

With original woodcuts of 664.
VOL. VIII.—PART I.]

[NOVEMBER.

HOOKER'S ICONES PLANTARUM;

OR,

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.

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PLATE 1701.

POLYDRAGMA MALLOTIFORME, Hook. f.

EUPHORBIACEÆ. Tribe CROTONEÆ.

Polydragma, Hook. f. (*gen. nov.*). Flores parvi, dioici, apetalii, racemosi, racemis axillaribus. Fl. ♂. Alabastra globosa. Sepala 3, lata, concava, valvata. Stamina perplurima, filamentis basi in phalanges 6 connatis, superne liberis ramosissimis, et in capitulum globosum antherarum desinentibus; antheræ minutæ, peltatæ, 2-loculares, didymæ, connectivo supra loculos obducto. Pistillodium 0. Fl. ♀. Sepala 5, inæqualia, lanceolata, erecta. Ovarium globosum, granulatum, 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. Racemi gracillimi.

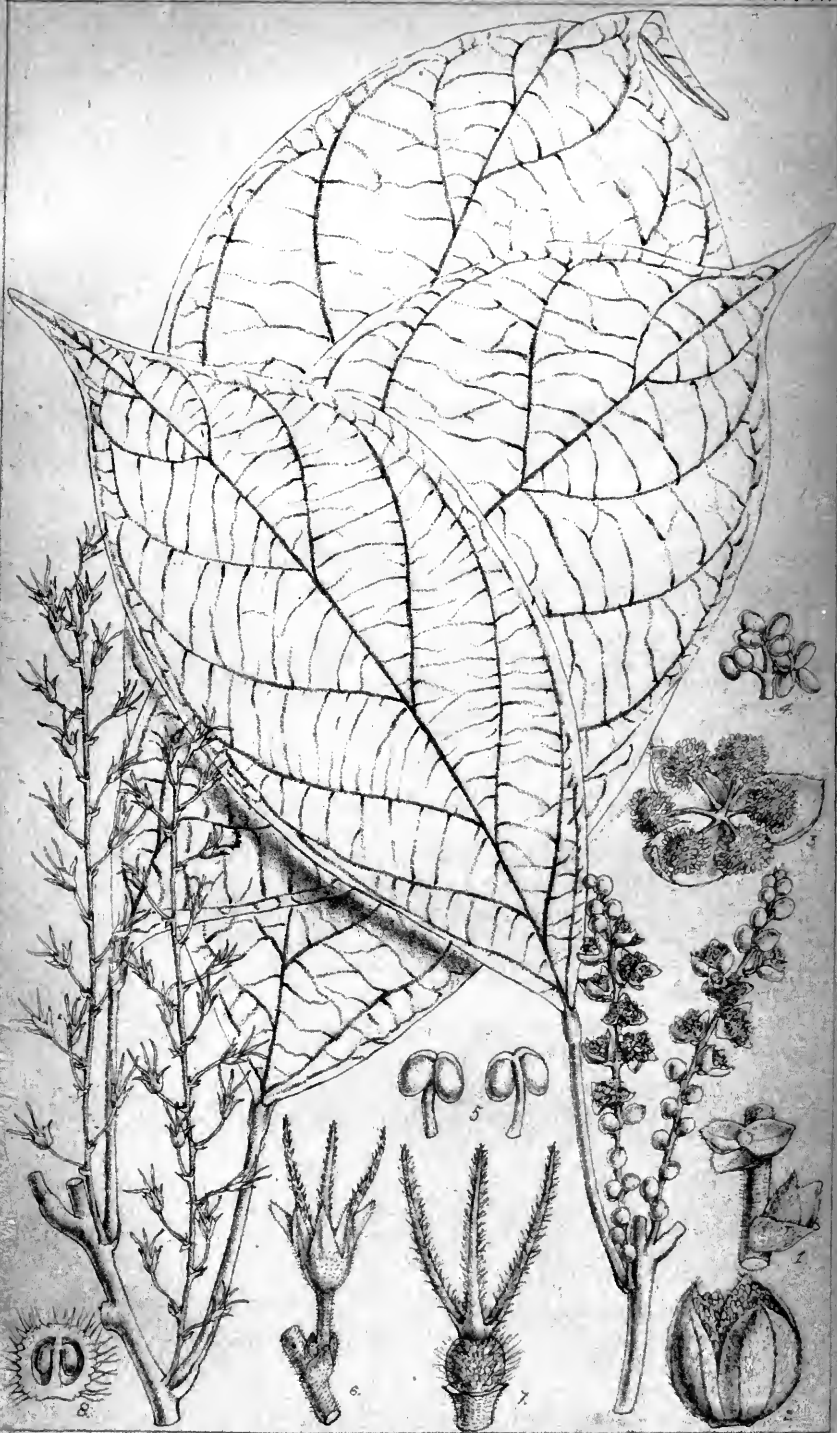
P. mallotiforme, Hook. f. in *Fl. Brit. Ind.* v. (ined.).

