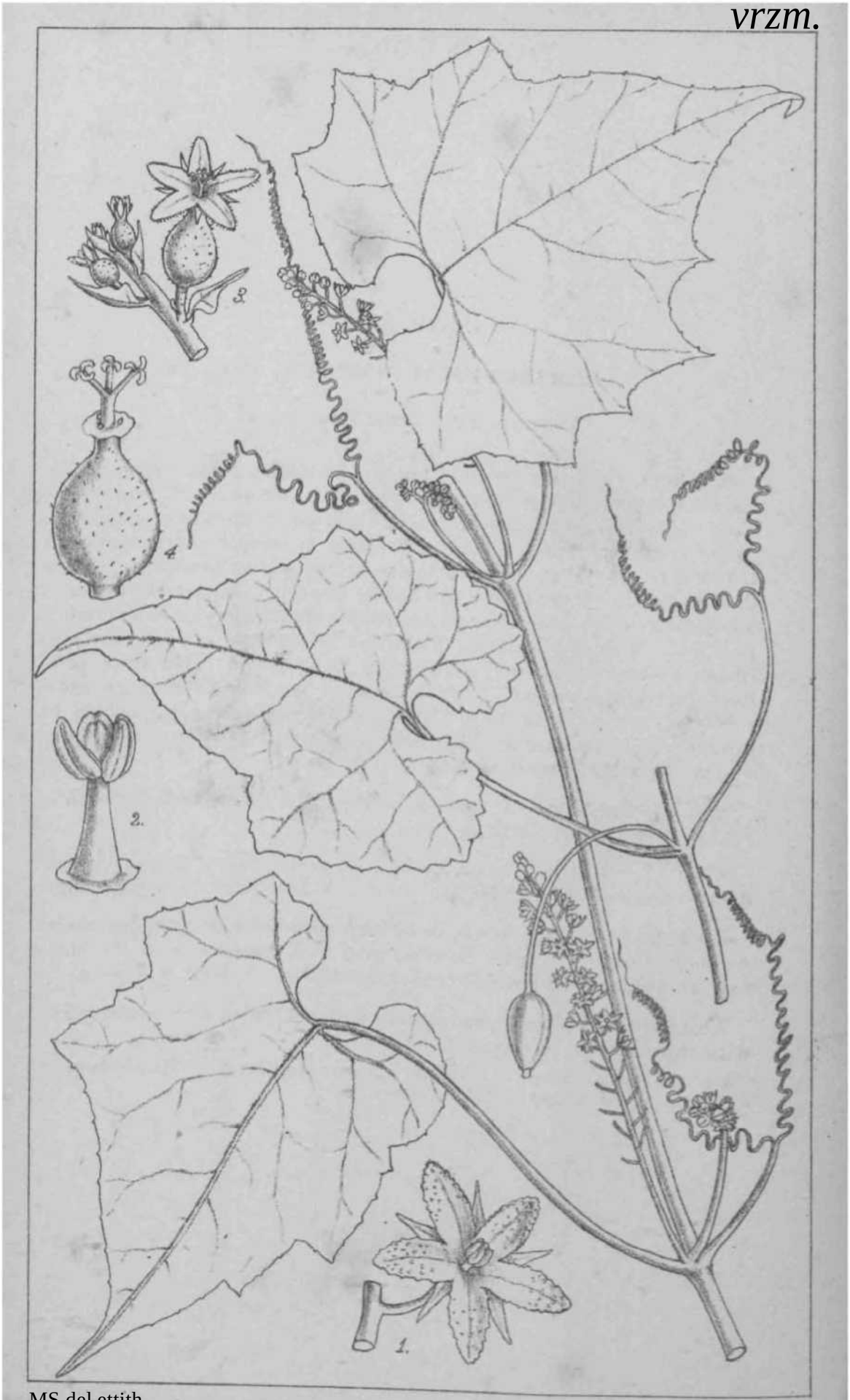
HAB. China, Prov. Hupeh, districts of Patung, Chienshih and Hsingshan, Dr. *A^Henry* (Nos. 1,757, 5,900, 5,936, 6,563), apparently ftlso a form of the same from Szechuen, Mount Omei, *Faber.*

***Folia* inferiora* 4-8 poll, longa, 3J-6 poll, lata; petiolns 2-5 poll, longus. *Flares* <$ 1J poll, diam.; fl. ? cum ovario l£-2 poll, longi. *Frttctus* 2^-4 poll.'diametro. *Semina* ¼ poll, longa.**

I have thought it best to figure this as it was named by Mr. Hemsley, though my friend M. Cogniaux, on his first inspection of *^r- Henry's specimens, referred it to *Mowordica*, I believe on the ground of the two calycine squamce. On further examination, however, ?£d comparison with" a plant in the Paris Herbarium, upon which M. Cogniaux proposes to base a new genus, he inclines to regard *iliadiantha ? Henryi* as a congener, and may probably publish it under the new generic name of *ThUtdiavthopsi. An ovary with the base similarly intruded occurs in *Thladiavtha longifolia, T. verrucosa,* [a]»d *T. glabra,* Cogn. *T. Oliveri,* Cogn., has a broad truncate base, [an]d *T. maculata,* Cogn., a narrow base, terminating abruptly ^ These specific names are still in manuscript in MJ. Cogniaux's determinations °f Dr. Henry's Chinese Cucurbitace®.—D. OLIVER.**

Fig. 1. Portion of calyx-tube, showing insertion of stamens and calycine equam*. 2. Auther, back and front view. 3. Ovary, with staminodia, rtyle, and stigmas. *• SewL 5. Krahij'o.i 6. Fruit. *Excepting Xo.* 6, *mlan/ed.*

vrzm.



MS.del(ettith

Schizopepon diotcus,Co gn.

PLATE 2224.

SCHIZOPEPON DIOICUS, *Gogn.*

CUCURBITACEJE. Tribe GYNOSTEMMEJE.

S. **dioicus,** *Cogn. MS. in lift.*; gracilis scandens, caule glabro, foliis mem branaceis late ovato-cordatis acuminatis basi sinu rotundato excavatis utriuque 2-3-deltoideo-lobatis minute denticulatis glabris v. pauce sctnlosis lamina petiolo sequilonga v. saepius longiore, cirrhis bifidis floribus <J parvis ebracteatis in racemis v. paniculis racemifnrmibus anguatis gracilibus axillaribus dispositis, caljcis lobis linearifiubulatis corollae Jobis oblongo-lanceolatisobtusis brevioribus, staminibus 3 (2 biloc, 1 uniioc), filamentis ad apicem coalitis, antheris liberis v. basi brevissime connatis, fl % ovario ovoideo apice producto glabro 3-loculare, ovolis solitariis pendulis, starainum rudimentifl minutis, ntylo apice 3-fido, fructu solitario longiuscule et graciliter pedunculato, ovoideo v. oblongo-ovoideo pen'carpio tenui plus minus longitudinaiiter verrucoso.

HAB. China, Prov. Hupeh, Districts of Patung and Chienshih, *Dr. A. Henry.* (Nos. 4,862, 5,991).

Folia l}-3 (-4) poll, longa, l^-2i (-3) poll. lata. *Fhres* & TV poll, diam. *Fructus* 5-6 lin. longus; pedunculo fiuctifero l-l^ poll, longo.

Though the fruit appears to be solitary on slender elongate peduncles without evidence of fallen flowers, yet I find, sometimes in the same axil, an abbreviated few-flowered inflorescence of small $ flowers.

This plant with its moDadeiphous stamens forms a connecting link with *Gynostemma.*—D. OLIVER.

Fig. 1. Staminate flower. 2. Staminal column and anthers. 3. Pistillate flowers. 4. Orary and style-branches. *All enlarged.*

M. S. del, et lith.

Gynostemma cardiosperma, Cogn.-

PLATE 2225.

GYNOSTEMMA CARDIOSPERMA, *Cogn.*

CUCURBITACEÆ. Tribe GTNOSTEMMEA:.

6. cardiospenna, *Cogn. MS. in litt.*; caule gracili sulcato glabro, foliis pedato-5-7-foliolatis, foliolis membranaceis lanceolatis v. oblongo-ellipticis acuminatis basi aDgustatis grosse et ssepe inoequaliter dentato- (vel interdum crenato-)serratis centraii longiuscule petioluiato, glabris v. interdum costa marginibusque minute setuloso-scaberulis, cirrhis gracilibus bifidis, floribus dioicis parvis, <J in paniculis gracilibus racemiformibna terminalibus v. quasi-axiliaribns folio subaequilongis dispositis, cal jcis lobis oblongo-lanceolatis acutis petalis lanceolatis caudatis 1-nerviis dimidio brevioribus, filamentis coalitis, antheris peltatim capitatis 1-locularibus longitudinaliter dehiscentibus, fl. ? perianthio maris, ovario ^-inferiore apice libero stylisque crassiusculis divergentibus facie sulcatis hirtellis, ovnlis geminatis pendulis, capsula ftubglobosa v. hemisphoerica glabra y. laxe pilosula calycis limbo medio circamdatn apice tricornuta tricrurim dehiscente, pericarpio tenuiter cruBtaceo, seminibus compressiasculis late cordiformibus testa .crustacea rugulosa faciebns vernicosa margiae sulcata.

HAB. China, Prov. Hupeh, Fang District, *Dr. A. Henry* (Nos. 6»701 var. capsulis molliter pilosulis, 6,779, 7,613).

Folium petiolo 1-2 poll, longo, foliolo intermedio 1^-4 poll, longo. *Capsula* £ poll. diam. *Semina* 2-2^ lin. lata. 3 4 5 [illegible] ^ 1·2.

Althougb tbe flowers are distinctly those of *Gynostemma,* the fruit dehiscing tricrurally at the apex is that'^of *Gomphogyne.*—D. OLIVER.

Fig. l. Staminate flowers. 2. Staminnl column and anthers. 3. Pistillate flower, 4. ^tyle-branchcs, side view. 5. Scerl. *All enlarged.*

M.S.ael.etOith.

Chionothrix somalensis, Hk.f.

PLATE 222G.

CHIONOTHRIX SOMALENSIS, *Hook.f.*

AMARANTACEA. Subtribe AGHTRANTHEJS.

C. **somalensis,** *Hook. f. Gen. Plant* iii. 33; frntex, ramulis teretibns glabrescentibus bornotinis gracilibus fulvo-hirtellis v. puberulis, foliis °ppositis obovato-ellipticis obtusis setuloao-scabridis coriaceis petiolatia, floribus in spicas elongatas termiDales sol it arias v. 2-4-nas dispositis, bractea bracteolisque subeequalibus concavis ovatis v. rotundato-ovatis perianthio multo brevioribus, perianthii segmertis 5 coriaceis lineari-lanceolatis acutis marginibus byaliuis dorso pilis ^genteis longis erect is minute barbel I atis vestitis basi ad discura mcrassatis, staminibus 5 inferne in tubum coalitis laciniis anantberiR 0, antherce lobis 2 apice basique liber is, ovario ellipsoideo glabro stylo ?ra«ile breviore. Sericocoma somalensis, *8. Moore in Journ* Bot.* xv. (1877), 70.

HAB. Somali Land, Ahlgebirge, 1,100 metr. alt., *Hildebrandt* (No. 1,519).

Frutex c. 10-pedalis. *Folia* £-f poll, longa, £-§ poll, lata ; petiolns *H* poll, longus. *Spicce* 4-6 poll, longoe ; bracteee persistentes £-£ poll, l o [illegible] bracteolse cum flore deciduas. *Florett* ^-^ poll, longi.—D. OLIVER.

Fig. 1. Flower and subtending bracts. 2. Perianth-segment. 3. Hair from same. 4- fttmninal tube. 5. The same laid open. 6. Pistil. 7. Ovule and funicle. *All enlarged.*

Licraurus leptodadus, Hk.f.

PLATE 2227.

DICRATJBUS LEPTOCLADUS, *Ilook. f.*

AMARANTACEJE. Tribe GOMPHBENE^.

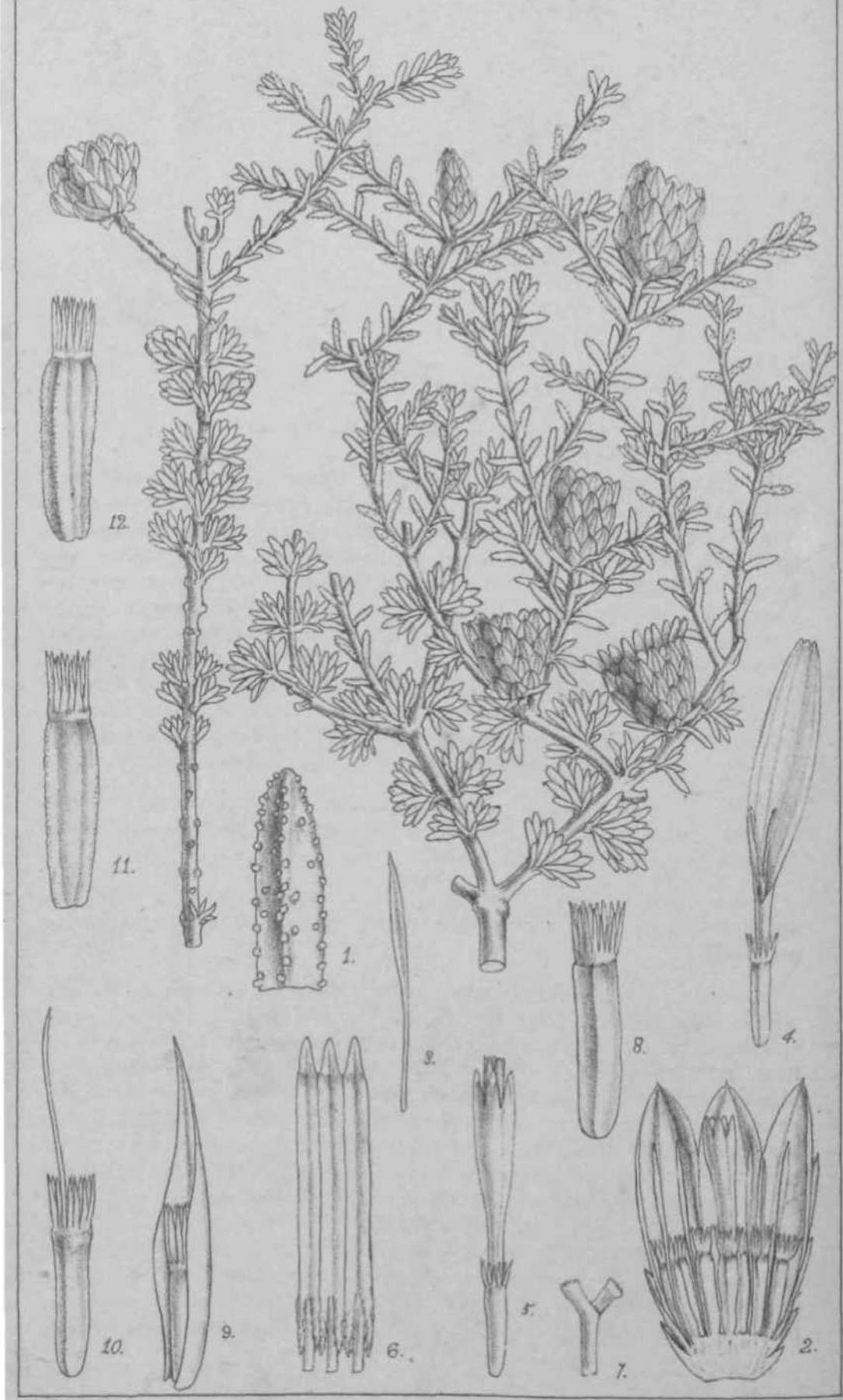
D. leptocladns, *JTook.f. in Gen. "Plant,* iii. 43; frutex ramosus,rarrmlis gracilibas elongatis teretibus appresse sericeo-tomentosis, annotinis glabrescentibus, foliis alternis parvis petiolatis lanceolatis v. ovato-lanceolatis acutis integerrimis subtus prsecipue sericeo-tomentosis, floribus ? <? glomerulatis sessilibus secns ramos divaricatos panicnlre terminalis dispositis, bractea ovata cum bracteolis rotundatis concavis scariosis dorso plus minus lanatis subcequilongis perianthio (fl. *$*) brevioribus, floribus <? : perianthii 5-partiti segmentis oblongis dorso dense albido-lanatis, staminibus antheriferis 5 v. paucioribus cam rudimentis 2-4 subulatis intermediis, filamentis anguste lineari- subulatis, antheris 1-locularibus dorsifixis oblongo-ellipticis, ovarii rudimento ellipsoideo apice 2-fido, fl. ?: ovoideo-rotundatis perianthii segmentis angustis bracteolis brevioribus, ovario glabro ovoideo, stylo bifido lobis subulatis, ovulo solitario ab apice funiculi suspenso, cotyledonibus complanatis radicula latioribus.

HAB. New Mexico (Expedition from "Western Texas to El Paso), *C. Wright* (N"o. 589) ; Mexico, near Chihuahua, *Pringle* (No. 345).

***Folia* (in ram. florif.) ^—J poll, longa. *Paniculce* srepe 6 poll. Ion gee; flores 1 lin. longi.**

The late Dr. A. Gray, in a note to Sir J. Hooker, said *Tlmrber's* No. 840 was identical with the above, though inadvertently referred to *Ires in e difftisa,* H. B. K., by Dr. Torrey. Mr Pringlo's specimens are admirable, and enable us to figure the genus for the first time. I tind the stamens free down to the thickened fleshy lobed disc, from which they spring.—D. OLIVER.

Fig. 1. Male flowers **and** subtending bracts. 2. Perianth laid open of *S* flower. 3. Stamens and alternating rudiments. 4. Female flower and bract. 5. Perianth laid open. 9. Pistil. 7. Ovule and funicle 8. Embryo. *All enlarged.*



M.S.dd.etUth.

Ttosenia glandulosa, Thurib.

PLATE 2228.

BOSENIA GLANDULOSA, *Thunb.*

COMPOSITE. Subtribe BELHANIE-E.

H. glandulosa, *Thunb. Fl. Gap. {Ed. Schult.),* 692; frutex 3§-5-pedalis, ramulis foliiferis rigidis divaricatis, foliis oppositis parvis" in ramulis elongatis internodiis brevioribus lineari-oblongis v. oblanceolatis plus minus obtusis minute cano-tomentosis, costa subtus conspicue carinatis, deinde praecipue in margine et carina inferiore glandulosis, capitulis heterogamis multifloris campannlato-tnrbinatis terminalibns sessilibus, sqaamis plnriseriatis imbricatis marginibus apicem versus late scariosis interioribus oblongis inferae coriaceis, receptaculo paleis paucis elongatis setiformibus superne leviter dilatatis apice acuminatis floribus disci subffiquilongis instructo, pappo 1-seriato paleis inaequalibus angnstis integris v. laciniatis ovario multo breviore. **-DC- *Prodr.* vi. 280; *Harv. and Sond. Fl. Gap.* iii. 294.**

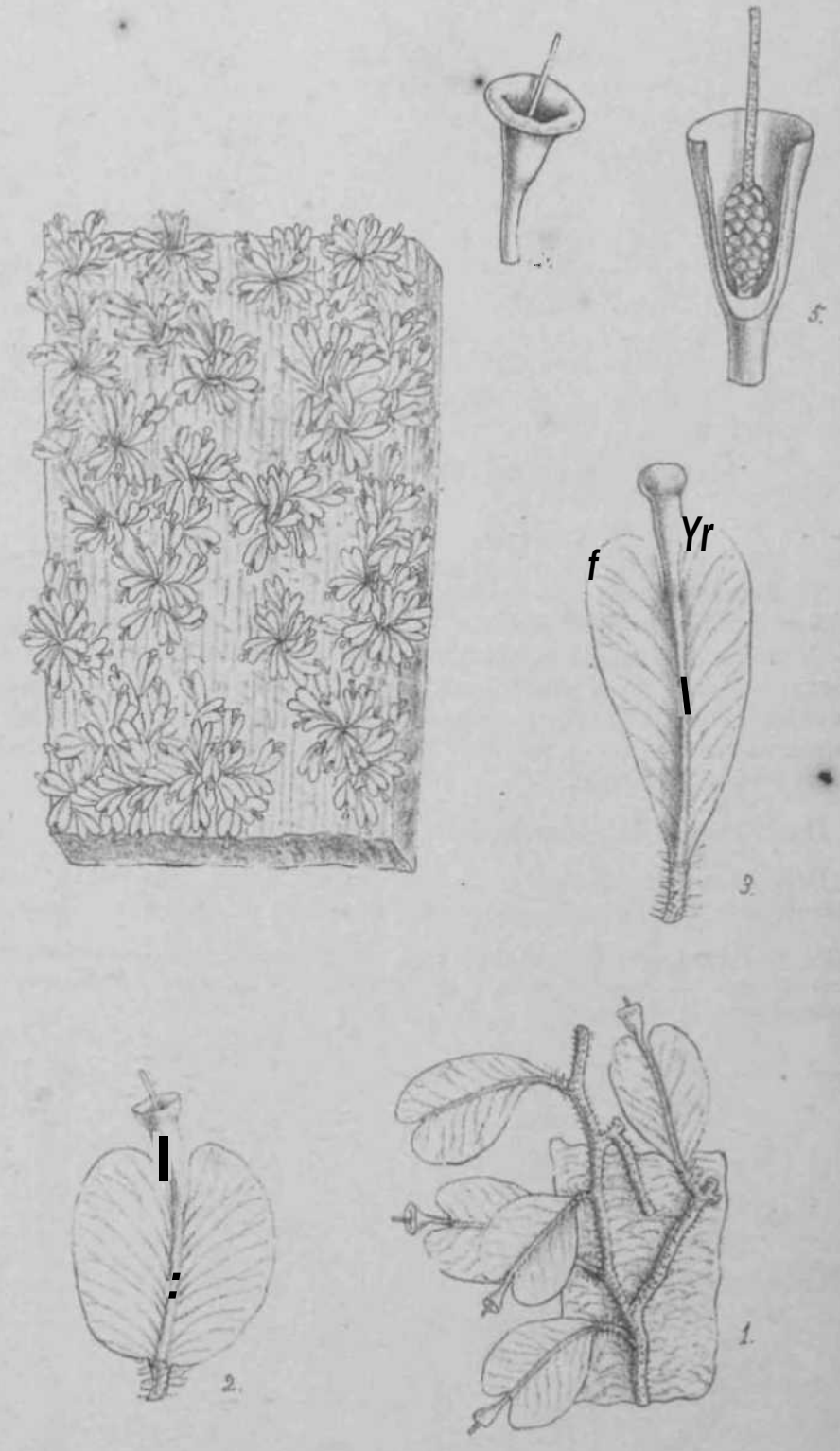
HAB. Cape Colony, *Thunberg;* between Beed Biver and Stink-Fontein (No. 1,390), and between Kleine Quakka Fontein and Dwaal Bivier (No. 1,456), *Burchell;* Vaal Biver, *Dr. Shaw* (No. 110).

Folia \-\ poll, longa. *Involucra h* poll, longa atque lata. *Atnherm* apice connectivo lanceolato, basi localis in processubus rigidiusculis prodact89.

The above description is taken wholly from Burchell's specimens, which were identified by Mr. N. E. Brown with Thunberg's type-specimens, kindly lent to him for comparison by Dr. Theodore Fries, from the Upsala Herbarium. There are, however, notwithstanding identity in all other particulars, singular differences in respect of the palese of the receptacle and pappus. In Thunberg's type the florets are sheathed by conduplicate scarious narrow squamae about twice as long as the ovary. In Burchell's plant the receptacle bears but a few (5 to 7) elongate setiform squamse, rather dilated above, and finely pointed at the apex, and about equal to the disk-florets in length. With regard to the pappus, some at least of the outer florets have, in addition to the short paleaceous pappus, a long seta, about as long as the ovary, which may originate either in the same series with tho pale© or inferior to it. Leasing, in his careful description, based upon

the identical types of Thunberg referred to here, describes the paleee of the receptacle as I find it, and of the pappus he says :—* Pappus disci: 2-serialis, paleis exterioribus multis, achcenio permulto brevioribus, linearibus, integris, subaequalibus, interioribus sctaceis, achoonio parum brevioribus, subsetaceis ; radii: idem ac series exterior disci.' *(8yn. Gen. Gomp.* 370). I have, of course, been unable to make a satisfactory examination of the Thunberg specimens, but it is clear that we must allow considerable variation in these characters. As Mr. Bentham remarks in his essay on ' The Classification, &c, of Composites' *(Joum. Linn. Soc.* xiii. 339), variations in the pappus ' are less in conformity with general differences than those of almost any other organ.' Of *Rosenia ttpinescens,* DC. (referred to *Nestlera, N. Bregeana,* by Harvey, *FL Gap.* iii. 296) I have not seen an authentic specimen, though we have specimens collected by Mr. Tyson (No. 232), and distributed under this name by Mr. Bolus—I do not doubt, correctly. It is a more slender plant than *R. glandulosa,* and bears finely-pointed spines. The receptacle is fimbrillate. De Candolle describes the paltao as lanceolaterlinear. The relation of the two species, which are not improbably congeneric, requires further examination, with access to Drege's specimen described, from Sonder's Herbarium, by Dr. Harvey.—D. OLIVEE.

Fig. 1. Leaf. 2. Vertical section of capitulum; one disk-floret retaining its corolla. 3. Palea of receptacle. 4. Ray-floret. 5. Disk-floret. 6. Anthers. 7. Style-branches. 8. Ovary and pappus. 9, 10, i1, 12. Fruits from Thunberg's type-specimen, tig. 9 showing the subtending palea. ***All enlarged.***



Trichomanes Sayeri, F. M. & B.

PLATE 2229.

TRICHOMANES SAYERI, *F. Muell and Baker.*

FILICES. **Suborder** HYMENOFHYLLEJL

T. Sayeri, *F. Muell. and Baker in Ann. Bot. v.* 195; rhizomate **filifbrmi late repente primum parce hispidulo, frondibus parvis £-£ poll. longis brevissime petiolatis pro genere firmulis obovato-cuneatis integris apice profunde bilobis. costa e basi ad apicem distincta, vcnulis lateralibus erecto-patentibus subflabellatis, indusio in sinu terminale solitario subsessile omnino exaerbo, tubo subc^lindrico, laoio orbicular! patnlo.**

HAB. Queensland, Trinity Bay, *Sayer* (Com. *Sir F. von Mueller).*

Resembles the Malayan *T. henzaianum,* Hook., in habit, but the sori in our plant are always solitary from the sinus.—J. G. BAKER.

Fig. 1. Portion of frond-bearing rhizome 2 and 3. Fronds detached, with solitary terminal sori. 4. Sorus, showing recurved margin of iudusium. *5.* Sporangia and exserted seta. *Enlarged,*

Matricaria zuurbergensis, Oliv.

PLATE 2230.

MATBJCARIA ZUURBERGENSIS, *Oliv.*

COMPOSITE. Tribe ANTHEMIDEJE.

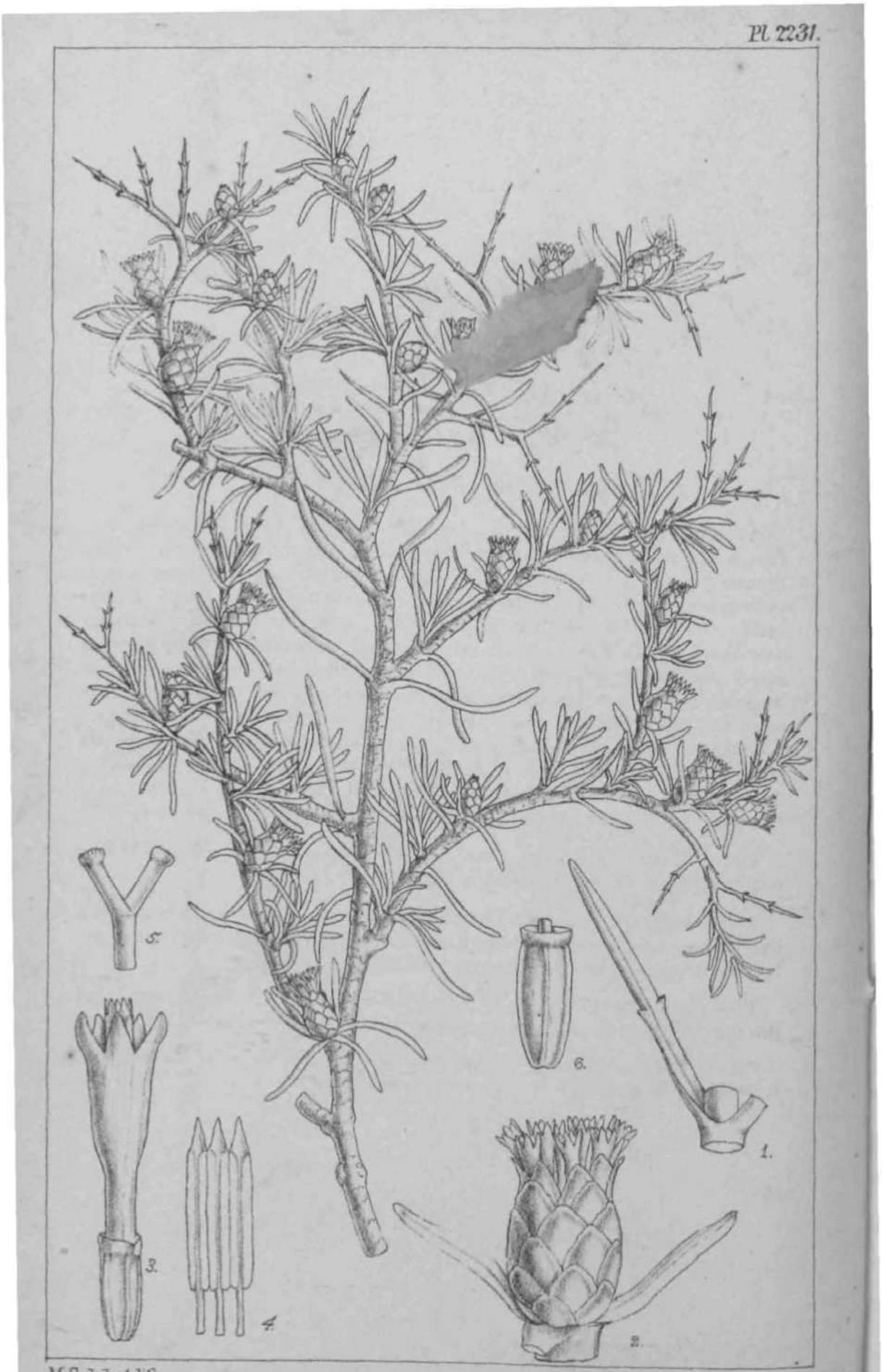
M. zuurbergensis, *Oliv. ($p. nov.)*; caulibus basi Hgnescentibus parce pilosulis glabratisve, foliis bipinnatitidis segment is oblongo-lanceolatis acutis in rachi decurrentibus parce hirtis pilosulisve, capitulis radiatis terminalibus solitariis v. in cymis laxis oligo- (2-3-) cepbalis dispositis pedunculatis, involucri squamis 2-seriatis marginibus scariosis ssepius purpurascentibus exterioribus ovatis, interioribus ellipticisv. obovatis, apice erosis, fl. radii albis ? c. 10-15, disci flavis breviter 4-dentatis dentibus obtueis tubo cor oil© leviter 2-alato, receptaculo ovoideo-conico glabro cavo, acheniis (immatnris) 3-4-angulatis facie interiore 2-3-costatis obliquis apice calvis.

HAB. South Africa, Griqualand East, in woods of the Zuurberg, *Wood* (No. 3,046), *Tyson* (No. 2,768).

***Gaules* 1-2 ped., foliiferi laeves. *Folia* 2-3 poll, longa, petiolata v. t-essilia, segmentis basilaribns stipnliformibus. *Capitula* l^-l^ poll, diam., disco ^-i poll. diam. *Antherce* basi inappendiculatas. *Stigmata* truncata.**

A plant with leaves like those of Feverfew, *Chrysanthemum Parthenium*, but with the segments very acute; altogether of a very European aspect, and quite unlike any described *Alatricarla* from South Africa.— D. OLIVER.

Fig. 1. Vertical section through involucre Jind hollow receptacle. 2. Ray-florfit. 3. Ovnry and style of same. 4. Dibk-iloret. *5.* Anthers. 6. Style-branches. 7. Aehenu. *All cnlaryed.*



Asaemia axillans, Harv.

PLATE 2231.

AS^JMIA AXIIiliARIS, *Harv.*

COMPOSITE. Tribe ANTHEMIDEJE.

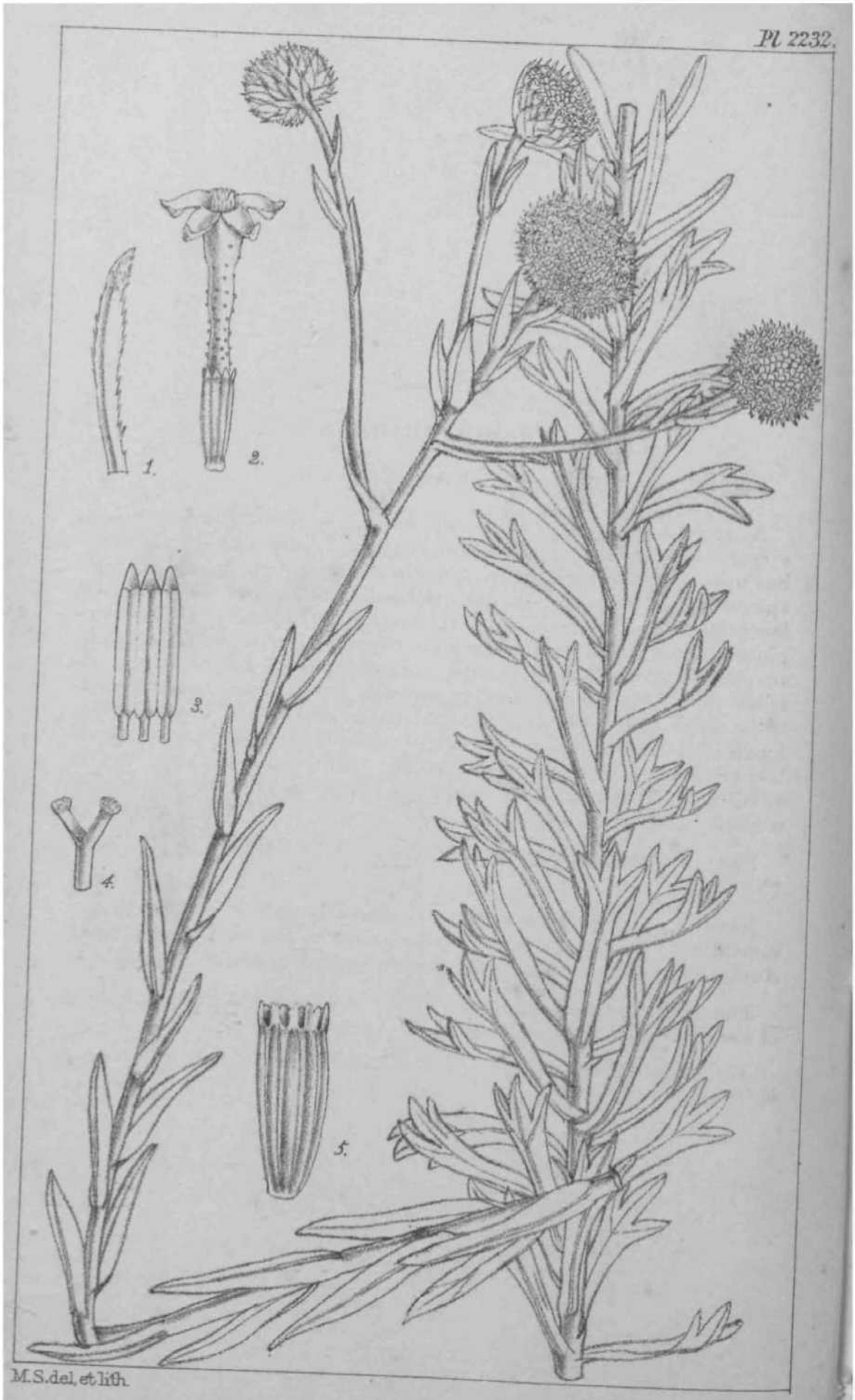
A. axillaris, *Harv. Flora Capmsis,* iii. 187 *(sub Stilpnopliytò)*; **fruticulus ramosissinms spinescens glaber, foliis oppositis linearibus carnosulis leviter complanatis v. sabteretibas supra canaliculatia obtusiascnlis integris v. nonnunquam utrinque medium versus 1-2-den. tatis basi connatis capitulis parvis inter fasciculas foliorum laterales sessilibus c. 25-floris, involncri urceolati squamis imbricatis arete appressis 3-5-seriatis, exterioribus et intermediis ovatis marginibus augusto scariosis see pi as obtusis interioribus oblongis apice interdum acutatis, receptaculo piano nudo, corolla (interdum insequaliter) 5-dentata, dentibus obi on go- v. ovato-lanceolatis, achaeniis calvis obliquis subtrigonis glabris v. basi paucisetulosis apice truncatis, 4-5-costatis costis distantibus. Stilpnophytum axillare, *Less. Syn.* *Comp.* 264; Tan ace turn axillare, *Tkunb. Fl. Cap. (Ed. Schultes)* 642.

HAB. Cape, *Thunberg*; near Graaff Reinet, *Bolus* (No. 2,008) ; near sea, Cow River, *Shaw* (No. 52).

***Folia* longiora ^-1 poll, longa, ^ lin. lata. *Capitula* florifera 4-6 Hn. longa. *AntheroB* basi inappeiidiculatae, apice connectivo oblongo-lanoeolato productse. *Styli* rami truncati.**

This plant has the habit of *Nestlera humilis,* but is spinescent, and the florets, besides being heterogamous, are very different.—D. .OLIVER.

Fig. I. Dentate Ic/if and connate base of pair. 2. Capitulum. *3.* Floret. 4. Am hers. 5. Style-branches. G. Acliene. *All cuUtrycd.*



Aihanasia tridens, Oliv.

TLATK 2232.

ATHABASIA TRIDENS, *Oliv.*

COMPOSITE. Tribe ANTHEM ID *EM.*

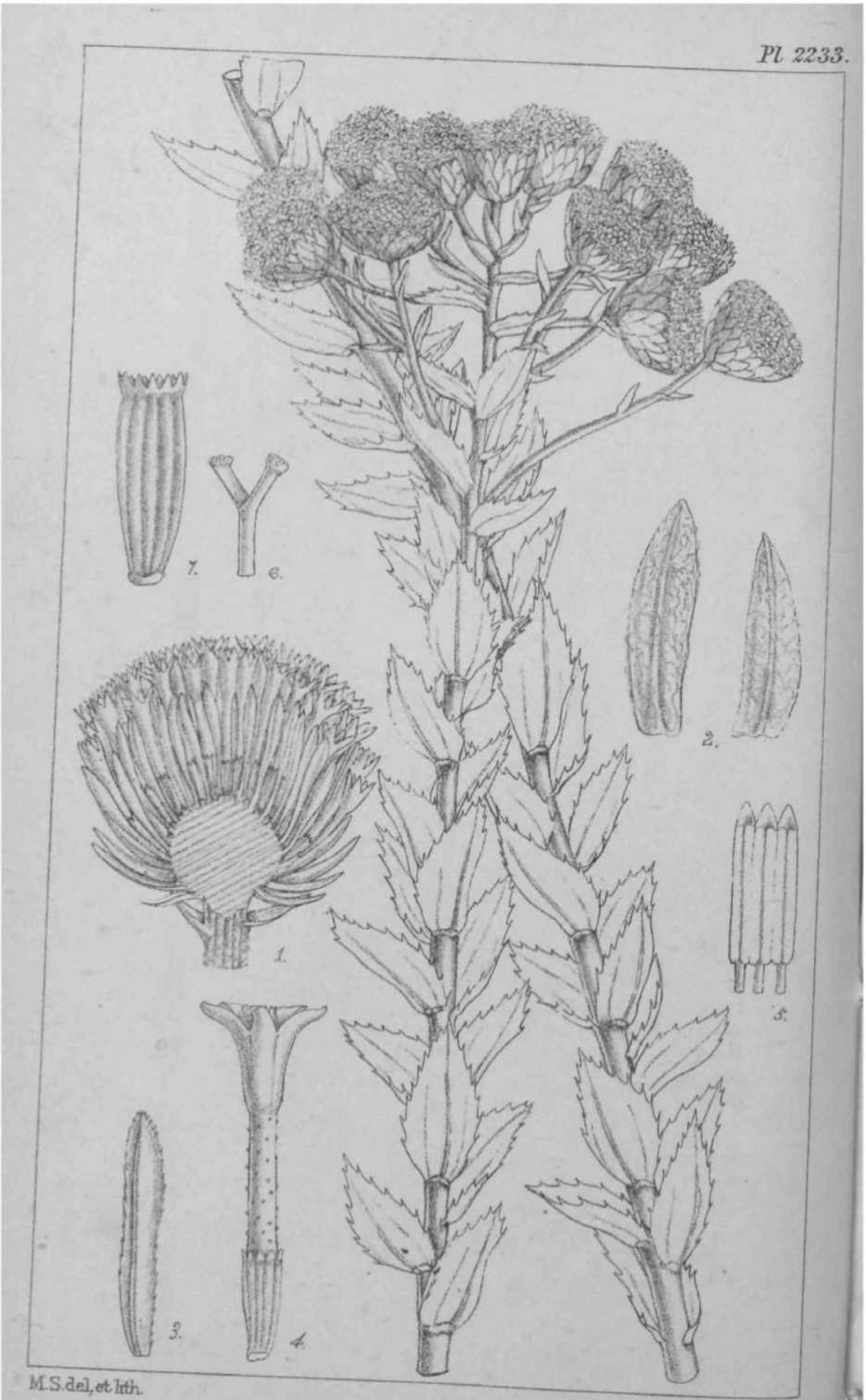
A. **tridens,** *Oh'v. (up. nov.)* ; albido-lanata, ramis floriferis erectis virgatis simplicibus fere ad inflorescentiara foliiferis, foliis auperiori-bus minoribus indivisia lineari-lanceolatis inferioribus lineari-oblongis apicera versus cuneatim dilatatis triiobatis marginibus recurvis lobis lanceolatis apiuulatis, capitnlis munitions hemisphaericis v. depresso-globosis in cymis terminalibus laxis oligo- (1-5-) cephalis dispositis, involucri squamis 3-5-seriatis plus minus appressis exterioribus mino-ribns lineari-lanceolatis tenuiter coriaceis dorso dense Ian a to torn en-tosis, paleis receptaculi lineari-subulatis acuminatis ovario dnplo longioribus superne leviter serrnlatis, corollee tubulosae apicera versus leviter dilatattB lobis recurvis flavidis deltoideo-lanceolatis, ovario valide 8-10-costato costis in dentibus pappi excurrentibus, dentibus minutis interdum bifidis.

HAB. Natal; hills near Blinkwater, 3,000-4,000 feet, *J. M. Wood* (No. 4,315).

Rami floriferi 1^-pedales teretes albido-tomentosi. *Folia* lanato-tomentosa, inferiora 3-fida 1-1^ poll, longa. *Gapitnla* §-J poll. di»m. *Anth&rce* apice connectivo membranaceo lanceolato obtuso terminatsa.

The florets are very numerous for an *Athanasia,* as large as those ot the macrocephalous *Santolince.*—D. OLIVER.

Fig. 1. P-tlea of receptacle. 2. Floret. 3. Anthers. 4. Stylo-branches. 5. Ovary. *All enlarged.*



M.S. del, et lith.

Athanasia leucoclada.Harv

ATHANASIA LEUCOCLADA, J/arv.

COMPOSITE. Tribe ANTHEMIDE^J.

A. leucoclada, *Harv. Flora Gapensis*, iii. 191; ramis floriferis virgatis teretibus albido-tomentosis ad apicem foliiferis, foliis sessilibus amplexicaulibus ovato- v. oblongo-lanceolatis acutis serratis coriaceis glabria utrinque melanostictis, capitulis multifloris hernisphoericis pedunculatis ÌD cymis 10-15-cephalis terminal]bus dispositis, involucri glabri v. parce lanati squamis imbricatis pluriseriatis lineari-lanceolatia obtusiusculis acutisve marginibus superne scariosis obsolete eroais, paleis receptaculi floribus fere eequilongis linearibns subacutis coriaceis lateribus reflexis, ovario valide (8-) 10-costato costis in dentibua pappi minatis excurreutibus. Hymenolepis ? leucoclada, *DG. Prodr.* vi. 86.

HAB. South Africa, Griqua East, in the Zuurbergen, 5,000 feet, and in the Malowe Mountains, near Clydesdale, 4,000 feet, *W. Tyson* (Nos. 1,185, 2,057).

