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HOOKER'S
ICONES PLANTAEUM.

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HOOKER'S
ICONES PLANTARUM;

OE,

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

SELECTED FROM THE

KEW HERBARIUM.

THIRD SERIES.

EDITED BY

Sir JOSEPH DALTON HOOKER, K.C.S.I., C.B., M.D., F.R.S .

D.C.L. OXON., LL.D. CANTAB., DUBLIN, BDIN., AND OLOTT., GORRRSP. MEMB. INST. PRANCE:
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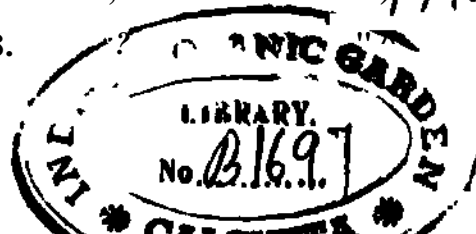


PLATE 1701.

POLYDBAGMA MALLOTIFOBME, *Hook. f.*

EUPHORBIAEAE. Tribe CROTONE-E.

Polydragma, *Hook. f. (gen. nov.)*. *Mores* parvi, dioici, apetalii, racemosi, racemis axillaribus. FL. <?. Alabastra globosa. *Sepala* 3, lata, concava, valvata. *Stamina* perplurima, filamentis basi in phalanges 6 connatis, sperne liberis ramosissimis, et in capitulum globosum antherarum desinentibus; antherae minutae, peltatae, 2-loculares, didymae, connectivo supra loculos obducto. *Pistillodium* O. FL. ?. *Sepala* 5, inaequalia, lanceolata, erecta. *Ovarium* globosum, granulosum, hispidum, 3-loculare; styli 3, elongati, erecti, subulati, intus papilloso; ovula in loculis solitaria. *Fructus* deest.—Frutex v. arbuscula. Folia *alterna, elliptico-oblonga* v. *obovata, acuminata* v. *longe cuspidata, penninervia*. Bacemi *gracillimi*.

P. mallotiforme, *Hook. f. in, Fl. Brit. Ind. v. (ined.)*.

HAB. Malay Peninsula, at Perak, *Father Scortechini*.

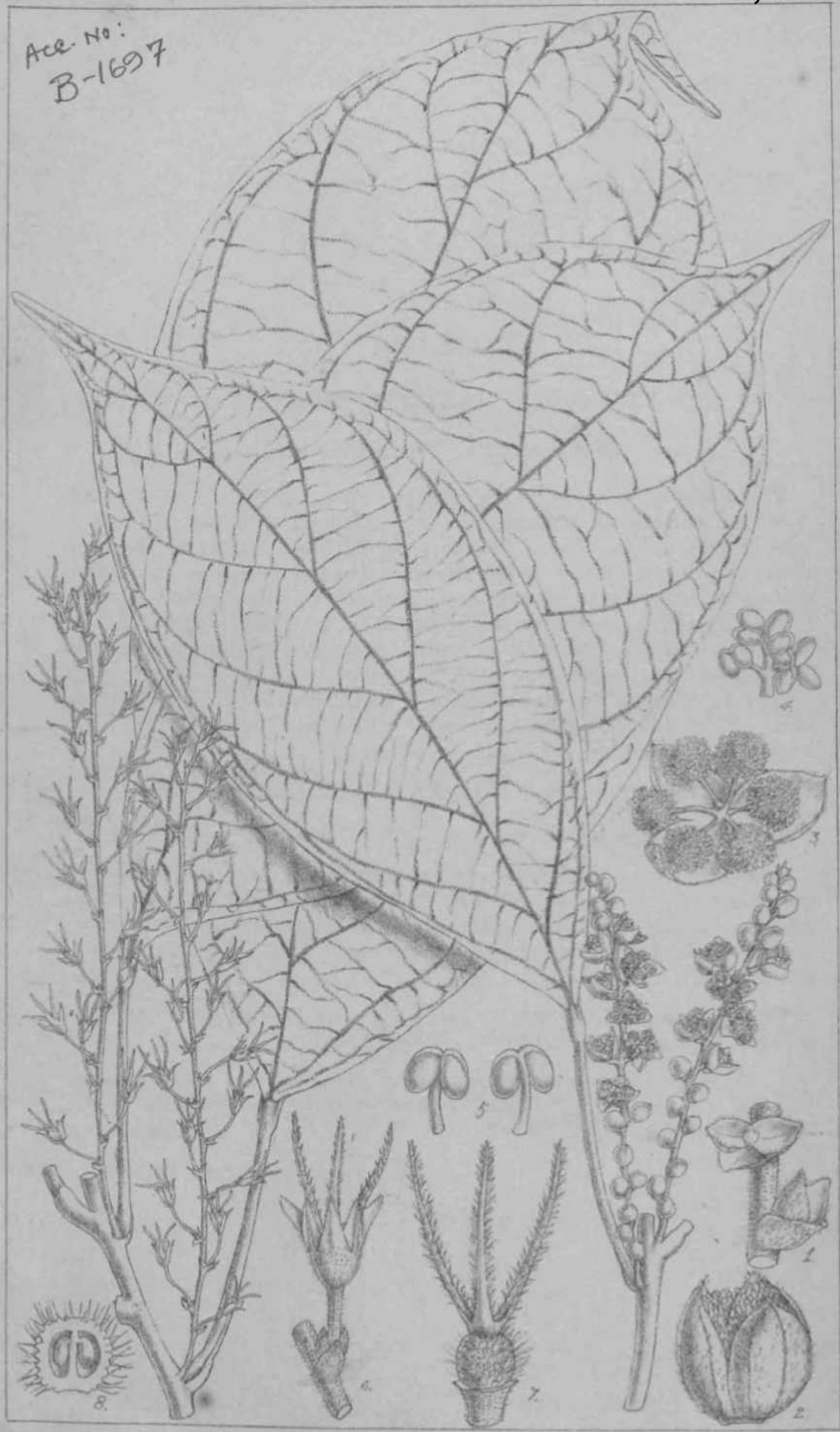
Branches slender, terete, woody, both branchlets and racemes finely pubescent. *Leaves* 6-9 in., membranous; nerves 5-6 pairs, very slender; petiole ≥ 2 in.; stipules small, subulate. *Male racemes* spiciform; pedicels 3-bracteate. *Sepals* membranous. *Fern, racemes* 3-4 in., slender, erect, lax-flowered.

The position of this genus is evidently near *Homonoia*, Lour., from which it differs in habit and in the stamens.—J. D. H.

Fig. 1. Bracts and calyx of <J flower. 2. 3 flower. 3. The same expanded. 4. Cluster of anthers. 5 & 6. Separate anthers. 6. ? flower. 7. Ovary. 8. Vertical section of ditto. *All enlarged.*



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M.S. del, et. lith.

Polydragma mallotiforro

PLATE 1702.

SPHYRANTHERA CAPITELLATA, *Hook. f.*

EUPHOBBIACEAE. Tribe ?.

Sphyranthera, *Hook. f. (gen. nov.)*. *Mores* minuti, <? ad apicem pedunculi axillaris umbellati, pedicellati, pedicellis basi bractcolatis. *Sepala* 3-5, late ovata, concava, valvata. *Petala* (v. disci lobi) sepalis alterna iisque multo minora, integra lobata v. fere bipartita segmentis divaricatis. *Stamina* 12-20, centro Boris inserta, filamentis liberis erectis glabris; anthers loculi ad apicem filamenti discreti, subglobosi. *Pistillodium* 0. *FL ? et fructus desunt.*—*Arbor* v. *frutex glaber, ramulis gracilibus*. *Folia alterna petiolata, elliptico-lanceolata, obtusa, integerrima, penninervia*. *Pedunculi fl. masc. graciles, petiolis paullo longiores.*

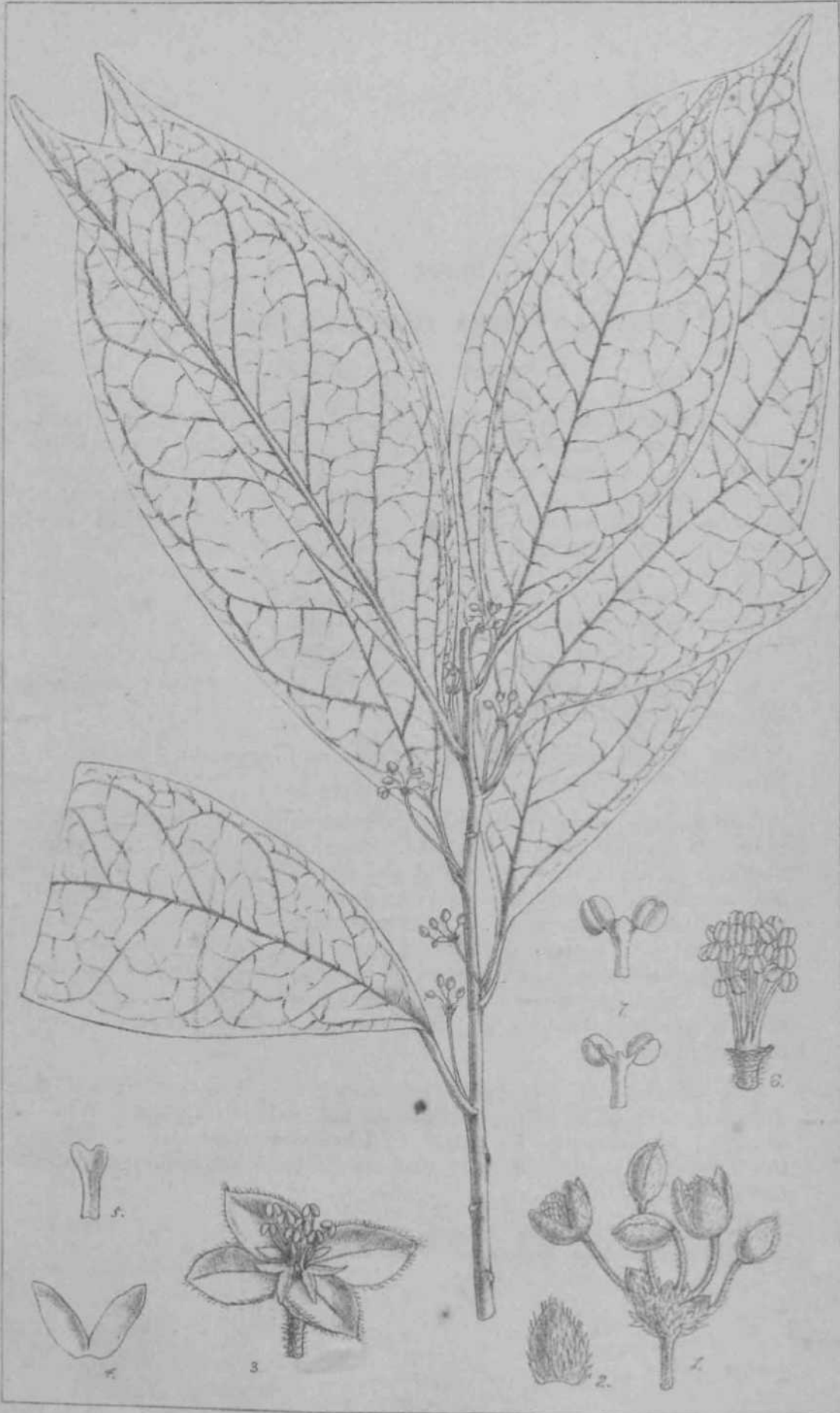
S. capitellata, *Hook. f. FL Brit Ind. v. (ined.)*. *Codioum?* *lutescens*, *Kurz, For. FL ii. 405.*'

HAB. Middle Andaman Island; in bamboo jungles along the Middle Straits, *Eurz.*

Frutex sempervirens, 8-12-pedalis, cortice pallido, ramulis gracilibus pberulis ligneis. *Folia* 3-5 poll, longa, in acumen v. cuspidem obtusam producta, recta v. subfalcata, flavescentia, tenuiter coriacea, basi acuminata in petiolum £ poll, longum attenuata, nervis utriusque cost© 10-15 tenuissimis, nervulis reticulatis; stipulffl non vis®. *Pedunculi* -^pollicares, graciles, pubescentes, capitula bractearum gerentes; pedicelli T^ poll, longi decurvi; alabastra <? ovoidea, vix TV poll, longa, pubescentia; sepala intus glabra; petala v. glandules disci polymorpha, integra v. 2-fida; stamina malleiformia, connectivo interdum producto.

The affinities of this genus are uncertain; it is clearly not a *Codiaum*, and is probably referable to the tribe *Acalyphæa*. When the plate was prepared for this work I had not recognised its being the *Codiceum ? lutescens* of Kurz, or I should have adopted his specific name.—J. D. H.

Fig. 1. Umbel of <J flower. 2. Sepal. 3. Flower expanded. 4 & 5. Forms of the petals or disk-lobes. 6. Stamen. 7 & 8. Anthers. *All enlarged.*



M. S. del, et lith.

Sphyrantia Kera CEPitdlata Hk. f.

PLATE 1703.

PTYCHOPYXIS COSTATA, Miquel.

EUPHORBIACEJ.: Tribe CBOTONEA.

Ptychopyxis, Miquel. FLORES \$ spicati. *Sepala* 4-5, subsequalia, crassa, valvata. *Discus* 0. *Stamina* numerosissima receptaculo crasso piloso conferta, filamentis flexuosis apicibus subulatis; anther late oblongse, planss, 4-loculares, loculis per paria superpositis, connectivo in appendicem latam acutam producto, loculis superioribus oblongis, inferioribus multo minoribus, omnibus introrsum dehiscentibus. *Pistil-lodium* 0. FL. \$ fasciculati. *Sepala* 6, lanceolate, crassa, inaequalia v. subffiqualia, persistentia. *Ovarium* 3-loculare; stylus elongatus, villosus, stigmatibus 3 brevibus recurvis integris intus papillosis; ovula in loculis solitaria. *Fructus* magnus, crassus, late ovoideus, abrupte rostratus, pericarpio crasse 6-costato, inter costas transverse rugoso, 3-locularis, 3-spermus. *Semina* ¥—Arbor pilis simplicibus dense ferrugineo-tomentosa. Folia apices versus ramulorum conferta, patentia, alterna, breviter crasse petiolata, coriacea, integerrima, penninervia. Flores bracteis linearibus crassis immixti.

P. costata, Miquel, *Fl Ind. Bat. Suppl.* 402; *Eook.f. Fl. Brit. Ind.* v. vned.

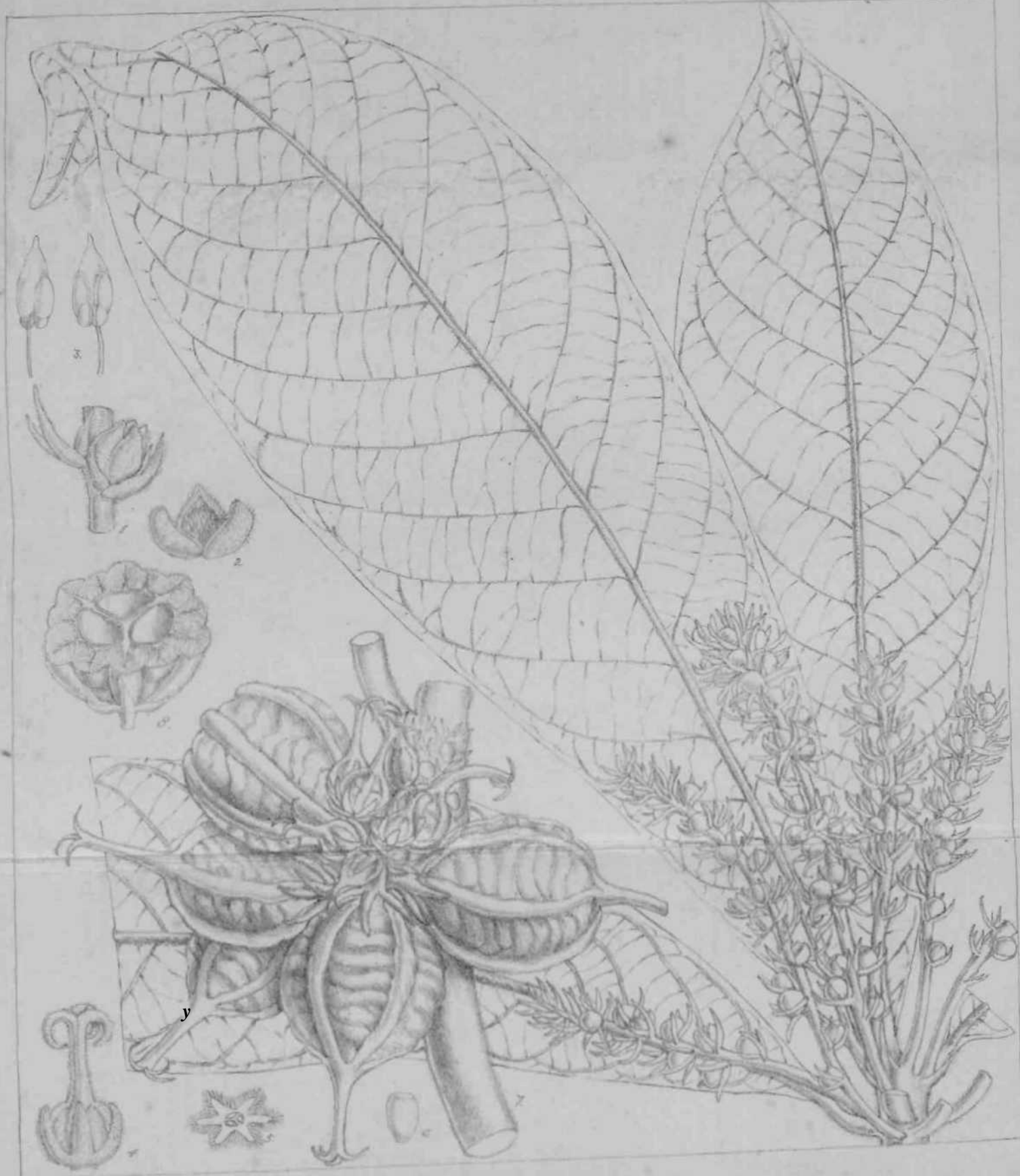
HAB. Sumatra; Perak, *King's Collector*; Malacca, *Griffith, Maingay*.

A tree 30-70 ft.; branchlets stout, woody. *Leaves* 6-12 in., oblanceo-late, coriaceous, glabrous above, except the midrib, rusty-tomentose beneath; nerves 15-20 pairs; petiole £-£ in.; stipules subulate. *Male spikes*, d-5 in., stout, velvety; flowers shorter than the bracts, i in. diam. *Stamens* contorted in bud. *Clusters of female flowers* i in. diam.; velvety, as are the bracts. *Fruit* H in. diam.; pericarp thin, but thickly clothed with densely-set hairs £ in. deep. *Seeds* immature.

• i. 1 ^ T i ^ 8 P J ? nt t0 m < V * V * *Ptychopyxis* with little hesitation, though I have of late seen no specimens of the latter. It agrees with a slight sketch of the leaf made by Professor Oliver from a specimen lent to Kew when the *Tiliaceae* (to which Order Miquel doubtfully referred the genus) were being studied for the • Genera Plan tar urn. 1 * also answers fairly well to Miquel's very incomplete description, which was apparently made from a fragmentary specimen. The seeds have decayed away in the ripest fruits, and I find no traces of a second

Zi ^ J ^ 0 / 1 f . : ^ gn is s / tWk_n , near MMt_0 us ^

Fig. 1. <J flower and bract. 2. <? flower open. 3. Stamens. 4. ? flower.
5. but ^ tXS ^ 0 * * z . 1 - * £ us . The sa™ at Jos* J*



M.S. Ad. et. hth

Ptychopyxis costata, Miq.

PLATE 1704.

ANDRACHNE FRUTICOSA, *Dene.*

EUPHORBIACEÆ. Tribe PHYLLANTHÆ.

A.fruticosa, *Dene, in Nouv. Ann. Mus.* iii. 484; frutex erectus sparse appresse pilosus, ramis gracilibus teretibus, foliis gracile petiolatis elliptico-lanceolatis acuminatis, basi acutis acuminatisve, nervis gracillimis, stipulis parvis lanceolatis, fl. masc. minutis breviter pedicellatis, sepalis petalisque subspathulatis, glandulis disci fl. *S* profunde 2-partitis, fl. fern, niaculis multo majoribus, sepalis ovatis acutis utrinque hirsutis, glandulis disci obcordatis, petalis glandulisque maris, ovario hispido, capsula parva, seminibus transverse rugosis. *Miquel FL Ind. Bat.* i. pars ii. 365; *Muell. Arg. in DC. Prodr.* xv. ii. 235; *Hook, f. FL Brit Ind.* v. 284, *ined.* *A. Decaisnei*, *Benth. FL Austral*, vi. 88.

HAB. Malay Peninsula and Archipelago; Perak, *King's Collector*; Timor Laut, *Riedel* ?; Philippine Islands, *Cuming* (No. 1608 and ? 1528); N. Australia, *Brown, &c.*

When preparing the *Euphorbiaceæ* for the * Flora of British India/ I was much puzzled with this plant, the total unlikeness of which to the type of the genus *Andrachne* (the European *A. telephioides*) deceived me into considering it to belong to a different genus from that plant, and consequently, in the *Conspectus* of the genera of *Euphorbiaceæ* of that work, I proposed for it the name *Hexakistra*, in allusion to the pin-like style-arms. A re-examination before printing the species of the Order led me to look into *Andrachne*, where I found indifferent specimens from Timor Laut of what I take to be *Decaisne's* *A. fruticosa* of Timor, that so closely resembled the Perak plants, that I had no hesitation in regarding them as conspecific, and I have thereupon abandoned *Hexakistra*, for the present at any rate, until I shall be able to study all the species of *Andrachne*. A closely-allied plant is *A. Glarkei*, H. f. ('Fl. Brit. Ind.' *I.e.* 285, *ined.*), lately discovered in Munnipore, by Mr. C. B. Clarke, F.R.S., which differs in the angled branches, round bases of the leaves, and glabrous ovary. Mueller refers *Cuming's* No. 1608 to a variety of *A. australis*, Zoll.; the specimens of it at my disposal are not very good, but I cannot doubt its being the same with *fruticosa*, of which I have examined Timor specimens collected by Riedel. Possibly *australis* itself is only a state of *fruticosa*. Bentham ('Fl. Austral.' *I.e.*) has changed the name of *fruticosa*, *Dene*, to *Decaisnei*, on the ground that the plant is not shrubby, which, however, it clearly is.—J. D. H.

Fig. 1 & 2. Sepals of <J flower. 3. & flower with serais removed. 4. Gland of disk and petal of <?. 5 & 6. Stamens. 7. 9 flower. 8. Ovary. 9. Verticw section of cell of ditto. 10. Section of coccus and seed. 11. Seed. *All enlarged.* .



M.S. del, et lith.

Andrachne iruticosa, Dene.

PLATE 1705.

EUBUS HENEYI, *Hemsl. et O. Kt%e.*

ROSACEJB. Tribe RUBEJS.

R. Henryi, *Hemsl. et O. Kite. (sp. nov.)*; foliis discoloribus alte angusteque trilobatis, floribus racemosis, sepalis caudatis glandulosis, petalitis* puberulis sepalis brevioribus; staminibus fere undique parce pilosis, ovarii paucis stylisque hirtis.—*Forbes et Hemsley, Index Florae Sinensis, in Journ. Linn. Soc. xxiii. p. 231.*

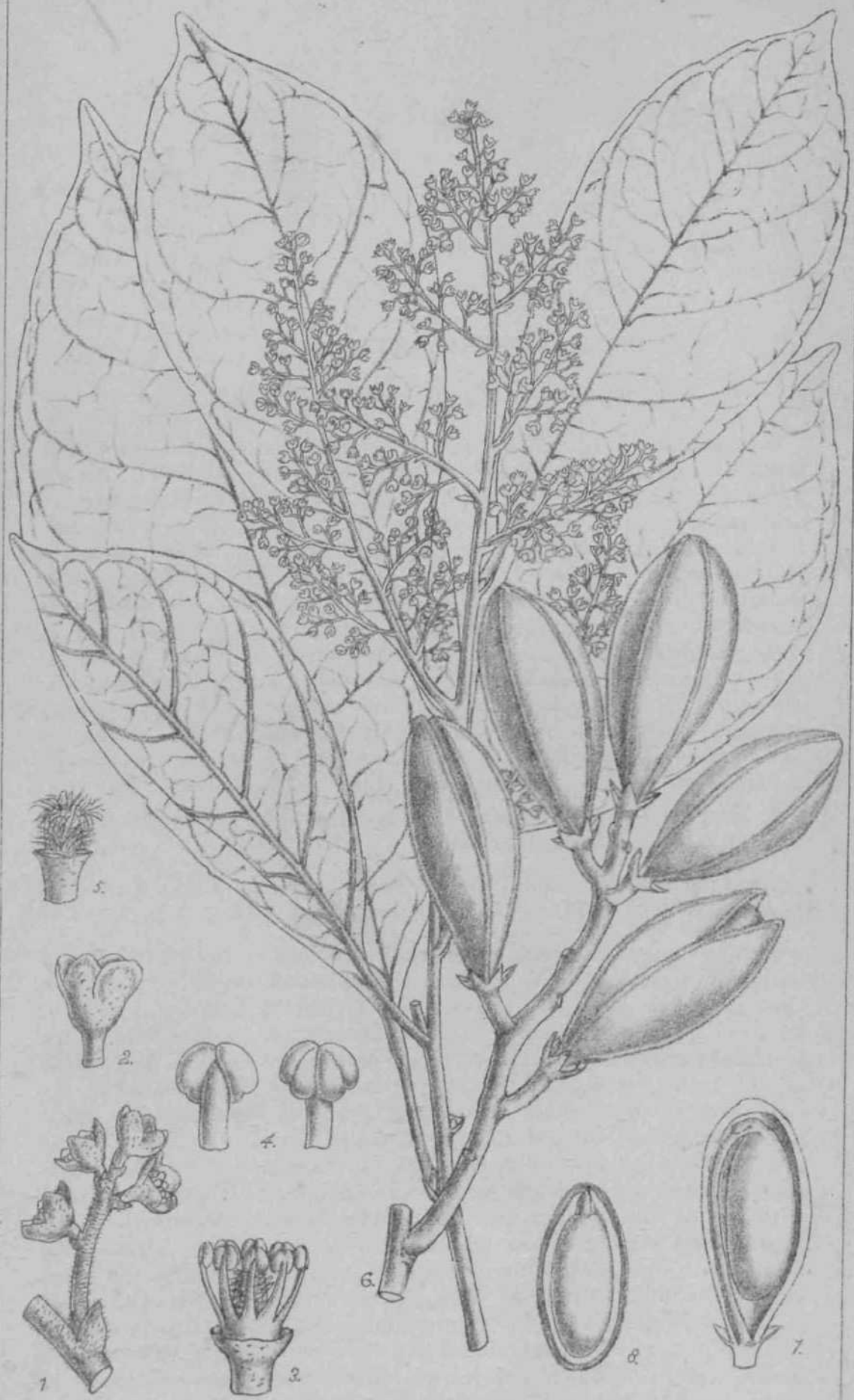
HAB. Icbang, Hupeh, Central China, *Dr. A. Henry.*

Frutex supra arbores 20 ped. altos scandens, ramulis gracilibus glabrescentibus, sterilibus pauciaculeolatis, floriferis inermis. *Folia* graciliter petiolata, subcoriacea, circumscriptione obovata vel intercom ovata, absque petiolo usque ad 6 poll, longa, alte divaricatim trilobata (lobis angustis acuminatissimis serrulatis) discoloria, supra glabra, subtus incana, costa interdum 2-3-aculeolata; petiolus 1-1[^] poll, longus, nudus vel 1-3-aculeolatus; stipulae liberae, lineares, apice saepius tridentatas. *Flores* rubri, racemosi, circiter 9 lineas diametro. *Fructus* ignotus.—W. B. HEMSLEY.

A very distinct species easily distinguished by its thick tripod-like leaves, dark-green and glabrous above and clothed with a very short white tomentum below.

Fig. 1. Flower partially open. **2.** An expanded flower. **3.** A petal. **4.** Stamen*. **6.** An ovary. *All enlarged.*





SCORTECHINIA KINGII, *Book. f.*

EUPHORBIACE*!. Tribe PHYLLANTHE^: ?

Scortechinia, *Hook.f. (gen. nov.)*. *Flares* minuti, dioici, in cymas subterminales dispositi, breviter pedioellati, apetalii. • FL. \$. *Sepala* 4?-5, rotundata, imbricata. *Stamina* 4-5, filamentis brevibus liberis; anther© latiusculro, intus dehiscentes. *Disci* glandulre 4-5, staminibus alternaa, pubescentes. *Fislillodium* breve, 3-lobum, pilosum. FL. \$. *Sepala* maris. *Ovarium* (3-4-loculare?); stigmata 4, minuta sessilia; ovula 2? ab apice loculi pendula. *Gapsula* cano-pubescent, oblongo-ovoidea, tenuiter Crustacea, 3-4-valvis, leviter 3-4-costata, 1-sperma, stigmatibus 3-4 minutis coronata. *Semen* ab apice column© (e deciduis septorum eformatae?) pendulum, elliptico-oblongum, compressum, testa tenuiter Crustacea, • albumine parco carnosio; cotyledones amygdalinae, radícula minuta supera.—Arbores fere glabrce. Folia alterna, petiolata, coriacea, integra v. subserrata, penninervia; petiolo apice incrassato. Stipulae non vism.

S. Eingii, *Rook. /.*; foliis elliptico- v. cuneato-obovatis obtusis v. cuspidatis glanduloso-crenatis.

HAD. Malay Peninsula and Islands; Perak, *King's Collector*; Malacca, *Griffith*; Borneo (*Herb. Beccari*, No. 1164).

A very singular genus, quite unlike any other in the Order, but curiously resembling the Malaccan Olacineous genus *Cteiwlophon*, Oliv. (in *Trans Linn. Soc.* xxviii. 51G, t. 43, and *Fl. Brit. Lid.* i. 577) in the form, indumentum and dehiscence of the capsule, and in the solitary pendulous seed and its column. I am very uncertain as to its position in the Order, which cannot be ascertained without knowing the structure of the female flowers, of which I have seen no specimens, though there are plenty of males and fruit. The fruit is always one-celled, and splits from apex to base into elliptic-lanceolate valves; it contains a single seed pendulous from a compressed column with ragged edges, which ascends from the base to the summit of the capsule, and is more or less adherent to the sides of the latter. The •column bears at its apex one pendulous seed, together with one ovule crowned with an obturator. The position of the ovule is at the back of the top of the seed. The stigmas and valves of the fruit appear to indicate a normally 4-carpellary and 4-celled ovary, of which 3 cells with their septa and ovules were undeveloped or disappeared during the development of the fruit. From the position of the ovule in the ripe

fruit it is impossible to say whether it belonged to the same cell with that of which the seed was developed, or to another. Should the ovarian cells prove to be uniovulate, the genus will have to be removed to the tribe *Crotonaceae*. The stigmas are extremely minute, cuneate and deciduous.

The generic name records the services to Botany of the late Father Scortechini, Soc. Jes., whose life was sacrificed to his zeal in exploring the botany of Perak. He died in Calcutta of fever contracted in that locality. His collections are divided between the Herbaria of Perak, Calcutta, and Kew. There are two other species in the Kew Herbarium, *S. nicobarica*, H. f. ('PL Brit. Ind.' ined.), with a pair of glands at the apex of the petiole; and *S. Forbesii*, H. f., from New Guinea (Sogeri region, Forbes, No. 434), with shorter, more turgid capsules, and broader leaves.—J. D. H.

Fig. 1. Portion of J panicle. 2. ♂ flower. 3. Stamens and pistillode. 4. Back and front view of stamens. 5. Pistillode. 6. Fruiting panicle. 7. Vertical section of fruit. 8. Vertical section of seed. *All but 6 and 7 enlarged**

PLATE 1707.

PLATYSTIQMA MYBISTIOEUM, *Brown.*

EUPHORBIACEII ? Tribe GALEARIE* ?

Platystigma, *Brown.* Flores dioici, in paniculas breves axillares dispositi. FL. <J bracteati et bracteolati. *Sepala* 4-5, varie connate brevia, inaequalia, imbricata. *Petala* 4-5, ovata, acuta, valvata. *Stamina* 4-5, petalis opposita, filamentis brevissimis; anther© magnoe, loculis oblongis parallelis subintrorsum dehiscentibus. *Pistillodium* 0. FL. § 1-braoteati. *Sepala* 5, late ovata, imbricata, 2 interiors *Ovarium* cylindraceum, pubescens, 1-locnlare; stigma magnum, erasum, sessile, pileiforme: ovulum solitarium, ab apice loculi pendulum, lineare, obturatore 0.—Arbor ? ramulis paniculisque rufo4omentom. Folia alterna, coriacea, integerriwia, pennimroia.

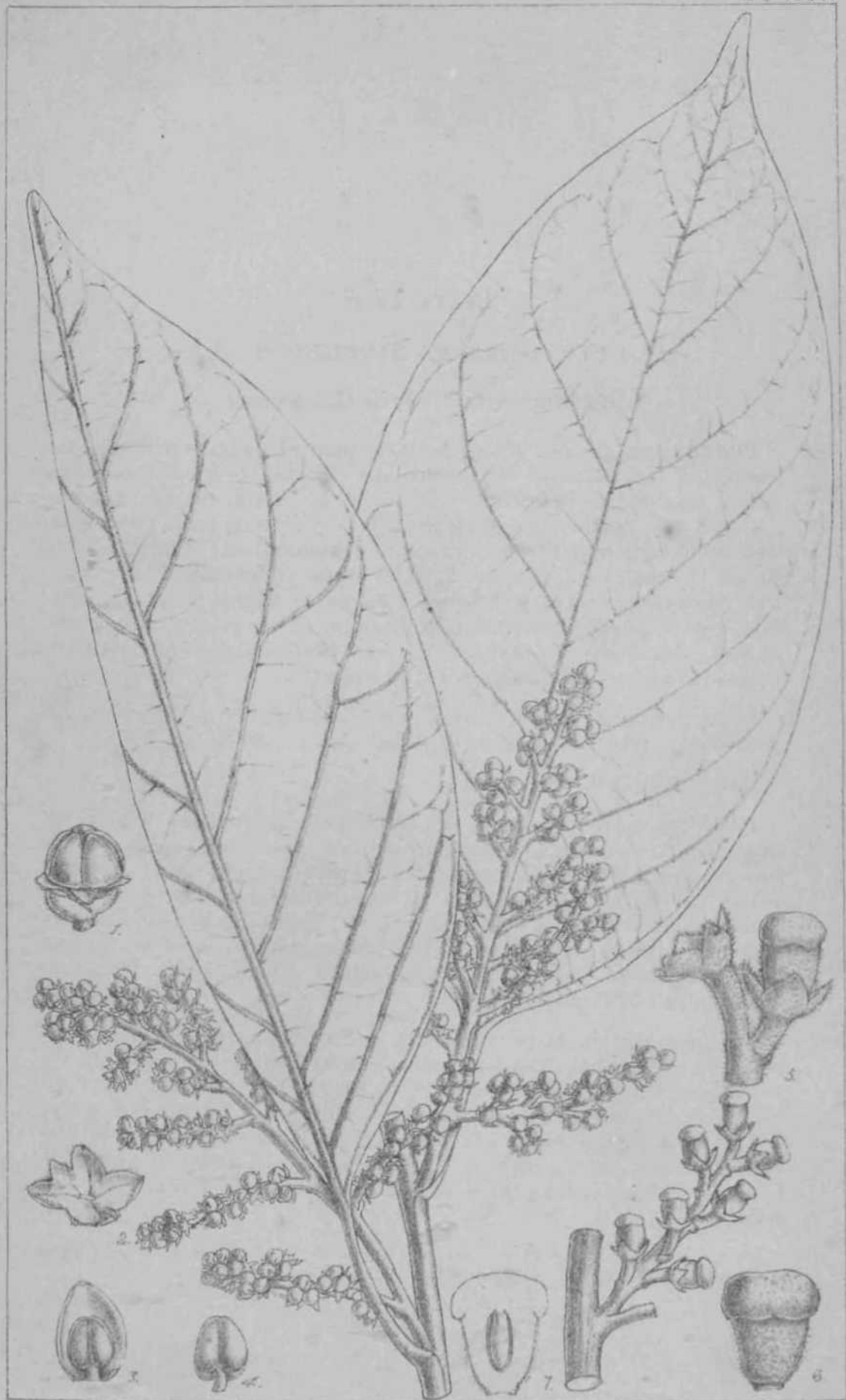
P. myristiceum, *Brown*, in *Wall. Cat.* 7523 (planta ?); *Hook.f. FL Brit. Ind.* v. (ined.). *Myristicea*, *Wall Oat.* 9017 (planta tf).

HAB. Silhet, *W. Gomez.*

Bami lignosi, teretes, caui. *Folia* 5-7 poll, longa, 2-3^ lata, elliptica v. elliptico-oblonga, acuta v. acuminata, basi acuta, supra glabra, subtus cana; nervis utrinque 10-12, nervulis obscuris; petiolus |-1-pollicaris; stipulflB non visse. *Paniculce* § 1-3-pollicares, sessiles, rachi ramisque robustis, alabastra globosa; flores £ poll. diam.; sepala hispidula; petala glabra v. stellatim puberula. *Panicula* ? maribus breviores; flores crasse pedicellati; sepala ^ poll, longa; ovarium crassum, loculo angusto.

I am not certain as to this being a Euphorbiaceous plant. *Bentham*, who has noted on the specimens in *Kew Herbarium* th&t there are two oVules, but one sometimes abortive, has suggested (' *Gen. Plant.*' iii, 283) that it may be a *Baccaurea*, from which genus the 2-celled ovary, linear ovule, stigma, and absence of a thickening at the apex of the petiole at once distinguish it. I have examined many ovaries, but have never found a trace of a second ovule, nor do I find traces of stipules.—*J. D. H.*

Fig. 1. *S* flower. 2. *S* calyx. 3. Fetal and stamen. 4. Stamen. 5. Branch of \$ panicle. 6. Ovary. 7. Vertical section of the same. All enlarged.



M.S. del. et lith

Platystigma myristiceum, R.Br.

PLATE 1708.

MEGAPHYLLJEA PERAKENSIS, *Hemsl*

MELIACEJS. Tribe **TRICHILIEÆ.**

Megaphyllaea, *Hemsl.* (*gen. nov.*). *Calyx* cupularis, valde incrassatus, squamiferus, subpersistens, tubo cum ovarii basi adnato, limbo irregulariter 3-5 lobato. *Petala* 10, ligulata, libera, biseriata, crassa, coriacea, imbricata. *Tubus stamineus* cylindricus, apice obscure crenulatus; anther 10, inclus. *Discus* pulvinatus, multilobatus, ovarium ferens. *Ovarium* 7-9-loculare, stylo crasso stigmatate capitato; ovula in loculis solitaria, angulo centrali affixa. *Gapsula* magna spherioidea, 7-9-lobata, 7-9-locularis (loculis sulcisoppositis) crassissima, tarde dehiscens. *Semina* exalbuminosa, compressa, nuda, glabra, hilo maximo, cotyledonibus conferruminatis.—*Arbor* circiter 50-pedalis. *Folia* pinnata, araplissima. *Flores* magni, laxe racemoso-paniculati.

M. perakensis, *Hemsl.* (*sp. unica*).

HAB. Larut, Perak, at 3,000 to 3,600 feet above the level of the sea, *It. Wray, junior.*

Folia glabra, subtus pallidiora, 6-7 ped. longa; petiolus teres, basi incrassatus. *Foliola* opposita, petiolulata, coriacea, leviter oblique oblonga, majora 12-15 poll, longa, 3-4 poll, lata., Integra, acuminata, vix acuta; venis primariis lateralibus distantibus subtus elevatis prominentibus: *Rhachis* sursum lateraliter compressa, fere quadrata. *Flores* circiter 15 lineas diametro, puberuli, pedicellati, pedicellis crassis juxta flores articulatis. *Petala* medio valde incrassata, extus puberula, reflexa. *Tubus stamineus* petalis brevior, intus infra antheras sessiles hirsutus. *Ovarium* stylusque infra medium dense pubescens. *Fructus* depresso-spherioideus, conspicue lobatus brevissime denseque tomentosus, circiter 3 poll, diametro. *Semina* 1 poll. longa.—W. B. HEMSLEY.

The biseriata petals are very remarkable, and it was at first suspected that this was an abnormal condition; but we are assured by Mr. Wray that they were so in all the flowers he had observed on more than one occasion. We place it provisionally next to *Chisocheton*.

Behind, a leaf very much reduced with a leaflet and portion of inflorescence natural size.

Fig. 1. A petal of the outer series. 2. A petal of the inner series. 3. Staminal tube laid open. 4. Ovary. 5. Vertical section of ovary after the flowering stage. 6. Cross section of very young fruit; all enlarged. 7. Fruit and 8. Seed (showing the large longitudinal hilum); natural size.



PLATE 1709.

MUNEONIA UNIPOLIOLATA, *Oliv.*

MELIACEJE. Tribe MELIEJJ.

M. unifoliolata, *Oliv. (sp.nov.)*; fruticulus pubescens, foliis unifoliolatis petiolatis lamina oblongo-elliptica integra v. utriusque 1-2-3-dentato-lobata late acutata v. obtusiuscula puberula, pedunculis axillaribus 1-3-floris petiolo saepe brevioribus, calycis lobis lanceolatis, corollas tubo gracili limbo subaequilongus v. longiore.

HAB. Ichang, China, Dr. A. Emry (Nos. 2901 and 3963).

Fruticulus 2-6 poll, alternis parce ramosus v. simplex, ramulis foliiferis hirsuto-pubescentibus. *Folia* alterna, lamina 1^{^-}2^{^-} poll, longa 1-1^{^-} poll, lata, basi late cuneata v. rotundata; petiolo 1/2-1 poll, longus. *Flores* albi 1 poll, longi; calyx parvus 5-partitus, lobis 1-1 lin. longis; corollas lobis oblanceolato-ellipticis patentibus; tubo staminens exsertus, dentibus oblongo-linearibus apice dentatis antheris mucronatis squilongis. *Fructus* magnitudine pisi, pubescens. *Semina* dorso hemisphaerica facie **concava**.

At first sight suggesting a unifoliolate state of *Munronia pumila* Wt. of Ceylon, but differing in the minute calyx and smaller flowers.—D. OLIVES.

Fig. 1. Calyx and style. 2. Apex of staminal tube. 3. Staminal tube laid open. 4. Disk. 5. Longitudinal and 6. Transverse, section of ovary. 7. Fruit. 8. Seed. *Excepting 7, enlarged.*



M.S. del., et lith.

Munronia unifoliolata, Oliv.

PLATE 1710.

SAGERETIA FERRUGINEA, *Oliv.*

RHAMNACEJ.

S. ferruginea, *Oliv.* (*sp. nov.*); frutex longe procumbens, ramis teretibus puberulis ramulis lateralibus nonnunquam abbreviatis recurvo-uncinatis, foliis ovali-oblongis acuminatis basi obtusis serrulatis breviter petiolatis supra glabratis subtus ferrugineo-tomentellis, venis primariis utrinque 7-9 supra depressis subtus prominentibus, spicis gracilibus interruptis seepius 2-4-nis vel paniculatis quasi terminalibus v in axillis superioribus dispositis fulvo-tomentellis.

HAB. Ichang, China, *Dr. A. Henry* (No. 2701).

Folia saepe subopposita 2-2[^] poll, longa, f-1 poll, lata; petiolus 2-3 lin. longus. *Flores* parvi sessiles tomentelli | - 1 lin. longi et lati.

Dr. Henry describes this fine species as trailing to a length of 20 feet; flowers yellow.—D. OLIVER.

Fig. 1. Flower. 2. Same in vertical section. 3. Petal. 4. Same with opposed stamen, front view. 5, Same, side view. 6. Ovary and disk. *All enlarged.*



M. S. del, et lith.

Saferetia ferruginea, Oliv.

PLATE 1711.

ELEUTHEBOCOCCUS HENBYI, *Oliv.*

ABALIACEJ.

E. Henryi, *Oliv. (sp. nw.)*; ramis teretibus glabrescentibus aculeatis ultimis scaberulis, aculeis raris recurvis brevibus solitariis basi tuberculatim longitudinaliter dilatatis, foliis 5-foliolatis, foliolis oblanceolatis ovalibusve plus minus acuminatis basi cuneatim angustatis serrulatis supra scaberula subtus parce pilosulis v. tomentellis, breviter petiolulatis, umbellis 3-6 pedunculatis terminalibus et in axillis superioribus dispositis multifloris subglobosis, fructibus siccitate acute 5-4-angulatis nigrescentibus stylo persistente longiusculo indiviso coronatis.

HAB. Patung, Prov. Hupeh, China, *Dr. A. Henry* (No. 1711).

Folia alterna longiuscule petiolata, foliolo centrali 2-2[^] poll, longo., lateralibus brevioribus; petiolus 1-3 poll, longus puberulus nudus v. aculeolis 1-2 minutis instructus. *Umbellae* florifero 1 poll. diam.; pedicelli [^]-| poll, longi parce hirtelli; fructifero 1[^]-2 poll. diam.; pedunculi 1-1[^] poll, longi. *Stylus* columnaris temp, florifero ovario longior. *Fructus* £ poll longus.

Dr. Henry sends this as the *Wu Ohia* PV, with red root, distinguishing it from specimens sent under the same Chinese name, but in which the 'outside of the root is white.' These latter appear to be specifically distinct, and may be diagnosed as under. The root-bark is used as a drug.

E. leucorrhizus, *Oliv. (sp. nov.)*; ramulis ultimis glaberrimis, aculeis deflexis solitariis v. 3-5-nis sub pulvino foliorum ortis, foliis, glabris 5-foliolatis, foliolis oblanceolatis ovalibusve acuminatis apicem versus plus minus serratis, umbellis (in spp. nostris) solitariis quasi terminalibus pedunculatis, fructibus angulatis stylo persistente brevissimo coronatis.

HAB. Patung district, Prov. Hupeh, *Dr. A. Henry* (No. 116 and 2680).

Growing to a height of 10 feet or more,¹ on cliffs.—D_t OLIVER.

Fig. 1. Bract. 2. Flower, petals fallen. 3. Same, ovary in longitudinal section. 4. Ovary, transverse section. 5. Fruit, longitudinal section. *All enlarged.*



M. S. del. et lith.

Eleutherococcus Henryi, Oliv.

PLATE 1712.

WENDLANDIA (SESTINIA) HBNETI, Oliv.

KUBIACEJ.

W. (Sestinia) Henryi, Oliv. (*sp. nov.*); frutex ramosus ramuijs virgatis strictis foliosis ultimis strigillosis, foliis ovalibus acutiusculis breviter petiolatis supra scaberulis subtus praecipue in venis strigillosis, stipulis lanceolate- v. ovato-deltaoideis dorso strigosis, paniculis compactis ramulos terminantibus subsessilibus v. breviter pedunculatis, calycis lobis linearibus strigosis tnbo subduplo longioribus, stylo longiuscnle exserto apice leviter clavato bifido.

HAB. Ichang, China, *Dr. A. Henry* (Nos. 317, 603, 1619, 2269).

Folia 1-1[^] poll, longa, [^]-[^] poll. lata. *Paniculce* parviro multiflorae strigosae, bracteis lineari-snbulatis. *Calyx* strigosus, lobis persistentibus. *Corolla* alba [^] poll, longa, glabra v. lobis parce hispidulis.

Very nearly allied to *Wevdlandia Kotschyi*, Boiss. et Hohen. of Kurdistan. The extremities are more distinctly strigose, the calyx-lobes absolutely and relatively much longer, and the style farther exserted.—D. OLIVER.

Fig. 1. Bud. 2. Flower. 3. Longitudinal section of ovary. 4. Fruit. 6. Same after dehiscence. 6. Seed. 7. Fruiting panicle. *Excepting 7, enlarged.*



M.S. del. et lith.

Wendlandia (Sestinia) Henryi, Oliv.

PLATE 1713.

OTHONNA CABNOSA, *Less. var. discoidea.*

COMPOSITE. Tribe SENECONIDEJE.

O. carnosa, *Less.*; DO. *Prodr.* vi* 477, *var. discoidea*; suffruticosa glaberrima glaucescentia, foliis sessilibus linearibus basi semiteretibus supra medium teretibus acuminatis, pedunculo ^ elongato^ erecto aubnudo, cymis 8-14-cephalis, capitulis hemisphericis discoideis.

HAB. Durban flat, Natal, X *Medley Wood* (No. 1309).

Suffrutex 1-2 pedalis. *Pedunculi* 1-1½ ped. longi; pedicelli f-1j poll, longi. *Flores* radii tubulosi J, stylo bifido: disci 3 stylo indiviso. *Achmia* subteretia basi angustata leviter curvata.—D. OLIVER.

Fig. 1. Involucre. 2. Ray-floret. 3. Style of same. 4. Achene. 5, Disk-floret. 6. Seta of pappus. 7« Anthers. 8. Style. *Enlarged**



M.S. del. et lith.

Oenothera carniflora Less. var. *laxior*

LOPHOPYXIS MAINGAYI.

EUPHORBIACEÆ ?