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 $\frac{1}{2}$ -2 in.; stipules small, subulate. Male racemes spiciform; pedicels 3-bracteate. Sepals membranous. Fem. 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 ♂ flower. 2. ♂ flower. 3. The same expanded. 4. Cluster of anthers. 5 & 6. Separate anthers. 6. ♀ flower. 7. Ovary. 8. Vertical section of ditto. All enlarged.



S. del. et lith.

Polydragma mallotiformis, Hk. f.

PLATE 1702.

SPHYRANTHERA CAPITELLATA, Hook. f.

EUPHORBIACEÆ. Tribe ?.

Sphyranthera, Hook. f. (*gen. nov.*). Flores minuti, ♂ ad apicem pedunculi axillaris umbellati, pedicellati, pedicellis basi bracteolatis. 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 floris inserta, filamentis liberis erectis glabris; antheræ 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.

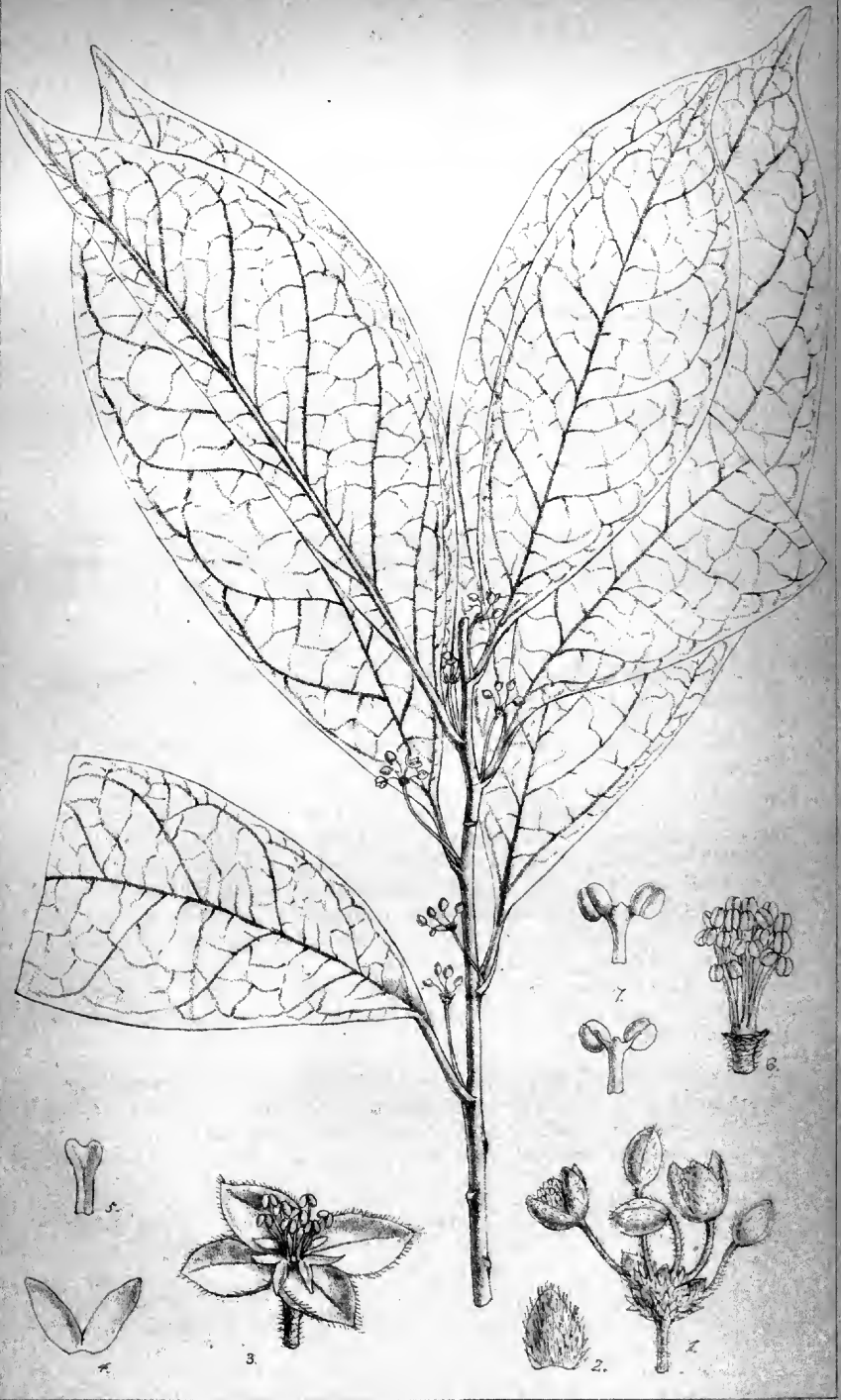
S. capitellata, Hook. f. *Fl. Brit. Ind.* v. (ined.). *Codicæum?* *lutescens*, Kurz, *For. Fl.* ii. 405.