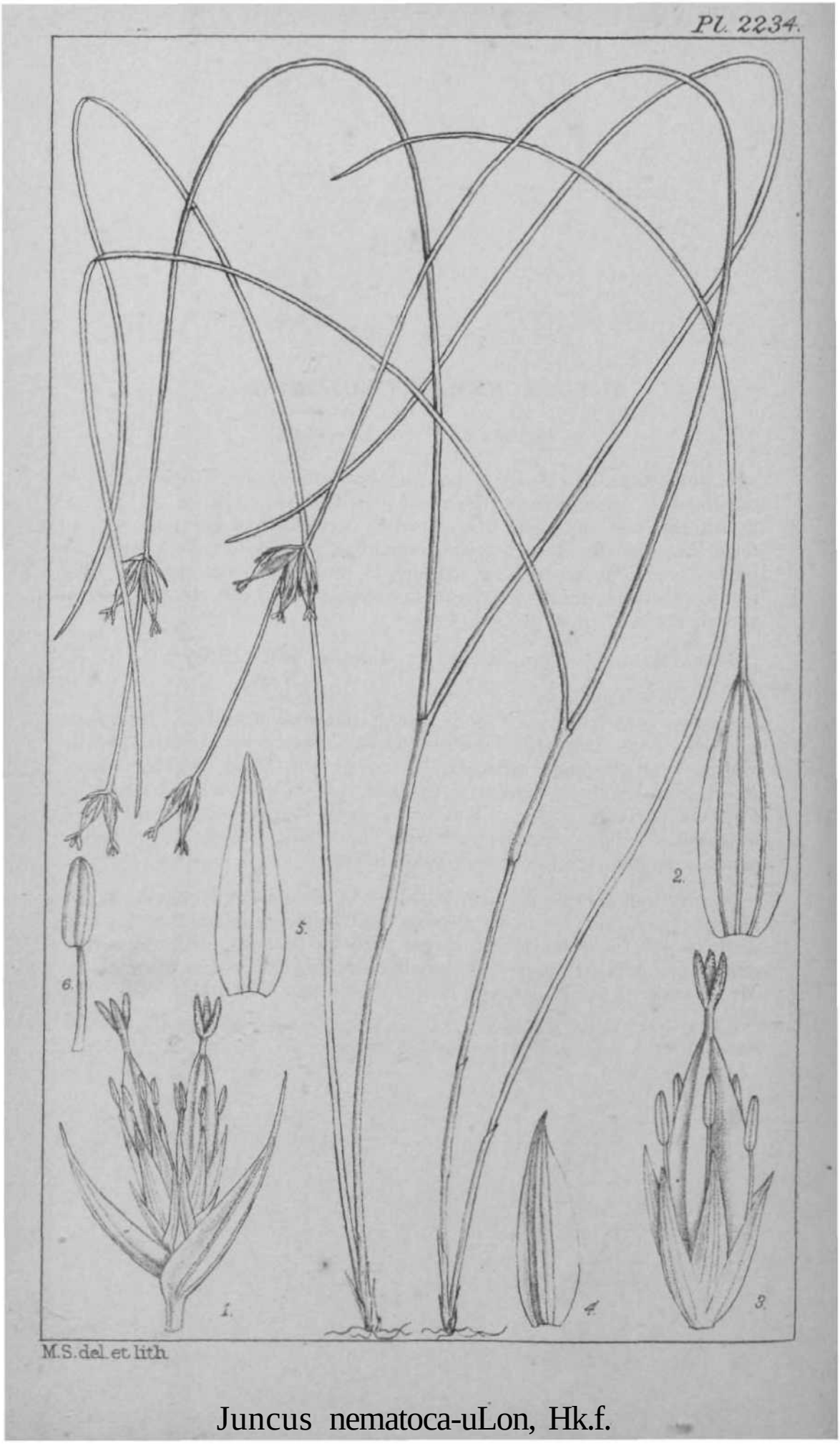
***Bami* floriferi H-2-pedales. *Folia* internodia obtegentia, caulina inferiora ^-1-1^ poll, longa. *Gapitula* ^-i poll. diam.**

The type of Drege, collected between the Omsamwubo and Oinsamcaba, I have not seen; but Mr, Bolus's determination of Mr. Tyson's specimens, which correspond accurately * with De Candolle's description, is doubtless correct.

The plant was also unknown to Harvey, who first transferred the species to *Athanasia.* The achenes and their crowning teeth are similar to those of *A. tridens*, figured on the preceding plate. Mr. J. M. Wood sends from Natal a specimen so similar to Mr. Tyson's plant, except in the glabrescent stem and the slightly larger leaves and capitula, that I can only regard it as a form of the same species (-4. *leucoclada* var. *glabrescens).*

Fig. 1. Vertical section of capitulum and solid receptacle. 2. Involucral bracts. 3. Palea of receptacle. 4. Floret. 5. Anthers. 6. Style-branches. 7. Ovary. *All enlarged.*

*** The receptacle, however, is solid, not hollow as in *Hymrnolepis camrttvki**, to which De Canrfollc doubtfully reform! it.**



Juncus nematoca-uLon, Hk.f.

PLATO 2234.

JUNCUS NEMATOCAULON, *Hook.f.*

JUNCACEÆ. Tribe EUJUNCEJS.

J. nematocaulon, *Hook, f. (sp. nov.)*; canlibns csespitosis foliisque capillaribus canaliculatis flexuosis, floiibus solitariis v. in cymas 2-3-floras remotas dispositis, bracteis exterioribns brevibus v. inferioribus capillaribus, floribus sessilibus parvis, sepalis petalisque pallide viridibus lanceoiatis acuminatis, antheris longe exsertis filamen to capilJaceo ranlfco brevioribus, capsula longe exserta prismatica acuminata. *FL Brit. Ind.* vi 400.

HAB. Assam; Naga Hills; on Jalepho, alt. 9,900 feet. *C B.* ***Clarke.***

Caules (annuiP) 1-1 \ poll, longi, superne unifoliati, interdum uniflori, flore terminali bractea capillari instructo. *Folia* pauca, vaginis brevibus membranaceis. *Flares* \ poll, longi, bracteis requilongis membranaceis involuti; sepala et petala consimilia, uninervia. *Capgula* perianthio duplo longior, £ poll, longa, 1-locularis, membranacea, pallida. *Sevtiina* utriiique in caudas elongatas producta, cauda una filiformi, altera fequilonga inflata.

A very remarkable species, allied to *J. khasiensis*, Buchen., in its slender habit, but far more slender, and differing in the few flowers, acute sepals, capsules much longer than the perianth, and seeds with one of the tails inflated. The seeds described are from a drawing by Mr. Clarke ; I fail to find any in this specimen.—J. D. H.

Fig. 1. Inflorescence detached. 2. Outer aristate bract. 3. Flower. 4. Outer carinate; and 5, inner perianth-segment. 6. Stamen. ***All enlarged.***

Juncus sikkimensis, Hk f.

PLATE 223').

JUNCUS SIKKIMENSIS, *Hwik. f.*

JUNCACKA;. Tribe ECJJUXCEA.

J. **sikkimensis,** *Hook. JiL (sp. nov.)* ; rhizomafre repente, vaginis ad basin caulis rigidis, foliis solitariis paucisve caulem cequantibus teretibus v. subcornpressis, cyma c capitulis 2 lateralibus sessilibus 4-6-floris, bracteis inferioribus foliaceis cyrnam superantibus, sepal is glumaceis brunneis lanceolatis acumhiatis, petalis linearUoblongis obtusis, antberis inclusis filamento multo longioribus, capsula inclusa, seminibus utrinque in caudam brevem productis. *Fl. Brit. Ltd.* vi. 399.

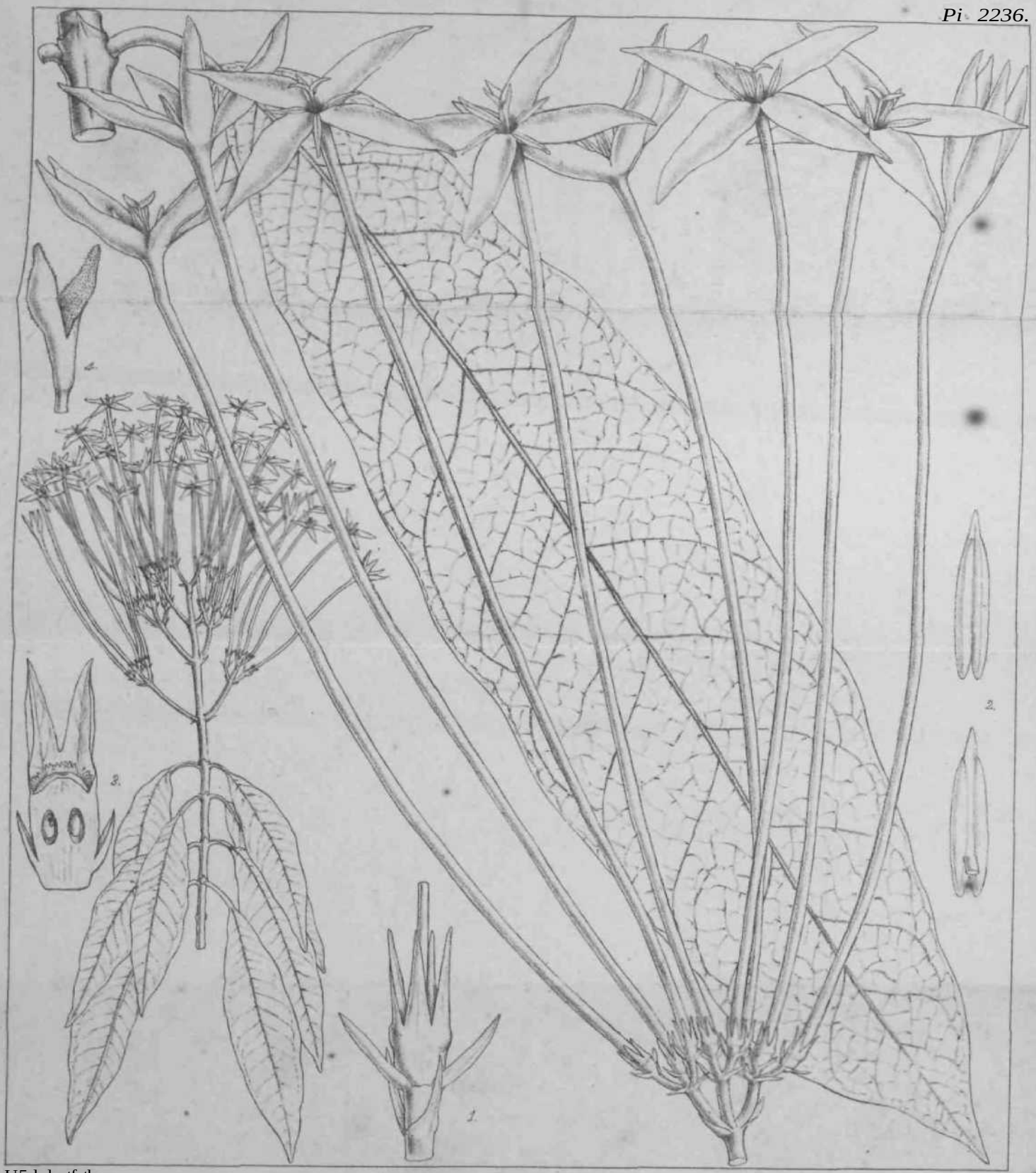
HAB. Sikkim Himalaya; Lachen Valley, alfc. 12,000-14,000 feet, ***J. D. H.***

Rhizoma crassitie pennre corvinse v. passerinoe; cauies spitbamei, canalicalati foliaque solidi; vaginae ^-l-polli«»res. *Flares* ^-^ poll, longi, sessiles, bracteis aequilongis inembranaceis involuti; sepala tonuiter acuminata, nitida; petala apice membranacea; antherae lineares, demum tortee ; ovarium parvum, stylo gracili elongato exserto, Ptigmatibus elongatis. *Capsula* sepalis vix longior, obovoidea, acuta, breviter rostrata, castanea, nitida, 3-septata. *fSeniina* $\frac{1}{1\cdot 2}$ poll, loiiga, caudis albis.

Var. *monocephala*; parvula, caule gracillimo, cyma monocepliala, bracteis inferioribus filiformibus ^-J poll, longis, sepalis \ poll, longis. *Ft. Brit. hid.* I.e., Sikkim, alt. 12,000 feet.

Allied to /. *hrinalensis*, Kl. and Garcke (wbich is very near the European /. *castaneus),* differing in the solid stems and leaves, sessile flowers, finely acuminate sepals, anthers longer than the filaments, much shorter capsule, and far smaller seeds with short stout tails. The larger forms, from 12,000 feet, a span high and more, have fewer leaves, stouter stems, and dark brown basal sheaths, and spathaceous outer bracts ; in more slender forms, from 13,000-15,000 feet, the basal sheaths are much more membranous, the lower bracts less spathaceous and flowers fewer. The var. *monocephala* looks like a different species, owing to the smaller size of all its parts, but I find no difference in the structure of its flowers.—J. D. H.

Fig. 1. Flower. 2. Same laid open. 3. Apex of perianth-segment. 4. Flower of Var, *monncpphaltt. ft.* Pistil of same. *All enlarynl.*



U5del etfcth

Ixora siphonantha. OYiv.

PLATE 2236.

IXORA SIPHOWANTHA, *Oliv.*

RUBIACE^E. Tribe IXOREJJ.

I. siphonantha, *Oliv. (ftp. nov.)*; glaberrima, foliis petiolatis elongato-ovalibus acutis coriaceis, stipulis connatis cuspidatis, panicula terminali dependente pedanculata trichotoma, bractei* lanceolatc-subulatis acutis, pedicellis ultimis brevissimis vel floribus sessilibns, calycis tubo campanulato limbo 4-partito breviore, segmentis limbi erectis lanceolatis acutis rigidiusculis, corollse tubo longissimo gracili, limbi lobis lineari-lanceolatis acutis; antheris fauce insertis linearibus apice apiculafcis lobis corollaB c. 4-plo brevioribus, filament is brevissimis, stigmatis lobis linearibus divergentibus.

HAB. Northern ^Madagascar, *Baron* (No. 6,611.)

Folia (in ram. florif.) 7-10 poll, longa, l^-2i poll. lata. *Panicula* cum pedunculo c. 1^-2 pedalis. *Flores* flavi, 8-10 poll, longi. *Calyx* lobis 2-2^ lin. longis. *Ovula* solitaria, peltatim inserta.

A noble addition to this large genus. I do not know any species of *Ixora* with flowers so large.—D. OLIVER.

Figr. 1. Calyx and **style-base.** 2. Anther, front and back. 3. Longitudinal section **of o\ary.** ***All enlarged.***

Polycardia Baroiuana, Oliv.

POLYCARDIA BARONIANA, *Oliv.*

CELASTKINEJS. Tribe CELASTBEJS.

P. **baroniana,** *Oliv. (sp. nov.)* ; glaberrima, rainulis gracilibus, foliis petiolatis coriaceis ovali-oblongis obtusiusculis ssepe breviter acuminatis basi in petiolam angustatis venis primariis obscnris v. subtus ^*x prominulis, uno latere prope v. supra medium ad costam excavatis *vt* hie flores pedicellatos 3-8-fasciculatos gerentibus, calycis 5-fidi lobis ovato-deltoideis, petal is calyce 2-3-plo longioribus ovatis v. ovato-lanceolatis obtusis persistentibus, ovarii loculis 2-3-ovulatis, capsula elliptica loculicide 5-valve, semiuibas angustis minute pubescentibus basi arillo oblique laciniato instructis.

HAB. North Madagascar, *Baron* (No. 6,243).

Folia 2£-4 poll, longa, *h-1%* poll, lata; petiolus J-^ poll, longus. *Pedicelli* ± poll, longi. *Stamina* in sinubus disci inserta, petalis breviora; filamenta subulata; anthere ovato-cordataB, obtusse, scabridoPAttBB, antice sulcatsB, dorso convexsB. *Ovarium* superum, ovoideum, disco circumdatum; stylus lasvis crassus; stigmate 3-5-lobulato. *Capsula* valvis tenuiter crustaceis ovalibus utrinque acutatis, 10-12 lin. longis.

This plant agrees with P. *Hildebrandtii,* Baill. (P. *laterally* Hoffm.), in the inflorescence originating from the base of a lateral sinus of the leaf, but differs in the much longer, more oblong, more obtuse pale leaves, and the floral sinus, instead of being near the base of the leaf, is at or above the middle : in this respect our plant is nearer Hildebrandt's No. 3,460, if not identical with it.—D. OLIVER.

Fig. 1. Flower. 2. Flower, the sepals and petals removed. 3. Stamen, back and front view. 4. Vertical section of ovary. 5. Transverse section of same. 6. Decapsule. 7. Seed, with arillus. *Except Jiff.* 6, *enlarged.*

Nicodemia Baroniana, Oliv.

PLATE 2238.

NICODEMIA BARONIANA, *Oliv.*

LOUANIACEJE. Subtribe BUDDLEIEJE.

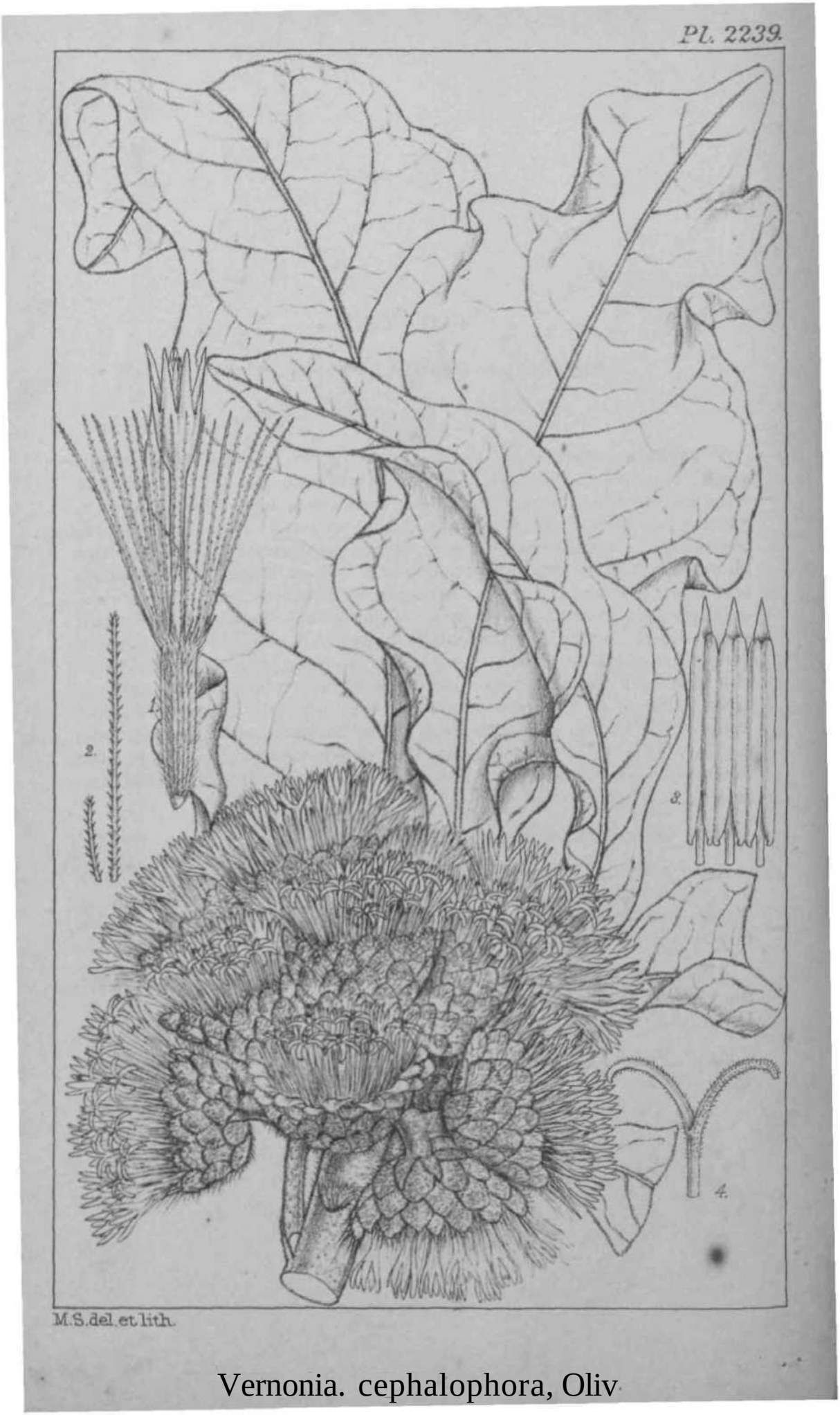
N. **baroniana,** *Oliv. (*p. nov.)* ; ramulis hornotinis cano-toraentellis, foliis petiolatis lanceolatis v. ovato-lanceolatis acuminatis apice acutiusculis integris vel utrinque 1-3-repando-dentatis supra parce stellato-tomentellis deinde glabratis snbtus cum petiolo cano*tomentosis, paniculis v. racemis compositis raultifloris terminalibus, pedunculis pedicellisque floriferis dense tomentosis, bracteis anguste Jinearibus, calycis tomentosi campanulati 4-fidi Jobis ovato-lanceolatis acutis, corolliB tubo calyce 2-3-plo longiore parce tomentello, limbo 4-fido, lobis ovato-rotundatis, antheris paullo supra medium tubi insertis Rubsessilibus oblongis, ovario 4-loculari globoso stylo ceqnilongo, stigmate leviter dilatato, fructibus globosis lsevibus basi calyce persistente stipatis, seminibus oo ellipsoideis lougitudinaliter sulcatis et transverse rugulosis.

HAB. Northern Madagascar, *Baron* (No. 6,277, 6,607).

JtamuM graciles crassitie pennae corvinae. *Folia* 2i-4 poll, longa; f-1^ poll, lata; petiolus ^-§ poll, longus. *Flares* J poll, longi; podunculi pedicellique fructiferi divaricati sa3pe glabrescentes. *Fructus i* poll. diam.

The stigma falls considerably short of the stamens in the flower examined. It is not improbable that the flowers may prove dimorphic, sind that a long-styled form occurs. I leave the genus in *Nicodemia* J»r the present, notwithstanding, as first observed by Miss Smith, the ovary and fruit are quadrilocular, with very thin dissepiments.—D. OLIVEK.

Fig. 1. Calyx and subtending bract. 2. Corolln, laid open, and pistil 3. Anther, **hack and front view. 4. Transverse scciiou of ovary. 5. Scei. 6. Stellate hair of indumentum.** ***All enlarged.***



Vernonia. cephalophora, Oliv

PLATE 2239.

VEBNONIA CEPHALOPHOBA, *Oliv.*

COMPOSITE. Tribe VEKNOKIACE-E.

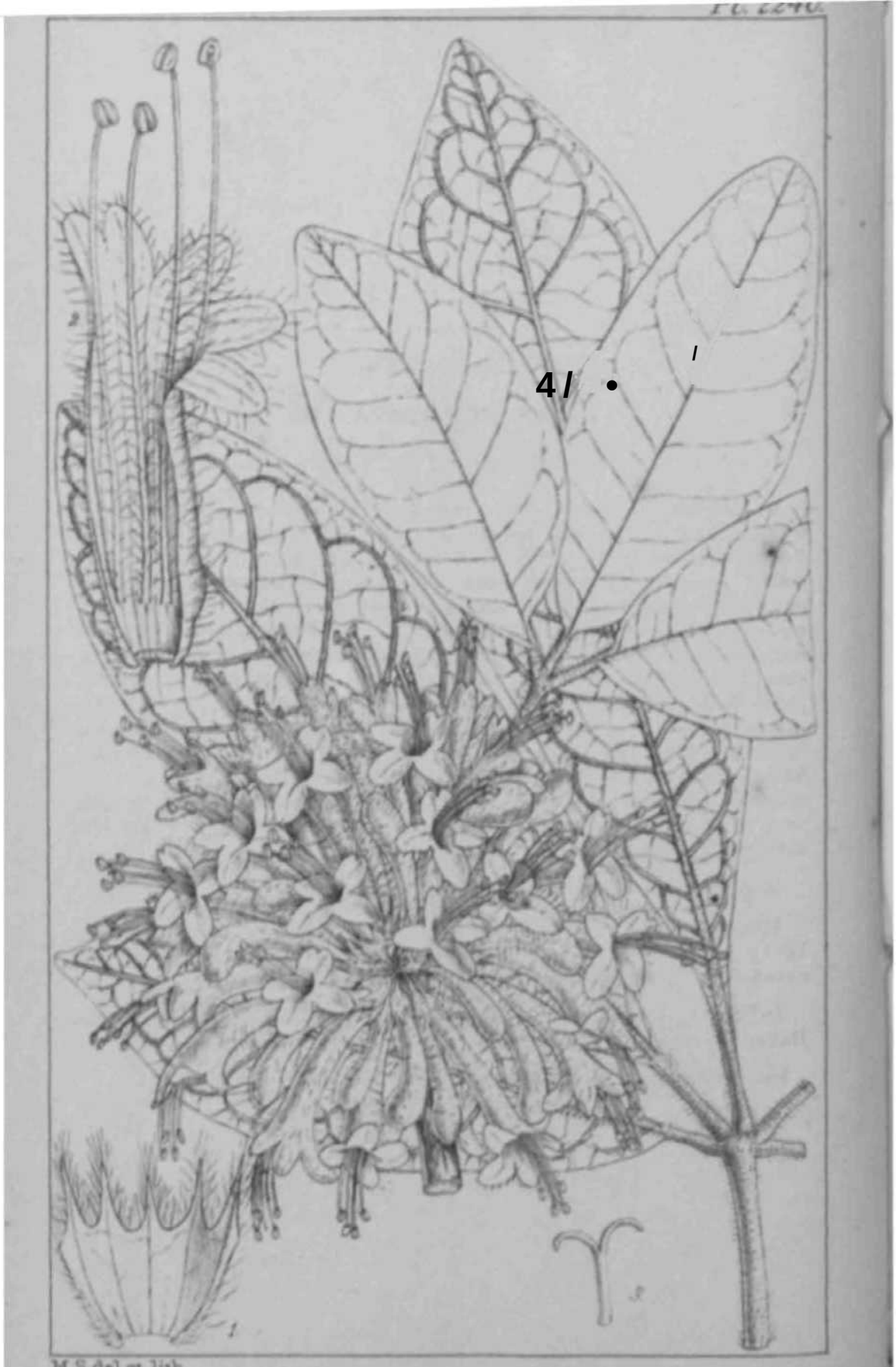
V. cephalophora, *Oliv. (sp. nou.)*; ramis floriferis teretibas valid is arete torn entasis, foliis petiolatis coriaceis oblongo- v. oblanceoiato-ellipticis obtupis v. acutiusculis basi in petiolum angustatis integris v. obscure sinuatis supra scaberulis sub lente glandnlosis subtus fulvo-tomentosis, capitulis multifloris turbinato-campanulatis dense molliter albido-tonientosis breviter peduncnlatis v. sessilibus in inflorescentia terminali capitata congestis, involucri squamis interioribus lineari-oblongis acutiusculis dorso apice albido-lanatis tloribus brevioribus, t'xterioribus brevioribus lanceolatis *v.* ovato-lanceolatis dorso apicem versus dense piloso-lanatis, receptacnlo areolato, corollic tubo gracili tlongato ore dilatato 5-fido dentibus subulato-lanceolatis, antheris Q'pice connectivo subulato productis basi sagittatis inappendiculat.is lobis obtusiuscule productis plus minus connatis, acheniis angulatis **c** 10-Bulcatis pilis subappressis albidis setuloso-sericeis, pnppi setis cxteiioribus brevibus interioribus achenio lougioribus argyreis barbellatis subtarde deciduis.

HAB. Northern Madagascar, *Baron* (No. 6,264).

Arbor verosimiliter, ramulis floriferis crassitie digiti minoris. *Folia* ᵹ-7 poll, longa,]i-3 poll, lata; petiolus ^f-1^ poll, longus. *lvjlores-cr?itia* hemispheerica v. subglobosa terminalis, 3^-4 poll. diam. *Gapitula* 1-1^ poll. diam.

Allied to *V. mecistophylla,* Baker, in *Journ. Linn. Soc.* xxv. 322, but Mu capitula are very different in their densely pilose involucres.—U. OLIVER.

Fig. 1. Floret. 2. Seta? of piippus. 3. Anthers. 4. Stylc-branchos. *All en-targed.*



Vitex con|esLa. Oliv

I'I.MI. 22 40.

VITEX CONOESTA, 0*

YKMMUCK*. Tri> VITICEÆ.

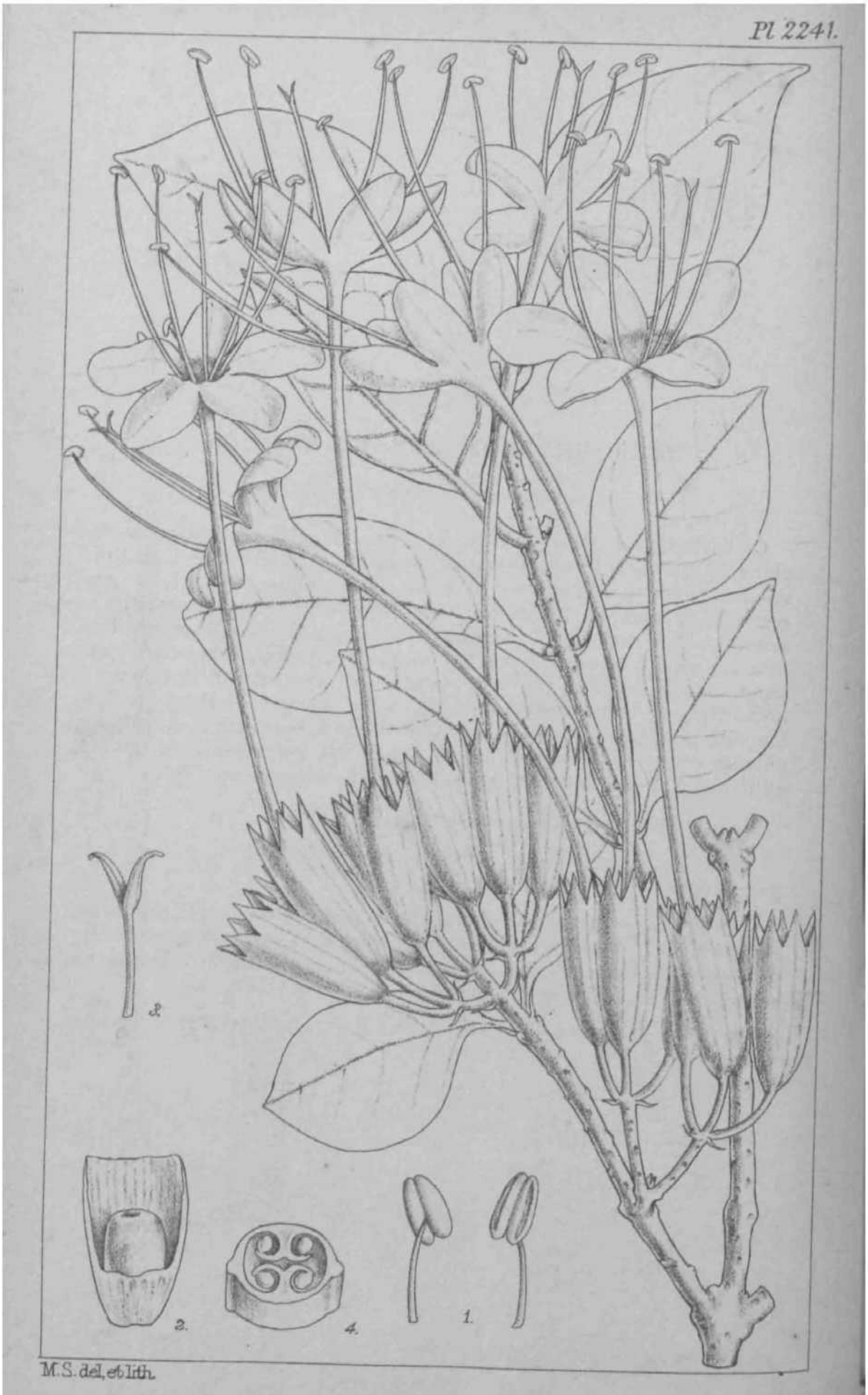
V. congeita, < (sp. nov.); ratuuli* ultimia attoan pilosis R rllj i-n is, folius 3–5 ... iolis setosis, foliolis petiolulatis (in fol. ' ^ l l atis, iiiU'nluiu I tiam MI lSrfibuiltti*, fbli olis exterioribus min-oribus tu bnmtar r. brariaauM patiotolati) oblancoolato-oblongia oblongisve obtusis v. tbtOM ftputmtU, »ut>r* spknunaimo et rabttti ta wat* •>••<-r»j„ vi nis pri uinii. utrinque 8–11 (1 h aablni prutatnontil bus facie inferiore scaberu in. fl«iil>ui* iocarri* rerragitiatMwtoaia in ojrnii •MMiihbiii atillitnbuii dtnaa oo^fMtia, : pedicellis brevi uitnta, ailj cis parvi 5 •t'uli iatoao-bi«()uli lobia anbalatia t«U» aqaaAtibtts, oorolla 1<*l> ce 6–8-plo longioris »b« itirurvn cvliriilnift'O tirv 1 leviter dilatato, limbo bilutijitto, lttbio laperiure broviter bifldo tobii "• ato-rot .miutio, lut»ia» n inferiore 3-fido lobis DViitiH ttutniHjutilibuit, fitiiMifiitix infcnin |Mtrco setulosis brevi ur iv se'tis, innln-ru biupoorvpirormt'Oordilbrmtbiui sinu prof mda upicn rotutiilutiM, #i\\n ^l«bn>, ftli^nnit. billtlu l obis subulatis divergentibus.

Hi B. North ,oni MudHgimcar, Baron (No. 6,676).

... ongo, 1½–1¾ JHII), la to, petiolu lo | – l poll, loogo. *Ovrvtta* \\ |K»I1. l> ngo extus setis (orroginoia juit. ntibus ob ut.

I" llonil Mmcturo p«*rhn|m moitt m<nrlr u llied to *V. triehantha*% Baker, a Uftt],, olate species of MiMlupMCftr.- I' . (I tTKB.

Fig. 1. GUjri UiJ <.l-0. 2. CvrulU IniJ .-|H.H, 3. SliMnm. *All enlarged.*



Clerodendron Baraniaiumi Oliv.

PLATE 2241.

CLERODENDRON BARONIANUM, *Oliv.*

VERBENACEJI. Tribe VITICE2E.

C. barODianum, *Oliv. (sp. nov.);* ramnlis giabris cortice albido obductis, foliis ellipticis breviter obtuse apicalatis coriaccis pallidis subnitentibus petiolatis, venis primariis ntrinque 5-6 snbtus prominulis, floribus in cymis brevibus 3-Boris breviter pedunculatis v. sessilibus axillaribus v. nmbellatim congestis quasi-terminalibus, bractcis niinutis lineari-aubulatis, pedicellis -^-pollicaribus calyce campanulato-tubuloso brevioribus, calycis coriacei rigidi dentibus 5 deltoideo-lanceolatis acutis, corollos tubo elongato calyce 4-5-plo longiore gracili, limbo profunde 5-tido lobis subcequalibus ellipticis v. oblongo-ellipticis obtusis, filarnentis gracili bus longe exsertis, antheris ellipticis, stylo elongato, stigmate bitido lobis anguste subulatis.

HAH. Northern Madagascar, 2?aro?^(No. 6,616).

***Folia* 1^-2^ poll, longa; petioln3 c. £ poll, longus. *Calyx* 1-1J poll, longns. *Corolla* c. 4 poll, longa.**

A fine species allied to *C. macrocalycinum*, Baker, and somewhat resembling 0. *p>'tuni<rides*, Baker, in foliage and calyx, but with very different corolla. We were previously indebted to Mr. Baron for several peculiar endemic species of this genus.—D. OLIVER.

Fig. I. Stamen, back and front view. 2. Base of calyx-tube and ovary. 3. Stigma. 4. Transverse section of ovary. *AU CHforged.*

Clerodendron eucalyciruim, Oliv,

PUTR 2242.

CLERODENDRON EUCALYCINUM, *Oliv.*

VERBENACE*. Tribe VIUCEJK.

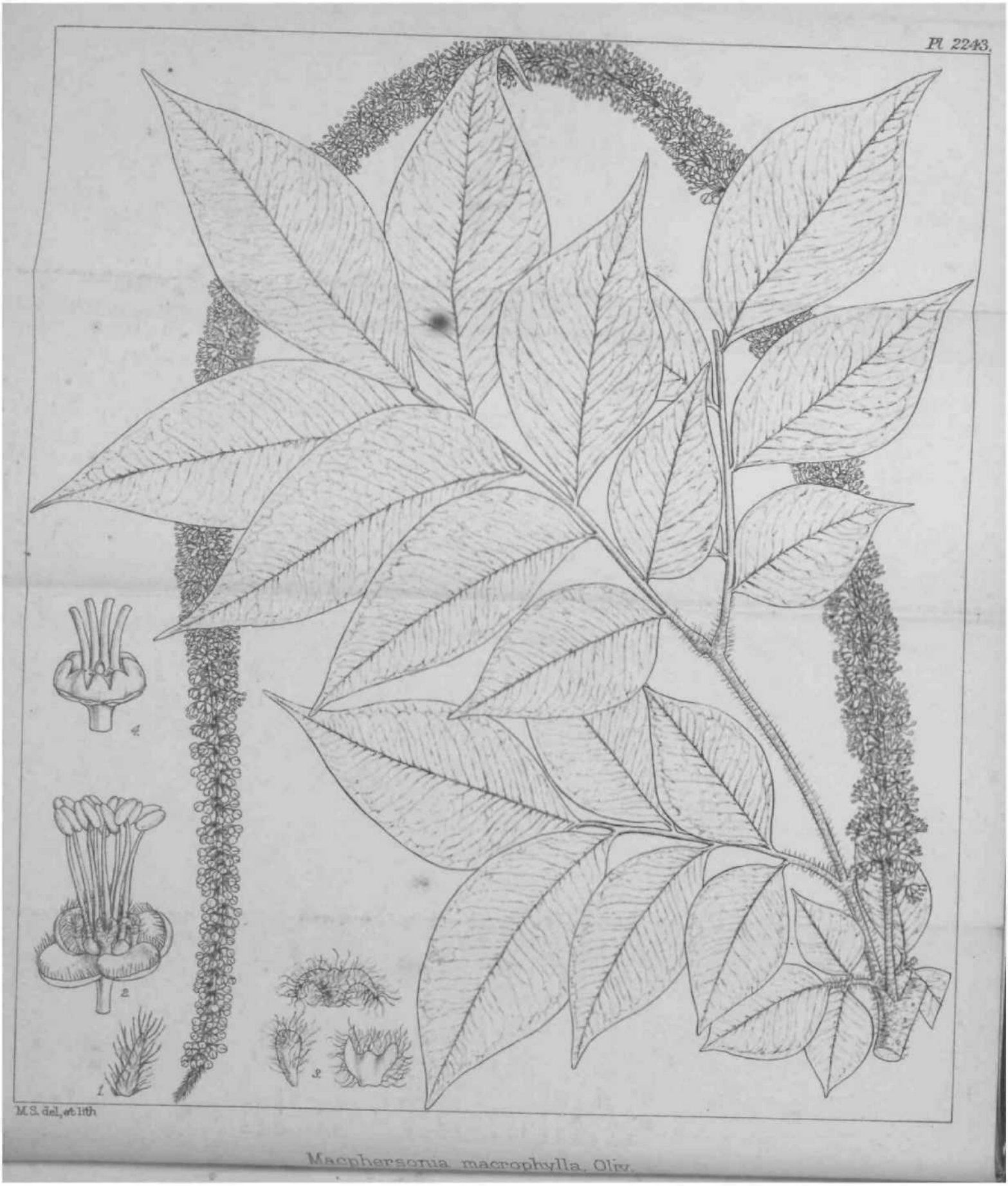
C. **eucalycinum,** *OUv.* (*p. *nov.)* ; glabrnm, foliifl obovato-oblongm obovatisve breviter obtuse apiculatis tenuiter coriaccia petiolatis vonis primarii.s ntrinque (5-8 subtus prominulis, Horibus in nymis paucifloriH breviter pedunuulatis v. snbsosHilibas ad apices ramorum laxo fascicalatiH, bracteis oblanceolato-linearibns, pedicelliM validiw calyco siopins brevioribua, calycis tubuloso-campanulati dentibns ovato-rotnndatis obtusis, corolliB tnbo calyco subdaf)lo longiore ore in limbo dilatato oblique dorsaliter fisso lobis 5 ellipticis obtusia tubo brovioribup, nlamcntis exscrtis, antheris oblongo-elliptiois, *styli* lobis subulatis.

IIAn. Northern Madagascar, *Baron* (No. 6,263).

Folia basi in petiolum angnstata 2V-3V poll. longa, 1.\-2 poll, lata ; Potiolus }-£ poll, longua. *Flares* 3-4 poll, longi. *Calyx* 1), poll. lon gus, £ poll, latns.

Another remarkable *Clerodendron,* allied to 0. *maerocalycinnm* and k. *ruhellum* of Mr. Baker, but with a calyx twice, or more than twice, as large as in either. *G. nuignolifffulinm*^ Baker, an endemic species, ^th an ample calyx, has the corolla-tube included, and *0. 'pefuuiaides,* •Maker, ako with a largo calyx, differs in its leaves and corolliutubu scarcely protruded.—*D.* OLIVKK.

Fig- 1. Stamen, back and front view. 2. Stigma. 3. Base of culyx-tubc and ov'»y. *All enlarged.*



M.S. del. et lith

Macphersonia macrophylla, Oliv.

PLATE 2243.

MACPHERSONIA MACROPHYLLA, *Olio.*

SAPINDACEJ;. Saborder SAPIKDEJE.

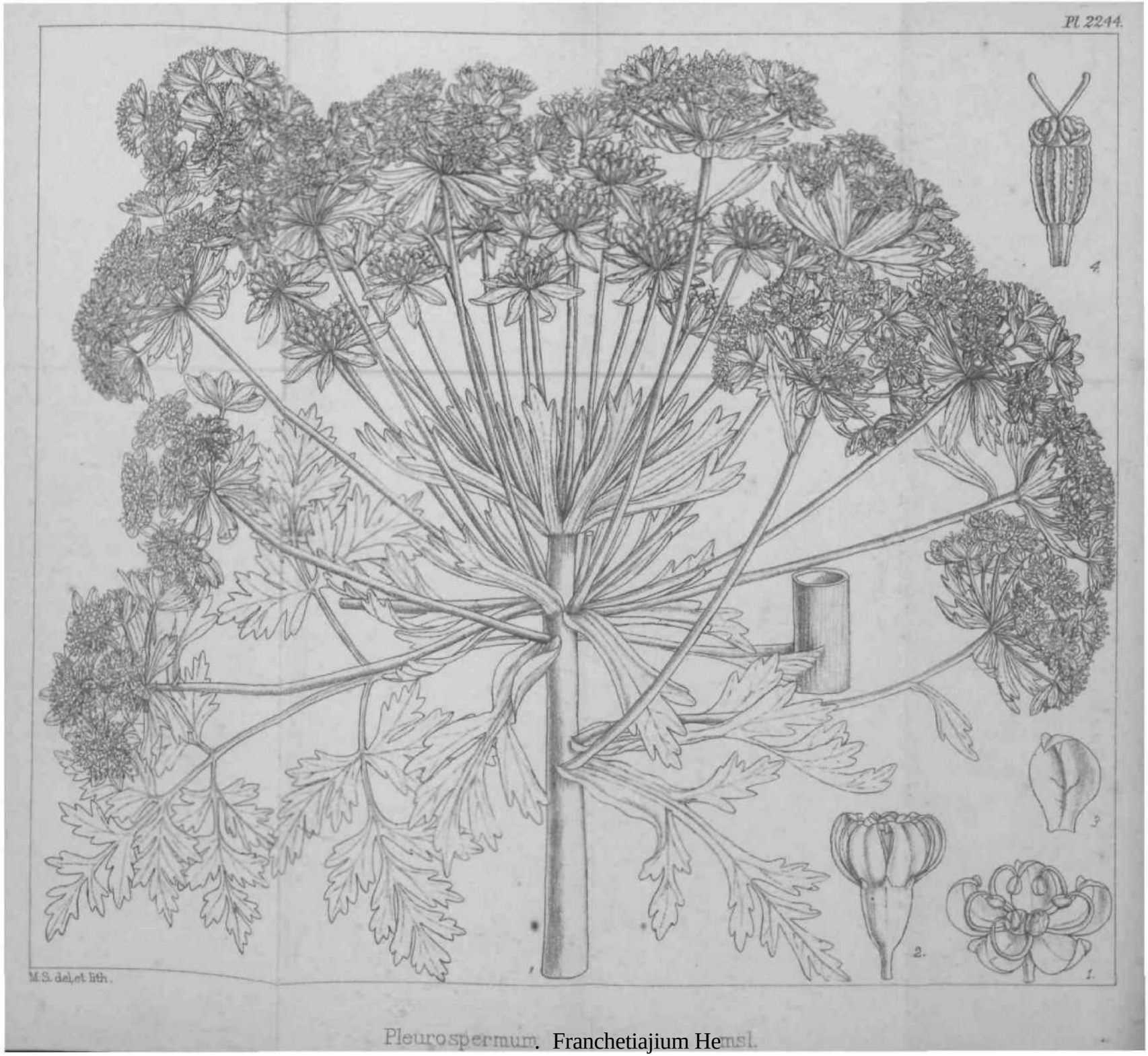
M. macrophylla, *OUv. (sp. nov.)* ; folia bipinnata, pinnis 3-4-jugis Juga inferiore basali ad foliolas 1-3 reducta subsessili, pinnis snperi-°nbus s as pins 7-9-foliolatis folio Us brevissime petiolulatis oblique ovato-ellipticis acute acuminatis integris glabris v. costa subtus Jiinute puberulis, inflorescentia (fl. ^)-axiliari racem^sa elon^ata folio saepius longiore racbi sparse setulosa, bracteis parvia lincaribus setoso-fimbriatis, pedicellis fasciculatis glabris corolla purpurea longi-°ribus, sepalis rotundatis concavis eiliolatis exterioribus paulo miuo-ribas, petalis 5 calyci fere • SBquilongia cuneatis sabungaicnlatia saepins bifidis (V. ineequaliter 2-3-lobatis) lobis lateralibns linearibus janceolatisve integris v. dentatis louge pilosia, disco carnoso profunde lobato glabro, staminibus H disco interioribus liberis exsercis, fila-^ ents filiformi-snbulatis glabris, antheris oblongo-ellipticis utriuque ^f'Usis emarginatis obsolete punctato-scaberulis, rudimento ovarii miuutissimo.