Lophopyxis, *Hookf.* {genus nov.}. *Flares* parvi, monoici, in cymas laxas elongatas axillares et terminales dispositi, £ in cymas inferiores. FL. \$. *Calyx* 5-partitus, peraistens, lobis ovatis valvatis. *Petala* minuta, inter lobos obcordatos disci crassi inserta. *Stamina* 5, lobis disci alterna, filamentis brevibus pnbescens; antherse breves, connectivo apiculat®, loculis oblongis introrsum dehiscentibus. *Pistillodium* parvum, villosum. FL. \$. *Perianthium* maris. *Discus* annularis, crenatus. *Ovarium* ovuideum, tomentosum, 5-loculare; stigmata 5, sessilia, subulata, recurva; ovula loculis 2, collateralia, pendula, linearia, obturatore 0. *Fructus* (immaturus) lineari-oblongus, profunde 5-sulcatus et 5-costatus.—*Frutex scandens, ramulis ut videtur pendulis. Folia alterna, breviter petiolata, integerrima, basi 3-nervia. Panicule pendulce.*

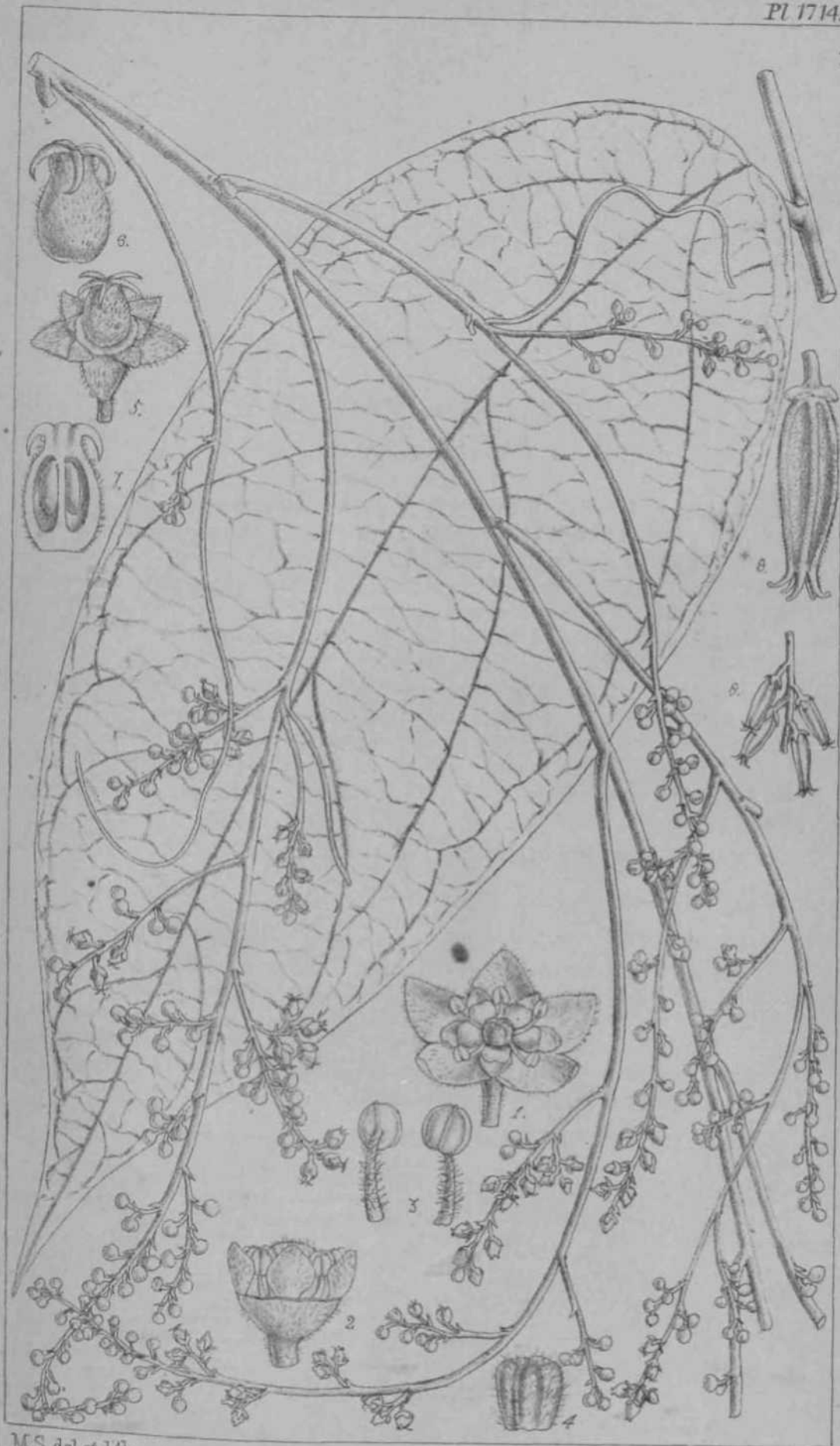
L. Maingayi, *Hook. f. in Fl. Brit. Ind. v. v.* (ined.).

HAB. Malacca, *Maingay* (Kew Distrib. 1429).

ramuli sulcati, pnbervi. *Limba* 4-6 poll, longa, coriacea, ovato-obcordata, longe acuminata, supra nitida, minute reticulata, subnitida, siccitate purpurascens, nervis utrinque supra basilares 4-5; petioli ^ poll, longi; stipules non visse. *Paniculce* pedales, pendulce, rachide puberula, ramulis canis. *Flores* ^ poll, diara., breviter pedicellati; alabastra globosa; bractee minutae. *Sepala* utrinque tomentosa. *Fructus* immaturus ^ poll, longus, stigmatibus coronatus.

I am very doubtful as to the affinities of this curious plant.—J.D.H.

Fig. 1. S flower. **2.** The same with the sepals removed. **3.** Stamen. **4.** Pistillode, **5.** \$ flower. **6.** Ovary. **7.** Vertical section of the same. **8.** Immature fruits of tit' natural size. **9.** An immature fruit. *All but fig. 8 enlarged.*



M.S. del et lith.

Lophopyxis Maingayi, Hk.f

PLATE 1715. .

SCHIZANDRA PROPINQUA, *Ilk. / et T. var.*

MAGNOLIACEJE. Tribe SCHIZANDRE[^]). .

8. **propinqua**, *Hook. fil. et Thorns., Flora of Brit. Ind.* i. 45, var. *slnensis*, ramulis elongatis gracillimis, foliis anguste- vel lineari-lanceolatis acuminatis basi cuneatis rotundatisve, remote denticulatis, floribus \$ quam in forma typica minoribus (3. poll. diam.).

HAB. Ichang, China, *Dr. A. Henry* (Nos. 1544, 1693, 2028, 3243).

Dr. Henry describes the flowers as green ' with pale pink centre.' Dr. Wallich's figure of 8. (*Kadsura*) *propinqua*,¹ *Tent. Fl. Nepal*,¹ 1.15, represents the sepals as cream-coloured tinged with red, passing into red-purple in the petals. The narrower leaves and smaller flowers do not seem to justify specific separation from the Himalayan type.—
D. OLIVER.

Fig. 1. Staminate flower. 2. Same open. 3. Androecium. 4. Anthers, back and front. 5. Seed. 6. Section of same, showing embryo. Enlarged,



Schizandra chinensis, Hk f & T. var amurensis

PLATE 1716.

PETROCOSMEA SINENSIS, *Oliv.*

GESNERACEAE, § CTRTANDRE^;

Petrocosmea, *Oliv.* (*gen. nov.*). *Calyx* 5-partitus, segmentis tubo corollae subaequilongis lanceolatis acutis. *Corolla* subtrotata bilabiata, labio postico bifido segmentis oblongo-ellipticis obtusis, antico trifido segmentis oblongo-ellipticis v. centrali obovato-oblongo, lobis omnibus subaequalibus. *Stamina* antherifera 2 antica basi tubo corollae inserta inclusa, filamentis brevissimis, antheris majusculis ovato-ellipticis emarginatis, bilocularibus; staminodia lateralia et postica minutissima squamiformia. *Discus* obsoletus. *Ovarium* liberum ovoideum puberulum in stylum attenuatum, basi latiusculum, uniloculare, placentis intrasis multiovulatis basi medio coalitis. *Stylus* gracilis; stigma parvum capitellatum indivisum. *Capsula* oblongo-ovoidea calycem aequans v. parum superans, stylo longiusculo persistente coronata, valvis utrinque solatis, medio placentiferis. *Semina* minuta fusiformia.—Herba acaulis pilosula. Folia plurima longe petiolata, lamina rotundata obovata v. elliptica obtusissima pilosula. Scapi uniflores graciles. Flores ut videtur violaceae.

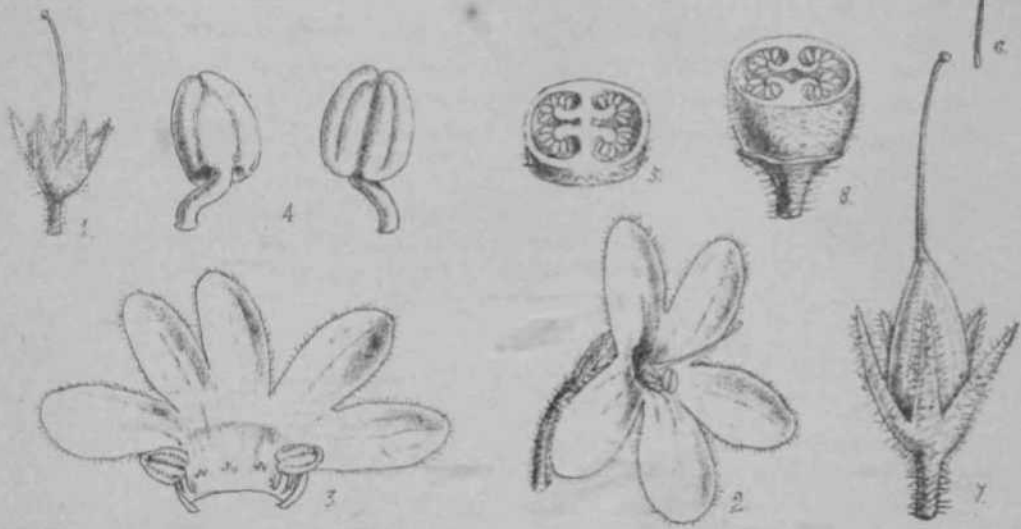
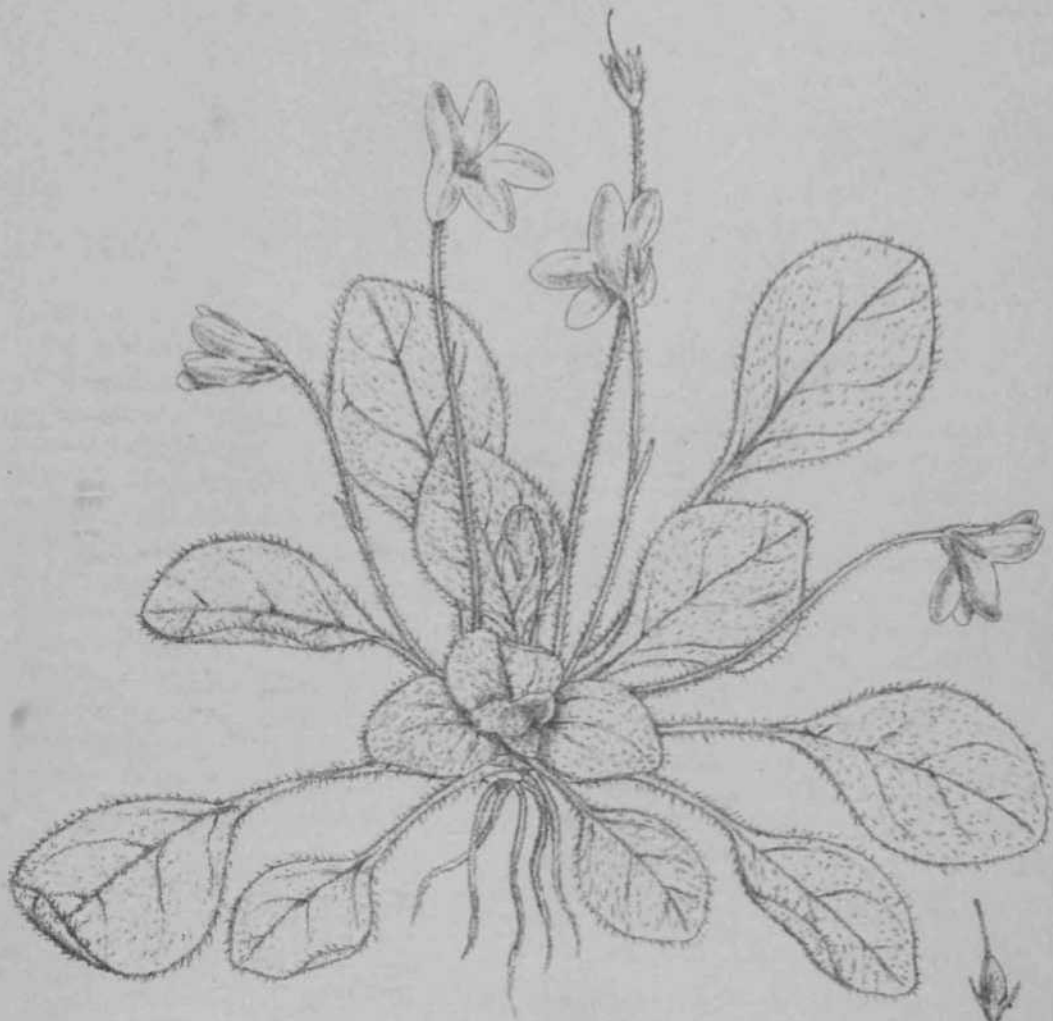
P. sinensis, *Oliv.* (*sp. unica*).

HAB. Ichang, China, *Dr. A. Henry* (Nos. 2321, 2921).

Folia lamina $\frac{1}{2}$ - 1 $\frac{1}{2}$ poll, longa, $\frac{1}{2}$ - $\frac{3}{4}$ poll, lata; petiolus $\frac{1}{2}$ - 1 $\frac{1}{2}$ poll. longus. Flores $\frac{1}{2}$ poll, diam. Capsula $\frac{1}{2}$ poll, longa.

Dr. Henry describes this pretty little plant as growing on the surface of a rock in the bottom of a small cave, with the leaves closely pressed against the rock. It is nearly allied to *Didymnocarpus*, to which genus, had the capsule been linear and elongate, it might well have been referred.—D. OLIVER.

Fig. 1. Calyx. 2. Flower in front. 3. Corolla laid open. 4. Anther, front and back. 5. Transverse section of ovary, at its base. 6. Fruit and calyx, natural size. 7. Same enlarged. 8. Transverse section of fruit. Excepting fig. 6, enlarged.



M. S. del. et lith.

PLATE 1717.

ASTEE PERFOLIATTS, *Oliv.*

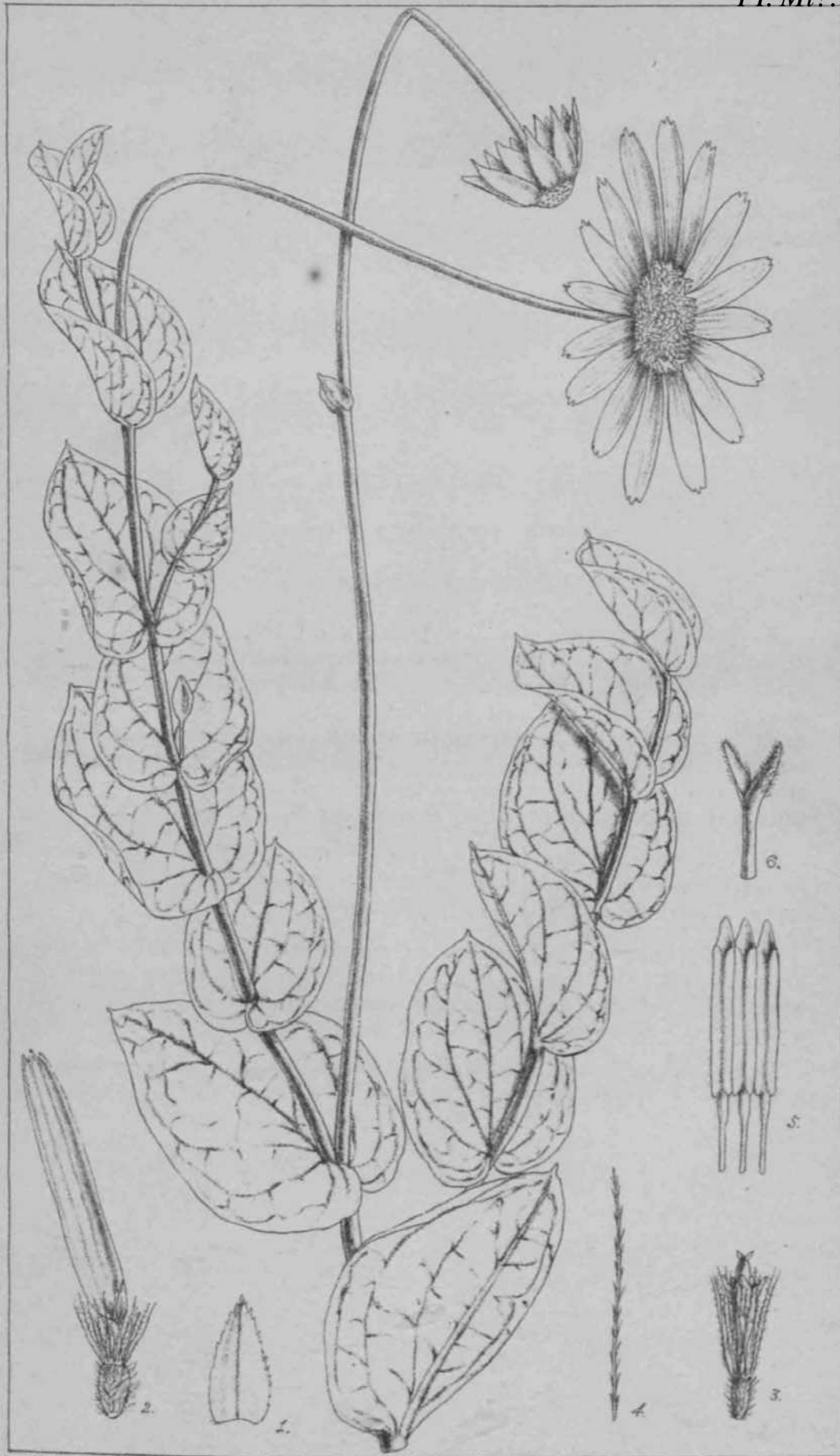
COMPOSITEJE, § ASTBEOIDEJI.

A. **perfoliatus**, *Oliv.* (*sp. nov.*) terba foliosa[^] glaberrima, ramis adscendentibus monocephalis, foliis sessilibus coriaceis late ovatis y. ovato-ellipticis basi cordatis amplexicaulibus seepins obtusis mucronatis integris reticulatim venosis glandulis resiniferis immersis notatis, capitulis solitariis scepe longe pedunculatis, involucri squamis paucis seriatis, exterioribus ovato-lanceolatis acutis margine late scariosis erosis interioribus oblanceolatis acutis, achssniis argenteo-pilosis, pappi setis barbatis corollam (fl. disci) asquantibus.

HAB. Slopes of the Drakensberg, *T. Cooper* (No. 3510); same locality, near the .Tugela falls, 4,500 ft., /. *Medley Wood* (No. 3605); Faku's Territory, S. Africa. *Dr. Sutherland*.

Herha, ut videtur 1-2 pedalis. *Folia* seepius internodiis subduplo longiora, 1-2 poll, longa, 1-1 \ poll, lata, rarius angustiora, basi lobis rotundatis. *Peduncidi* terminales monocephali 1[^]-8 poll, longi graciles. *Gapitula* radiata 1[^]-8 poll, diam.—D. OLIVER.

Fig. 1. Bract of involucre. 2. Ray-floret. 3. Disk-floret. 4. Seta of pappus. 5. Anthers. 6. Stigma. ***Enlarged.***



M. S. ieldrfk

Aster perfoliatus, Oliv.

PLATE 1718.

MUSSJENDA MUTABILIS, Hemsl

RUBIACEJE. Tribe **MUSSJENDEÆ.**

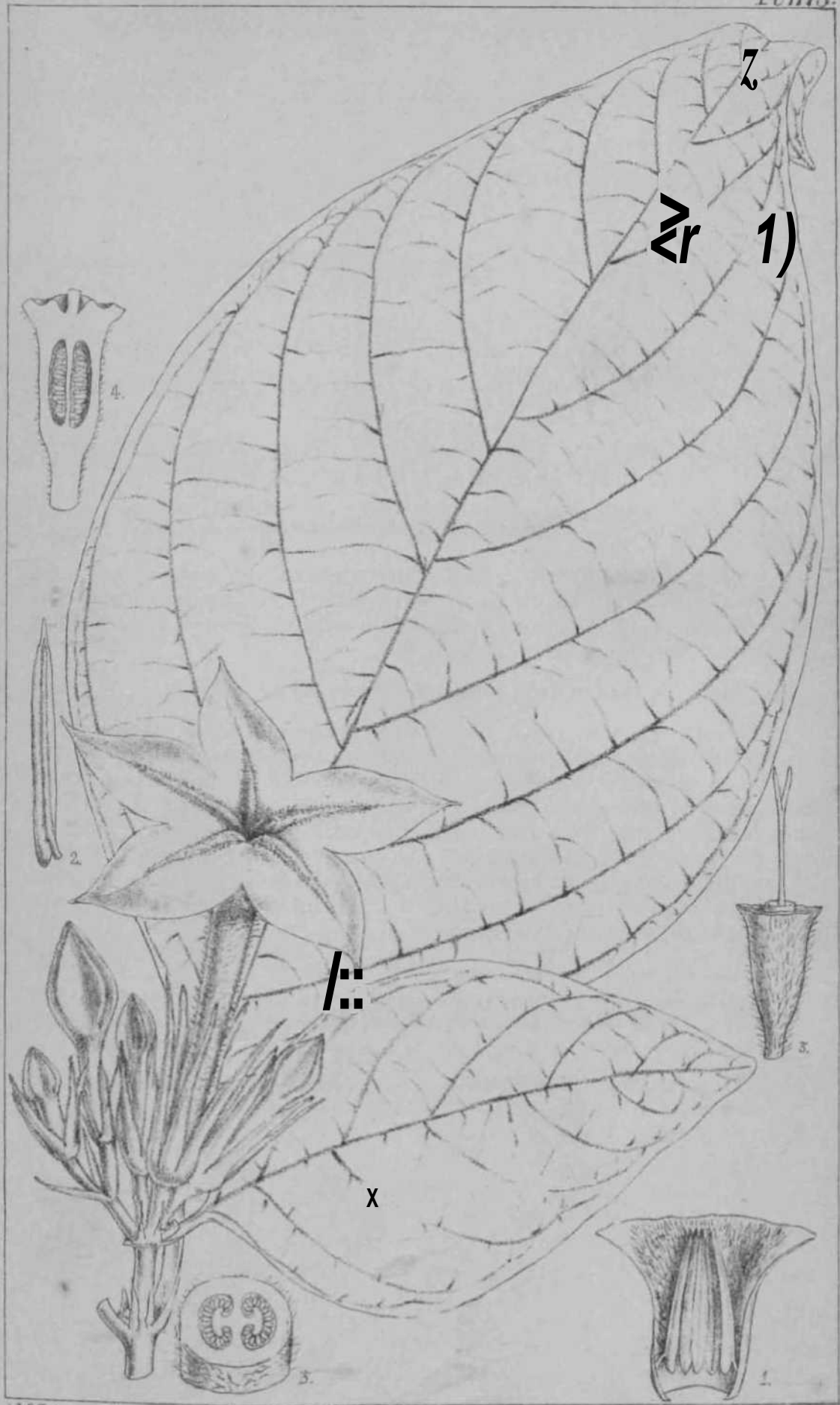
M. mutabilis, Hemsl.; preter flores glabra vel glabrescens, foliis graciliter petiolatis ovatis utrinque attenuates, calycis lobis persistentibus soqualibus, corollae lobis late ovatis. *Acranthera mutabilis, Hemsl.* in 'Journ. Bot.' 1887, p. 204

HAB. Waterfall Hill, Perak, *L. Wray, junior.*

Frutex vagans, ramis lenticellatis glabrescentibus. *Folia* longe petiolata, fere membranacea, glabrescentia, late ovato-elliptica, utrinque longe attenuata, acuta, cum petiolo usque ad 11 poll, longa, venis primariis lateralibus utrinque 7-8 conspicuis arcuatis. *Flores* flavi deinde coccinei, 2-2[^] poll, longi., in cymas parvas densas terminales dispositi. *Calycis lobi* lineares, acutissimi, 6-8 lineas longi. *Corolla* infundibularis, extus hirsuta, lobis late ovatis intus pulverulentis, tubo intus barbato. *Acranthera Griffithii* affinis : differt corollas lobis late ovatis, Ac.—W. B. HEMSLET.

Acranthera Maingayi and *A. Griffithii, Hook. f.* ('Flora of British India,' iii. p. 92) are very closely allied to the plant here figured ; and as they all three have a two-celled ovary and a divided style, they should be referred to *Musscenda*, if the two genera are retained.

Fig. 1. Upper portion of the corolla-tube thrown open to show the insertion of the stamens. 2. An anther. 3. Ovary. 4. Section of the same. *All enlarged.*



M.S. del. yrt. IMh,

Mussaenda rutabilis. Hemsl.

PLATE 1719.

NASTURTIUM HENRYI, *Oliv.*

CRUCIFERÆ.

N. Henryi, *Oliv.* (*sp. nov.*); herba debilis, parce pilosula, canlibns gracilibus decumbentibus tenuiter albido-pilosis, foliis petiolatis pinnati-partitis segmentis ovatis v. ellipticis tenuibus obtnsis obtuse crenato-dentatis supra breviter subtus longiuscule parce pilosis, lateralibus saepius bijugis sessilibus v. basi petiolatim - angustatis, racemis terminalibus angustis sinuatis elongatis multifloris breviter pedunculatis, pedicellis fructiferis patentibus capsulam subeequantibus, capsulisbrevibusovali-oblongissubteretibus (leviter dorso compressis) saepe oligo- v. mono-spermis, valvis tenuibus cymbiformibus, radicula incumbente.

HAB. Ichang, China, Dr. A. *Henry* (No. 2899).

Herba ^-1-pedalis. *Flores* parvi albidī. *Ovula* in loculis 5-8. *Cctpsula* pilis albidis patentibns parce pilosula 1-1^ lin. longa, stylo brevi coronata.

This singular plant, which for the present may be left in *Nasturtium*, may prove ultimately better disposed of in *Lepidineoe* as a distinct generic type. The radicle is distinctly, though sometimes obliquely, incumbent. The ovules in our examples seem often to be abortive, so that the capsule is few- or even 1-seeded.—D. OLIVER.

Fig. 1. Sepal. 2. Fetal. 3. Stamens. 4. Ovary. 5. **Same laid open.** 6. Seed. 7. Embryo. *Enlarged.*



M.S. del. et lith.

PLATE 1720.

BOMBAX JENMANI, *Oliv.*

MALVACEAE, § BOMBACEJB.

B. Jenmani, *Oliv.* (sp. nov.) ; foliis glaberrimis petiolo laminae foliolorum subsequilongo subtereti, foliolis 5-7 ovali- v. oblanceolato-oblongis breviter acute v. acutiuscule acuminatis basi in petiolulum angustatis tenuiter coriaceis supra nitidis subtus opacis pallidioribus, foliis eis *Pachira* aquaticis similibus, petalis elongato-linearibus fulvo-tomentellis calyce breviter tubuloso 12-15-plo longioribus, capsula oblongo-ellipsoidea lana copiosa farcta, valvis marginibus incurvis apice rigide apiculatis.

HAB. Essequibo river, British Guiana, *Mr. Jenman* (No. 2449).

Arbor 30-50-pedalis. *Foliola* majora 5-6 poll, longa 1¹/₂ poll, lata; petiolus 4 poll, longus; petiolulus 1¹/₂ poll, longus. *Flores* 8-10 poll, longi. *Calyx* coriaceus truncatus brevissime dentatus. *Tubus stamineus* 3 poll, longus; phalanges 5-7 poll, longi. *Capsula* 4-5 poll.; lana copiosa fulva.

The flowers of our specimen are detached, so that I cannot describe the inflorescence, nor does our material suffice for some other not important details; but the plant is interesting as entirely *Pachira*, almost the common *P. aquatica*, Aubl., in appearance of the flower, while the capsule is that of a typical *Bombax*. I understand my friend Dr. Schumann, who monographed the Bombaces of 'Flora Brasiliensis' proposes to unite these genera—I think, rightly. This plant, he informed me, was new to him.—D. OLIVER.

Fig. 1. Anthers, enlarged. 2. Capsule, nat. size.



M.S. del. et lith.

PLATE 1721.

PHYLLOBCEA SINENSIS, *Oliv*,

GESNEEACEJE. Tribe CYRTANDREJE.

P. sinensis, *Oliv*, (ap. nov.) | internodiis brevibus, foliis longe pefcio-
latis oppositis lanceolato- vel obloDgo-ellipticis acntiusculis basi in
petiolum angustatis niargine obscure crenulato-dentatis supra gla-
bratis subtus cum petiolo arete fulvo-tomentellis, nervis primariia
utrinque 10-12 curvatis subtus prominulis, petiolo basi dilatato amplexi-
caule, pedunculis axillaribus foliis inferioribus breyioribus laxe tomen-
tellis tomento decidno, cymis plurifloris conspicue bracteatis, bracteis
berbaceis late ovatis rotundatisve obtusis sessilibus, pedicellis calyce
cequilongis, lobis calycis subasqualibus oblanceolatis obtusis, corolla
late campanulata lobis rotundatis subaequalibus, staminibus inclusis
fijamentis infra medium incrassatis.

HAB. Ichang, *Dr. A. Henry* (No. lf>72).

Eerba | -1-pedalis. *Folia* 3-4 poll, longa, | - 1 ^ poll, lata; *petiolus*
1 ^ -2 poll, longus. *Pedunculi* stricti 2-2 ^ poll, longi; *bractea* B ^ poll,
longae. *Capsula* torta 1 ^ poll, longa.

In inflorescence very similar to the only previously described species
of the genus, *P. amplexicaulis*, C. B. Clarke, of Lower Birma; but the
leaves are very different. By inadvertence the leaves in our plate are
represented as alternate; they are opposite, and the sheathing bases of
the petioles narrowly connate.—D. OLIVER.

Fig. 1. Calyx and pistil. 2. Corolla laid open. 3. Pistil. 4. Transverse section
of unilocular ovary. *Enlarged*,



M.S. del. et lith.

Phylloboea sinensis Oley

PLATE 1722.

LYSILOMA SABICU, *Benth.*

LEGUMINOSJE. Suborder MIMOSEJ:

L. Sabicu, *Benth. in Hook & Journ.* vi. (1854), p. 236; glaberrima, petiolis tenuibus, pinnis 2-3-jugis, foliolis 3-4-jugis oblique obovatis oblanceolatisve obtusissimis venulosis breviter sed distincte petiolulatis, pedunculis folio brevioribus, legumine longiuscule stipitatum planum obtusum, marginibus tenuiter incrassatis.—*Benth* in *Trans. Linn. Soc.* xxx. 534 (*cum syn.*).

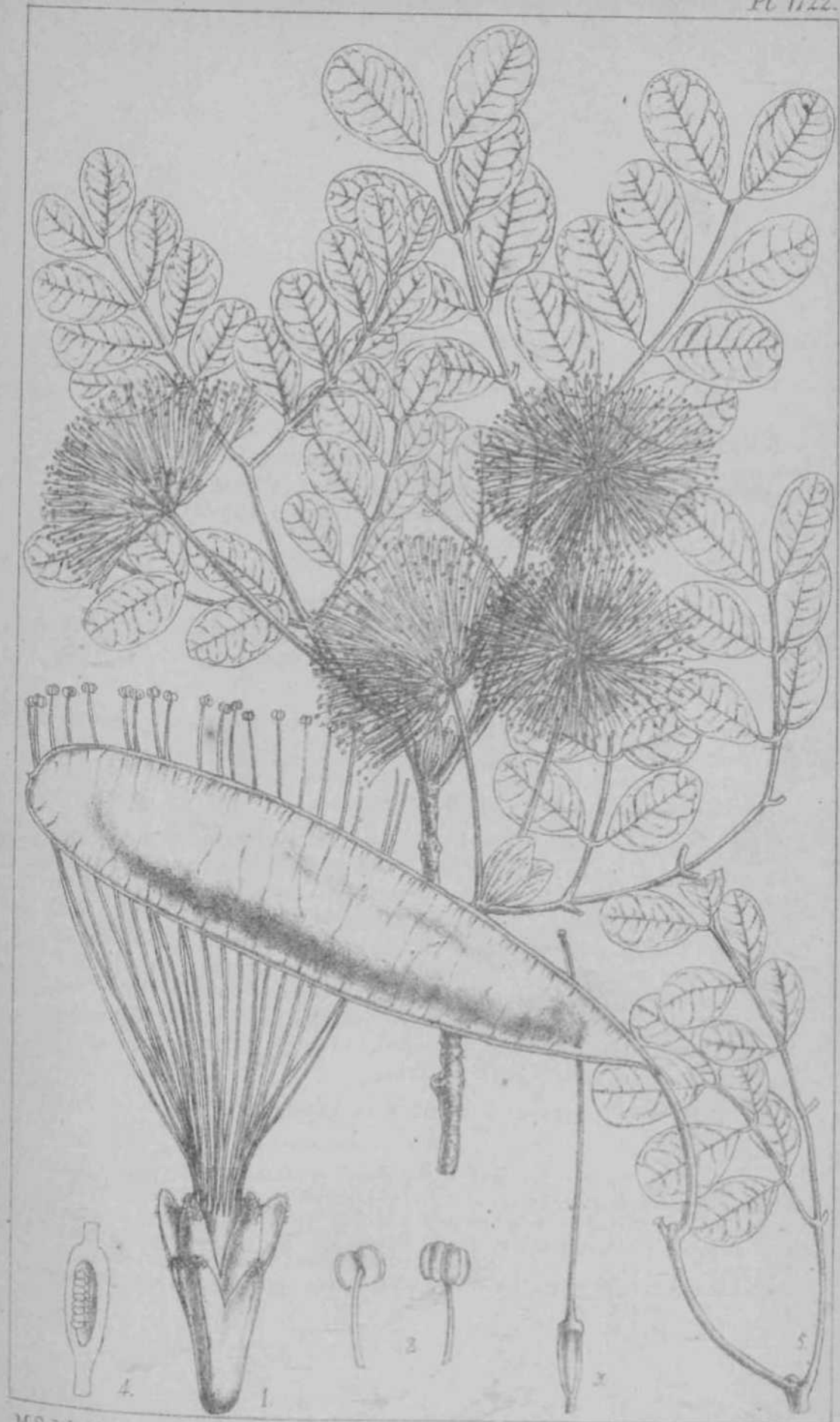
HAB. Cuba, *B. de la Sagra, Wright*, No. 2392; Bahamas, N. Providence, *L. J. K. Brace*, and more recently through the intervention of H.E. Governor Blake, sent in flower and fruit by *Mr. F. E. Taylor*.

Arbor pulchra. *Folia* 3-6-poll.; stipulro obovato obtusro venosas $\frac{1}{2}$ poll, longo; foliola $\frac{1}{2}$ poll, longa, $\frac{1}{4}$ poll, lata (interdum minora). *Pedunculi* $\frac{1}{2}$ -2 poll, longi. *Legumen* 2|-4(-5) poll, longum, 1-11 poll, latum; stipite $\frac{1}{2}$ -1 poll, longo.

This species, as pointed out by the late Mr. Bentham, in the 'Kew Journal' (*I. c.*), is the source of the valuable Cuban timber known as Sabicu. Recently specimens in flower and fruit have been sent to Kew from the Bahamas (which are identical or very nearly identical with the Cuban specimens) as of the tree affording the so-called "Horse-flesh mahogany." A note by Mr. J. R. Jackson on the difference between the Cuban and Bahamas woods is subjoined.* Notwithstanding these differences, however, on the faith of the flowering and fruiting specimens. I am compelled to regard them as afforded by one and the same species.—*J. D. OLIVER.*

Fig. 1. Flower. 2. Anthers. 3. Pistil. 4. Ovary, longitudinal section. 5. Fruit. *Excepting 5, enlarged.*

* A fine block of timber of Horse-flesh Mahogany was obtained for the Eew Museum from the Bahamas Court of the Colonial and Indian Exhibition, 1886. This wood differs from the Cuban Sabicu; it is lighter in weight, of a reddish colour with occasional dark streaks, the annual rings are clearly defined, and the medullary rays wide and numerous. The Cuban wood is of a dark-brown colour, very heavy and dense, the rings not very distinctly marked, and the medullary rays very numerous and extremely fine.—*J. R. JACKSON.*



M.S. del et lith

Lysiloma Sabicu, Benth.

PLATE 1723.

OLDENBURGIA PAPIONTJM, DO.

COMPOSITE. Tribe **MUTISIACEÆ.**

O. Papionum, DG. *Prodr.* vii. 12; canle florifero elongato erecto 1-2-cephalo, foliis subradicalibus oblanceolatis obtusis basi longe ang^ustatis rigide coriaceis supra glabris subtus tomentosus petiolo basi abrupte dilatato intus lanato, capitulis longe pedunculatis, involucri squamis imbricatis, gradatim majoribus, exterioribus late ovatis interioribus lanceolatis rigidis intus medio carinatis glabris omnibus extus dense tomentosus.

HAB. 'Mountains near Tulbagh and Nieuwekloof/ Drege; rocky places in the Drakensteenbergh near the Tulbagh falls, J3". Bolus (No. 5410; *Herb. Norm.* 402).

Folia 6-8 poll, longa 1-2 poll. lata. *Scapus* 2-2J.ped. erectus teres glabratus. *Capitula* 2[^]-4 poll. diam. turbinato-hemisphaerica. *Flores* radii bilabiati, labio antico ligulato albo tridentato [^]-f poll, longo; flores disci lobis linearibus subsequialibus. *Ovaria* sericeo-pilosa; pappi setis longo barbatis v. breviter plumosis.

We owe to our excellent correspondent Mr. Bolus admirable specimens of this noble Composite, previously known to us only from the very imperfect specimens distributed by Drege. The other *Oldenburgia* resembling this in habit, *O. arbuscula*, DC, is very different in the acuminate elongate involucreal scales.—D. OLIVER.

Fig. 1. Bay-floret. 2. Disk-floret. 3. Anthers. 4. Stigma. *Enlarged.*



M.S. del. et lith.

Oldenbur & Papionum, 1^o C.

PLATE 1724.

STOCESIA BRAHTTICA, *Benth.*

SAPINDACEA.

S. brahnica, *Benth. in Hook. Kew Journ.* v. (1853), p. 305; frutex glaberrimus divaricato-ramosus spinosissimus, foliis linearibus obtusis nonnunquam basi dentato-lobatis breviter petiolatis alternis vel ad nodos fasciculatis, floribus in nodis fasciculatis pedicellis brevioribus polygamis, capsulis membranaceis in flatibus cordiformibus trivalvis loculicide dehiscentibus, seminibus subglobosis lffivibus pisiformibus exalbuminosis, cotyledonibus spiraliter tortis.

HAB. Upper Beloochistan, Dr. / *E. Stocks* (No. 990) ; Afghanistan, near Ghaznee, *Griffith* (No. 524, of Itinerary). Kaisar, Afghanistan (fruit only), *Dr. Aitchison*; Quetta, *Mr. Lace*.

Fructus 1-1[^] poll, diam., valvis (in sicco) papyraceis extus pubescentibus.

It is not necessary to repeat here the floral characters sufficiently given by Mr. Bentham (Z.c). We are enabled to figure the plant thanks to a small collection made by Mr. J. E. Lace, Assistant-Conservator of Forests, forwarded to Kew by the Government of India with permission to select desiderata. The specimens are admirably selected, and dried with unusual care. Our figure of the flowering plant is from one of Mr. Lace's specimens; of the fruit, previously unknown, from Dr. Aitchison's fine collection.—D. OLIVER.

Fig. 1. Flower. 2. Fetal. 3. Stamen. 4. Rudimentary ovary. 5. Ovary of A flower. 6. Transverse, and 7. Longitudinal, section of same. 8. Attached capsules. 9- Transverse section of fruit. 10. Embryo, in situ. *Excepting the fruit, enlarged.*



M.S. del. et lith.

Stjcksia brahuica, Beri h.

PLATE 1725.

CARAGANA DECORTICANS, *Eemsl* ·

LEGUMINOSJE. Suborder PAPILIONACEJJ.

C. decorticans, *Eemsl.* (*sp. nov.*); foliolis glabrescentibus prominenter transversim paucivenosis, calycis dentibus brevissimis, ovario glaberrimo, legumine elongato.—*Garagana ambigua*, Aitch. in *Journ. Linn. Soc.* xxiii. p. 43, non Stocks.

HAB. Kurrum Valley, Afghanistan, *Dr. J. E. T. Aitchison.*

Frutex vel arbor parva, statura corticeque *Laburni vulgaris* (*Aitchison*) dense ramosa, ramulis floriferis spinosis stipulatis dense foliatis. *Foliola* 3-4-juga, puberula, glabrescentia, ovato-oblonga vel obovata, apice aculeata, rhachide indurato spinoso persistente. *Fedunculi* graciles, saepissime geminati, folia cequantur vel superantes, supra medianam articulati. *Oalyx* glaber vel cito glabrescens. *Petala* glabra, 9-12 lineas longa. *Ovarium* glaberrimum, multiovulatum, stylo elongato curvato. *Legumen* sessile, crustaceum, laeve, 1J-2 poll, longum, compressum, acuminatum. *Semina* oblonga, loevia.

This differs from the allied species *O. ulicina* and *O. ambigua* in the glabrescent calyx with very short teeth, quite glabrous ovary, and much longer pod.—W. B. HEMSLET.

⁴ Bark employed by the Afghans in the form of rings to slip over and hold the sheaths of their long knives in position in lieu of brass-work; the surface takes a good polish, and when new resembles bronzed leather.¹—AITCHISON.

Fig. 1. Portion of leaflet. 2. Calyx and ovary. 3. Wing-petal. 4. Keel-petal. 5. Branchlet in fruit. 6. Pod with one valve removed. 7. Seed. All except 5 enlarged.



M.S. del. et lith.

PLATE 1726.

NANOLIRION CAPENSE, *Benth.*

LILIACEAE. Tribe ASPHODELEJE.

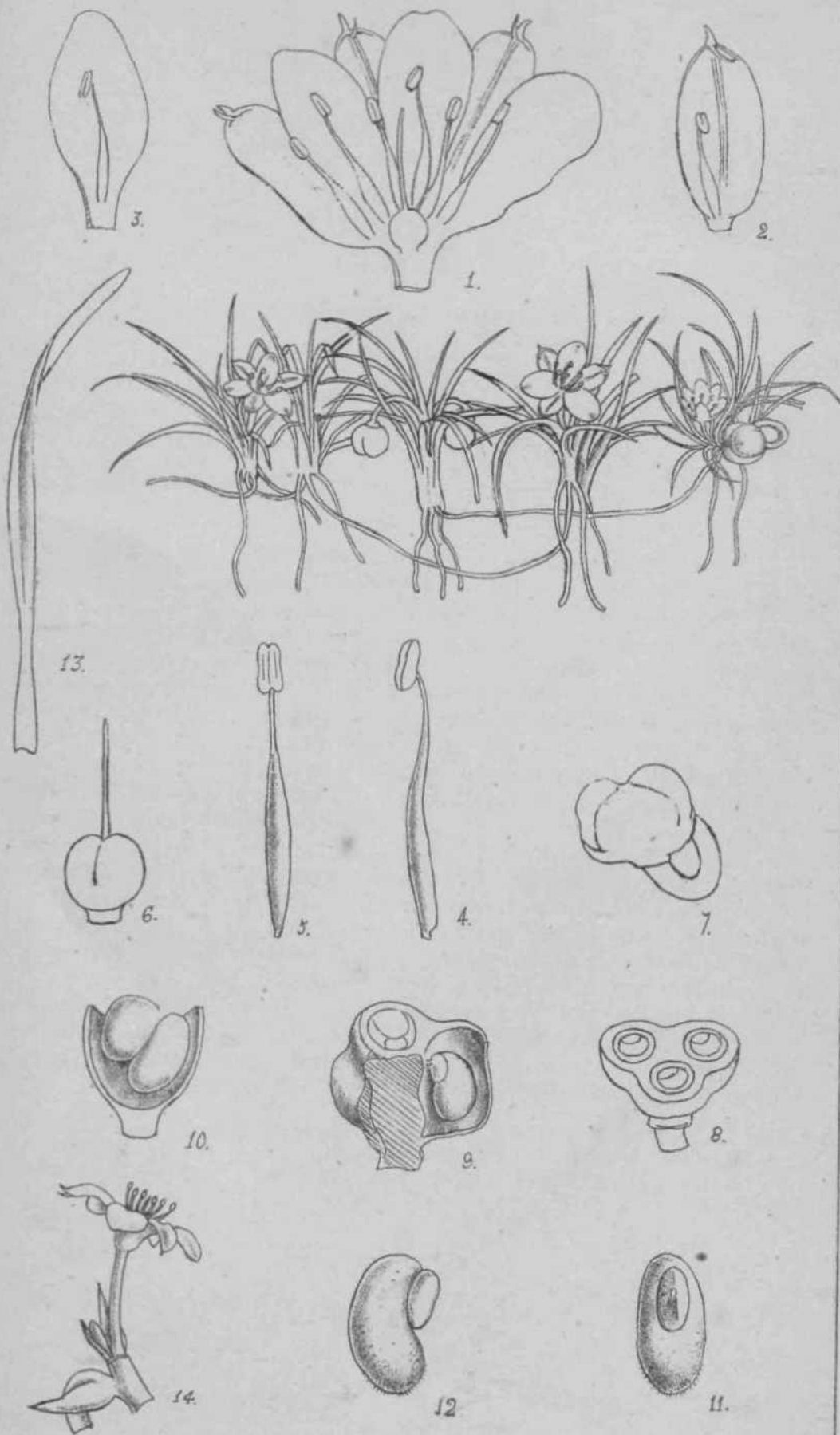
H. capense, *Benth. in Benth. et Hook. fit. Oen. Plant*, iii. 793;
Herpolirion capense, Bolus in *Journ. Linn. Soc.* xviii. 395.

HAB. In summo cacumine saxoso montis Winterhoek prope Tul-
< bagh, Africa austr., *H. Bolus* (No. 5170).

'*Herba* perennis acaulis graminoides glabra caespitosa bipollicaris; rhizoma gracile repens stoloniferum, flagellis hypogaeis filiformibus. *Folia* linearia congesta rigida, basi membranacea scapam arete cingentia, sursum complicata, dorso crebre nervata, acumine calloso desinentia, flores parvae superantia, 1-2 centim. longa, 2 mill. lata. *Scapus* subnullus filiformis umbellatus, 1-2- v. rarius 3-florus; bracteae foliis subconformes basi vaginantes, vetustiores 8-18 mill, longae; pedicelli floriferi ascendentes subcarnosi flavi, fructiferi decurvati indurantes din. persistentes, 6-8 mill, longi. *Perianthium* pallide creruleum, apice purpureo-suffusum; segmentis oblanceolatis subconformibus, medio tantum leviter 3-nervatis, 6 mm. longis, 3 mm. latis, post anthesin spiraliter contortis. *Stamina* inclusa, 3 exteriora profunde perigyna, 3 interiora hypogyna breviora, filamentis dilatatis lanceolatis luteis, antheris ovatis obtusis. *Ovarium* semiovatum, stigmate punctiformi, stamina breviora aequante. *Capsula* subglobosa leviter 3-lobata, 5 mm. longa et lata, loculicide dehiscens, seminibus 3 in loculis/geminis collateralibus erectis translucetibus.'—H. BOLUS.

Clearly a near ally of the Australasian genus *Herpolirion*, under which it was first published by Mr. Bolus, whose description is copied above, and whose careful drawing from living specimens is reproduced herewith by Miss Smith.—D. O.

Fig. 1. Perianth laid open. 2. Outer, 3. inner perianth segment detached. 4 5. Stamens 6. Pistil. 7. Capsule, nearly ripe. 8, 9. Sections of capsule. 10. One cell of same laid open. 11, 12. Seed. 13. Leaf. 14. Flower and pedicel. *Enlarged.*



M. S. da, et lith.

Nanolinon capense. Benth

PLATE 1727.

POLYXENA HJEMANTHOIDES, Baker.

LILIACEÆ. Tribe SCILLE-E,

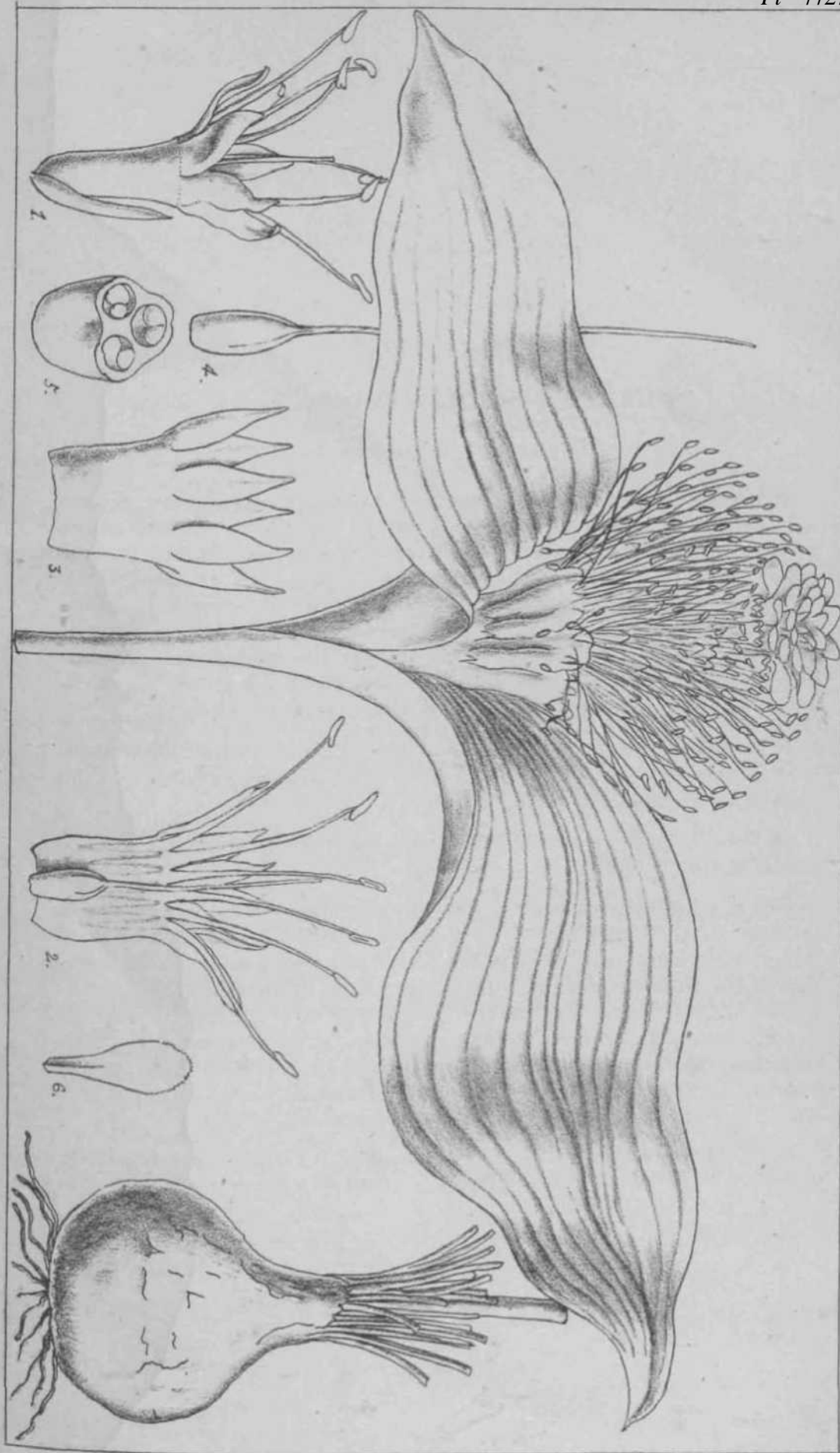
P. h&manthoides, Baker (*sp. nov.*) ; bulbo magno subgloboso, pedunculo brevissimo subhypogæo, foliis 2 patulis humifusis oblongis acutis glabris subcarnosis conspicue multinervatis margine scabris, floribus permultis in capitulum globosum congestis, pedicellis brevissimis vel subnullis, bracteis parvis hyalinis, inferioribus ovato-lanceolatis acutis, superioribus multis vacuis obovatis, comam formantibus, perianthio pallido tubo subcylindrico segmentis oblongo-lanceolatis ascendentibus tubo brevioribus, filamentis ascendentibus splendide rubris longe exsertis ad basin liberis, stylo elongato, stigmatе minuto capitato.