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

Frutex sempervirens, 8-12-pedalis, cortice pallido, ramulis gracilibus puberulis ligneis. Folia 3-5 poll. longa, in acumen v. cuspidem obtusam producta, recta v. subfalcata, flavescens, tenuiter coriacea, basi acuminata in petiolum $\frac{1}{4}$ poll. longum attenuata, nervis utrinque costæ 10-15 tenuissimis, nervulis reticulatis; stipulæ non visæ. Pedunculi $\frac{1}{2}$ -pollicares, graciles, pubescentes, capitula bractearum gerentes; pedicelli $\frac{1}{8}$ poll. longi decurvi; alabastra ♂ ovoidea, vix $\frac{1}{2}$ poll. longa, pubescentia; sepala intus glabra; petala v. glandulæ disci polymorpha, integra v. 2-fida; stamina malleiformia, connectivo interdum producto.

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

Fig. 1. Umbel of ♂ 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.

Sphyranthera capitellata Hk. f.

PLATE 1703.

PTYCHOPYXIS COSTATA, Miquel.

EUPHORBIACEÆ. Tribe CROTONEÆ.

Ptychopyxis, Miquel. FLORES ♂ spicati. *Sepala* 4-5, subæqualia, crassa, valvata. *Discus* 0. *Stamina* numerosissima receptaculo crasso piloso conferta, filamentis flexuosis apicibus subulatis; antheræ late oblongæ, planæ, 4-loculares, loculis per paria superpositis, connectivo in appendicem latam acutam producto, loculis superioribus oblongis, inferioribus multo minoribus, omnibus introrsum dehiscentibus. *Pistilodidium* 0. FL. ♀ fasciculati. *Sepala* 6, lanceolata, crassa, inæqualia v. subæqualia, persistentia. *Ovarium* 3-loculare; stylus elongatus, villosus, stigmatibus 3 brevibus recurvis integris intus papillois; 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; Hook. f. Fl. Brit. Ind. v. ined.

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

A tree 30-70 ft.; branchlets stout, woody. *Leaves* 6-12 in., oblanceolate, coriaceous, glabrous above, except the midrib, rusty-tomentose beneath; nerves 15-20 pairs; petiole $\frac{1}{8}$ - $\frac{1}{4}$ in.; stipules subulate. *Male spikes*, 3-5 in., stout, velvety; flowers shorter than the bracts, $\frac{1}{3}$ in. diam. *Stamens* contorted in bud. *Clusters of female flowers* $\frac{1}{2}$ in. diam.; velvety, as are the bracts. *Fruit* $1\frac{1}{2}$ in. diam; pericarp thin, but thickly clothed with densely-set hairs $\frac{1}{4}$ in. deep. *Seeds* immature.

I refer this plant to Miquel's *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 *Tiliaceæ* (to which Order Miquel doubtfully referred the genus) were being studied for the 'Genera Plantarum.' It 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 ovule. The position of the genus is, I think, near *Mallotus* and *Macaranga*.—J. D. H.

Fig. 1. ♂ flower and bract. 2. ♂ flower open. 3. Stamens. 4. ♀ flower. 5. Ovary cut across. 6. Ovule. 7. Immature fruit. 8. The same cut across. All but figs. 7 and 8 enlarged.