Hab. Northern Madagascar, *Baron* (No. 6,483).

Folia (in ramis floriferis) rftchi 3-4 poll, longa, pinnis 4-7 poll, longis ; foliolasnperioraiuajora2J-3i poll, longa. *Racemi* 10-20 poll. longi, c. i poll. lati. *Flores* lir-2 liu. diam.

The other species known to me of this genus from Madagascar and eastern Africa have nnmeroim small obtuse leaflets half an inch in ttth or smaller. • Female flowers aud fruit are dcsideratii.— J>- OLIVER.

Fig. 1. Bract. 2. Staminate flower 3. Petals. 4. Di*k. *All enlarged.*



Pleurospermum. Franchetiajium Hemsl.

PLATE 2244.

PLEUTtOSPERMUM FRANCHETIANUM, *Hemsl.*

UMBELLIFER^:. Tribe SESELINEJI.

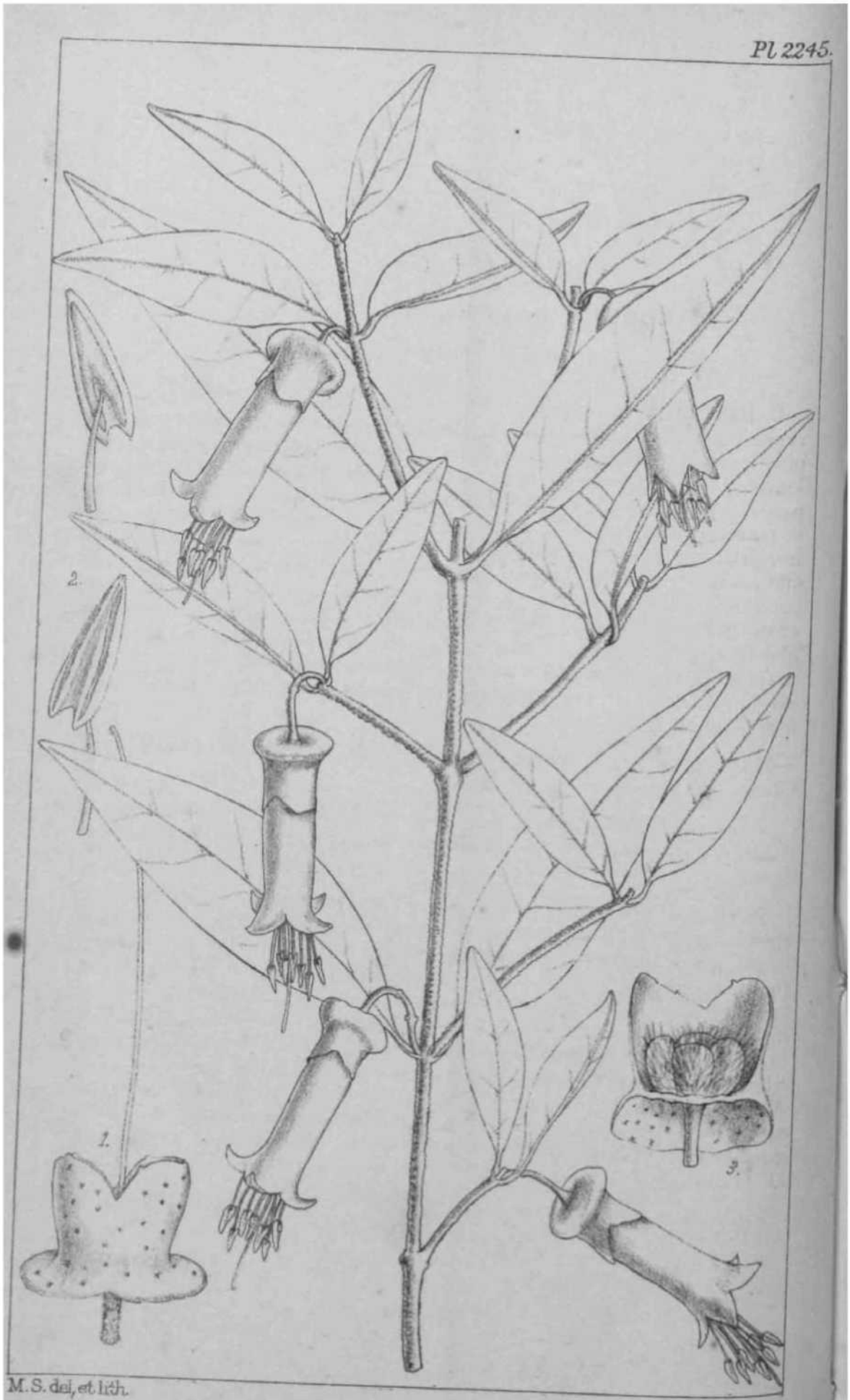
P. franchetianum, *Hemsl, in.Tourn. Linn, Soc.* xxix. *ined.*; P. Davidii affine sed differt foliorum segmentis angustioribus, bracts is bracteolisque minus dissectis insigniter albo-marginatis.

HAB. In a collection from West Szechnen and the Tibe+an frontier, chiefly near Tachienln, 9,000-15,500 feet, *Pratt* (No. 552).

Perenne v. bienne, erecfcum, robustum, H-2 ped. altum, undique glaberrimum, caulibus sinxplicibus, cavis, circiter *h* P°^- diametro. *Folia* radicalia non visa, canlina tenuia, fere mem bran acea, longe petiolata, subtriternatim pinnatisecta, segmentis nltimis linearibus Bubacutis, maxima, 6 poll, longa; petiolo angusto deorsum leviter dilatato; folia snperiora sessilia, bracteiformia, paucilobata, nmbeHas laterales subtendentia. *Umbella?* compositee, pluri- vel multi-radiatae, unica sessilis terminalis, "floribus omnibus femineis, cum pluribus (circiter 15) lateralibus confertis longe pednnculatis floribus omnibus (v. fere omnibus) masculinis ; bracte© seepius breviter tritides, umbelloe terminalis majores sed qnam radii fere dimidio breviores, bracte83 uinbellarum lateralium radios graciles asquantes v. superantes; bracteoloe Integrae, spathulatae, pedicellos brevissimos superantrs,3-5 lineas long®. *Fructus* (maturus ignotus) glaber, stylis longis divergentibus coronatus.

This is a very distinct and showy species, and the evident separation of the sexes is interesting. The terminal umbel is sessile and* female, and it is surrounded and overtopped by numerous smaller compound, lateral umbels bearing only male flowers (or with an occasional female). Whether this condition be constant is uncertain, nut, from a cursory examination of other species of the genus, the flowers are commonly functioually unisexual.—W. B. HEMSLKY.

Fig. 1. Staminate flower. 2. Pistillate flower. 3. Petal. 4. Immature fmit. *All enlarged.*



Correa Bauerlenri.F.v. Muell

PLATE 2245.

CORREA BAUERLENII, *F. v. Mudl.*

RUTACEJ;. Tribe BORONIE^:.

C **BaU9rlenii,** *F. v. Mueller in Proc. Linn. Soc. N, S. Wales,* ix. 960; ij<Qiulis gracilibus teretibus, novellis porphyreo-brunneis pilis stellatis Plus minus obsitis, foliis oppositis petiolatis tenuitcr coriaceis ob-ioiJgo- v. ovali-ianceolatis acntiusculis planis subtus pilis ferrugineis parce notatis, floribus flavido-virescentibus peduncalatis axillaribus y« terminalibus, calyce mox glabrato ore breviter 4-dentato sropius ^regnlariter fisso v. quasi-bilabiato prope basin tubi horizontaliter ala to-dilatato, corolla gamopetala extns pilis stellatis pal lid is tomentella tTibuloaa cylindrica cnlyce 3-^t-plo longiore, breviter 4-lobata, lobis °yuto.deltoideis acutis vix patnlis, staminibns exsertis, filaraentis glabris anguste lineari-snbulatis, antheris lineari-oblougis versatilibus, °vario hirsuto 4-partito, coccis glabrescentibus 'valvis endocarpii ^rsum dilatatis, seminibns niteutibus brunneis, cotyledonibus radicate ·ure æqui dnig s.'

HAB. New South Wales, * on stony banks of rivulets of the Upper C]yde,' *W. Bauerlen.*

pj Folia H-2^ poll, longa, i-J poll, lata; petiolus 1-3 lin. longus. *Lores* 1 p0H(longi. *Calyx* ala basali coriacea 1-2 lin. lata demum decurva.

S!^ F. von Mueller, to whom we are indebted for excellent flowering specimens, wild ones from the restricted original locality, sent to Kevv i? J-84, and recently cultivated specimens from Port Phillip, suggests t oat this species is deserving of a figure in ' Icones Plantarum' as c Olle of the rarest plants of Australia * and ' of singular structural . Merest.' The latter remark applies to the horizontal wing-like ^pansion of the base of the calyx, unlike anythiug in allied Rutacese. -lr Jr. v. Mueller remarks that ' several of the most local plants in Au stralia are contained in the order *Rutacece.'* The finely narrowed apex of the filaments is continued into, and concealed by, an extin-guisher-like excavation of the connective, as in *Correa speciwu.*— D. OLIVER.

3. C 'f• I. Calyx, showing basal annular dilatation. 2. Author, back and front view. *"yx, vertical section, &liowiug carpels. All vidarijwL

M.S. del. et lith.

Didymocarpus pectmata.C B C

PLATE *2246.*

DIDYMOCARPUS PECTINATA, *C. B. Clarke.*

GESNEKACEJC. Tribe CYRTANDREJE.

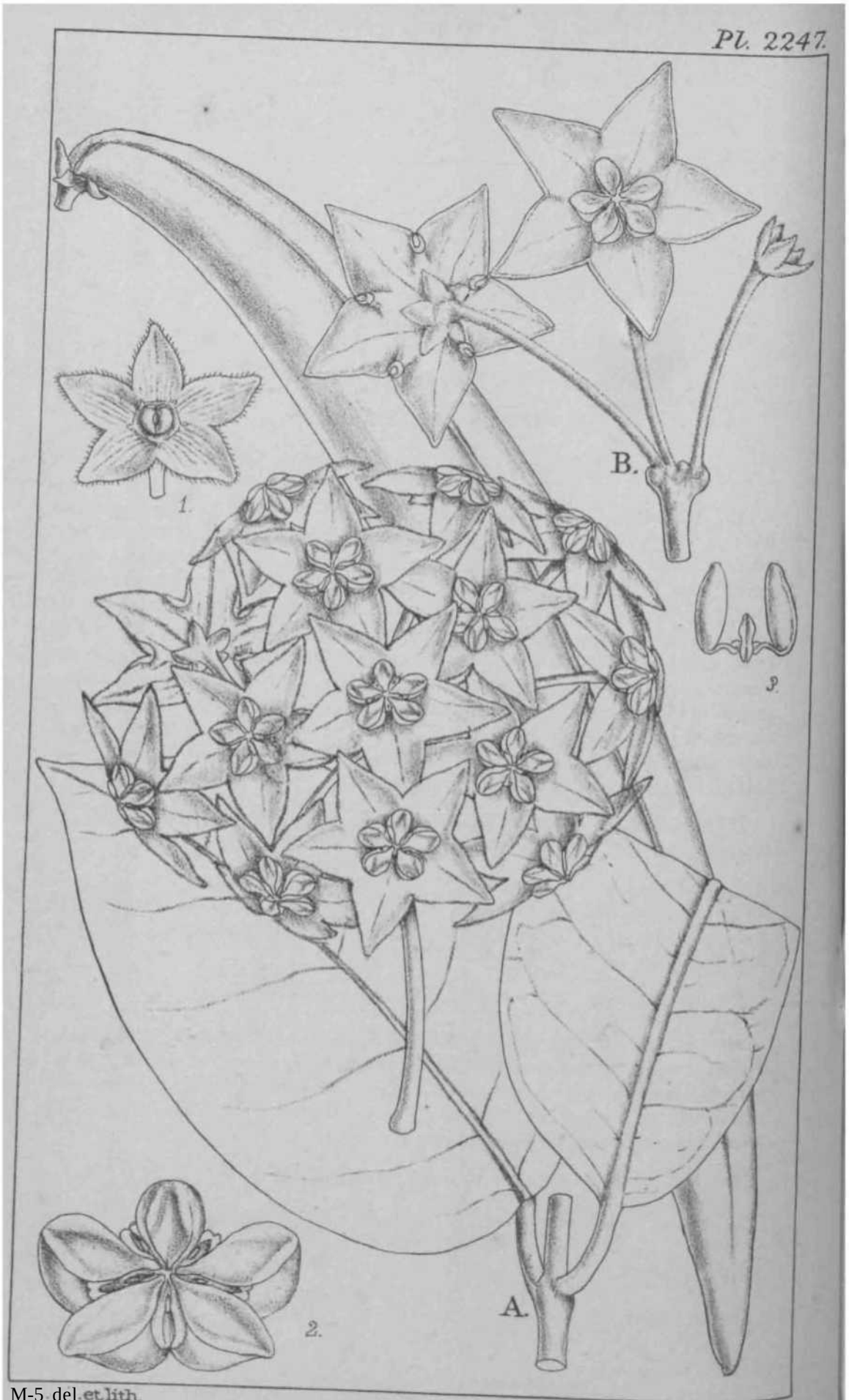
D. (§ **Heteroboea) pectinata,** *C. B. Clarke in Herh. Keio.*; frntex, canle lignescente parce ciichotonio glabro, foliis pluribus apices ramulorum versus confertis alternis v. nonnunquam. oppositis sessilibus v. brevissime petiolatis anguste ovali-oblongis acamiuatis pectinatis glabris, segmentis lanceolatis e basi oblique deltoidea leviter acuminatis obtusiusculis, fioribus axillaribus pedunculatis solitariis, pednnculo folio breviore gracili adscendeute supra medium bibracteolato, bractcolis approximatés anguste subulatis, calycis obliqui 5-partiti segment is lanceolatis obtusiusculis corolla 5-6-plo brevioribus, corollas t omen tell® tubo cylindrico leviter inflafco, lobo exteriore antico obovato-rotnndato, staminibus antheriferis 2, filamentis apice conniventibus, antheris oblongis agglutinatis, staminodiis ut videtur 0, disco tubnloso ovarii basin cingente, eapsula anguste lineari horizontaliter deflexa compressiuscula valvis dorso leviter costatis.

HAB. Malayan Peninsula, Perak, dense jungle on limestone rocks, alt. 400-800 feet, *Dr. King's Collector* (No. 10,711).

***Folia* 3-4 poll, lorga, i—J poll, lata; segmenta basi 1-1 i lin. lata.** *Pcdunculi* pubescentes. *Bractr.olce* \ poll, longae. *Fit/res* ^ poll, longi; calyx indigoticus ; corolla alba. *Capsula* £ poll, longa.

In *fades* perhaps the most singular ppecies of the genus. Below the leafy extremities the branches are naked with a finely-fissured cortex. Each segment of the pectinate leaves is traversed by a longitudinal nerve a little within the upper margin ; the ultimate venation is sparse and very obscure, only apparent by transmitted light. I have not had sufficient material for complete examination of the lobes of the corolla-limb.—D. OLIVER.

FIGT. 1. Segments of pinnatipart leaf. 2. Calyx and pistil, with tubular di&k. 3. Stameus. *All enlarged.*



A. Hoya Guppyi, Oliv.
B. ——— affinis, Hemsl.

PLATE 2247.

A.—HOYA GUPPYI, *Oliv.*

B.—HOYA AFFINIS, *Etmul*

ASCLEPIADACISJE. Tribe MARSDENIEJ:.

A.—H. Guppyi, *Oliv. in Gappy, 'Solomon Islands',* p. 298; ramulis ultimis parce hirtellis deiude glabratis foliis petiolatis coriaceis late ellipticis breviter acuminatis cuspidatisve basi late rotundatis subcordatisve supra glabris v. fere glabris subtus plus minus hirtellis 1-costatis nervis lateraltbus primariis subtus utrinque 7-9, urabellis peduuculatis pedunculia pedicellisqne glabris, calycis parvi corollas tubo 2-4-plo brevioris carnosuli 5-partiti lobis ovatis obtusis ciliolatis, corollaB rotatse lobis patentibus ovatis v. late ovato-lanceolatis acutatis intus hirtellis extus glabris sinubus reflexis, coronje foliolis cartilagineo-incrassatis disco ovato-lanceolatis (sicco) conravis obtusis basi angustatis dorso profunde excavatis marginibus lateralibus utrinque carinatis, folliculis subteretibus loDgitudinaliter striatis parce hirtellis.

HAB. Solomon Islands, Fauro Island, Bougainville Straits, *H. B. Guppy* (tf. 18g).

Folia 3i-4i poll, longa, 2J-2| poll, lata; petiolus hirtellus i-1 poll. longi8. *Umbella* 10-14-flora; pedunculns 2 poll, lonpns; pedioelli JH poll, longi. *Corolla* 1-li poll. diam. rubro-purpurea. *Follicula* 3-9 poll, longa.

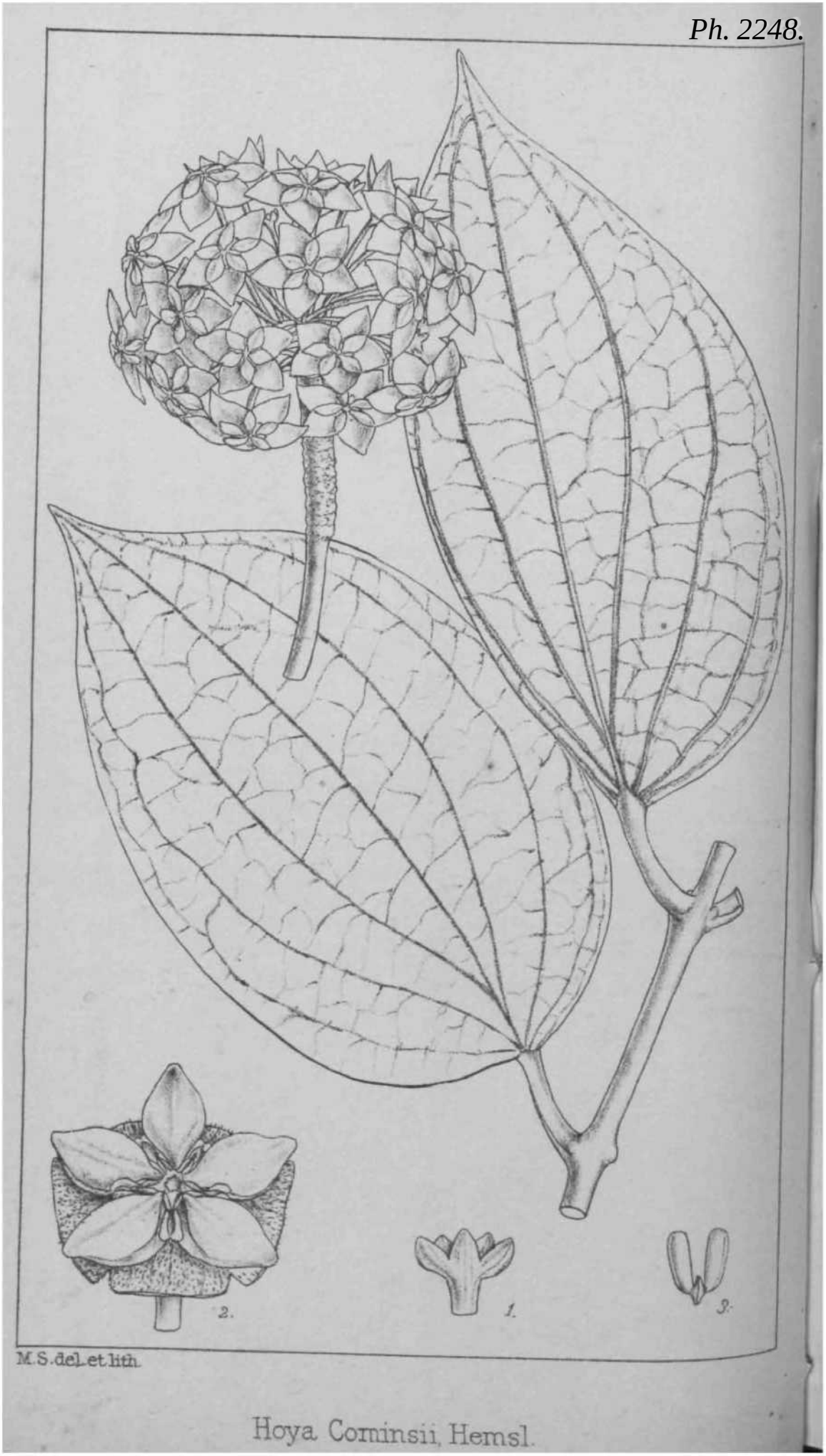
A « Kg. 1. Calyx. 2. Corona. 3. Pollinia. *All enlarged.*

affinis, *Eemsl in Keio Bull* 1892, 126, pnecedenti affinis, differt: foliis oblongo-ellipticis costa subtus prsecipue basin versus hirtellis nervis primariis subtus haud prominentibus utrinque 5-7 pedicellis calycibusque hirtellis, corolla dorso setuloso-hirta, facie papilloso-puberula, coronae foliolis latioribus.

HAB. Sblomon Islands; Florida Island, *Comins* (No. 57).

Folia 3.J-4 poll .longa, 1J-2 poll, lata; petiolus 1-1^ poll, longiw cr ^BHUB. *Peduncnlus* parce hirtellus 1i poll, longus; pedicelli birtcili xa Poll, loi.gi. *Flares* 1J poll, diam.—1). OLIVKK.

B P'



Hoya Cominsii, Hemsl.

PLATE 2248.

HOYA COMINSII, *Hernsl*

ASCLEPIADACEJ:. Tribe MARSDHNIEJ:.

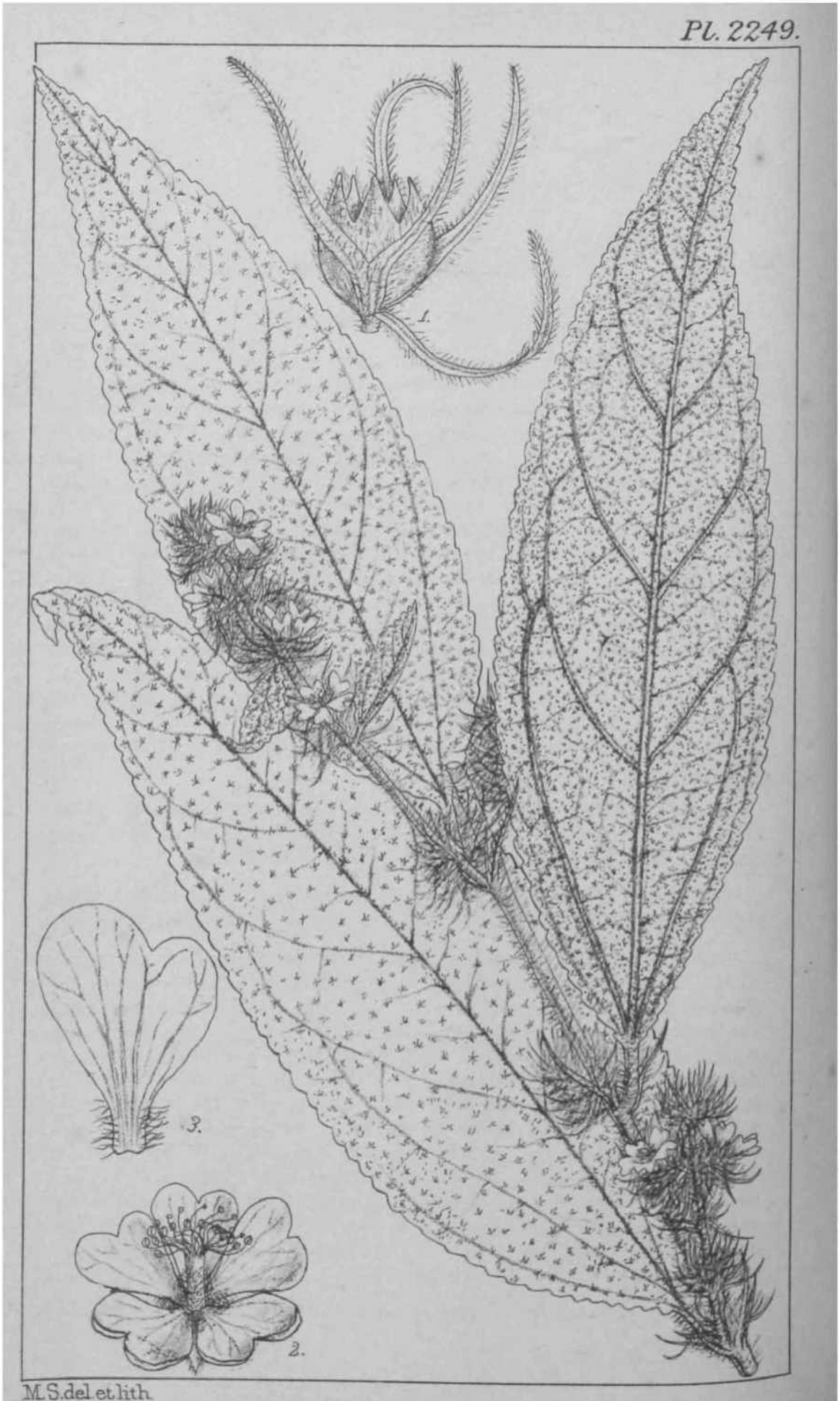
H. **Cominsii,** *Hemsl. in Ann. Bot.* v. 505; glabra, foliis ellipticoovatis basi late rotundatis subcordatis breviter abrupte apiculatis obtusiusculis 5-7-nerviis, petiolis crassiu3culis lamina 6-plo brevioribus, pedunculis multifloris persistentibus cicatricibus crebris florum delapsorum notatis, pedicellis gracilibus, floribns cremeis rotatis, calycis parvi tubo corollee dimidio brevioris 5-partiti segmentis ovatis obtusiusculis, corollae lobis ovatis v. deltoideo-ovatis supra puberulis subtus Rlabris, coronoe segmentis disco ellipticis coroliro tubo longioribus l°bis ejusdem brevioribus inarginibus arete re flex is polliniis lineari-[illegible] s.

HAB. Solomon Islands, San Cbristoval, *Gomins* (No. 163).

Folia 4-4^ poll, longa, 2i poll, lata; petiolns ^-f poll, longus. *Pedunctilus* rachi fiorifera ad 1-1J· poll, longa; pedicelli ^ poll, longi. *Flores* 5-6 lin. lati.

The nearest ally of this species would appear to be *H. samoensis,* Seem., "which has less ovate leaves, not so broadly rounded or subcordate at base as in our plant. In this respect it is nearer a plant collected in New Caledonia by Deplanche (No. 4).—D. OLIVER.

Fig. 1. Calyx. 2. Corona, segments of corolla removed. 3. Pollinia. ***All enlurged.***



Sida qiunqnenervia., DTIchass.

PLATE 2249.

SIDA QUINQUENERVIA, *Buchass.*

MALVACEJ:. Subtribe SIDEJJ.

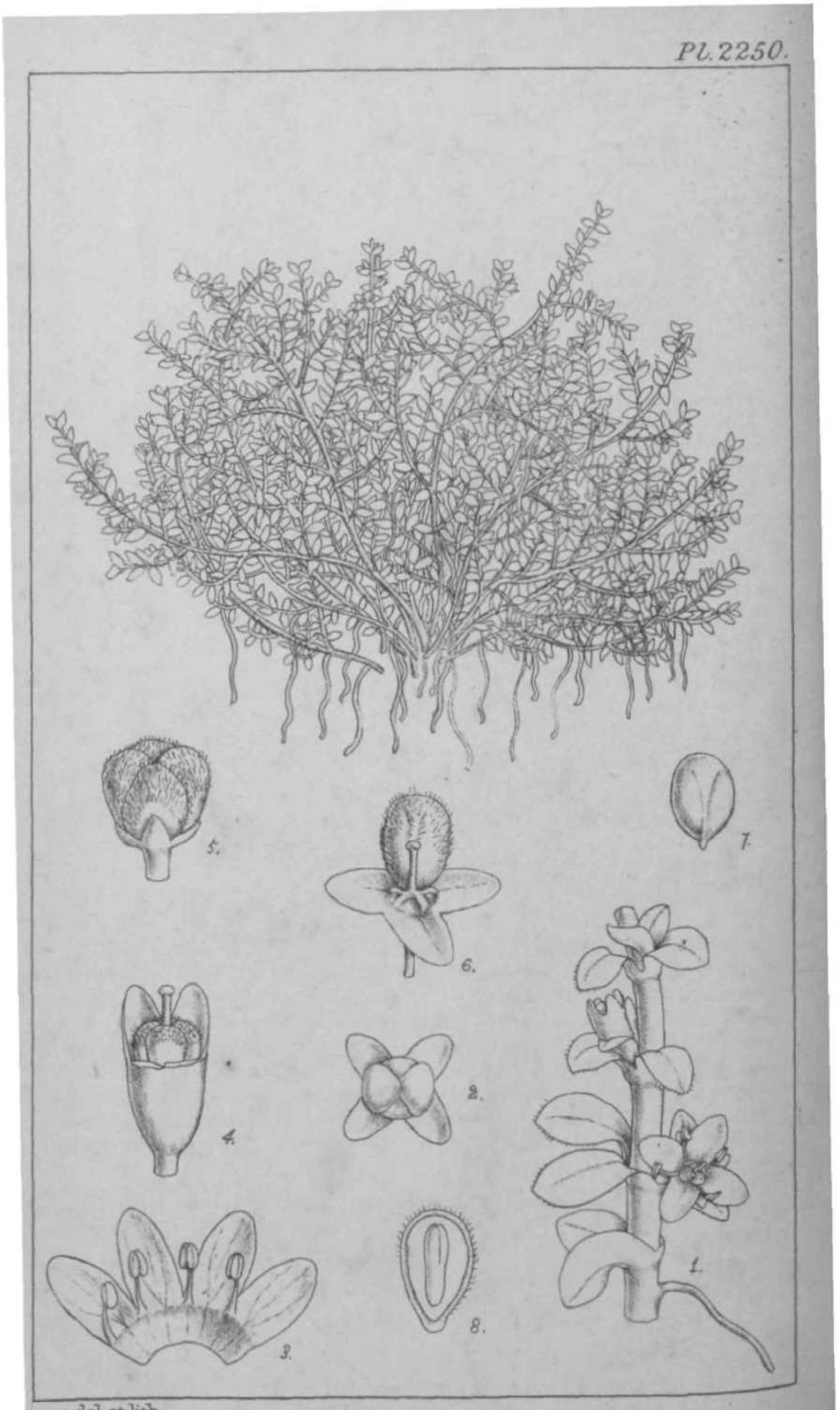
S. **quinqūenervia,** *Duchnssaing in Ann. Sc. Nat.,* set[4], iv., xvii. 17C ***(Planch, et Triano, Prodr.FI. Nwogranat.);*** **frutescens 7-9 ped. alt a,** ramia teretibus ferrugineo-setoais, foliis lanceolato- v. ovato-oblongis acuminatis serratis baai rotandatis utrinque stellato-hispidis, petiolo Betoso lamiua 6-10-plo breviore, stipulis subulatis ssepe 2-3-fidis, floribnssubsessilibus in spicis axillaribus brevibus congest is v. in axillis superioribas longioribus saepe iuterraptis dispositis, supremis in spicam simplicem v. paice ramosam confluent.ibus, bracteis bracteolisque 3-5-7 calyces superantibus anguste liDeari-subnlatis basi ssepins breviter coalitis, calycis dense setoso-birsuti 5-iidi segmentis ovatis acutis, petal is setoso-unguiculatis cuneatis oblique et obtuse bilobatis, staminum tubo basi ovarium arete cingente, cvario depresso globoso tomentello, sty]is inferne coalitis c. 8 gzacilibus. stigcuatibus capitellatis, ovulo solitario pendulo, carpidiis inaturis papyraceis dorso rotnndatis tumidis inappendiculatis primum apice ' demum secus dorsum Bsque ad basin' debiscentibus. Sida guianensis, *K. Sclium. in Mart. Fl. Bras,* xii., *par** iii. 805; Sidastruin quinquenervium, *E. G. Baker* ***in Joum. BoL,*** **1892, 137.**

Hab. Panama, *Duchassaing*; British Guiana, *Schomburgk* (Nos. 545, 863 B) ; French Guiana, *Pviteau*; Brazil, Registro ot S. João da Araguay, *Burchell* (No. 9,102), *Glaziou* (No. 10,279).

Folia **4r-7 poll,** longa, **l£-2£ poll. lata;** petiolus £-1 poll, longus. *Flores* ^-^ **poll,** lati, aurei. *C^rjjidia* matura 1 lin. longa atque lata.

This plant I had sorted into *Malvastrum* in provisionally working Yþ the Burchell Herbaŕum. Mr. Edmund Baker, in his revision of the •Malveae for his ' Synopsis,' now in course of publication, recognised the probable identity of the Brazilian plant with that from Panama collected by Duchassaing, and established upon it a new genus intermediate between *Sida* and *Malvastrum.* On comparing our specimens, however, with the description of *Sida guianensis* of Dr. Schumann, I suspected the identity of *Siilastrum* with that plant, and find this confirmed by inspection of Gkziou's specimen cited by Dr. S., which apparently had not been accessible to Mr. Baker. I think it prudent to leave it in *Sida.* I need not here enter upon the morphological value of the subulate 'bracts and bracteoles' associated with the congested flowers. The coherent ' bracteoles ' very probably are the eqmvalents of the often 2- or 3-fid stipnles.—D. OLIVER.

FIS- 1. Bnipt and Lractooles. 2. Expanded flower. 3. Pet.-il. ***All ailaŋ/vd.***



Tetrachondra Hamiltomi. Petne.

PLATE 2250.

TBTRACHONDRA HAMILTONII, *Pdrie.*

BORAOINE/E.

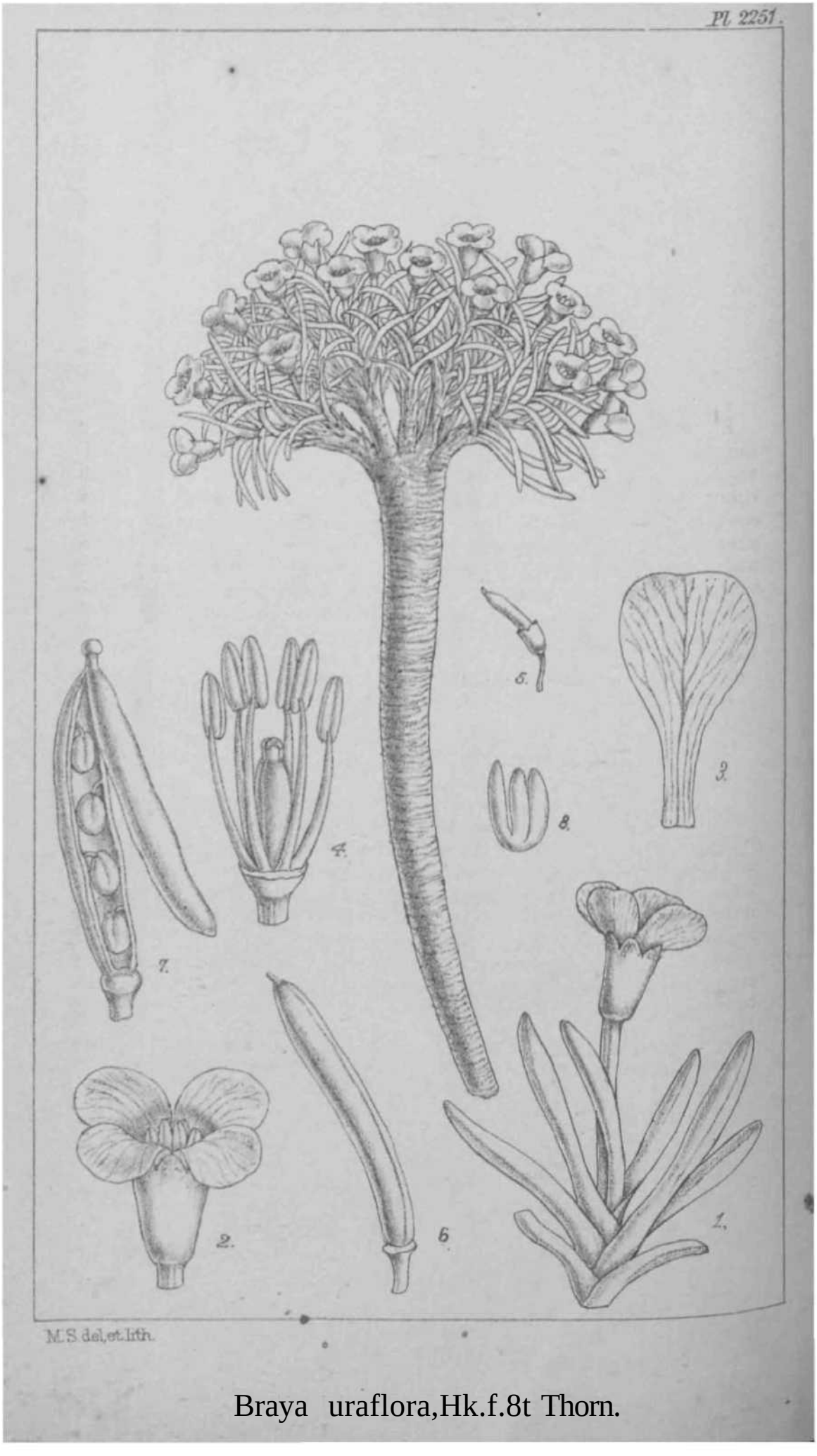
Tetrachtfndra, ***Petric (qen. ww.).*** ***Flores*** **parvi, tetrameri.** ***Calyx*** **pers'8tens alte 4-fi'ius, segnientis ovatis obtusis; fructifer imam tat us.** ***Corolla*** **subrotata calycem paallo superans, limbi segment is ovatis, fauce esquaniata, aestivatione imbricata.** ***Stamina*** **4 sinubus corollas inserta; tilamentis brevibus anthers subrequilongis; anlherne parvus rotundatro dorsifixae, biloculares, inappendiculatee.** ***Ovarium*** **4-partuum ; stylus inter lobos erectus ovario 2-plo longior ; stigma parvum. Aucic/ce saspius 4 erectae areola parva basilari affixes, dorso et apice fotundatse, setulosro, infeme triangalares, calycem persistentem stylumqae subduplo superantes.** ***Sernina*** **erecta, albuminosa; embryo Wes albumini suba3quilongas, cotyledonibus radiculoe eequilongis.—Herba** *dvpressa repens glabra v. subglabra.* Folia *omnia opposita parva* YV~TV P^{0}'^ i^{on}ga, *eltiptica, obtusa v. obtusiuscula, Integra, caniosula, obscure punctata; petioli latiusculi, plani, interdum parce sehiloso-cMolati, connati.* **Flores** *ramulos breves axillares foliiftros ttrvnittautes, sazpius solitarii.*

T. Hamiltonii, ***Petrie in Herb. KPW. (sp. unica).*** **Tilloea Hamiltonii,** T. *Kirk ex Hamilton in Trans. N. Z. Inst.* **xvii. (1684)** 292.

HAB. New Zealand, South Island ; Lowlands of Southern Otago, Waipahi, Z>. ***Petrie;*** **flats and river-bed of the Makarewa (or Mangarewa,** *T. Kirk.*

A very remarkable little plant of doubtful immediate affinity, occurring, according to Mr. W. S. Hamilton (Z. c), with *Tlllma,* **for Which it is, at first sight, most readily mistaken, and other aquatic or semi-aquatic growths, with which it * carpets the river-bottom to a Very considerable depth.' The leaves are strictly opposite, the petioles being, indeed, connate, and the seeds contain a copious albumen, which is wanting in Boragere pruper. I have been unable to satisfy myself entirely as to the aestivation, farther than that it appears t0 be imbricate, though in what sequence in the segments I am unable to say.—D. OLIVER.**

Fig. 1. Fragment of flowering branch enlarged. 2. Bud from above, showing imbricate p. of coi-olla-lobes. 3. Corolla laid open. 4 Flower, the corolla and front-lobes of ralyx removed. 5. Fruit. 6. Same, three of the nutx removed. 7. 1>" tuchea nut, inner face. 8. Longitudinal section of seed, showing embryo. *All enlarged.*



Braya uraflora, Hk.f. & Thom.

PLATK 2251.

BEAYA **UNIFLORA,** *Hook. f. et Thorn.*

CRUCIFERJE. Tribe CAMEMNEJS.

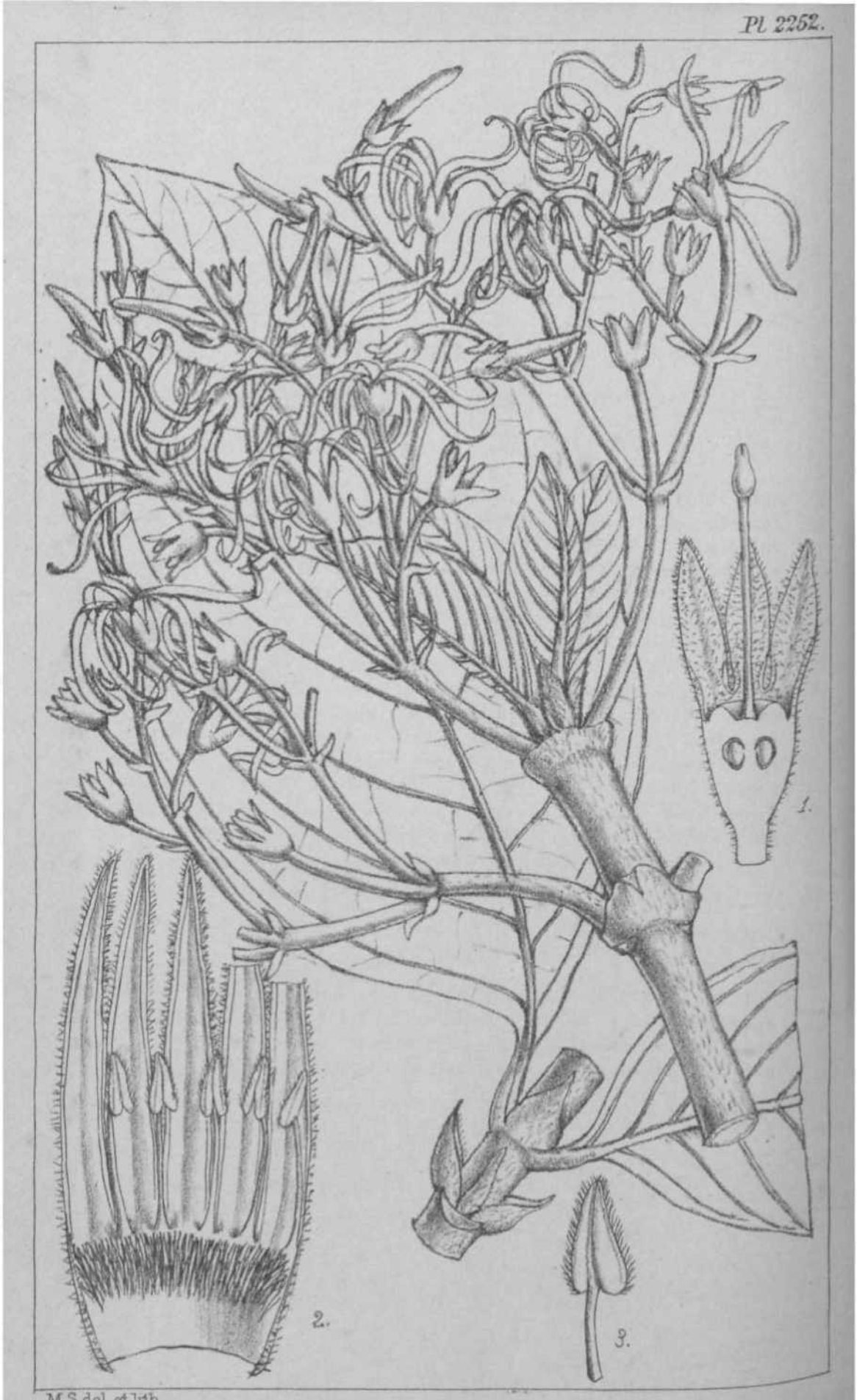
B. uniflora, *Hook. fil. Sf Thorn a. in Jnurn. Linn. Soc.* v. 168; **humilis, dense ccespitosa, glaberrima, collibus crassis petiolorum vaginis albidis arete vestitis, foliis lineari-spathulatia obtasis integerrimis carnosis planiusculis, scapis unifloris Rccpius folio brevioribus, Pepalis interdum fere ad apicem v. inooqualiter cohuerentibus basi fiuboequalibus oblongo-cllipticis obtusis marginibus hyalinis, petalis ungaiculatis, lamina obovato-rotunrlata alba, ovario leviter compreaso ^Gtragono, ovulis in utroque loculo c. 5-6, siliquis** *(in spp. Thomsoniiinis)* **linearibus compressiusculis, suturia loDgitudinaliter sulcatia, valvifl ^arnosulis, septo com pie to, seminibns c. 10 uniseriatis ellipsoideis leviter compressis.**

HAB. Western Tibet, Nabra, 15,000-17,000 feet, *Thomson*; **Yarkand Expedition,** *Henderson*; **Tibet, 17,000 feet, in ' sandy gravelly soil,'** *I'horold.*

***Folia* pollicaria. *Siliquce* 4-6 lin. longoo.**

This enrions little plant, of wbich a good flowering specimen has Recently been communicated to the Kew Herbarinm by Surgeon-captain W. G. Thorold, is the only member of the large and familiar JJrder Cruciferoe—so far, at least, as my experience goes—in which we n«-ve true cohesion of the sepals. The cohesion is not always equal all round, it is true, but it is singular that in an Order of considerably over one thousand species, in a very large number of which the sepals are erect and closely applied in their imbricate restivation, a tendency to a ganiosepalous calyx should not be more frequent.—OLIVER.