HAB. Central region of Cape Colony, on the Nieuweld Mountains near Fraserburg, at an altitude of 4,200 feet above sea-level; flowering in April and May, Bolus (No. 5493).

Bulbus 12-15 lin. diam. *Folia* supra basin 3-4 poll, longa. *Perianthii* tubus semipollicaris. *Filamenta* 7-8 lin. longa.

The affinity of this interesting novelty is evidently close with *Massonia rugulosa* of Lichtenstein and *M. marginata* of Willdenow, of neither of which we possess specimens in the Kew Herbarium, and which I therefore know from the descriptions alone. Both of them fall under the genus *Polyxena*, as defined in the *Genera Plantarum*. The Nieuweld is a lofty treeless tract of country on the border between the two botanical regions of the interior, as defined by Mr. Bolus, the 'upper region,' and the 'region of succulents.' Burchell passed through it in 1811, but at a much later period of the year.—J. G. BAKER.

Fig. 1. Flower, with bract. 2. Flower, opened out. 3. Outside view of perianth. 4. Pistil. 5. Horizontal section of ovary. 6. Bract from the coma.



M. S. del et lith.

Polyxena Tnaemanhioides, Baker.

PLATE 1728.

ANGRJECUM SAUNDERSIJE, *Bolus.*

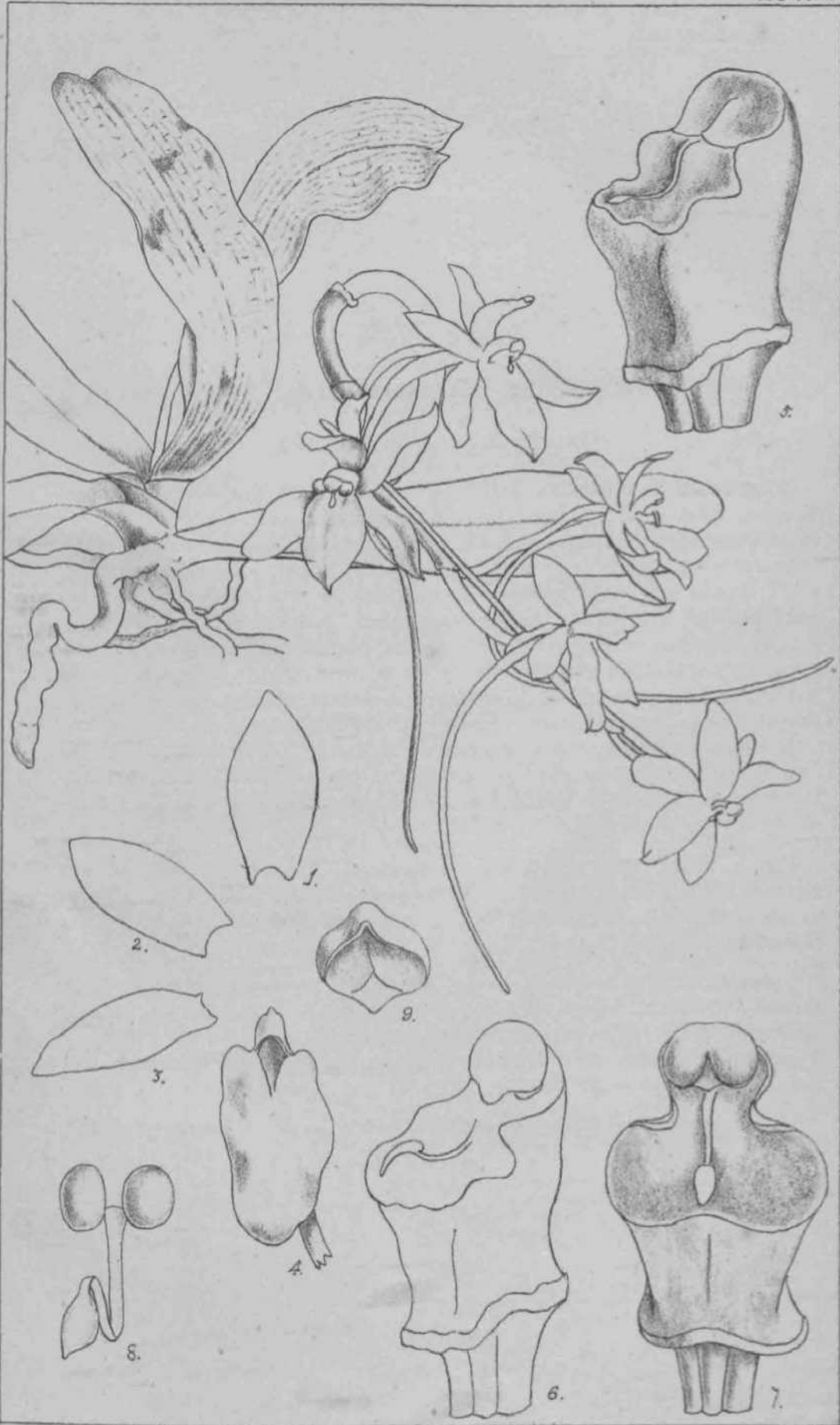
ORCHIDACEA. Tribe YANDEX.

Angraecum Saundersia B, *Bolus* (*sp. nov.*); caulis brevis simplex herbaceus; folia disticha ligulata basi angustata apice acute et oblique biloba, coriacea, obscure reticulata, 80-11*0 cm. longa; racemi axillares penduli, foliis longiores pauciflori (-5-flori); flores pedicellati albi; sepala et petaia lateralia lanceolato-oblonga subconsimilia, sepalo postico declinato, petalis lateralibus demum reflexis, 1*2 cm. longa; labellum oblongum parum majus, patens, basi incalcariforme pendulum costatum, 6*0-7*0 cm. longum, productum; columna brevis subtetragona, apice triloba, declinata; rostellum porrectum diaphanum, ungue lineari, lamina ovata, gracile curvatum; operculum ecristatum, antice in rostrum breve triangulare productum; glandula polliciformis unica, rostello exacte conformis eoque arete adpreasa; ovarium filiforme, gracile, cum pedicello 1'5-2'2 cm. longum. (*Ex exempt, unico ut infra.*)

HAB. Natal, *Mrs. Katharine Saunders*. [Palmeit and Umbilo Rivers, Natal, March 1865: 'Flower white, spur and base of segments flesh- or salmon-colour.'—J. Sanderson, No. 892 !; and Mrs. K. Saunders, in *Herb. Kew.*]

I describe from a single living specimen received from the **lady** named above, and which flowered in the Botanic Gardens, Capetown, in March, 1884. The structure of the rostellum and gland is the same in general character as that of *A. citratum*. Pet. Thou., as figured in the *Bot. Mag. t. 5624.*—H. BOLUS.

Fig. 1. Posterior sepal. 2. Lateral sepal. 3. Lateral petal. 4. Labellum. 5,6,7. Column. 8. Pollinium. 9. Anther-case. *Enlarged,*



M.S del et hth.

Arifraecum Saiindersice Bolus



MS.del.etJrth

Satyrium princeps, Bolus.

PLATE 1729.

SATYBIUM PBINCEPS, Bolus.

ORCHIDACEJE. Tribe **OPHRYDÆ.**

Satyrium princeps, Bolus (*sp. nov.*) ; glabrum, erectum, robustum, 40-85 centim. altum; folia 2, radicalia, ovato-subrotunda, acuta, carnosa, multinervia, huiustrata, 10-22 cm. longa, 8-18 cm. lata; scapus rectus, validus, vaginis inferioribus erecto-patentibus cucullatis nuncuminatis membranaceis apice sub-foliaceis, superioribus sensim minoribus acutis, omnino membranaceis; spica dense multiflora, oblonga, 10-25 cm. longa; bracteae lanceolatae, acute, membranaceae, multinervi89, inferioribus reflexis floribus brevioribus, junioribus erectis; flores patentes, subnutantes, laciniis perianthii alte solutis; sepala lateralia oblique oblonga, abrupte acuta, patentia, 1*4 cm. longa, intermedium angustius ligulatum apice ampliatum, obtusum, deflexum, sequilongum; petala lanceolata, acuminata, e medio usque ad apicem serrulata, deflexa, sepalis sequilonga; labellum galeatum, ore subrotundoj apice libera, cuneata, acuta, serrulata, reflexa, calcaribus filiformibus arcuatis, ovario paullo longioribus, totum cum calc. 4 cm. longum; columna medio antice deflexa; rostellum subtriangulare, dente intermedio acuminato, basi utrinque tuberculatum; glandul@ lanceolatae acuminatae, apice approximatae; lobus stigmatiferus rhomboideus, latior quam longas, superne marginatus, emarginatusque ; ovarium oblongum, costatum, circa 1*7 cm. longum. (*Ex exempl plur. vio. sub num. 5929 distrib.*)

HAB. In dunis arenosis juxta litus maris, sinu St. Francis Bay. prope Port Elizabeth, flor. Sept., legit *R. HallacJe.*—No. 5929 in *herbb. proprio, Kewensi, etc.*

One of the handsomest of the genus, with bright carmine flowers deepening to crimson on the back of the galea, the bracts a dull raw sienna, the scape reddish, with dark green leaves. It is allied by habit and floral structure both to *S. carneum* and to *S. membranaceum*[^] and occupies the same kind of wet sandy downs near Port Elizabeth which are affected by the former near Capetown. From the first it is well distinguished by the shape and setting of the flowers, by its deflexed (not ascending) odd sepal and petals, and by its much shorter and wider stigmatic lobe; the shape of the rostellum and glands are extremely similar in each. From *S. membranaceum* it may be known by its more robust habit, by its much wider side sepals, by its obtuse

PLATE 1730.

INULA RHIZOCEPHALA, Schrenk.

COMPOSITE. Tribe INULOIDEJ.

I. rhizocephala, Schrenk \ foliis angustioribus; involucri bracteis viridibus, corollis liguliformibus pappo fere duplo longioribus, achfflniis hirsutis.— *Boiss. FL Or.* iii. p. 196.

HAB. Shah Junali, south of the Hindu Kush, at 11,000 feet: Gilgit Expedition, *Dr. Giles*.—Persia, Afghanistan, and Songaria.

This and *Inula rhizocephaloides*, Clarke (plate 1731), are so much alike as to be easily mistaken for each other, though distinguishable by the characters given in the accompanying diagnosis.—W. B. HEMS LET.

Fig. 1. An involucral bract. 2. A ray-flower. 3. A disk-flower. 4. Anthers. 5. Upper part of style with stigma. 6. An achene. *Enlarged*. Figures 1-5 drawn from *Dr. Giles's* specimens, and figure 6 from *Griffith's* Afghan plant, attached to the same sheet in the Eew Herbarium.



M.S. ieletJHh

Inula rhizocephala, Schr.

PLATE 1731.

INULA RHIZOCEPHALOIDES, Clarke.

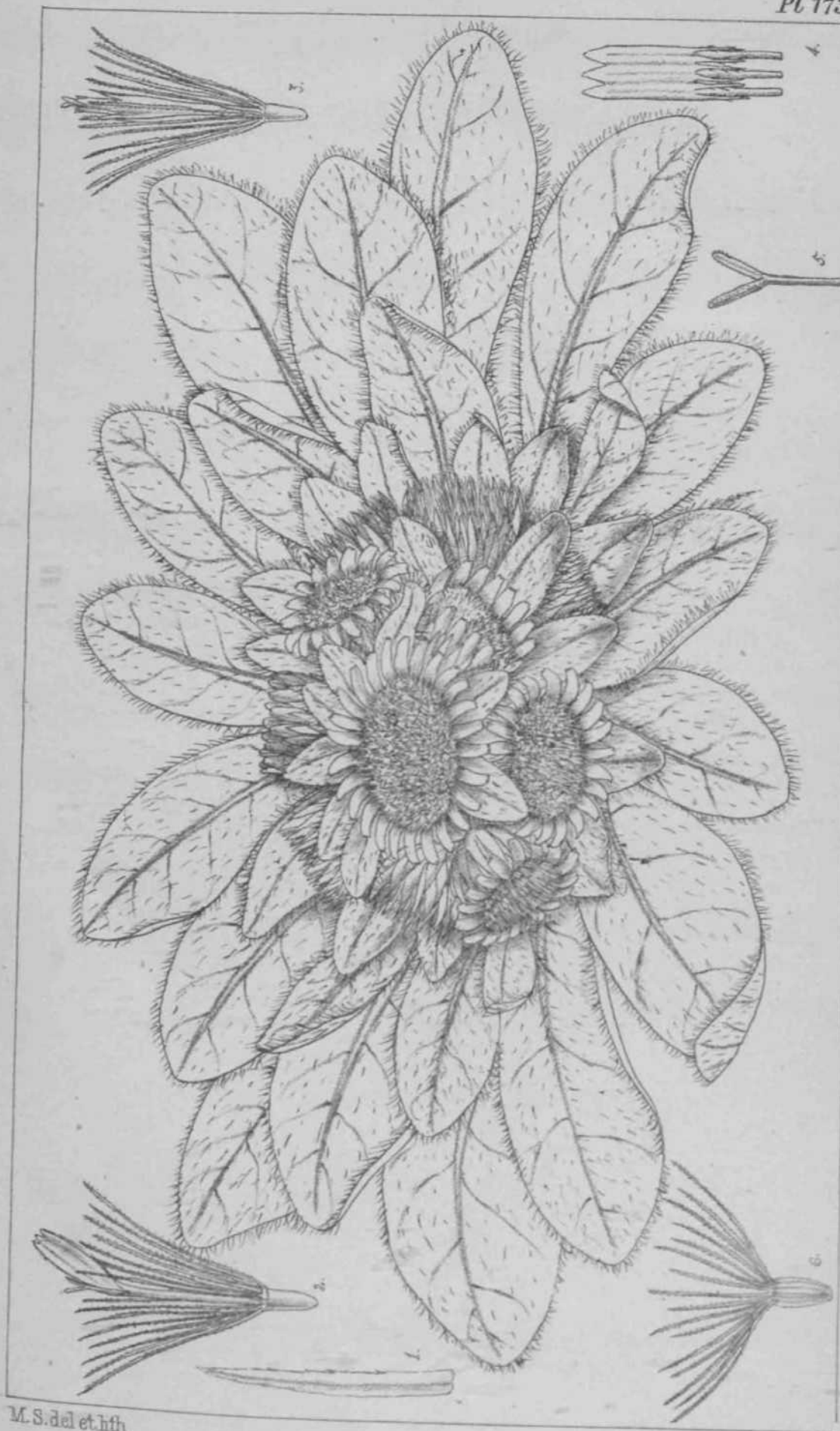
COMPOSITE. Tribe INULIOIDEJ;

I. **rhizocephaloides**, Clarke ; involucri bracteis angustioribus longioribus apice coloratis, floribus liguliformibus pappam paullo superantibus, achseniis glabris.—*Composite Indices*, p. 124.

HAB. Kurrum Valley, Afghanistan, *Dr. Aitchison*, 942, 1879.—Dras and Ladak, Western Tibet.

The purple bracts of the involucre, short ray-flowers, and glabrous achenes are the chief points in which this differs from *Inula rhizocephala*, Schrenk (Plate 1730).—W. B. HEMSLEY.

Fig. 1. An involucre bract. 2. A ray-flower. 3. A disk-flower. 4. Anthers. 5. Part of style and stigma. 6. An achene. *Enlarged*. The achene drawn from a specimen collected at Dras by Dr. Thomson; all the rest from the Afghan specimens.



M.S. del et. hth.

Inula rhizocephaloides, C.B.C.

PLATE 1732.

TBICHOLBPIS TIBETICA, *Hook.f. et Thorns.*

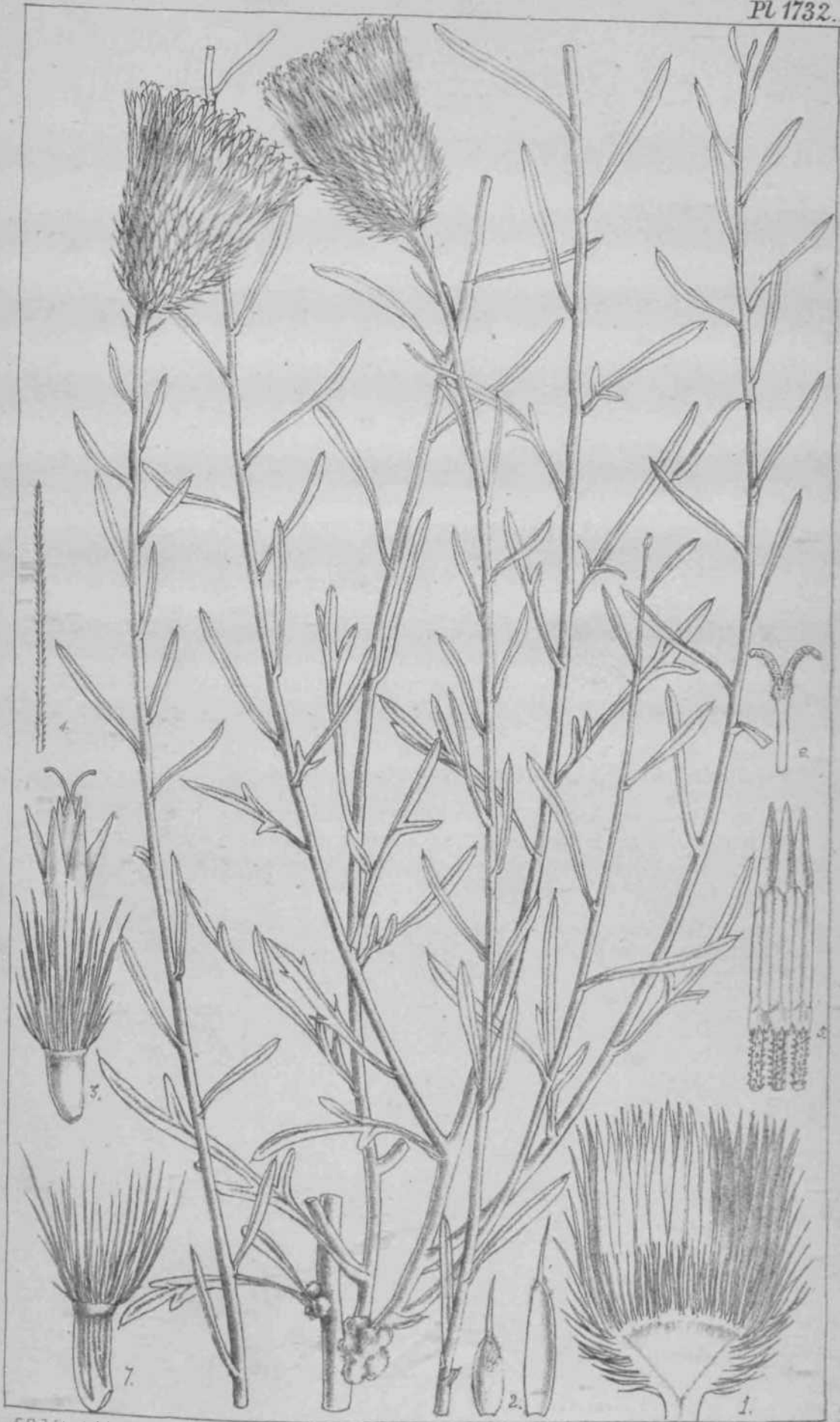
COMPOSITE. Tribe OYNAROIDEA.

T. tibetica, *Hook. f. et Thorns.*; involucri bracteis exterioribus brevibus aculeiformibus patulis, interioribus linearibus longioribus sed quam flores brevioribus, acheniis costatis simul rugulosis.—Clarke, *Composites Indicce*, p. 241.

HAB. Doyan, south of the Hindu Kush, at 7,000 feet; Gilgit Expedition, *Dr. Giles.*—Also in North-west Himalaya.

The short, prickle-like, somewhat spreading outer bracts of the involucre, and the ribbed, rugulose achenes characterise this species, which is otherwise very much like *Tricholepis spartioides*, Clarke (Plate 1733).—W. B. HEMSLEY.

Fig. 1. Section of a capitulum -with the flowers removed. 2. Intermediate bracts of the involucre. 3. A flower. 4. A bristle of the pappus. 5. Anthers. 6. Part of style with stigma. 7. Achene. *Enlarged.*



C.S.d. intrfJi

Tricholepis libetica, Hkf. & T.

PLATE 1733.

TBJCHOLEPIS SPAETIOIDES, *Clarice*.

COMPOSITE. Tribe **CYNABOIDEÆ.**

T. spartioides, *Clarke*; involucri bracteis numerosissimis setiformibus, achaeniis ecostatis.—*Clarke, Composite Indicce*, p. 241; *Jurinea clmtolepis*, *Boiss. Fl. Or. iii.* p. 570.

HAB. Mirgram, south of the Hindu Eush ; Gilgit Expedition, *Dr. Giles*.—Also in Afghanistan.

See remarks on *Tricholepis tibetica* (Plate 1732).—**W. B. HEMSLET.**

Fig. 1. Section of a capitulum, with the flowers removed. 2. Involucral bracts. 3. A flower. 4. Anthers. 5. Upper part of style with stigma. 6. An achene. 7. A bristle of the pappus. *Enlarged.*



M.S. del. et lith.

Tricholepis spartioides. CBC

PLATE 1734.

SAUSSUREA LBPTOPHYLLA, *Hemsl.*

COMPOSITE. Tribe CYNAROIDEJE.

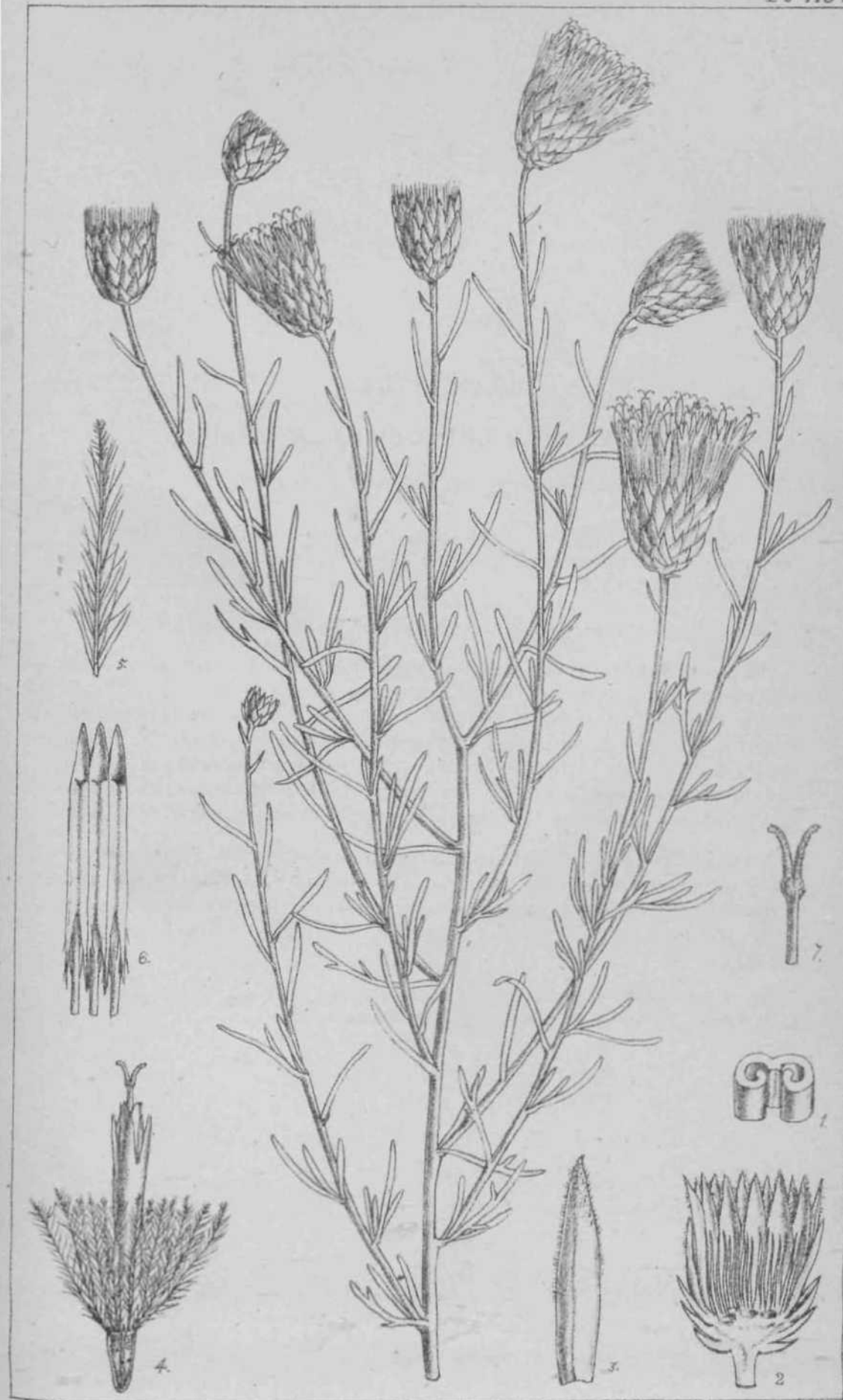
S. leptophylla, *Hemsl* (*sp. nov.*); ramosissima, facie foliisque *Jurinece elegantis* et spp. aff.; differt capitulis brevioribus pappi setis uniseriatis etc.

HAB. Shah Salim, at 9.700 feet; Gilgit Expedition, *Dr. Giles.*

Herba sublignosa, glabra, ramulis gracilibus viridibus striatis. *Folia* angustissima, marginibus arete revolatis, pseudoteretia, 4-8 lineas longa, caulina inferiora interdam 2-3-lobata. *Capitula* terminalia, solitaria, pedunculis foliiferis; involucri bractea 7-8-seriatae, rigidae, rectae, acutissimae, primae leviter arachnoideae; receptaculi paleae angustissima, achaeniis multo longiores. *Achcenia* glabra, matura non visa; pappus albus, flore brevior, setis longe plumosis, exterior nullus.

Number 386 of Dr. Aitchison's Afghan collection of 1880, erroneously published as *Jurinea leptoloba*, DC, belongs to this genus, and is exceedingly near the present species, of which it may be a variety with the lower bracts of the involucre distinctly reflexed.—W. B. HEMSLET.

Fig. 1. Section of leaf. 2. Section of receptacle. 3. Bract of the involucre. 4. A flower. 5. A bristle of the pappus. 6. Stamens. *Enlarged.*



M.S.del et lith.

Saussurea leptophylla, Hemsl.

PLATE 1735.

SAUSSTREA DECURRENS, *Hemsl.*

COMPOSITE. Tribe GYNABOIDEJB.

S. decurrens, *Hemsl. (sp. nov.)*; species ex affinitate *S. albescenti* foliis concoloribus parcissime setulosis capitulis paucioribus majoribus.

HAB. Dashhin 7,500 feet; Gilgit Expedition, *Dr. Giles*.

Herba perennis? erecta, 2-3-pedalis (fortasse ultra), caulibus infra simplicibus striatis. *Folia* alterna, crebra, sessilia, oblique decurrentia, tenuia, oblongo-lanceolata, usque ad 6 poll, longa (caulina tantum visa), glabrescentia, paucisinuato-lobata, lobis acutis vel mucronulatis vel rotundatis. *Capitula* 12-15-flora, circiter 12-20, laxe corymbosa; involucri bracteae 7-8-seriatae, glabrae vel minutissime puberulae, rigidae, acuminatissimae; receptaculi paleae molles, gracillimae, achaeniis multo longiores. *Achcena* matura non visa; pappus albus, flore brevior, setis longe plumosis, exterior nullus.—W. B. HEMSLEY.

Fig. 1. Section of receptacle showing the long paleae. 2. An involucre bract. 3. A flower. 4. A bristle of the pappus. 5. Stamens. 6. Upper portion of style and stigma. *All enlarged.*



M.S. del. et lith.

Saussurea decurrens, Hemsl.

PLATE 1736.

SAUBSURBA OILESI, *Utmtl*

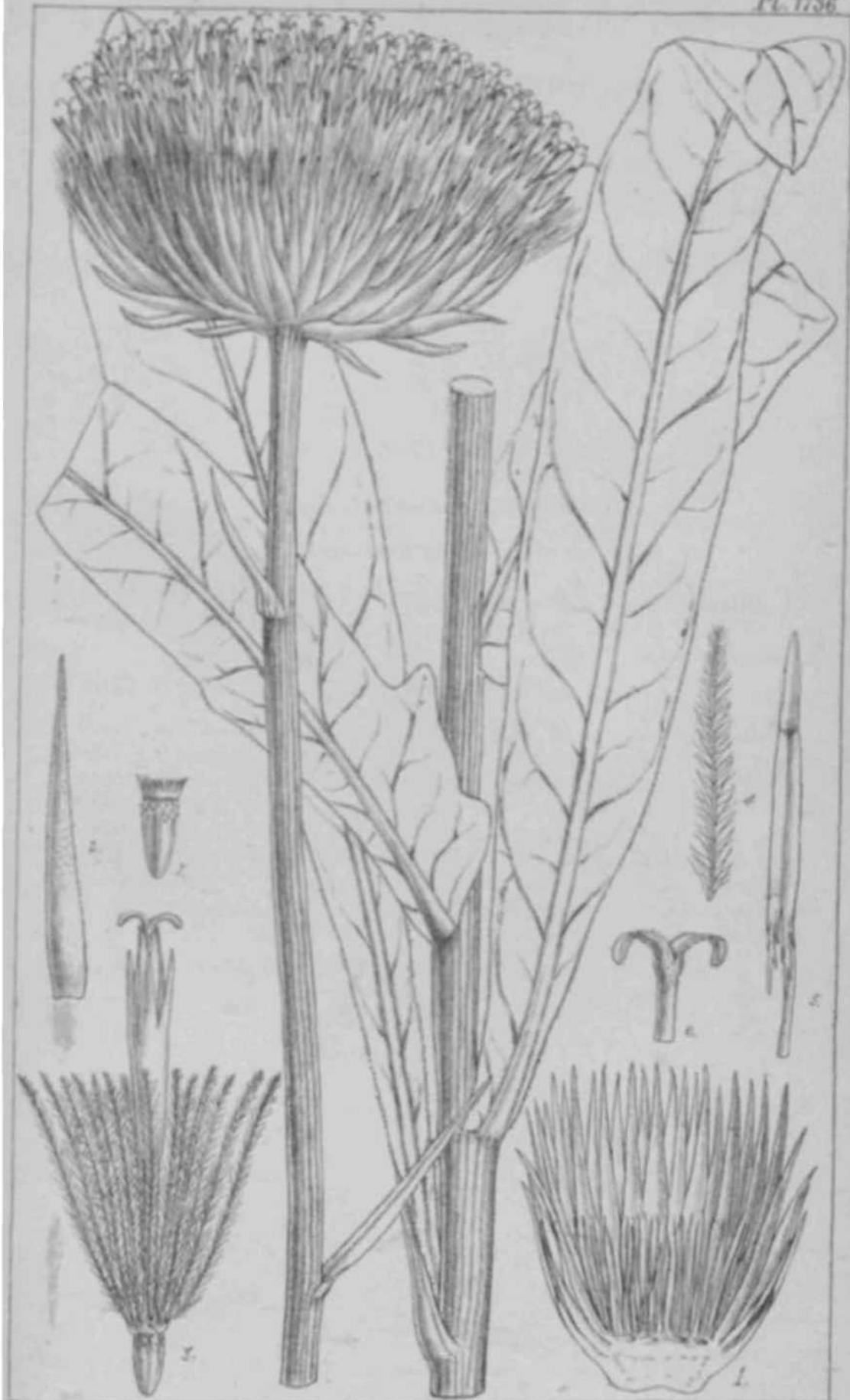
COMPOSITÆ. Tribe Cnuiotoi*.

S. Oilesii, *ERMML*. («p. ***.）」, *peci« *tx affioitate S glani'«&»*
elator foliis integrU, invuliurt bnetei numeroaioribo*, acbvnil
squamulifi etc.

HAiL Darah *Pmm.* 12,000 to 14,000 feat; Gilgit Ks^lition./V. (*Mm.*

Herba erect 4 II -1! p*«i. klji, Kcnbrida. *citatiba* anMmtucalb itnatt**
monocephalia. Folia (caulinit *Uatum tia*) *MMI'II**, *UMittitt*, *ao(fttit«*
laii<colata, icota Til sub-laita, ampn- m>| 5 poll. lon_», *bast labartca-*
l<t.>, vel inferior"4 in tM*tii'lofi) *Ktenuata. Capitula magna, longe pedt in-*
caluta; involucri bracte B nanit rosissima, pauciseriata, elongata,
lin.ari-lanceolata, acutissima, subherbacea, demum coriacea, hispida «;
receptaculi palea angustae, acutae, acheniis longiores. Achenia r
non visa, squamulifera; pappus albidus, ictia iuag« plumuua, exterior
cupulatus.—W. B. H: Mst.tr.

Fig. I. Section of nraptecl. 1. Bnrt. 1. Flo««r. 4. Rri*U vt BBDOML*
5. Stamen. 8. l'«rt of »tylo »oJ itigBM. 7. Young achene. Enlarged.



M.S. del et lith

Saussurea Giesii, Hemsl

PLATE 1737.

STATICE GILESII, *Eeml*

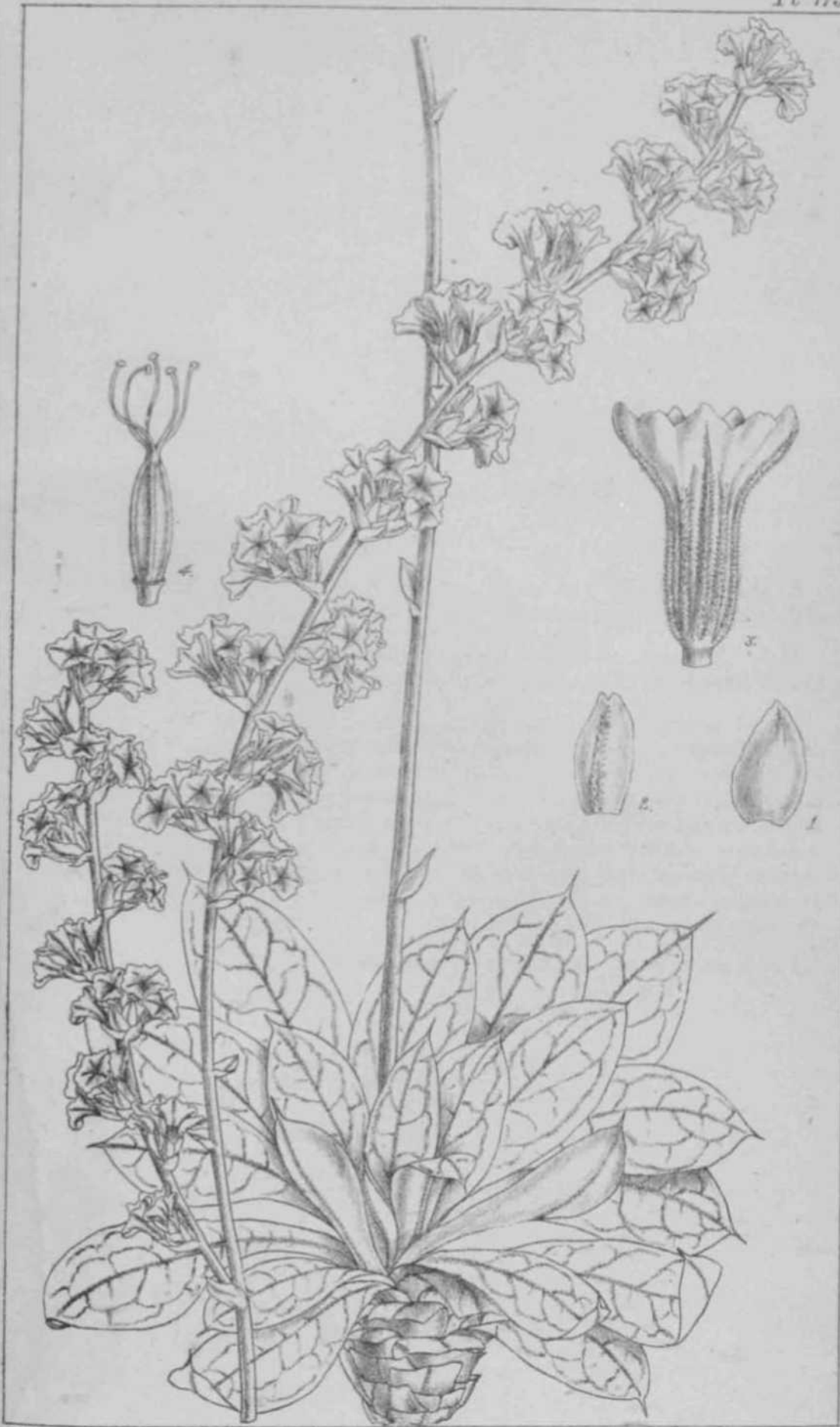
PLUMBAGIHEA.

8. *Oilesii*, *Hemsl* (**p. nov.*); aff. *S. Qriifithii*, Aitch. et Hemsl.
diffurt imprimis spiculis circiter 6-florb.

HAB. Shoghot, at 6,000 to 7,000 feet, south of Hindu Kush;
Gilgit Expedition, *Dr. Giles*.

Herba pcrennis, scaposa, glabra, glanca, minute lepidota. *Folia*
denso ronulata, ciassa, coriacea, obovata vel spatfaulata, 1-2_i poll,
lon^a, apico aculcato*inucronata. *Scnputt* solitarius, flexuosus, 12-15
poll, allus, sirpius nimplux HOC interdum ramulis 2-3 brcvibus lateralibus
instrnctus, ad vel infra medium floriferas. *Spiculce* 3-10-flora³ (ctepius
5-6 flora)), sessilcs, bmetcis bracteolisque similibus latis brcvibus fere
omnino Bcarioso-hyalinco; bractca exterior brevior. *Calyx* breviter
10-lobatus, tubo valide 10-costato pubescente. *Corolla* non visa.
Ovarium glabrum.—W. B. HEMSLEY.

Figs. 1 and 2. Bracts. 3. Calyx. 4. Ovary. *Enlarged.*



M.S. del, et. lnh

Statice Gilesn. Hem si

PLATE 1738.

TABEBTJIA LONGIPES, *Baker*.

BIGNONIACEAS. Tribe TECOMEJ.

T. longipes, *Baker* (*sp. nov.*); arborea, glabra, foliis uhifoliolatis oblongis rigide coriaceis longe petiolatis, floribus in paniculam subsesilem corymbosam dispositis, bracteis parvis lanceolatis, calycis tubo oblongo segmentis ovatis irregularibus, corollas tubo late infundibulari segmentis 5 orbicularibus subaequalibus, fructu subcylindrico elougato, semini bus late membranaceo-alatis.

HAB. British Guiana; wet savannahs at Hooroobe, *Jenman*, 3723.

Arbor 70-pedalis. *Folia* 8-9 poll, longa, petiolo limbo subduplo breviori. *Calyx* 8-9 lin. longus. *Gorollce* tubus bipollicaris, limbo explicato bipollicari et ultra. *Semitia* valde imbricata 15-18 lin. lata.

Contrary to the usual habit of the Order, this is a large erect tree. It is called 'White Cldar,' and furnishes a useful wood for indoor use. The species of this genus are very numerous and greatly need working out.—J. GK BAKER.

Fig. 1. Calyx, enclosing pistil. 2. Tube of corolla, -with stamens and staininode. 3. Young capsule and pulvinate disk. 4. Portion of fruiting panicle. 5. A seed.



X-Vv:

MS de Witt

Tabebuia longipes, Baker

PLATE 1739.

CHELIDONIUM LASIOCARPUM, *Oliv.*

PAPAVERACEAE. Tribe EUPAPAVEEEA.

C. lasiocarpum, *Oliv. (sp. nov.)*; herba 1-1¹-pedalis parce pilosula, foliis tenuibus lyrato-pinnatipartitis, segmentis lateralibus ovato-oblongis acutatis irregulariter dentatis inferioribus brevioribus terminali late ovato-rotundato inequaliter late dentato, pedunculis 4-5-fasciculatis folio brevioribus pilosulis, sepalis pilosulis apiculatis caducis, petalis obovato-rotundatis, stylo longiasculo glabrato stigmate capitato, capsula cylindrica elongata hirtella longitudinaliter dehiscente, valvis angustis placentas cum stylo persistente nudantibus, seminibus cristatis.

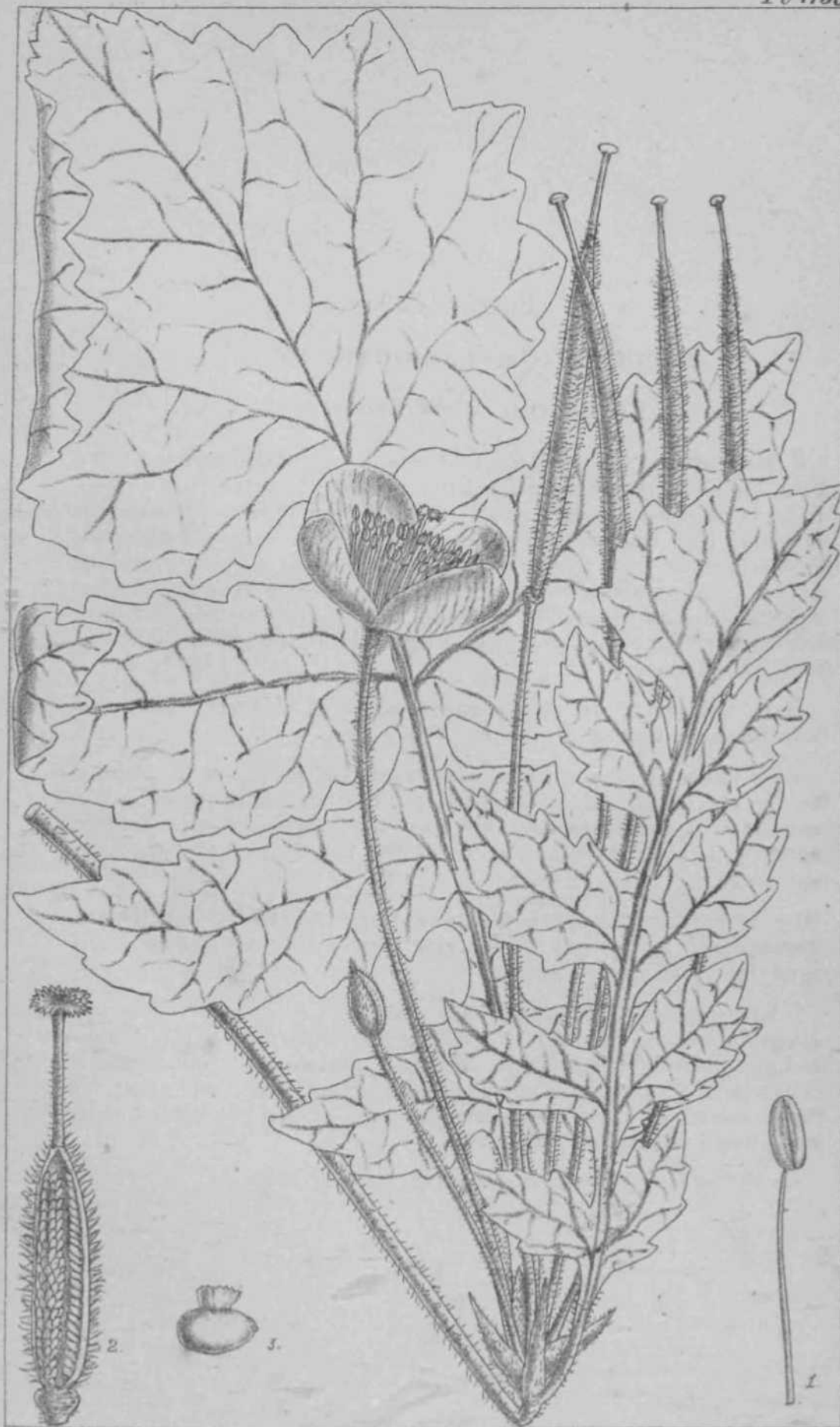
HAB. Nan-t'o, Prov. Hupeh, cultivated only; originally introduced from Szechwan, *Dr. A. Henry* (No. 3885).

Folia radicalia et caulina conformia, radicalia longiuscule caulina breviter petiolata, subtus glaucescens in costa nervisque interdum parce hirtella, segmentis lateralibus utrinque 3-7; folia radicalia cum petiolo 9-15 poll, longa. *Pedunculi* 3-4 poll, longi. *Capsula* 2-2½ poll, longa.

Dr. Henry says the root is used as a drug; and the leaves and stem, characterised by a 'red juice,' give origin to the Chinese name signifying 'man's-blood herb.'

I have preferred to assign this plant to the genus *Chelidonium*, although clearly a near ally of *Stylophorum diphyllum*, Nutt.; intermediate indeed between this American species and our common Celandine. Some remodelling of the genera of this group of Papaveraceae is, I fear, imminent, in view of new Eastern Asiatic forms now reaching us.—D. OLIVER.

Fig. 1. Stamens. 2. Pistil, ovary laid open. 3. Seed. *Enlarged.*



M. S. Peck et al.

Cheilanthes lanuginosa, Urv.

PLATE 1740.

ACTINOTINUS SINENSIS, *Oliv.*

CAPRIFOLIACEA:

Actinotinus, *Oliv. (gen. nov.)*. Flores herniaphroditi, exteriores majores neutri. Calyx tubo campanulato-turbinato, limbo 5-fido lobis deltoideo-ovatis dorso incrassatis. Corolla epigyna campanulato-rotata 5-fida, lobis ovato-ellipticis obtasis wstivatione imbricatis, fl. exter. neutri corolla oblique ampliata unilateraliter 4-5-lobata, lobis interioribus minoribus. Stamina 5 basi corollro inserta leviter exserta, anther© dorsifixse oblong©. Ovarium inferum 1-loculare, ovuluin solitarium pendulum; stylus conicus, stigma 3-lobulatum.—Arbuscuia 10-pedalis, ramulis ultimis teretibus crassitie penno? cygni glabris. Folia opposiia longe petiolata digitata, foliolis 7 oblongo-oblanceolatis acumina-Us basi angustatis concinniter serrulatis petiolulatis. Cymse breviter pedunculatce umbdliformes terminales puberulce pilis interdum paucis stellatis, floribu8 \$ fasciculatim congestis.

A. sinensis, *Oliv. (sp. unica)*.

HAB. Patung, Prov. Hupeb, on the high mountains, *Dr. A. Henry* (No. 4058).

Folia exstipulata supra glabrata subtns tenniter pubescentia; foliola majora 6-9 poll, longa 1J-3 poll, lata •, petiolus teres puberulus 6-10 poll, longus petioluli ^-1 poll, longi v. foliolis lateralibus breviores. *Cymoe* 2-3 poll. diam.; flores neutri 1 poll, diain., pedunculus j-1 ^ poll, longus.