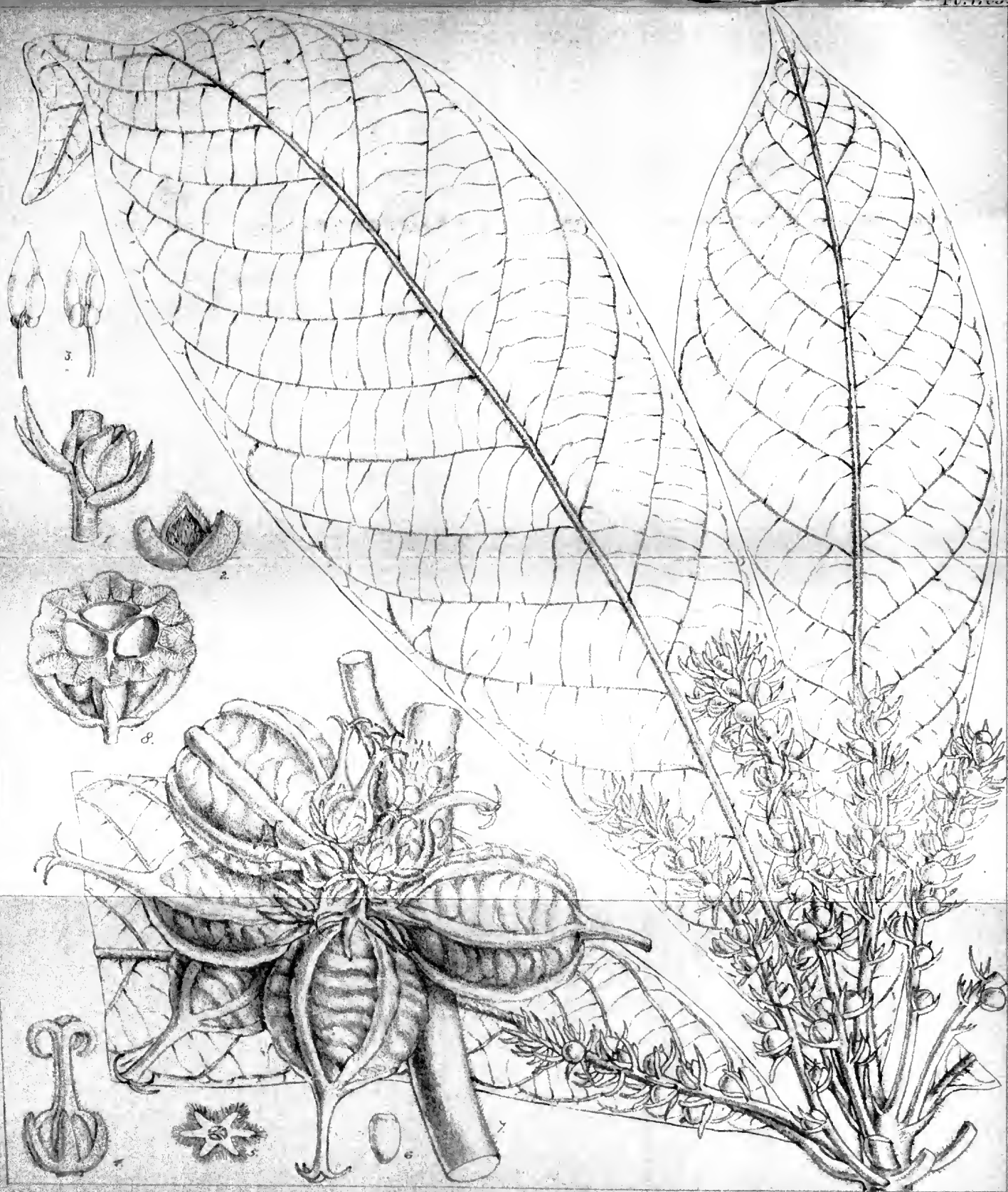


PLATE 1704.

ANDRACHNE FRUTICOSA, Dcne.

EUPHORBIACEÆ. Tribe PHYLLANTHÆÆ.

A. fruticosa, Dcne, in *Now. Ann. Mus.* iii. 484; frutex erectus sparse appresse pilosus, ramis gracilibus teretibus, foliis gracile petiolatis elliptico-lanceolatis acuminatis, basi acutis acuminatisve, nervis gracilimis, stipulis parvis lanceolatis, fl. masc. minutis breviter pedicellatis, sepalis petalisque subspathulatis, glandulis disci fl. ♂ profunde 2-partitis, fl. fem. masculis 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. Clarkei*, H. f. ('*Fl. Brit. Ind.*' *l.c.* 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.*' *l.c.*) has changed the name of *fruticosa*, *Dcne.* to *Decaisnei*, on the ground that the plant is not shrubby, which, however, it clearly is.—J. D. H.

Fig. 1 & 2. Sepals of ♂ flower. 3. ♂ flower with sepals removed. 4. Gland of disk and petal of ♂. 5 & 6. Stamens. 7. ♀ flower. 8. Ovary. 9. Vertical section of cell of ditto. 10. Section of coccus and seed. 11. Seed. All enlarged.



del. et lith.

Andrachne fruticosa DCne.

PLATE 1705.

RUBUS HENRYI, *Hemsl. et O. Ktze.*

ROSACEÆ. Tribe RUBEÆ:

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

HAB. Ichang, 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 interdum 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 1-1½ poll. longus, nudus vel 1-3-aculeolatus; stipulæ liberæ, lineares, apice sæpius tridentatæ. *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. Stamens. 5. An ovary. *All enlarged.*



M.S. del. et lith.

Rubus Henryi Hemsl. & O. Ktze.



M. S. del. et lith.

Scortechinia Kingii, Hk. f.

PLATE 1706.

SCORTECHINIA KINGII, *Hook. f.*

EUPHORBIACEÆ. Tribe PHYLLANTHÆ?