Fig. 1. Flowering branch. 2. Flower. 3. Petal. 4. Stamens and pistil. 5. Ovary after fall of petals and stamens. 6. Fruit. 7. &*me laid open. *Ml enlarged.*



Canthium lanciflorurtLHiern.

PLATE 2252.

CANTHITJM LANCIFLOBUM, *Him.*

RURIACEA. Tribo VANGUERIEJJ.

C. lanciflorum, *Jliern in Oliv. Fl. Trop. Afr.* iii. 146 ; arbuscula ramosa v. frutex, ramis validis annotinis epidermide delapso farinaceo-rubiginosis, ultimis foliiferis fulvo-tomentosis, foliis coriaceis ellipticis v. oblongo-ellipticis acntiusculis basi rotundatis v. interdum emarginatis, supra scabride hispidis subtus tomentosis, breviter petiolatis, Btipulis dense ln'rsutis e basi interpetioiari lata lanceolatis snbulatisve, cymis plurifloris interdum contractis tomentosis pedunculatis axillaribtis, bracteis ovatis, pedicellis brevibus v. calyce 2-3-plo longioribus, caljcis dense tomentosi lobis oblongo-lanceolatis obtusiusculis tubo campanulato-turbinato ssquilongis v. longioribus intus tomentosis v. interdum fere glabris, corolla, a'abastro elongato extus fulvo-hirsuto, rotata profunde 5-fida segmentis linearibus v. lineari-lanceolatis I'eflexis intus glabris tnbo 2-3-plo longioribus, tubo intus annulo dense hirsuto pilis rigidis deflexis munito, staminibus exsertis, stylo exserto glabro stigmate conico-cylindrico apice bilobato calyptrato.

HAB. South Trop. Africa; Highlands of Batoka country, near the Victoria Falls, *Kirk*; Shire Highlands, *Buchanan.*

***Folia* 4-5 poll, longa, 2-2^ poll, lata; petiolus £-^ poll, longus. *Corolla* lobis | poll, longis.**

I have not seen the fruit, but Sir J. Kirk's label attached to his specimens states that it is ' said to be one of the best fruits of the country,[1] and now, that its native country is being opened up, it may be well that attention should bo called to it.—D. OLIVER.

Fig. I. Longitudinal section of flower, the corolla removed. 2. Corolla laid open. 3. Stamen. *All enlarged.*

M.S. del. et lith.

BAMBUSA WRAYI, *Staj>f.*

GRAMINEÆ. Subtiibe EUBAMJIUSEJS.

Bambusa Wrayi, *Stapf in Kew Bulletin,* 1893, 14; culmo peralto, valde nutante gracili, panicula maxime decomposita, spiculis fertilibus paucis, glumis gradatim increscentibus, infimis 2 vacuis, sequentibus 2-3 plerumque gemmiparis, gl florifera rachilla tenui elongata gemmulam rudimentariam gerente oequilonga vel subcequilonga, ovario oblongo sen aim in stylum brevem attenuato, stigmatibus 3 tenuibus longis.

HAB. Perak in monte Ganong Inas ad fontes fluminum Selama et Plus River, 4,500-5,500 ped. alt., L. *Wray, fan.* (Herb. Mus. Peiak. No 4,166).

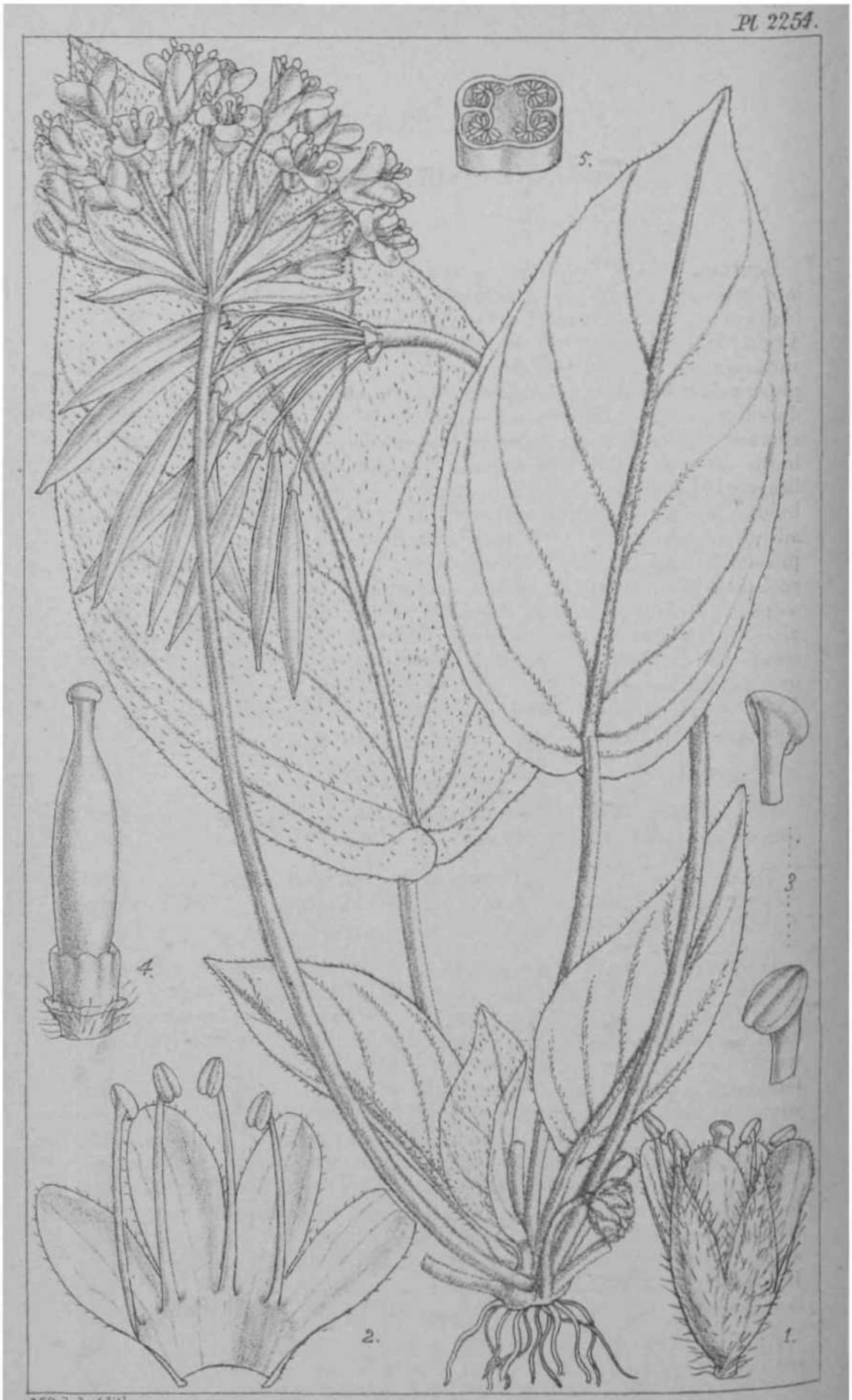
Oulmus 40-60 ped. altus, basi circa 1 poll, crassus superne tennis. Bmnms nutans apice ad solum usque flexus inermis, internodiis flavidis glabris nitidis teretibus fistulosis, tertio vel quarto supra basin longissimo interdum ad 7 ped. longo. *Folia* lineari-lanceolata longe et angustissime acuminata basi rotundata, 8-10 poll, longa 10-13 lin. lata via, glabra, nervis secundariis utrinque 7-8, vaginis striatis pallidis glabris, ligula truncata brevi pilis 3-6 lin. longis deciduis ciliata. *Panicula* nnda vel apicem versus folioaa, a basi ramosissima, ramis vel abbreviatis verticillatim sen subverticillatim arete congestis, yel elongatis, plerumque 5-8 poll., interdum vero ultra 3 ped. longis, striatis. *Spiculce* laxius dissitse vel ssepius fasciculatim congesta3, 6-9 lin. longeB., *Glumce* infimro ovatee, intermediss et penores lanceolateB, acuminatcB, tenuiter coriacece, opacre, ad 4-n. longBB, marginibus ciliatas. *Palea* submembranacea glunia sua puio brevior, superne quidem bicarinata, in carinis asperala velciliata, ft sulco dorsali rachillam rndimentumque fovens. *Lodiculce* obovataB vel elliptic©, ciliatae, subeequales. AnthereB 6 glabrce, muticeB. *Ovarium* vix 1 lin. Ionium; stylus £ lin. longus stigmatibus 3 plumosis rosi vel longioribus. *Caryopsis* (immatura) e basi oblonga in strum brevem cylindricum attenuata.

JVTaf/ *Wray* is closely allied to *B. Griffithiana,* Munro, and, like this, to only as far as the condition of the spicula is concerned. The spikelet difference is in the presence of gemmae or sterile flowering glumes which immediately precede the flowering one. I am therefore of opinion that *Nastus* should be brought as a section or genus to *Bambusa.* There exists also a striking similarity in the habit of loose and long-branched panicles, between *Nastus* and *Melocanna virgata.* Munro. but the structure of the spikelet is quite different.

The Sea Dayaks call this bamboo *Buloh Veraumpitan* and use the long internodes for their blowpipes. Some interesting particulars respecting this Bamboo and its uses are given in a letter from Mr. Wray to the Director of the Royal Gardens in the Kew Bulletin/ 1893, p. 16.

—O. STAPF.

Fig. 1. Spikelet. 2. Sterile and upper perfect floret of spikelet. 3. Stamen. 4. Pistil. *All enlurgrd.*



Bomrnea sinensis,Oliv

PLATE 2254.

BOURNEA SINENSIS, *Oliv.*

GESNERACEJE. Sabtribe DIDYMOCARPJCA:.

Bournea, *Oliv. (gen. vov.).* *Calyx* profande 4-fidus; tubo campanulato, segmentis aequalibus lanceolatis v. lineari-lanceolatis corolla paullo brevioribus v. interdum suboequilongis. *Corolla* fere regnlaris profunde 4-fida; lobis adscendentibns aequilongis tabo paullo longioribus v.eodem RubsequiloDgis. *Stamina* 4 lobis corollee alterna, 2 v. 3 v. omnia demum plus minus exserta; anthera liberre distantes, oblongo-ellipticre, dorsifixaB inappendiculat©; filamenta anguste linearia glabra sub sinubus corollre inserta. *Discus* campanulato-tubulosus integer ovarii basin cingens. *Ovarium* anguste lineari-oblongnm apice in stylum byevem angustatum, stigmate obtuso bilobulato; placentre intrus© bifidee, laminis ovuliferis recurvis. *Capsula* linearis apice acuminata ad basin gradatim angustata, loculicide debiscens, valvis medio placentiferis haud tortis. *Semina* . . . . .—Herba *acaulis, foliis longe petiolatis ovato-ellipticis, breviter acuminatis integris basi rotundatis ay*gu8te cordatis auriculis brevibus obtusis superpositis, supra late viridibu8, sparse et adpresae setuloso-pilosis, subtus prcecipue in costa nervisque parce adpresse setulosis.* Scapi *patentim ferrugineo-pilosi apice urnbeilatim multijiori folia minora super antes; umbellce involucraice jb-ZQ.florce bractece herbacece lineari-lanceolatce pedicellis pilosis scepius °reviore8.*

B. **flittensis,** *Oliv. (sp, unicā).*

HAB. China, Prov. Kwangtung, in tbe Lo-fau Mountains, 3,000 feet, *Bourne arid Atkinson's Native Collector*; com. *C. Ford* (No. 324).

Folia majora 4-5^ poll, longa, 2-3 poll, lata; petiolus 1^-5 poll. £V£US, P*118 minus adpresse setuloso-hirtus. *Scapus* 4-7 poll, longus. •* *lores* 5-6 lin. longi. *Capsula* 1-1J poll, longa.

One habitually feels averse to the multiplication of monotypic generic forms of Cyrtandreas, of which several have reached us of recent years from China, but I believe no other course is open under exiting taxonomies of the Tribe. The nearest affinity of *Bournea* ^ould seem to be with *Oreocharis,* from which it differs in the tetramerous calyx, the 4-lobed corolla (of which one segment—I pre-8Utne.> tbe posterior—is but very slightly broader than the rest), and tbe relatively very short tube of the corolla as compared with its limb; tbe entire corolla indeed is shorter, or scarcely longer, than the calyx, f- he foliage somewhat resembles that of *Chirita ebumea,* Hance. Un-0I> tunately, no seeds are left in the capsules of a previous year which r^n^n attached to the specimen. The generic name commemorates, & Mr. Ford's request, the services rendered to botany by Mr. F. S. A. "ourne, H.B.M. Vice-Consul at Canton, to whom the Kew Herbarium i8 ln^ebted for various valuable communications.—D. OLIVER.

Fig. 1, Flower. 2. Corolla, laid open. 3. Anther, back and front *View*. 4. Ovary and d uifK. 6. **Transverse bection of ovary.** ***All enlarged.***

Tr eio c arya s 1 k kimen s i s, 0 hv

PLATE 2255.

TRETOCARYA SIKKIBiENSIS, *Oliv.*

BOBAGINE£!. **Subtribe** EBITRICHIEJJ.

T. sikkimensis, *Oliver;* herba ramosa setosa 2-3-pedalis, folijs caulinis ovato-lanceolatis acutis basi in petiolum angustatia, cymis fongestis bracteatis terminalibus et in axillis foliorum pedunculiatis v.-superioribus sesfiilibus, floribus brevissime pedicellatis v. sessilibus, calycia segmentis lanceolatis setosis fructiferis leviter accrescentibus, corolla rotata? tubo calyce subduplo longiore fauce squamis previous late rotundatis instructo, segmentis limbi rotundatis integris, antneris apicibus leviter exsertis ovali-oblongis inappendiculatis, nuculis gynobasi pyramidatae medio areola parva immarginata affixis rnom-boideo-ovoideis, dorso convexo medio fovea parva oblonga <l[aa]?* perforatis leviter tuberculatis apice productis acutiusculis basi ñlb®"[s] rotundatis. Anchusa sikkimensis, *Clarke in Hook. FL BnL lnd.* iv. 168.

HAB. Sikkim Himalaya, Latong, 11,500 feet, *Hooker*; in a collection from West Szechuan and Tibetan frontier, chiefly near Tacnienlu, 9,000-13,500 feet, *Pratt* (No. 645).

***Folia* caulina inferiora longe petiolata, lamina 2-2¡ poll, longa, 1 poll, lata; folia superiora minora; petiolus 1-2 poll, longus; omnia plus minus setoso-scabra. *Flares* -\-% poll. diam. *Nucula* 1 lin. long[80]* facie supra areolam carinatae.**

Notwithstanding the remarkable difference in habit from the acaulescent monotypic *Tretocarya* of Maximowicz, I prefer to place this plant under that genus, with which, so far as I have ascertainea, the structure of the flower and fruit is in satisfactory agreement, rather than under *Jvchusa*, to which genus it is referred by Mr. Uarke (Z.c), though with hesitation, and the remark confirmatory ot the course here taken, that' the nutlets are exceedingly like those ot *Microula* and do not agree well with those of *Audium.'* Oar figure is *rom Mr. Pratt's specimen, in which I find quite mature nuts, which *ore wanting in the Sikkim specimens at Mr. Clarke's disposal. *Microul is tie genus most nearly allied to *Tretocarya*, so far as I can [s]e«, the latter only differing in the dorsal *fnrea* of the nuts. Our plant [a] little resembles *Omphalodes trichocarpal Max.*, in habit.—D. OLIVER.**

^'g. 1. Fl wor. 2. Calyx. 3. Corolla laid open. 4. Nut showing dorsal areole. 5. [Ottme]» [ín]nw face, showing hilum. *All enlarged.*

Actinocarya tibetica,C.B.Clarke

PLATE 2256.

ACTINOOARYA TIBETICA, 0. *B. Clarke.*

BOBAGINEJ:. Sabtribe CYNOGLOSSE<E.

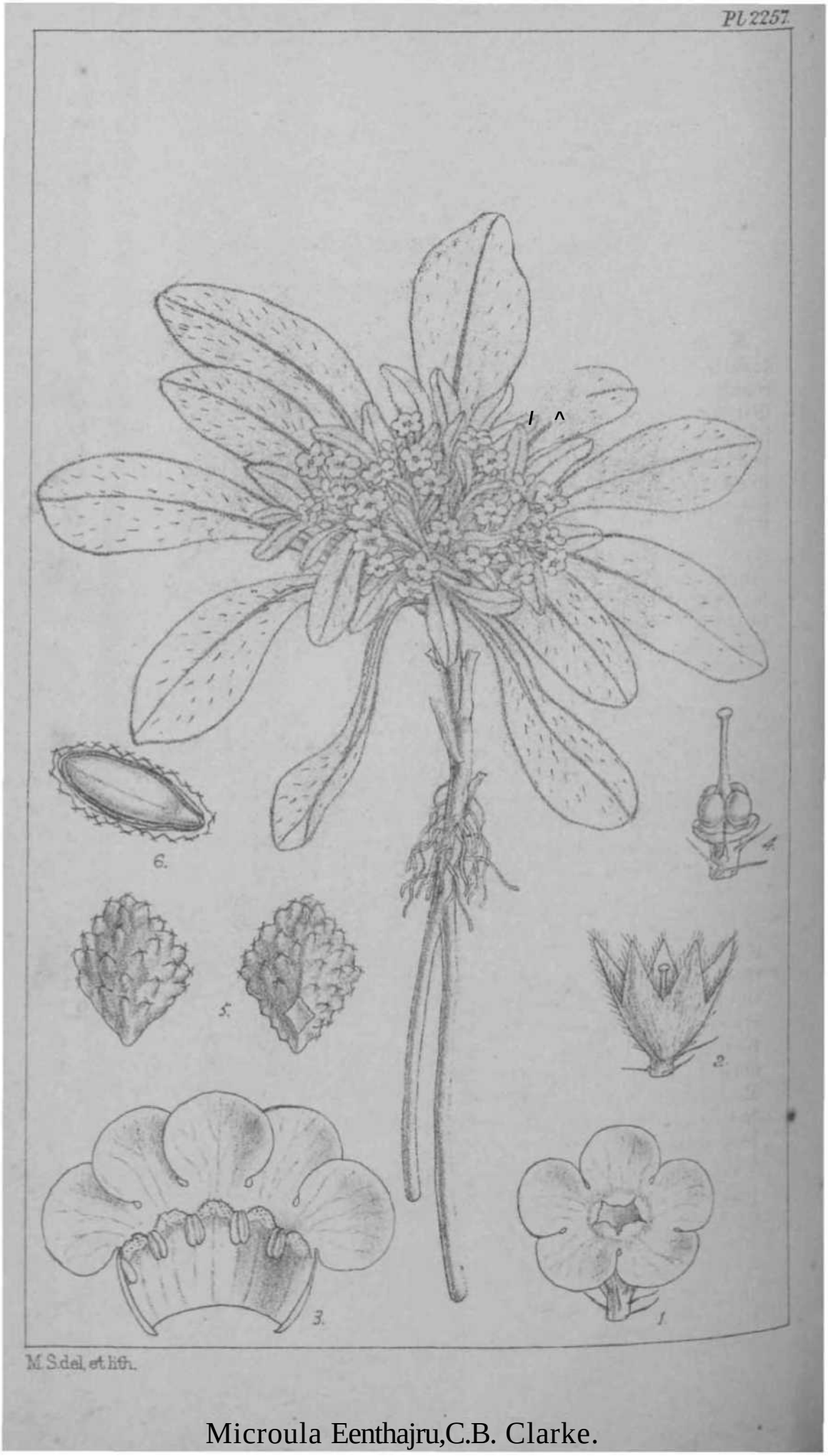
A. tibetioa, *0. B. Clarke in Eooh. Fl. Brit Ind.* iv. 1&5; berba Rracilis diffusa sparse strigillosa v. glabrata, foliis oblanceolatis spathulatisve obtusis, floribus minimis graciliter pedicellatis, pedicellis insertione bracteee foliaceas arete approximatis, calycis 5-partiti segmentis oblongo-lanceolatis acutinsculis setuloso-ciliolatis, corollae rotatee tubo calyce breviore campanulato, ore leviter constricto sqnamis brevibus obtusis emarginatis instructo, limbi lobis rot and at is integris, antberis parvis inclusis ellipticis inuppendiculatis medio tubi insertis, stylo ovarium auperante stigmate capitellato, naculis radiatim patentibas pilo minuto, hispidulo-scabridis et glocbidiis sparsis stipitatis armatiB, *acie superiore cjatho cartilagineo glochidiis marginato ornatis.

HAD. Western Tibet; Nubra, near Karsar, 13,000 feet, *Thomson.*

Folia basi gradatim angnstata, inferiora et radicalia longiuscnle petiolata; lamina £-1 poll, longa. *Pedicelli %-±* poll, longi. *Floras •*-$* poll, diara.

A carious little plant, of wbicb we only possess Dr. Thomson's ?rijnal specimens, allied to *Omphalodes* and *Thyrocarpus,* bnt different a the abrupt insertion of the glochidiate-margined cyathns on the fac0 °f ^e nuts» but more especially in the narrow attachment and radial disposition of the latter. In the * Genera Plantarum' I observe that © glochidia are described as ' sparsis v. nonnullis basi connexis, vix jjmen, cyathnm formantibus,[1] whilo in the * Flora of Brit. India' Mr. ^»arke makes no reference to a cyathiform appendage. In ripe nuts> however, it is conspicuous and as here figured.—D. OLIVER.

Fig. 1. Flower. 2» Calyx laid open, corolla removed. 3. Corolla laid open. 4. Pistil. 5. Nut detached and laid open. *Ml enlarged.*



Microula Eenthajru,C.B. Clarke.

PLATE 2257.

MICROULA BENTHAMI, *G. B. Clarke.*

BORAGINEJE. Subtribe ERITRICHIE^:.

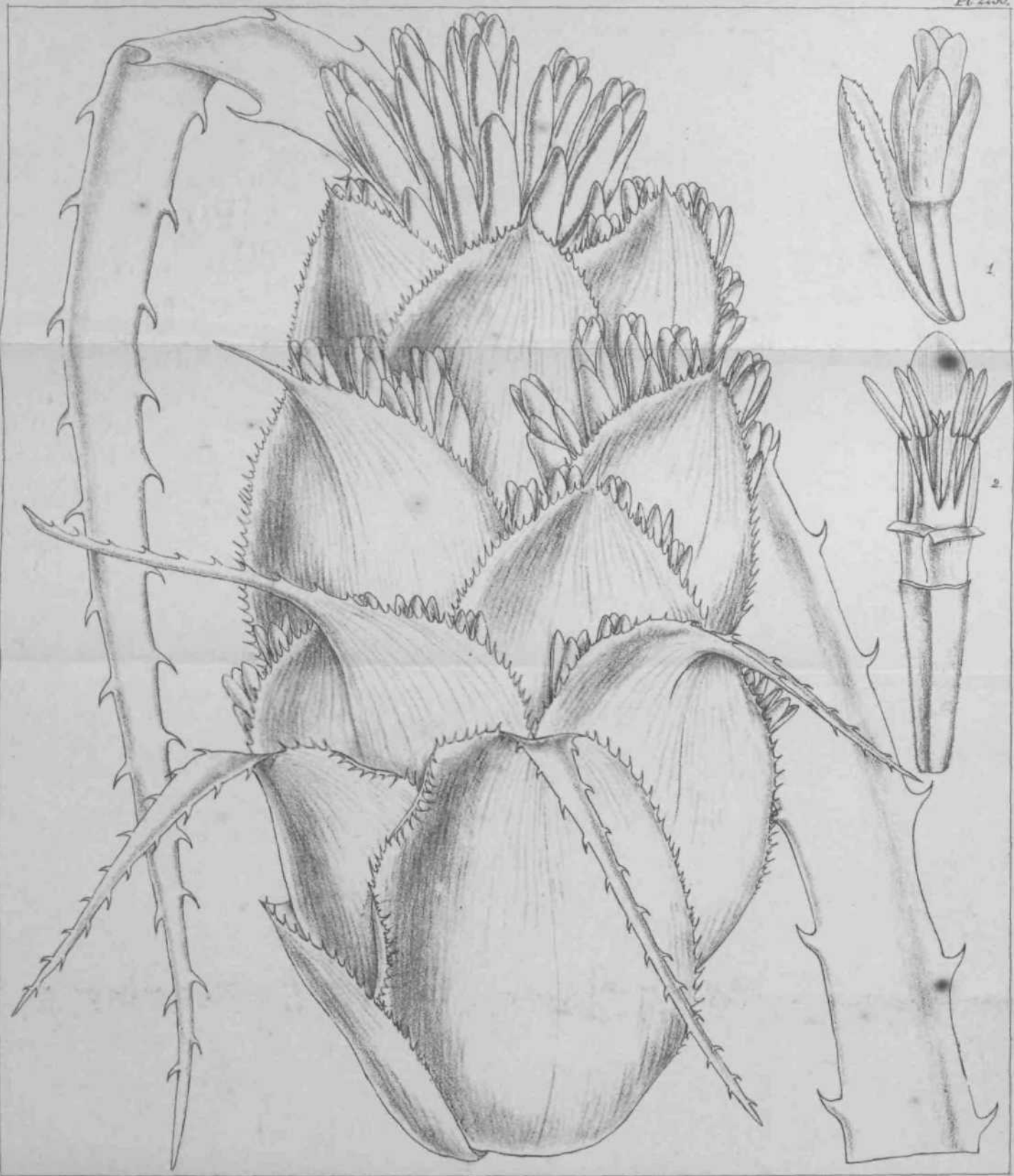
M. Benthami, ***C.*** **fl.** ***Clarice in Book. Fl. Brit Ind.*** **iv. 167; herba** acaulis v. nonnunquam ramulos laterales breves emittens, fohis rosulatis patentibus ovali- v. spathulato-obloDgis basi angustatis v. distincte petiolatia obtusis setoso-dentatis v. repando-serratis scabnde nispidis et parce setosis setis tuberculo insidentibus, cymis contracts, pedunculis crassis brevibus folio multo brevioribus bracteatis iteratim divisis, bracteis foliaceia margine setosis inferioribus flores superantibus, floribus sessilibus v. brevissime pedicellatis, calycis temp, florif. 5-ndi *'Qbo campanulato-turbinato glabro v. parce setoso, lobis ovato-oblongis dorso^ setulosis, corollas rotataa tnbo calycem aaquante lobis rotundatia fauce squamis 5 obtusis retusisve instrncto, ovarii lobis 4 distinctis lateraliter compressis areola gynobasi subplan® insertis, nuculis ovoideis v. rhomboideo-ovoideis obtuse augulatis plus minus tuberculatis, tuberculis cum setis brevissimis recurvis glochidiatis coronatis.

HAB. Tibet, 15,000-18,000 feet, *Thomson*; *Strachey and Winterbottom, Thorold.*

Radix simplex v. parce ramosa recta elongata. *Folia* majora 1-3 Poll, louga, i-^ poll. lata. *Flores* | poll. diam. *Bractece* ultimo obloii v. lineari-oblongse setulosee floribus breviores. *Anthera* tubo corollae insertaB, elliptico-oblongaa; filamentum breve. *Stylus* temp, norif. ovarium superans (2-3-plo loDgior) ; stigma parvum truncatum sabcapitellatum.

The geuus *Tretocarya* of Maximowicz *(Mel Biol* xi.; *Diag. Plant.* *Nov. Asiaticarum* iv. 270 (1881), of which we possess specimens collected by M. Przewalski in Northern Tibet, singularly resembles the above plant in almost every particular. But I find no trace, on **the back of the nucules of *Microula*, of the *'foveaparva immarginata'*** characteristic of those of *Tretocarya.* In the absence of fairly mature fruit it must be almost impossible to decide to which genus a specimen should be referred. Although I have no explanation to offer of the alleged difference in respect of this character of the nuts, one can hardly help suspecting that *Tretocarya* may prove to be a form of the plant here figured.—D. OLIVER.

Fig. 1, Flower; 2, Calyx; 3, Corolla, laid open; 4, Pistil; 5, Nut, back view. 6. Same, laid open. ***All enlarged.***



M.S. del. et lith.

Bromelia argentina, Baker.

PLATE 2258.

BROMELIA ARGENTINA, *Baker.*

BROMELIACEJ:. Tribe BROMELIEJ:.

B. **axgentina,** *Baiter in Kew Bulletin,,* 1892, p. 194; terrestris, acaulescens, foliis (5-pedalibus) super vaginam hand constrictis sed [a]d apicem gradatim angustatis, margine aculeis validis rigidis basi subito dilatatis a basi sursum versus uncinatis armato, inflorescentia dense paniculata oblonga pedunculata, pedunculo bracteis imbricatis ovato-lanceolatis scariosis obtecto, bracteis inflorescentiffl primariis ovatis dentatis in apicem anguste lanceolatam rubro-coloratam subito contraptis, bracteis floriferis oblongis acute carinatis denticulatis v. mtegris, ovario oblongo trigono tomentoso, sepalis oblongis obtusis, petaljs rubris lingulatis sepala paullo superantibus, staminibus styloque Petalis brevioribus, bacca oblonga coriacea.

HAB. South America: Argentine Republic, *F. E. Harman*; Paraguay, *Dr. W. Stewart.*

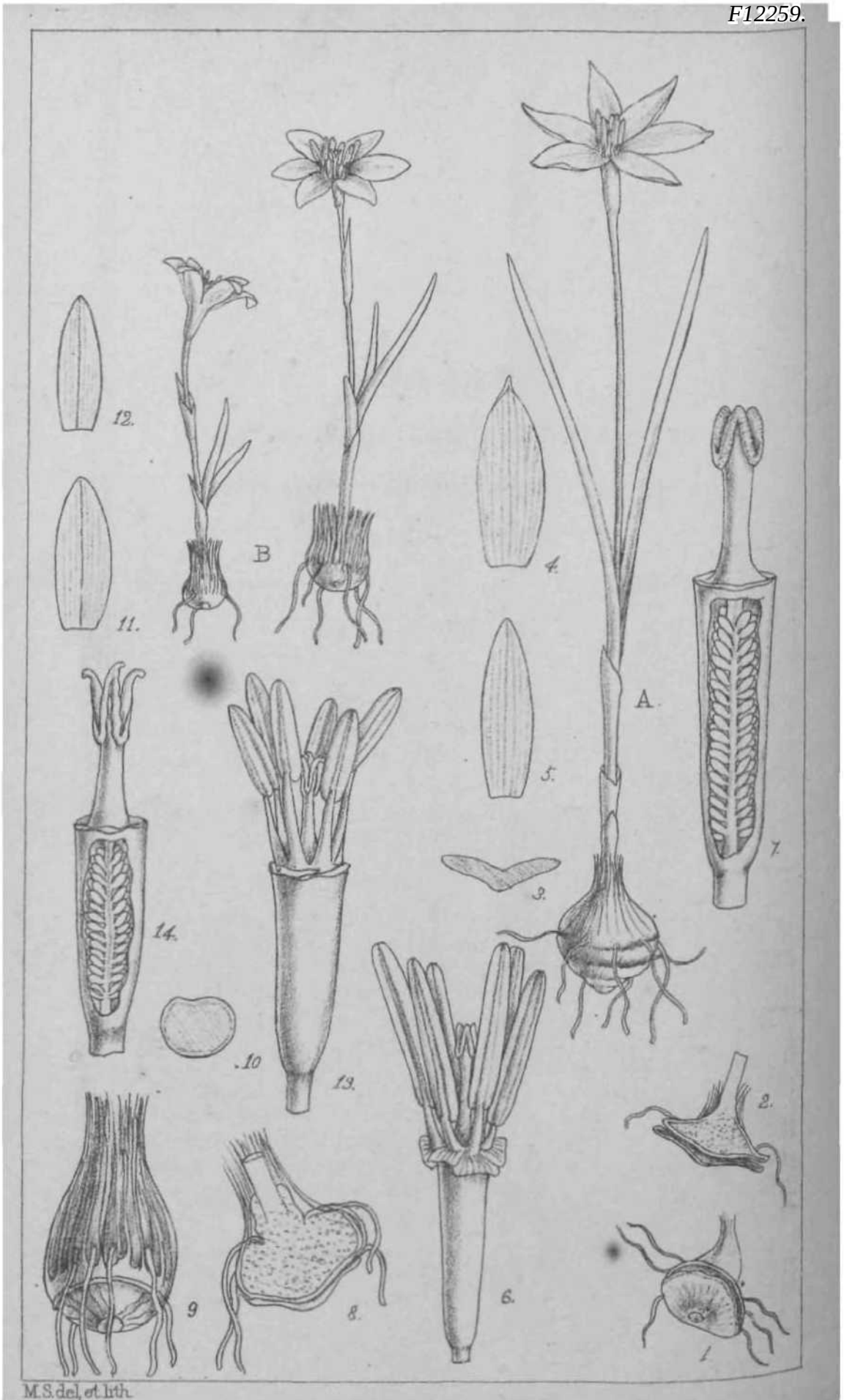
Folia super vaginara 1£ poll. lata. *Inflorescentia* ^-pedalis ; pedunculus subpedalis validus bracteatus; bracte© floriferaa 1^ poll. long©. *Ovarium* (exsicc.) 1 poll, longum, ^ poll. diam. *Sepala* pollicaria. *Bacca* 1^ poll, longa.

As explained in the * Kew Bulletin′ cited above, the original description of *Bromelia argentina* in my [c] Handbook of the Bromeliacero' "^as vitiated by the leaves, sent with, the inflorescence of the true PJant, proving to belong to a different species. We are indebted to Mr.. Stewart, H.B.M. Consul at Ascension, for the excellent and complete specimens which enable us to give the accompanying figure and corrected description.

The aculei of the median portion of the leaf are about one inch apart, laterally directed towards the apex, but occasionally a few are retrorse.

The importance of this species from an economic point of view, as affording the 'Caraguata fibre,' is pointed out in the number of the Kew Bulletin' above referred to. Its nearest ally would appear to be Bromelia Karatas Mez in Martius,' Fl. Bras/ (Bromeliaceae, p. 194, tab. 53).—J. G. BAKER.

Fig. 1. Detached flower and bract removed. 2. Flower, the perianth-segments in front *Slightly enlarged.*



A. Hypoxis curculigoid.es,Bolus.
B_____Schlechten, Bolus.

PLATE 2259.

A.—HYPOXIS CURCULIGOIDES, *Bolus.*

B.—HYPOXIS SCHLECHTERI, *Bolus.*

AMARYLLIDEÆ. Tribe HYPOXIDEÆ.

£'"^' **CUrculigoidcs,** *Bolus (nov. sp.)*; tota glabra, gracilis, 3-4 P°l.. alta ; cormo depresso-conico vel sab-discoideo margine acuta embrana lrevi vestito basi applanato fibris paucis coronato, vagina sail elongata, foliis saepius 2 rarius 3 linearibus, facie canalicnlatis cutis flore brevioribus, pedunculo gracili snepissime unilloro bractea ^?an^e acuta praedito, perianthii segraentis oblongis vel lanceolatis Pe.. Pra ^vis subtus viridibus, antheris linearibus flavis segmentis P-nanthii brevioribus, stigmatibus oblongis antheris duplo brevioribus, ovano oblongo-clavato.

HAB.- Sandy heathy flats, Kenilworth, near Cape Town, April-May (after the hrst winter rains), *R Schlechter* (No. 627).

Folia 3-7 cm. longa. *Perianthii limbus* 1-2-1-8 cm. longus.

This **species may possibly have been hitherto regarded as a var. of *H. stellata*, L., and I know of no other with which it can be confused. I am indebted to Mr.** Schlechter for pointing **out to me its differences** inv?..1? species- The corm of the latter is usually—and I suppose, xvii Y^obose. It is so described by Baker ' Journ. Linn. Soc.' though *f-* *S so *n *^e specimens in my herbarium; and Publi K A 1S differently represented in some of the older figures ^eallv. h Ud Gr the name of *H, stellata*, *I* do nofc suppose that it can this til e, vamble to so great an extent. The leaves and flowers of 8haJ an *I* are smaller and fewer (the latter strikingly resembling in <ttffer«mt anu olour those of *Curc^ugo pUcata),* the habit is somewhat *B stpi)*·*I* anuf tiDallv^ while this plant flowers in April and May, *--vata* does not appear until July and August.—H. BOLUS.

A.—H. CURCULIGOIDES. Fig. 1. Corm. 2. Same, longitudinal section. 3. Transverse section of leaf. 4~5- JPerianth-segments. 6. Flower, the perianth-segments removed. 7 T t- longitudinal section of ovary. *Except Jigs.* 1 *and* 2, *enlarged.*

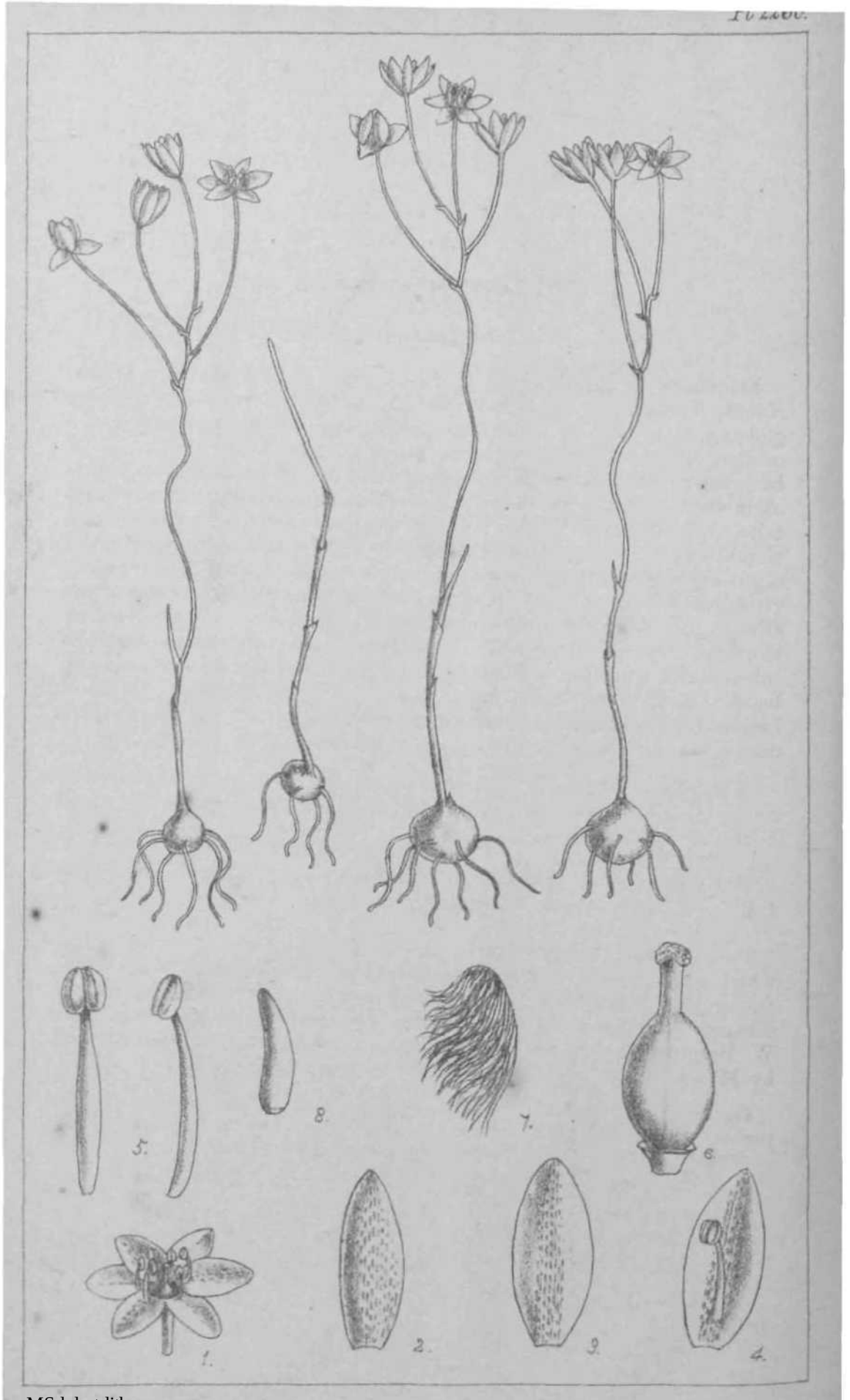
B.—Hypoxis Schlechteri, *Bolus (nov. pp.)* ; tota glabra, pumila, 3-5 centim. alta, cormo ovato fibris rigidis cancellatis atro-brunneis omnino vestito, foliis e vagina basali saepius 2, rarius 3, erectis subteretibus facie parurn applanatis pedunculi longitudinis, pedunculo gracillimo saepissime unifloro rarius fureato 2-floro bractea vaginante acuta prsedito, perianthii segmentis late lanceolatis acutis supra aurantiacis subtus rubellis, antheris lincaribus flavis segmentis perianthii duplo brevioribus vel subasqualibus, stigmatibus linearibus, ovario oblongo 3-4 mill, longo.

HAH. Sandy heathy flats, Kenilworth, near Cape Town, April-May (after the first winter rains), *Schlechter* (No. 628).

Perianthii limbus 6-10 mill, longus.

This seems well distinguished from *H. alba,* L. fil.—to which it is otherwise nearly allied, and for a variety of which I had long mistaken it—by its corm (which in that species is globose and destitute of tb« covering of rigid bristles), its smaller size, and very differently coloured flowers. I have named it after the collector, an enthusiastic young German botanist, who in the short time of his sojourn here has already detected several novelties and rediscovered some interesting and rare species. Mr. Schlechter first brought its distinctive characters to my notice.—H. BOLUS.

B.—H. SCHLECHTERI. Fig. 8. Vertical section of corm. 9. Entire corm. 10. Transverse section of leaf. 11 and 12. Perianth-segments. 13. Flower, the perianth" segments removed. 14. Longitudinal section of ovary. ***All enlarged.***



. MSdal-rt lith.

£plosperraxim spirale, Berg.

PLATK 2260.

ERIOSPERMUM SPIRALE, *Berg.*

LILIACEJE. Tribe ASPHODELE^ : Sab tribe BOWIEJE.

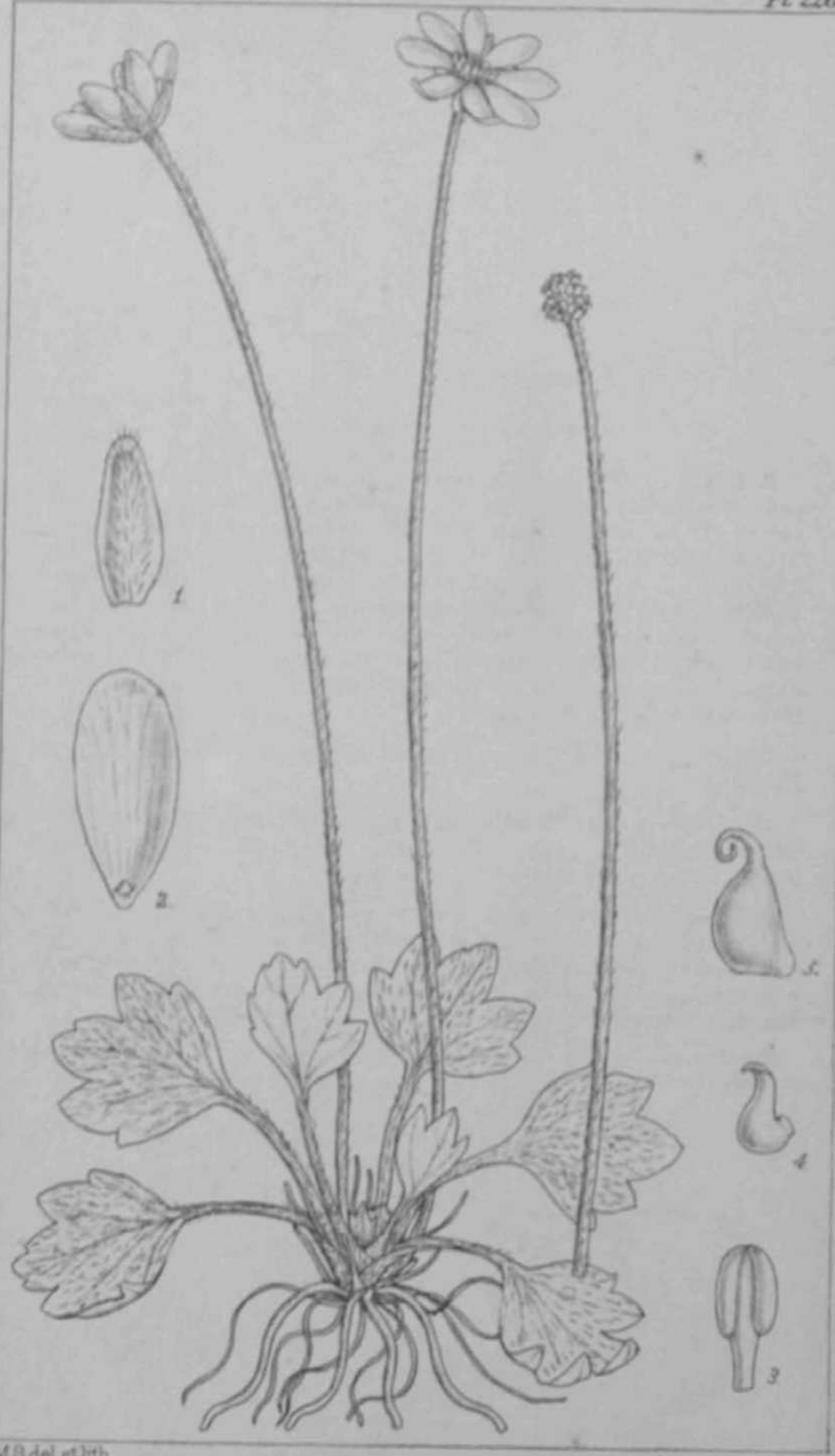
Eriospermum spirale, *Berg, in Roem. and SchulL Syst.* vii., p. 1696; *Kunth, Enum.* iv. p. 654; *Baker in Journ. Linn. Soc.* xv. 266; corrao globoso, 6-10 millim. diametro, folio unico filiforme erecto, 2-2'5 centim. longo, e vagina hypogaea annotina anantha prodncto vel ad basin scapi serotino, scapo pollicari gracillirao, inferne setiformi rigido undulato-flexuoso, sursnm leviter incrassato, apice corymboso; pedicellis 2-5 filiformibus erectis flexuosis, basi bractea minima ovata membranacea colorata proditis, apice sub flore articulatis, perianthii segmentis exterioribns lanceolatis acutis supra albidis subtus rubroviridibus, 4-5 mill, longis, interioribus ovatis acutis eaquilongis supra albis longitudinaliter purpureo-fasciatis, staminibus perianthio brevioribus incurvis, filamentis lineari-lanceolatis applanatis, antheria subrotundis, stylo brevi, stigmate punctiforme, ovario oblongo trigono, loculis 2-ovulatis ovulis superpositis, capsula oblonga perianthii longitudine, seminibus pyriformi-clavatiB incurvis lana fuscescente densissime vestitis.—Anthericum spirale, *Linn. Mant.* 224.