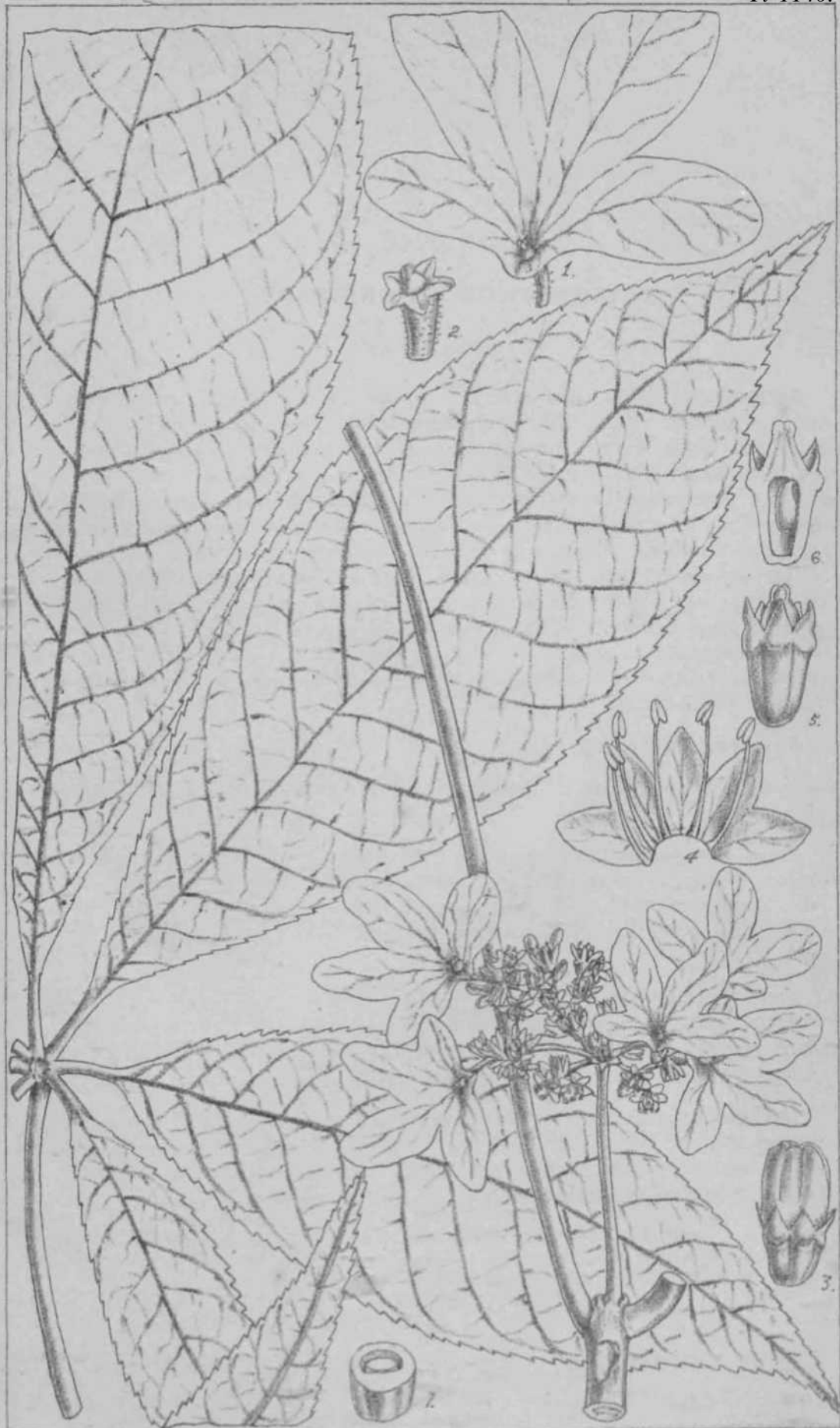
Fruit I have not seen.

Although there is no floral character to separate this remarkable plant from the genus *Viburnum*^ I think the compound leaves, which are almost precisely those of an *Msculus*, justify such separation.

Dr. Henry says it is 'very rare.' It is certainly one of the most remarkable of the many important additions to the Chinese Flora which *we* owe to his persistent energy. One can hardly suppose it to be the only digitate-leaved member of this group.—D. OLIVER.

Fig. 1. Neuter flower. 2. Calyx-tube of same. 3. Bud of perfect flower. 4. Corolla of same. 5. Same, corolla removed. 6. Longitudinal, and 7. transverse section of ovary. *More or less enlarged.*

ACTINOTINUS SINENSIS, published in the last volume of 'Icones Plantarum' (vol. viii. N.S., pi. 1740), proves to be based upon a trick played upon us by one of Dr. Henry's Chinese collectors. It is made up of the inflorescence of a *Viburnum* inserted artfully into the terminal bud of *T*rylu8 chinensis*.—D. OLIVER, **June** 1889.



M.S. del. et lith.

Actinotinus sinensis, Olrv

PLATE 1741.

DECUMARIA SINENSIS, *Oliv.*

SAXIFRAGACEÆ. Tribe HYDRANGEJE.

D. sinensis, *Oliv.* (*sp. nov.*); frutex decumbens ramulis subteretibus spongiosis, foliis petiolatis oblanceolato-ellipticis obtusiusculis basi cuneatis parce serrulato-denticulatis v. subintegris glabris, paniculis multifloris terminalibus pedunculatis, pedicellis strigilloso-pilosulis, floribus 7-9-meris, calycis tubo turbinato limbo brevi lobis obtusis ovatis rotundatisve, petalis ellipticis obtusis.

HAB. Iohang, Prov. Hupeh, China, *Dr. Aug. Hemy* (No. 3434).

Folia 1² poll, longa, f-1 poll, lata; petiolus 1² poll, longus; lamina tenuiter coriacea.

Of great interest as an addition to the growing list of genera common, and restricted, to the Himalayo-Chinese region and the Atlantic States of North America, and specially interesting in this case as the genus has been hitherto monotypic, and known only from the South-Eastern States. Dr. Henry describes this plant as a 'creeper hanging down from wall of cliff' (in the Ichang Gorge) with beautiful clusters of fragrant white flowers.—D. OLIVER.

Fig. 1. Expanded flower. 2. Stamens. 3. Flower (petals and stamens removed), showing conspicuous epigynous disk. 4 and 5. Transverse sections at upper and lower planes. 6. Vertical section of ovary. *Enlarged.*



M.Sdel et lith

Decumaria sinensis, Ohv,

PLATE 1742.

HAMAMELIS MOLLIS, *Oliv.*

HAMAMELIDEJ.

H. mollis, *Oliv. (sp. nov.)*; foliis late obovato-ellipticis cuspidatis basi oblique cordatis sinuato-denticulatis supra minute subscabride stellulato-pubescentibus subtus dense stellato-tomentosis, breviter petiolatis, stipulis caducis dense tomentosis.

HAB. Patnng, Prov. **Hupeh, China**, *Dr. Aug. Eentry* (No. 3791, 3793A).

Arbor 10-30-pedalis. *Folia* 4-5 poll, long., 2[^]-3[^] poll, lata; petiolus tomentosus $\frac{1}{2}$ - $\frac{3}{4}$ poll, longus; stipulad intus glabro $\frac{1}{2}$ - $\frac{3}{4}$ poll. longSB.

The floral structure is essentially that of *Hamamelis japonica*, S. & Z.
—D. OLIVEB.

Fig. 1. Expanded flower. 2. Same, petals removed. 3. Stamens. 4. Pistil.
5. Longitudinal section of ovary. 6. Young fruit. *Excepting fig. 1, enlarged.*



M.S. del et lith.

Hamamelis mollis. Oliv

PLATE 1743.

POLYGONUM AMPLEXICAULE, *Don, var.*

POLYGONACEJE.

P. amplexicaule, *Don, Prodr. Fl. Nepal.* 70, *var.*; glabrata v. foliis subtus in costa nervisque parce hirtellis, foliis radicalibus ovatis v. elliptico-ovatis basi cordatis acuminatis margine obsolete serrulatis, longe petiolatis, foliis caulinis breviter petiolatis ovato-lanceolatis graciliter acuminatis, ochreis erectis elongatis fere ad basin fissis glabris v. nervis obsolete scabridis, spicis elongatis gracilibus.—*Hook, fil. Fl. Intl.* v. 32 (*cww syn.*).

HAB. Patung, Hupeh, China, *Dr. Aug. Henry* (Nos. 1818, 2521, 4061).

A species widely spread in the Himalaya. Our Chinese plant is too nearly allied to the Himalayan form to deserve specific separation*—
D. OLIVER.

Fig. 1. Detached fascicle of flowers with their bracts. 2. Perianth, laid open. 3. Stamen. 4. Pistil. 5. Ovary, laid open. *Enlarged.*



M. S. del. et. lith.

Polygonum amplexicule, Don, var.

PLATE 1744.

CHRYSOSPENITTM MACROPHYLLUM, *Oliv.*

SAXIFRAGACEA. Tribe SAXIFRAGES.

C. macrophyllum, *Oliv. (sp. nov.)* § *Innovationes epigaeae*, §§ *Folia alterna* (Maximowicz, *Chrysosplenium* in *Mélanges Biolog.* xi. p. 218), foliis radicalibus leviter carnosulis late obovatis obtusissimis basi in petiolum longiusculam cuneatim angustatis, petiolo marginibus pilis longis laxis ferrugineis lanuginosis, caule subnudo, bracteis ellipticis oblongisve cornuto-dentatis floribus breviter pedicellatis longioribus, floribus saepius 4-meris, staminibus 8 filamentis elongatis calyce duplo longioribus (v. 2 saepe breviora y. 0), capsula f-libera truncata biloba sfcylis persistentibus horizontaliter divaricatis coronata, seminibus castaneis nitidis minutissime pilosulis.

HAB. Ifan-t'o, Prov. Hupeh, China, *Dr. Aug. Henry (So. 3846)*.

Folia radicalia;- lamina 2£-4 poll, longa, 1[^]-2[^] poll, lata, petiolus 1-2[^] poll, longus.

My kind friend M. Maximowicz, -who has made a special study of this difficult genus, has examined this plant for me and favoured me with his memoranda. He would place it next to *Chrysosplenium adoxoides*, Hook. f. et Thorns.—D. OLIVER.

Fig. 1. Advanced flower. 2. Stamen and detached anther. 3. Young fruit, the calyx-lobes removed. 4. Seed. *Enlarged.*



MS del. et lith.

Chrysosplenium macrophyllum, Oliv.

PLATE 1745.

ISOPYEUM HENRYI, *Oliv.*

RANUNCULACEJE Tribe HELLEBORES.

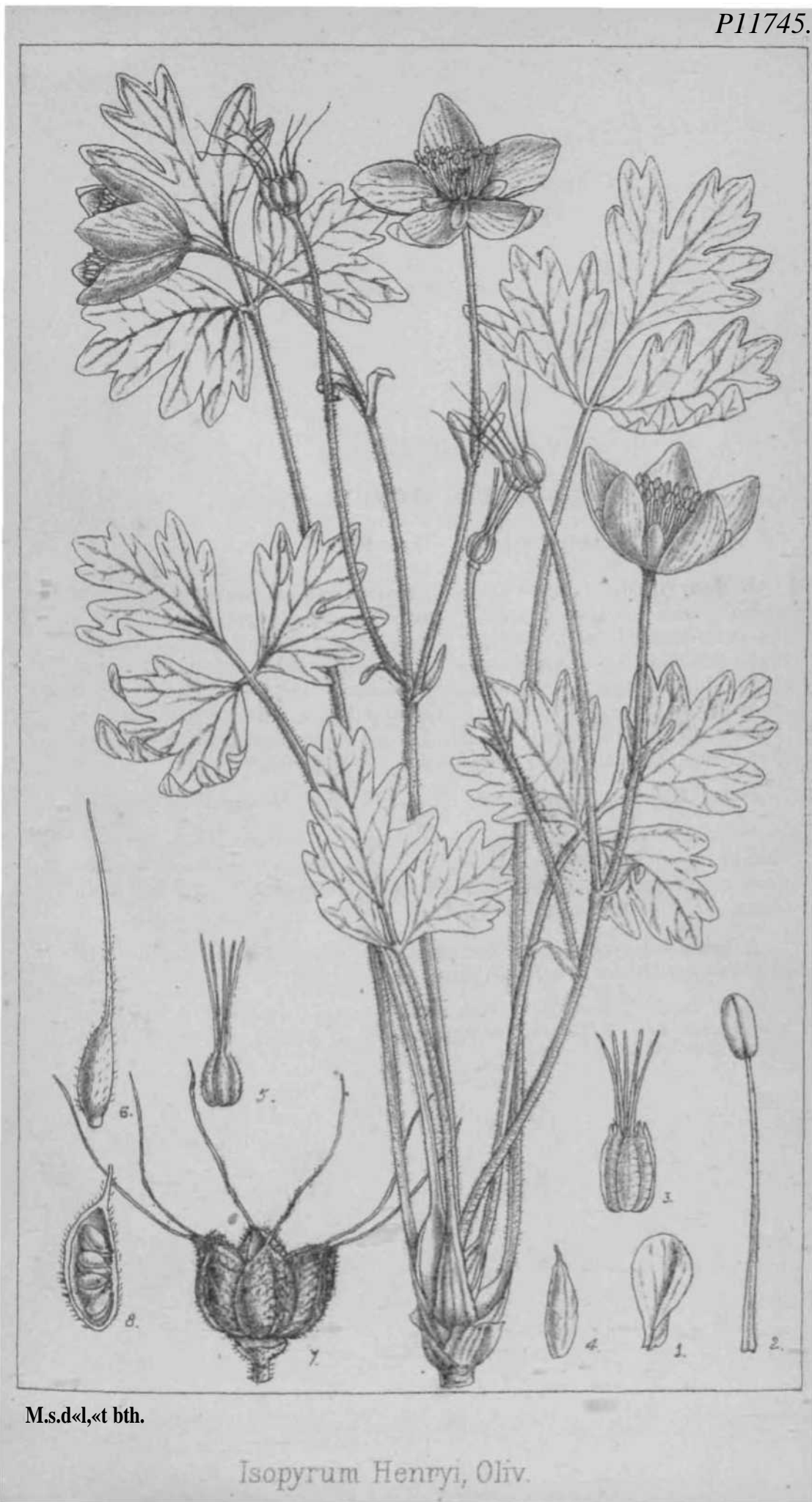
I. Henryi, *Oliv. (sp. nov.)*; foliis omnibus radicalibus longe petiolatis petiolo basi abrupte dilatato, lamina ternatim 3-partita, segmentis cuneatis inaequaliter 7-9-fidis v. 3-fidis lobis 2-3-dentatis, scapis folio subaequilongis 1-3-floris, sepalis 5 caeruleis DS oblanceolato-ellipticis obtusis basi unguiculatim angustatis, petalis calyce 3-4-plo brevioribus oblongis cymbiformibus basi gibbosis breviter unguiculatis, staminodiis membranaceis lineari-oblongis ovario longioribus, carpellis 5-8 hirtis, stylis elongatis gracilibus.

HAB. Nan-t'o, Prov. Hupeh, China, *Dr. Aug. Henry* (No. 3820).

Folia cum petiolo elongato plus minus pubescentia, lobis obtusis; lamina 1² poll. diam.; petiolus 3-7 poll, longus. *Bractea* lanceolata v. lineares. *Pedunculi* 1-3 poll, longi pubescentes. *Flores* 1 poll, diam.

A beautiful species with flowers about the same size as those of *I. grandiflorum* and *I. microphyllum*.—D. OLIVER.

Fig. 1. Petal. 2. Stamen. 3. Staminodes, sheathing the carpels. 4. **Staminode**, convex outer side. 5. Carpels. 6. Single carpel. 7. Fruiting carpels. 8. Longitudinal section of ovary. *Enlarged.*



M.s.d<l,<t bth.

Isopyrum Henryi, Oliv.

PLATE 1746.

CIMICIFUGA CALTHIFOLIA, Maxim.

RANUNCULACEÆ. Tribe HELLEBORES.

C. calthifolia, Maximowicz MS8.; foliis radicalibus simplicibus longe petiolatis cordiformibus apiculatis crenatis crenulis cuspidatis, scapo erecto foliis longiore simplice v. 1-2-ramoso, floribus fasciculatis pedicellatis bracteatis, sepalis 5-6 exterioribus late ellipticis apiculatis interioribus oblongo-ellipticis, petalis 0, staminibus 6, filamentis anguste linearibus basi leviter angustatis antheris globosis emarginatis subdidymis, carpello solitario, ovulis circ. 8 biseriatis, folliculo oblique lineari-oblongo apice stylo coronato oblique nervoso, semiibus oblongis oblique corrugatis.

HAB. Mount Omei, 4,500 feet to summit; Prov. Szechwan, China. Rev. Ernst Faber (Nos. 624, et var. *minor* 625, 626) ; Eastern Kansuh, fide Maximowicz.

Herba J-1|-ped. radice fibrosa fibris dense ferrugineo-pilosis. *Folia* glabrata membranacea v. tenuiter coriacea 3-4j poll, lata; petiolus glaber, 4-8 poll, longus. *Scapus* erectus folia superans glaber; racemus interruptus puberulus ; bracteae lanceolatae acuminatae pedicellis pubescentibus breviores. *Flores* parvi ^-^ poll. diam. *Folliculus* j-f poll, longus.

I had intended to separate this plant generically; but M. Maximowicz, who kindly allows me to consult him in such cases, informing me that he had already referred it to *Cimicifuga*, though not unmindful of the very different aspect of the plant, I think it may be prudent, provisionally at least, so to leave it for the present.—D. OLIVER.

Figs. 1 and 2. Expanded flowers. 3, 4. Outer and inner sepals. 5. Stamen (the filament should be slightly narrow below). 6. Carpel. 7. Same laid open. 8. Seed. 9. Longitudinal section of same, with embryo. *Enlarged.*



M.S. del et lith.

Cui cifugi calif!æfolia, Max.

ENQELHARDTIA NUDIPLORA, Hook.f.

JUGLANDEA'.

E. nudiflora, Hook.f. (sp. nov.); puberula, ramulis petiolis foliisque subtus glandulosis, foliolis 2-6-jugis subsessilibus coriaceis ellipticis oblongis cuneato-obovatisve obtusis v. subacutis integerrimis v. apices versus crenato-serratis, bracteis masculinis subpectinatim laciniatis laciniis antheriferis, antheris ellipsoideis hispidulis, ovario pubescente, stylis divaricatis filiformi-subulatis, nuce parva villosa.

HAB. Penang, on Government Hill, *Maingay* (*Kew distrib.* 1510).

Arbor elata, ramosa; ramulis petiolis inflorescentia foliisque subtus hirtello-pubescentibus glandulisque minutis aureis conspersis. *Folia* breviter petiolata, petiolo brevi cum rachis 2-2[^] poll, longa; foliola coriacea, 1-2[^] poll, longa, supra fusca, subtus brunnea opaca, nervis sub-6-jugis, arcuatis, supra impressis, subtus elevatis. *Spicce* masculinae axillares, 1-H-pollicares, graciles; bracteis ad axim in ramulos antheras solitarias gerentes fissis, rachis ramisque teretibus puberulis. *Antherae* minutae, quasi breviter pedicellatae. *Spicce* femineae axillares, subsolitario, graciles, florentes erectae, pedunculatae, 2-3 poll, longae, fructiferae pendulae, 6-7-pollicares. *Bracteae* 1-flores, 3-fid., floriferae glandulosae; fructiferae membranaceae, 1-H-pollicares; lobo medio lineari v. obovato-oblongo obtuso, basi hirsuta, lateralibus subduplo longiore. *Nux* parva, globosa, 1/2 poll. diam.

This species is remarkable for the antheriferous bracts of the male flowers being so deeply cleft into narrow antheriferous segments as to appear like a cluster of stipitate anthers on a terete rachis. Blume's figure and description of *E. rigida* show an approach to this character, and its habit and foliage are very much those of this plant, but in it the bract is much more developed and the anther ovate-cordate. The form and size of the fruiting bracts are extremely variable in *E. nudiflora*.—**J. D. H.**

Fig. 1. Portion of male spike with bracts and anthers. **2.** Bract and anthers. **3.** Portion of female spike with bracts and flower. **4.** Female flower. **5.** Vertical section of ovary. **6.** Base of bracts and female flower. **7.** Transverse, and **8,** vertical section of immature nut. *All enlarged.*



PLATE 1748.

URERA TEN AX, *N. E. Br.*

URTICACEÆ. Tribe URTICÆÆ.

U. tenax, *N. E. Br.* (*sp. nov.*); ramis crassis herbaceis (succulentibus ?) glabris, foliis petiolatis rotundato-cordatis acutis grosse dentatis, cum paniculis folio brevioribus angustis et interrupte spiciformibus v. ramosis pilis urentibus sparse armatis, pauculis ex axillis defoliatis subsessilibus.

HAB. Inanda, Natal, / *M. Wood* (No. 3837).

Frutex 8-10-pedalis. *Folia* alterna, lamina 1-3 poll, longa et lata; petiolus [^]-2.} poll, longus. *Flores* minuti, femineos tantum vidi, perianthium in fructu auctum.

An Urticaceous fibre was sent to the Natal court of the Colonial and Indian Exhibition of 1886 by Mr. J. Kirk man, of Umzinto. It did not appear in the Catalogue, but attracted a good deal of attention from experts. Specimens of the plant yielding the fibre were subsequently obtained by Mr. J. Medley Wood, the indefatigable Curator of the Botanical Garden, Durban, Natal, and from them the accompanying plate was drawn. Mr. Wood gives the following particulars concerning it. The plant is not uncommon in the midland districts, but the specimens sent were the first he had seen with flowers. The bark is used by the natives for making sleeping mats, and as the plant grows readily from cuttings, it could be grown in quantity if found to be remunerative.—N. E. BROWN.

Fig. 1. Branch with ? flowers. 2. Pistillate flower. 3. Ovary. 4. Ovule. 5. Fruiting perianth. 6. Nut. 7. Seed. *Enlarged.*



M. S. del et lith.

Urera tenax. N.E.Br.

PLATE 1749.

LIMACIA SAGITTATA, *Oliv.*

MENISPERMACEJ. Tribe CocculiE.

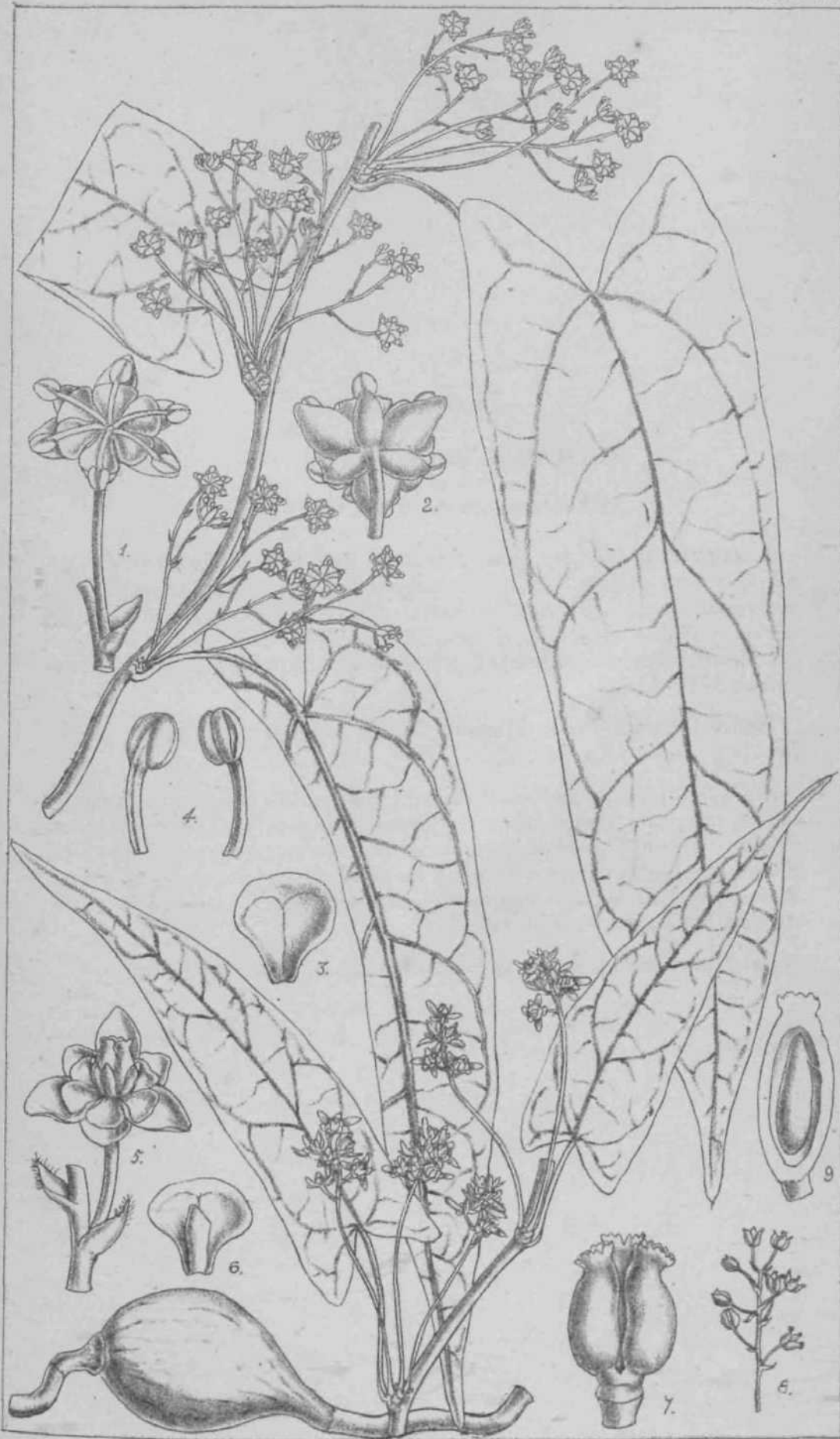
L. sagittata, *Oliv. (sp. nov.)*; ramulis gracilibus sinuatis parce hirtellis, foliis petiolatis oblongo-lanceolatis obtusiuscule acuminatis mucronatis basi sagittatis v. hastato-sagittatis subtus praecipue in nervis hirtellis, racemis $\$$ paucifloris fasciculatis pedicellis laxis gracilibus bracteatis, racemis ? solitariis geminisve longiuscule pedunculatis 4-10-floris.

HAB. Ichang, Prov. Hupeh, China; 'creeper in all the glens.'
Dr. Aug. Henry (No. 3431).

Folia 3-5 poll, longa, basi 1-2 poll, lata; lobis basalibus obtusis v. acutis, interdum divergentibus. *Sepala* elliptica, 3 exteriora minora. *Petala* carnosula obovato-rotundata basi cuneata, *Sepalis* breviora. *Stamina* 6 libera patentia v. recurva petalis longiora, antheris ovatis. *Staminodia* (fl. ?) oblonga petalis brevioribus. *Garpella* 3 v. 4, stigmatibus papilloso-lobulatis.

Dr. Henry says the root is a medicinal simple.—D. OLIVER.

Fig. 1. Male flower. 2. Same, from below. 3. Petal. 4. Stamens. 5. Female flower. 6. Fetal and staminode. 7. Carpels. 8. Raceme of same. 9. Carpel, longitudinal section. *Excepting fig. 8, enlarged.*



M.S.deLetlith.

Limnium sagittale, (iv).

PLATE 1750.

ABUTILON SINENSE, *Oliv.*

MALVACEJ. Tribe MALTED.

A. sinense, *Oliv.* (*sp. nov.*); arbuscula tomeritella, foliis longiuscule petiolatis cordiformibus apiculatis inaequaliter dentatis supra sparse subtus dense tomentellis, floribus axillaribus solitariis geminis ternisve, pedunculis folio brevioribus tempore florifero apicem versus decurvis, calyce hirta profunde 5-fido segmentis lanceolatis acuminatis petalis flavis calyce 3-plo longioribus, carpellis fructiferis 8-10, 7-9-spermis calyce aequalongis truncatis valvis oblique acutatis extus hirtis, seminibus subreniformibus minutissime areolatis parce papilloso-setulosis.

HAB. S.W. China, *F. 8. A. Bourne*; Ichang and Nan-t'o mountains, Prov. Hupeh, *Dr. Aug. Henry* (Nos. 3454, 3822).

Arbuscula 3-20-ped., ramis teretibus brevissime cano-tomentellis interdum mox glabratis. *Folia* 2-4 poll, lata; stipulis anguste linearibus deciduis 4-5 lin. longis. *Flores* flavi 1|-2 poll, longi decurvi; pedunculi articulati fructiferi erecti. *Fructus* 1 poll, longus, apice 1 poll, latus.

It is remarkable that a species so conspicuous, and suited for home cultivation, should have escaped us so long. In the Nan-t'o mountains *Dr. Henry's* collector reports it as growing to a height of 20 feet, wild in the woods.—D. OLIVER.

Fig. 1. Style-branches. 2. Ovary. 3. Same, one cell laid open. 4. Ovules
5. Seed. *Enlarged.*



M. S. del. et lith.

Abutilon sinense, Oliv.



M.S.aeL*tlith

Brachydados lycioides, Don.

PLATE 1751.

BBACHYCLADOS LYCIOIDES, *G. ty D.*

COMPOSITE. Tribe MUTISIACEJE.

B. lycioides, *Gillies & Don; BO. Prodr.* vii. 33; foliis fasciculatis coriaceis rigidis anguste lineari-oblongis mucronulatis ssepe obtusiusculis supra glabrescentibus nitentibusque subtus cano-tomentosis marginibus revolntis, capitulis aureis solitariis terminalibus pedunculatis, involucri bracteis pauciseriatis lineari-lanceolatis tomentosus nervo medio glabrato apice rigidiuscule producto, exterioribus brevioribus, receptaculo nudo areolato, floribus radii ligula $\frac{1}{2}$ poll., disci ligula revolata 1-2 lin. lodga, achaeniis papulosis, pappi copiosi setis rigidiusculis barbellatis.

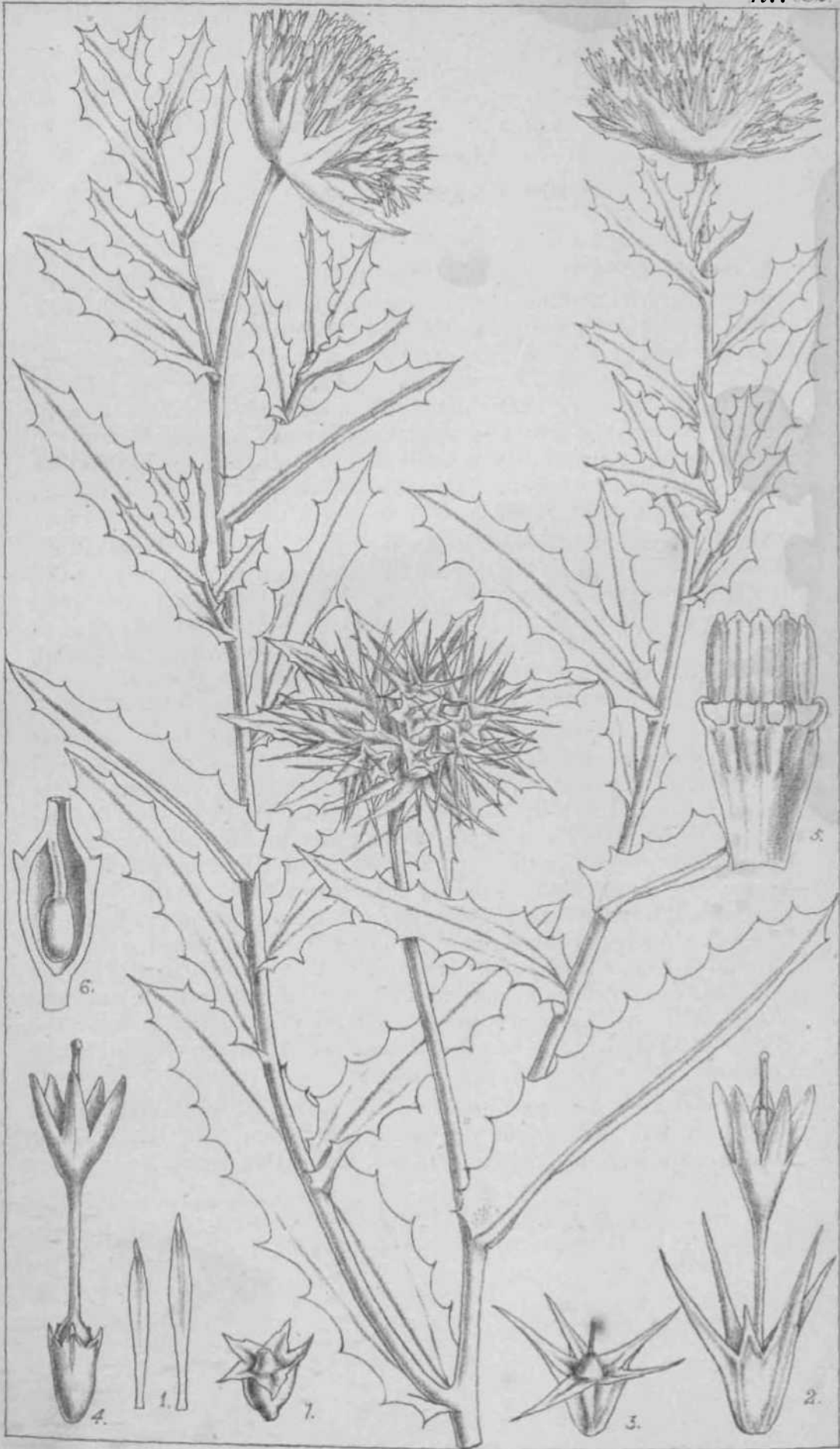
HAB. Patagonia; ⁱ found chiefly on high tablelands in clay or on stony soil; occasionally in valleys: common on the Suger, Chubut, Descado and Rio Negro.—*Mr. J. L. Williams Andrews.* Northern Patagonia, *Tiveedie*; Prov. Mendoza, on the Bio d. Diamante, *Gillies*; Chili, Concepcion, *Bridges*.

Frutex 2-4-pedalis, ramulis hornotinis cano-tomentosis. *Folia* $\frac{1}{2}$ -1 poll, longa, 1-2 lin. lata, brevissime petiolata, petiolis tomentosus. *Pedunculi* 1-2 poll, longi. *Capitula* 1-1 | poll. lata.

The excellent specimens kindly communicated by Mr. Williams Andrews enable us to give a figure of this characteristic species of the Patagonian uplands.

Mr. Andrews describes the foliage as 'hard, dark green/ **and** the, flower-heads as of deep golden colour.—D. OLIVER.

Fig. 1. Bay-floret. 2..Setae of pappus. 3. Disk-floret. 4. Stamens. 5. Style. 6. Ovary and pappus. *Enlarged.*



M-S. dsletith.

Boopis crassifolia. A Gray.

BOOPIS CRASSIFOLIA, A. Gray.

CALYCEREÆ!

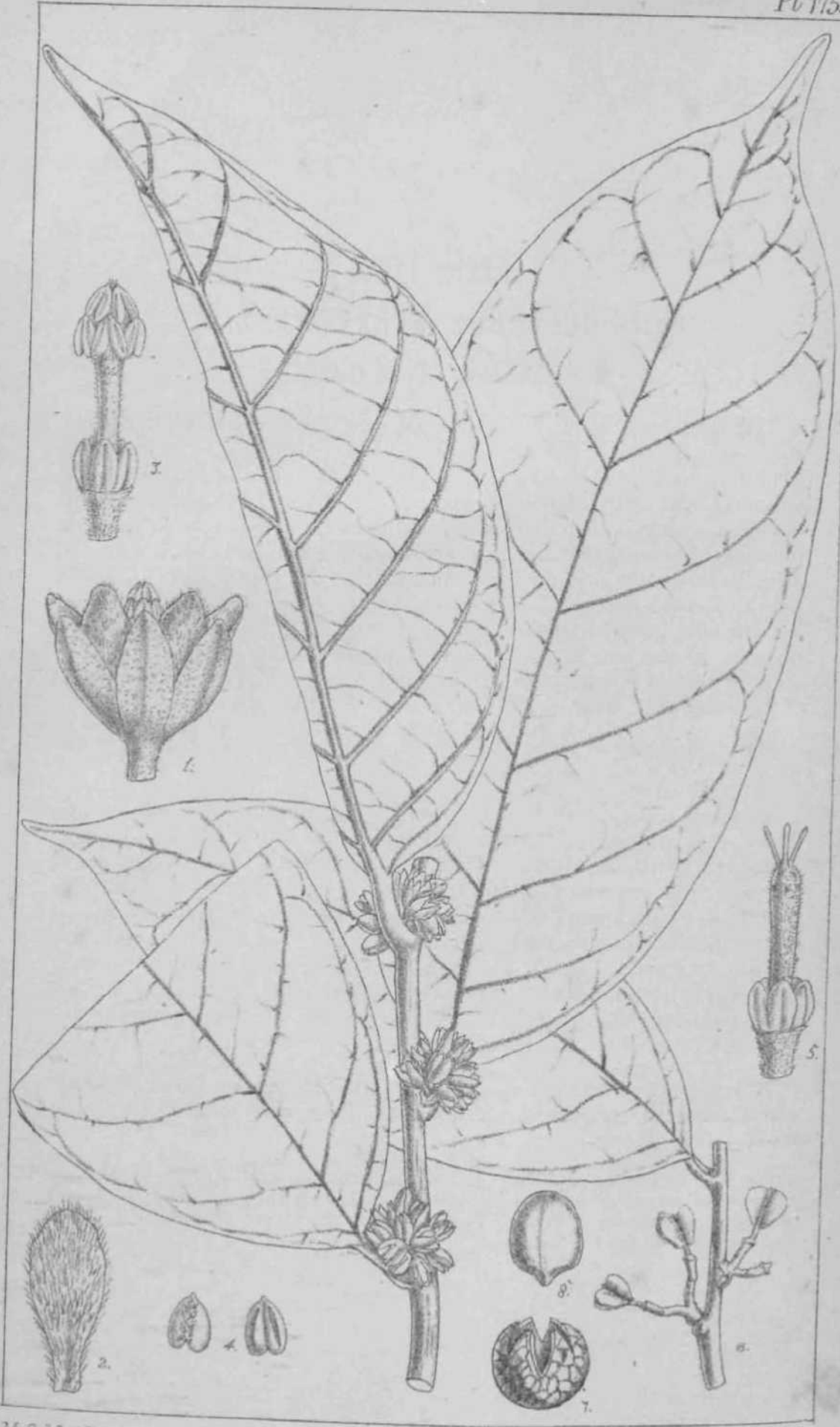
B. crassifolia, A. Gray in *Proc. Am. Acad.* v. 321: glaberrima, caule ramoso adscendente, foliis rigidulis carnosulis lineari- v. ovali-oblongis acutis obtusiusculisve mucronatis repando-sinuatis spinuloso-dentatis sessilibus semiamplexicaulibus, capitulis pedunculatis, involucreo carnosulo profunde 5-6-fido, segmentis lanceolatis oblongisve vel foliaceis repandisque, achsen liberis dimorphis majoribus spinulis 4-5 cartilagineis inaequalibus coronatis, spinulis lanceolato-acuminatis, dorso in alis pericarpium decurrentibus, minoribus cum lobis calycinis brevioribus ovato-deltoides acutis cartilagineo-induratis.—*Acicarpa crassifolia*, Miers, *Contrib.* ii. 40, pi. 51 A.

HAB. Maldonado, *Tweedie*: Montevideo in sands of the coast, *M. Gibert* (specimens from both of above collectors with obscurely repand leaves much more widened above and oblanceolate than in the specimens figured from Mr. J. L. Williams Andrews, who speaks of it as one of the most widely distributed plants in Patagonia, in sandy soil, especially of the coast, and occasionally on the higher plateau, extending as far south as the Straits of Magellan).

The last, or nearly the last, communication we had from our dear Dr. Asa Gray, concerned this plant. 'No doubt it is *Boopis crassifolia*. But my specimen is in mature fruit.' That which we had sent to him was in flower. This is the more surprising that Dr. Gray when dealing (*I.e.*) with Mr. Miers's reference of the plant to *Acicarpa* should have left it in *Boopis* rather than in *Galycera*. For I find our single fruiting specimen to have conspicuously dimorphic achenes, so that I should not hesitate to refer it to *Galycera*, though I prefer to let the figure go under an already published name. Indeed Dr. Gray himself says (*I.e.*), 'Although I refer it to *Boopis*, notwithstanding some difformity in the calyx-lobes of different flowers, and the approach to a subulate character in the narrower ones, I am inclined to think that even *Boopis* is likely to be reduced to a mere section of the original genus *Galycera*.⁹

Mr. Williams Andrews describes the plant as with vivid green foliage, smooth and bright on the upper surface, and large yellow blossoms, growing to a height of 1 to 2 feet.—D. OLIVER.

Fig. 1. Scales of receptacle. 2 and 4. Florets. 3. Achene (*scarcely enlarged*) of 2. 5. Showing insertion of stamens, and 6. Longitudinal section of ovary (*of fig. 4*). 7. Achene (*of fig. 4*). *Excepting figs. 3 and 7, enlarged.*



M. S. del et lith.

Triglopleura majayana Hk. f.

TRIGONOPLEITRA MALAYANA, *Hook.f.*

EUPHORBIACEAE. Tribe CEOTONEZE.

Trigonopleura, *Hook.f.* Flores axillares, cymoso-fasciculati, dioici? *FL masc.* *Sepala* 5, oblonga, coriacea, late imbricata. *Petala* paullo longiora, obovato-spathulata, utrinque villosa. *Disci* glanduliferi basin columnae staminese cingentes, erecti. *Stamina* ad 8, filamentis in columnam cingentem pubescentia confluentia, apicibus liberis; antherae oblongae, extrorsum dehiscentes, loculis connectivo pubescenti adnatis. *JPistillodia* 3, subulata, apice columnae affixa. *FL fern*, ignoti. *Capsula* parva, 3-loba, incana epicarpio secedente; cocci 3, ossei, columellae 3-alatae affixi, alis columellae hyalinis. *Semina* in loculis solitaria, late oblonga, dorso compressa, testa atra nitida; arillo magno pallido.—*Arbor*? *Folia alterna penninervia, integerrima.* Flores parvi.

T. malayana, *Hook.f. FL Bril. Ind.* v. 399 (species unica).

HAB. Malayan Peninsula; Malacca, Maingay; Perak, *Father Scortechini*.

Frutex v. *arbor*, ramis lignosis; ramulis puberulis apicibus tomentosis. *Folia* 4-6-pollicaria, breviter petiolata, oblonga v. lineari-oblonga, integerrima, glabra, obtuse cuspidata v. subcaudata, basi obtuse acuta v. rotundata; nervis utrinque costis 8-10, costa interdum puberula; petiolo $\frac{1}{2}$ - $\frac{3}{4}$ poll., longo; stipulis minutis, ovato-oblongis, pubescentibus. *Flores* numerosi, ebracteati, cymuli axillares v. ad cicatrices foliorum delapsorum siti. *Sepala* inaequalia. *Petala* sicca rufo-pubescentia, coriacea, interdum apice v. uno latere emarginata. *Columna* staminea sicca rufo-tomentosa. *Capsula* $\frac{1}{2}$ poll., diam. *Semina* placentas in crassate (v. arillo) adnata.

A genus approaching *Trigonostemon* but differing in habit, inflorescence, stamens, pistillode, and the broadly-winged columella of the fruit.—J. D. HOOKER.

Fig. 1. Male flower. 2. Fetal. 3. Staminal column and disk-glands. 4. Anthers. 5. Staminal column with the anthers removed, showing the pistillodes. 6. Branch with leaf and remains of fruiting cyme, showing the winged columella. 7. Cocci. 8. Seed. All h& fig. 6 enlarged.



M.S. del et lith

Berbens (Mahoma) & acilipes, Oliver.

PLATE 1754.

BERBERIS (*Mahmia*) **GRACILIPES**, *Oliv.*

BERBERIDACEJ.

B. (Mahmia) gracilipes, *Oliv. (sp. nov.)*; glaberrima, foliis 7-foliolatis, foliolis oblanceolatis apice spinoso-acuminatis basin versus connatis angustatis utrinque supra medium 3-6-spinuloso-dentatis coriaceis supra nervosis subtus albido-pruinosis e basi 3- (v. fol. terminali) sub 5-nervosis, brevissime petiolulatis, perulis elongato-lanceolatis acuminatis, racemis elongatis gracilibus laxifloris, bracteis minutis ovato-lanceolatis concavis, pedicellis gracillimis flore 2-3-plo longioribus.

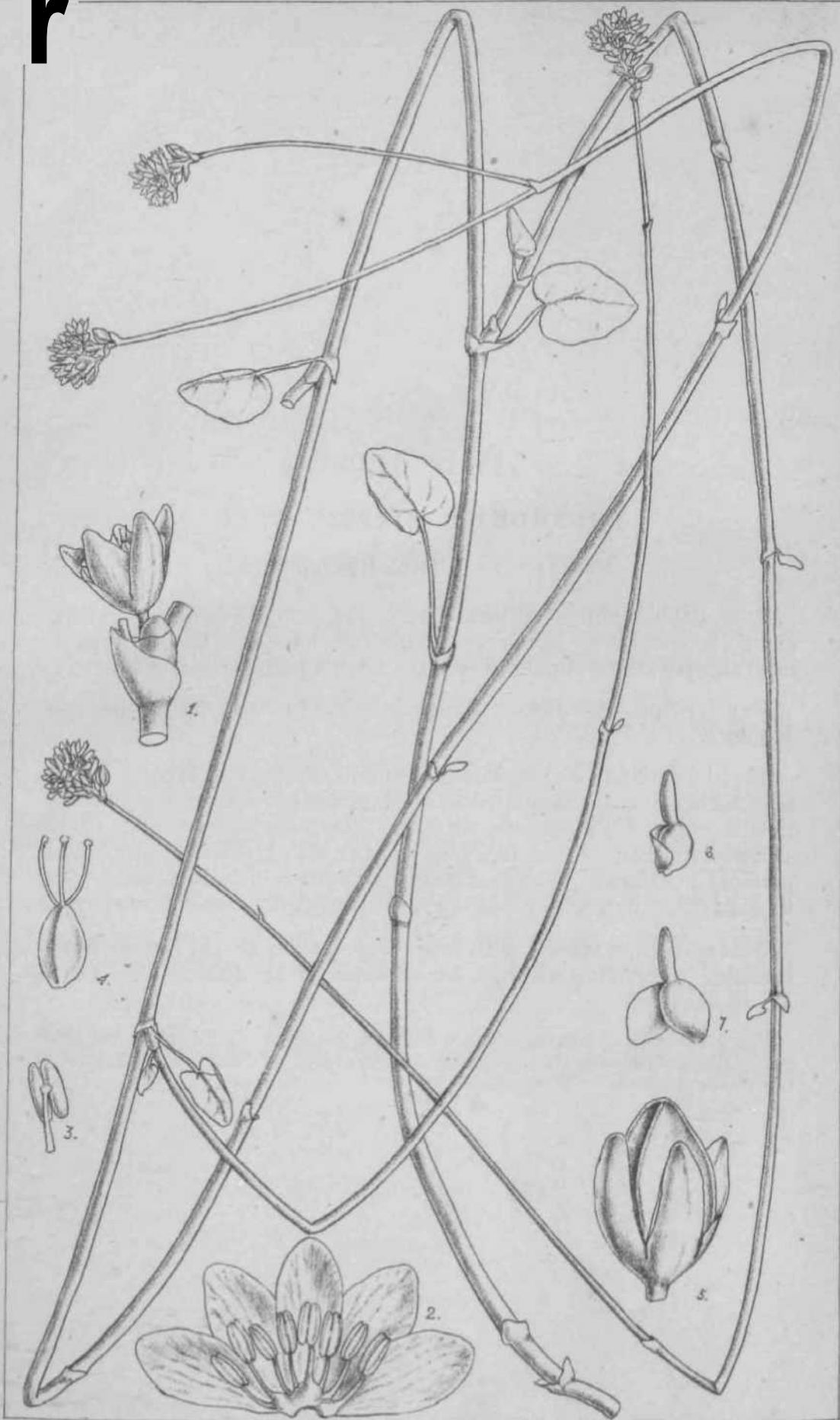
HAB. Mount Omei, 4,000feet; Prov. Szechwan, China, *Rev.B. Ffiber.*

Folia 1-1[^] ped. longa; foliola 3-5 poll, longa, 1-1^J (-2) poll. lata. *Eacemi* 1-1[^] ped. longa; pedicelli 1-1[^] poll, longi. *Flores* f poll, diam.

In the dried flowers the sepals show more or less of purplish coloration. The plant well deserves introduction.—D. OLIVER.

Fig. 1. Expanded flower. 2. Fetal. 3. Stamen. 4. Ovary. *All enlarged.*

r



MS.dd,eUrtk

Polygonum Gilesn, Hen sl.

PLATE 1756.

POLYGONUM GILESII, Heml

POLYGONACEI. Tribe EUPOLYGONEM

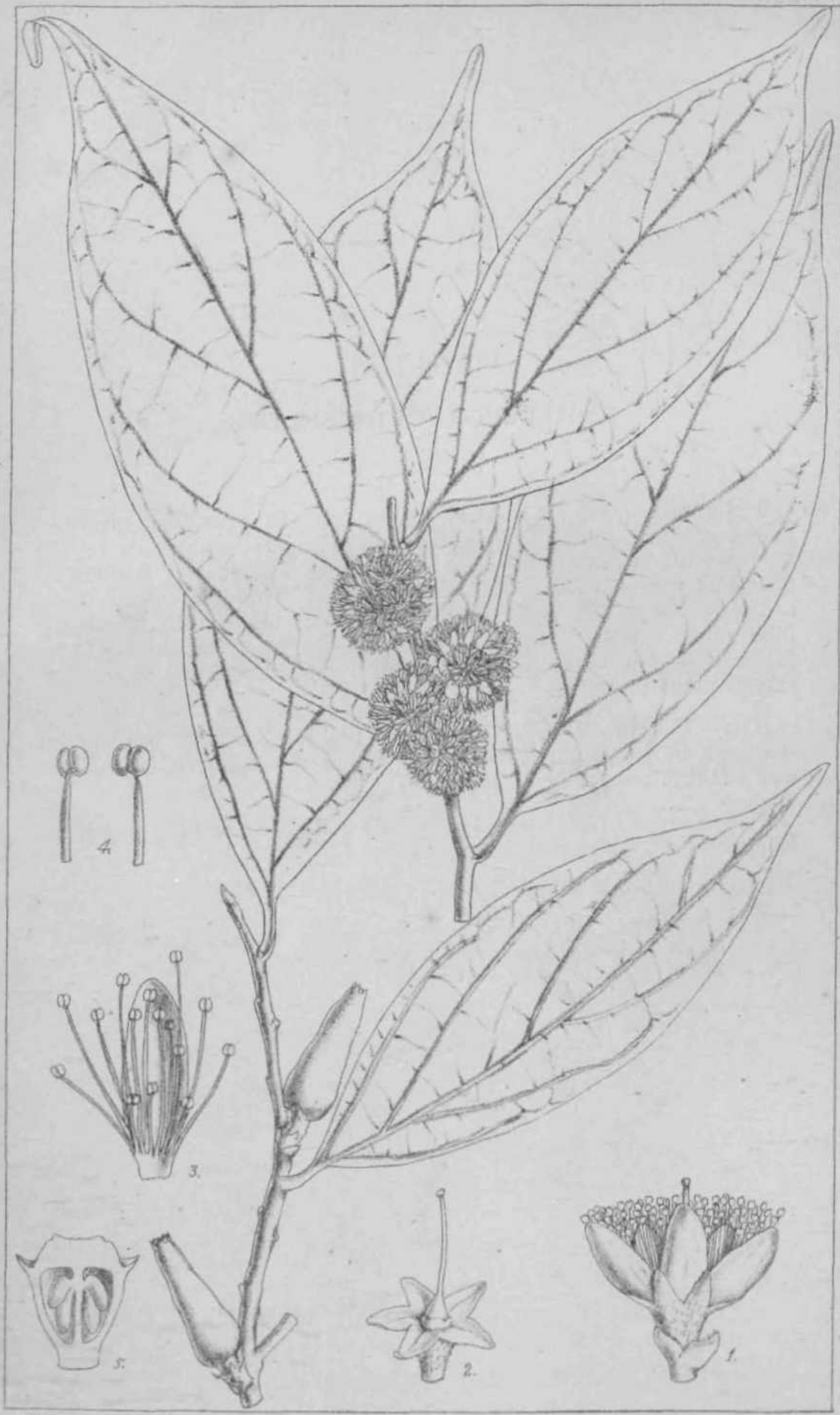
F. (§. **Cephalophilon**) *Gilesii*, *Eernsl* (*sp. nov.*); caulibus ramisque elongatis gracilibus subnignosis viridibus fere aphyllis, floribus in capitulas parvas terminales dispositis, nucula perianthio longiore.