Scortechinia, *Hook. f. (gen. nov.)*. Flores minuti, dioici, in cymas subterminales dispositi, breviter pedicellati, apetalii. FL. ♂. *Sepala* 4-5, rotundata, imbricata. *Stamina* 4-5, filamentis brevibus liberis; antheræ latiusculæ, intus dehiscentes. *Disci glandulæ* 4-5, staminibus alternæ, pubescentes. *Pistilodium* breve, 3-lobum, pilosum. FL. ♀. *Sepala* maris. *Ovarium* (3-4-loculare?); stigmata 4, minuta sessilia; ovula 2? ab apice loculi pendula. *Capsula* cano-pubescentis, oblongo-ovoidea, tenuiter crustacea, 3-4-valvis, leviter 3-4-costata, 1-sperma, stigmatibus 3-4 minutis coronata. *Semen* ab apice columnæ (e deciduis septorum efformatæ?) pendulum, elliptico-oblongum, compressum, testa tenuiter crustacea, albumine parco carnoso; cotyledones amygdalinæ, radícula minuta supera.—Arbores fere glabræ. Folia alterna, petiolata, coriacea, integra v. subserrata, penninervia; petiolo apice incrassato. Stipulæ non visæ.

S. Kingii, *Hook. f.*; foliis elliptico- v. cuneato-obovatis obtusis v. cuspidatis glanduloso-crenatis.

HAB. 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 *Ctenolophon*, Oliv. (in *Trans. Linn. Soc.* xxviii. 516, t. 43, and *Fl. Brit. Ind.* 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 *Crotonæ*. 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. ('Fl. 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 ♂ 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.

PLATYSTIGMA MYRISTICUM, *Brown.*

EUPHORBIACEÆ? Tribe GALEARIÆ?

Platystigma, *Brown.* Flores dioici, in paniculas breves axillares dispositi. FL. ♂ bracteati et bracteolati. Sepala 4-5, varie connata, brevia, inæqualia, imbricata. Petala 4-5, ovata, acuta, valvata. Stamina 4-5, petalis opposita, filamentis brevissimis; antheræ magnæ, loculis oblongis parallelis subintrorsum dehiscentibus. Pistillodium 0. FL. ♂ 1-bracteati. Sepala 5, late ovata, imbricata, 2 interiora. Ovarium cylindraceum, pubescens, 1-loculare; stigma magnum, crassum, sessile, pileiforme: ovulum solitarium, ab apice loculi pendulum, lineare, obturatore 0.—Arbor? ramulis paniculisque rufo-tomentosis. Folia alterna, coriacea, integerrima, penninervia.

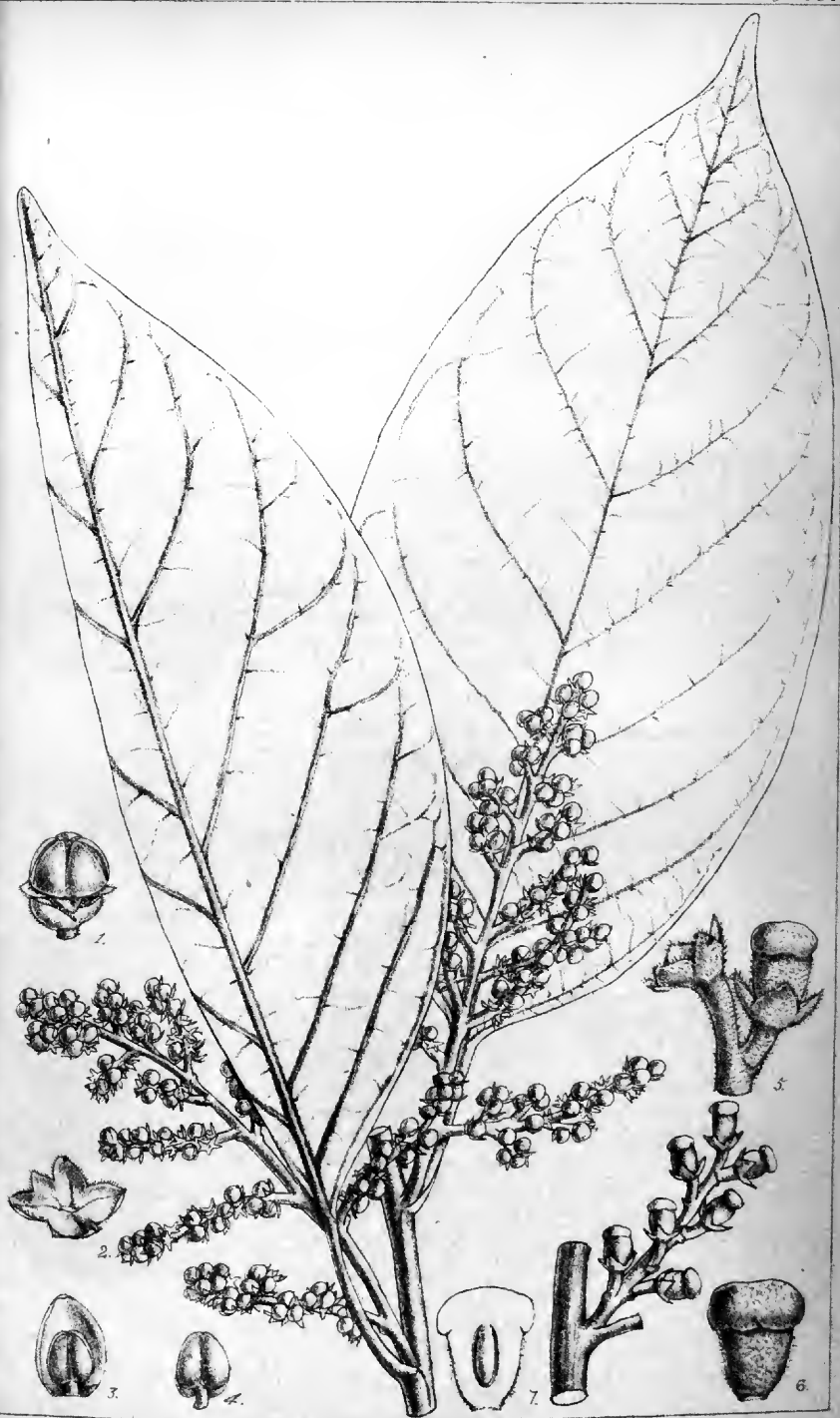
P. myristicum, *Brown*, in *Wall. Cat.* 7523 (planta ♀); *Hook. f. Fl. Brit. Ind. v.* (ined.). *Myristicea*, *Wall. Cat.* 9017 (planta ♂).