HAB. Cape of Good Hope, *Koenig,* 0. *W. Bergius*; in shallow soil upon granite rocks, Kenilworth, near Cape Town, fl. April, *Schlechter* (No. 600).

***Flos* expansus campanulatus *7* millim. latus. *Pedicelli* inferiores l-2'5 cm. longi, superiores gradatim breviores.**

This little plant is peculiar in the genus by its wiry fiVxuous scape, which greatly resembles that of *Carpolyza spiralis*% or of the smaller *Disce* of the *Schizodium* group, and by its cymose inflorescence. It has escaped observation for many years—apparently since the time of C. W. Bergius, who collected about 1820—and has now just been refound by Mr. E. Schlechter.—H. BOLUS.

Fig. 1. Flower. 2 and 3. Perianth-segments from outside. 4. Inner face of perianth-segment with adnate stamen. 5. Stamen, Hack and front view. 6. Pistil. 7. Seed, with lanate testa. 8. Same, testa removed. *All enlarged.*



M.B. del. et lith.

Ranunculus Lowii, Stapf

Plate 2261.

RANUNCULUS LOWII, *Stapf.*

[illegible]NUNCULACEÆ. Tribe RANUNCULEÆ.

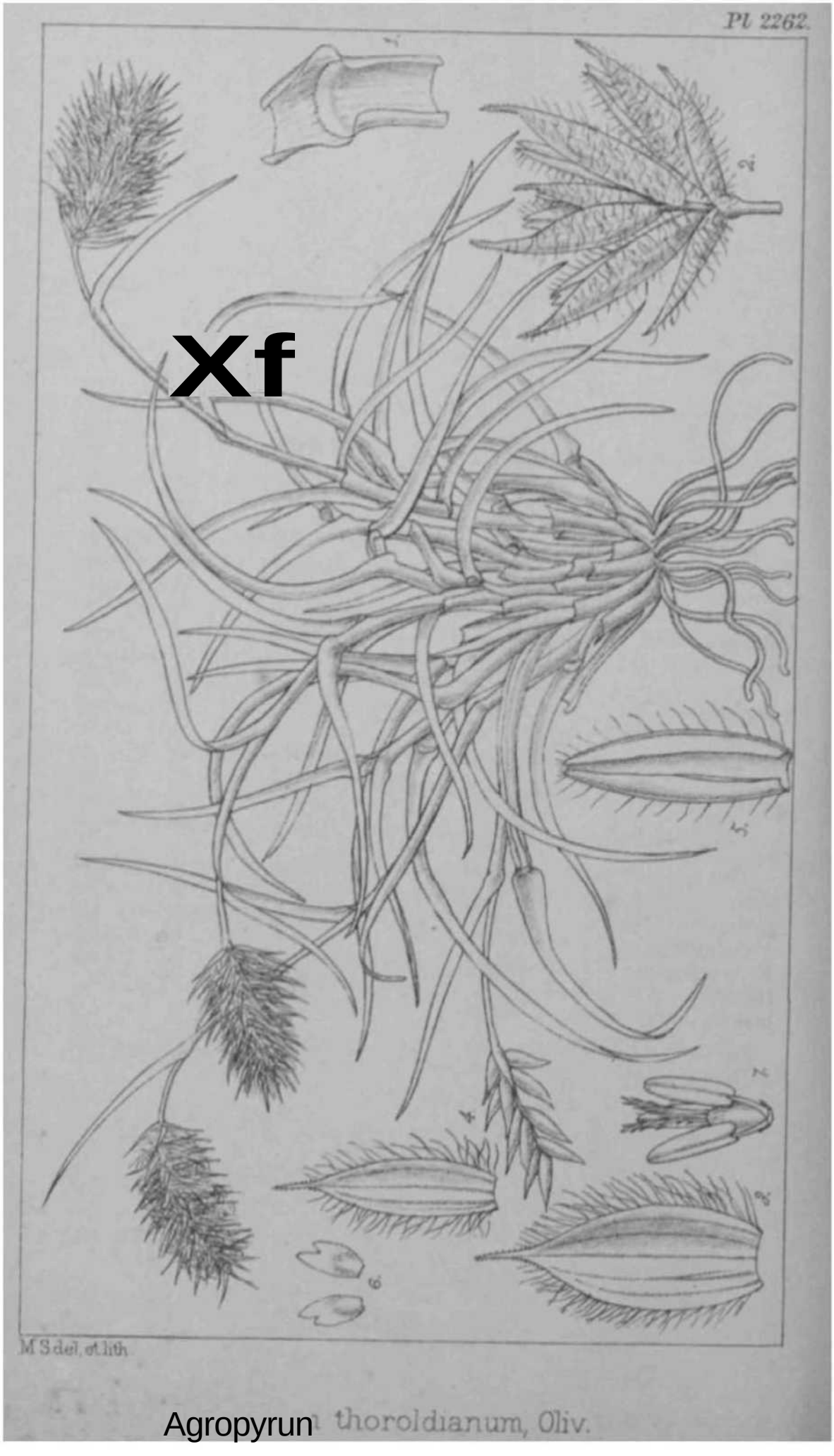
R. Lowii, *Stapf (sp. nov.)*; [illegible] sæpius longe petiolatis lami[illegible] strigoso-hirsuta subtus [illegible] otund[illegible]ta truncata v. subcordata breviter 3–5–7-lobata lobis ovatis v. ovato-deltoidei[illegible]ulatis interdum utrinque 1–2-dentatis, scapo erecto foliis longiore adpresse strigoso unifloro, sepalis adpressis ovato-lanceolatis dorso plus minus strigoso-hirsutis, petalis 6–8 aureis subtus venosis oblanceolato-oblongis obtusis [illegible] [illegible]rifera minuta [illegible]uctis, carpellis fructiferis capitatis num[illegible]rcte congestis lævibus v. oculo armato papilloso-tuberculatis, [illegible] [illegible]o recurvato rostrat[illegible]s.

HAB. Borneo, Ki[illegible],000–12,000 feet, in moist places, *Low*, [illegible]*aviland.*

Folia cum petiolo 2–[illegible] lon[illegible] [illegible] ue lata. *Scapus* 4–10 poll. longus. *Flores* [illegible] poll. diam. *Et*[illegible] [illegible] poll. lon[illegible].

Sir Hu[illegible] specimens, received many years ago, were unfortunately destitute of flowers, but are clearly identical with those complete ones recently communicated by Dr. Haviland. Further detail I give in my paper on the Flora of Kinabalu, to be [illegible] to the Linnean S[illegible]y.—O. [illegible]TAPF.

[illegible]Petal, showing [illegible] 3. [illegible] 4. Carpel. [illegible] *[illegible]arged.*



Agropyrun

1'i.Mi: 2262.

AGKOPYRUM THOROLDIANUM, *OUv.*

GIAMIMUI. Tribo **HOIDSA**

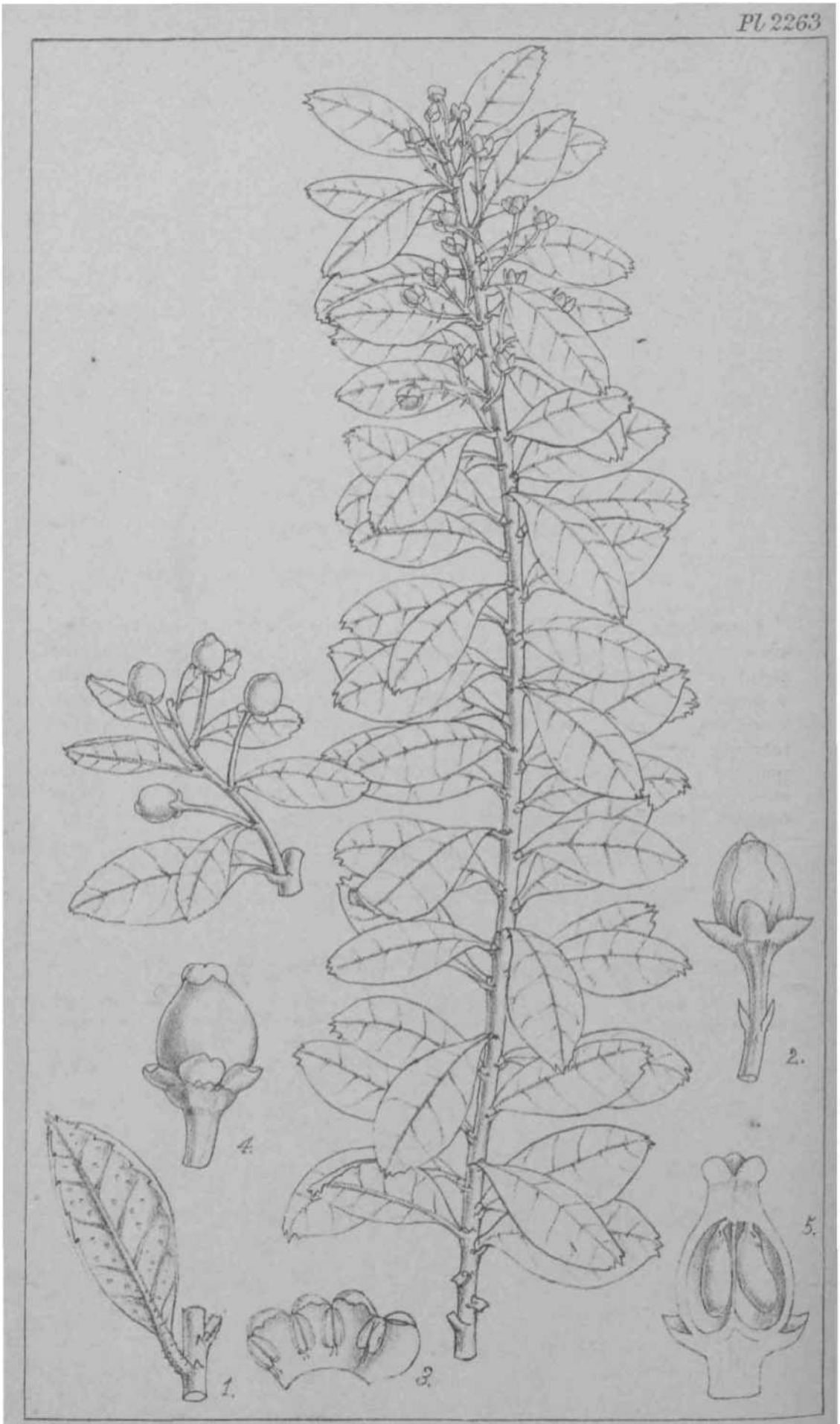
A. Thoroldianuni, ***Olio,*** **(n>.** *nov.)*; **perenne, onlmu plaribns breviUus diffu fin, t'uliirt liuuarihiift vitliilf; nervous marginiboi plni minus itivn-lutis supra nerVIH BUtfginibiuqae aoabria bisi interdnm «|mrs' piloso-ciliatis vagitia Hupivmi luviter itillulu, litfiila bn-vi^hitmt, iptos uvuta v. oblongo-ovata compressi dentinaonla villoaa, ipicnlia &-(i-flori» adwi n-dentibu», plumis exterioribtiH oblongo-lancsolatia Ibrevissimo aristatis 8* (v. oblique 4)inerviis, gluma flolifcnt Into lancoolata bnevissime ariRtntJi 5-ner<i dorso roiondato daow pOoaft| juilcu ovtili-olt]onga iimr^iitibtiH inllrsis cariniH pitrco Bpinoloala, o w u obOTOideo piloso lodiculia latoralitcr l*das.tfttii ir,!erne incrassat[i puallo lougioro.**

HAD. Tibot, 16,500 **feet**; *Thorold* (No. 108).

Culm» 3-5 poll, longi folia supermtc«. *8}>iew* **J-l** poll. longæ.

This **interestinp; grruw, wbioh lion something <>r i!i« upoi t and dimensions of tin; !intui;il** ***Agrapyrwa onmtalt,*** **would Mten to be refJil.- f<> I i • section of the geIIH, adopted by M. Boissier, of** ***Pseudo*•n.i.l *>-fit>,*** **«I lie! i iu the' Gonora Planbirnin i" naorg*d in the section** *empym*. **The Qowertnff glamrs are inot carinate but rounded on the Iack. The awa of the flowering glttJUM may 1e from i | to £ tlio lengtfa** of the glume.—D. **OLH**IVER.

Fi.- 1. Part of lea f-olii'tiih, (ilniwiriff li(fuln. 2. Spikelet. 3, **Flowering** glume. 4. Out«T gluiitc. *t*. Palea. G. Iy-Min-uiur. 7. **Btanawnmd ptrtil.** *All enlarged.*



M.Sdd,etliih.

Ilex revoluta, S[1]tapf.

PLATE 2263.

ILEX RBVOLUTA, *Stapf.*

ILICINEJ:.

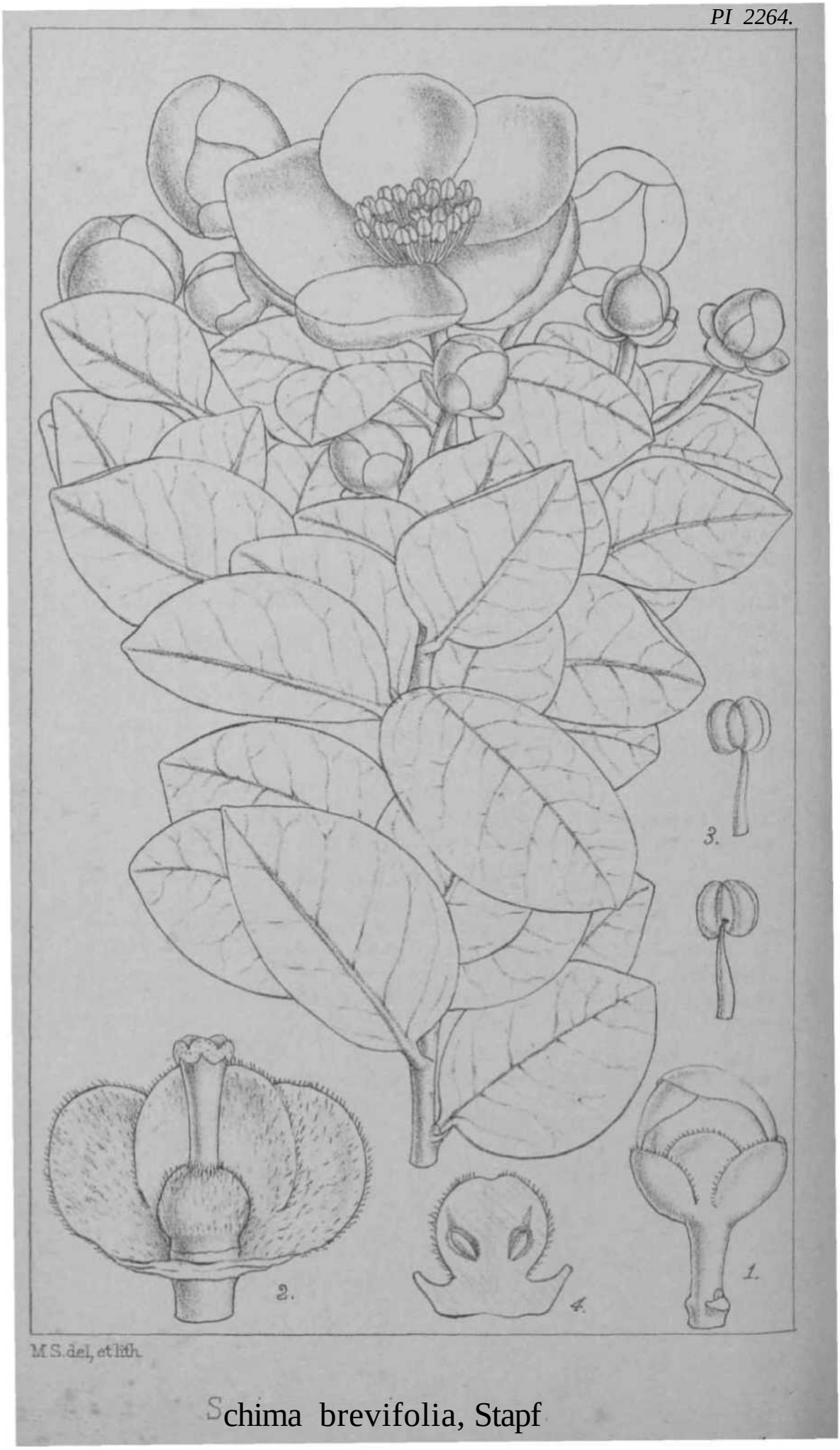
I. revoluta, *Stapf {sp. nov.)* ; frntez, ramnliB nigrescentibus minutissime hirtello-puberulis, foliis minute stipulatis coriaceis rugosis breviter petiolatis ellipticis v. oblanceolafco-ellipticis apice mucronatis integris v. scepius apice utrinque 1-3-dentatis margine revolutis, costa subtus valde prominente parce setulosa, floribus axillaribus pedicel I a tis solitariis v. fl. *$* in cymis paucifloris dispositis folio multo brcvioribus, pedicellis bibracteolatis apicera versus breviter incrasBatis, sepal is rotundatis glabris eroso-denticulatia, petalis albis rotundatis inferne coalitis, baccis nigrescentibus globosis 3-pyrenis.

HAB. Borneo, Kinabalu, 11,000 feet, *Haviland* (No. 1,087).

***Folia* |-1 J poll, longa, £-| poll, lata; petiolus ^ j " ! P°U« loDgus. *Bacca* 3-4 lin. diam.**

Allied to I. *crenata,* Thbg, and I. *rugosa,* Max.—0. STAPF.

Fig. 1. Leaf and its insertion, showing minute stipule 2. Pedicel and bud. 3. Corolla, laid open. 4. Young fruit. 6. Longitudinal section of ovary. *Enlarged.*



Schima brevifolia, Stapf

PLATE 22G4.

SCHIMA BREVIPOLIA, *Stapf.*

TERNSTRCEMIACEJ;. **Tribe GORIONIEJE.**

S. brevifolia, *Baill. Hint, des Plantes* iv. 254 *(ad not.)*; frutex, **ramulis crassiuKculis ultimis foliis dense imbricatis obtectis, foliis coriaceis late ellipticis v. ovato-ellipticis scepius obtusis basi rotundatis nonnunquam subcordatis brevissime petiolatis, floribus albis majusculis pedunculatis in cymis paucifloris folia vix aut leviter superantibus, sepalis rotundatis coriaceis ciliolatis, petalis calyce 4-6-pio longioribus basi extus sericeo-pilosis, ovario globoso dense albido-hirsuto, ovulis in loculis 2 v. 3, capsula globosa lignosa columella brevi.—Gordonia brevifolia,** ***Hook./, in Traits. Linn. Soc.*** **xxiii. 162.**

HAB. Borneo, Kinabalu, 8,000-10,000 feet, ***Low, Haviland*** **(No. 1,126, 1,127).**

Frutex **v. arbuscula 4-14-pedalis.** ***Folia*** **1-2 poll, longa, —£ Poll. lata.** ***Pedunculi*** **-^-J poll, longi.** ***Flores*** **1^-2 poll, expansi.** ***Stamina*** **glabra; anther© ellipsoidece.** ***Capsula*** **§ - | poll. diam.**

Although I have not ascertained the direction of the radicle, our material being scarcely adequate, yet from the character of the fruit and (he few ovules, which appear to be laterally attached, I follow M. Baillon (/.c.) in referring this plant to ***Scldma*** **rather than to** ***Gordonia.*** **Sir J. Hooker (/.c) points out also that the (capitate central receptacle' of the capsule accords with Blume's character of Reinwardt's genus** ***Schima.*****—O. STAPF.**

Fig. 1. Bud. 2: Calyx laid open, showing pistil. 3. Stamen, back and front view. 4. Vertical section of ovary.—*Except fig. 1, enlarged.*

Scottelli'a leonensis Oliv.

PLATE 2265.

SCOTTELLIA, *Oliv.*

BIXINEA!.

Scottellia, *Oliv. (nov. gen.). Sepala* 5 libera, imbricata, glabra, fere raquilonga v. exteriora panllo breviora, 3 exteriora cymbiformia elliptica, interiora late elliptica. *Petala* 5 imbricata, oblongo-elliptica v. ovato-lanceolata obtusa piloso-ciliata, intus basi sqnama crassiuscula obovato-cuneata facie interiore pilosa petalis mnlto breviora instructa. *Stamina* 5, hypogyna, petalis alterna libera, glabra; filamenta linearisubulata apice attenuate anthera fere duplo longiora; anther© ovatoellipticaa basi bifidre, connective) latiusculo, locellis polliniferis marginaliter dehiscentibus. *Ovarium* glabrum obovoideo-ellipsoideum, basi leviter angustiore, 1-loculare, piacentra 3 multiovulatsB; stylus brevis breviter 3-fidus. *Fruct.* non vidi.—Arbuscula *15-20-pedalis, glabra.* Folia *late elliptica, Integra, breviter obtuse apiculata basi late rotundata v. sub cor data glabra coriacea venis primariis utrinque* 6-9 *subtus cum costa prominentibus; petiolus brevis crassiusculus.* Flores *in racemis axillaribus v. quasi terminalibns multifloris obsolete puberulis folio longioribus dispositi; bractece minutce caducce.*

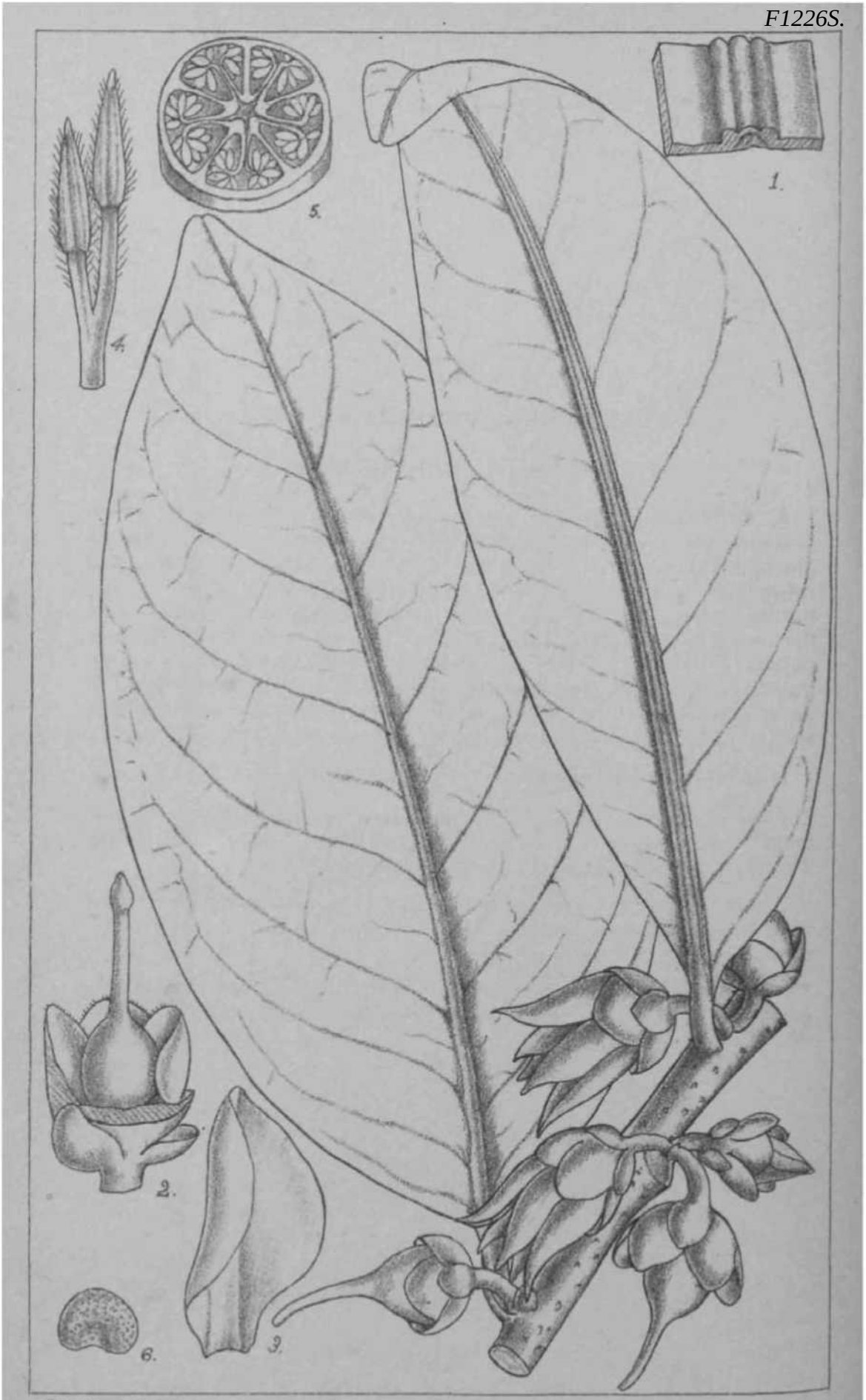
S. leonensis, *Oliv. (sp. unica).*

HAB. Collected on the Sierra Leone Boundary Commission, in the Sama Country, near Luseniya, *O. F. Scott-Elliot.*

Folia 4^-5^ poll, longa, 2^-3 poll, lata; petiolus $_{T}$V~i P°^« longus. *Bacemi* 5-9 poll, longi. *Flores* £-£ poll. diam.; pedicelli ^j—^ poll, longi.

The generic name is contrived to commemorate as euphoniously as may be the important botanical services of my friend Mr. G. F. Scott-Elliot, who accompanied the Anglo-French Delimitation Commission of Sierra Leone in the capacity of Naturalist, and who had previously explored little-known parts of South Madagascar as well as the Transvaal. *Scottellia* is clearly a close ally of my genus *Dasylepis* (' Journ. Linn. Soc' ix. 170), in which the stamens are indefinite. I placed this latter genus in *Tangier* but it may prove expedient to constitute a distinct subdivision of *Bixinece* to include *Scottellia, Dasylepis,* and *Rawsonia.* Dr. Baillon, I observe, regards *Dasylepis* as not generically different from *Rawsonia (Diet, de Botanique).* I have not referred to stipules in the description ; I think they have probably been present, but in our advanced specimen none remain, and tho scars are obsolete.—D. OLIVER.

Fig. 1. Flower laid open. 2. Same, side view. 3. Detached petul, showing pilose adnate scale. 4. Anther, back and front view. *5.* Pistil. 6. Trans verso section of the ovary. *All enlarged.*



Adinandra verrucosa, Stapf.

PLATE 22C6.

ADINANDRA VERRUCOSA, *Stapf.*

TERNSTRCEMIACEJ:. **Tribe** TERNSTRQBMIEJ;.

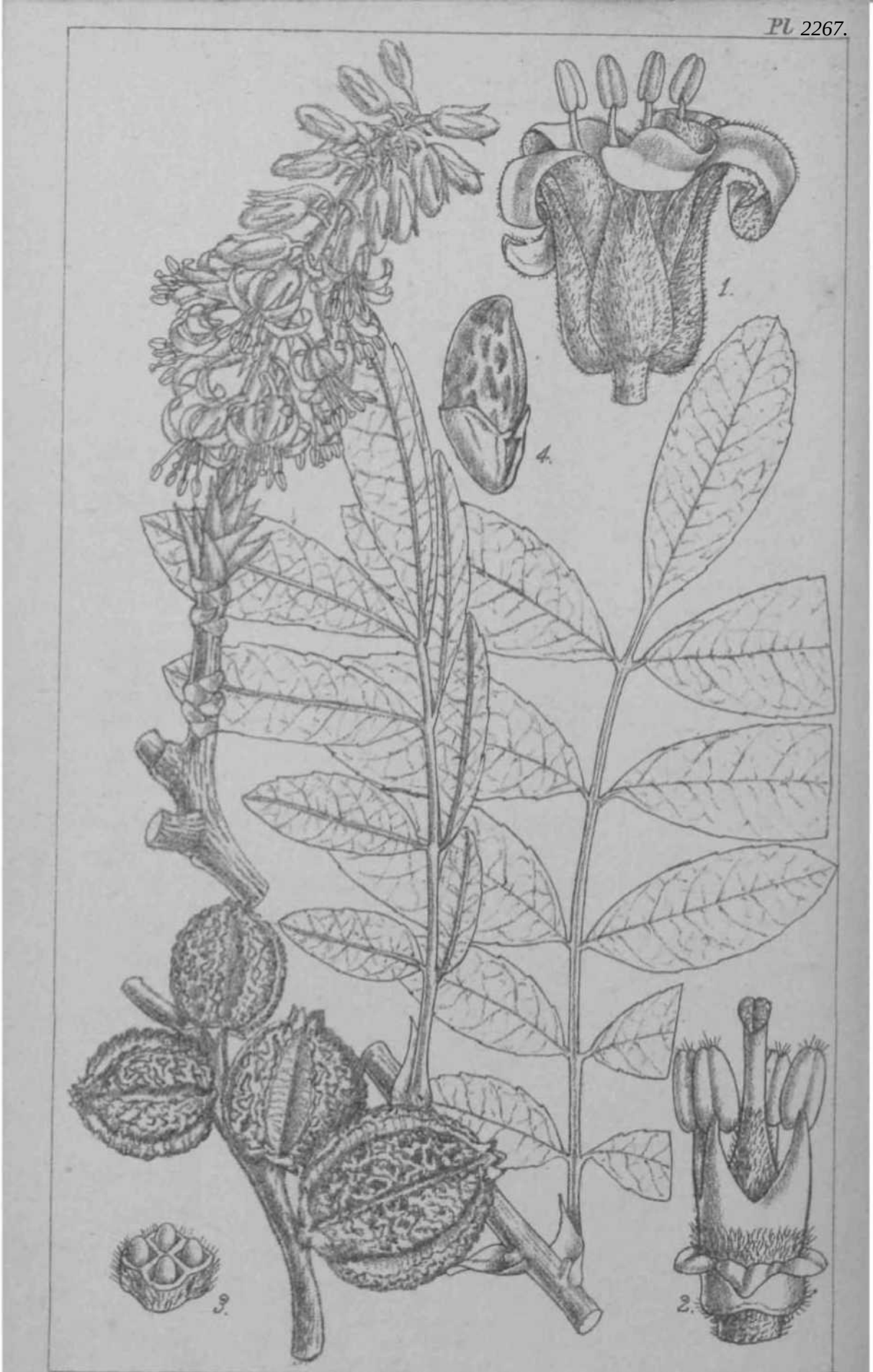
A. verrucosa, *Stapf (sp. nov.)* ; arbuscnla glabra ramis floriferis crassitie pennce cygni verrucoso-lenticellatis, foliis crasse coriaceis oblongo-ellipticis apice breviter obtnse productis emarginatis basi rotundatis costa subtus promincnte longitudinaliter (siceo) bisnlcata, ñoribus axillaribus solitariis geminis ternisve, peduncnio calyce breviore deenrvo apice bibracteolatis, sepalis coriaceis rotundatis ciliolatis, petalis pallide roseis late ovato-ellipticis basi breviter lateque unguiculatis, filamentis basi coalitis cum antheris apicnlatis prsecipue in dorso argenteo-sericeis, ovario glabro ovoideo in stylnm Bensim abeunte, seminibus snbreniformibns nitidis minntissime areolato-scrobiculatis.

HAB. Borneo, Kinabalu, 8,000 feet. *Eaviland* (No. 1,101).

***Folia* 5-6 poll, longa, 2^-2J poll, lata; petioli crassi £-£ poll, longi. *Sepala* 3-4 lin. lata. *Petala* 6-8 lin. louga, 4-5 lin. lata, *Fructus %* poll. diam.; semina ^ -| lin. longa.**

A fine species, well marked in its large very coriaceous leaves, thick midrib conspicnons beneath and bisnlcate when dry, and large flowers.—O. STAPF.

Fig. 1. Portion of leaf showing bisulcate costa. 2. Calyx laid open, and bracteolate pedicel. 3. Fetal. 4. Two stamens. 5. Transverse section of ovary. 6. Seed. *All more or less enlarged.*



Bersama tysoniana Oliv

PLATE 2267.

BEBSAMA TYSONIANA. *Oliv.*

SAPINDACEÆ. Suborder MELANTHEJE.

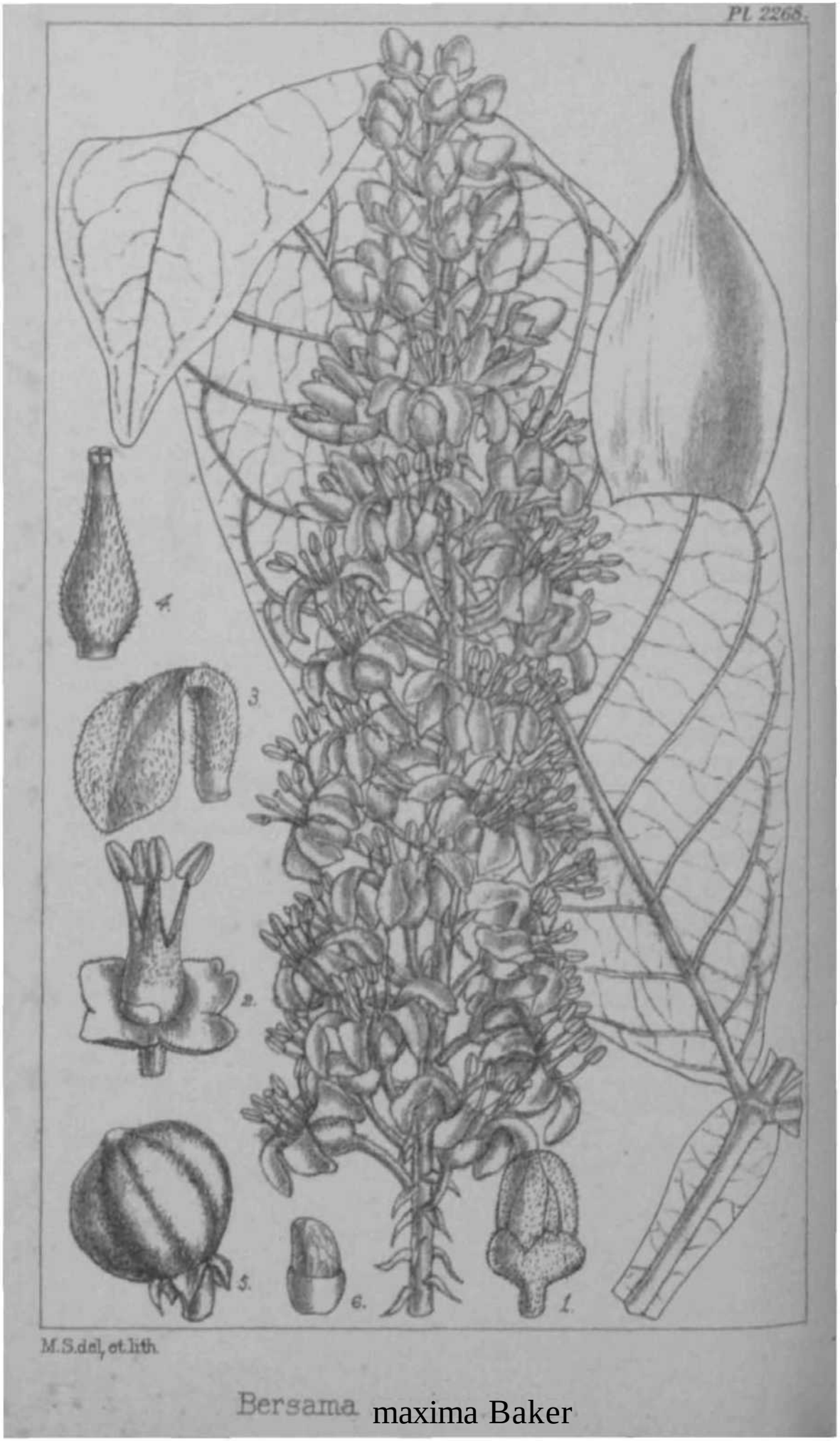
B. tysoniana, *Oliv. {sp. nov.);* foliis £-^-pedalibus, 9-11-foliolatis, rachi gracili aptera pilosula v. glabra, foliolis ovali-oblongis ohtnnis y. breviter apiculatis integria v. apiccm versus parce serrulatis giabris glabratisve subtus venis conspicue reticulatis subscssilibus, racemis termiDalibas fusco- v. ferruginco-tomentosis, bracteis lanceolatis v. ovato-lanceolaiis, sepalis coriaceis oblongo-lanceolatis acutinsculis postico lateralibusque basi gibbosis arcnatim incurvis 2 anticis ad medium v. fere ad apicem coalitis, petalis oblongis calyce dnplo longioribus sericeo-pilosis reflexis, staminibus 4 monadelphis filamentis dilatatis parce sericeis pistillo hirsuto, ovario 4-loculare in styium elongatum attenuato, capsula subglobosa, valvis medio septifieris dorso rugoso-corrugatis longitudinaliter profunde sulcatis arillo carnoso, testa corrugata.

HAB. Kaffraria, *Tyson* (No. 6,216).

Foliola superiora majora l^-lf poll, longa, \ poll. lat. *Racemi* cum pedunculo 2^-3 poll. loDgi. *Capsula* 1 poll, longa, 10-11 lin. diam.

We have a *Bersama*, superficially resembling this species, from Natal, collected by Gerrard (No. 1,428), but scarcely in a state to determine satisfactorily. It is perhaps more nearly allied to *B. abyssinica*, Fres. (which name it bore in Gerrard's distribution) than to *B. tysoniana.* For the excellent specimens in flower and fruit here figured we are indebted to Mr. Bolus.—D. OLIVER.

Fig. 1. Detached flower. 2. Same, calyx and petals removed, showing staminal sheath and lobed disk. 3. Transverse section of ovary. 4. Seed and arillus. ***All enlarged.***



Bersama maxima Baker

BERSAMA **MAXIMA,** *Baker.*

SAPINDACEÆ. Subtribo **Ifxu**ANTHEÆ.

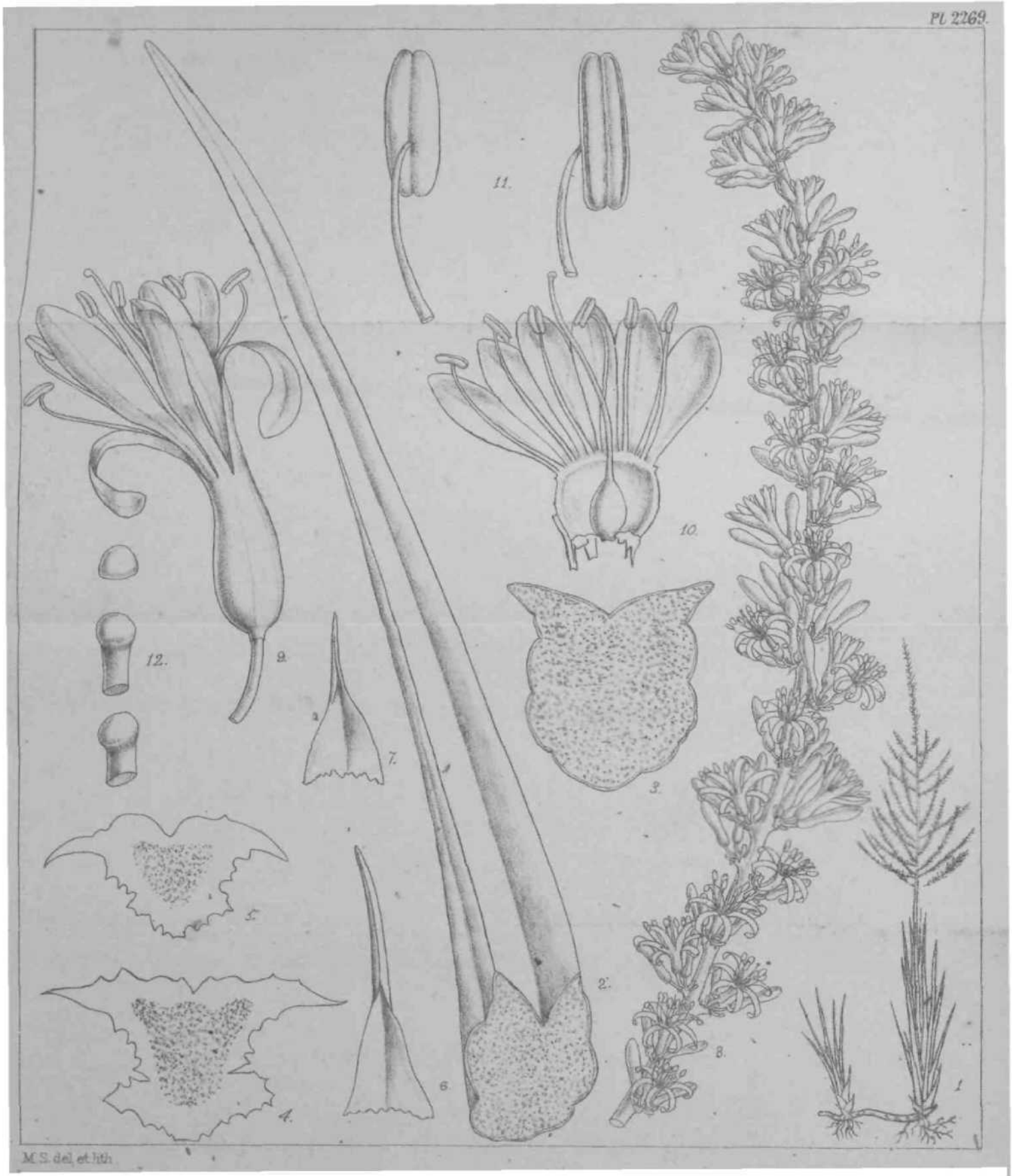
B. maxima, ***Baktr*** **fa 0***liv. Fl. Trop.* ***Mr.*** **i. 43i; arbnicnla** 25-pe(Iitlin, nun in floriferis crassiusculis ferrugineo-hirsutis, foliis **iinpartpisBatia amplia foltoJia** *7* –9-jugis v. inferril>us ultiwrn?* nlilnn^tM **r. oUoogo-alliptioia acatiojcni** is interiutn **broritar aoamiaatii ba«i** | plus minus rutundatiti HuWi'twilibun ^lnltnitiM v. HubiiiH pnccipuo ui costa veni**toQi** jiirtiw, rwlii **apiorai reraoa alata** |>**lu« niaoa** ffrmgi'neo-inrU'llii.Htipulii ititni|R.'iioiHri ovata **aoaninata** OKUIH liTru^im^i »oricc», racemo**imo mnltifloro** eioingato erecto k rtit^incu pcdicollia lluru **nnpiuii** brev. ioribuif fimcifulutiiu sulmpprmiiiiHtis, bmteis prdioollo breviorIIIUM linediri-nubtiliiliH, calyco **profande 5-Ado M'gtonitii penisteatibai** cariaoeui ovatis (•xtunfnrnigiiit'o-birtiK Jimtifm **fora** ml •picem cmilitiH, petalis **oaljoa** IJ-plo loogioribua **imbrioatii** inn **p. florifero refiaiii** fj|>lftuceolato-oblongui obtuw* **antioia panllo angoatioribu** •xtus appre«m piloho-touiL'utomH hittiH **mipra** imulium brovi ter tomentellis, star**ainibna 4 eorolla** subæqulilon^is filainrntiii muMiiiHcutiM itiforna in (ulnnri **ooalida axtu ntpra baaitt tomaotoaia antberii** cllipticin utrinqoo eroarginHtiH, disi'u **poatioo oamoao, ptstillo** hirsut<. ovurio tetragono 4-lo**oolari** in ttlyltitu loii^iiiHculiiui **attonuato,** nti^matn capitellato d**l-lobnlal**o, caps <ila itubglobona ferruginoo-tomoutosaobnctiro tetragona.

IIAIL W. Trop. Afriru, **Coriaoo Island,** *M>tnn* (No. 1,H53).