HAB. Gilgit Expedition; Shoghot, 6,000 to 7,000 feet. South of Hindu Koosh, *Dr. Giles*.

Herba ? undique glabra, ramulis superne filiformibus aphyllis saltern tripedalibus. *Folia* in parte inferiori caulis parcissima, distincte petiolata, crassiuscula cordata, circiter 6 lineas diametro, stipulis parvis squamaeformibus. *Flores* parvi, ut videtur albi, brevissime pedicellati; perianthii segmenta oblonga obtusa; stamina 8 inclusa, antheae loculis discretis. *Nux* glabra nuda, exserta; cotyledonibus subconvolutis.

A very distinct species with long, very slender, almost leafless green branches resembling an *Ephedra* or some of the leafless *Genistece*.—
W. B. HEMSLEY.

Fig. 1. Portion of inflorescence. 2. Perianth laid open. 3. An anther and upper part of filament, showing the attachment. 4. An ovary. 6. Fruit. 6 and 7. Embryo in different positions. *All enlarged**



M.S. del. lith.

Symplocos Curtusii, Ohw.

PLATE 1757.

SYMPLOCOS CUBTISII, *Oliv.*

STYRACACEA.

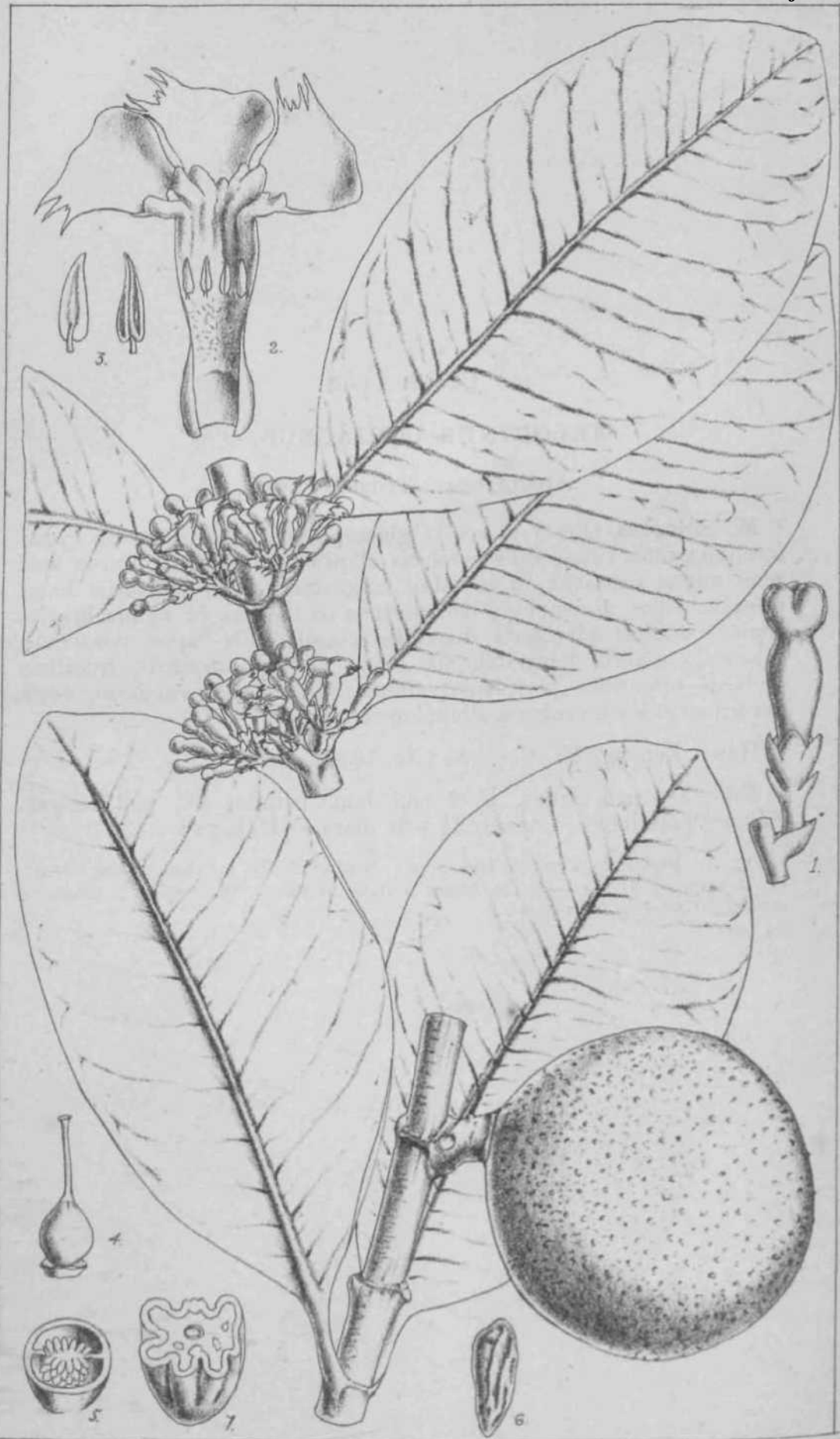
S. Curtisii, *Oliv.* (*sp. nov.*); glabra, ramulis gracilibus crassitie pennis corvine?, foliis ellipticis utrinque attenuatis acuminatis breviter petiolatis tenuiter coriaceis nervis utrinque 4-5 incurvis, floribus in fasciculis parvis densis sessilibus axillaribus dispositis, calycis lobis ovatis obtusis corolla 3-plo brevioribus, petalis basi coalitis filamentis filiformibus corollas adnatis oblongo-ellipticis, fructibus subsessilibus subteretibus lanceolato-oblongis apicem versus plus minus angustatis calycis limbo coronatis.

HAB. Penang, *Mr. (7. Curtis* (No. 1099). We have apparently the same, in fruit, though with fruits less narrowed above, from Maxwell's Hill, Perak.—*Mr. L. Wray, jun.*

Folia 4-5 (-7) poll, longa, 1½-2½ (-3) poll, lata; petiolus ½-1 poll, longus. *Fructus* 1-f poll, longus. .

1 have not found a well-developed embryo.—D. OLIVER.

Fig. 1. Flower. 2. Same after removal of corolla and epipetalous stamens. 3. One segment of limb of corolla with attached stamens. 4. Stamens. 5. Longitudinal section of ovary. *Enlarged.*



M. S. dal. et lith.

Melodinus coriaceus, Ohw.

PLATE 1758.

MELODINUS COHIACEUS, *Oliv.*

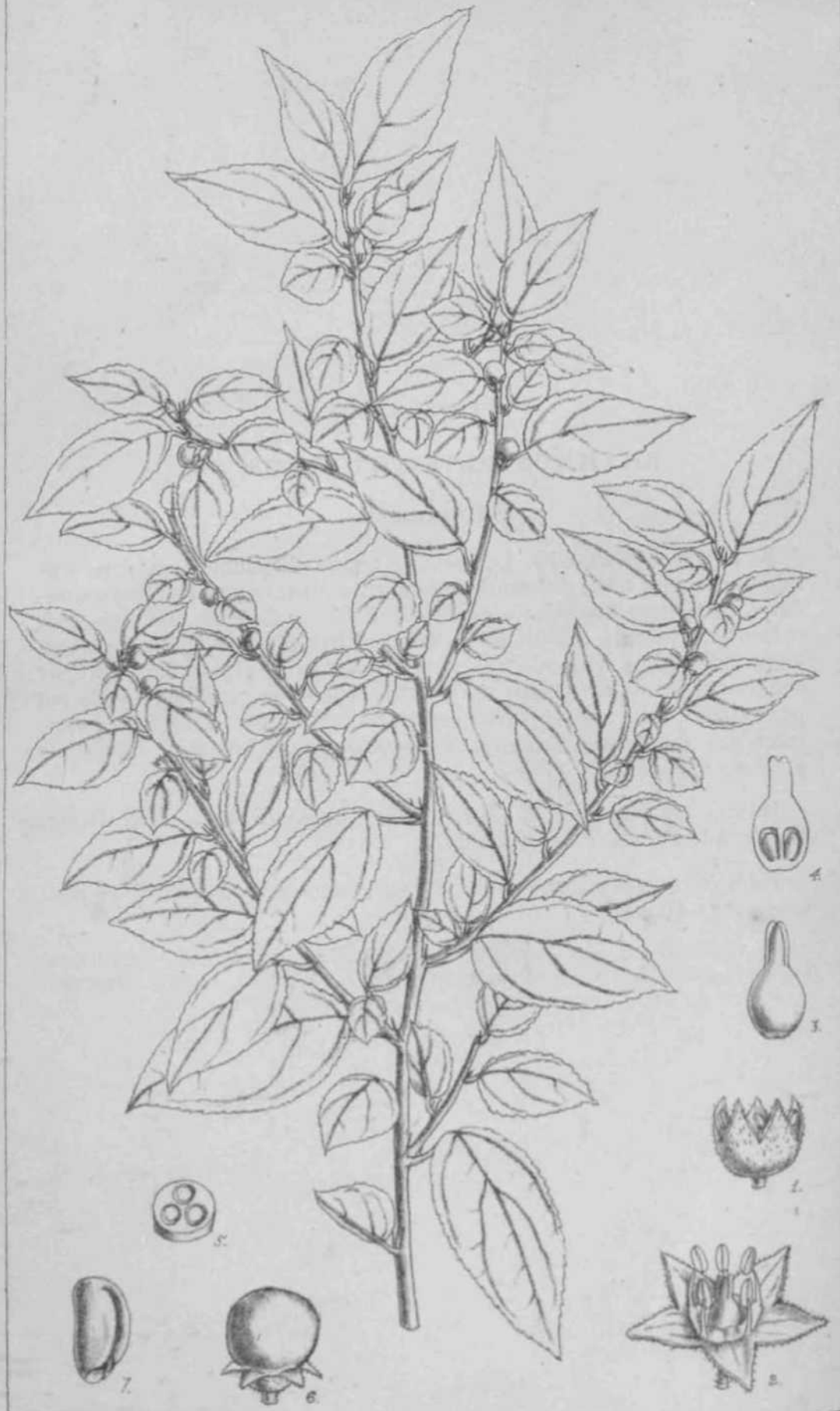
APOCYNACEAE. Tribe CABISSÉ-B.

M. COhiaceus, *Oliv.* (*sp. nov.*) ; glaber, ramis crassitie penn© cygni teretibus subrovibus, foliis coriaceis ellipticis v. obovatis obtusis basi pins minus cneatim in petiolnm angustatis, venis primariis hand prominentibus ntrinque 13-16, floribns axillaribus in cymis brevissimis sessilibns plurifloris dispositis, corollas tnbo apice constricto carnosulo glabro, lobis obliquis apice fimbriato-dentafcis, frnctibns globosis nitentibns pericarpio minute tuberculatim ruguloso, testa cavernosa sulcatim intrnsa albumine rnminato.

HAB. Penang, *Mr. C. Curtis* (No. 1040).

Folia 3-4 poll, longa, 1[^]-2 poll, lata; petiolus §-[^] poll, longus. *Flores* § poll, longi. *Fructus* 1£ poll, diam.—D. OLIVER!

Fig. 1. Bud. 2. Corolla, laid open, showing fleshy squamæ of the throat. 3. Anthers. 4. Ovary. 5. Transverse section of same. 6. Seed. 7* Same in section. *Excepting 6, enlarged.*



M.S. del et lith.

Rhamnus heterophyllus, Ohw.

PLATE 1759.

RHAMNUS HETEROPHYLLUS, *Oliv.*

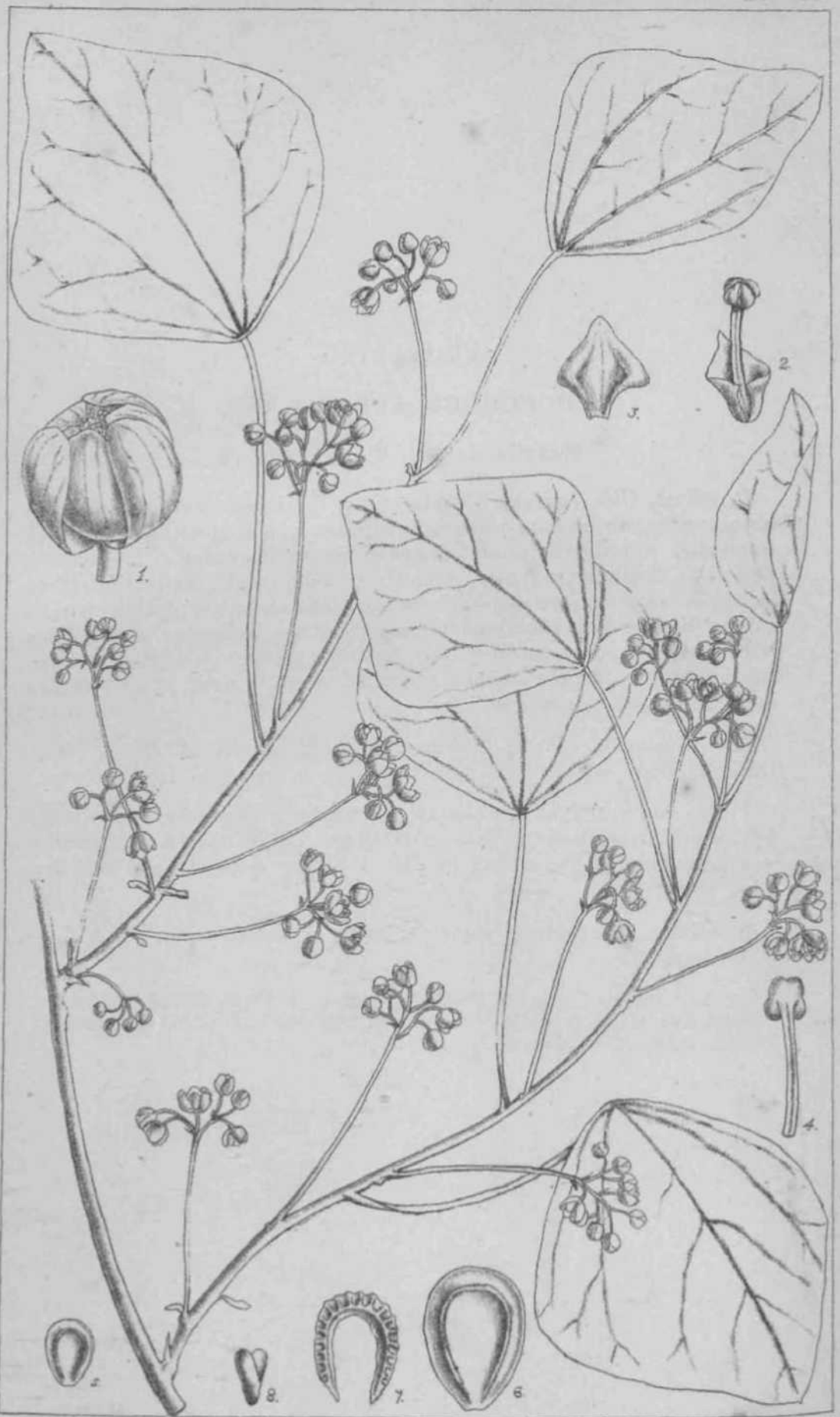
RHAMNACEJ;

B. heterophyllus, *Oliv. (sp. nov.)*; frutex decumbens, ramulis hirtellis intricatis, foliis difformibus minoribus rotundatis v. ovato-rotundatis, majoribus lanceolatis ovato-ellipticis v. ellipticis acutatis basi rotundatis, minute serrulatis glabrescentibus v. nervis pubescentibus, venis lateralibus utrinque 3-4 v. interdum subtriplinerviis, stipulis subulatis petiolo brevioribus, floribus hemisphaericis viridibus brevissime pedicellatis, calyce 5-fido lobis deltoideo-ovatis, petalis minutis ovatis interdum bidentatis antheris subsequilongis v. obsoletis, fructibus globosis tripyrenis,

HAB. Ichang, *Dr. A. Henry* (Nos. 3083, 3312); Min River, Szechwan, *Rev. E. Faber* (No. 667).

Folia rotundata minora 1-1.5 poll, lata; lanceolata majora 1-1.5 poll, longa.—D. OLIVER.

Fig. 1. Flower. 2. Same, apetalous form, laid open. 3. Pistil. 4. Longitudinal section of same. 5. Transverse section of ovary. 6. Fruit. 7. Embryo. *Entarged.*



M.S. del et lith.

Cocculus affinis, Oliv.

PLATE 1760.

COCCTJLUS APFINIS, *Oliv.*

MENISPERMACEJL. Tribe COCCULEJL.

C. affinis, *Oliv.* (*sp. nov.*); glaberrimns, foliis rotundato-rhomboideis obtasis obsolete crenato-sinuatis integrisve basi angustissime peltatis 5-nerviis, adaltis tenuiter coriaceis reticulato-venosis longiuscule petiolatis, floribus in cymis axillaribus pedunculatis umbelliformibus solitariis fasciculatisve dispositis, sepalis late obovato-ellipticis, petalis calyce brevioribus rhomboideis lobo centrali deltoideo acuto lobis lateralibus stamen amplectentibus, antheris tetragonis 4-lobatis calyce subaequilongis, drupis oblique obovatis lateraliter compressis obtuse carinatis glabris glaucescentibus.

HAB. Nan-t'o, Ichang district, Hupeh, China, *Dr. A. Henry* (Nos. 1887, 3818).

Frutex late scandens (20-30-ped.), ramulis teretibus tevibus. *Folia* lf-2j poll, lata; petiolus 2-2[^] poll, longi. *Pedunculi* (fl. <?) graciles + —poll, longi. *Flores* 2-3 lin. lati. *Drupes* 4 lin. long®, 3-3[^] lin. lat».

In foliage approaching some forms of *O. macrocarpus*, W. & A.—
D. OLIVER.

Fig. 1. Staminate flower. 2. Fetal and stamen. 3. Fetal, behind. 4. Stamen. 5. Fruit, natural size or smaller. 6. Same enlarged (the inner ridge too prominent). 7. Seed. 8. Embryo. *Excepting fig. 5, enlarged.*



M.S. del et lith.

Buettneria Curtisi, Oliv.

PLATE 1761.

BUETTNERIA CUHTISII, *Oliv.*

STERCULIACEJ. Tribe BUETTKBRIB^.

B. Curtisii, *Oliv.* (*sp. nov.*); scandens, ramulis teretibus oculo armato pnberrulis, foliis ovali-oblongis v. oblanceolatis acuminatis basi angustatis obtusis angustissime cordatis integris membranaceis venosis glabrescentibus subficus in axillis nervorum soepe parce stellato-tomentellis, cymis axillaribus umbellatis graciliter pedunculatis saepius 3-7-floris, calyce 5-partito segmentis ovato-lanceolatis longe acuminatis, petalis cacullatis dorso ligula simplici elongata instructis calyce Buboequilonga.

HAB. Penang, *G. Curtis* (No. 817).

Folia 5-7 poll, longa, 1[^]-2 poll, lata, basi triplinervia; petiolus 2-3 lin. longus; stipulsa subulatas 2 lin. longis.

Allied to the Bornean *B. lancifolia*, Hook, f.—D. OLIVER.

Fig. 1. Bud. 2. Flower. 3. Same, calyx removed. 4. Fetal and dorsal appendix. 5. Staminal urcoolus. 6. Pistil.



M.S. del. lith.

Mappia pitosporoides, Oliv.

PLATE 1762.

MAPPIA PITTOSPOROIDES, *Oliv.*

OLACINEJE. Tribe ICACINEJE.

K. pittosporoides, *Oliv.* (*sp. nov.*); frutex, ramulis hornotinis hirtis strigillosisve demum glabrescentibus, foliis oblongo-ovalibus oblanceolatisve acuminatis basi in petiolum longiusculum attenuatis, integris, supra glabris v. in costa media parce strigillosis, subtus preecipue in nervis parce strigillosis v. minute hirtellis, cymis multifloris terminalibus breviter pedunculatis hirtis, calyce late cupulato 5-dentato dentibus deltoideis acutis extus parce hirtis, petalis inferne coalitis extns strigosis intus villosulis, ovario dense hirsute disco glabro basi circumdato, drupa ellipsoidea apice obtuse umbonata.

HAB. Ichang, Prov. Hupeh, China, Dr. A. *Henry* (Nos. 3536, 3990).

Folia 4-5 (-6) poll, longa, J-1[^] (-2) poll, lata; petiolus | - | poll, longus. *Flores* flavidi ^ poll. diam.

Dr. Henry notices the disagreeable odour of the flowers.—D. OLIVER.

Fig. 1. Expanding, and 2. Wholly expanded flower. 3. Stamens, anther back and front. 4. Pistil. 5. Longitudinal section of ovary and disk. *Enlarged.*



M.S. del. & Mi.

Euonymus macrocarpus, Camb.

PLATE 1763.

EUONYMUS MACROCARPUS, *Gamble*.

CELASTRACEJ. Tribe CELASTREÆ.

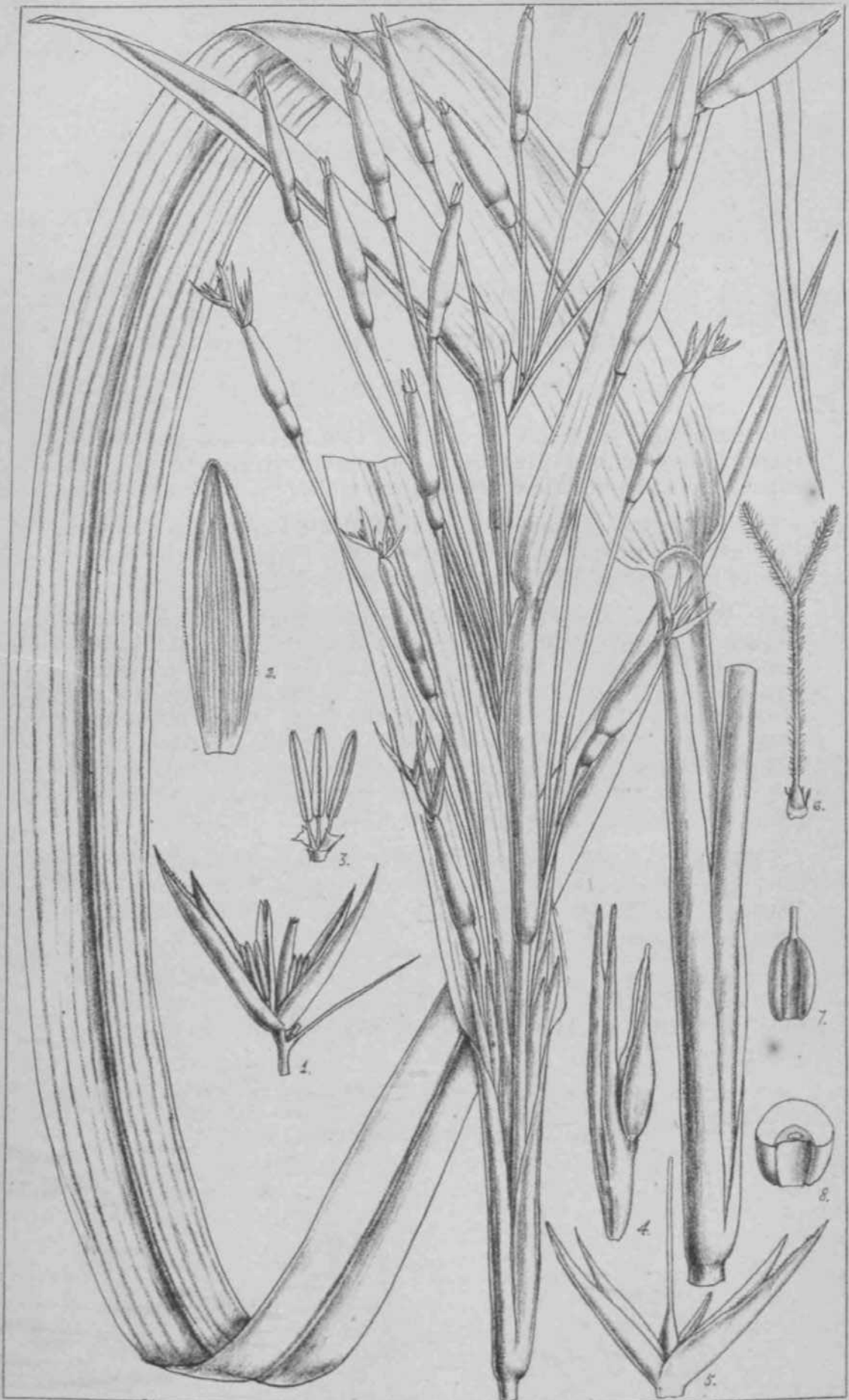
E. macrocarpus, *Gamble, MS* in Herb. Kew.*; frutex glaber alte scandens, foliis coriaceis ovali-oblongis seepius acuminatis obtuse callososerrulatis, nervis utrinque 7-8, cymis axillaribus breviter pedunculatis paucifloris pedicellis flore subaequilongis, petalis rotundatis crispato-denticulatis, ovario basi lato disco cupuliforrai crassiusculo cincto, capsulis coriaceis majusculis valvis 3-5 apiculatis.

HAB. Khumpung, Bhotan, nr. Darjiling, alt. 7500 ft. / *S. Gamble*.

Folia 3-4 poll, longa, 1-1¹/₂ poll, lata; *petiolus* ¹/₂ poll, longus. *Pedunculi* seepius 3-flori ¹/₂ poll, longus. *Flores* ¹/₂ poll. diam.; *ovula* 3 v. 2. *Fructus* 1¹/₂ poll, longus, 1 poll, latus.

Mr. Gamble describes this species as acquiring a thick stem and branches, attaining the tops of the trees 'like ordinary big climbers/ i.e. not 'like *E. echinatus* and *E. vagans*, which root like ivy.'—
D. OLIVER.

Fig. 1. Flower, vertical section. 2. Fetal. 3. Seed and arilla. 4. Seed, transverse section. *Enlarged.*



MS.AS. et. h.

Coix lacryma, Lvar. *stenocarpa*.

PLATE 1764.

COIX LACHRYMA, L., var. *stenocarpa*.

GRAMINEJS. Tribe MAYDEJE.

C. *Lachryma*, L.; *Kunth, Enum. Plant*, i. 20, var. *stenocarpa*; a forma typica differt tantum: involu'cris interdum superpositis elongatis anguste cylindraceutis, basin versus et ad apicem sropius leviter angustatis.

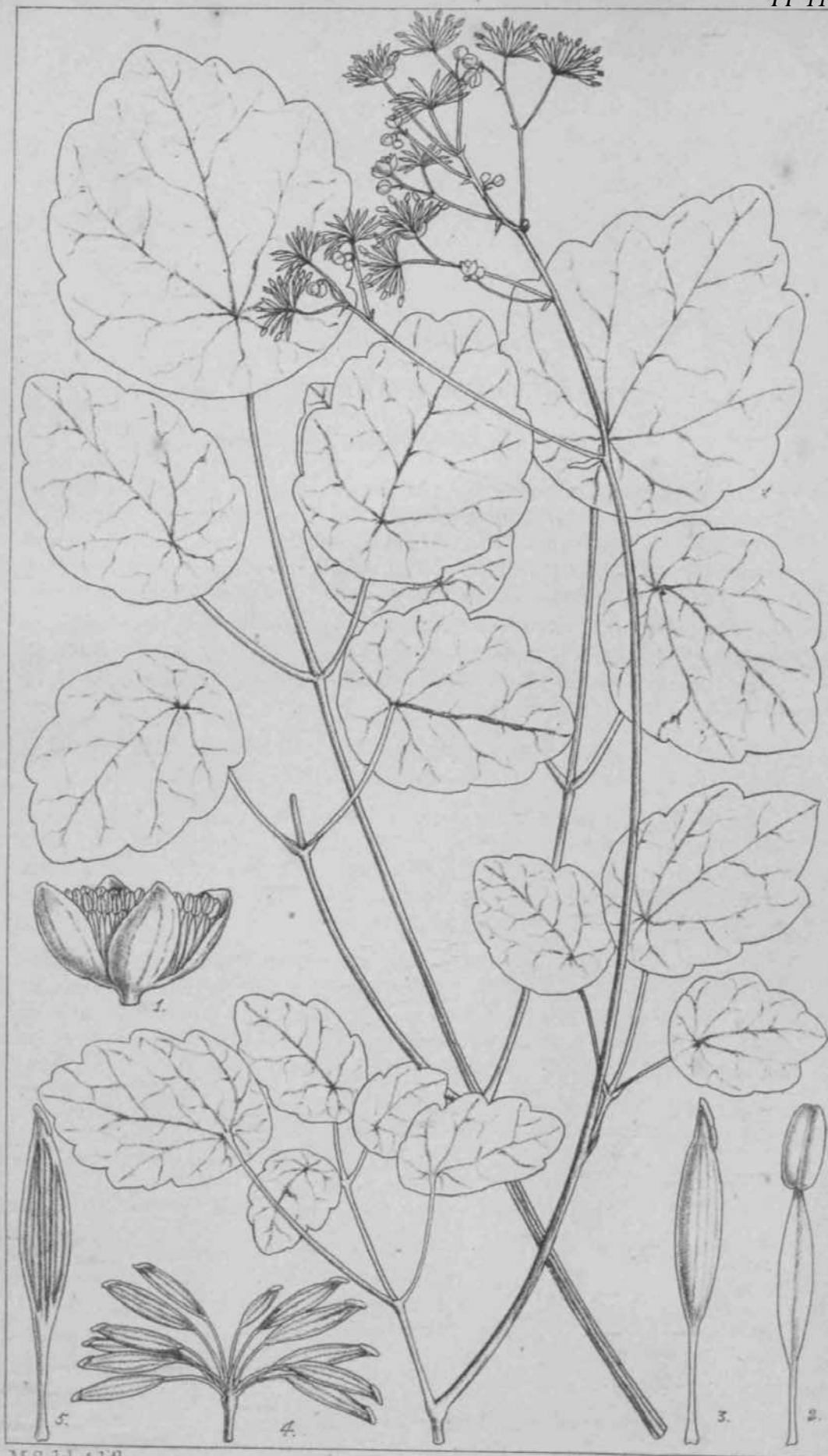
HAB.^c Burma,⁹ communicated by *Dr. O. Watt*, Reporter on Economic Products to the Indian Government. We have also a form, with shorter involucres, collected at Mergui by *Mr. Griffith*.

Dr. Watt says the strong involucres are 'used by the Karens, of Burma, to ornament their garments, and by the Angami Nagas, of Assam, to decorate their earrings.' The Kew Herbarium possesses also a packet of the same involucres, obtained by the Chief Commissioner of Burma, and communicated through the India Office; also a letter from Mr. R. Bruce, of Balipara, Assam, to Mr. C. H. Read, of the British Museum, saying that the involucres are known to 'the Assamese and the Meris, and called by them the "Cowl monee," or Crow-bead, from the fondness of these birds for this berry/

I have not thought it necessary *to* describe in detail the floral structure, which is adequately figured, for the typical form, in Webb and Berthelot, 'Hist. Nat. Canar.[^] tabb. 242-3, and in Martins, * *Flora Bras.*' (Gramines), ii. pt. 2, tab. 10.

Our involucres vary from 5 to 9 lines in length. They are usually more or less fusiform, tapering at the ends to about 1 line in diameter, from the median thickest part, which may be 1J line in diameter.—
D. OLIVER.

Fig. 1. Spikelet of staminate flowers. 2. Outer glume of same. 3. Stamens and lodicules. 4. Pistillate floret. 5. Glumes of same, laid open. 6. Pistil. 7. Sulcate face of caryopsis. 8. Same, transverse section. *Enlarged.*



M.S. del, et lith.

Thalictrum ichangense Lee

PLATE 1765.

THALICTRUM ICHANGENSE, *Lee.*

RANUNCULACEAE. Tribe ANEMONES.

T. ichangense, *Lecoyer in litU*; herba (9-15-poll.) glaberrima crecta, foliis radicalibus longipetiolatis, foliolis 2-1-ternatis ovatis v. rotundato-ovatis obtusis late creuato-lobatis basi rotundatis subtus glaucescentibus insigniter peltatis, petiolulis longiusculis rigidiusculis gracillimis, paniculis parce divaricatim ramosis pedunculis pedicellisque gracillimis, floribus parvis \textasciixit filamentis longiusculis superne dilatatis apice abrupte angustatis, antheris oblongis muticis, stigmatate laterali stylo aequilongo atque eequilato, carpellis fructiferis longiuscule stipitatis saepius 5-12 fusiformibus longitudinaliter nervosis.

HAB. Ichang and Nan-t'o, prov. Hupeh, China, *Dr. A. Henry* (Nos. 3583, 1949). Prov. Kwangtung, 0. *Ford* (No. 307).

Radix fibrosa, fibris fusco-tomentellis. *Folia* radicalia petiolo 5-8 poll, longo; petioluli ultimi \wedge -2 poll, longi; foliola | - 1 | poll, lata, folia caulina superiora ssepe 1-foliolata. *Inflorescenza* sparsa folia superantia; pedicelli adscendentes 2-10 lin. longi. *Flores* albi. *Achcenia* $1\frac{1}{2}$ lin. longa stipite leviter longi ora.

M. Lecoyer kindly allowed me to submit to him fragments of this (and of the following) species. He regards *T. ichangense* as approaching *T. Przewahkii*, Maxim., in his section 'Microgynes \S Longistaminés' with claviform filaments, but unlike any species known to him in its peltate leaflets, excepting the American *T. peltatum*, DC.—D. OLIVER.

Fig. 1. Flower and stamen. 3. Carpel. 4. Head of achenes. 5. Stipitateachene, detached (the nervation has come out too strongly in the print). *Enlarged.*



M.S. del. et lith.

Thalictrum microgynunx Lec.

PLATE 1766.

THALICTRUM MICROGYNUM, *Lee.*

BANUNCULACEJE Tribe ANEMONES.

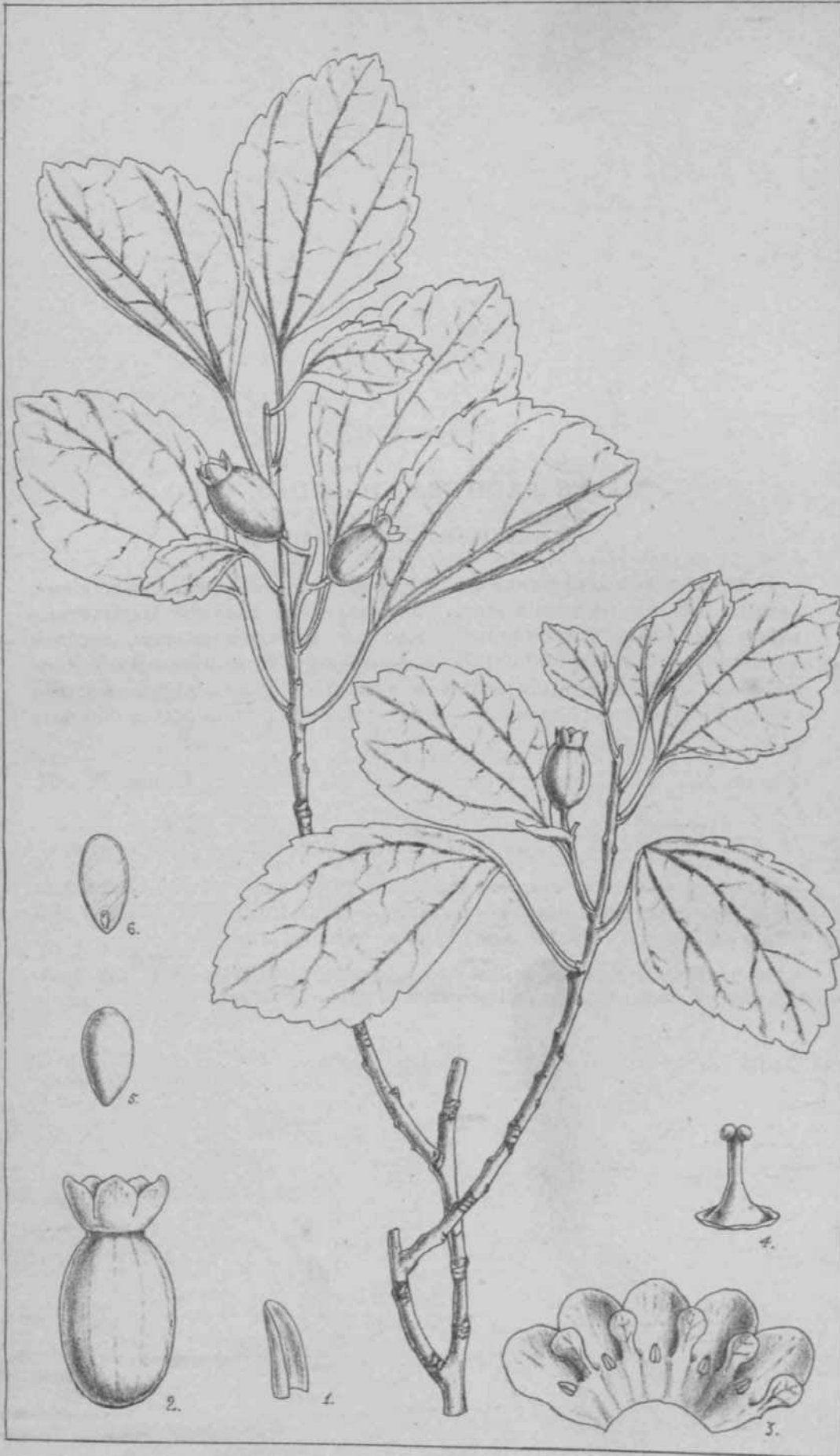
T. microgynnm, *Lee. in litt.*; herba 1-2-pedalis glabra, foliis radicalibus 2-3-pinnatis, foliolis mediocribus ovatis v. terminali obovato Bubtrilobatis lobis obtuse crenato-dentatis mucronulatis longiuscule petiolulatis subtus venosis pallidioribus, paniculis foliosis, pedunculis plus minus snbumbellatim contractis, pedicellis adscendentibus incurvis, carpellis fructiferis 6-15, stipitatis pendentibus parvis fusiformibus valide nervosis leviter aut vix compressis, stigmati punctiormi obliquo.

HAB. Nan-t'o, near Ichang, Hupeh, China, *Dr. A. Henry* (No. 3932).

Foliola, 1- $\frac{1}{2}$ (-2) poll, longa, basi rotundata v. late cuneata. {*Mores* \$. *Filamenta* filiformia; *anther* linearis mutica.—*M. Lecoyer*, who found a stamen remaining on a fragment sent to him,) *Achcenia* 1 lin. longa, stipite subtequilonga v. paullo longiora.

Our specimens of this species are in fruit. *M. Lecoyer* would provisionally class it near to *T. virgatum*, Hook. f. et T.—D. OLIVER.

Fig. 1. Head of achenes. 2. Single mature achene. *Enlarged.*



M. SdeleLMh.

Ribes padnysandroides, Oliv.

PLATE 1767.

RIBES PACHYSANDROIDES, *Oliv.*

SAXIFRAGACEJL Tribe RIBESIEJE.

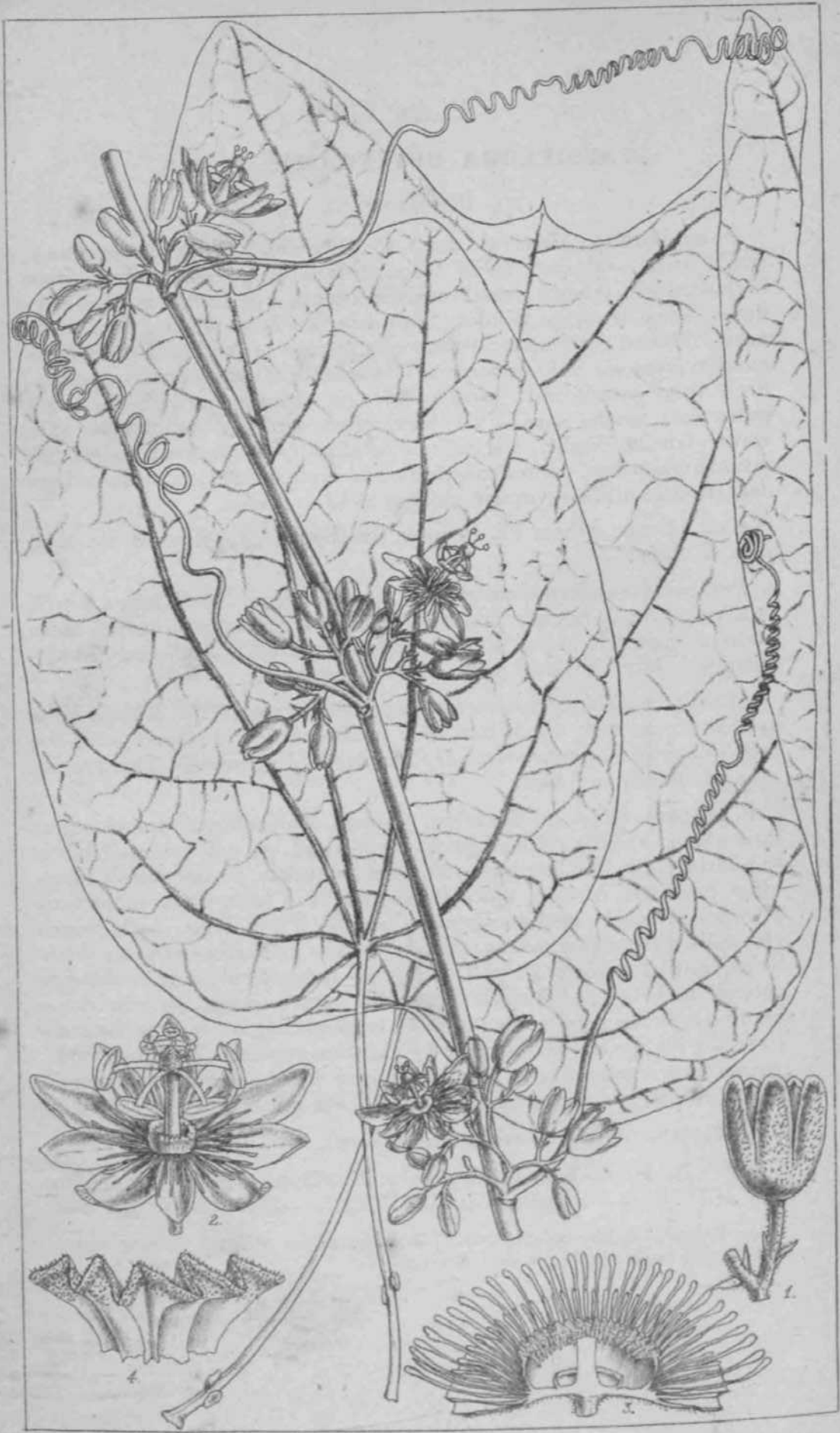
E. pachysandroides, *Oliv. (sp.nov.)*; fruticulus ¹-pedalis adscendens, ramulis ultimis puberulis mox glabratis, foliis obovatis triplinerviis supra medium crenato-dentatis tenuiter coriaceis glabris, racemis axillaribus pauci-(2-3-)floris, bracteis oblongis deciduis pedicello longioribus, fructibus glabris ellipsoideis erectis calycis limbo persistente coronatis, lobis calycinis late obovato-rotundatis, petalis parvis obovatis calyce brevioribus.

HAB. Mt. Omei, in a ravine at 4000 ft., Szechwan, China, *Rev. 13. Faber.*

Folia ¹/₂ poll, longa, ¹/₂ poll, lata; petiolus ¹/₂ poll, longus.

Our single specimen of this interesting and very distinct Currant is far advanced in fruit, but the persistent calyx-limb still encloses the petals and sessile or subsessile anthers.—D. OLIVER.

Fig. 1. Bract. 2. Fruit crowned by calyx-limb. 3. Calyx-limb, laid open. 4. Style. 5. Seed. 6. Longitudinal section of same. *Enlarged**



M.S. del et. hth.

Fassiflora cupifontus, MIM.

PASSIFLORA CUPIFORMIS, M. T. M.

PASSIFLORACEJE.

P. cupiformis, *Mast.* (*sp. nov.*) (§ *Decaloba*, subsect. *Polyanthea*); ramis striato-sulcatis; foliis longe petiolatis, petiolis versus basin biglandulosus, laminis membranaceis ambitu cupiformibus, basi cordatis, apice truncato 3-lobis, lobis lateralibus adscendentibus, lobo medio minimo mucronato; pedunculis petiolis multo brevioribus fasciculatim cymosis rufo-furfuraceis; bracteis a flore remotis linearibus; floris tubo pateriformi; sepalis oblongis obtusis ecorniculatis extns⁴ puberulis; petalis sepalis vix brevioribus conformibus, flavidis (?); corona fauciali duplici, filis extimis petalis vix dimidio brevioribus, filis intimis minoribus, corona membranacea arete plicata, margine inflexo dentato fimbriifero; ovario globoso albido-pilosulo.

HAB. Prope urbem Fu, in prov. Szechwan, imp. Sinens., ubi legit *Bev. E. Faber!*

Fruticulus scandens cirrifer, rami pilosuli. *Folia* 5 poll, longa, 4 poll, lata, palmatim 3 costata pilosula. *Petiole* 3 poll, longi, versus basin utrinque glandula majnsacula pulvioiforme muniti. *Alabastra* clavato-oblonga. *Flores* expansi diametro |—polHcares.

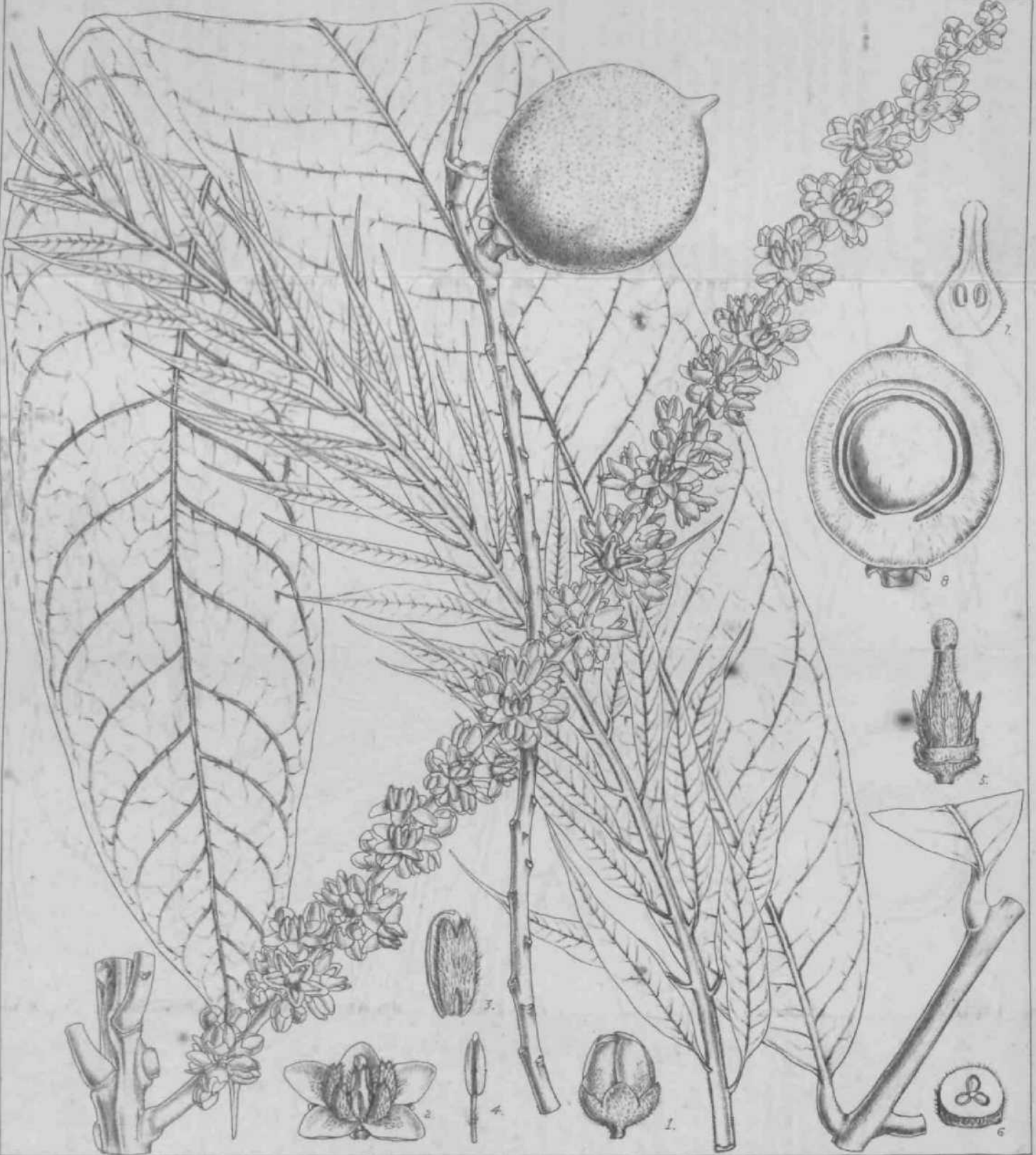
Allied to a hitherto undescribed species, native of the Khasia Hills and Manipur, and which has been confounded in herbaria with the very different *P. Leschenaultii* D.C. from the Nilghirris. This species may be defined as follows.