HAB. Silhet, *W. Gomez.*

Rami lignosi, teretes, cani. Folia 5-7 poll. longa, 2-3½ lata, elliptica v. elliptico-oblonga, acuta v. acuminata, basi acuta, supra glabra, subtus cana; nervis utrinque 10-12, nervulis obscuris; petiolus ¾-1-pollicaris; stipulæ non visæ. Paniculæ ♂ 1-3-pollicares, sessiles, rachi ramisque robustis, alabastra globosa; flores ¼ poll. diam.; sepala hispidula; petala glabra v. stellatim puberula. Paniculæ ♀ maribus breviores; flores crasse pedicellati; sepala ¼ 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* that 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. ♂ flower. 2. ♂ calyx. 3. Petal 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.

MEGAPHYLLÆA PERAKENSIS, Hemsl.

MELIACEÆ. Tribe TRICHILIÆ.

Megaphyllæa, 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; antheræ 10, inclusæ. *Discus* pulvinatus, multilobatus, ovarium ferens. *Ovarium* 7-9-loculare, stylo crasso stigmatate capitato; ovula in loculis solitaria, angulo centrali affixa. *Capsula* magna spheroidica, 7-9-lobata, 7-9-locularis (loculis sulcis oppositis) crassissima, tarde dehiscens. *Semina* exalbuminosa, compressa, nuda, glabra, hilo maximo, cotyledonibus conferruminatis.—*Arbor* circiter 50-pedalis. *Folia* pinnata, amplissima. *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, L. 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 subsessiles hirsutus. *Ovarium* stylusque infra medium dense pubescens. *Fructus* depresso-spheroidicus, 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.

MUNRONIA UNIFOLIOLATA, Oliv.

MELIACEÆ. Tribe MELIÆ.

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

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

Fruticulus 2-6 poll. altus parce ramosus v. simplex, ramulis foliiferis hirtopubescentibus. Folia alterna, lamina $1\frac{1}{2}$ - $2\frac{1}{4}$ poll. longa $\frac{2}{3}$ -1 poll. lata, basi late cuneata v. rotundata; petiolus $\frac{1}{2}$ - $1\frac{1}{4}$ poll. longus. Flores albi $\frac{2}{3}$ poll. longi; calyx parvus 5-partitus, lobis $\frac{3}{4}$ -1 lin. longis; corollæ lobis oblanceolato-ellipticis patentibus; tubus stamineus exsertus, dentibus oblongo-linearibus apice dentatis antheris mucronulatis æquilongis. Fructus magnitudine pisi, pubescens. Semina dorso hemisphærica 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. OLIVER.

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.*

RHAMNACEÆ.

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 sæpius 2-4-nis vel paniculatis quasi terminalibus v. in axillis superioribus dispositis fulvo-tomentellis.

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

Folia sæpius subopposita 2-2½ poll. longa, ¾-1 poll. lata; petiolus 2-3 lin. longus. *Flores* parvi sessiles tomentelli ¾-1 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.

Sageretia ferruginea, Oliv

PLATE 1711.

ELEUTHEROCOCCUS HENRYI, Oliv.