Folia 2–3-pe i.ui;i; **foliola** t'voliita **tnparton** 6–9 poll. lonpi, *Z\–3½ pol I. luta. *Ra:emu** cum **pedttBCttlo** I'. **8 pad,** lnngiiK; pedicolli fructiferi ½–| polL **loagt** ***P«iala*** Jj-jJ poll, louga. *Oapsula [6* – 1- tin. lon**ja atqiM** luta.

Ncnply fill ed to •'OH plant is a *Bersama* co **iftaotod** l\y Mr. Ituchanan nn **lbs top** Mou **at** Zninba, in **tba** Sliiri Highlands, **Oar •peotmana** liunlly **admit** of pn cise co **unpariion.** li bus ibo HU) sessile leaflets **and** raobis alato above.—1>. OLIVER.

Fig. 1. Bud. 2. Ca **!TX nd ulamtui*. 3. Pctitl. 4. I'thtil. 5. Fruit. «. Seed and arillus. *Ero•rftt (itfttrr* **ft, a// W***arged.*



M.S. del. et lith.

SANSEVIERIA* EHRENBERGII, *Schwf.*

HÆMODORACEÆ. Tribe OPHIOPOGONF.;E.

S. Ehrenbergii, *Schweivfurth* i> *Herb. Nub. Exsicc.* (1865) No. 31; *Baker in Jour*TI. *Linn. Boc,* xiv. 549; foliis snhcylindiicis v. seini-cylindricis facie supra medium profunde sulcata infra medium planius-cula longitudinaliter sulcata marginibus acutinsculis plus minus prominentibus divaricatis, dorso rotundato leviter 5-7-canaliculato, foliis exterioribus parvis ovatis v, ovato-deltoideis apice longe cuspidatis, scapo foliis longior'e, pauicula ampla multiflora, floribus in racemis sublaxis adscendentibus dispositis, pedicellis fascicnlatis (3-6) apicem versus articulatis, perianthio albido pedicello 4-5-plo longiore, segmentis lineari-oblongis obtusis tubo gracili supra ovarium leviter constricto longioribus, staminibus/perianthio sequilongis filamentis graciljbus antheris oblongis dorsifixis, stylo breviter exserto.—S. Ehrenbergiana, *Schwf. Pifcnte utili delV Eritrea,* 30.

HAB. Nubia and Italian territory west of the southern portion of the Red Sea, *Schweinfurth*; Yemen, widely spread in the lower region to the east of Hodeidah, *Schweinfurth*; Somali-land, *tftace.*

***Folia* longiora 4-5 ped. longa, medio 1^-1^ poll, crassa. *Flores* f-| poll, longi.**

This plant was first published by Mr. Baker (i.e.), under the name given to it in Dr. SchweinfurtVs herbarium, in 1875, his description being based upon a small specimen collected by that distinguished explorer of the Red Sea region. In the course of the current year the living plant has been received at Kew from Somali-land, through the good offices of Lieut.-Col. E. V. Stace, H.M. Consul on the Somali Coast; correspondence relative to which, and report upon the commercial value of its fibre, will be found in the ' Kew Bnlletin,' 1892, 129. The Somali plant has not yet flowered, but I follow *Dr. Schweinfurth, to whom sections of the leaf have been submitted, in referring it to *S. Ehrenbergii.* Our plate is chiefly based upon careful drawings supplied by Dr. Suhweinfurth. We give repre-sentations also of transverse fictions of the fresh leaf (from the Somali plant at Kew), which are those described above, as well as of the dried leaf, the latter copied from Dr. Schweinfurth.—D. OLIVER.

Fig. 1. Reduced view of entire plant. 2. Apex of leaf. 3. Transverse section of leaf, about 16 ins. from its base. 4 and 5. Transverse sections of dried leaf. 6 and 7. Reduced outer (cataphyllary) leaves. 8. Flowering branch of panicle. 9. Detached flower. 10. Same, laid open. 11. Stamen, back and front view. 12. Stigma. 9 to 12. *Enlarged* (floral details, and leaf sections 4 and 5, copied from Dr. Schweinfurth's drawings). *

Passifiora Jenmani. M.T.M'.

PASSIFLORA JBNMANI, *Mast.*

PASSIFLORACEJS. **Tribe** PASSIFLOREJ:.

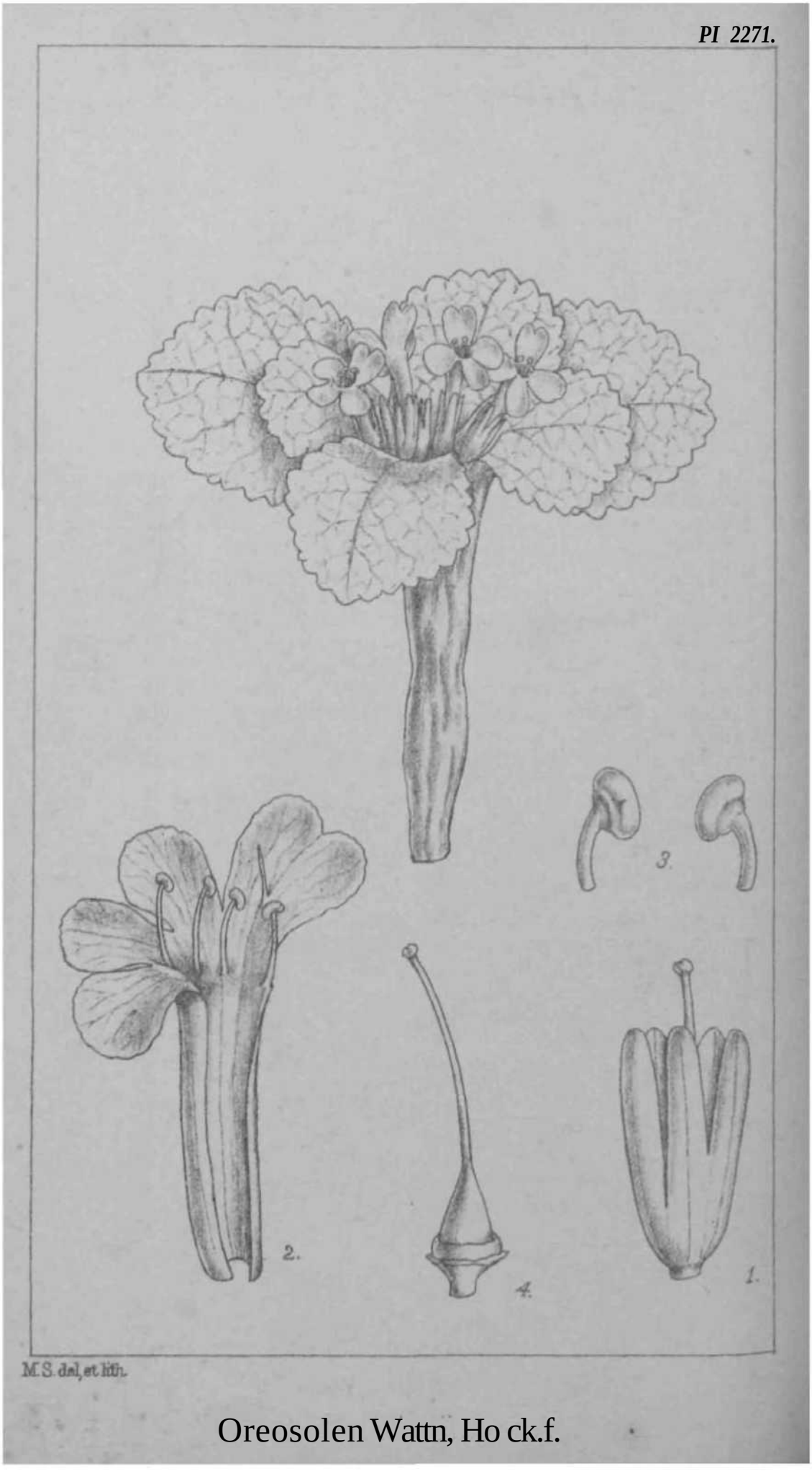
P. (§ Decaloba) Jenmani, *Mast. (sp. nov.)*; ramnlis teretibus pnbernlis, petiolis infra medium glandulis oroicularibus nigrescentibus sessilibus munitia, stipulis lineari-subulatis puberulis caducis, foliis pedatim 5-7-toliolatis, foliolo medio longiore, omnibus subcoriaceis oblongis acutis mucronatis basi in petiolulos breves angustatis, superne glabris, subtns puberulis, pedunculis brevibus cymosim 3-ramosis, ramis lateralibus floriferis, ramo centrali cirriiato, bracteis lineari-subulatis curvatis, floris tubo campanulato puberulo, intus glabro longitudinaliter sulcato, sepalis subcarnosis oblongis obtusis ecorniculatis, petalis sepalis aequiloogis lineari- v. obovato-oblongis membranaceis 1-nerviis arcuatim venosis, corona filamentosa 3-seriali fills extimis petala ©quantibus carnosulis apicem versus spathulatis petaloideo-dilataiis ad margines hyalino-denticulatis, filis inferioribus dimidio brevioribus apice capitatis rugosim lobulatis, corona merabranacea ex ore tubi assurgente arete plicata superne in lacinias membranaceas fimbrilliferas divisa, corona inframediana et corona basilari deficientibus; gynophoro tereti basi incrassato ruguloso, superne glabro, andrcecio basi cupulato infra medium in filamenta dividente, ovario dense cano-tomentello ovoideo stipitulo puberulo insidente, stigmatibus majusculis sub. quadratis, fructu globoso eztus coriaceo, seminibus obovoideis trans-Versim rugulosis.

HAB. British Guiana, on the Mazaruni river; *Jenman* (No. 5,797).

***Foliola* majora 2–3 poll. longa, ¾–1¼ poll. lata; exteriora sæpius minora; petiolus 2–2½ poll. longus; petioluli ⅙-⅓ poll. longi. *Pedunculi* 1–1½ poll. longi; pedicelli 1–1½ poll. longi. *Flores* diam. circ. 2–2½ poll.; tubus calycinus ¼ poll., basi obtusus truncatusve. *Petala* pallide rubro-aurantiaca. Fructns magnitud ine pruni *Armeniacce. Semina* 3/10 poll. longa.**

A remarkable species, technically belonging to the *Decaloha* section, but having more the appearance of a *Granadilla.* In its foliage it is unlike any other species except P. *pedata,* L., otherwise very different. i[J]. *cirriflora* of Jussieu, according to the description, approximates in the character of the foliage, but Jnssieu's plant is imperfectly known and may well be a *Modecca.* De Candolle's P. *septenata* is also doubtfully known, and may be the same ns Jussieu's. Guiana is given as the habitat for both. It is noteworthy that there are now known several distinct species which are endemic in Guiana generally, but whirh have not, as yet, bean found in the neighbouring countries.—
MAXWELL T. MASTERS.

Kig. 1. Vertical section of flower. 2. Iutermediate segments of corona, 3. Portion of inuer plicate corona. 4. Seed. 5. Same, mure highly magnified.



Oreosolen Wattn, Ho ck.f.

PLATE 2271.

OREOSOLEN *WATTII, IIook.f.*

SCROPHULARINEJ£.

0. Wattii, *Hook. /., Fl. Ind.* iv. 318; herba rasa v. subacaulis carnosula c̣rispule pilosuia v. glabrata, radice prinlaria verticaliter dcscendente nonnunquain incrassata, foliis oppositis obovato-rotundatis -ellipticisve obtusis incequaliter crenato-dentatis facie BU peri ore saepe (in sicco) ruguloso-corrugatis, floribus fasciculatis folio brevioribns brevissime pedicellatis, sepalis 5 inferno plus minus coal it .is subeequalibus erectis lineari-oblongis obtusis corolla tiava diraidio brevioribus, corollte labio Buperiore breviter bilobato lobulis rotundatis in aestivatione exterioribus, labio inferiore trilobato lobis rotundatis intermedio minore, stamiuibus didjnamis 2 anticis paullo longioribus filamentis inappendicnlatis glabris antheris liberis v. plus minus cohcerentibus loculis confluentibus, staminodio postico subulato, ovario ovoideo in stylum elongatum gracilem attenuato, ovulis indcfinitis.

HAB. Sikkim Himalaya, Jongri, 14,000 feet, *Watt*; Phari and Lachoong, *Dunghoo.*

Folia 1-1^ poll, longa, J-1J poll, lata, basi angnstata v. breviter petiolata. *Flores* §-1 poll, longi.

Fruit I have not seen. The additional specimens, collected by Dungboo, received from Dr. King since the publication of the genus by Sir J. Hooker, do not enable mo to settle the affinity of the genns, which Sir Joseph suggested as probably with *Veronicece.* The general aspect of the plant suggests relationship with *Picrorhiza* and its allies. The posterior lip of the corolla—*i.e.* the lip bearing the staminode below its sinus—is clearly outside in aestivation.—D. OLIVER.

Fig. 1. Calyx. 2. Corolla, laid open. 3. Anther. 4. Pistil and disk. *All enlarged.*

M.S. del. et lith.

Nematostylis loranthoides, Hk.f.

PLATK 2272.

NEMATOSTYLIS LORANTHOIDES, *Uook.f.*

UuniACiJE. Tribe ALBERTEJS.

N. loranthoides, *Hook, fil. in Gen. Plant,* ii. 110; ramulis craasiusculis giabratis v. parco Retuloaia, foliis brevitor petiolatis subcoriaueis ellipticis v. ovato-ellipticis plus minus acutis, stipuliM basi lato doltoidcis abrupto brevitor subulatia, cymiH hirtellia HetulosiHve pluri-innltiiWm terminalibuH, bracteis ovali-oblongm floribun brovitcr pedicellatiH v. KewsilibuH, cal)cift scgnionto foliacco tubo 2-plo longioro ovali-oblongo v. -oblanceolato rigidnlo fructifero rcticulato, ciuteris minoribuH hubuluto-lunceolatiH 1 sajpiua jviullo inajoro, corolla) tubuloKOO tubo cylindrico upice leviter dilatato lobis litnbi tubo multotios brevioribua rotundatiH obtusis, tubo intiiH unquu ad iiiHcrtionem antlierarum piloso, anthuris an^nHte liiiearibns apice mucronatis basi sagittatis, loculis glabris, liljiiTicntis brevisKimis, Htylo elongato longo cxserto, fltigrnato bifido, calyciH tubo fructiieri longitudinaliter 8-lO-coHtato coHtis tranHVtTHiiu irregularit(>r interrupts, epicarpio parco sotuloso Heriatiiii papilloso ^ixo v. facile Holuto, endocarpio crustacoo v. osseo, Homiiiibus nolituriis upice truncatis fuuiculo dilatato piloatis, ombryono Hubtcrcti, radicula Hupora obtusissiraa cotyledonibus fere u)qnilonga, albumiuo carnoHO ^"ui. N. antfaopliyllo, *Haiti. U null. Sue. Linn. Paris.* 1!>8 ; Pavetta anthophylla, *A. Rich. Mem. Hub.* 101.

HAR. Madagascar, var. *foliis glahris glabratinvc%* Central Madagascar, *Parker,* and in a collection chiefly from 13et»ileo-land, *Baron* (No. 148) ; *v&r.fotiia hirtin,* Central Madagascar, *Baron* (No. 751).

Folia 1-2 (seDpius 1J-1J) poll, longa; 2-1 poll, lata, vel, *in forma nngmtifolia,* 4-5 lin. lata. *Calyx* fructifor lobo foliacco J poll, longo; *Corolla* $-J poll, loaga.—D. OLIVER.

»R. 1. Detached flower. 2. Corolla, lnid open. 3. Anther. 4. Calyx-tube more advanced. 6. Longitudinal section ot ovary. 6. Seed. *All wore or lest enlarged.*

Paundiantha carvthiifbha,HI–1

PLATK 2273.

PAUBKDIANTHA CANTHIIFOLIA, *Uk.j.*

RUBIACEÆ. Tribe MUSS^NDEJS.

P. can|)liifolia, ***Jtyofe.*** */. in, Gen. Plant,* **ii.** ***70*****; frutex ramulis Kriicilibus* Ntrigillosis, foliis ohlongo-cllipticis potiolnfis acuminatis basi angustatis, venis primariis ntrinquo 4—5 venulis transversis Nubparallclis fjlabris ^rlabrtftisvo coHta Hubtas et voni* primariiH plus minus Rtri^illosiH hirtollisve, nt.ipiiliH Hnbulatia e root is rigidiuHRiiliH, <;ynti0 axiltarihaa noopias 1 (-S)-floriH biwiter podunculatin, podicello bi^teoluto cum oaljde parce stripilloso, calycin tnbo brovitor campanulato v. turbiiiato, limbo 4-5-tido tubo subroquilon^o lobis ovato-dt'ltoùloifl, corolluo robesccntiH calyce 2-plo longioriH lobiM ovato-lauceolatiH patentibus rccnrvinvo adstivationo valvatis tabn irquilon^iH, Htaminibus |ftnco hirsuto inHortis, tilanuMitis bnivibufl, nntlwris parviH t^llipticis dorHitixis minuto apiculatis, ntylo orecto calyris limbum Buporanto apico brovitor ohfnso 2-lido disco carnoso basi oiroumdato. —Hiern in Ol!v.** ***Fl. Trop:Afr.*** **iii. 71.**

HAH. Fernando Po, ***Mann*** **(No. 167).**

Frufer **12-15-pedal IN.** ***Folia*** **H-2 poll, lon^a; potioluH ^g—l-p«ll. longus; ftipulflt J-poll. longaa.** ***Ffores*** **iV·iVpoll. longi.**

From iiear Lagos Dr. Rowland sent to Kew in 1890 specimens in fruit of a very cloy ally of the above, though probably a distinct HpccioH. It differs in bavin^ from seven to niuo primary lateral veins in tbo loaves, and tbo ultimate vuinlets are ***\VHH*** **distinctly parallel. Tlie costaaboTeals#iRstrigillose, while beneath it is glabrous, or nearly HO. The fruit (figured from the Lagos plant) is globose, sizoof a small pea, with a smooth thinly fleshy pericarp; the Boeds very numerous, ellipsoidal, with a scrobicnlate crustaccous red-brown testa.—D.** OMVKU.

Fig. 1. Flower. 2. Vertical lection of orary. 3. Corulla, laid open. 4. Seed. ***All enlarged.***

HhabdosU^ma Kir-

PLATE 2275.

RHABDOSTIGMA KIRKII, *Hook. f.*

RUBIACEJE. Tribe ALBKRTEJE.

It. Kirkii, *Hook. f. in, Gen. Plant,* ii. 109; arbuscula glaborrima ramis tetragon is, foliis ellipticis v. oblongo-ellipticis obtusis v. obtuse acutatia, basi in petiolum angustatis, ten ui tor coriaceis nervis]>rimariiH lateral ibns haud conspicuis utrinquo 6 7, stipulis late deltoideis acutis coriaceis persistentibus, paniculis axillaribus folio 2-plo longiorihiiH pedunculatis ram is laxo divergentibus, pedicellis gracilibus mvpo floro longioribus, bra etc is parvis coriaceis lancoolatis ncutis, calycis limbo 5-fido dentibus parvis ovato-deltoideis obtusiusculis, corollw rot at to tubo quam calycis limbo multo longiore, ore dense barbato, lobis tubo iDqailougis v. longioribus oblongis v. lancoolato-oblongis obtnsis QDStivatione sinistrorsum tortis, staminibus exsortis paullo infra sinubus insertis, filamentis brevissimis, antberis anguste lincari-lanceolatis connectivo apice apiculato. Hiern in Oliv. *Fl. Trop. Afr.* iii. 131.

HAD. East Tropical Africa, Qailoa, *Kirk* (No. 105).

***Folia* 3-4 poll, longa, li-lj poll, lata; petiolus £-£ poll, longas. *Stipulce* %-\ poll, longa) atqao latoo. *Floret I* poll. diam.**

The foliage and twigs dry a dark reddish- or purple-brown. No specimens of this plant havo reached us since those originally received from Dr., now Sir John, Kirk, twenty-fivo years ngo. The ripe fruit is not known. I observe that M. Baillon in his ' Histoire dos Plantes,' vii. 431, reduces this gen as to *Galiniera.* The ovules are solitary in our plant; the general *fades* is not that of *Qaliniera,* and until the seeds aro forthcoming, the albumen of which is ruminated in *Galiniera,* I think *Rhabdostigma* should be maintained.—D. OLIVER.

Fig. 1. Bud. showing aestivation of corolln. 2. Ovary in longitudinal section nnd stylo. 3. Corolla laid open. 4. Anther. *All enlarged.*

M.S. del. et lith.

Breweria Heudelotii, Baker.

PLATE 2276.

BREWERIA IIEUDELOTII, *Vutkrr.*

CONVOLVULACEA. Tribe CONVOLVULKJB.

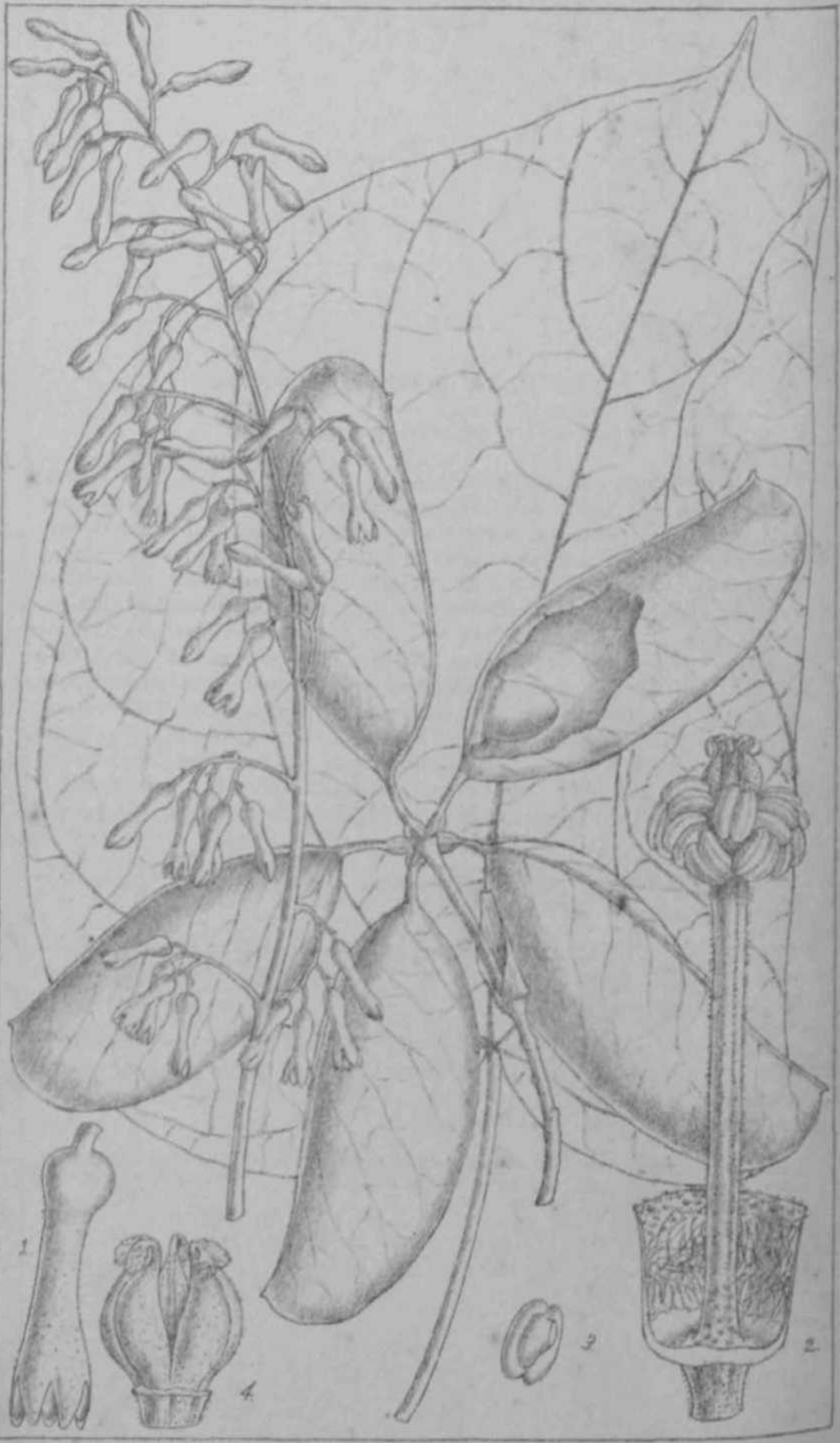
B. Heudelotii, *linker MSS. in Herb. Kew.*; a lie scandcns, glabra, ratnis foliilctis clongatis tcrotibus, foliis submcnibranacois pctiolatiu ovato-ellipticis brovitcr obtuse cuftpidatis nonnunquam cnmrginatis bagi Bospius lato rotundatis integris glabris, floribus pedicellatis in cymis axillaribuH plurifloris cano-tomentellis in tore! inn racomo.sira clongatis Bed folio v. nonnunquam pctiolo brevioribus dispositis, pcdicellis bibracteatis bractcis ovato-ellipticis concaviH, scpalis incanis, 3 interioribus tcnuioribus ovato-ollipticis 2 cxterioribus nccro-ficcntibuH rotundato-cordatiH cxterioro caitcris majore, corolliu inflato-infundibulifornuH calyco G-·8-plo lon^ioris Bc^montis tubo 4-5-plo brevioribus lato ovato-rotnndatin, ovario ovoideo basi disco carnosulo adnato incrassato apice parco pilosulo, BO pa lo ex tori ore fructiforo amplo rotundato membranacco tenuiter VOIIOHO basi auriculato-cordato auriciilis rotundatis imbricatis, sepalo proximo opposito minoro ovato-cordato, interioribus tribus omnino occultis.

HAB. W. Trop. Africa; Soncgambia, *Jfeudeht* (No. 864) ; Siorra Leone Boundary Commission, licrria, near Falaba (No. 5,230) j **and** Duunia, Talla Hills (No. 5,018), *Scott-Elliut.*

Folia 3i-4 (-5^) poll, longa, 2-2} poll, lata; poiiolus \-\ poll, longus. *Flares* 8-13 lin. lon^i, pedicelli { \ poll, longi; bracteole opositn) *Jo-fc* poll, longro. *Stamina* inclusa propo basin tubi insorta, n^Htivationc antheris erectis. *Seyalum* exterius fructigerum 2 poll, longum atque latum.

Mr. Scott-Elliot's excellent specimens in flower and fruit enablo us to furnish a satisfactory fi^nro of a very interesting plant, of which the inadequate material of *M.* Houdelot has long been in this Herbarium. Its nearest ally is a plant collected by M. Soyaux on the Gabun (No. HO), which differs in its obovato, narrowly-cordato-based leaves, pubescent beneath (ii. *mirabilis.* Baker MSS. in Herb. Kew.). *B.* ***Cudonanthti8f*** **Baker** ***(Vrevostea africana,*** **Benth.,** ***Codonanthus ? allerni-folia,*** Planch., in *thii* work, t. 796), is also nearly related, but unknown to us in fruit. I leavo this plant and its allies in *Breweria,* following the * Genera Plantarum,' though ono cannot but feel the generic bond strained almost to breaking when wo compare it, for instance, with the Arabian species, formerly assigned to *Seddera.* It is curious to note how, in this case of a scandont species, the outor sopal simulates the accrescent bract in the similarly scan don t and allied genus *Neuropeltis.*—-D. OLIVER.

Fig 1. f\ilyx and pistil. 2. Corolla, laid open. 3. Pistil. ***Enlarytd.***



M.S. del. et lith.

Sterculia Barteri, M.T.M.

PLATE 2277.

STERCULIA BARTERI, *Mas ten.*

STEBCULIACKJE. Tribe STBBCULIGJE.

8. (§ Firmiana; Barteri, *M. T. Masters in Oliv. Fl. Trap. Afr.* i. 218; arbor ilO-pcdftlis ramis floriferis cnvHsiuRcnliH oortico lrovi flavescento ohductiH, foliis petiolatis membranacois rotundiito-conliformibus broviterobtuso apiculatis subinte^ris v. anpilato-Kinuntis tflabrcscontibus vcrnntiono subtiiH pins minus stollato-liirtis, paniculis]rir(MHinbna rucoiniforiiiibuH in axillisHuporioribnH dispositis iiiilorcHcoiitiam laxiusculani quasi terminalein forinantibus, iloribus pcdicclla:is, ralyoo tubuloHo]U1HTU1O basi Icviter dilatato alabastro apico subdavuto obtuso, lobis 5 tnbo nnilto bntviorihiiH ovatis, tubo intus foro ad basin annu]()S(?tul()so-pil()K() instructo, coImnnaHtiuniiuMi tubo paullo brcviore, H. <J : carpel 1 is TMi^eriH tomcntt-'llis bruvitcr ntipitatis antico anpuste apcrtis biovulatis eti^inatibus reflcxis basi antlicris sessilibus 1M—15 circnimdatiR, carf>ellis fructiforis stipitatis radiatim divcr^ntibus l-sperinin oblon^is . apico obtuuis oblicjuo mucronatis, pcricarpio ten ui tor papyracoo.

HAH. W. Trop. Africa; Niirrilimin. Xup*', *Barter* (No. 1,085); Abeokuta, *Rowlnnd.*

Folia G-10 poll. Ion pa at quo luta; potiobiN 2J-4 poll, lon^ns. *Vanirnla>* 3-8 poll. loujriB. i'7rirrjrcoccinoi4 H lin. lonj»i. *Curfmlla* fruciifura ^-2^ poll, longa, 9*10 HD. lata.

This in vnry iritferoHtinp an tbo only Tropical Afriran rcprosontative of tbe section *Firmiava* of *Stvrruiia.* Kor copious flowering specimens wo aro indebted jbo Dr. Rowland. Foliage and fruit wo previously bud from Uurter.—D. OLIVKR.

Fig. 1. Dctachtd flow«r« ' 2. Longitudinal nection of flower, the upper part of the calyx removed. 3* Back view of au anther. 4. Curprls at time of flowering. *All*

M.S. del. et lith.

Sterculia Murex, Hensl

PLATE 2278.

STERCTŁLIA MUREX, *Ilemsl.*

STERCULIAORJE. Tribe STBRCULIEJR.

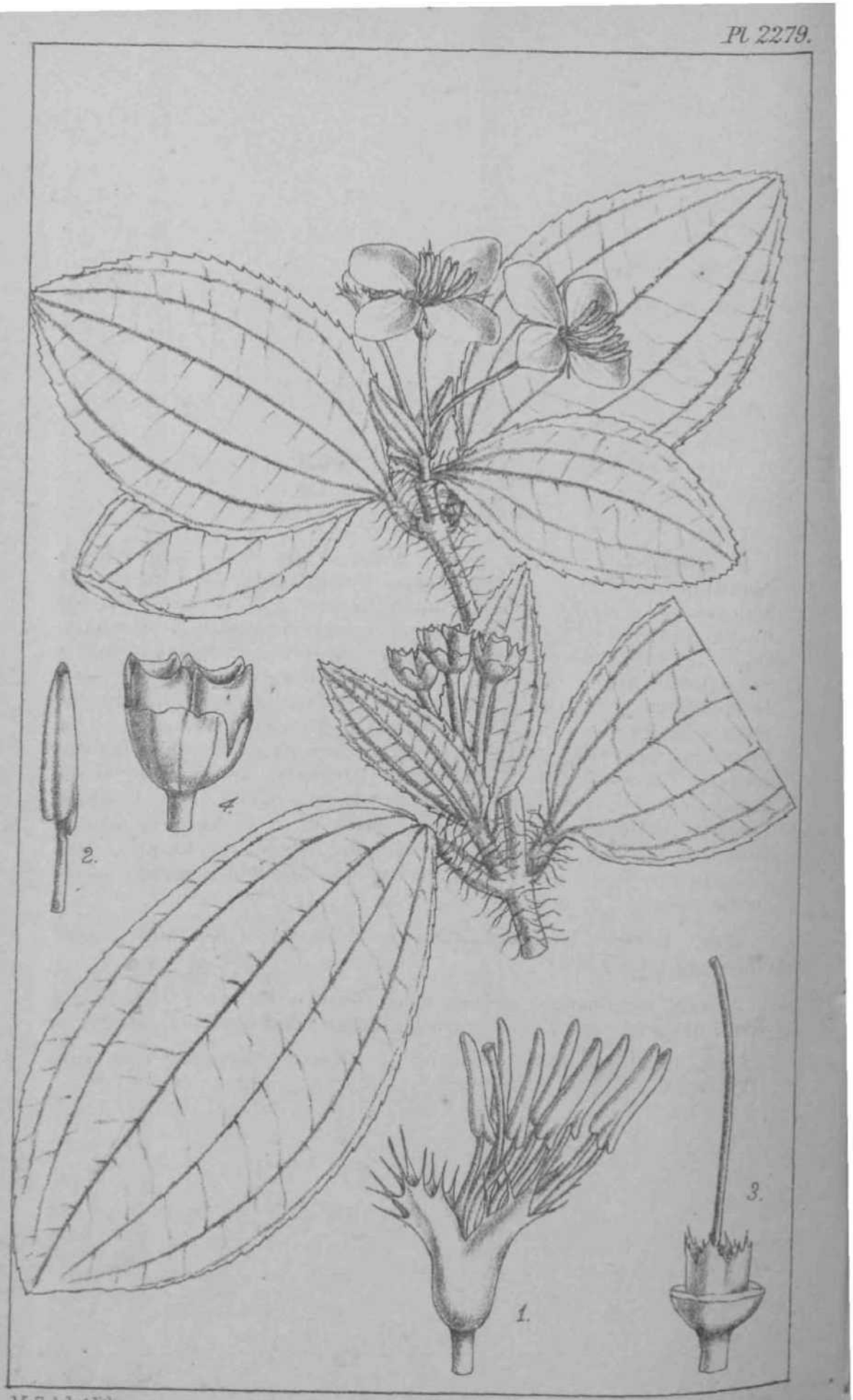
8. Murex, *Hemrt. in Kdẇ Bull* 1&93, 155; foliis digitatim 7-foliolatis longe petiulatis, pctiolo teretiusculo hirtello, foliolis oblongo-ovalibus utrinquo angustatis sossilibus apico acutiusculis mucronatis utrinque (in spp. exsiccatis) venulis parum elevatis minuto aruoliitiin-ruticuJatis subtus mollitcr supra Hcabriuscule stollato-hirtellis, floribus <f in paniculis laxis racemiformibus tomontolliH apices versus ramulorum approximatis dispoaitis, ualycis r»-tidi minuto stellato-hirtolli segmentis lanceolatis auutis,,carpcllis fructiferis maximis crassiusculis lignescentibuH brevi8sime>stipitatis apieo rostratis, apertis subhmni-8plinBriuis dorso spinis validis nunierosis inocquilongis patentibus recurvisve arrnatis efc brovitor fastigiatim v. stollatim hirtollis, intus lrovibuR circ. 8-10-spermis, s^minibus compresso-obovoidois elliptioisvo nigreBcentibas sublrovibus,, hilo parvo, testa crustacoa, albumiu» ceroso.

HAB. South Africa, Transvaal, /. *Medley.Wood* (No. 4,710) ; *K fl. Oulpin* (No. 1,072).

Petioltis 3-6 poll. loncqiiR. *Fnlinla* mnjora ?>\ -C^ poll, longa. *Car-Yellum* apertum cireiter 0-9 poll, diainotro, spinis \-l\ poll, longis lnstractum. *Semi Ha* circ. poḷlicaria.

This species, so remarkable in its largo, strongly-armed fruit-carpelH, IRi with the exception of the raro and very lo<?al *8. Alexandria* Hanr., probably the most southern representative of the genus in the African continent. The fruit of *8. Alexandri* has not, so far as I know, boen described, but that species is quite distinct from *8. Murex* in its glabrous blunt leaflets.—D. OLIVER.

Fig. I. Fragment of leaf. 2, 3, and 4. Detached stellate hairs of indumontum. JJ ftnd 0. Andnecium from above and below. 7. Detached anther, from back. »• Seed. 1-7 *enlarged.*



Phyllagathis elliptica, Stapf

PLATE 2279.

PHYLLAGATHIS ELLIPTICA, *Stapf.*

MELASTOMACEJE. Tribe SONERILEA.

P. elliptica, *Stapf (sp.* wotf.); herba erecta v. e cauli repente radicante a seen dens, superne dense hirsutinscula et imprimis ad nodos setis longis flexuosis vestita, foliis snbsequalibus petiolatis ob-ovatis y. obovato-ellipticis basi obtusis margine serrulato-denticnlatis, supra primum villosulis demutu glabratis subtus proecipue in nervis venisque hirsutis 5-7-nerviis, cymulis 2-3-floris axillaribus v. quasi terminalibns, pedunculo crassinsculo brevissimo bibracteato, pedicellis strictis glaberrimis gracilibus demum (fructiferis) incrassatis, calyce breviter campannlato glabro limbi segmentis 4 ovato-lanceolatis falcato-recurvis deciduis, petalis oblongis obovatisve, antheris fiBqualibus aureis lineari-lanceolatis obtusiascalis basi vix bilobis antice inappen-dicnlatis postice breviter calcaratis, ovario ut in P. *uniflora,* capsula subhemispheerica subtetragona valvulis 4 retuso-fcruncatis, basi reliqaiis caljcinis tennatis irregulariter 8-lobatis lobulis seepius valide naedio costatis circumdata.

HAB. Borneo ; Kinabalu, damp localities, 4,000-5,000 feet. *Low, Haviland* (No. 1,286).

A very well-marked species more nearly allied to P. *tonkinensis,* Stepf, than to other Bornean species hitherto described.—O. STAPP.

Fig. 1. Detached flower, petals removed. 2. Anther. 3. Orary and style, calyx-tube removed. 4. Fruit. *All enlarged.*

Mfade; «tlrth.

Phyllagathis uruf:ora, Stapf

PLATE 2280.

PHYLLAGATHIS UNIPLORA, *Siapf.*

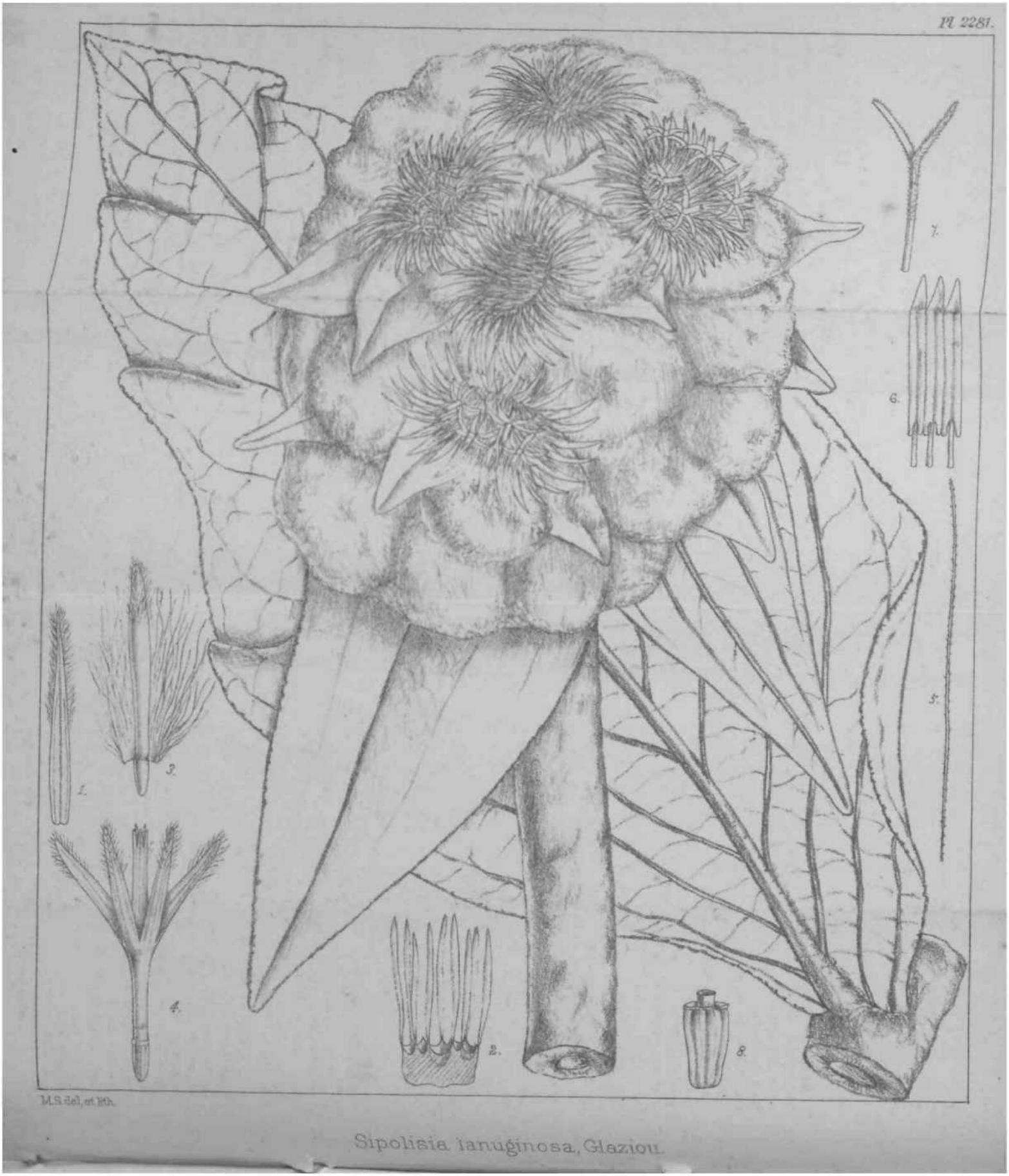
MELASTOMACE*;. Tribe **SONERILEÆ.**

P. uniflora, *Stapf* (sp. *nov.)* ; caule e basi parce ramoso lignescento novellis rufo-hirsutis deraum glabrescente, foliis maxime disparibus oblongo-lanceolatis acutinsculis basi acutis leviterve rotundatis a medio marginibus serrnlatis supra obscure viridibus secundum costam utrinque 3-5 setulis adpressis uniseriatis obsitis, subtus in nervis atfpresse rufo-hirsutis triplinerviis cum nervulis arete intramarginalibus inconspicuis, floribus axillaribus solitariis breviter pedicellatis, calycis tubo breviter subcampanulato subtetragono limbo 4-lobato deciduo lobis e basi deltoidea lineari-subulatis v. falcato-recurvis, petalis obovatis acutis roseia, staminibus 8 aequalibus, antheris basi antice minute bilobatis inappendiculatis connectivo postice in calcar breve abaunte, ovario subgloboso ad ^ calyci adnato vertice coronula obpyramidata tetragona ornato, capsula hemisphrerica obtuse tetragon a glaberrima albida valvulis breviter bilobis, seminibus oblique ovato-oblongiQ granulatis nitidulis.

HAB. Borneo; Kinabalu, 6,000 feet, *Haviland.*

. Herba adscendens §-1 ped. alta. *Folia* majora 1-1^ poll, longa, **i** poll, lata, minora majoribus consimillima minima brevissime petiolata; petiolus £-£ poll. loDgus. *Pedicelli* crassiusculi 1-1^ lin. longi. *Cupiu a* 2-2-^ lin. longa.—0. STAPF.

Fig. i. Detached flower. 2. Anthers. 3. Capsule. 4. Valve of capsule. 5. Seed. *All enlarged.*



M.S. del. et lith.

Sipolisia lanuginosa, Glaziou.

SIPOLISIA LANUGINOSJ., *Glazhn.*

COMPOSITE. Sabfcribe EUYERNONIE^.