P. perpera, *Mast.* (§ *Decaloba*, subsect. *Polyanthea*); ramis angulatis glabris striatis; foliis 2½ poll. long. 4 poll. lat. subcoriaceis glabris v. pilosiusculis, basi cordatis palmatim 3-costatis, costa centrali insigniter pinnatim ramosa, apice truncato-bilobis lobis ovato-lanceolatis divergentibus lobo mediano minimo, petiolis 2 poll, long., basin versus glandulis duabus majusculis prseditis; cymis axillaribus ramosis petiolo oeqnautibus; floribus 1 poll. diam. tubo pateriformi; sepalis oblongis obtusis glabris ecorniculatis glandula tamen prope apicem dorso munitis; petalis couformibus sepalis subaBquilougis; cor on© faucialis 1-serialis filis petalis tertia parte brevioribus angulatis, basi maculatis; corona membranacea arete plicata margine inflexo denticnlato fimbriifero; ovario pyriforme glabrescente vel vix pilosula.

P. obscura, *Griffith*, MSS. in *Herb. Kew.*, haud Lindl.

HAB. In *Mont. Khasia*, *Griffith!*; *Nunklow*, *Hook. fit. et Thorns.* (No. 1671!); in *Manipur*, *Watt* (No. 7310!).— MAXWELL T. MASTERS

Fig. 1. Bud. 2. Expanded flower. 3. Longitudinal section, showing corona. 4. Portion of inner plicate corona. *Enlarged.*



M.S. ad et lith.

Talisia princeps, Oliv

TALISIA PBINCEPS, *Oliv.*

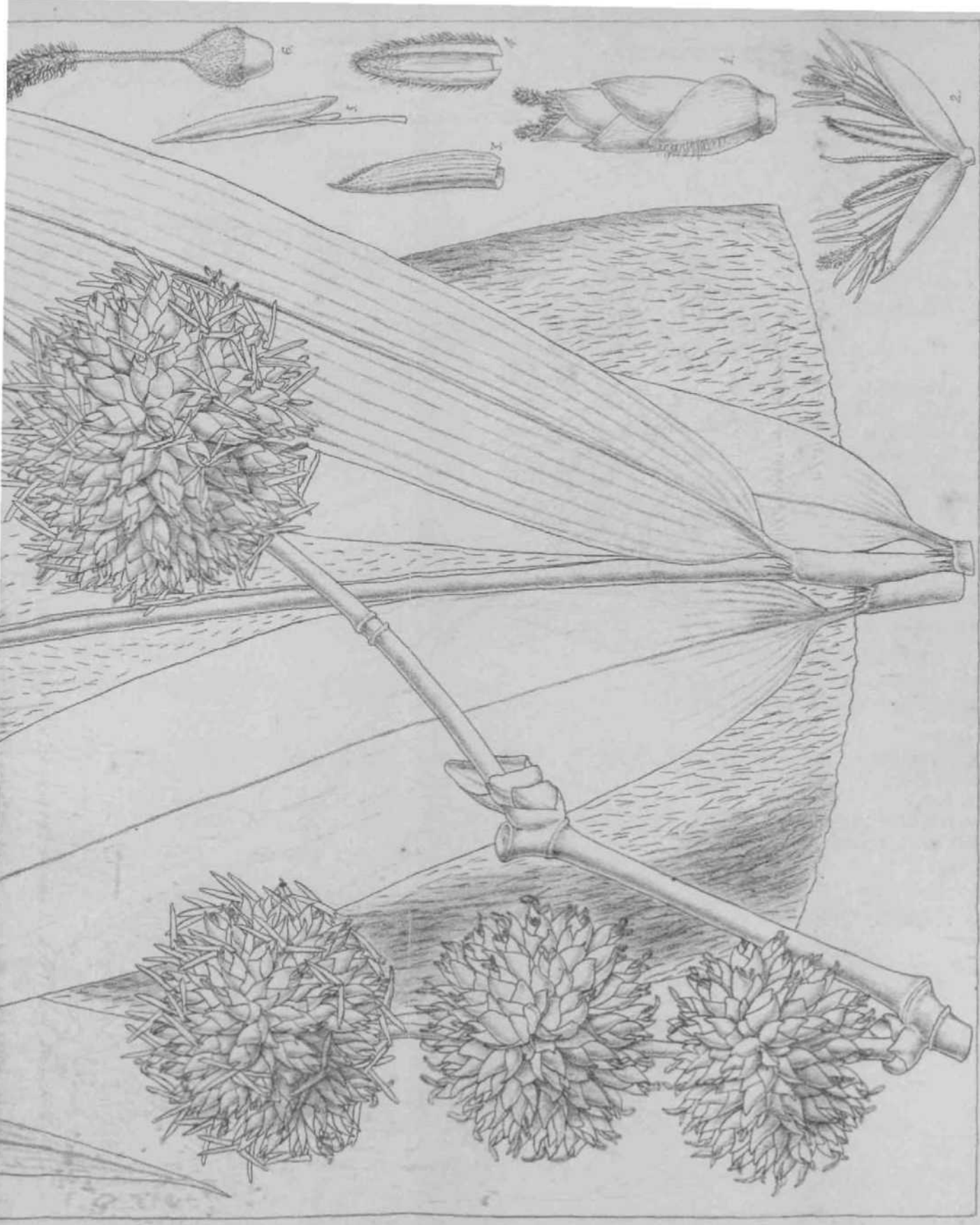
SAPINDACE*.

T. princeps, *Oliv.* (*sp. nov.*) ; truncus erectus simplex 20-40-pedalis; foliis (3[^]-6 ped. longis) circ. 40-foliolatis foliolis flubnppositis v. alternis elongato-oblongid gracile acuminiatis basi oblique rotundatis v. late cuneatis petiolatis, nervis primariis utrinque circ. 27-29, tenuiter coriaceis, supra glabris subtus praecipue in costa parce hirtellis, rhachide subteretipubescente, floribus fasciculatis brevissime pedicellatis racemosis in panícula ampla terminali dispositis, pedunculis fulvo-tomentellia, calyoe pubescente 5-fido lobis ovatis obtusis, petalis calyce dnplo longioribus ovato-ellipticis dorso basin versus hirtellis unguiculatis, squama dense et longe villosa supra unguem inserta petalo paullo brevior, disco breviter cupuliforme hirto, filamentis anguste lineari-subnatis apicem versus parce hirtellis glabrativae, fructibus globosis breviter apiculatia leviter rmgulosis, monospermis, pericarpio crasse coriaceo.—*Theophrasta pinnata*, Jacq. *Fragrmenta* p. 49, tabb. 64 (fig. 2), 65, 66; *Brownea privceps*, and *B. erecta*, Lind. *Cat.* (Otto-et Dietr., *Aligemeine Gartenzeitung*, 1855, p. 147).

HAB. Venezuela, *fide Jacquw.*, *I.e.* (Only known to me from cultivated specimens.)

This fine decorative plant has long been in cultivation in Europe, but does not appear to have flowered before the autumn of 1878, when specimens were sent to us for determination from the garden of Mr. Crawford, of Lakelands, Cork. These were clearly referable to the genus *Talisia*, and nearly allied to *T. megaphylla*, Sagot, though not identical. The late M. Planchon appears to have been the first to suggest, in the absence of flowers, that the *Brownea erecta* of continental gardens might be a Sapindacea, the identity of which plant with Jacquin's '*Theophrasta*' (unknown to him in flower) is pointed out, as Prof. Radlkofer kindly informs me, in Heynhold's '*Nomenclator*' ii. 726, published in 1846. The stem, growing only by its terminal bud, unfolds annually a superb erect plume of ample pinnate leaves, at first flushed with rose or flesh-colour. Ultimately these become patent, and finally reflexed. The ordinary foliage-leaves are preceded by a series of much smaller erect leaves, a few[^] inches to a foot in length, pinnately multifoliolate, which seem to be in the relation of cataphylls to the ordinary leaves. The larger leaflets vary from 10 to 16 inches in length, and in breadth from 1 to nearly 3 inches. I may add that Professor Radlkofer, who has so long made this difficult order (*Sapindacece*) his own, confirms me in regarding this *Talisia* as probably distinct from any hitherto described species. He would assign it a place near *T. megaphylla* Sagot, and *T. stricta* Tr. et Pl.—D. OLIVER.

Fig. 1. Bud. 2. Expanded flower. 3. Petal and villous squama. 4. Stamen. 5. Pistil with disk. 6. Transverse, and 7. Longitudinal sections of ovary. 8. Section of fruit. *Except fig. 8, enlarged**



Dendrocalamus sikkmensis, Gamble.

M. S. G. et. 116.

PLATE 1770.

DENDROCALAMUS SIKKIMENSIS, *Gamble*.

GRAMINEJS. Tribe BAMBUSE-E.

D. sikkimensis, *Gamble*, *MSS. in Serb. Kew.*; culmo subbarboreo alto, cataphyllis extus tomentellis inferne etiam setis rigidulis reflexis dense intertextis iudntis, intus glabris, apice ad basin laminte rudimenti ligula setacea (setis permultis pluriseriatis longiusculis) instructis, foliis oblongo-lanceolatis acuminatis basi rotundatis breviter petiolatis. Supra longitudinaliter striatis glabris, subtus parce setuloso-villosulis, lignis setaceis, vaginis glabris, paniculse ramulis ultimis rigidis internodiis crassitie per^o corvina^B, capitulis dissitis subglobosis, spiculis lanceolatis saepius bifloris glumis inferioribus vacais circ. 4 late ovatis disticbe imbricatis inferioribus minoribus subcarinatis apicem versus setulosis, superioribus apiculatis glabris nitentibus, paleis bicarinatis carinis setulosis.

HAB. Sikkim, 4000-6000 feet, *Mr. Pantling*; and cultivated in the Eoyal Gardens, *Kew*.

This is the 'Pugriang' or 'Pagriang' of the Lepchas of Sikkim, the tallest Bamboo of the province. It throws up but few culms (2 or 3), which persist four to five years. Diameter of culm about 6 inches, the internodes 18 inches in length. The cataphylls are very large, but I have not seen one entire, clothed below the middle with a dense felt of dark brown setae. Ordinary leaves usually from 6 to 10 (5-12) inches long, and 1-2 (2½) inches broad. Flower-heads at intervals of 1-2 inches, about 1½ inch in diameter. Spikelets ¾ inch long.—D. OLIVER.

Fig. 1. Spikelet. **2.** Foret. **3.** Glume. **4.** Paloa. **5.** Stamen. **6.** Pistil
Enlarged.



PLATE 1771.

DEBRIS FORDII, *OUv.*

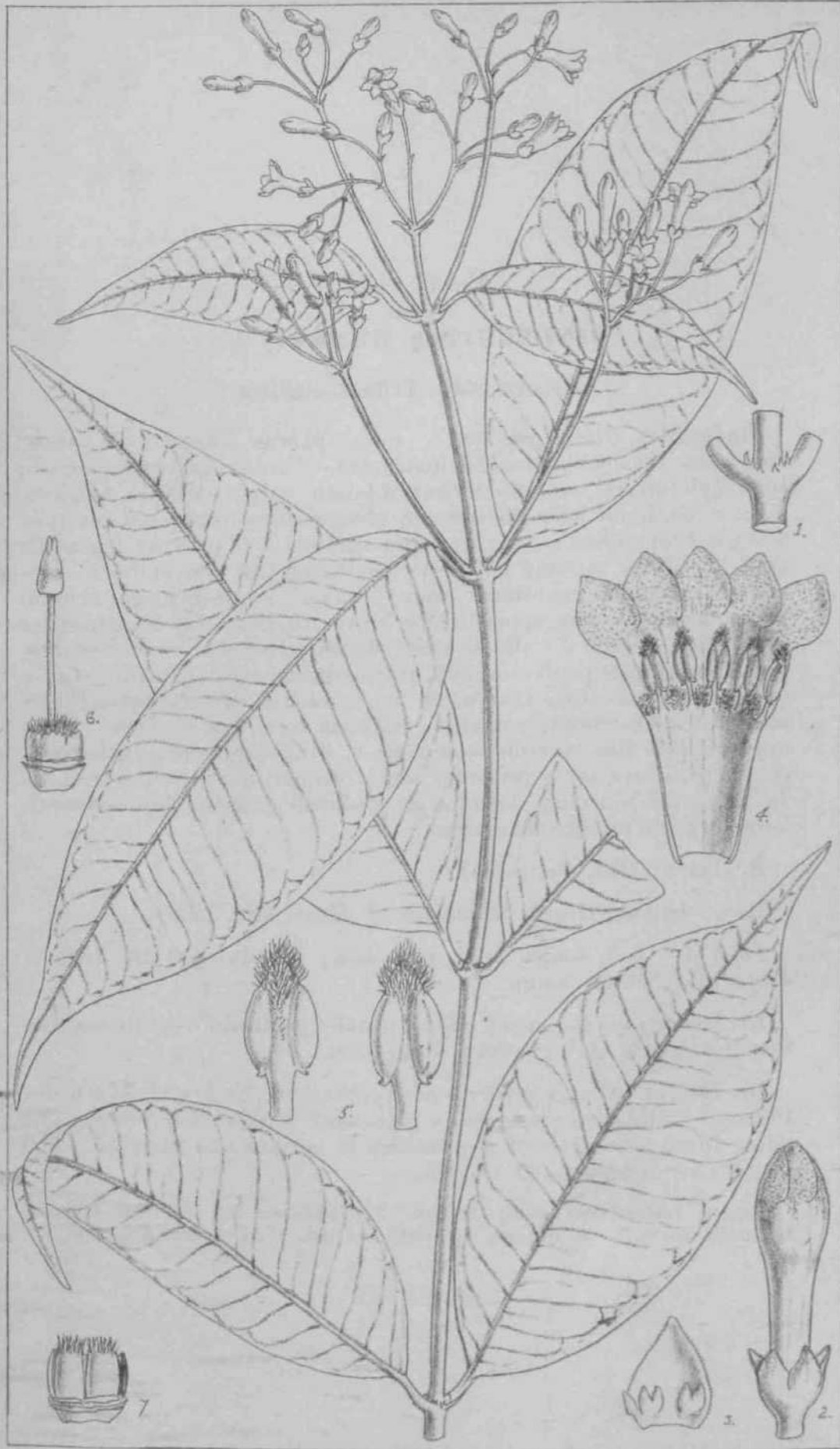
LEGUMINOS[^]). Tribe DALBERGIE-B.

D. Fordii, *OUv.* (*sp. nov.*); glabra, foliis 7-5-foliolatis, petiolatiR, foliolis ovali- v. ovato-obloDgis obt.usiuscule acaminatis petiolulatis, membranaceis, nervis primariis utrinque 6—7, paniculis axillaribus subsessilibus pedunculis lateralibus divaricatis, pedicellis gracilibus calyce subaequilongis, calyce oblique campannlato labio inferiore breviter et late rotundato-lobulato, vexillo basi nudo lamina late obovato-elliptica leviter cucullato emarginato, staminibns monadelphis filamento postico basi libero, ovario sessile pluriovulato, legumine compresso oblongo tenniter coriaceo ssepins 1-4-spermo sntura ventrali angnste alato.

HAB. Prov. Kwangfcnng, China, 0. *Ford* (Nos. 50, 55, 58).

Folia 7-10 poll, longa; foliola 3-3^{^(^)} longa, 1-1j(-1|) lata; petioluli 2-3 lin. longi. *Tanicula* 6 poll, longa multiflora pateutim ramosa. *Flores* albi, 4-5 lin. longi. *Legumen* 2-3£ poll, longum.—
D. OLIVER.

Fig. 1. Caljx and pistil. 2. Vexillum. 3. Ala. 4. Carinal petal. 5. Staminal sheath. 6. Longitudinal section of ovary. 7. Seeds *in situ*. *Except Jig, 7, enlarged.*



M. S. de Lath.

PLATE 1772.

SINDECHITES HENRYI, *Oliv.*

APOCYNACEJC. Tribe EOHITIDEJ.

SindecMtes, *Oliv.* (*gen. nov.*). *Calyx* parvus 5-fidus lobis ovatis, basi intus squamellis circ. 15 instructus. *Corolla* hprocateriformis, tubo cylindraceo superne levifcer dilatato calyce 4-6-plo longiore, fance nudo, limbi lobis dextrorsum obtegentibus ovatis obtusis tubo 4-5-plo brevioribus. *Stamina* supra medium tubi inserta; filamentis superne liberis anguste linearibus; anther© basi bidentatte v. brevissime sagittal®, connectivo apice producto ovato-oblongo acutato ptloso, luculis basi in appendiculas breves cartilagineas obtusiuscuku productis. Ovaria 2 distincta apice dense pilosa disco annulato irregulariter lobulato paullo longiora, pluriovulata; stylus gracilis; stigma ovoideo-conicum, basi truncatum apice minute bidentatum.—*Frutex* scandens glaberrimus, ramulis gracilibus teretibus laevibiis. *Folia* opposita petiolata lanceolato-oblonga v. ovato-lanceolata acuminata, subtus pallidiora venis primariis late divergentibus utrinque circ. 20. *Inflorescentia* pi unflora terminalis; pedicelli graciles flore subaequilongi, bractes ininuta lanceolate.

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

HAB. Ichang, Hupeh, China, *Dr. A. Henry* (No. 3636).

Folia 3-4 poll, longa, 1-1J poll, lata; petiolus 2-3 lin. loiiigus. *Fkre8**lbi*, 5-6 lin. longi.

Dr. Henry says this plant grows usually prostrate over stones, and that the stem is ' full of sticky white juice.'¹

Dr. Baillon, who is working at Apocynaceae for his ' Histoire des Plantes,' would give *SindecMtes* a place near to *Trachelospermum*. The pilose apical connective of the anthers is curious and unusual. The fruit I have not seen.—D. OLIVER.

Fig. 1. Interpetiolar gland. 2. Bud. 3. Calyx-lobe and included squamae. 4. Corolla laid open. 5. Anthers. 6. Pistil and disk. 7. Ovaries. *Enlarged.*



M.S. del et lith.

Ischaemum angustifolium, Hack.

ISCHÆSMUM ANGHUSTIFOLIUM, *Hackel*.

GRAMINEÆ. Tribe ANDROPOGONÆ.

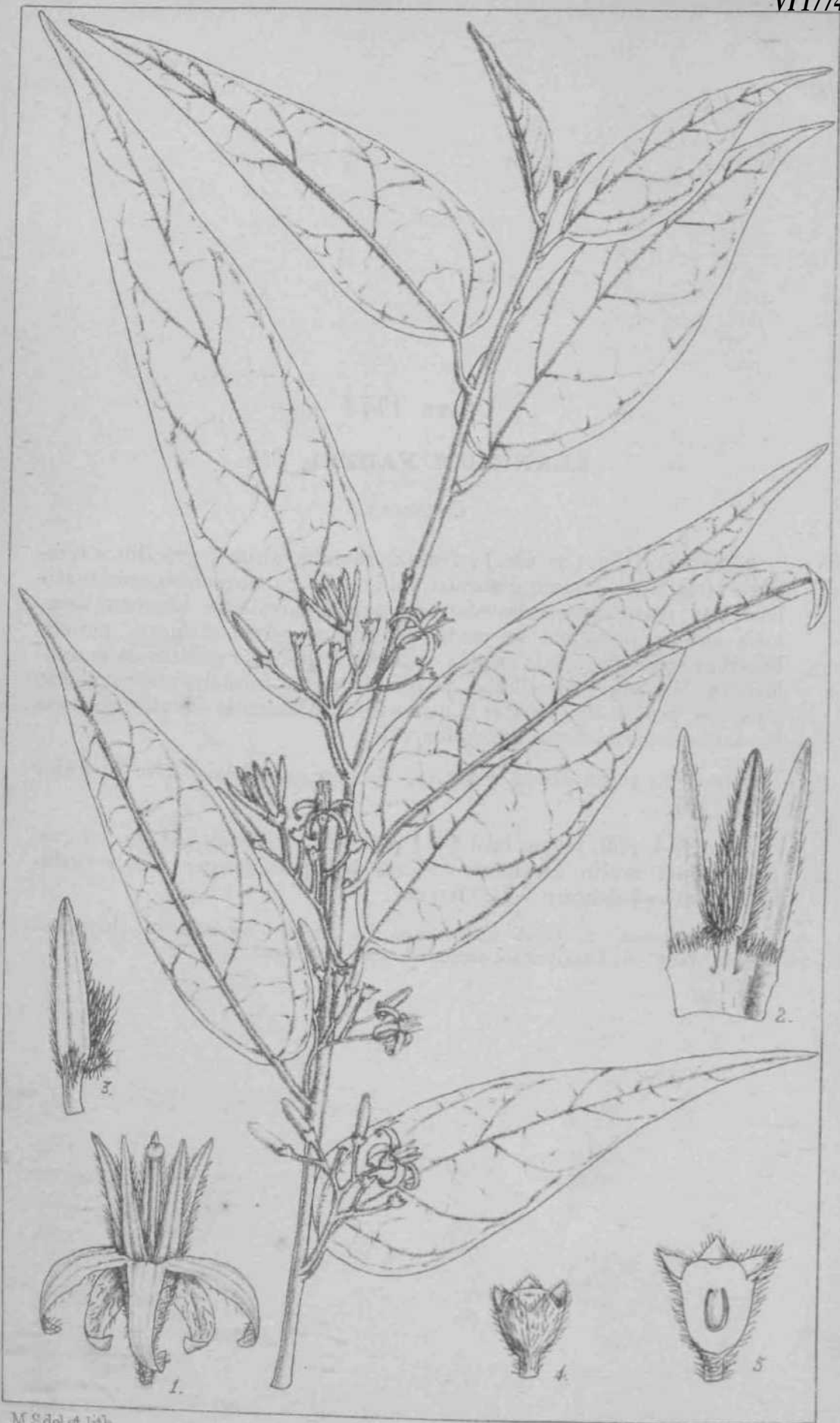
I. angustifolium, *Hackel in A. de Cand. Monogr. Phan.* vol. vi. (*ined*).
 cū mis folisque dense caespitosis basi saepius lana intertexta copiosa
 indutis, foliis superne anguste linearibus striatis marginibus saepius
 arcte involutis facie interiore parce pilosulis glabrativae extus elaber-
 rimis, spicis saepius 2-4-nis exsertis undique (pilis rigidiusculis ad
 basim spicularum dense fasciculatis) fulvo-hirsutis, spiculis s*pius
 bifloris, floresp. §, flore unif. * glumis exterioribus subasquilonis
 7- v. gl. mf. 5-nervis dorso pilis fasciculatis instructis: fl. A s inf
 1-nervis longiuscule aristata, arista terminali gl. sup late ovata
 hyalina apicem versus ciliata; fl. J glumis hyalinis ciliatis, lodiculis
 denticulatis.

HAB. Widely spread in the drier regions of India from the Hima-
 laya and Afghanistan to the Godavery, and eastward to China.
 Variable in height from under 1 foot to 2 or 3 feet; growing in dense
 tufts, usually remarkably invested by a rather loose tawny, cottony
 indumentum at the base of each tuft. It is used for rope-making by
 the natives, and has a probable future as a substitute for Esparto and
 Alfa in paper-making. A full account of its introduction as an
 economic product, with native names and various botanical identifica-
 tions, is given by Mr. Thiselton Dyer in the 'Journal of the Linnean
 Society,' xx. p. 409. It is also referred to in the Kew Reports, 1878
 p. 45, under the name of *Eriophorum comosum*; and 1879, p. 36, under
Spodiopogon angustifolius. Mr. Gamble informs me that it is culti-
 vated in small patches by the Sonthals in the Rajznehil Hills.

I prefer to adopt the name under which this Grass will appear in
 Herr E. Hackel's monograph. As he kindly points out to me, it does
 not fall well into any established genus, and to refer it to *Ischæmum*
 does least violence to accepted formulas. Herr Hackel has favoured
 me with the following synonymy: *Andropogon binatus*, Retz.
 (*specimen macrum, spiculis unifloris*); *Spodiopogon angustifolius*
Trin.; *Andropogon Notopogon, Nees*; *Spodiopogon laniger, Nees*;
Andropogon involutus, Steud.; *A. obvallatus, Steud.*; *Pollinia criopoda,*
Ilance. —D. OLIVER.

Our figure represents a specimen in which the leaves are nearly flat.
 It usually occurs with the margins closely involute.

Fig. 1. Portion of spike. 2. Spikelct. 3. Palea of ♂ flower. 4. Staminate floret.
 5. Lodicules. 6. Pistil. *Enlarged.*



M. S. Adel et lith.

Alangium Faberi, Oliv.

PLATE 1774.

ALANGIUM FABERI, *Oliv.*

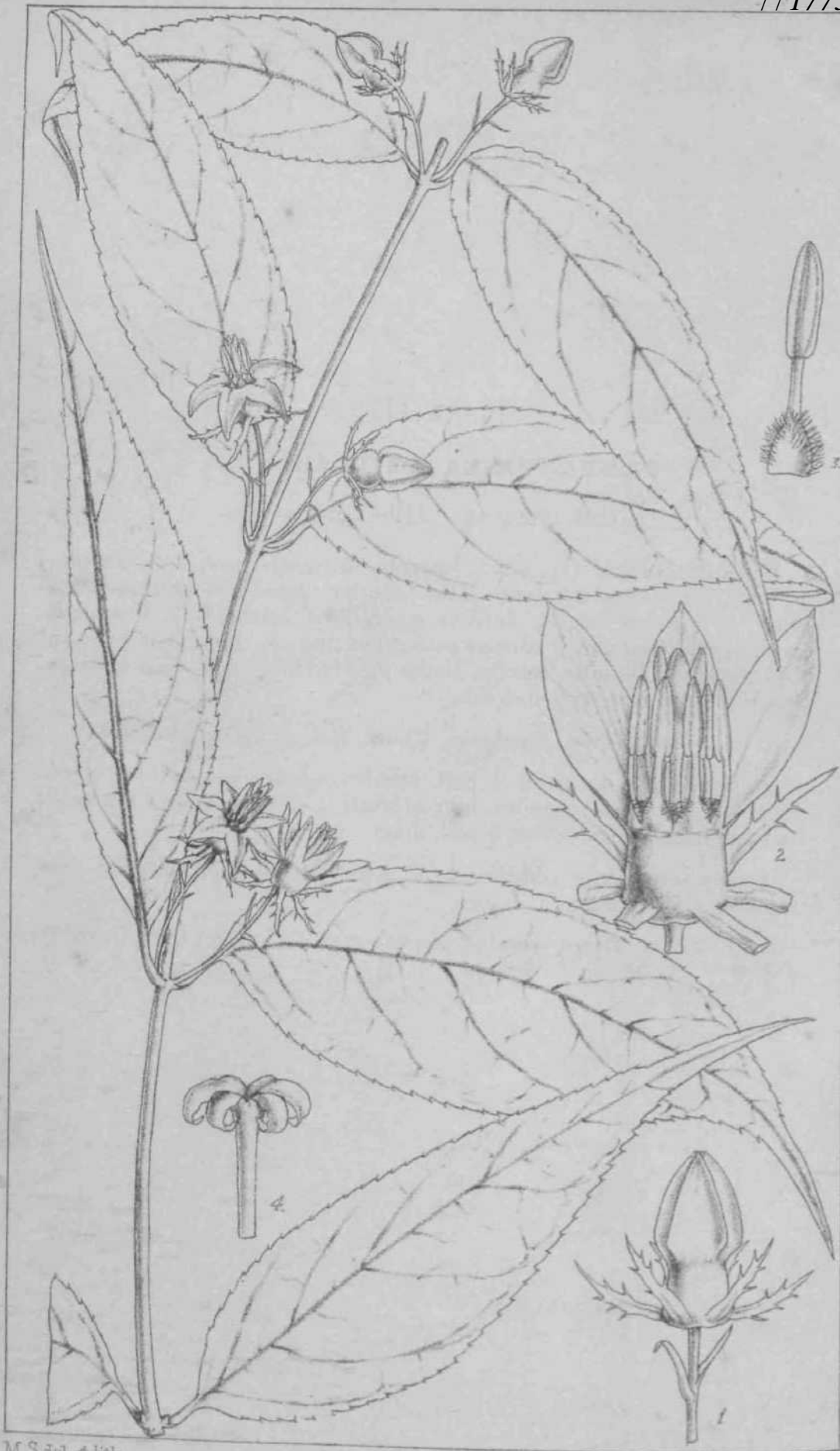
CORNACE-B.

A. Faberi, *Oliv. (sp. nov.)*; frutex, ramulis ultimis gracilibus tere-
tibas strigillosis demura glabratis, foliis oblongo-lanceolatis acuminatis
basi late rotundatis subcordatisve, supra parcissime adpresse seta-
losis subtus preecipue in costa venulisque parce strigosis, petiolis
brevibus strigosis, cymis sespius 5-10-floris breviter pedunculatis axil-
laribus, floribus pedicellatis, pedicellis rectis cum calyce turbinato
strigosis, petalis basi leviter coherentibus, filamentis adnatis, antheris
linearibus inferoe dense setoso-bispidis.

HAB. On rocks above Fn city, Szechwan, China, *Rev. E. Fdber*
(No. 110).

Folia 3-4 poll, longa, basi $\frac{1}{2}$ - $\frac{1}{3}$ poll, lata; petiolus 1-6 lin. longus.
Gymm folio multo breviores. *Flores* $\frac{1}{2}$ - $\frac{1}{3}$ poll, longi. *Calyx* turbi-
natus, limbo 5-dentato.—D. OLIVER.

Fig. 1. Flower. 2. Petals and stamen. 3. Stamen reversed, 4. Calyx and
inferior ovary. 5. Longitudinal section of same. *Enlarged*,



M. S. del. et lith.

Campanumæa axillaris, Oliv

PLATE 1775.

CAMPANUMCEA AXILLARIS, *Oliv.*

CAMPANULACEAE Tribe CAMPANULEJE

C. axillaris, *Oliv.* (sp. nov.); ramulis elongatis gracilibus teretibus glabris, foliis oppositis lanceolatis tenuiter acuminatis serrulatis basi plus minus rotundatis, floribus axillaribus solitariis pedunculatis, calycis lobis basi ovarii adnatis patentibus anguste linearibus utrinque 1-4-pinnatim dentatis, corollae limbo profunde 5-6-fido lobis oblongo-lanceolatis acutis, stylo 5-6-fido.

HAB. Mount Omei, Szechwan, China, *Rev. E. Faber* (No. 253).

Folia 3-4 poll, longa, c. 1 poll, lata, membranacea; *petiolus* $\frac{1}{2}$ poll, longus. *Pedunculi* graciles bibracteolati $\frac{1}{2}$ - $\frac{3}{4}$ poll, longi, bracteolis anguste linearibus. *Flores* $\frac{1}{2}$ poll. diam.

A very interesting addition to a genus of peculiar morphological interest.—D. OLIVER.

Fig. 1. Bud. 2. Flower expanded, part of corolla and calyx-segments removed. 3. Stamen. 4. Style. *Enlarged.*

4



MS del. rtilh.

Stichoneuron membranaceum, Hk. J.

STICHONEURON MEMBRANACEUM.

ROXBURGHIACE*!.

Stichoneuron, *Hook. l. in Benth. fy HooJc. f. Gen. Plant* v. iii. p. 747.

S. membranaceum, *Jlook.f. sp. nov.* (sp. nica).—*Wall. Cat* 9110, absque nomine.

HAD. Silhet and the Khasia hills in Eastern Bengal; DE SILYA (*Wallich*), *Griffith*, J. D. H. and T. T.

Herba v. suffrutex glaberrima, 2-3-pedalis, superne ramosa; rhizomate brevi, nodoso; cauli gracili nodoso, tereti; ramulis gracilibus patenti-decurvis, obscure puberulis, basi foliolo parvo lanceolato vaginante instructis. *Folia* 3-5-j-pollicaria, alterna, subdisticha, breviter petiolata, tenuiter membranacea, oblongo- v. ovato-lanceolata, acuminata, basi 3-nervia, deinde pinnatim paucinervia, nervulis transversis parallelis creberrimis tenuissimis; petiolo ^-poll. longo. *Peduneuli* axillares, solitarii, stricti, rigiduli, 1-1^ poll, longi. *Flore*s ad apicem peduneuli numerosi, minimi, pedicellati, subumbellatimconferti, erecti; umbellula bractea parva lanceolata instructa; pedicellis £-£- poll, longis, rigidis, inaequilongis, basi bracteolatis, bracteolis setaceis. *Perianthium* pedicello articulatum, ovario obconico adnatum, subcampanulatum, 4-fidum; lobi triangulari-ovati, crassi, patentés, valvati. *Stamina* 4, basi loborum affixa, iisque longiora; filamentis crassis; anther© parveo, loculis disoretis basi divergentibus, connectivo obtuso. *Ovarium* semisuperum, 1-loculare, stigmatibus 3 brevissimis obtuse-conicis coronatum; ovula plurima, ab apice ovarii pendula, funiculo brevi, semianatropa.

This remarkable plant has long been known in Herbaria as a standing puzzle. Dr. Thomson and I gathered it abundantly in the Khasia mountains in 1850, when I made the analysis here reproduced, but we failed altogether to refer it to its natural family, inclining, however, to regard it as *Santalaceous*; nor had the many botanists to whom we distributed specimens been able to determine its affinities. It was reserved for Bentham when working up the *Boxburghiaceae* for the 'Genera Plantarum' to detect its alliance to the genus *Croomia* of Torrey and Gray, though whether this justifies both it and *Croomia* being placed in the same family with *Stenibna* (*Roxburghia*, Bank.) may be doubted, differing as both these genera do from *Stemona* so remarkably in habit, perianth, filaments, and pendulous ovules. It is singular that the fruit of *Stichoneuron* has never been gathered, though the attention of collectors in the Khasia hills has been directed to this important desideratum.--J. D. HOOKER.

Fig. 1. Apex of peduncle and flowers. 2. Bud. 3. and 4. Expanded flowprs. 5: Flower with ovary laid open. 6. Apex of Htiunen. 7. Pollen. 8. Ovule, longitudinal section. 9. Ovule. *All much enlarged.*



M.S. del. et lith.

Musa proboscidea, Ohv.

PLATE 1777.

MUSA PROBOSCIDEA, *Oliv.*

SCITAMINEÆ. Tribe MUSEÆ.

M. proboscidea, *Oliv. (sp. nov.); cauloma pluripedale cylindricum* (hand bulboso-dilatatum), foliis ovali-oblongis breviter petiolatis; spadice pendulo longissimo bracteis (fl. $\$$ gerentibus) late ovatis obtusis floribus 2[^]-3-plo longioribus, floribus $\$$ ut videtur biseriatis (circa 18-24 intra bracteas deciduas superiores) perianthii labio superiore subrecurvo brevissimo subreniformi medio abrupte apiculato, seminibus turbinato-obovoideis lateribus irregulariter complanatis laevibus nigris.

HAB. Hills of Ukami, about 100 miles inland to the west of the Island of Zanzibar.—*Sir John Kirk.*

Of this singular Banana we possess only the seeds and photographs, kindly communicated by Sir J. Kirk. The latter show the spadix just beginning to recurve with the young fruits in the axils of the lower bracts, the cylindrical continuation of the axis bearing male flowers emerging, already naked below, from the early fall of the bracts to which the flowers are adnate, the leaves still entire and vigorous; another photograph-shows a more advanced stage, the leaves reduced to pendent shreds, and the axis of the inflorescence reaching to about one-third the height of the stem above the ground, rope-like, cylindrical, marked with the close scars of the fallen bracts, and bearing at the extremity the terminal as yet unfolded bud sheathed in the still-remaining bracts. The only other photograph is of a flower-bearing scale, as represented in the plate. The seeds average about five lines in length and diameter, and are convex, with a minute central depression above, more or less angled from mutual pressure on the sides. They are not so vertically depressed, nor are they tuberc'ed, as in *M. Livingstoniana*, Kirk.—D. OLIVER.

Figs. 1 and 2. Seed. 3. Same (*enlarged*), vertical section.



M.S. del. et lith.

Parnassia Faberi, Oliv

PLATE 1778.

PARNASSIA FABERI, *Oliv.*

SAXIFRAGACEJE Tribe SAXIFRAGES,

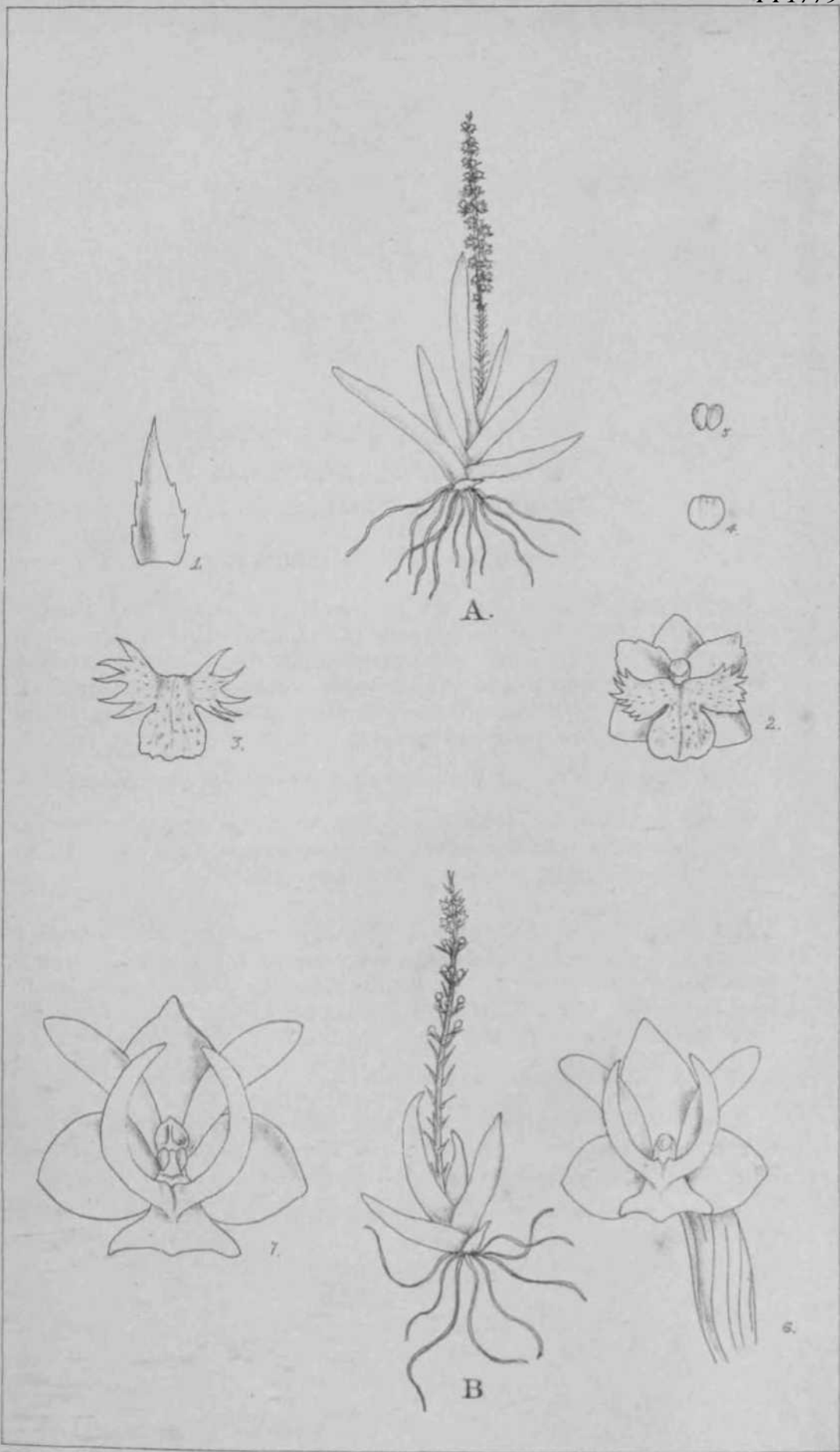
P. (Saxifragastrum) Faberi, Oliv. (sp. nov.); herba parvula caule foliifero sropius abbreviato sed interdum parce ramoso, foliis late obovato-ellipticis obtusissimis basi in petiolum longiufeculum cuneatim desinentibus, scapis gracilibus saepius 1-2 poll.longis bracteam parvara oblongam v. obovatam gerentibus, calycis lobis ellipticis petalis albidis ovato-ellipticis integerrimis basi breviter latiuscule unguiculatis brevioribus, staminodiis simplicibas glandula solitaria terminatis, ovario ovoideo apice angustato, stigmatibus 3 brevibus oblongis recurvis.

HAD. In woods, 4,500 ft., Mount Omei, Prov. Szechwan, China, *Rev. E. Faher* (No. 10).

Folia lamina 3-8 lin. longa. *Fbres* £ poll. diam.

Alternating with the calyx-lobes on the outside are, at least in some cases, minute solitary glands. I have not seen these so long and slender as represented in fig. 1.—D. OLIVEK.

Fig. 1. Bud. 2. Expanded flower. 3. Stamen, back and front. 4. Staminode. 5. Ovary. 6. Transverse section of same. *All enlarged.*



M.S. del, et lith.

A. *Oberonia clarkeri*, Hk.f.

B. _____ *tenuis*, Lindl.

PLATE 1779.

A. **OBEBONIA CLARKEI**, *Hook.f.*

B. **OBEBONIA TENUIS**, *Lindl*

ORCHIDEA. Tribe MALAXIDEE.

O. **Clarkei**, *Hook. f. (sp. nov.)*; parvula, foliis brevibus linear-ensiformibus, scapo brevi multibracteato, spica gracili, floribus minutis verticillatis, bracteis flores sessilibus aequantibus ovato-lanceolatis dentatis, petalis late ovatis obtusis sepala consimilia subaequantibus, labello trilobo, lobis lateralibus latis pectinatim dentatis, terminali parvo subquadrato truncato

HAB. KHASIA MTS. ; at Shillong, alt. 5,000 *ft.*—*O. B. Clarke.*

Planta 2-pollicaris. *Folia* 1 poll, lata, striata, obtusa v. subacuta. *Bractea* basi folio supremo adnata; spicae rachis filiformis. *Flores* pedicellatae, ad 1 poll, lata, labello sepala subaequante.

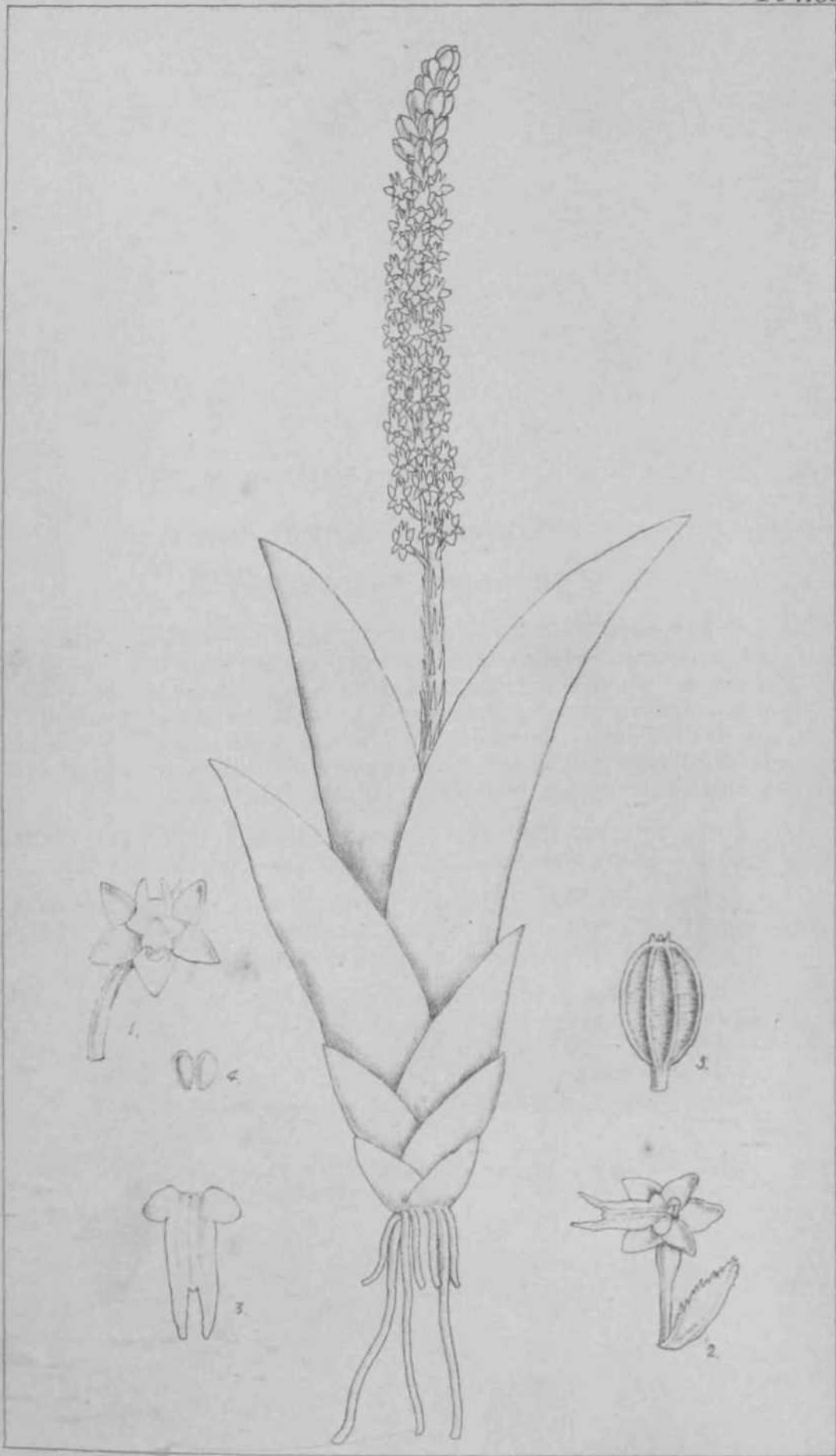
O. **tenuis**, *Lindl. Fol. Orchid. No. 16*; parvula, foliis brevibus linear-oblongis, scapo multibracteato, bracteis lanceolatis setaceis flores pedicellatos superantibus, petalis linearibus integerrimis, labelli lobis lateralibus erectis linearibus falcatis petalis aequilongis, terminali brevi dolabriformi.—*Malaxis tenuis*, Reichb. f. in Walp. Ann. vi. 211.

CEYLON ; at Hittawake.—*Thwaites.*

Planta 2-2¹/₂-pollicaris. *Folia* 1-1¹/₂ poll, longa, curvula. *Flores* ochraceo-rubri. *Labelli* lobo terminali a basi angusta abrupte dilatato truncato, obscure sinuato-trilobo.—J. D. HOOKER.

A. O. CLARKEI. Fig. 1. Bract. 2. Flower. 3. Lip. 4. Anther case. 5. Pollinia. *All enlarged.*

B. O. TENUIS. Fig. 6. Flower and lip of ovary. 7. Flower. *Both enlarged.*



M.S. del, et lith.

*Ob*eronia Falconeri*, Hk.f.

PLATE 1780.

OBERONIA FALCONEHI, *Hooker*.

ORCHIDEA. Tribe MALAXIDEA.

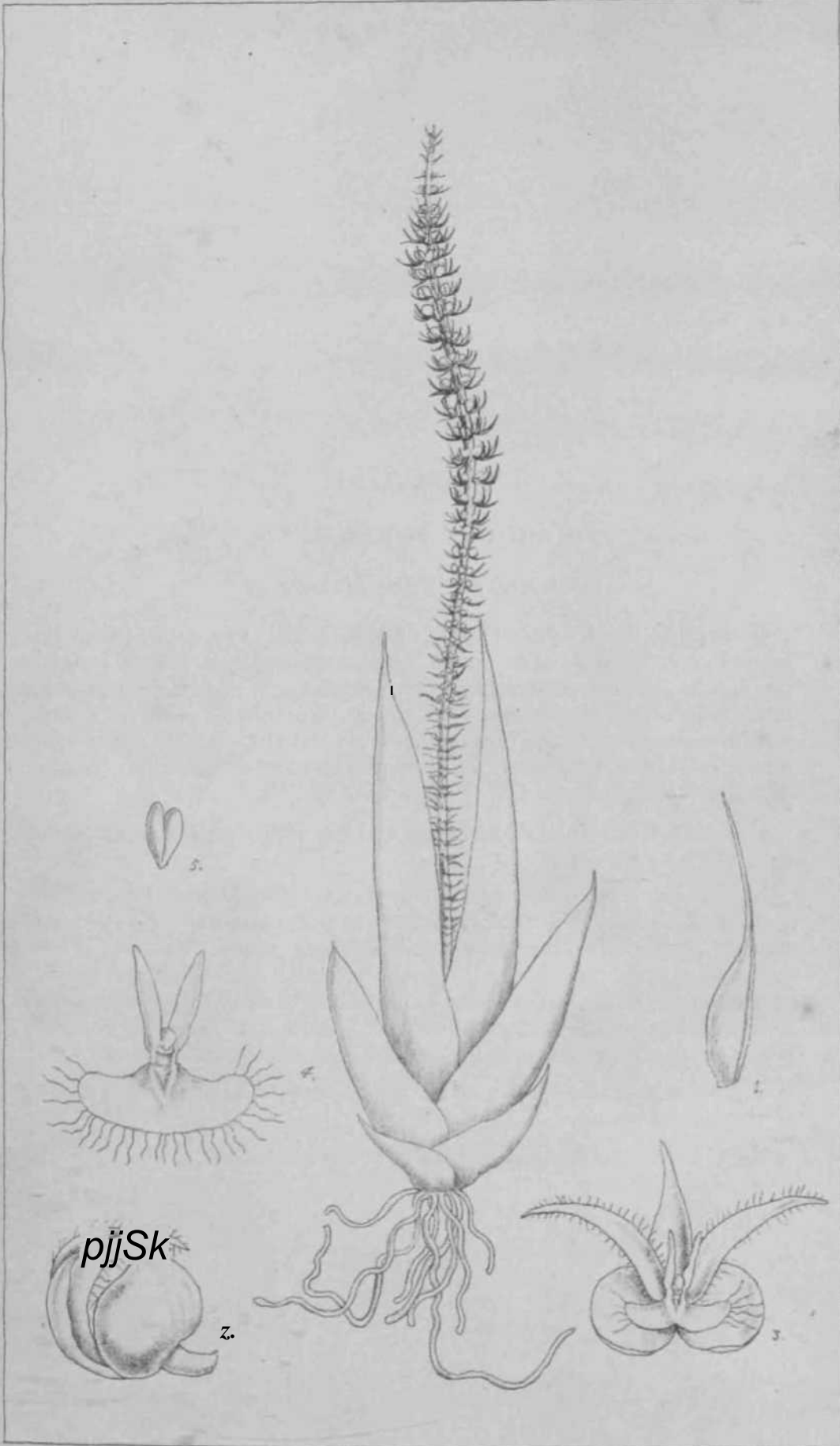
O. Falconeri, *Hooker*. (*sp. nov.*); foliis late ensiformibus acutis sub-falcatis, scapo robusto multibracteato, racemo densifloro erecto v. decurvo, bracteis oblongis serrulatis flores subaequantibus, petalis ovato-oblongis obtusis, labello oblongo v. subquadrato lobis lateralibus parvis rotundatis v. dentiformibus terminali quadrato v. lobis oblongo apice bifido, sinu truncato lobulis angustis parallelis v. incurvis sub-acutis.—*O. iridifolia*, Wall. Cat. 1948, 1 and 3 (*in part*).