ARALIACEÆ.

E. Henryi, Oliv. (sp. nov.); 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 2-2½ poll. longo, lateralibus brevioribus; petiolus 1-3 poll. longus puberulus nudus v. aculeolis 1-2 minutis instructus. *Umbellæ* floriferæ 1 poll. diam.; pedicelli ½-1 poll. longi parce hirtelli; fructiferæ 1½-2 poll. diam.; pedunculi 1-1½ poll. longi. *Stylus* columnaris temp. florifero ovario longior. *Fructus* ¼ poll. longus.

Dr. Henry sends this as the *Wu Chia Pi*, 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 2580).

Growing to a height of '10 feet or more,' on cliffs.—D. 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) HENRYI, *Oliv.*

RUBIACEÆ.

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

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

Folia 1-1½ poll. longa, ⅓-½ poll. lata. *Paniculæ* parvæ multifloræ strigosæ, bracteis lineari-subulatis. *Calyx* strigosus, lobis persistentibus. *Corolla* alba ½ poll. longa, glabra v. lobis parce hispidulis.

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

Fig. 1. Bud. 2. Flower. 3. Longitudinal section of ovary. 4. Fruit. 5. Same after dehiscence. 6. Seed. 7. Fruiting panicle. *Excepting 7, enlarged.*



M.S. del. et lith.

Wendlandia (Sestinia) Henryi Oliv.

PLATE 1713.

OTHONNA CARNOSA, Less. var. *discoidea*.

COMPOSITE. Tribe SENECTIONIDÆ.

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

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

Suffrutex 1-2 pedalis. *Pedunculi* 1-1½ ped. longi; *pedicelli* ¾-1½ poll. longi. *Flores* radii tubulosi ♂, stylo bifido: *disci* ♂ stylo indiviso. *Achænia* 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.

Oihonna carnososa, Less var

PLATE 1714

LOPHOPYXIS MAINGAYI.

EUPHORBIACEÆ?

Lophopyxis, Hook f. (*genus nov.*). Flores parvi, monoici, in cymas laxas elongatas axillares et terminales dispositi, ♀ in cymas inferiores. FL. ♂. *Calyx* 5-partitus, persistens, lobis ovatis valvatis. *Petala* minuta, inter lobos obcordatos disci crassi inserta. *Stamina* 5, lobis disci alterna, filamentis brevibus pubescentibus; antheræ breves, connectivo apiculatæ, loculis oblongis introrsum dehiscentibus. *Pistillodium* parvum, villosum. FL. ♀. *Perianthium* maris. *Discus* annularis, crenatus. *Ovarium* ovoideum, 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. Paniculæ pendulæ.*

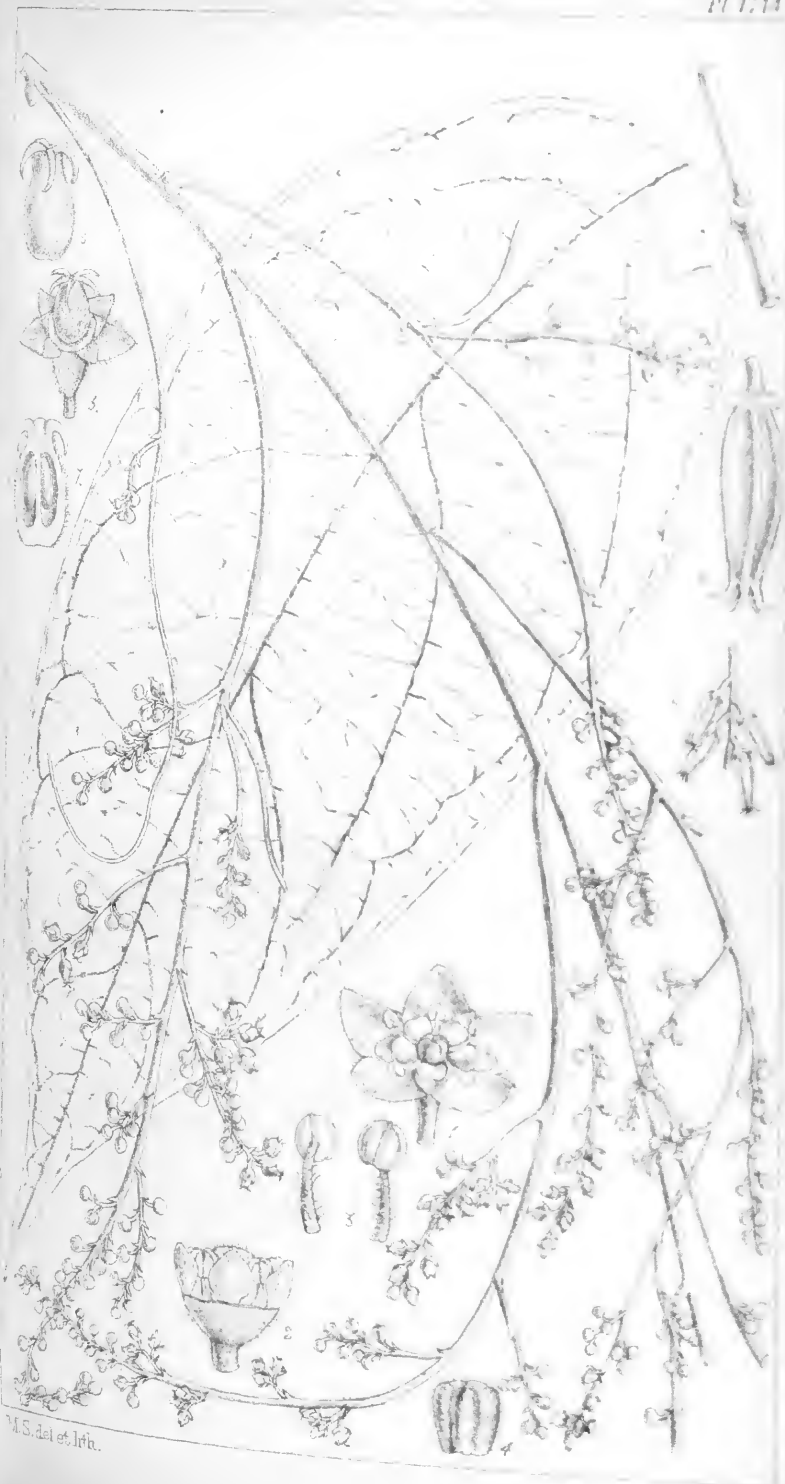
L. Maingayi, Hook f. in *Fl. Brit. Ind. v. v.* (ined.).