Sipolisia, *Glaziou MSS. in Hb. Keio. (gen. nov.). Capitula* **multiflora hómogama tubuliflora in glcunerulum terminalem aggregata.** ***Involucvum*** **bractcis exterioribus fbliaceis ovatis v. iDtermediis ovato-lanceolatis dense argenteo-lanatis, interioribus angnste linearibus acurainatis recurvis apice purpureo-coloratis dorso superne lanatis.** ***Ueceptacnluin*** **foveolatum, foveolce margiqibus irregulariter dentatis et in sqnamis ovario 2-3-plo longioribus planis rigidis lineari-snbulatis productis.** ***Corolla*** **tubo graciliter cylindrico, limbi segmentis anguste linearibus gradatimacuminatis apice dorsaliter albido-pilosis.** ***Stamina*** **filamentis glabris; antheris exsertis . linearibus, apice connectivo lanceolato acutiusculo niembranaceo producto coronatis, basi auriculis breviter prodnctis obtusis per paria connatis.** ***Sfyli*** **rami angustissiiri setulosi.** ***Achcenia*** **subcylindrica v. obscure angalata 10-costata, valleculis intermediis snbplanis v. parum elevatis.** ***Pappus*** **caducissimus, setosus, setis 30-60 biseriatis ineequijongis leviter cornplanatis barbellatis basi angustatis (quasi stipitatis) in tubum corolla9 basin vaginantera coalitis.**—Frutex *ut videtur, ramis cum lana argentea densa indutis.* Folia *alterna sessilia ovaia v. ovato-lanceolata acutata subintegra v. obscure crenata utrinque dense stellato-tomentosa v. subtus lanata.* Rami *capituligeri axillares ut videtur, aphylli deusissims lanati apice sub capitulis exterioribus glomeruli cum bracteis amplis foliaceis ovato-lanceolatis instructi.*

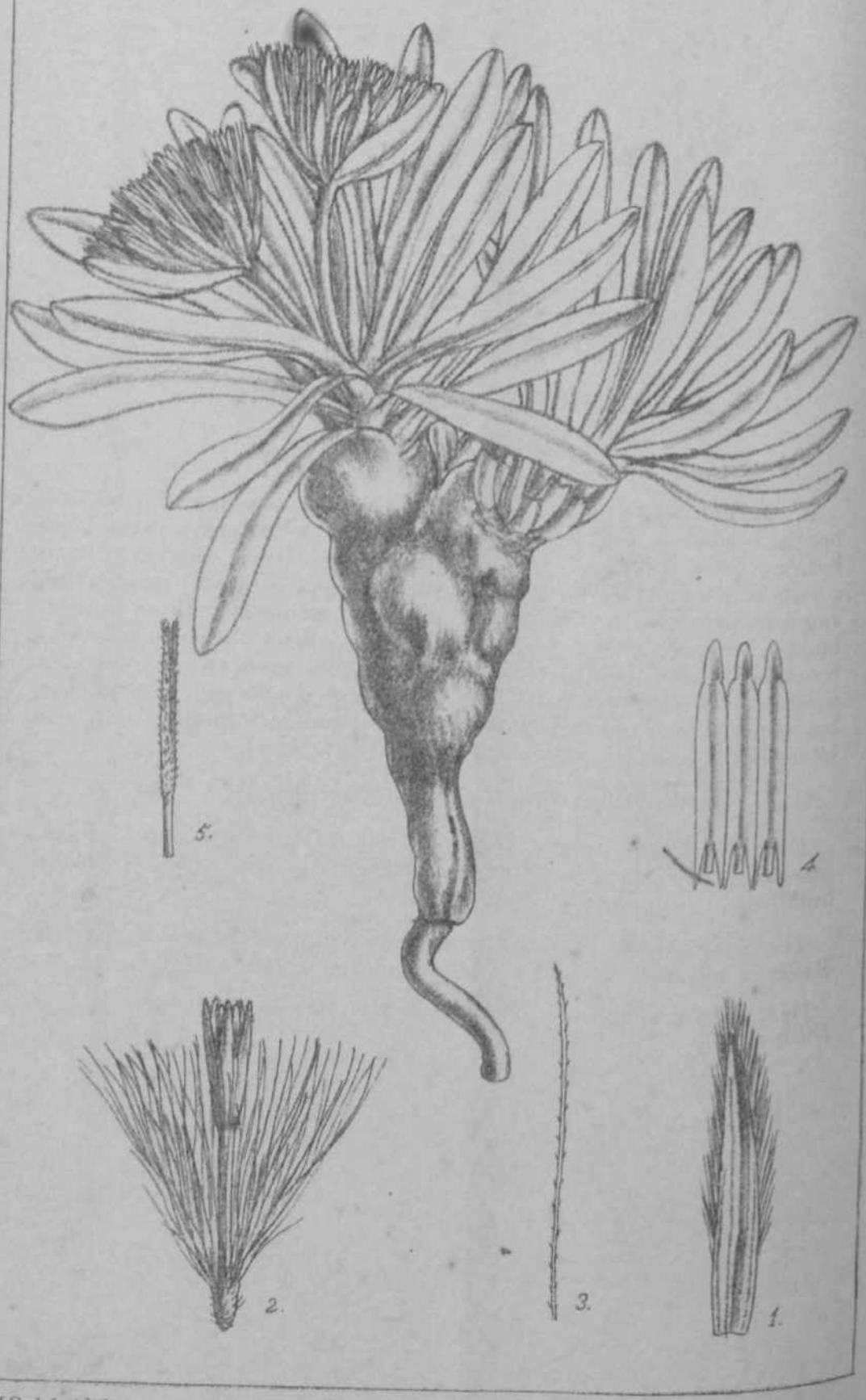
S. lanuginosa, *Glaziou (sp. unica).*

HAB. Brazil, near Diamantina, Minas Geraes, ***Glaziou*** **(No. 19,470).**

Folia **8-12 poll, longa, 8-5 poll. lata.** ***Eami*** **axillares florigeri 1-2 ped. longi.** ***Bractece*** **exteriores 4-6-10 poll. long®.** ***Glomeruli*** **2^-4 poll. diam.** ***Involucri\-1*** **poll. diam.**

In the generic name of this noble Composite M. Glaziou commemorates the services to science of the Abbé M. M. Sipolis, Director of the Seminary of Diamantina, ' qui m'a toujours guidé avec une extreme bonté dans la plupart de mes excursions à Tintérieur de la province de Minas; l'entomologie **lrti** doit ane foule de découvertea precieuses, ®t la science en général beaucoup de services.' On the whole, perhaps, **'t is as nearly allied to** ***Proteopsis*** **as to any described germs of Vernoniacere, unless it be tp some of the Lychnophorero, the genera of which are, I fear, too artificially distinguished. In the same collection with our present plant, M. Glaziou sends another lanate plant with the aspect entirely of a** ***Lychnophora (L. villosissima,*** **Mart.), but the capitula are in terminal ovoid spiciform heads, and the individual capitula may contain from twelve to twenty florets. The corollas and anthers are, unfortunately, too much injured for description, with a figure, in this work.—D.** OLIVER.

Fig. 1. Involucral scale. 2. Portion of receptacle with squamae. 3. Bud, pappus partially removed. 4. Expanded floret, pappus removed. 5. Seta of pappus. 6- Anthers. 7. Style-branches. 8. Achene. ***Enlarged.***



M.S. del. et lith.

Erem[illegible]in.thus purpurascens, Oliv.

PLATE 2282.

EREMANTHUS PURPURASCENS, *Oliv.*

COMPOSITE. Tribe VERNONIACEJ;.

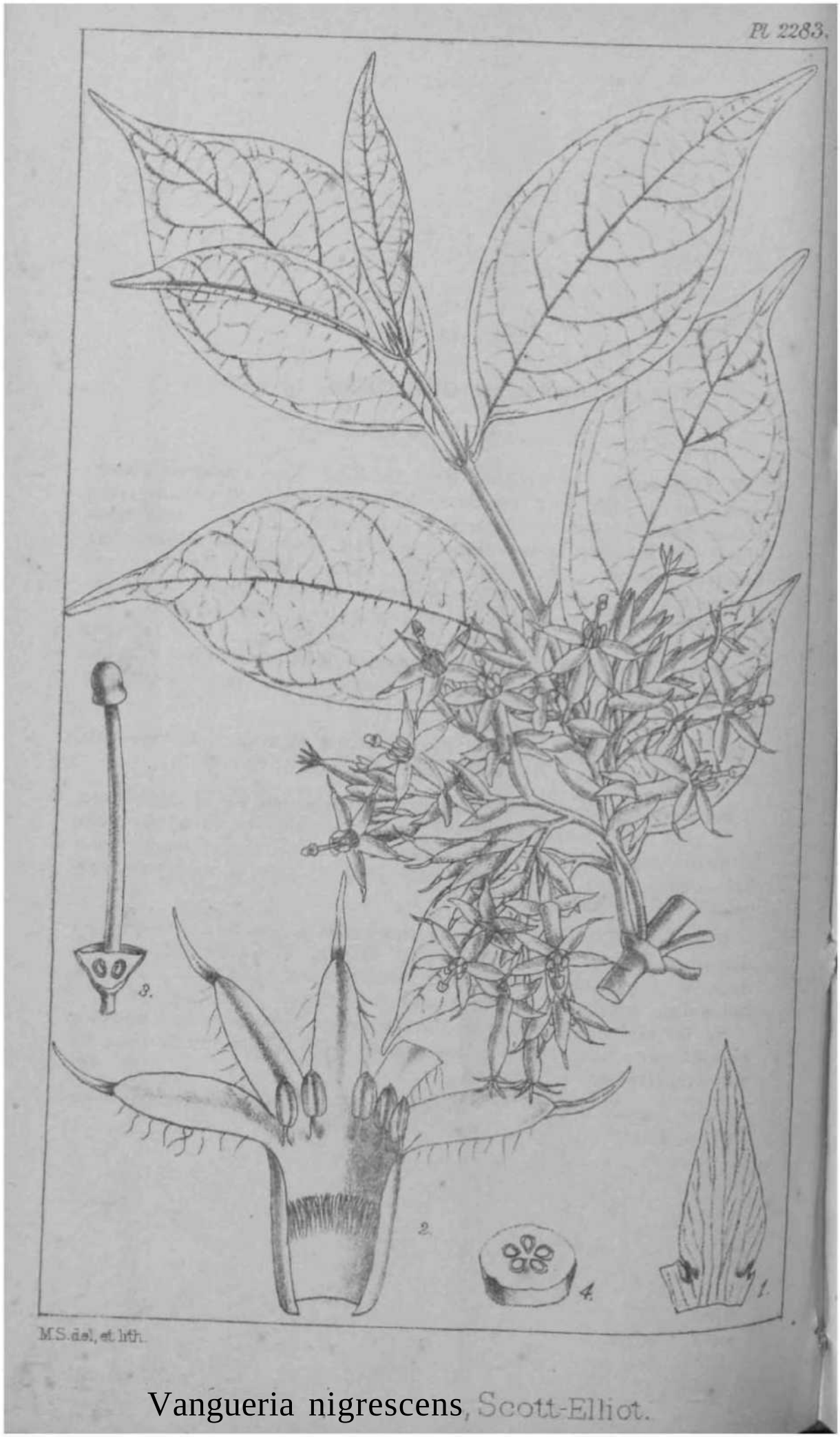
E. purpurascens, *Oliv. (sp. nov.)*; acaulis, caudice lignoso abbreviato basibus foliorum dclapsoruzn dense sericeo-tomentosis arete mduto, foliis linear^- v. oblongo-spatliuiatis obtusis basi angastatis coriaceis marginibus pins minus revolutis supra (in sicco) corrugatim-pugosis primum sericeo-lanatis denique glabratis subtus albido-lanatis, see pis lanatis folio brevioribus, glomerulo hemisplicerico, bracteis paucis foliaceis ' oblongis albido-tomentosis involucratis, involucri 4-6 consestis 8-10-floria, involucro proprio pappo ©quilongo, bracteolis lineari-oblongis Janceolatisve dorso sericco-villosis, ovario 5-costato, pappo purpurascente ovario 4-5 longiore.

HAB. Brazil, Minas Geraes, *Glaziou* (No. 19,404).

Folia ^r^ Po^- longa, i-^ poll. lata. *Glomerulus* 1 poll, diam., capus |-;j- poll, longus. Bractea3 exteriores *4* poll, longi, involucri bracteola3 5-6 lin. longa3.

The nearest ally of tbis species would appear to be *E. eriopus*, Baker, a species known to me only from description.—D. OLIVER.

Fig. 1. Involucral scale. 2. Floret. 3. Seta of pappus. 4. Anthers. 5. Style.



Vangueria nigrescens, Scott-Elliot.

PLATE 2283.

VANGUERIA NIGRESCENS, *Scott-Elliot.*

RUBUCEA. .Tribe VANGUERIEA.

V. nigrescens, ***Scott-Elliot, M88. in Herb. Kew.;*** **inermis, glaberrima, ramis gracilibns teretibus, foliis petiolatis oblongo-ellipticis obtuse acuminatis venis primariia utrinque 5-7, cymis axillaribus plurifloris breviter pedunculatis bracteatis folio multo brevioribus, bracteis o vat is v. ovato-lanceolatis seepe obtusis membranaceis ioternodiis inflorescenti© longioribus, calycis limbo 5-parfcito, segmentis ovato-lanceolatis tubo campanulato v. bemisphfflrico 4-5-plo longioribus, corollce segmentis lineari-oblongis apice abrupte ^audatis tubo subeequilongis parce setoso-ciliatis, staminibus sinnbns corollee insertis segmentis multo brevioribus, ovario 5-loculare, stigmate calyptriforme ellipsoideo.**

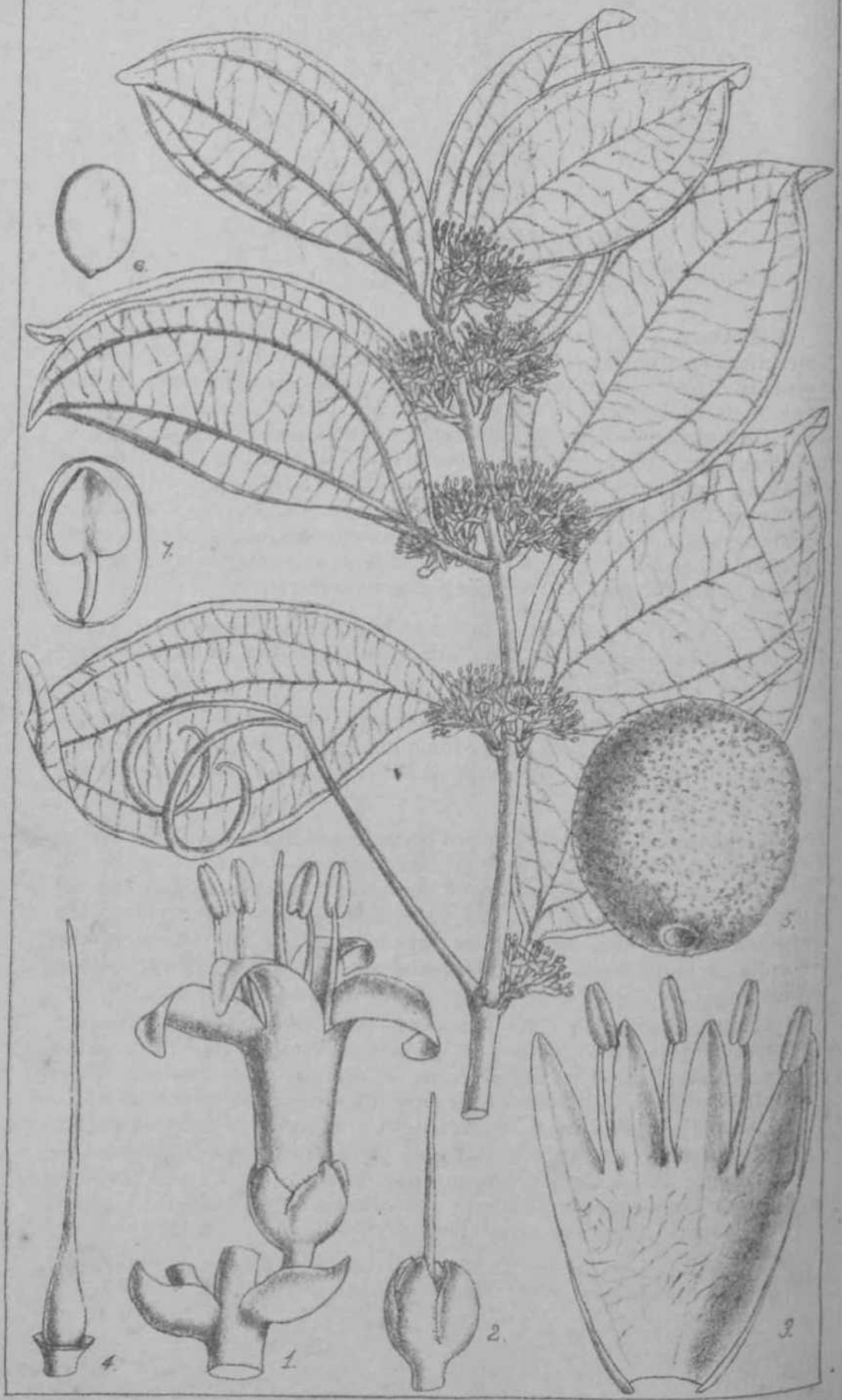
HAB. W. Trop. Africa. Sierra Leone Boundary Commission, near Falaba (No. 5,736) and Kafogo (No. 5,610), ***Scott-Elliot***

Folia **(in spp. exsicc.) nigrescentia, membrancea, 2^-3^ poll, longa, 1-li poll, lata; petiolus ^-^ poll, longus ; stipulro deltoidea?, apiculataa v. acuminated, basi connatae.** ***Pedunculi %*** **poll, longi; biacteiB 4-6 hn. longaB.** ***Calyx*** **segmentis £ poll, longis.** ***Corolla*** **segmentis cum caudis 6-7 lin. longis.**

Very different from the only species with caudate corolla-lobes described in the 'Flora of Tropical Africa/ ***V. velutina,*** **Hiern, with densely tomentose leaves and inflorescence, and** ***V. pauciflora,*** **kc .we n ., with solitary or geminate flowers and truncate calyx.**

So far as I can judge from the specimens, the copious infloresceuco and conspicuous flowers of this species make it a desirable plant for stove cultivation.—D. OLIVER.

Fig. 1. Segment of calyx. 2. Corolla laid open. 3. Pistil, ovary in vertical section. 4. Transverse section of ovary. ***All enlarged.***



M.S. del. et lith.

Strychnos Barteri, Solered.

PLATE 2284.

STBYCHNOS BAKTEBI, *Solcr.*

LOQANIACEJE. Tribe EULOGANIE^:.

S. Baiteri, *Solereder* iiiEagler, *But Jahrb.* xvii. (1893), 556; frutcx <'irrhifcrus glaberrimus, cirrhis bifurcatis curvaturis incrassatis, ramulis obscure tetragonis, foliis coriaccis Jaete viridibus ellipticis brevitor ct latu apiculatis triplinerviis, cymis axillaribus sessilibus v. brevissime podun-uulafcis multifloris, bracteis late ovatis concavis pedicellis cequilongis v. cnsdem brevioribns srepissime ebracteolatis, sepalis 4 ovato-rotundatis breviter late apiculatis v. obtusis, corollas 4-fides segment is liaeari-oblongis tubo ecquilongis tubo intus ssspius plus minus piloso cxtus glabro, staminibus exsertis, bacca globosa oligosperma, seminibus compressis ellipticis, embryone albumine fere eequilongo cotyledonibus planis subcordiformibus radiculte recto sequilongis.

HAB. W. Trop. Africa, Ooitscha, Nigritania, *Barter* (Nos. 1,247, 1,759) ; Sierra Leone Boundary Commission, Madina, Limba Country, *Scott-Elliot* (Nos. 5,569 ; 5,659).

Folia 2-3 poll, longa, 1-1J (-2) poll. lata; petiolus J-£ poll, longus. *Cirrhi* geminati, peduuculati, pedunculus 1^ poll, longus. *Cymai* congestae ^-1 poll. diam. *Flores* 2^-3 lin. longi, albi. *Bacca* Crustacea, i poll. diam.

There are some slight differences between the Niger and Sierra Lcono specimens. The inflorescence of the latter is not quite so compact, and the sepals are connivent over the ovary; but this is after the fall ot the corolla, and is probably the case in the Niger plant, tho specimens of which are not so far advanced. The throat of tho corolla is more densely pilose in the specimens from Sierra Leone, This plant is clearly a very near ally of *Strychnos densiflora,* Baillon in Adansonia, xii. 369, which in its turn is nearly related (by "les plus étroit... ") to *S. Icaja* of the same author, of which, indeed, ho ... may be only a simple form or variety. The leaves of these plants described by Professor Baillon are considerably larger than in ... (in *S. Icaja* ... in length), and in S. *densiflora* a pair of bracteoles occurs at the extremity of the pedicel closely appresscd to the calyx. Bracteoles in this position I fail to find in *S. Barteri,* and, moreover, the flowers are considerably smaller. I no nob ... of the size of the ... in *densiflora.*—*D.* OLIVER.

Fig. 1. ... flower and bracteoles. 2. Calyx. 3. Corolla laid open. 4. Pistil. 5. Fruit. 6. ... 7. Longitudinal section of same. *Analyses all enlarged.*

Aegle Barteri, Hk. fil.

PLATE 2285.

JEGLE BABTERT, *Hook.f.*

RUTACEI:. Tribe AUBANTIE^.

2E. Barteri, *Hook. fil. MSS. in Herb. Kew.*; arbuscula spinosa glabra, spinis rectis gracilibns axillaribus petiolo scopius brevioribrs, ibliis petiolatis trifoliolatis, foliolis membranaccis obovato- v. oblongo-ellipticis obtusis ssepo emarginatis basi in petiolulumangustatis obscure nndulato-crenatis pellucide glanduloso-punctatis, racemia pauci- v. pluri-floris axillaribus v. quasi terminalibus, staminibus c. 15-20, disco crasso ovarii basin cingente sulcato ovario subgloboso v. ovoidco-globoso latiore, loculis ovarii 8, ovula in loculis 1*2-18.

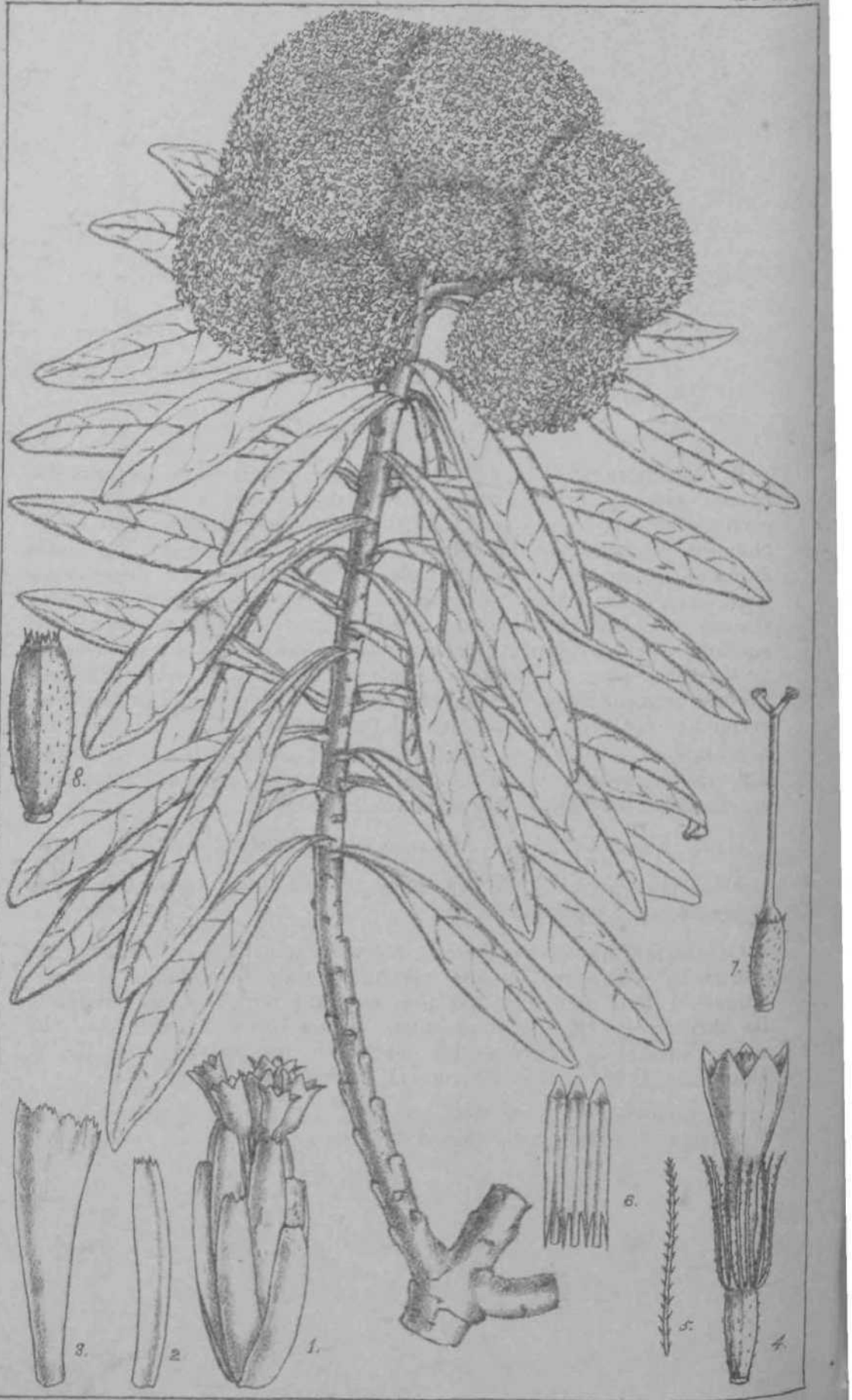
HAB. Trop. "West Africa, Nigritania, ' Ogbomorham,' *Barter* (No. 3,404). Abeokuta, *Rowland.*

Foliola l^-2f poll, longa, 10-14 lin. lata; petiolus 1-1^ poll, longus; petioluli (foliol. centr.) ^-^ poll, longi. *Racemi* 1-2 poll, longi; pedicelli breves. *Calyx* obscure et late rotundaio-lobulatus. *Petala* elliptico-oblonga, imbricata. *Stamina* 13-20, libera. *Bacca* globosa coi'tice ligneo.

Mr. Barter describes the fruit[c] as large as a shaddock, hard-shcllcd aud uneatable. Calabashes are made ot it.' This is a very ne«ar ally of the well-known' Bael Tree' of India *{2E. Marmelos,* Corr.), differing, [a]s pointed out by Sir J. Hooker in the Kew Herbarium, in its moro globose ovary, larger lobed disks, and fewer cells of the ovary, to which differences may be added the fewer stamens and more obtusu leaflets, usually not, as in *2E. Marmelos,* more or less narrowed to an obtuse apex.

Whether rightly distinguished specifically or not, the occurrence of an ^Egle in Nigritania, differing from the Bad chiefly in the floral characters mentioned, is of much interest.—D. OLIVER.

Fig. 1. Hud. 2. Petal. 3. Audroccium. 4. Detached stamen. 5. Pistil and disk. (j. Transverse section of ovary. *All enlarged.*



M.S. del. et lith.

Helichrysum densiflorum, Oliv.

PLATE 228G.

HELICHRYSUM DENSIFLORUM, *Oliv.*

COMPOSITE. Subtribe GNAPHALIEJ:.

H. densiflorum, *Oliv. (sp. nov.)*; frutex ramia teretibus crassitio pennao olorinoo cicatricibus folioram delapsorum notatis, prim urn cano-tomentosis, foliis apices versus ramorum congestis angustc ovali-oblongis obtusiusculis mncronatis basi in petiolam sensim angustatis supra parce appresse tomentosis glabrescentibusve subtus dense cano-tomentosis obscure trinerviis, capitulis 4-6-floris liomogamis in cymas densas breviter pedunculatas umbellatim subglobosas confertis, squamis involucri floribus brevioribus sordidc albis flavescontibusvo 2-3-seriatis paucis oblongis v. interioribus apice levitcr dilatatis minute dontatis fimbriatisve exterioribus linearibus paullo brevioribus, receptaculo nudo floribus ut videtur omnibus ♂, corolla breviter 5-dentata inferne anguste tubulosa, achieniis subteretibus loovibus pilis niinutissimis albis dissite notatis, setis pappi caducissimis paucis rigidiusculis barbcllatis ovario paullo longioribus.

HAB. South-East Trop. Africa, Nyassaland, *Buchanan* (No. 933).

***Folia* cum petiolo 2-2^ poll, longa, j?, poll. lata. *GymoB* terminates congestee, 2^-3 poll. Iat83.**

Of the few species of *Helichrysum* with this form of inflorescence —that is, with few-flowered capitula closely disposed in compact cymes—I find none like our present plant, which is also notable in its shrubby habit, with stout stems, leafless below. It is one of the many interesting novelties for which we are indebted to Mr. J. Buchanan, O.M.G., of Blantyre.—D. OLIVER.

Fig. l. Capitulum. 2, 3. Involucral scales. 4. Floret. 5. Seta, of pnppus. G- Anthers. 7. Ovary, corolla removed, and style. 8. Acheno, *All enlarged.*

Commiphora caryaefolia Oliv.

PLATE 2287.

COMMIFHOBA CARY-ffiFOLIA, *Oliv.*

BUESERACEiE.

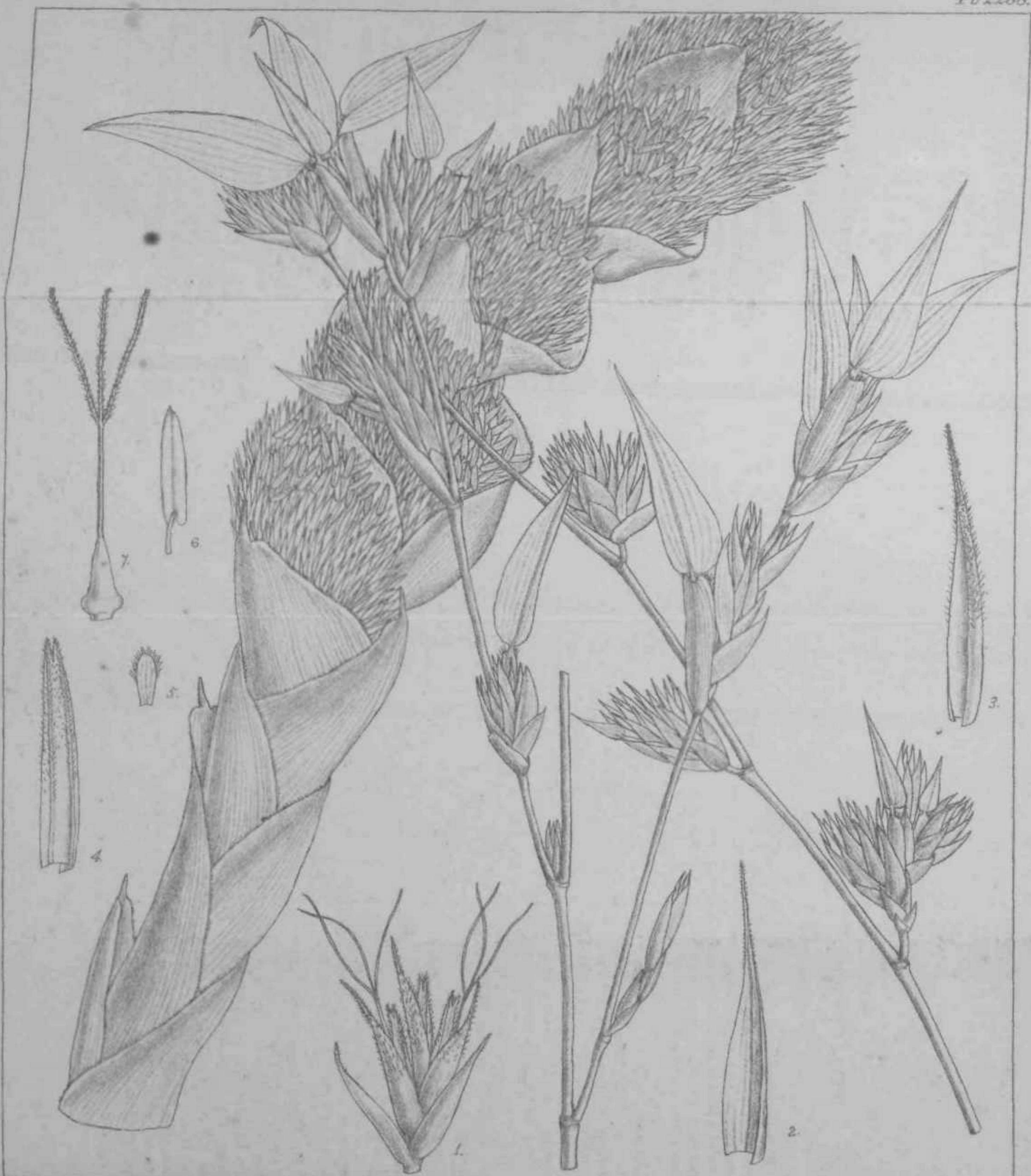
C. carysefolia, *Oliv. (sp. nov.)* ; glaberrima, foliis imparipinnatis, foliolis lateralibus 3-5-jugis oblongo-lanceolatis basi pins minus rotundatis apicem versus angustatis acutiusculis v. acuminatis obtuse- v. crenato-serratis, paniculis proococibus ad apices ramulorum congestis foliis brevioribus interrupte spiciformibus, ramulis secundariis brevissimis obsoletisve floribus propterea fasciculatim congestis sessilibus v. sub9essilibus, drupis ellipsoideis pericarpio exteriore primum carnosulo demum in valvis tribus secedente, pyrenis ellipsoideis leviter compressis o^seis, basi carnosulis quasi-arillatis, monospermis (loculo altero abortivo).

HAB. South Africa, Natal, *Wood* (Nos. 1,046, 1,409, 4,095). Kaffraria, near Komgha, *Flanagan* (No. 1,107).

Folia 10-14 poll, longa, petiolata; foliola membranacea 2i-4 poll, longa, J-1J poll. lata. *Panicnlon* 1-^4 poll longae. *Calyx* 4-fidus, segmentis ovatis, rostivatione valvatis. *Discus* adnatus tnbum calycis vestiens. *Petala* fiavescentia, perigyna, calycis tubo inserta, ovata, apice (in alabastro) mucrone incurvo, deinde obovato-clliptica, recurva, 8-cuta. *Stamina* biseriata, perigyna, margine disci inserta. *Ovarii* rudimentum (in fl. ^) minutissimum. *Drupa* §-J- poll, longsi, pyrenis ,h poll, longis osseis, basi carnoso-incrassatis rubris v. aurantiacis.

I follow Dr. Englor's ' Monograph of Burseraceae* in adopting Commiphora as the generic name of this species, which resembles *C. Harvcyi,* Engl.* of Natal more nearly than any other in the Kow Herbarium, though differing from it at first sight in the contraction of the lateral branches of the inflorescence, which has the appearance °f an interrupted spike with congested flowers. *C. erythrcea,* Engl., t-he original *Hemprichia* of Ehrenberg, from the Rsd Sea, has much in common with our species, and the puzzling description of the fruit given by Ehrenberg is quite intelligible on examination of that here figured. He describes the pericarp as ' sesquiplex, externum coriaceo-carnosum, . . . 2- ad 4-valve, deciduum; internum dimidiatum, tatissime rubrum, succulentum, . . . arillum mentiens, pyrenas basi

* Indeed, Wood's specimen No. 1,409 is cited by Engler as C. *Harveyi.*



M.S. del. et lith.

PLATE 2288.

PHYLLOSTACHYS HETEROCLADA, *OUV.*

GRAMINEJE. * Tribe BAMBUSEJE.

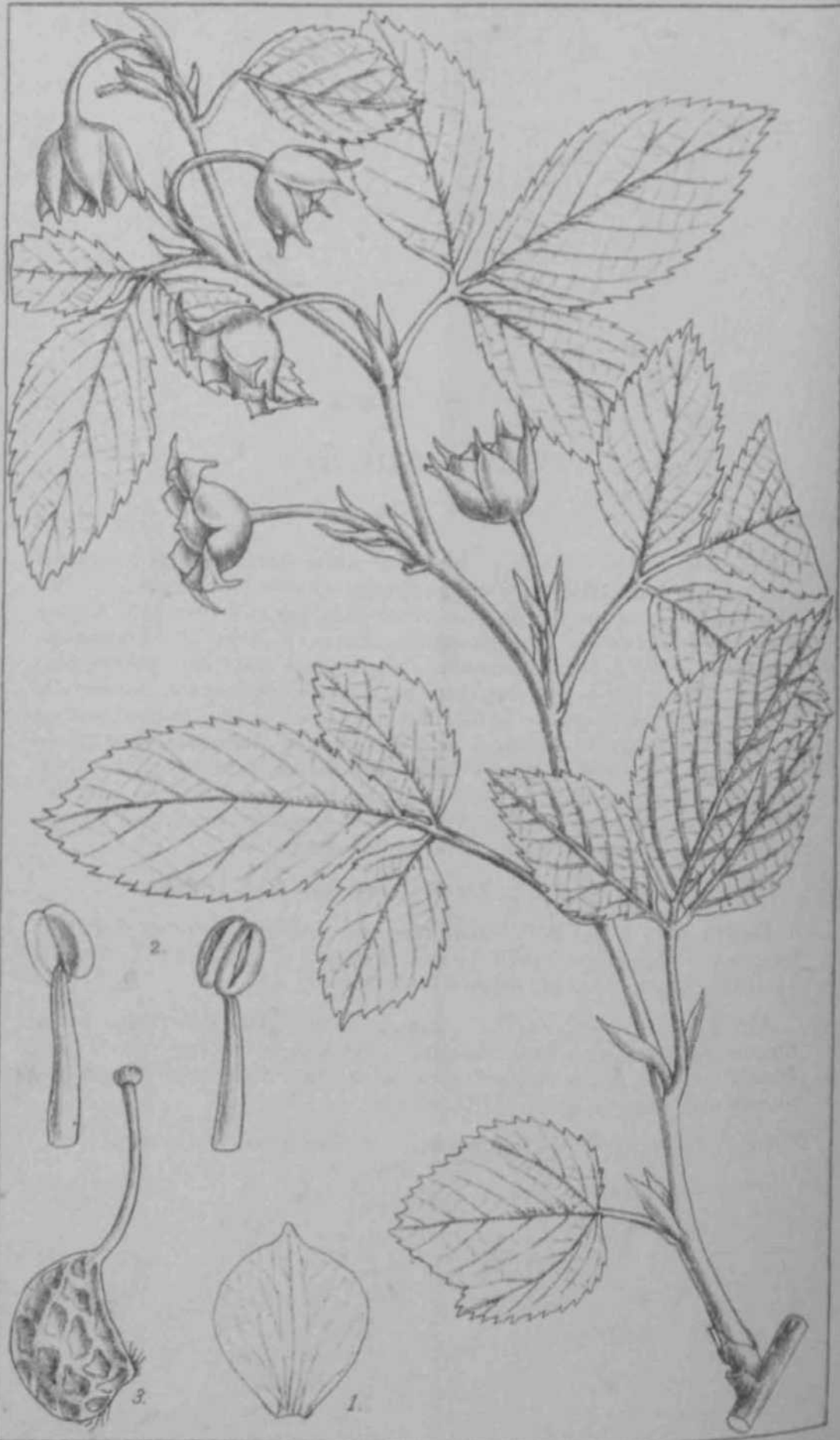
P. heteroclada, *Oliv. (sp. nov:)* ; 1-3-pedalis, culmis foliiferis strictis gracilibus ramosis glabris internodiis ssepius 1^-2^ poll, longis subteretibus v. inferne semiteretibus, foliis lanceolatis acnminatia basi rotundatis lamina brevissime petioJata glaucescente glabra v. glabrescente margine scabra, vaginis muftinerviis glabris hirtisve ore sctosofimbriatis, S|)iculis normaliter 3-floris cum flosculo terminali imperfecvo v. in ramulis foliiferis in fasciculos densos srepius turbinato-hemisphscrioos axil lares congestis v. in ramis scapisve pedunculatis radicalibus simplicibus v. ramosis aphyllis sed late bracteatis dense fastigiatis, bracteis in inflorescentiis radicalibus late ovato-rotundatis graciliter multinerviis apiculatis fasciculos floriferos subeequantibns gluma florifera lanceolata acuminata ecarinata dorso apicem versus hirsuta inferiore creteris longioro spicula fere requilonga 7-9-nerve, palea plus minus bicarinata dorso hirsuta.

HAB. China, Szechuen, *Dr. A. Henry* (No. 8,833) ; and in a collection from West Szechuen and the Tibetan frontier, chiefly near Tachienlu, 9,000-13,500 feet alt., *Pratt* (No. 384).

Eami aphylli dense floriferi adscendentes 10-12 poll, longi; ppdunculi bracteis 2-3 poll, longis vacuis arete amplfixicaulibns vaginati; bracte© primariae floriferaa 1 poll, long©, 1-1J poll, latie. *Folia* 1^-2 poll, longa, 5-7 lin. lata, Vagina fasciculo spicularum fere seqmlonga. *Antherce* exsertae, lineares, obscure mncronulatflp, basi breviter sagittatoo auriculis obtusiusculis. *Stylus* 3-fidus, brachiis gracilibus. *Lvdiculce* 3 obovataa v. rotundat&d, ciliatse.

Dr. Henry's specimens reached us—owing, I believe, to his illness at the time—without his usual number and corresponding remark, so that it is difficult to speak with certainty as to the usual dimensions and habit of this interesting plant. The leafy sprays nearly resemble those of a bamboo received from him from Ichang (No. 4ôO), called the * Water Bamboo/ common there, but not found in water so far as Dr. Henry was aware. Our plant is related to Phyllostachys nidnlaria, *Munro,* in ' Gardeners' Chronicle,' 1876, ii. 774 *(undescribed),* a bamboo then cultivated at Florence. Thg upper florets of each spikclec appear to be staminate.—D. OLIVER.

1% I. Spikolot. 2. Empty glume. 3. Flowering glume. 4. Palea. 5. Lodiculo. 6. Anther. 7. Pistil. *All enlarged.*



M. S. del. et lith.

Rubus Lowii, Stapf.

PLATE 2289.

RUBUS LOWII, *Stapf.*

ROSACEÆ. Tribe HIBEÆ.

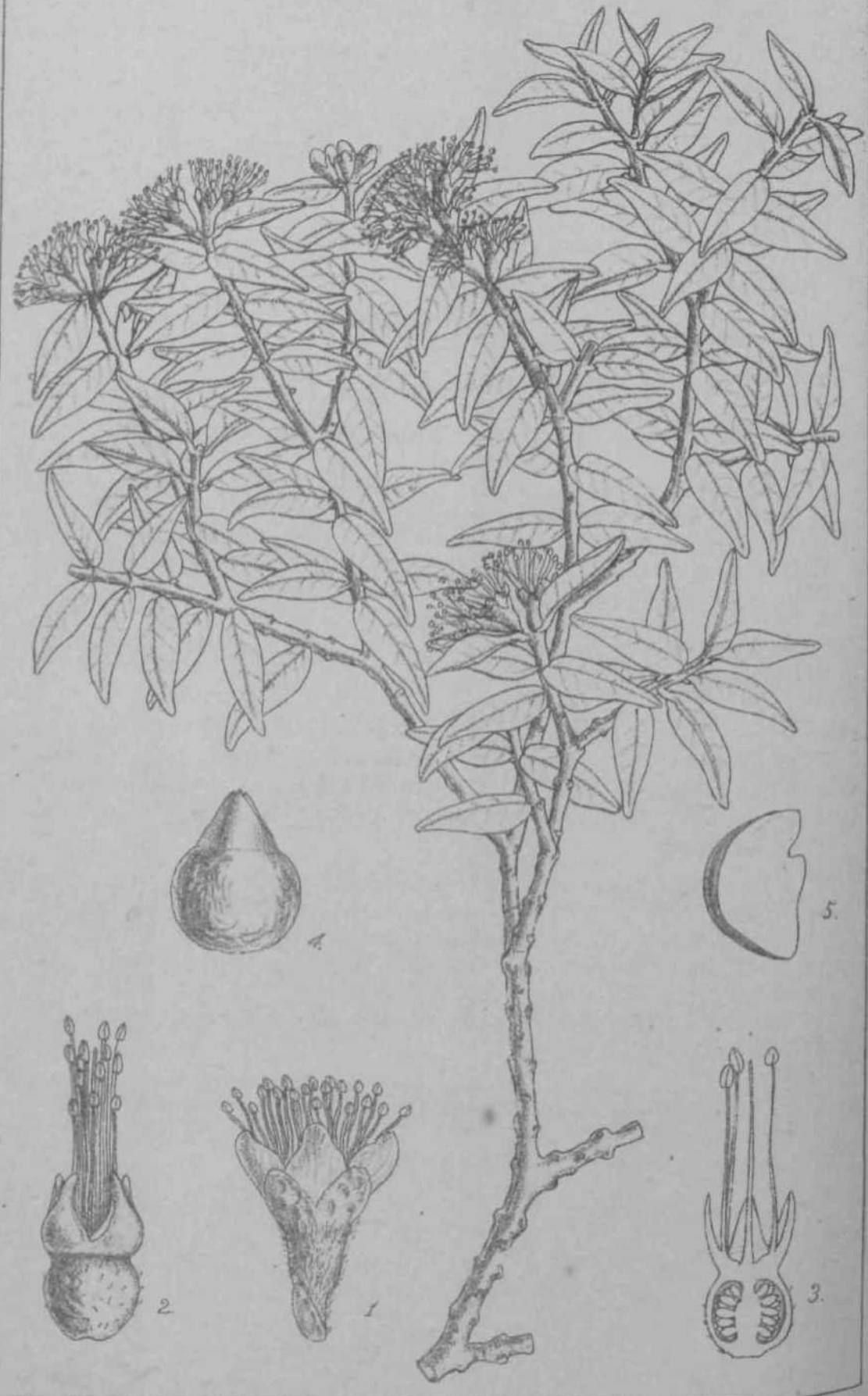
It, Lowii, *St-tff (.-f.* ***not*** •; **ioennu,** nun in leietibus mgratccntibnii pili« Hparsitt **tomentefiia tandem glabratis, foliii 8- (interd** . . . 1-) folio. latis. futiulirt **breriter petiolalatii orato»eUiptiaii v.** *t* **twmisftlj BMion** l'liu tiiiiitm obovnto basi cuncato, uctitis v. **bsreriter toctninmtu** duplicato-sciTutid norvin **primariifl** plus **misu im]**pressis **nibtai phm** minus **nine •artoeo*pUostt| petiolu tomenteLUa, ittpnlii lacoeofatia** sæpi***on*** **mtegrii, Soriboi Mdl»riboi solitariifl, podioellii natantibui paroe piloaii, oalrou fcobo bid late rotnndato** *t.* **trnooato paroe ntow •"; glabrato, tegmeniia** ovatis loi**ge acuiminati*, petalii** n)Kei« **oal/oe Bubbrftrioribna,** .stjiminilms **labiiDMeriatM, reoeptaonlo detue binrato-pUoso, acheniit** circ. 0 **obliq**ue ovo **idea** fnvtulftto-roticulatia **glabria *pioe** stylo pereiBteute longiusculo glubro coronutis.

BaB, Jturnoo, Kinabalu, 9,000-13,000 feeb, *Low, Havita,d.*

Foliola **J-1J (-2^)** poll, longa, lateralia **minoi**a; petiolus 6 **ID** lin. loUgoa. ***PedieelU 4-1*** poll, longi. *Flares* ***§-$*** **poll** diniu. ***Aoka**nia* 1½–2 I in. K'ugii, stylo **pens**istente 2 lin- **longo.**

Allied to *ItnfauimUtuuiyWaW.,**tad*** *R. alpestris,* **Bl.; differincrfromtfao raroier** in **Ita mori** erect fruticose **babit and retioalate frait-oarpels, f"'"! tin- latter La tiu abienoe** of tu-ulrf. **broader leaflet!** ***with*** **impra**ssed ""•v< s and aolitury **Bowers.—O. BTAPF.**

Fig. 1 I'ILII. ***t,*** **9tuua, back and front**ipe **ewptL** *Attmrfm**ed.*



M.S. del. et lith.