HAB. TROPICAL HIMALAYA; Kumaon, *Wallich*, *Falconer*. BEHAR, *J. D. H.* CHOTA NAOPURE, *O. B. O'Wke*. THE CONCAN, *Law*, *Ac.*

Folia coriacea 1-2 poll, longa, 1-1½ poll, lata, inferiora sensim minora. *Scapus* teres foliis brevior; racemus 5-5-pollicaris, rachi valida. *Flores* ad 1½ poll, lati, flavovirides. *Gapsula* alte costata.

The specimens included under Wallich's No. 1948 are so mixed and bad that I am not certain of the identification of all those included under Nos. 1 and 3. The species is allied to *O. pyrulifera*, but is more robust, with shorter, broader leaves and lateral lobes to the lip, the terminal lobules of which are separated by a truncate sinus.—J. D. HOOKER.

Fig. 1. Flower, from Dr. Falconer's specimen. 2. Flower, from Concan specimen*
3. Lip of fig. 2. 4. Pollinia. 5. Capsule. *All enlarged.*



pjjSk

MS.dfli.i3t.lith

Obei'onia Scylla, Lindl.

PLATE 1781.

OBERONIA SCYLLJE, *Lindl*

ORCHIDÆ. Tribe MALAXIDEJ.

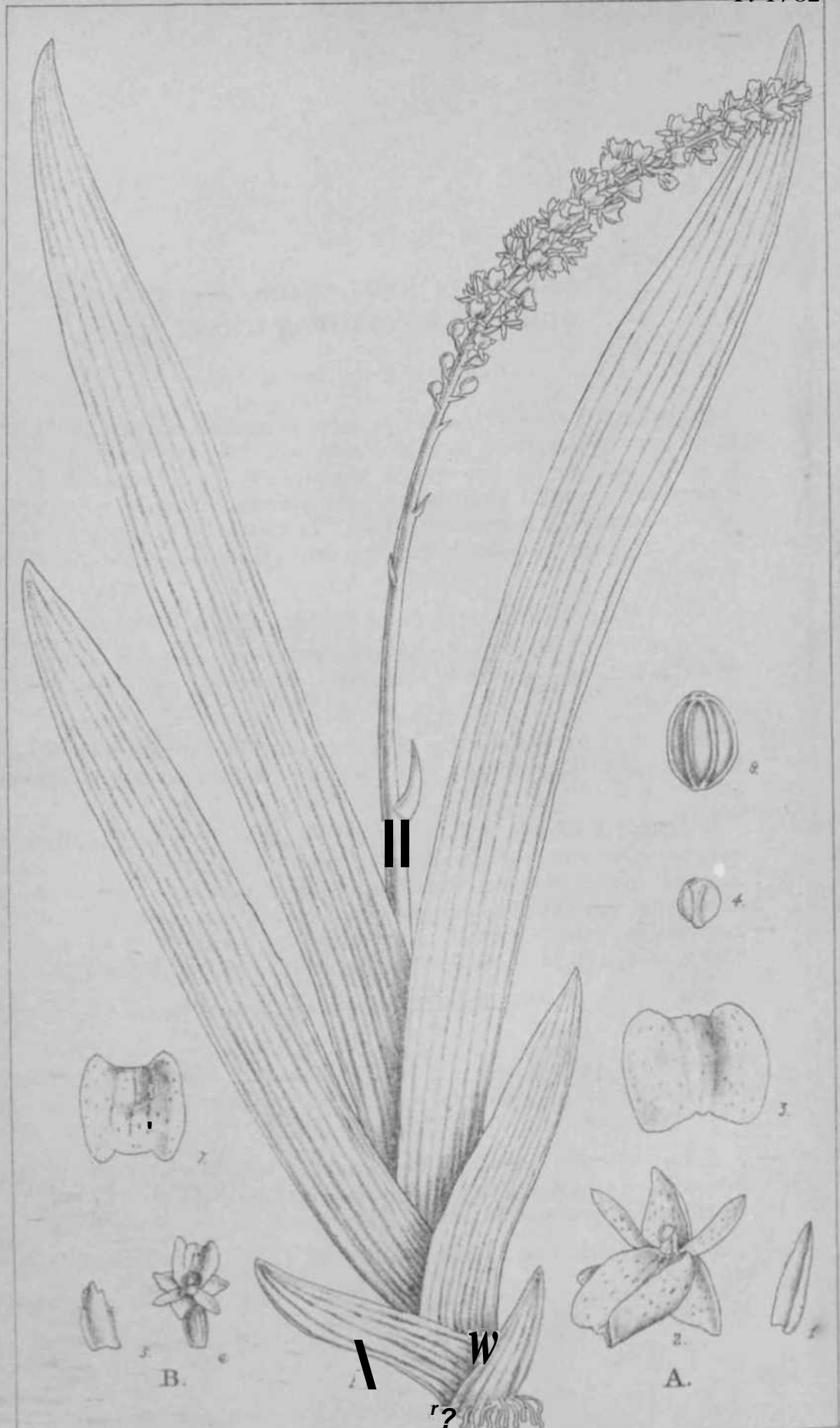
O. *Scylla*, *Lindl Fol. Orchid. Oberon.* No. 28; foliis linearibus lanceolatisve acuminatis scapo squarroso-multibracteato bracteis lanceolatis apicibus setaceis flores verticillatos nou superantibus, sepalis lateralibus maximis orbicularibus, dorsali lariceolato multo majoribus, petalis lineari-lanceolatis falcato-recurvis ciliatis, labelli parvi lobis lateralibus linearibus erectis, terminali lunato integerrimo crinito. *Malaxis ScyllcB*, Reichb. f. in Walp. Ann. vi. 213.

HAB. CEYLON ; in the Maturatte and the Elephant plains, alt. 4,000 to 6,000 ft.—*Thwaites*.

Species omnium quam maxime insignis. *Caulis* perbrevis. *Folia* \-2\ poll, longa, £-J lata, inferiora sensim minora. *Scapus* cum racemo 5-pollicaris, bracteis flaccidis hyalinis patulis crinitus. *Flores* pro genere majusculi, incurvi. *Seyala* lateralia indusium floris bivalve efficientia. *Petala* sepalis multo longiora, alabastro incurva et marginibus sepalorum lateralim apposita. *Labelli* lobi laterales paralleli, petalis multoties minores et breviores, terminalis quasi bialatus.

The most singular species of the genus, unique in the form and size of the lateral sepals.—J. D. HOOKER.

Fig. 1. Bract. 2. Unexpanded flower. 3. Expanded flower, 4. Lip. 5. Foliuia. *All enlarged.*



M.S. del, et lith.

A. *Oberonia zeylanica*, Hk.f.
 B. _____ *forcipata*, Lindl.

PLATE 1782.

A. OBERONIA ZEYLANICA, Hook.f.

B. OBERONIA FORCIPATA, Lindl. var.

ORGHIDEA. Tribe MALAXIDEAE.

O. zeylanica, Hook.f. (*sp. nov.*); foliis elongatis loriformibus obtusis, scapo robusto compresso paucibracteato basi folio parvo adnato, spica subaxiflora, bracteis late ovatis integerrimis flores subsessiles non superantibus, petalis linearibus, labello quadrato integerrimo v. apice late truncato.—*O. Browniana*, Herb. Thwaites (O.P. 3869, in Herb. Hook.), *O. kngibraeteata*, Herb. Thwaites (G.P. 543, in part, in Herb. Hook.).

HAB. CEYLON; at Matelle East, *Beckett*; Hantani, *Thwaites*.

Folia 4-7 poll, longi, f-lata, fere recta. *Scapus* foliis brevior. *Spica* tt-pollicaris, curva v. decurva. *Flores* f-poll, lati, pallidi. *Capsula* sessilis.

I have had great difficulty in segregating the plants included (in the Hookerian Herbarium) by Thwaites under his numbers 3869 and 543.

O. forcipata, Lindl. *Fol. Orchid. Oberon*. No. 7; foliis ensiformibus obtusis y. acutis, scapo subalato, spica elongata gracili decurva, bracteis ovatis dentatis fimbriatis flores minutos sessiles dense imbricates non superantibus, petalis lineari-oblongis, labello quadrato lateribus integris v. dentatis, apice obscure 2-lobis ad angulos sitis v. labello in lobulum forcipatum terminalem contracto.

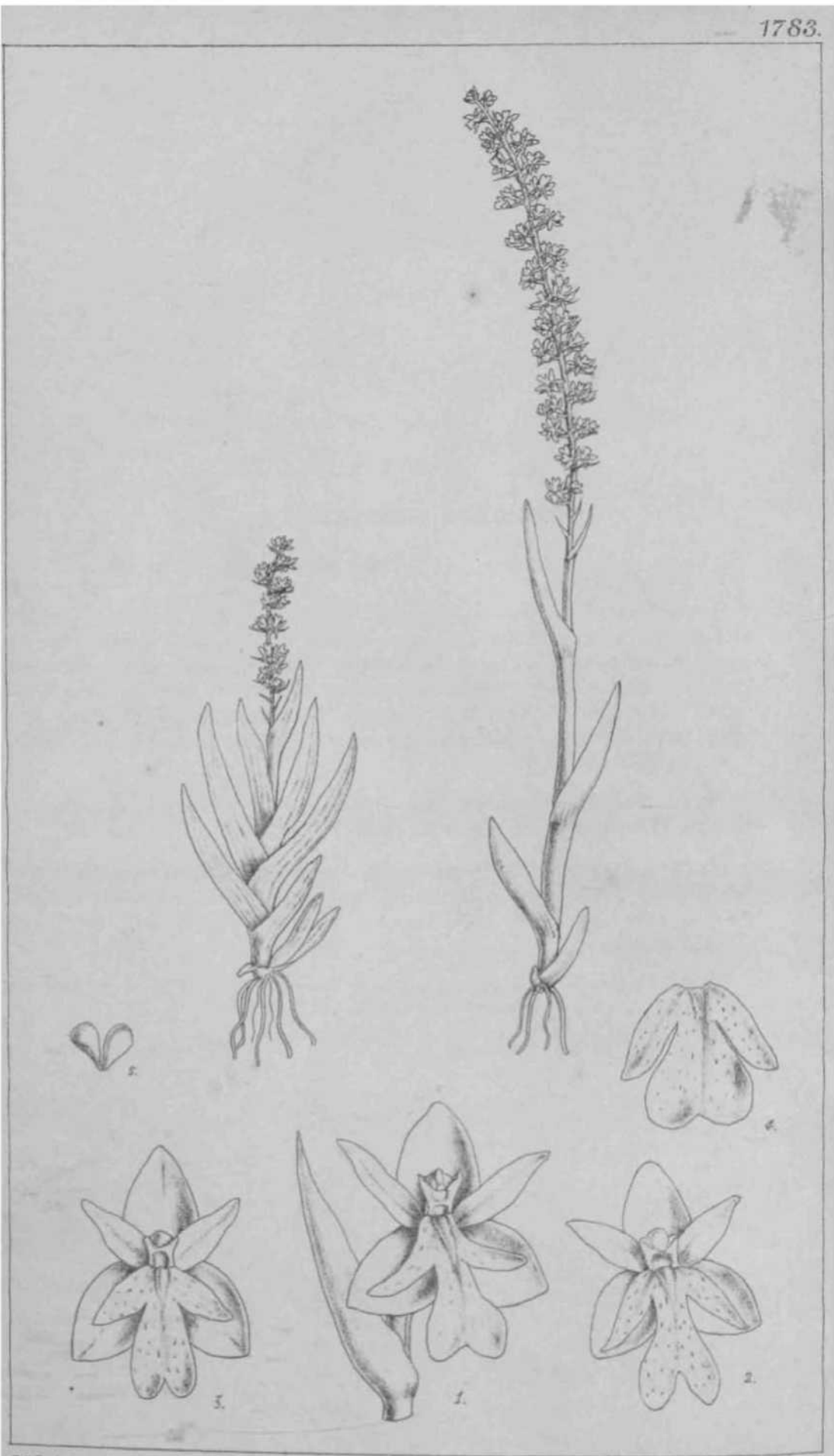
HAB. CEYLON; Peradenya and the Hewahette district, alt. 1,000 to 3,000 ft. *Thwaites*.

Folia 3-8 poll, longa, f-lata, subfalcata. *Scapus* 1-2-pollicaris, folio non adnatus. *Spica* 4-7 poll, longa. *Flores* f-poll, lati, pallidi. *Capsula* sessilis.

A very graceful species. The variety of which the flowers are here figured, and which are from Thwaites, have a lip in no way different from that of *O. zeylanica*.—J. D. HOOKER.

A. O. ZETLANICA. Fig. 1. Bract. 2. Flower. 3. Lip. 4. Anther. 5. Capsule
All enlarged.

B. O. FORCIPATA. Fig. 5. Bract. 6. Flower. 7. Lip of a form of *O. forcipata*.



Ophrys sphegodes Lindl.

PLATE 1783.

OBEEONIA OBCORDATA, *Lindl*

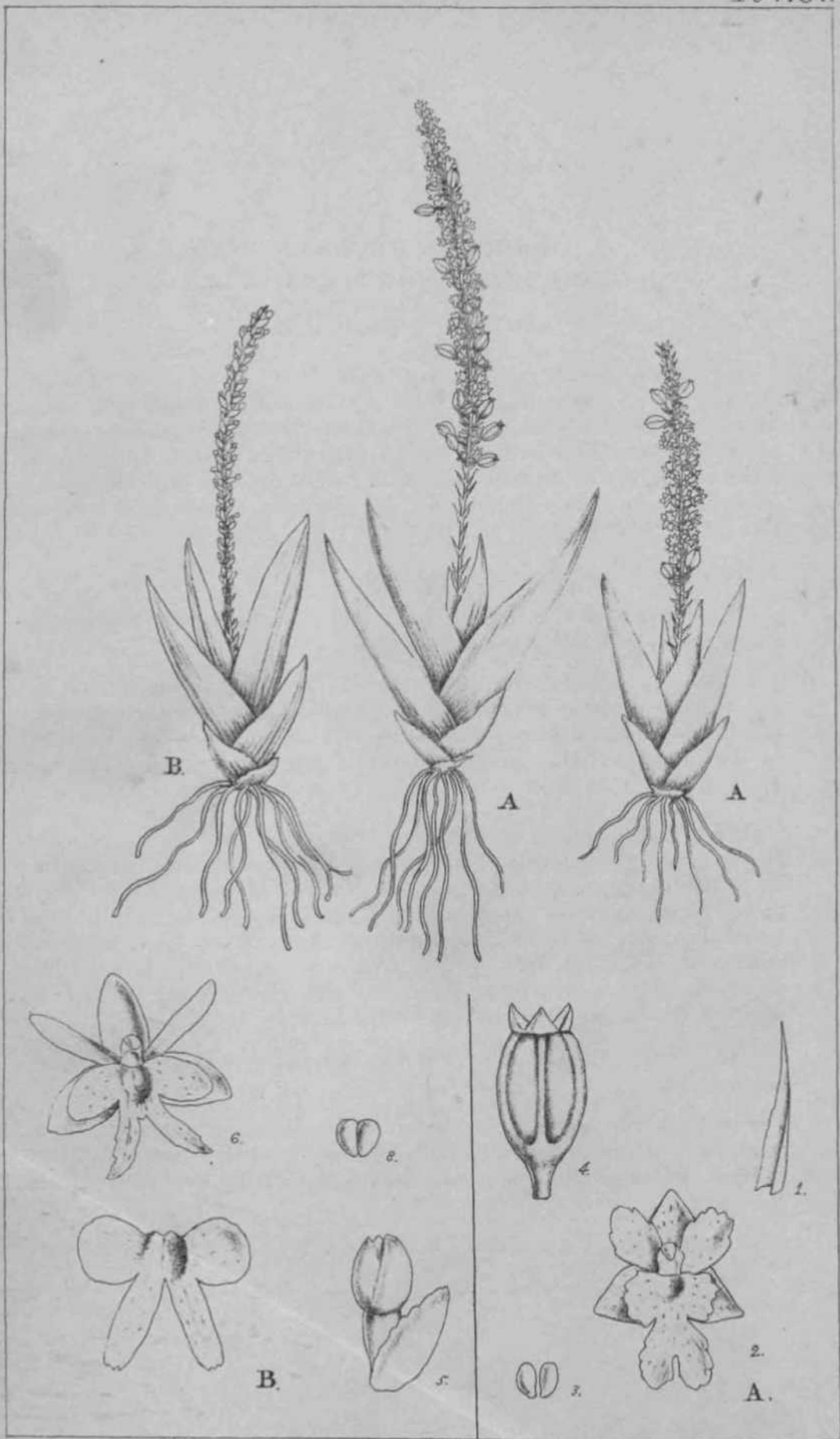
OBCHIDEJ.: Tribe MALAXIDEJE.

O. obcordata, *Lindl. Fol. Orchid. Oleron*. No. 43; caulescens, foliis alternis imbricatis v. sparsis, linearibus v. ensiformibus acutis, racemo brevi v. elongato, bracteis lanceolatis integerrimis flores minutos breviter pedicellatos verticillatos supraorbibus, petalis linearibus lineari-oblongisve, labelli basi angusti lobis lateralibus oblongis obtusis, terminali brevi v. elongato obcordato.—*Malaxis obcordata*, Reichb. f. in Walp. Ann. vi. 216.

HAB. SIKKIM HIMALAYA, alt. 5,000 to 9,000 ft., *C. R. Clarke*. KHASIA MOUNTAINS, alt: 5,000 ft., *Oriji*, &c.

Gaulis 1-4 pollicaris, compressus, brevis v. elongatus, strictus v. flexuosus. *Folia* 1-1^{1/2} poll, longa, plerumque plus minusve falcata. *Scapus* cum spica 2-6 poll, longus. *Flores* 1/2 poll, lati, flavidi.—
J. D. HOOKER.

Fig. 1. Bract scape and flower. 2 and 3. Flower showing varieties in the shape of the lip. 4. Lip of a third form. 5. Pollinia. *All enlarged.*



M.S. del. et lith.

A *O~beronia recurva*.Lmdl.
 B Wighttanajndi, var.

A. OBERONIA RECURVA, *Lindl*
 B. OBERONIA WIGHTIANA, *Lindl., var.*

ORCHIDEJE. Tribe MALAXIDEJE.

O. recurva, *Lindl. in Bot. Reg.* 1839, *Misc.* No. 8; *Fol. Orchid. Oberon.* No. 24; parvula, foliis oblongo-lanceolatis acuminatis, scapo brevi bracteato, racemo gracili densifloro, bracteis lanceolatis Hores pedicellatos non excedentibus, petalis obovatis dentatis, labelli erosi lobis lateralibus rotundatis terminali 2-fido, capsula pedicellata.—*O. setifera*, *Lindl. Fol. Orchid.* No. 11. *Malaxis setifera* and *recurva*, *Reichb. f. in Walp. Ann.* vi. 210, 212.

HAB. THE CONCAN, *Law, Stocks, &c.*

Planta 2-4-pollicaris. *Folia* 1-1½ poll, longa, sicca membranacea. *Flores* ad ½ poll, lati, hyalini, punctati.

I have examined several flowers of Lindley's specimens of his *O. setifera* and many others, and failed to find any with the setaceous petals that he has drawn on the sheet with his specimen and described in the 'Fol. Orchid. '; in all the petals are as represented in Plate 1784 A.—J. D. HOOKER.

O. Wightiana, *Lindl. in Bot. Reg.* 1839, *Misc.* No. 9; *Fol. Orchid. Oberon.* No. 25; parvula, foliis lineari-oblongis ensiformibus acutis; scapo brevi bracteato, racemo gracili, bracteis lanceolatis v. oblongis erosis flores minutos subsequantibus, petalis linearibus, labelli lobis lateralibus magnis rotundatis, terminali 2-cruri, cruribus linearibus subdentatis.—*Wight, Ic.* t. 1627. *O. Arnottiana*, *Wight, Z. c. t.* 1628. *O. stachyoides*, *A. Rich. in Ann. Sc. Nat. Ser. 2, xv.* 15, t. i. A. *Malaxis Wightiana*, *Reichb. f. in Walp. Ann.* vi. 212.

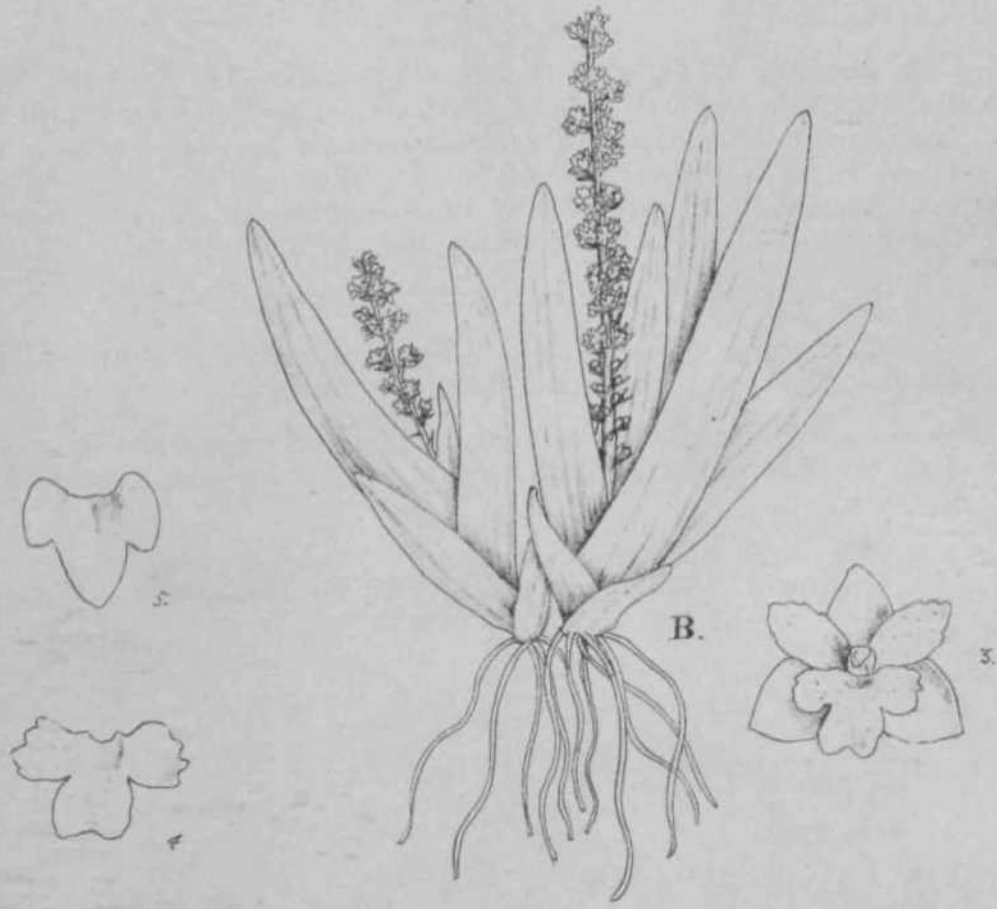
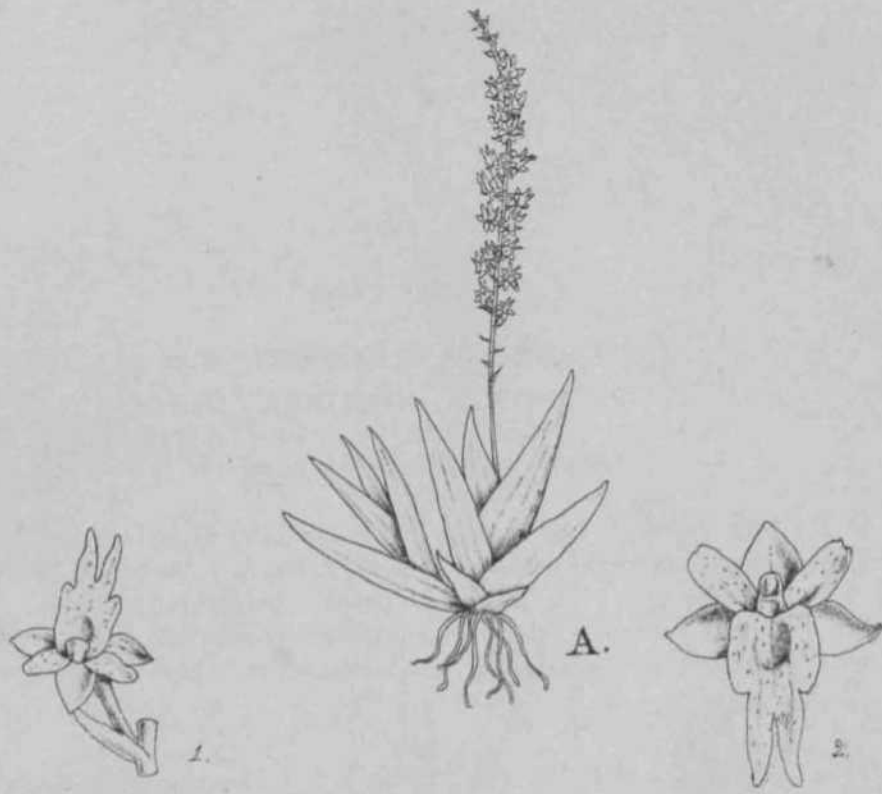
HAB. NILGHIRI and TRAVANCORE MOUNTAINS, *Wight.* CEYLON, *Walker, &c.*

Folia 1-4 poll, longa. *Scapus* cum racemo 3-6-pollicaris, erectus v. decurvus. *Flores* pallidi, -^ ad ^rt poll. lati. *Capsula* longe pedicellata.

Var. bracteis oblongis obtusis crenatis. (Nilghiri hills.)—J. D. HOOKER.

A. *O. RECURVA.* Fig. 1. Bract. 2. Flower. . 3. Pollinia. 4. Capsule. *All enlarged.*

B. *O. WIGHTIANA* var. Fig. 5. Bud and bract. 6. Flower. 7. Lip. 8. Pollinia. *All enlarged.*



M.S.delathlh

A *Oberonia Helfen*, Hk. f.
 B .*demissa*, Lindl.

PLATE 1785.

A. **OBERONIA HELPERI**, *Hook. f.*

B. **OBERONIA DEMISSA**, *Until.*

OBCHIDEJI. Tribe MALAXIDETE.

O. **Helperi**, *Hook. f. (sp. nov.)*; parvula, foliis brevibus ensiformibus acntis membranaceis, scapo filiformi subnudo, bracteis lanceolatis flores minutos non excedentibus, petalis oblongis obtasis, labello sepalis duplo longiore, lobis lateralibus *parvis ad gustus, terminali bicruri cruribus elongatis parallelis acutis v. subacntis.

HAB. TENASSERIM, *Heifer*.

Planta tenera, 3-4-pollicaris. Folia ^-1 pollicaria, sicca translucida. *Bacemii* laxiflorus, erectus v. decurvus. *Flores* hyalini, ad ^ poll, lati, pallidi.

O. *demissa*, *Lindl. Fol. Orchid. Oberon*. No. 18; parvula, foliis lineari-oblongis obtasis submembranaceis, scapo brevi folio supremo basi adnato nudo, spica densiflora, • bracteis brevibus acutis erosis flores minutos subsessiles non excedentibus, petalis late oblongis denticulatis, labello parvo 3-lobo, lobis omnibus subquadratis crenatis. *Malaxis demissa*, Reichb. f. in Walp. Ann. vi. 211.

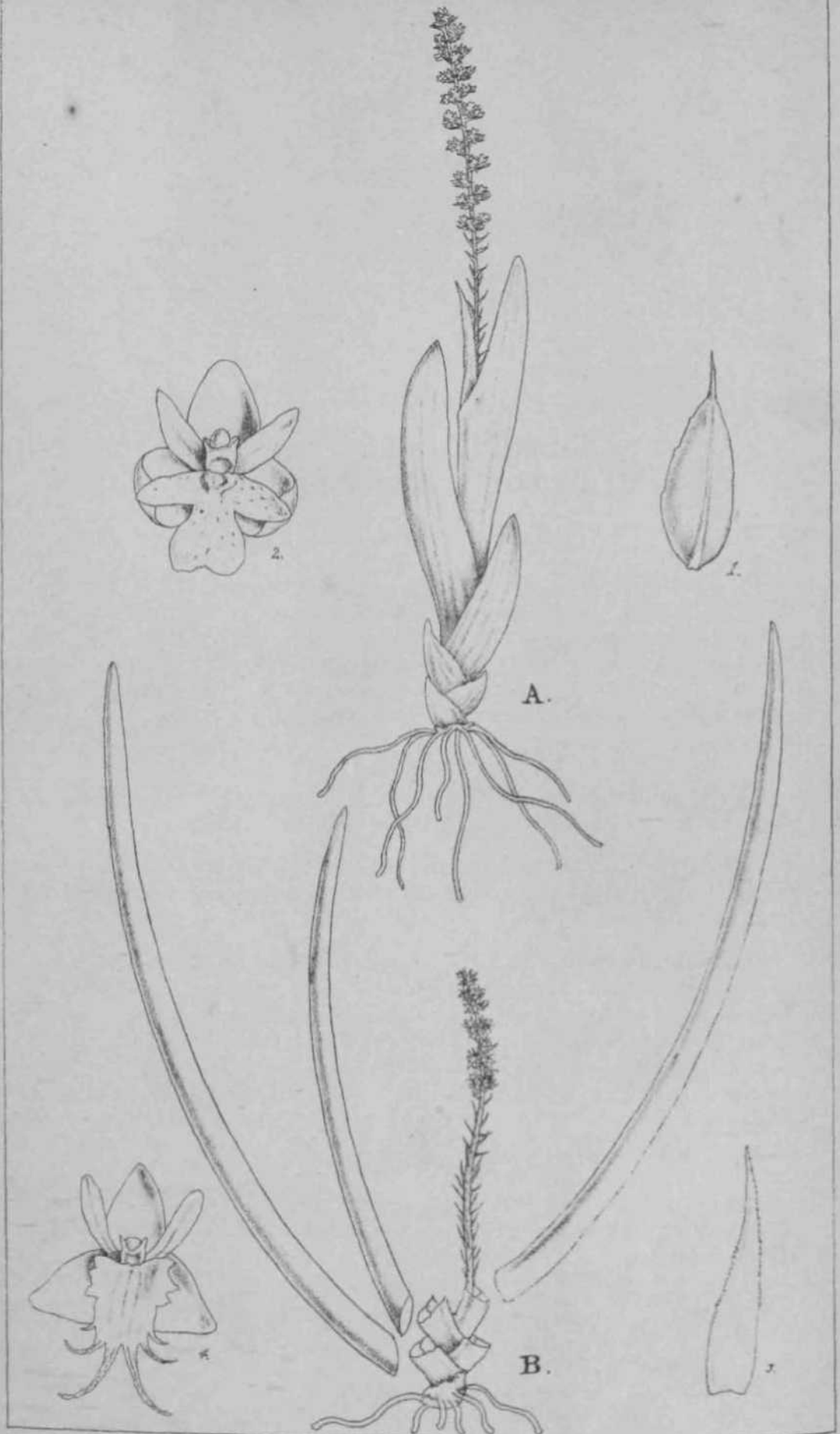
HAB. SIKKIM HIMALAYA; at the foot of the hills, J. D. H.

Folia 2-pollicaria, ^-poll. lata. *Scapus* subrobustus, racemo pallide viridi. *Flores* ad ^ poll, lati, obscure verticillati.

In fig. 5 I have given a copy of Lindley's drawing of the lip, which I do not find to accord with that of his or my own specimens.—
J. D. HOOKER.

A. O. HBLFEM. Fig. 1. Bract and flower. 2. Flower. *Both enlarged.*

B. O. DBMISSA. Fig. 3. Flower. 4. Lip. 5. Lip from DP. Lindley's drawing. *All enlarged.*



M S. del et lith.

A. *Oberonia Treutleri*, Hk C
 B. *Myosurus*, Lindl.

PLATE 1786.

A. OBERONIA TREUTLERI, *Hookf.*

B. OBERONIA MYOSURUS, *Lindl.*

ORCHIDEJE. Tribe MALAXIDEJ.

O. *Treutleri*, *Hookf. f. (sp. nov.)*; subcaulescens, foliis brevibus lineari-oblongis v. oblongo-lanceolatis obtusis, scapo basi folio supremo adnato brevi bracteato, bracteis ovato-lanceolatis acuminatis erosis flores minutos verticillatos vix excedentibus, petalis lineari-oblongis, labello sepalis vix longiore crassiusculo subasqualiter 3-lobo obscure crenato, lobis lateralibus oblongis rotundatisve terminali obcordato.

HAB. SIKKIM HIMALAYA: alt. 6,000 ft., *Dr. Treutler*.

Gaulis subelongatus. *Folia* 1-2 poll, longa, 1-1½ lata. *Scajpus* 1-cum racemo 2-pollicaris. *Flores* ad 1½-poll. lati, pallidi.

Referred by Reichenbach (in *Herb. Kew*) to a variety of *O. obcordata*, possibly rightly, but the leaves are much broader and the bracts are much shorter.—J. D. H.

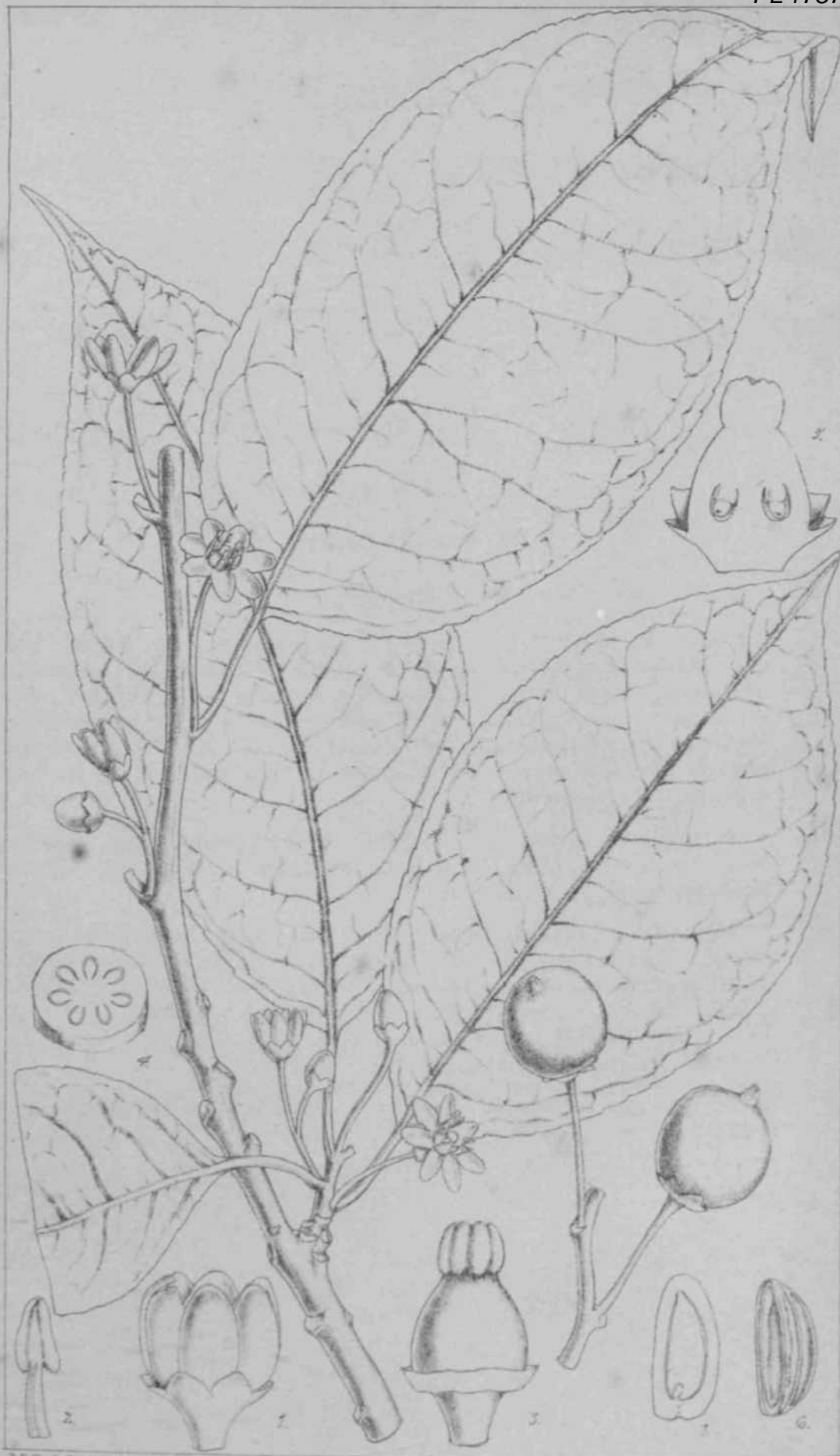
O. *Myosurus*, *Wall Cat.* 1947; *IAndl. Oen. and Sp. Orchid.* 16; *Fol. Orchid. Oheron.* No. 51; acaulis, foliis e vagina brevi teretibus elongatis eubacutis, scapo foliis brevioribus bracteato, spica brevi densiflora, bracteis lanceolatis erosis flores minutos excedentibus, petalis linearibus, labello sepalis longiore cuneato-ovali lobis lateralibus angustis, terminali latiusculo apice caudiculis ad 6 recurvis intermediis elongatis instructo.

HAB. NEPAL, *Wallich*; TBNASSERIM, *Parish*.

I have seen but few specimens, and only one flowering (from Tensasserim), of this singular species, which is said to be a native of the Society Islands.—J. D. HOOKER.

A. *O. TREUTLERI*. Fig. 1. Bract. 2. Flower. *Both enlarged.*

B. *O. MYOSURUS*. Fig. 3. Bract. 4. Flower. *Both enlarged.*



M.S. del et lith.

Ilex macrocarpa, Oliv.

PLATE 1787.

ILEX MACROCABPA, *Oliv.*

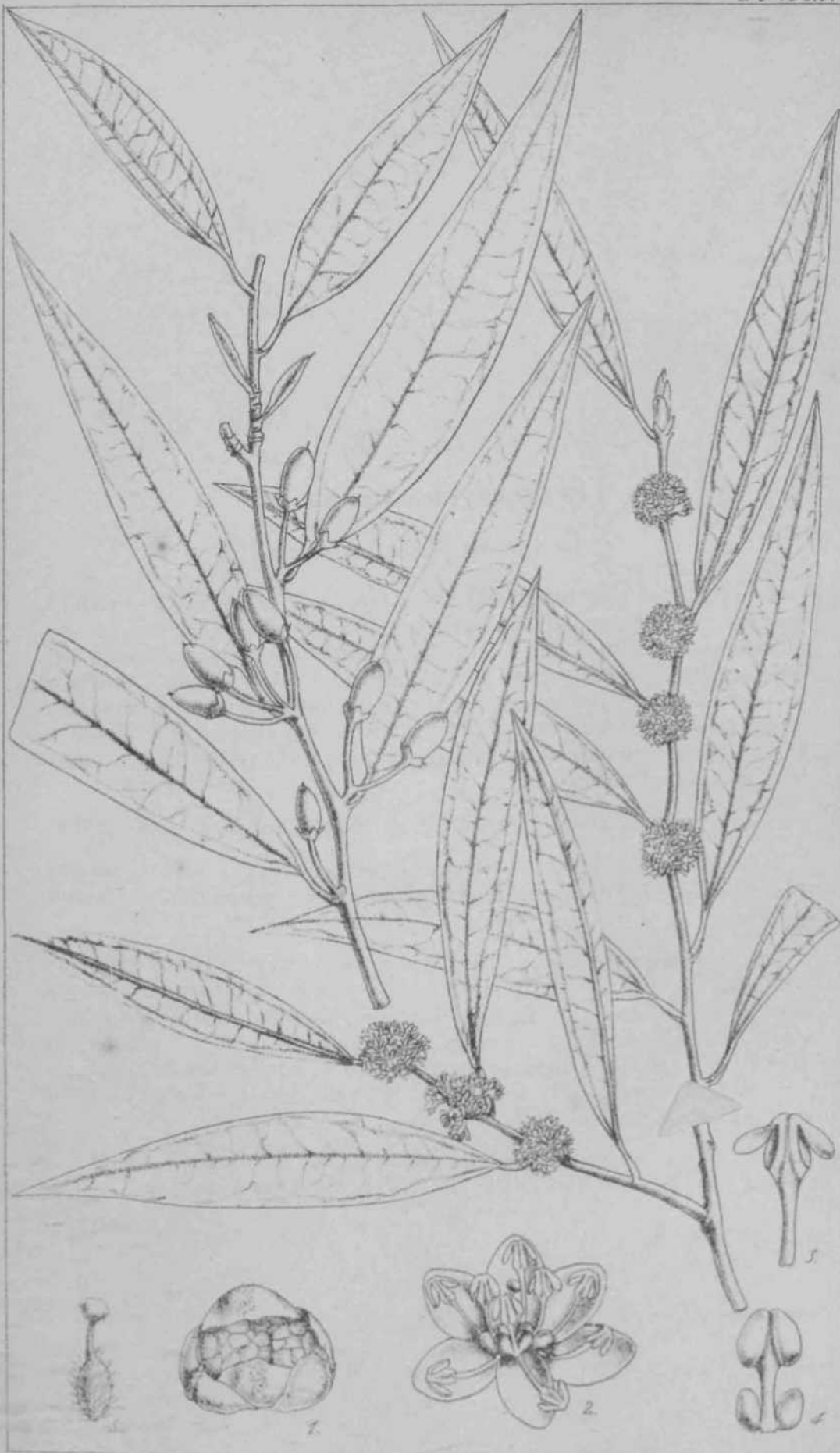
ILICINEJS.

I. **macrocarpa**, *Oliv. (sp. nov.)*; arbuscula glabra, foliis deciduis late ellipticis breviter acuminatis basi rotundatis serrulatis, pedunculis axillaribus petiolo suboblongis uni- v. bi-floris, calyce 6-7-fido IOWB brevibus ovato-rotundatis, corolla alba profunde 6-7-fida calyce 2-3-plolongiore, ovario ovoideo 6-7-loculare, stigmatibus sessilibus sulcatis, drupa globosa stigmate persistente coronata, pyrenis angustis osseis 7-6, dorso saepe tricarinatis.

HAB. China; Prov. Hupeh, ^lens off the Ichang gorge, Nan-t'o Mountains, *Dr. A. Henry* (Nos. 1895, 2981, 3874, 4179, 4633). Prov. Kwangtung, *O. Ford* (No. 289).

Arbuscula 8-10-pedalis v. arbor (Pr. Nan-t'o) 20-50-pedalis, ramis teretibus teribus glabris parce lenticellatis. *Folia* 2[^]-5 poll, longa, 1¹/₂-2¹/₂ poll, lata submembranacea v. tenuiter coriacea; petiolus 1/2 poll, (^-f poll.) longus. *Flores* 1[^] poll- diam.; pedunculi 1[^]-1 poll, fongi. *Fructus* 1[^]/₂ poll. diam. drupaceus nigrescens; pyrenis circ. 7/8-3/4 lin. longis.—D. OLIVER.

Fig. 1. Flower. 2. Stamen. 3. Ovary. 4. Transverse section of same. 5. Longitudinal ditto. 6. Pyrene. 7. Longitudinal section of same. *All enlarged.*



M.S. del. et lith.

Lindera fragrans, Oliv.

PLATE 1738.

LINDERA FRAGRANS, *OU*v,

LAURACE-E. Tribe LITSEAGEJE.

L. (Daphnidium) fragrans, *Oliv. (sp. nov.)*; frutex 3-5-pedalis, ramulis gracilibus. intricatis teretibus uliinis parce appresse sericeo-pilosis mox glabris, foliis anguste ovali-Janceolatis acutissimis basi triplinerviis coriaceis subtus albido-glancis glabris v. primum prsecipue in costa tenuiter appresse pilosulis, floribus axillaribus fasciculatis: fl. *S* fasciculis sessilibus 2-7-floris, floribus breyissime pedicellatis v. subsessilibus, squamis gemmaa cito deciduis, fl. % pedicellis fructiferis fructu ellipsoideo eequilongis.

HAB. Hupqh, Ichang; China, *Dr. A. Eentry* (Nos. 1056,3295,3295a).

Folia 2-3 poll, longa, 5-9 lin. lata; petiolus 1-3 lin. longus. *Pedicelli* floriferi pilosuli. *Bacce* glabrescentes perianthio persistente suffultft.

Of this elegant shrub *Dr. Henry* remarks: 'The leaves are pounded in mills in the glens, and the powder mixed with that got from roots of *Biota* . . . in a similar way; used for making *Joss-sticks*, sticks of incense used in religious worship. It is known as the *Hsiang Yeh tzii*, i.e. "Incense leaves." ' The flowers are fragrant.

I find a small ovule in the fairly well developed ovary of the staminate flowers.—D. OLIVER.

Fig. 1. Buds enclosed by early-deciduous scales. 2. Expanded *i* flower. 3# Stamen. 4. Ditto with basal glands, o. Ovary. *All enlarged.*



M.S. del, et lith

Primula Faberi, Oliv.

PLATE 1789.

PRIMULA FABERI, *Oliv.*

PIUMULACEJE.

P. (Aleuritia) Faberi, Oliv. (sp. nov.); planta glabra, rhizoma breve, foliis ovalibus v. oblanceolato-oblongis acutiusculis basi seepe longe attenuatis remotiuscule denticulatis submembranaceis v. papyraceis concoloribus glaberrimis, scapo erecto foliis 2-3-plo longiore, umbellis 3-8-floris involucre, bracteis involucri herbaceis ovali-vel ovato-oblongis obtusiusculis, pedicellis saepius brevissimis, calyce campanulato glabro ad medium 5-fido lobis ovato-ellipticis subcarinato-costatis obtusiusculis apiculatis corollae tubo brevioribus, corolla flavida tubo ad faucem ampliato lobis adscendentibus ovato-oblongis obtusis integris tubo 3-plo brevioribus.

HAB. China; Szechwan Prov., summit of Mount Omei, *Rev. K. Faber* (No. 325);

Folia 3-4 poll, longa (cum petiolo), 8-10 lin. lata. *Scapus* 6-10 poll, longus erectus. *Flares* fragrantissimi | poll. lodigi, limbo explanato circ. $\frac{1}{2}$ poll. diam.

An interesting addition to the superb series of Chinese Primulas recently discovered by the Abbé Delavay and described by Mons. Franchet, through whose kind offices we are indebted to the Administration of the Muséum d'Histoire Naturelle for a fine set of specimens. Mr. Faber's species catches the eye at first glance by its conspicuous involucre, which almost conceals the calyxes of the shortly pedicellate flowers.—D. OLIVER.

Fig. 1. Calyx. 2. Corolla laid open. 3. Ovary. *Enlarged.*



M.S. del. et lith.

Bauhinia Faberi, Oliv.

PLATE 1790.

BAUHINIA FABEBI, Oliv.

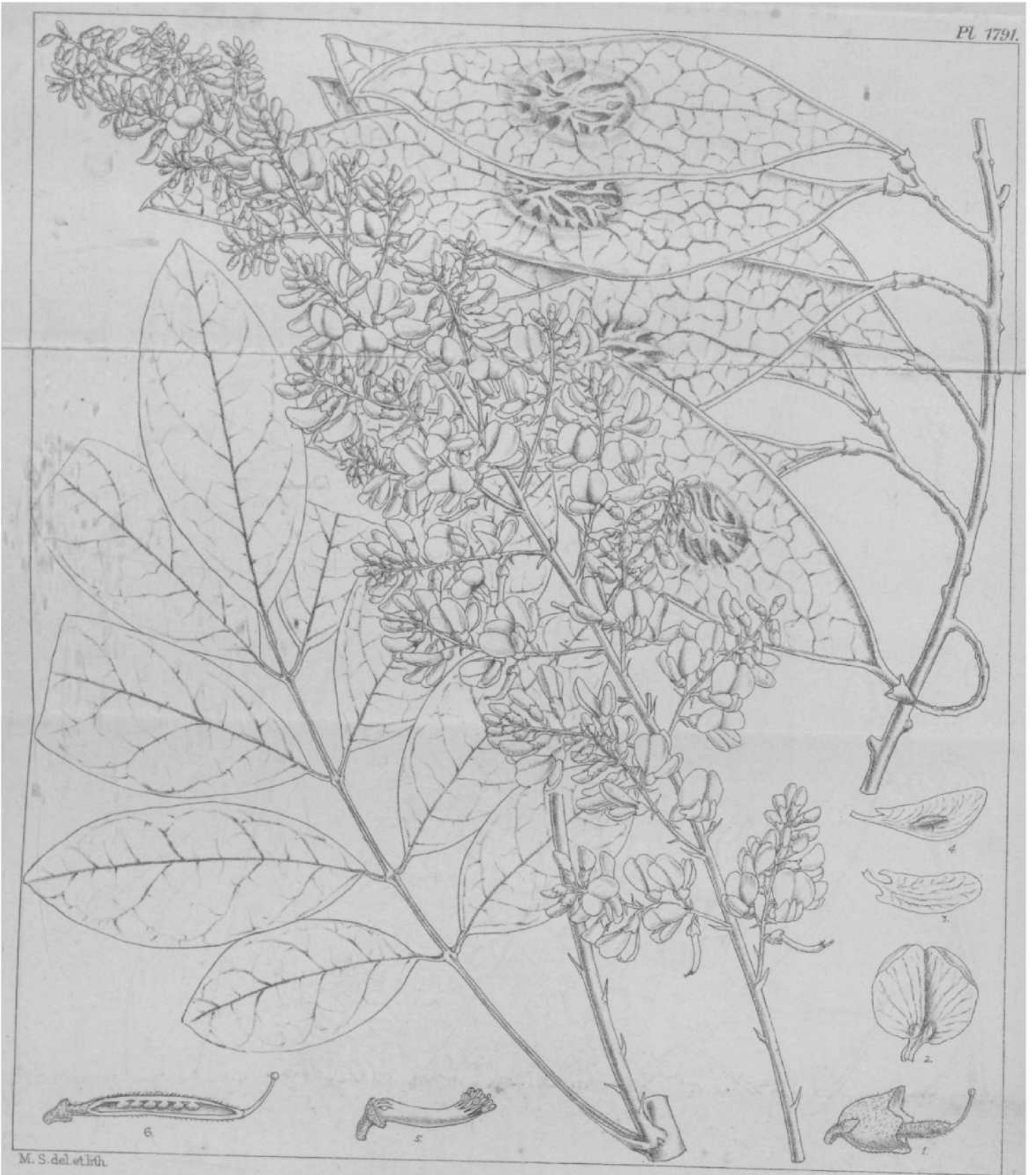
LEGUMINOSJS. Tribe **BAUHINIEE.**

R. (*Pauletia*) Faberi, Oliv. (*sp. nov.*); frutex ramulis gracilibus ultimis nonnunquam angulatis puberulis mox glabratis, foliis rotundatis bifidis lobis obtusis muticis basi cordatis membranaceis supra glabris Rubtus (sub lente) puberulis v. obsolete pubescentibus, stipulis angusto linearibus, racemis plurifloris breviter pedunculatis extra-axillaribus pubescentibus, bracteis squamosis linearibus deciduis, calycis limbo spatulato tubo breviter turbinato 3-4-plo longiore, petalis oblanceolatis unguiculatis, staminibus 10 (9-11) 5 longioribus, ovario tomentosa stipite libero, legumine oblongo apice oblique apiculato basi angustato, valvis coriaceis levibus.

HAB. China; Szechwan, Wushan Gorge, *Rev. E. Faber* (Nos. 760, 761).

Folia 1-3 poll, lata; petiolus 3-8 lin. longus. **Racemi** cum pedunculo f-1 ½ poll, longi. **Flares** 1-1½ poll, longi. **Legumen** 3 poll, longum, 1½ poll, latum.—D. OLIVER.

Fig. 1. Expanded flower. **2.** Calyx-tubo and ovary. **3.** Fragment of valve of legume with seed. *Enlarged.*



Lonchocarpus cyanescens, Benth..

LONCHOCARPUS CYANESCEWS, *Benth.*

LEGUMINOSÆ. Tribe DALBEEQIE^.

L. cyanescens *Benth. in Journ. Linn. Soc. iv. (Suppl.) 96*; arbuscula v. frutex alte scandens, foliolis scepiis 9-13 petiolulatis oblongo-ellipticis v. interdum oblanceolato-oblongis obtusiusculis mucronatis supra glabris subtus minutissime **pobeeentdbas** inconspitue reticulatis, j>aniculis elongatis angustis multifloris pubescentibus folia superantibus, bracteis lanceolato-subulatis decidua, pedicellis brevissimis, calyce tomentello deutibus anticis obtuse deltoideis corolla violacea 3-4-plo brevior, legumine oblongo v. ovali-oblongo basi cuneatim angustato breviter stipitato chartaceo valide rehiclato 1-2 (-5)-spermo.—**Baker** in *Oliv. Flora Tj*p. Africa, ii. 243*; *Robinla cyaiutscem*, *Sebum, et Thonn., Guiti. l'huît. 35 L.*

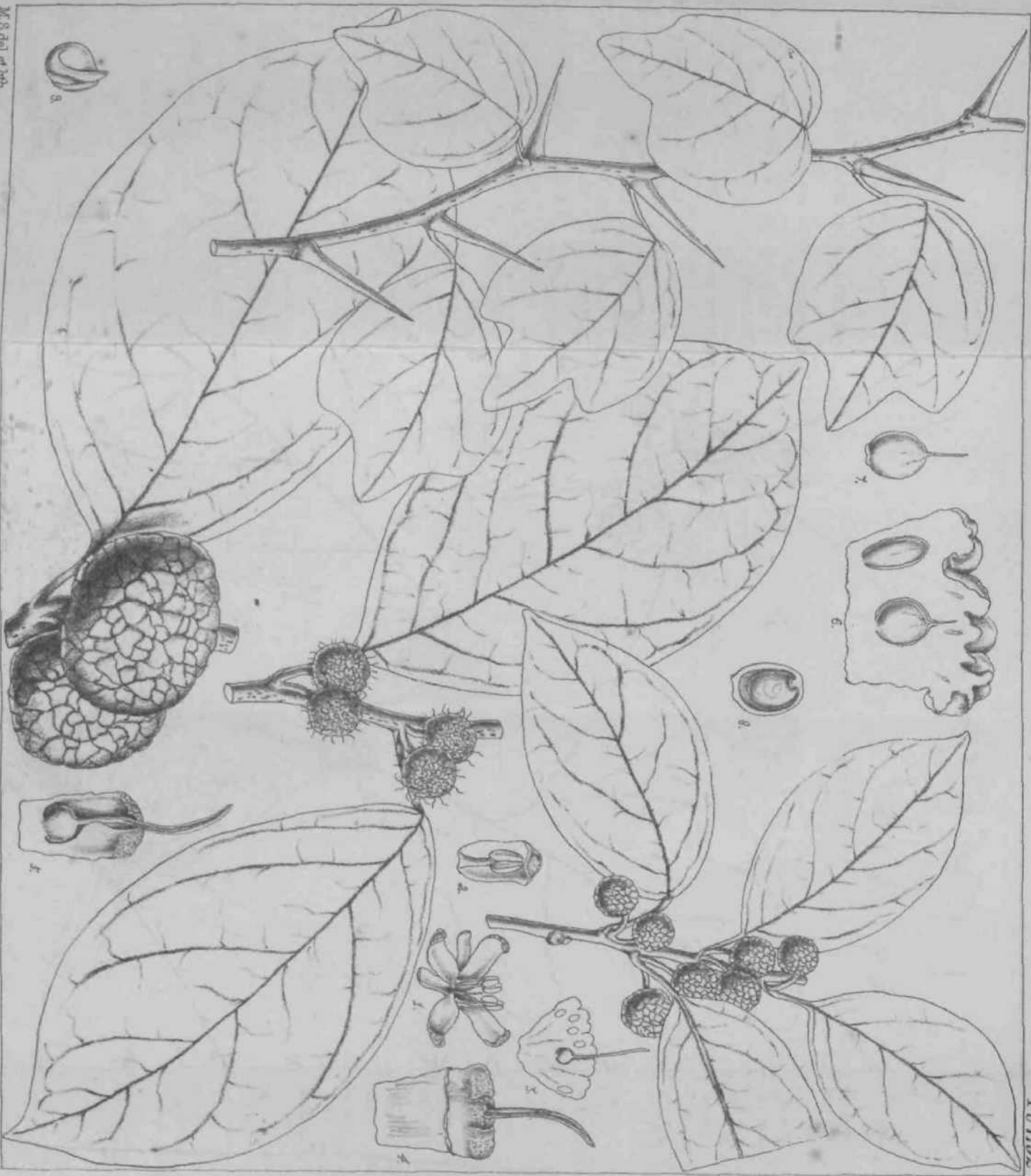
HAB, West Tropical Africa, Niger (Nope), *Barter*; Lagos, *Rev. J. B. Wood*; Fernando Po, *Mann*; Gold Coast, *Capt. Moloiiy*; and perhaps the same from Senegambia and Sierra Leone.

Foliola concolaria scepius 3-5 **poll**, longa, petiolulo | - ^ poll, lon^o. Pantcw^aramuliH (**ateraliboa** ^-2 poll, longis floribundis 'maxillis summis solitariis v. ad apicem rami in paniculam ultrapedalem dispositis.' *Flores* ^-V poll, longi, *Lajumen* 4-8 (-10) poll, longum, 1-1 | poll, latum, ad semina leviter incrassatum et reticalatum.

This species is the Indigo of the Yoruba country, a region north of Abeokuta, and goes by the name of the 'Yoruba Indigo'. Mr. Bentham was the first to identify our plant with Schumacher and Thonning's *Johima*, the specific name of which he of course took up under its present genus. I cannot be quite certain, however, of the identity, S. and T. describing the pods of this **plant** as pubescent, while ours even immature are glabrous, and they omit all reference to the conspicuous reticulation of the pericarp. The late Mr. Barter, nearly thirty years ago, sent leaves to Sir William Hooker with a memorandum attached: 'In cultivation the plant is kept about 7 or 8 feet high . . . being cut close, and it becomes short . . . and bushy. . . . The leaves are gathered young, merely pounded in a mortar, in a black pasty state made into balls . . . for the market. In dyeing, one pint to a gallon of water is used; the cloth allowed to remain four days. Dye is fixed with potash; a fine deep blue, very permanent.' See also Mr. Dyer's **paper** in 'Journ. Linn. Soc.* Bot. vol. xx. p. 404, and 'Kew Bulletin,' 1888, p. 75.

Our figure is from specimens cultivated in Ceylon by Dr. Trimen.—
D. OLIVER.

Fig. 1, Calyx and ovary. 2. \>xi!nm. 'i Ua. I. Cbrid petal. ~i. Stamina!
sho-... 6. Omty, longitudinal section. <<-i-—•



M. S. Dal., det. hbh.

Cudrania triloba, Hance

PLATE 1792.

CUDRANIA TRILOBA, *Hance.*

URTICACEÆ. Tribe ARTOCARPEÆ.

C. triloba, *Hance in Journ. Botany*, vi. (1868), 49; 'arbuscula v. frutex, ramulis foliiferis sœpe spinis axillaribus armatis, foliis late ellipticis v. obovato-ellipticis, breviter et abrupte acuminatis apiculatisve in ramis sterilibus sœpe apice late trilobatis lobo intermedio ovato-deltaideo lateralibus brevibus longiore, supra glabratis subfœcis pallidioribus præcipue in nervis parce pilosula, capitulis 6* et \$ globosis geminatis solitariisve breviter pedunculatis, fructiferis f-£ poll, diam., pericarpio ellipsoideo lenticulari-compresso crustaceo nitente.—*Cudrania tricuspidata*, *Bur. in Lav. Arb. Segrez. 243*; *Madura tricuspidata*, *Carr. in Rev. Hort.* 1864, 390, fig. 37 and 1872, 56, fig. 7; *Nichol. Diet. Gard.* ii. 312-3 with figures.

HAB. China, Shantung, *Rev. J. Graves*; Kiangsu, Shanghai, *Carles*; Chekiang, Ningpo district, *Consul Cooper, Bev. E. Faber*; Hupeh, Ichang-, and Nan-t'o, *Dr. A. Henry*; Kiangsi, *David*; Kwangtung, West River, *C. Ford*; Hooper Island, Corean Archipelago, *Oldham*.

Folia (integra) 2[^]—H poll, longa, 1[^]-2J lata; *petiolus* £-1 poll, longus. *Capitula* florifera \$ \ poll. diam.; *pedunculus* tomentellus \ poll, longus; *perianth* ii segmentis truncatis apice incrassatis inflexis. *Capitula* % ½ poll. diam.; brevissime pedunculata, stylis exsertis anguste subulatis. *Pericarpium* 2% lin. longum.

This is the 'Silkworm Thorn,' known in China as the 'Tsa*' tree (*Dr. Henry*, to whom we are indebted for a fine series of specimens). It is evidently of wide distribution in China. *Dr. Henry* says it is common about Ichang, where * it is considered to be as good for silkworms as the mulberry, but is not used so long as mulberry leaves can be got, because the tree is thorny and it is troublesome to pick off the leaves. It is hence given chiefly to adult silkworms, and, as mulberry leaves soon become finished, it is much used.' The tree attains a height of about 20 feet. The leafy shoots, probably more especially from near the base, are often armed with strong, stout, straight-pointed axillary spines.—D. OLIVER.

Fig. 1. Staminate flower. 2. Stamen and subtending perianth-segment. 3. Pistillate flower, immersed in its capitulum. 4. Single \$ flower removed. 5. Same in section. 6. Portion of fruiting capitulum. 7. Fruit and stylo-base. 8. Fruit laid open. 9. Kmhryo. *Enlarged.*



M.S. dal. et lith

Catostemma fragrans, Benth.

PLATE 1793.

CATOSTEMMA FBAGBANS, *Bentli.*

Genus Anomalum: MYRTACEAE ?

C. fragrans, *Benth. in Hook Lond. Journ.*, ii. 365, species unica.

HAB. Banks of rivers, British Guiana, *Schamburg* 280; Lower Demerara river, *Jenman*, 4336. Native name *Bauranmalli*.

Arbw 50-pedalis. *Folia* alterna, obovato-oblonga, obtusa, petiolata, rigide coriacea, 3-4 poll, longa, venis faciei inferioris ad marginem productis arcuatis parallelis valde exsculptis. *Flares* laterales dense fasciculati, longe pedicellati, bracteis basalibus parvis, ovatis, squamæformibus. *Calyx* tubo campanulato, segmentis ovatis. *Petala* alba, oblonga, post anthesin patula. *Stamina* perplurima perigyna, filamentis elongatis, antheris reniformibus, quasi unilocularibus. *Ovarium* liberum, ampulteforme, triloculare, stylo subulato sursum bifurcate. *Fructus* ignotus.

This curious plant, which was discovered by Schomburgk fifty years ago, has never been refound till now by Mr. G. S. Jenman. It has the habit of *Psidium*, but is totally different in structure, and seems to form a connecting link between *Myrtacea* and *Ternstroemia-cece*. See * Gen. Plantarum,' i. 724, for detailed description of the genus.—J. G. BAKER.

Fig. 1. Bud. 2. Stellate hairs of calyx. 3. Stamens. 4. Pistil. 5. Transverse section of ovary. *Enlarged.*



M.S. del., et lith.

Alexa Imperatricis, Baker.

PLATE 1794.

ALEXA IMPERATRICIS, *Baker*.

LEGUMINOS^A. Tribe SOPHOREJ.

A. Imperatricis, *Baker* (species nica).

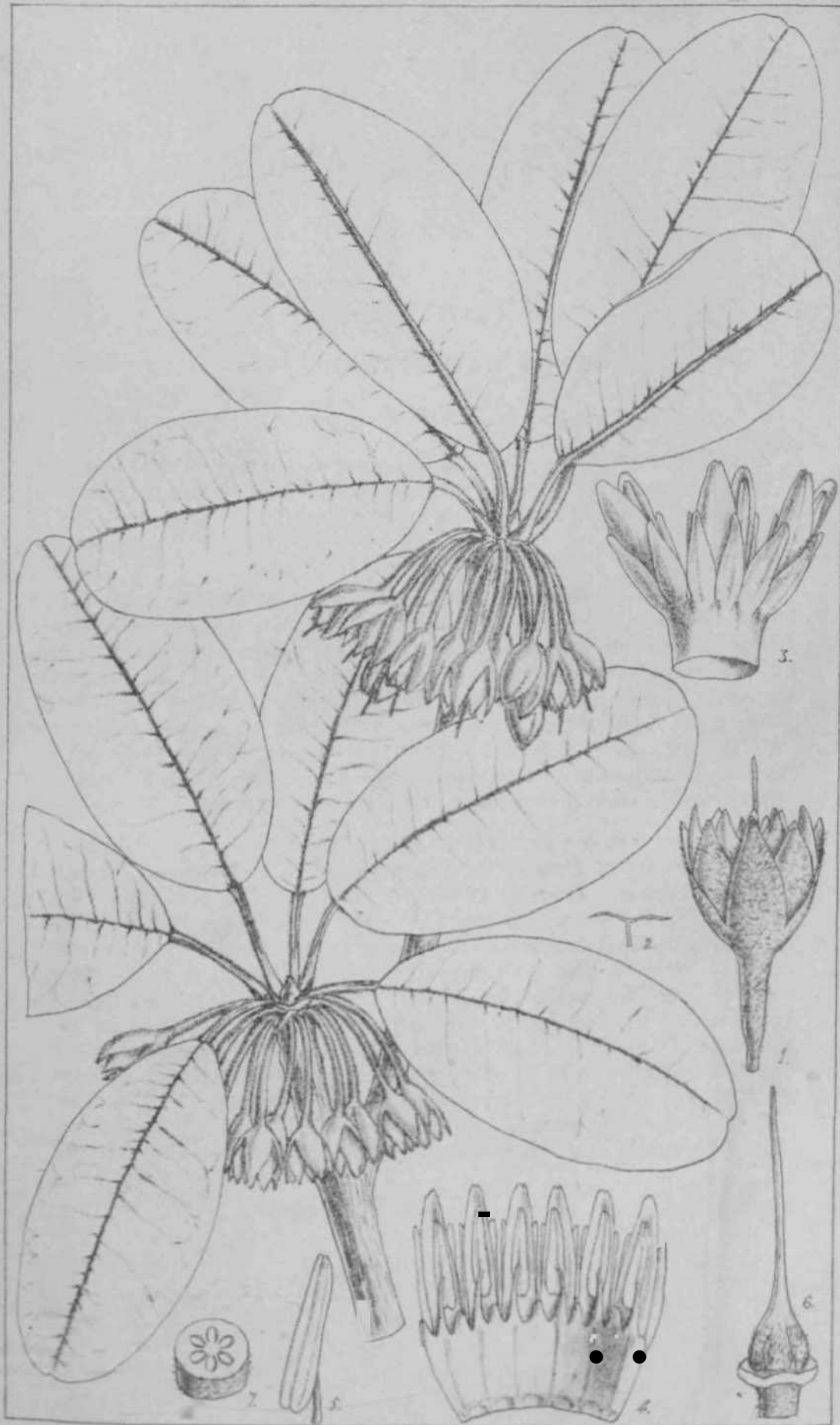
Alexandra Imperatricis, *Schonib. in Hook. Lond. Journ.* iv. 12; *Diss.* 1845, 18, *cum icone*: *Walp. Rep.* v. 564

HAB. British Guiana, on the banks of the Pomeroon and Cuyuni rivers, *Schomburgk*. Banks of the Upper Demerara river, *Jenman*, 4240. Native name, *Hyariballi*.

Arbor erecta 90-120-pedalis. *Folia* imparipinnata, foliolis 7-9 oblongis cuspidatis petiolulatis rigide coriaceis glabris semipedalibus. *Flores* in racemos breves dispositi, azi velutino, pedicellis ad basin articulatis. *Calyx* coriacens, 7-8 lin. longas et latus, tubo campanulato, segmentis brevibus latis obtusis insaqualibus. *Petala* aurantiaca, calyce dnplo longiora; vexillum obovatum: ala oblongse vexillo vix breviores. *Stamina* libera, declinata, inclusa. *Ovarium* lineare, stipitatum, multiovnlatum, in stylm cnrvatum sensim angustatnm. *Legumen* lignosum, bivalve. *Semina* suborbicularia, crassa, compressa.

This is another of Schoxnburgk's discoveries, which has just been refound for the first time by Mr. G. S. Jenman. The name was changed by Moquin Tandon, because it was preoccupied by Bunge for a genus of Chenopodiaceae.—J. G. BAKER.

Fig. 1. Calyx and stamens. 2. Anther. 3. Ovary after flowering. *More or less enlarged.*



M.S. del. et. lith

Achras bahamensis, Baker

PLATE 1795.

ACHRAS BAHAMENSIS, *Baker*.

SAPOTACEJE.

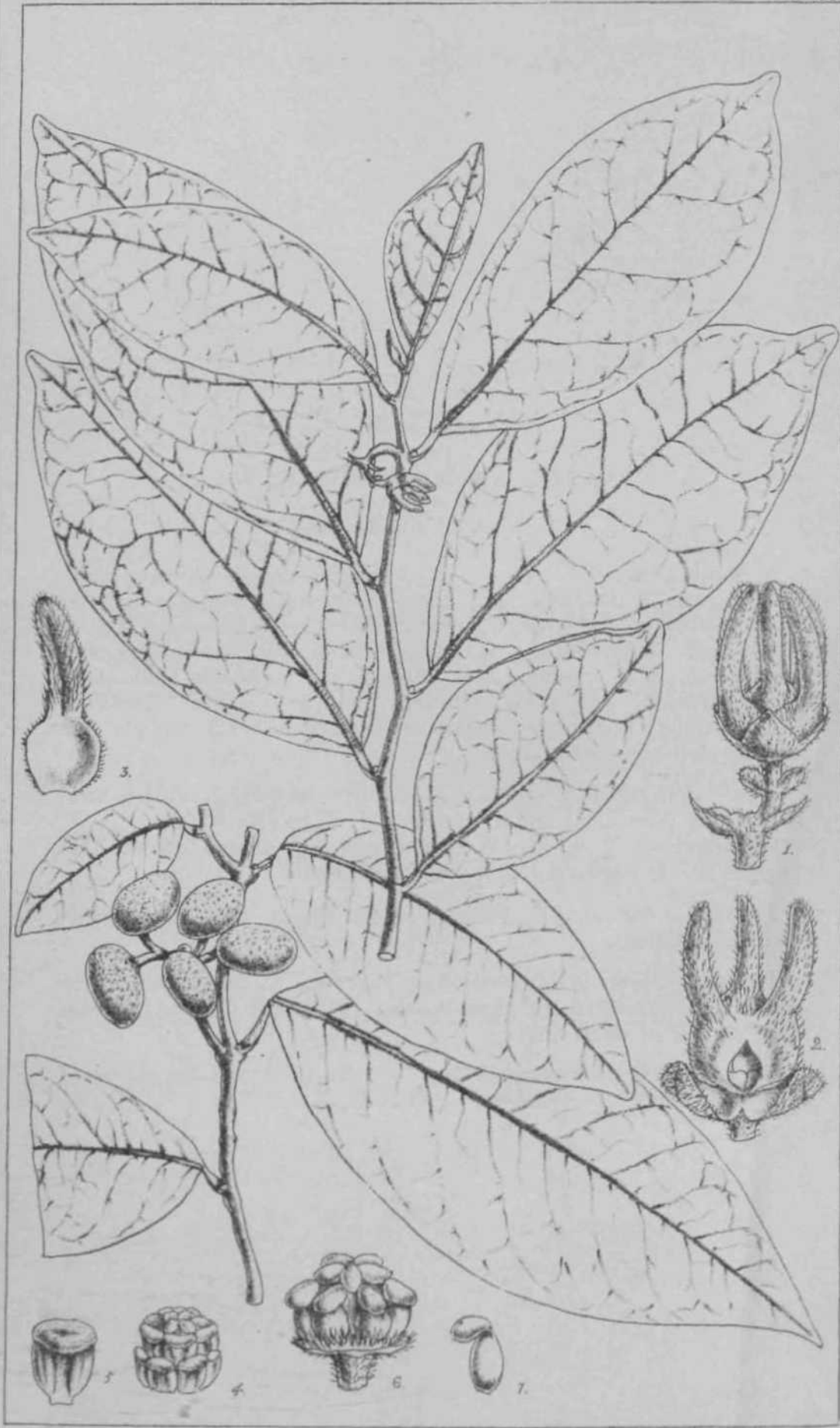
A. bahamensis, *Baker* | foliis ad ramorum apices aggregatis oblongis obtusis emarginatis, floribus deflexis, corollae segmentis 12 parvis lanceolatis staminodiis petaloideis brevioribus.

HAB. Fortune Island, Bahamas, *Eggers*, 3837.

Arbor erecta 16-pedalis. *Folia* rigide coriacea, glabra, 2-2[^] poll, longa, ad basin rotundata, venis faciei inferioris obscuris immersis. *Flores* ad ramorum apices ad foliorum axillas producti, pedicellis pendulis ferrugineo-tomentosis 5-6 lin. longis. *Calyx* 2 lin. longus, segmentis tribus exterioribus valvatis ferrugineo-tomentosis, tribus interioribus tenuioribus. *Corolla* tubo brevi lato, segmentis 12 lanceolatis acuminatis. *Staminodia* lingulata, 2 lin. longa. *Stamina* 6 staminodiis opposita., filamentis brevibus, antheris magnis lineari-oblongis. *Ovarium* globosum, stylus elongatus, exsertus.

There is a rough figure of the Sappadillo tree of the Bahamas in vol. ii. tab. 87 of Catesby's 'Natural History of Carolina, Florida, and the Bahaman Islands,' published in 1754. The plant seems not to have been further investigated till now, when Baron Eggers, in his expedition to the Bahamas for the British Association for the Advancement of Science, has collected specimens. It proves to be very distinct from the well-known *Achrns Sapota*, which is well figured 'Bot. Mag.¹ t. 3111-3112, not only in the leaf, but also in the structure of the flower, having the segments of the corolla twelve in number instead of six. so that unless it be made a new genus the character of *Achrns* will have, to be materially enlarged. The fruit, which Baron Eggers has not obtained, is figured by Gatesby as "a[^]presso-globose, and about the size of a small walnut.—J. G. BAKER.

Fig. 1. Flower. 2. Bifid hair of calyx. 3. Corolla. 4. Same laid open. 5. Anther. 6. Pistil. 7. Transverse section of ovary. *Enlarged*.



M.S. del. et lith.

Artabotrys ~~Monteiroæ~~ ^Monteiroæ, Oliv.

PLATE 1796.

ABTABOTRYS MONTEIROI, *Oliv.*

ANONACEAE. Tribe UNONEJE.

A. Monteiroae, *Oliv.* (*sp. nov.*); ramulis hornotinis parce appresse hirsutis deinde glabratis, foliis tenuiter corjaceis oblanceolato- vel elliptico-oblongis breviter obtuse apiculatis glabratis v. subtus in costa parce hirtis reticulatis, pedunculis uncinatis folio oppositis sropius complanatis pauci-(2-4) floris, calyce profunde 3-fido lobis ovato-deltaideis, petalis subequalibus hirsutis, carpellis fructiferis breviter stipitatis oblique subglobois minutissime tuberculatis pilis minutis stellatis eparsis pallidis praecipue in stipite notatis.

HAB. Delagoa Bay (form with smaller leaves), /. *J. Monteiro* Natal, near Nbrthdene and Durban, /. *M. Wood* (No. 3962).

One figure is from Mr. Wood's plant with larger leaves. The flowers, Mr. Monteiro noted, are yellowish white.

Folia 1J-3 poll, longa. *Flores* £-£ poll, longi. *Carpella* fructifera pisi magnitudine.

Perhaps nearer to *A. suaveolens*, Bl., than to any other species which I have seen. I had three species, all endemic, in the 'Flora of Tropical Africa.'—D. OLIVER.

Fig. 1. Peduncle and flower. 2. Flower. 3. Petal. 4. Essential organs. 5. Anther. 6. Carpels. 7. Singlo carpel. *Enlarged.*



M.S. del, et lith.

Didissandra sesquifolia, C B C.

PLATE 1797.

DIDISSANDRA SESQUIPOLIA, C. B. Clarke.

GESNERACEA!. Tribe CTBTANDBE^:

D. sesquifolia, C. B. Clarke (*sp. nov.*); caule apice bifoliolate; folio altero multo majore, sessili, cordato-ovato, supra minute hispidulo*, pedunculo brevissimo, 1-2-floro; calyce semi-5-fido lanato-villoso.

HAB. China. Mons Omei, Szechwan, alt. 4,000 feet, Faber (*n. 82 bis.*)

Rhizoma repens, perenne. *Caulis* 1-2 dm., simplex, apice 1-2-folius, fusco-villosus proventu glabratus. *Folium* alternum longum 3 dm. latum 2 dm., basi leviter cordatam, apice acutum, in margine (sub-nplo-) serratum, supra omnino a pilis albis 2-4-cellulis hispidulum, subtus in lamina proventu fere, glabratum, in venis fusco-villosum, folium alterum longum 2-5 cm., subsimile. Pedunculus 1-3 cm. longus: bractee 6 mm. longas, oblongae. *Calyx* longus 15-20 mm., a pilis longis multicellulis densissime villosus; lobi 1 cm. longi, lanceolati, apice raodo subulati modo parum acutati. *Corolla* 6 cm. longa, tubuloso-infundibuliformis, extus sparsim villosula, purpurascens. *Capsula* non visa.—Species *Chiritas monophyllce*, O. B. Clarke (in DC. Monogr. v. 5, pars 1, p. 121), similis. Differt a genero *Didissandra* calyce non alte partito et corolla maxima; genus novum fortasse indicat, sed capsula ignota.—C. B. CLARKE.

Fig. 1. Base of corolla-tube, with stamens. 2. Ovary.



M. Seai, et hth.

Hemiboea Henryi, C.B.C

HEMIBCEA HENRYI, O. B. Clarke.

GESNERACEJ. Tribu CYRTANDREW.

Hemiboea, *C. B. Clarke* (gen. novum). *Calyx* breviter vel alfce lobatus. *Corolla* latius tubulosa,* labio superiore 2- inferiore 3-lobo, lobis omnibus rotundatis. *Stamina* 2. *Ovarium* liberum, oblongum, 2-cellulare, apice (brevis spatio) 1-cellulare; cellulo altero parvo vacuo rudimentario; placentas 2, in axi (nisi apice summo ovarii) omnino fussa, in altero latere (ambro) rudimentarias; stylus breviter vel longe linearis, unilateralis. *Capsula* secunda, oblonga, acuta; 2 bemi-placento (nisi apicem versus capsulae) coalitoo; cellula altera minuta rudimentaria, altera loculicida (ideoque capsula follicularis videtur). Semina numerosa, ellipsoidea, fere levia.—Herboe. Folia (fere omnia) *opposita*. Inflorescentia *sympodio-dichotoma, pseudo-terminalis, vel pedunculi ex axillis superioribus enati; spicoe geminates, proventu oblongce, aut fere capitatae, a bracteis magnis flores involventibus dense obsilce.*

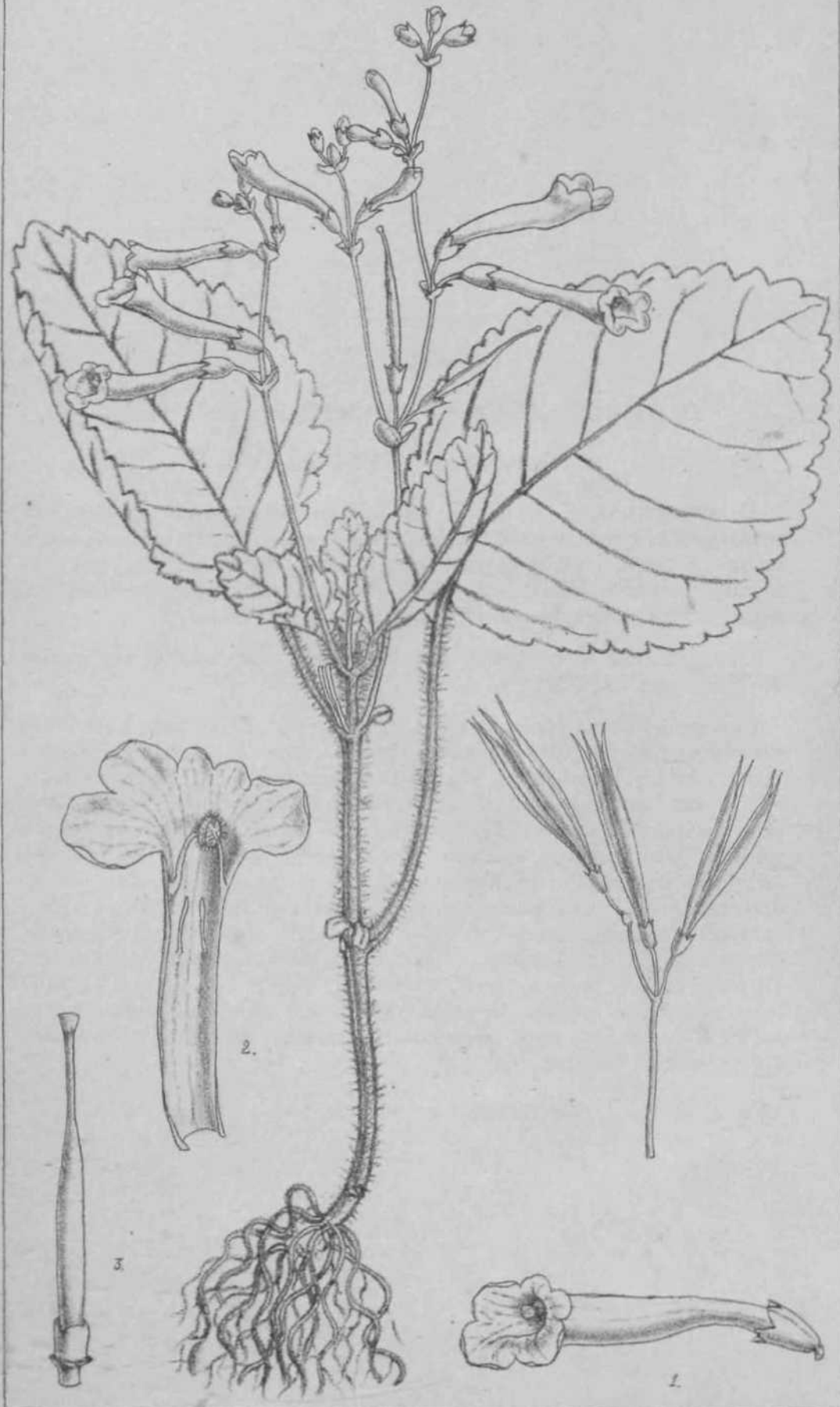
Sect. 1. STMPODIALES. *Calyx* oblique infundibuliformis breviter lobatus. *Corolla* minuscula. *Antherce* rotundae. *Discus* annularis.—*Spicm geminatoB, sessiles, proventu oblongce.*

1. *H. follicularis, O. B. Clarke (sp. nov.)*. Herba 3-5 dm. alta, fere glabra. Folia 15 cm. longa, 8 cm. lata, elliptica, acuminata, basi inaequaliter rhomboidea, minute denticulata; petioli 2-3 cm. longi. Spiceo 4 cm. longae. Bracteis 1 cm. longae, rotundae, tenerae. *Calyx* 1 cm. longus. *Corolla* 15 mm. longa. *Capsula* 1 cm. longa, 3 mm. lata. Flores virides et atrorubri (Ford).

HAB. China, Kwantung Provincia, *C. Ford* (nn. 248, 371).

Sect. 2. SUBCAPITATAE. *Calyx* sub-5-partitus. *Corolla* majuscula. *Anthera* lineari-oblongae, proventu agglutinatae. *Discus* cupuliformis. —*Spicoe subcapitatae (B, longius pedunculate.*

2. *H. subcapitata, C. B. Clarke (sp. nov.)*. Herba 15-25 cm. alta. Surculi elongati, teneri. Folia 6-12 cm. longa, 4-6 cm. lata, ovato-elliptica acuminata, basi inaequaliter rhomboidea fere integra, in pagina superiore a pilis sparsis multicellulis albis ornata aut fere glabrata; in pagina inferiore glabra, a cystolithis immersis interdum inspersa; petioli 2-3 cm. longi. Folia saepe imperfecte opposita, inferiora interdum subalterna, parvula. Pedunculi 1-5 cm. longi, ex axillis penultimis orti aut pseudoterminales. Capitulum 3-8-florum, vix dichotomum. Bractero 1 cm. in diam., rotundae, teuciro, glabrae. *Calyx*



M.S. del. et lith.

- *Didymocarpus stenanthos*, CB C.

PLATE 1799.

DIDYMOCARPUS STENANTHOS, *O. B. Clarice*.

GESNERACEJ. Tribe CYRTANDREJ.

D. stenanthos, *C. B. Clarke (sp. nov.)*; foliis sparsis oppositisque, ovatis aut ellipticis, crenatis, supra dense pubescentibus subtus pallidioribus minus pilosulis; cymis irregulariter subumbellatis, fere glabratis, pedicellis brevibus; calyce longo 3 mm., breviter dentato; capsula 2 cm. longa, brevissime stipitata.

HAB. China, Mons Omei, Szechwan, alt. 2,500-4,000 ped., *Rev E. Faber* (nn. 75, 326).

Caulis 3-6 cm. longus, villosus, foliiger. *Folia* inferiora longe petiolata, alterna aut opposita, summa opposita sessilia; inferiora usque ad 8 cm. longa, 4 cm. lata; petioli usque ad 4 cm. longi. Pedunculi 4 cm. longi, subumbellati; bracteae 3 mm. longae, **ovate**, saepe purpurascens; pedicelli (saepe geminati) 3 mm. longi, a pilis paucis multicellulis tenuissimis apice glanduligeris sparse ornati. *Calyx* infundibuliformis, purpurascens, subglaber, usque ad tertiam partem divisus, lobis 5 triangulari-oblongis obtusiusculis. *Corolla* elongato-tubulosa, longa 2 cm., tubo 2-3 mm. lato, glabra, purpurascens. *Ovulus* proventu 4-valvis.—Species *D. subalternanti*, Wall. (DO. Monogr. v. 5, pars 1, p. 77), similis; differt teneritate, corollae tubo admodum angusto, capsula subsessili. Etiam ad Sect. *Didymanthum* (e floribus saepe geminatis) accedens, sed a calyce omnino differt.—O. B. CLARKE.

Fig. 1. Flower. 2. Corolla laid open. 3. Ovary and disk. *Enlarged.*



M.S. del et lith.

Indigofera podophylla, Benth.

PLATE 1800.

INDIGOFEBA PODOPHYLLA, Benth.

LEGUMINOSJE. Tribe GALEGEJ.

J. (§ *Juncifolice*) **podophylla**, Benth. in *Harv. fy Sond. Fl. Capensis*, ii. 168; suffruticosa glabrata ramulis foliiferis virgatis, foliis unifoliolatis folio oblongo- vel lanceolato- v. obovato-elliptico obtusiusculo mucronulato cum pilis parvis albidis adpressis, breviter petiolulato, stipellis stipulisque minutis, racemis paucifloris petiolo subaequilongis v. brevioribus, floribus parvis brevissime pedicellatis strigillosis, calyce 5-fido dentibus e basi deltoidea subulatis corolla 2-3-plo brevioribus, legumine recto subtereti suturis subprominulis 7-11-spermo.

HAB. Delagoa Bay, *Forbes*; Inhambane, *Lawrence Scott*.

Folia 1-3 poll, longa, longitudinaliter striatis glabratis. *Racemi* breviter pedunculati, cum pedunc. ^-1 poll, longi. *Flores* 2 lin. longi. *Legumen* 6-10 lin. longum, cinnamomeum.

The 'petiole' of the above description is the rachis of the pinnate-leaved *Indigoferrf*, and I find, in at least one leaf, indication of minute lateral leaflets, which not improbably became more freely developed on vigorous vegetative shoots. The only specimens of this curious species previously known to us were those of Forbes from Delagoa Bay. Mr. L. Scott's capital collection from Nyassa and Mozambique, kindly presented by him to the Royal Gardens, includes good specimens from Inhambane, a little further northward.—D. OLIVER.

Fig. 1. Leaflet, stipellse and apex of leaf-rachis. 2. Peltate **hair of** ditto. 3. Calyx and ovary. 4. Vexillum. 5. Ala. 6. Carinal petal. 7. **Stafieos**. 8. Anther. 9. **Valve** of legume, with partial septa. 10. Seed. *Enlarged*.

INDEX OF SPECIES AND SYNONYMS

	Plate			Plate
<i>Abutilon sinense</i> , Oliv.	1750		<i>Cudrania tricuspidata</i> , Bur.	1792
<i>Achras bahamensis</i> , Baker	1795		—triloba, Hce.	1792
<i>Acicarpa crassifolia</i> , Miers	1752		<i>Decumaria sinensis</i> , Oliv.	1741
<i>Acranthera mutabilis</i> , Hemsl.	1718		<i>Dendrocalamus sikkimensis</i> , (Faw & Te)	1770
<i>Actinotinus sinensis</i> , Oliv.	1740		<i>Derris Fordii</i> , Oliv.	1771
<i>Alangium Faberi</i> , Oliv.	1774		<i>Didissandra sosquifolia</i> , C.B. C.	1797
<i>Alexa Imperatricis</i> , Baker	1794		<i>Didymocarpus stenanthos</i> , C.B.C.	1799
<i>Alexandra Imperatrieis</i> , Schomb.	1794		<i>Eleutherococcus Henryi</i> , Oliv.	1711
<i>Andrachne Clarkii</i> , Hook. f.	1704		—leucorrhizus, Oliv.	1711
— <i>Dccaisnei</i> , Benth.	1704		<i>Engelhardtia nudiflora</i> , -fibo A./	1747
— <i>fruticosa</i> , Dene.	1704		<i>Eriophorum comosum</i>	1773
<i>Andropogon binatus</i> , Retz.	1773		<i>Euonymus macrocarpus</i> , Gamble	1763
— <i>involutus</i> , St.	1773		<i>Hamamelis mollis</i> , Oliv.	1742
— <i>Notopogon</i> , Nees.	1773		<i>Hedyotis Ion.giden</i> 8, H&nce, « Wend-	
— <i>obvallatus</i> , St.	1773		landia Henryi, Oliv., omitted	
<i>Angrsecum Saundersiae</i> , Solus	1728		under PI. 1712	
<i>Artabotrys Monteiroe</i> , Oliv.	1796		<i>Heliotropium gymnostomum</i> , HemsL	1755
<i>Aster perfoliatus</i> , Oliv.	1717		<i>Hemibcea follicularis</i> , C. B. C.	1798
<i>Bauhinia Faberi</i> , Oliv.	1790		—Henryi, C.B. C.	1798
<i>Berberis gracilipes</i> , Oliv.	1754		—subcapitata, C. B. C.	1798
<i>Bombax Jenmani</i> , Oliv.	1720		<i>Herpolirion capense</i> , Bolus	1726
<i>Boopis crassifolia</i> ^ Gr.	1752		<i>Ilex macrocarpa</i> , Oliv.	1787
<i>Brachyclados lyciflora</i> , Res, Q, & D.	1751		<i>Indigofera podophylla</i> , Benth.	1800
<i>Brownca erecta</i> , Linden	1769		<i>Inula rhizocephala</i> , Schr.	1730
— <i>princeps</i> , Linden	1769		—rhizocephaloides, Clarke	1731
<i>Buettneria Curtisii</i> , Oliv.	1761		<i>Ischsemum angustifolium</i> , Hack.	1773
<i>Campanumoea axillaris</i> , Oliv.	1775		<i>Isopyrum Henryi</i> , Oliv.	1745
<i>Caragana ambigua</i> , Aitch.	1725		<i>Jurinea chatolepis</i> , Boiss.	1733-
— <i>decorticans</i> , Hemsl.	1725		— <i>leptoloba</i> , DC.	1734
<i>Catostemma fragrans</i> , Benth.	1703		<i>Limacia sagittata</i> , Oliv.	1749
<i>Chelidonium lasiocarpum</i> , Oliv.	1739		<i>Lindera fragraus</i> , Oliv.	1788
<i>Chrysosplenium macrophyllum</i> ,			<i>Lonchocarpus cyanescens</i> , Benth.	1791
<i>Oliv.</i>	1744		<i>Lophopyxi & Maingayi</i> , Hook./	1714
<i>Cimicifuga calthifolia</i> , Maxim.	1746		<i>Lysiloma Sabicu</i> , Benth.	1722
<i>Cocclulus afSnis</i> , Oliv.	1760			
<i>Codiaum lute & cens</i> , Kurz.	1702			
<i>Coiz Lachryma</i> , L. var. <i>stenocarpa</i> , Oliv.	1761			

INDEX OF SPECIES AND SYNONYMS.

	Plate		
<i>Madura trictispidata</i> , Cam	1792	<i>Phyllobrea</i> <i>densifl.</i> , <i>Oliv.</i>	1721
<i>Malaxis demissa</i> , Reidib.	1785	<i>Platystig</i> <i>ma myristiceum</i> , <i>JSr.</i>	1707
— <i>obcordata</i> , Ilcichb.	1783	<i>Pollinia eriops</i> > <i>Ja</i> , <i>Banco</i>	1773
— <i>recurva</i> , Reiclib.	1784	<i>Polydrag</i> • • • <i>lama Uotiforinc</i> , <i>IJmk.f.</i>	17 ⁽¹⁾
— <i>Set/ifa</i> , Reiehb.	1781	<i>Polygon</i> <i>im ami'icxicauli</i> , <i>Don</i> , var.	1743
— <i>setifera</i> , Reiehb.	178+	— <i>Oileaii</i> , <i>Ifrmsl.</i>	1736
• — <i>tmuis</i> , ReicJib	177:)	<i>Poly</i> <i>tenii hitmaiitlioides</i> , <i>Baker</i>	1727
— <i>H'ightiana</i> , ReicM>	1784	<i>Primula Faberi</i> , <i>Ohv.</i>	1789
<i>Mappia pittosparoidi</i> ¹ , <i>Oliv.</i>	1762	— <i>gampyais costata</i> , <i>Miq.</i>	1703
<i>Mrgjiphyllrea pewit eiais</i> , <i>Hemsl.</i>	1708	<i>Rhamnu</i> <i>8 heterophyllus</i> , <i>Ouv.</i>	1769
<i>Melodinus eoriaccus</i> , <i>Oliv.</i>	1768	<i>Ribes pac</i> <i>liyaandroites</i> , <i>Oliv.</i>	1767
<i>Mmironia unifoliolatn</i> , <i>Oliv.</i>	170!)	<i>Robinia cyan</i> <i>uemt</i> , <i>S. & 'E.</i>	1791
<i>Musa proboscidt-a</i> , <i>Oliv.</i>	1777	<i>Rubus Henryi</i> , <i>Hemst. \$ O. K.</i>	1705
<i>Massnda mutabilis</i> , <i>Hemsl.</i>	1718	<i>Sagwetia fwTugi</i> ^{neA} <i>Olio.</i>	1710
<i>Nanolirion cuponse</i> , <i>BtntA</i> ,	1726	<i>Saty</i> <i>nom prineops</i> , <i>Boh.</i>	1720
<i>Nasturtium Henryi</i> , <i>Oliv.</i>	1719	<i>Saug</i> <i>'urea <J oeurren s</i> , <i>Hand.</i>	17 36
<i>Obcronia. Arnotiiana</i> , <i>Wt.</i>	178-1	— <i>Gilesn</i> , <i>Hemsl.</i>	1735
— <i>Broumiana</i> , <i>Thw.</i>	1782	— <i>lept</i> > <i>phylla</i> , <i>Hemsl.</i>	1735
— <i>C\axka\</i> , <i>Hoo&.f.</i>	1779	<i>Schizandri</i> <i>l propinqua</i> , <i>Hook. f\$T.</i>	1715
• — <i>demissa</i> , <i>Lindl.</i>	1785	<i>Scortechin</i> <i>iaForbesii</i> , <i>Hook.f.</i>	1 : 06
— <i>Falcoricri</i> , <i>Hook. f.</i>	1780	— <i>Kiitp</i> :::, <i>Hook.f.</i>	1706
— <i>forcipato</i> , <i>Lindl. Tar.</i>	1782	— <i>mcobarica</i> , <i>Hook. f.</i>	1706
— <i>Helferi</i> , <i>Hoohf.</i>	1765	<i>SrndedutM Hcniyi</i> , <i>Oliv.</i>	1772
— <i>iridifolia</i> , <i>W.LU.</i>	1780	<i>HphyrailtieM capitellata</i> , <i>Hook.f.</i>	1702
— <i>lonyi bracteata</i> , <i>Th&T.</i>	17S2	<i>bpodwpcgmn anantifotim</i> , <i>Trie.</i>	1773
• <i>Myosuni</i> ^s , <i>Lindl.</i>	178G	— • <i>temger</i> , <i>Hack.</i>	J73
• <i>uLcordatft</i> , <i>Lindl.</i>	1783	<i>Httfaonouon membranacouin</i> , <i>///t'./</i>	1777
• — <i>recurva</i> , <i>Lii</i> <i>ndl.</i>	17H	<i>Static</i> <i>aGilesii</i> , <i>Hemsl.</i>	1737
• — <i>iScyllse</i> , <i>Lindl.</i>	1781	<i>StoaltBia bnihuica</i> , <i>Benth.</i>	1724
— <i>scitifera</i> , <i>Limll</i>	1784	<i>Symplocoe Curtiaii</i> , <i>Oliv.</i>	1757
• <i>tUichyotdes</i> , <i>A. Rich.</i>	1764	<i>Tabcbnia longjpea</i> , <i>Baker</i>	1788
— <i>U-mjifi</i> , <i>Lindl.</i>	1770	<i>'ilism princop*</i> , <i>Oliv.</i>	1769
— <i>TrouUeri</i> , <i>Hook.f.</i>	1786	<i>inahcirum ichangenso</i> , <i>Z«C.</i>	1765
— <i>Wightiana</i> , <i>Lindl. var.</i>	1781	— <i>microgymun</i> , <i>f«.</i>	1766
— <i>zoyknien</i> , <i>Hook.f.</i>	1782	— <i>ata pinnata</i> , <i>Jacq.</i>	1769
<i>Olduul</i> • <i>rgia papionum</i> , <i>lic.</i>	1723	<i>cholepis spartioides</i> , <i>Clarke.</i>	1733
<i>Othouna carnosa</i> , <i>Less. var.</i>	1713	<i>etica</i> , <i>Hook. f. & T.</i>	1732
<i>F'.rnitssia Fu</i> <i>beri</i> , <i>Oliv.</i>	1778	«9gonopl«afli niaJayana», <i>Hook.f.</i>	1763
<i>P&ssilluni cap</i> <i>ormis</i> , <i>M. /. Si.</i>	1768	<i>Urera tcnas</i> , <i>JV: £', a*!</i>	1738
— <i>obscura</i> , <i>Griff.</i>	1718	<i>Wondlandia Henryi</i> , <i>Oliv.</i>	1712
— <i>ptTpt^ra</i> , <i>M. T. M.</i>	1768		
<i>Petrocosmea sinensis</i> , <i>oliv.</i>	171C		