PLATE 2290.

MYRTUS FLAVIDA, *Stapf.*

MTRTACEJS. Tribe MTBTEJB.

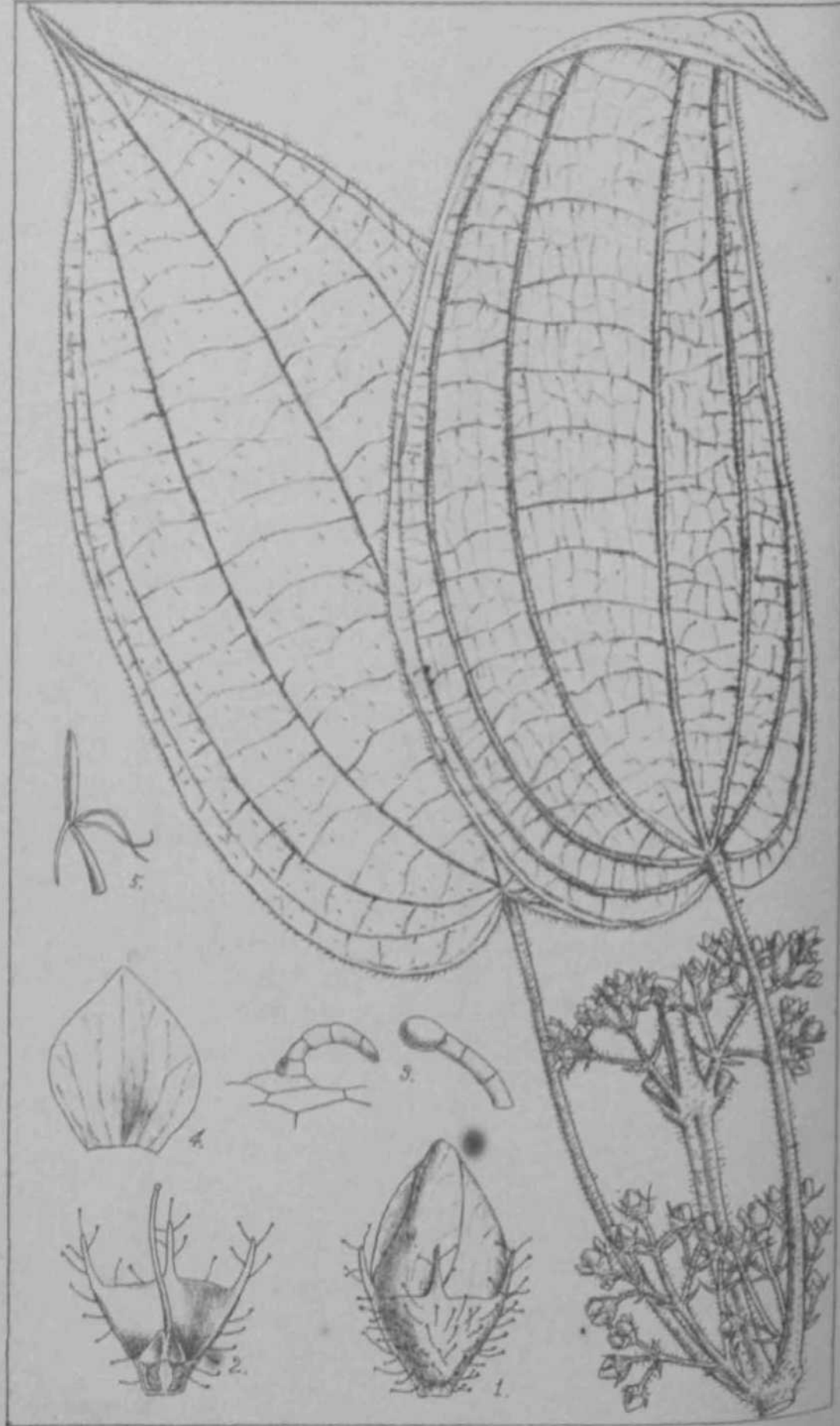
M. flavida, *Stapf* (*p. *nov.)* ; arbuscula v. frutex ramosissimus, novellis albido-villosis, foliis oppositis patentibus reflexisve brevissime petiolatis rigido coriaceis lanceolatis obtusis basi rotundatis marginibus plus minus revolufcis supra glabris glabratisvo subtus prcecipuo in costa sericeo-villosulis, floribus tetrameris axillaribus solitariis binis ternisve brevissime pcdicellatis, calycis tubo villosulo turbinato lobis ovato-deltoideis tubo suboequilongis, ovario biloculari, ovulis in utroque loculo 10-14.

HAB. Borneo, Kinabalu, 5,500-7,700 feet, *Haviland.*

Folia ^ (-1) poll, longa, basin versus]—} poll, lata; petiolus 2~1 Hn. longus. *Petala* flava. *Stamina* biseriata. *Stylus* filiforrais, stigmate punctiforme. *Baccce* calyce persistente coronatce, globosre, 1^-2 lin. diam.

A remarkable species, and the first of the genus known to us from the Archipelago. Its habit is similar to that of If. *myricoides,* H.B.K., or *M. microphylla,* H.B., of South America. Our specimen from tho loftier station, with more coriaceous revolute-margined leaves, approaches the New Caledonian *M. rufopunctatm,* Brongn. and Gris, and perhaps *it Metrosideros,* BailL, of the Bellenden-Ker Mountains, Queensland.— O . STAPF.

Ejg. I. Flower. 2. Same, farther advanced. 3. Longitudinal section of same. 4. *ruit, with persistent connivenrcal^x-lobes. 6. Seed. *All enlarged.*



M. S. del. et lith.

Drièzsenia glandulìgera, Stapf.

PLATE 2291.

DRIESSENIA GLANDULIFERA, *Stapf.*

MELASTOMACEÆ. Tribe OXYSPOREÆ.

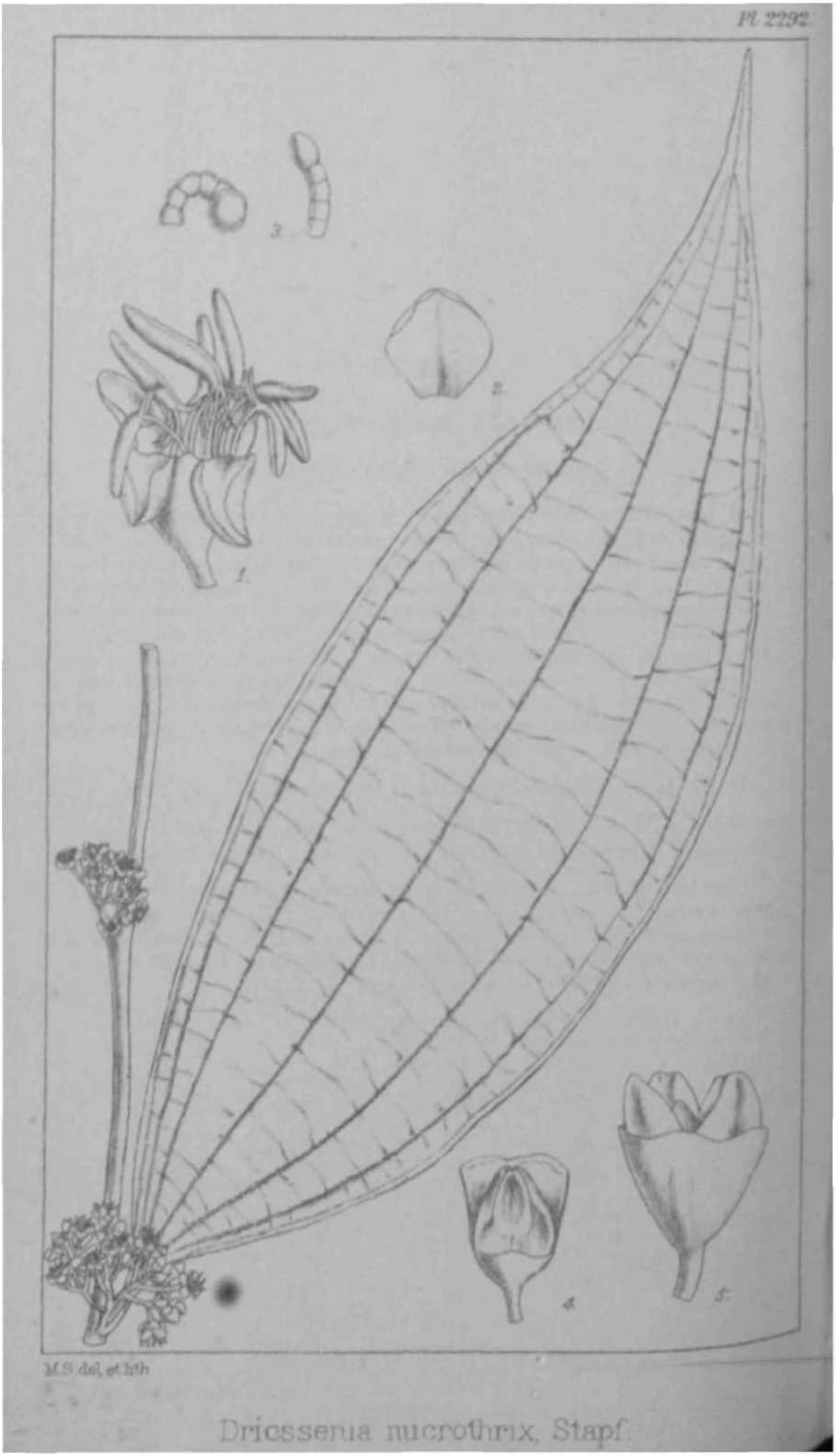
D. glandulifera, *Stapf* (sp. nova); frutex 4-pedalis, foliis longe petiolatis ovato-ellipticis breviter acuminatis basi cordatis [illegible] angusto membranaceis [illegible] brevibus [illegible] transversis margine [illegible] ciliatis [illegible] et præterea pilis [illegible] glanduligeris [illegible] transversis panic[illegible] setigero [illegible] breviori- brevit[illegible] dispositis, calycis tubo turbinato- [illegible] oso-setc[illegible] subulatis, petalis ab [illegible] aureis [illegible] flexuosis [illegible] calcare [illegible] auctis, ovario vertice coronula breviter 4-lobata [illegible] oruato.

HAB. Borneo, Kinabalu, [illegible]000 feet. Haviland (No. 1,1[illegible]4).

Folia 4–7 poll. longa, 2–[illegible] poll. lata; petioli [illegible] poll. longus. Panicula circ. 1 poll. longa; bracteæ [illegible] lanceolatæ, parvæ.

See remarks under the following plate. — O. Stapf.

Fig. 1. [illegible]. 2. Vertical section of ovary and calyx-tube. 3. [illegible] hairs. 4. Pet[illegible]. Author. All enlarged.



Dricssenia mucrothrix, Stapf.

PLATE 2292.

DRIESSENIA MICROTHRIX, *Stapf*.

MELASTOMACEÆ. — Tribe OXYSPOREÆ.

D. microthrix, *Stapf* (*sp. nova*); [illegible] minutissime puberulis, caule [illegible] tetragono, foliis [illegible] petiolatis in eodem [illegible] asymmetricis ovato-oblongis [illegible] lanceolatisve longe et oblique acuminatis [illegible] cuneato-rotundatis integerrimis 5-nerviis venis transversis, [illegible] floribus in cymulis [illegible] subsessilibus 10–15-floribus petiolo [illegible] sphærico-cupularis glabri denticulis brevissimis latis inconspicuis, petalis albis late rotundato-ovatis obtusis, staminibus subæqualibus, antheris linearibus obtusis basi antice appendiculis binis subfiliformibus auctis postice breviter calcaratis, ovario vertice coronula pyramidata brevi [illegible] persistente coronato, capsula calyce circumdata 4-valve.

HAB. BORNEO, Kinabalu, at 3,500 feet, *Haviland*.

Folia [illegible] poll. longa, $2\frac{1}{2}$–3 poll. lata; petiolus $\frac{1}{3}$–$\frac{1}{2}$ poll. longus. *Pedicelli* $\frac{1}{8}$–$\frac{1}{6}$ poll. longi, calyce duplo longiores; bracteæ minutissimæ.

One leaf of each pair seems to be reduced to a mere rudiment in this species, in which, as in the preceding (*D. glanduligera*), the anthers are nearly or quite equal, and linear and obtuse, not rostrate as in the original species of Korthals (*D. axantha*). In other species they agree in all essentials with the type.—O. STAPF.

Fig. 1. Flower; 2, [illegible]; 3, [illegible]; 4, [illegible] calyx-tube. 6. Fruit and persistent calyx. All enlarged.

M.S del. et lith.

Polycline psyllioides, Oliv.

PLATE 2203.

POLYCLINE PSYLLIOIDES, *Oliv.*

COMPOSITE. Tribe ANTHEMIDEJE.

Polycline, *OUv. (gen. tiov.).* ***Capitula*** **homogaran, discoidea, ovoidoa v. oblongo-ovoidea, 10- 20-flora (flonbus hermaphroditis), in glomerulos dcnsos, globosos, terminates, squamis paucin ovato-rotundatia oblongisvo capitula subtcndcntibus quasi-in volucratos, aggrcgata.** ***Hecvptaculum*** **angustum, Kubulatmn, puleaccum; paleis scarioHis oblongis v. obovalo-dlipticis flore puullo brovioribuH, concavin v. lovitor 17111 biformibiiH, obtusis, ajucom versus oroHO-fimbriatiH.** ***Corolla*** **lubo uylindrico, parco glauduloHO-papilloBO, wuprrno infundibulifonne-dilat:ito, limbo f>-fido, sogmcntis lancculatis recuirvin.** ***Anthertv*** **bani minute bidcntatco v. brcvistutmu sagittatir, auriculis per paria coalitis, apico fonncctivo mcmbranaccH) laucoolaio produoius.** ***Styli*** **rami broves, iccurvi, obtutri v. Riibtruncati.** ***Ach<rnia*** **Nubcylindrica v. pluH minus obovoidea, S03pins loviter comprossji, uigrescentia, calva v. JIHCO minuto brevissimo timbriato coronata.—Herbu)** ***ereettv, glalrcr, caule aplcro, gractti.*** **Folia** ***altenia, linearia, indv'ma.*** **Capitulorum** ***gloineruli ad apice* ramorum 8olitarii, receptaculo communi conico, capitulis VUHJUIIH exterioribus bractea suffultis.***

P. psyllioides, *OUv. (sp. nov.);* **caulibus erectis, rigidis, costatis, foliis linearibus v. suporne loviter dilalatis obtUHiusculis basi sensim anguBtatis, acbooniis transvorsim rugosis.**

HAB. East Tropical Africa, Kilimanjaro, ***Lieut. 0. 8* Smith.***

Herba **i- (-l^-)pedalis, glaberrima.** *Folia* **1-21 poll, longa, latiora i ·a poll. lata.** *Qlomeruli* **peduuculati, subglobosi, \ poll. diam.**

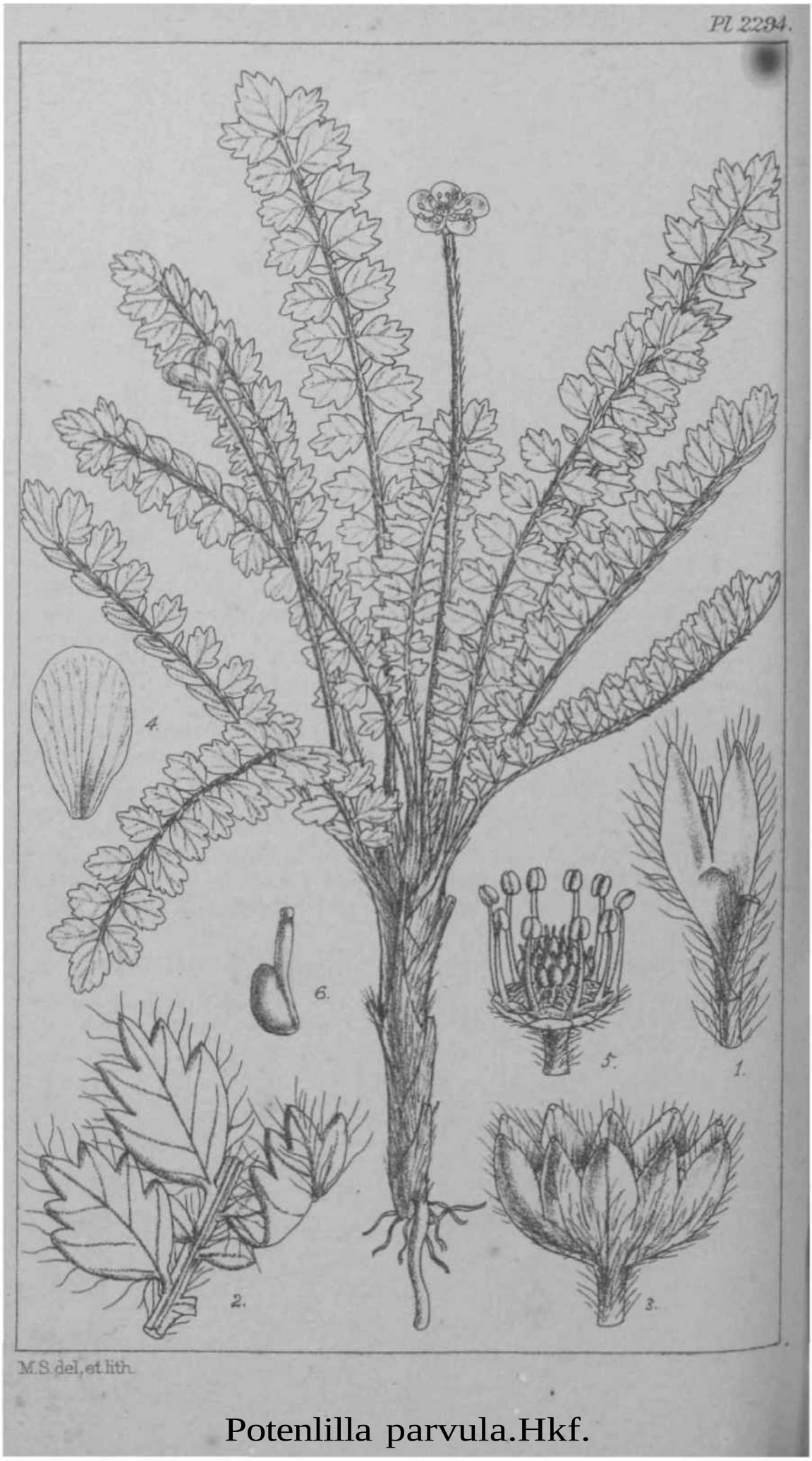
Congonoric with tho above is, no doubt, the plant which I described i tho 'Journal of tho Linnean Society/ xxi. 400, as ***Sphtvranthu* graciHg,*** **collected in Masai land, on tho Kapte plateau, by Mr. J. Thomson. It may be diagnosed thus :**

P. gracilis, *OUv.;* **glomerulia compactis hemisphtericis, achn?uii» laovibus parce et minute hirtellis.**

Oauks **1^-ped.** *Folia* **anguste Hnearia utrinque angustata, 2-3 poll. ga.** *Qlomeruli* **{ poll. diam.**

Examination of Lieut. Smith's specimen satisfied me that it could not be referred to *Sphceranthus,* to which I had, without sufficient regard to analysis, referred Mr. Thomson's nearly allied plant. The conspicuous paiese which subtend the florets, the florets themselves which are hermaphrodite, the uppermost on the remarkable slender spiciform receptacles being often rudimentary, and the entirely different styles, remove it far from *Sphceranthus,* and I cannot suggest a better affinity for the proposed new genus than amongst the Anthemidesd, probably near *Athanasia* and its allies.—D. OLIVER.

Fig. 1. Elongate receptacles of a compound head. 2. Detached capitulum. 3. Involucral scale. 4. Floret. 5. Stamens. 6. Style-branches. 7. Achene. *All enlarged.*



Potenlilla parvula.Hkf.

PLATE 2294.

POTENTILLA PARVULA, *Hook. f.*

ROSACEJE. Tribe POTENT] LLEJE.

P. (§ **Polyphyllffi) parvula,** *Hook. f. MSS. in Herb. Kew.*; caule abbreviato foliorum vetastorum stipularum reliquiis sericeo-lanatis dense obsito, foliis pinnatifidis multifoliolatis, foliolis inferioribus gradatim nrinoribus sessilibus v. brevissime petiolnlatis rotundato-ovatis apicem versus utrinque 1-3-dentatis, supra glaberriniis nitidis subtus in costa interdum parce pilosis, pedunculis unifloris folio brevioribus v. eodem uequilongis, bracteolis iuvolucelli late ellipticis sepalis ovatis aequilongis, tubo calyeis cum peduneulo sericeo-piloso, petalis obovatis aureis, staminibus binis sab utroque petalo, thalamo dense sericeo, carpellis glabris brcviter oblique oblongis.

HAH. Borneo, Kinabalu, 11,000 feet, *Low, Haviland.*

Folia 3-5 poll, longa, v. in speciminibus nanis 1-2 poll, longis; foliola majora ¦-J poll, longa. *Stipulce* petiolo |-adnatoe oblongee, 4-6 lin. longas, acutee, extus sericeflB, intus glabree. *Flores* ^--J poll, diam.

The nearest ally of this species is P. *Mooniana,* Wt.—.0. STAPF.

Fig. l. Stipular base of leaf. 2. Portion of leaf, showing intercalated smaller segments. 3: Fruiting calyx. 4. Fetal. *6.* Stamens and carpels. 6. Detached carpel. *All enlarged.*

M.S. del. et lith.

Stranvæsia integrifolia, Stapf.

PLATE 2295.

STRANV-ffiSIA INTEGBIFOLIA, *Stapf.*

ROSACEJS. Tribe POMEJJ.

S. **integrifolia,** *Stapf (sp. nov.)* ; frutex, ramnlis novellis hirto-tomentosis demum glabratis, foliis petiolatia oblongo- v. oblanceolato-ellipticis acutis v. breviter acuminatis integris coriaceis subtus glabris supra nitidis in nervis primum tenuiter sericeo-pilosulis margine ciliolatis demum omnino glabriB, corymbis terminalibus hirsnto-tomentellis multifloris foliis brevioribus, calycis turbinati hirsuti lobis ovato-deltoideis acutiuscnlis, petalis albis rotundatis, staminibus circ. 20, ovario semisupero, sty 1 is 5 apice liberis leviter incrassatis tmncatis, fructibus campanulato-globosis vertice hemisphsBrico e tubo calycino breviter ezserto.

HAB. Borneo, Kinabalu, 11,500-13,000 feet, *Hamland.*

Folia 2-3 poll, longa, 10-12 lin. lata; petiolus %-\ poll, longus. *Corymbi* 20-40-flori, 1-1^ poll, lati; pedunculi i_2 poll, longi, hirti, pedicelli 1-3 lin. longi. *Fructus* J-J poll. diam.

Allied to *S. glaucescens,* Lindl., and to a Chinese plant which may bo *8. Davidiana,* Decn.—O. STAPF.

1'ig. 1. Flower, petals and stamens removed, calyx-tube laid open. 2. Fetal. [3]- **fruit.** ***All enlarged.***

M.S. del. et lith.

Polyosma Hookeri, Stapf

PLATE 2296.

POLYOSMA **HOOKBHI,** A*apf.*

SAXIFUMA **Triba K*** ALLONIE**«.**

P. Hookeri, *Stapf (sp. nov.)*; frute **i,** retnuli* novellis obsolete **pulMTtjllk U**ox glabris nigricantibus, foliis oppositis petiolatis ellipticis v. obovatis obtusis emarginatis coriaceis [illegible] revolutis, cymulis |tturirton» 'erminalibus fo**lt» rn m**perantibus, calycis tubo turbinato v. cylindrico-turbinato, dentibus deltoideis br**[•vilniR, |io<h**lis elongatis lineari-l**ttwvoU'**is extus **pnpcipui' t>**asin versus minute flavido-sericeis intus pilo[illegible]), filame[illegible]tis pilosulis, fruc**tiboji pllipwode-i* caljrcr prn»><'i !<• o«int!i«i**is.

His. **Borneo,** Kin»t*)o, **R.000** 10,500 feet, *Low, Hariland.*

*Fol*ia t–1(poll, t.>ti((», **] 1** pnll **UIA,** itititTtlam mullo minor*, petio[illegible] longi, apicem versus 2–3-bracteolati; bracteolæ su**balMM r i m 1 Ij j»'!l k»fi** *Fructus* **niffrMM** [illegible] *lævis 4–5 lin. longus.*

This interesting speci**tt i* Ti»rr** Jutinrt frmn iu **oongwneni** in its flowers and **abbmvifttr<l iaflorMOMO*.—** O. STAPF.

JK[1]. Flower. **t. IMM, Ul« p**etals [illegible] Stamen, nd front. *All enlarged.*

Pleurostylia caper) sis, Oliv.

PLEUBOSTYLIA CAPENSIS, *Oliv.*

CELASTRINEA. Subtiibo EUONYMEA.

P. capensis, *Oliv.*; arbor ramosissima glaberrima, ramulis graoilibos, foliis oppositis v. snboppositis tenuiter coriaceis brcviter petiolatio venulosis oblongo-ovalibus obtusis basi in petiolura angustatis integerrimis v. obsolete repando-crenatis, cymis azillaribas breviter pedunculatis pauci- v. plurifloris umbelliformibus, ovario ovoideo in centro disci crenulnti imposito 1-localari 4-5-ovulato, fruotu obovoideo (v. immature oblique clavato-oWongo), stigmate sessili infra medium lateraliter notato monospermo, semine exarillato subgioboso, albumins eopioso carnoso, embrjoue viridi longitudine fere serainia, radicula brevi. Cathastrum capense, *Turcz. in Bull Mosc.* 1858, i. 448.

HAB. South Africa; Kaffraria, near the Kei River; woods near Koragha, *Flanagan* (No. 623); Forests in Krakakamma, *Zeyher (Cdastr.* No. 2) ; Kwelegha, *Hutchins*; *Gerrard* (No. 1,596).

Folia 1^-2 (-2£) pell, longa, f § H) poll- Jata. *Stipulce* minutissimas decidnflB. *PeduneuK* petiolis subsequilongi. *Flores* 5-meri. *Calyx* lobis rotundatis eroso-denticnlatis, 2 exterioribus minoribus. *Petala* obovato-rotnndata, calyce 2-plo longiora, margine minutissime croso-denticulata, imbricata. *Stamina 5*, sub margine disci inserta; filamenta carnosula, glabra, petalis sequilonga; antheroo ovoideD3. *Migma* peltato-capitatum, cum sinu laterali. *Frnctus* |—£ poll, longus, pericarpio coriaceo.

Mr. Flanagan's excellent specimens of this plant in fruit and flower—for which we are indebted *to* Mr. Bolus—I have little hesitation in referring to the genus *Pleurostylia*, the original species of which belongs to India and Ceylon, while one or two allied species occur in Mauritius and Madagascar. Mr. N. E. Brown further identified them with specimens already in the Herbarium, from Gerrard and Macowan and Bolus (Herb. Norm. 915); referred to Turczaninow's genus *Cathastrum*, described in the absence of frniting specimens, which must give place to *Pleurostylia*, which is of much earlier foundation (1834). The ovnles in described species of *Pleurostylia* are said to be geminate: in our plant there are fonr or five, of which bnt one matures. Of the arilliform endocarp, 'semen . . . endocarpio arilliformi tectura/ noted in Gen. PI. i. 364, I find no evidence in £*. *capensis*; nor does Tulasne, in his careful description of *P. pachyphloea*, refer to any endocarp; he simply describes the seed as destitute °f an arillus.—D. OLIVER.

Fig. 1. Flower and bracteoles. 2. Expanded flower. 3. Ovary and disk. 4. Longitudinnl section of ovary. 5. Carpel with lateral stigma. 6. Same, laid opeu. 7. Seed. *All enlarged.*

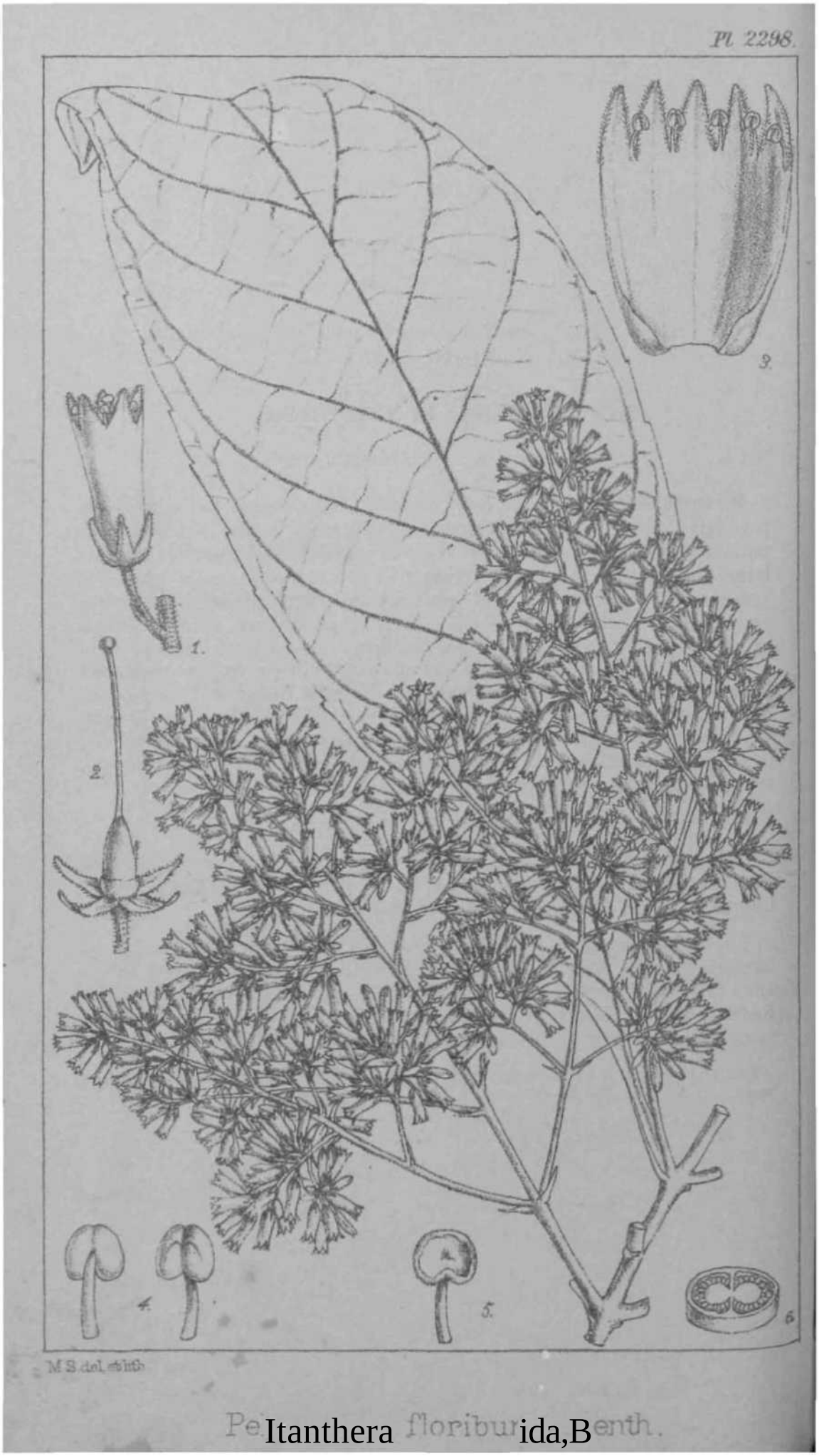

Pl. 2298.
1.
2.
3.
4.
5.
6.
M.S. del. et lith.
Pe Itanthera floribur ida,B enth.

PLATE 2298.

PELTANTHERA PLORIBUNDA, *Benth.*

LOGANIACEJ]. Subtribe ANTONIEA.

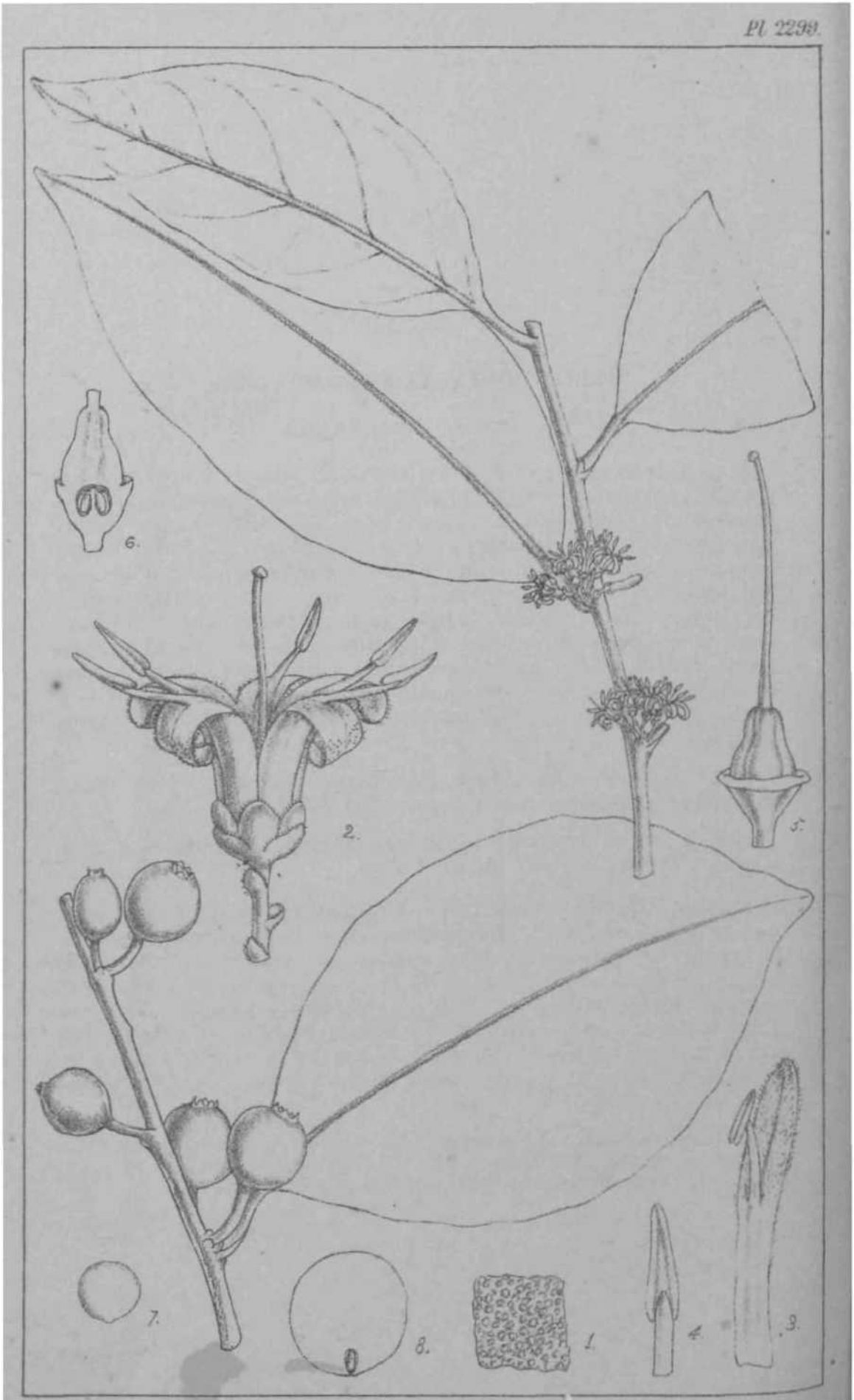
P. **floribnnda,** *Benth, in Gen. Plant,* ii. 797; arbor, foliis oppoaitis petiolatis membranaceis oblanceolato-ellipticis acute apiculatis in petiolura cuneatim angustatis obscure glanduloso-denticulatis nervis lateralibus utrinque 12-13 costaque subtus prominulis glabratis vernatione subtus tomentellis, panicnlis multifloris divaricatis breviter pedunculatis folio brevioribus axillis superioribus ortis, floribns graci liter pedicellatis, bracteis parvis linear ibus deciduis, caljcis parvi 5'-partiti segmentis lanceolatis, coroll» cylindricse calyce multoties longioris Jobis brevibus aestivatione valvatis intus et margin ibus breviter tomentellis, filamentis apice liberis corolla fere sequilongis, untheris parvis ovato-rotundatis post dehiscentiam peltatim affixis, ovario ovoideo in stjlum gracilem attenuato cum stylo parce pilosulo, stigmate peltato-discoideo, ovulis indefinitis.

HAB. Peru, Tarapoto, by rocky streams, *Spruce (So.* 4,940).

Arbor 40-pedalis, ramosa, ramulis teretibus glabratis novellis parce tomentellis. *Folia* 6-8 poll, longa, 2£-2£ poll, lata ; petiolus £-§ poll, iongus. *Flores* * albi, odorati/ 2-2^ lin. longi.

The only specimens of this interesting species in the Kew Herbarium are the original examples collected by Mr. Spruce in 1857, J^d first described by Mr. Bentham in the 'Genera Plantarum.' * rom the same locality Mr. Spruce sent specimens of a form of the same with rather narrower leaves, 1-^-2 inches broad.—*D.* OLIVER.

Fig. 1. Flower. 2. Calyx and pistil. 3. Corolla, laid open. 4. Stamen, Lack and front. 5, Anther, after detiiscence. 6. Transverse section of ovary. ***Ail hd Ail enhirgid.***



M.S. del. et lith.

Strombo[illegible]pustulata. Oliv.

si a t

PLATE 2299.

STROMBOSIA PUSTULATA, *Oliv.*

OLACINE£. Tribe OLACEJJ.

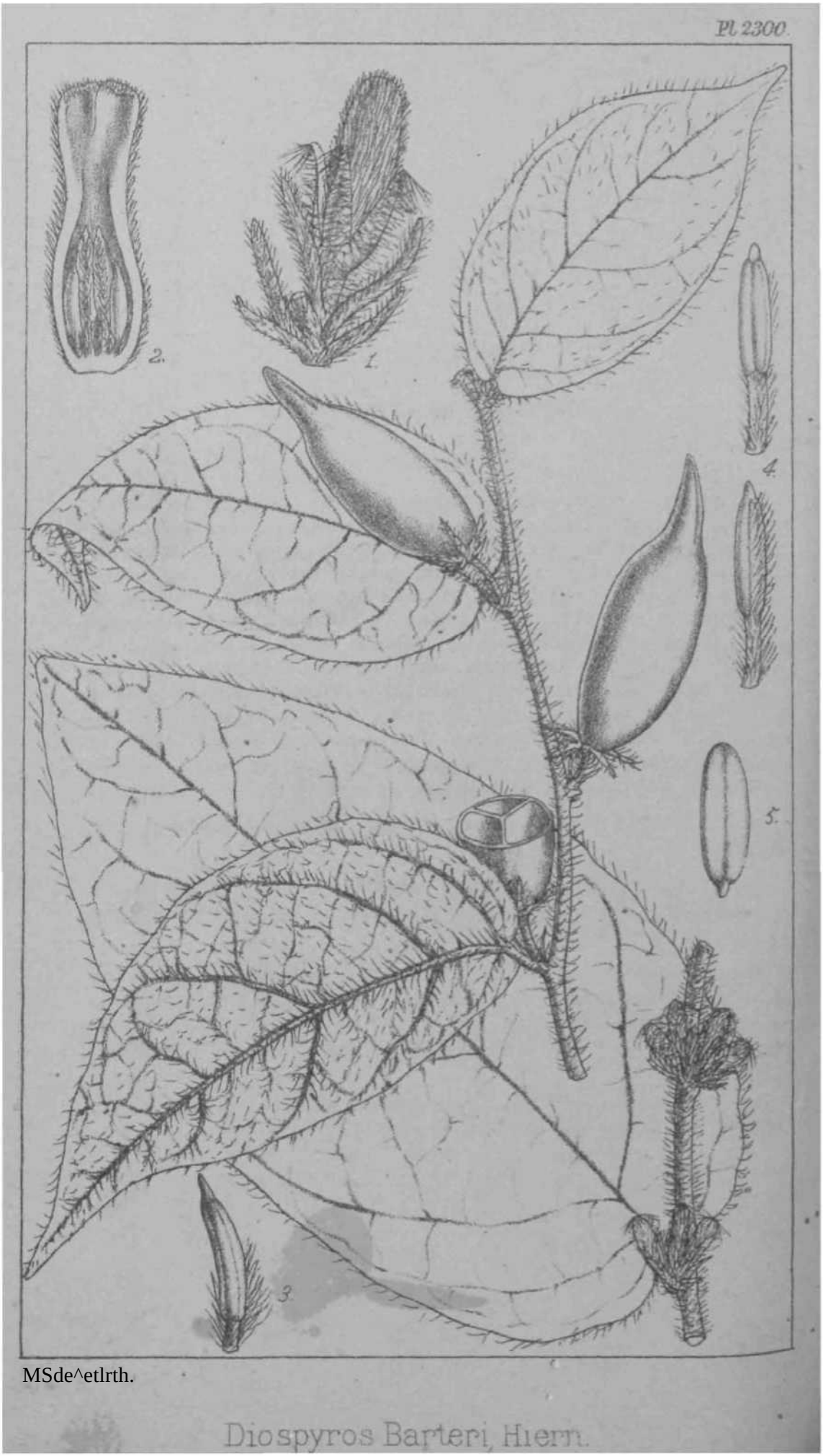
S. ptistulata, *Oliv. (sp. nov.)*; glaberrima, ramulis teretibus, foiiis petiolatis oblongo* v. ovali*ellipticis breviter acuminatis scepe obtusiusculis costa in mucronem terminante supra (sub lente) minute pustulatis nervis inconspicuis, subtus nervis lateralibas utrinque 4-6 leviter prominentibus, cymis axillaribus sessilibus petiolis eeqnilongis, floribns pedicellatis, pedicel 1 is bracteolatis bracteolis parvis rotundatis, sepalis parvis late ovatis obtusis, petalis lineari-oblongis supra medium recurvis margine et facie interiori apicem versus pilosulis, staminibus petalis adnatis et fere sequilongis, ovario apice carnoso libero ovoideo in stylum staminibus sequilongum abrupte angustato, cavitate ovulifera infera, fructibus subglobosis lobis calycinis marcidis apice coronatis.

HAB. West Tropical Africa, near Lagos, *Rowland*; Sierra Leone Boundary Commission, near Kambia, *Scott-Elliot* (No. 4,733).

Folia 3^-4 poll, longa, 1^-2 poll lata, subcoriacea; petiolus <*fo* poll, longus. *Fructus* £-£ poll. diam.

The only other described Tropical African Olacinea ascribed (with a ?) to *Strombosia* in the Kew Herbarium is *S. grandifolia*, Hook, f., of which we have no fruiting specimens. The leaves are much longer (5-8 inches long) than in *S. pus tula t a*, the lateral nerves conspicuous above and below, with approximately parallel transverse veins, and there is no trace of the minute pustuliform spots on the upper surface, readily found under a lens in *S. pustulate* due probably to moulding of the dry tissues of the leaf over cystolithic concretions.—D. OLIVER.

Fig. 1. Portion of leaf, showing upper surface. 2. Flower. 3. Petal and antiposed stamen. 4. Anther, from back. 5. Pistil. 6. Longitudinal section of pistil. 7. Seed. 8. Vertical section of same. *Excepting fig. 7, enlarged.*.



MSde^etlrth.

Diospyros Barteri, Hiern.

PLATE 2300.

DIOSPYROS BARTEBI, *Uiern.*

EBENACEJ:.

D. Barteri, *Hiem, Monog. Ebenaceat,* 187; ramulis divaricatis teretibas patentim hispidis tandem glabratis, foliis breviasirae pctiolatis ovato-oblongis v. -ellipticis acute v. obtuse acuminatis basi cordatis supra glabratis v. parcissime setosis nervis depressis subtus prsecipue in costa nervisqae priraariis setoso-hispidis, floribus <$ axillaribus in fasciculis subsessilibus paucifloris ferrugineo-hispidis dispositis, pedicellis brevibus, bracteis parvis lineari-lanceolatis, calycis 4-partiti segmentis lanceolatis intus glabris corolla brevioribus, corollffi tubo crassiusculo intus glabro extus inferne tomentello superne setoso-hi&pido, staminibus circ. 12 setosis antheris lineari-lanceolatis, floribus ? solitariis pedicellatis, fructibus ovali-oblongis apice in rostrum productis di-trispermis, seminibus oblongis piano-con vexis v. trigonis, albumine corneo aequabili.

HAB. West Tropical Africa, Lagos, *Barter;* Western Lagos, ***Rowland.***

Frutex {fide Barter), ramulis gracilibus. *Folia* membranacea, 3-5 poll, longa, lf-2^ poll lata; petiolus 1-2 lin. longus. *Fructus* 1£ poll, longus. *Semen* f poll, longum.

Excellent specimens in fruit, with male flowers in bud, of this remarkable *Diospyros,* recently sent to Kew by Dr. Rowland, enable us to give a satisfactory figure. Mr. Hiern had but a fragment, with ' a single fruit, at his disposal for the description given in his Monograph. ~—D. OLIVER.

Fig. Detached flower and bracts. 2. Longitudinal section of <? flower. 3 and 4. Stamens; anther, back and front view. 5. Embryo. ***All enlarged.***