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

Ramuli sulcati, puberuli. *Folia* 4-6 poll. longa, coriacea, ovato-subcordata, longe acuminata, supra nitida, minute reticulata, subtus siccitate purpurascens, nervis utrinque supra basilares 4-5; petioli $\frac{1}{6}$ poll. longi; stipulæ non visæ. *Paniculæ* pedales, pendulæ, rachide puberula, ramulis canis. *Flores* $\frac{1}{10}$ poll. diam., breviter pedicellati; alabastra globosa; bractæ minutæ. *Sepala* utrinque tomentosa. *Fructus* immaturus $\frac{1}{3}$ poll. longus, stigmatibus coronatus.

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

Fig. 1. ♂ 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 the natural size. 9. An immature fruit. *All but fig. 8 enlarged.*



M.S. del et. lith.

Lophopyxis Maingayi, Hk f

PLATE 1715.

SCHIZANDRA PROPINQUA, *Hk. f. et T. var.*

MAGNOLIACEÆ. Tribe SCHIZANDREÆ.

S. propinqua, *Hook. fil. et Thoms., Flora of Brit. Ind. i. 45, var. sinensis*, ramulis elongatis gracillimis, foliis anguste-vel linearilanceolatis acuminatis basi cuneatis rotundatisve, remote denticulatis, floribus ♂ quam in forma typica minoribus ($\frac{1}{3}$ 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 *S. (Kadsura) propinqua*, 'Tent. Fl. Nepal,' t. 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.*



M. S. del., et lith.

Schizandra propinqua, Hk. f. & T. var.

PLATE 1716.

PETROCOSMEA SINENSIS, Oliv.

GESNERACEÆ, § CYRTANDREÆ.

Petrocosmea, Oliv. (gen. nov.). Calyx 5-partitus, segmentis tubo corollæ subæquilongis lanceolatis acutis. Corolla subrotata bilabiata, labio postico bifido segmentis oblongo-ellipticis obtusis, antico trifido segmentis oblongo-ellipticis v. centrali obovato-oblongo, lobis omnibus subæqualibus. Stamina antherifera 2 antica basi tubo corollæ 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 æquans v. parum superans, stylo longiusculo persistente coronata, valvis utrinque solutis, medio placentiferis. Semina minuta fusi-formia.—Herba acaulis pilosula. Folia plurima longe petiolata, lamina rotundata obovata v. elliptica obtusissima pilosula. Scapi uniflores graciles. Flores ut videtur violacei.

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

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

Folia lamina $\frac{1}{2}$ – $1\frac{1}{4}$ poll. longa, $\frac{1}{2}$ – $\frac{5}{8}$ poll. lata; petiolus $\frac{1}{2}$ – $1\frac{1}{2}$ poll. longus. Flores $\frac{1}{2}$ poll. diam. Capsula $\frac{1}{6}$ 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 *Didymocarpus*, 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.

Petrocosmea sinensis, Oliv

PLATE 1717.

ASTER PERFOLIATUS, *Oliv.*

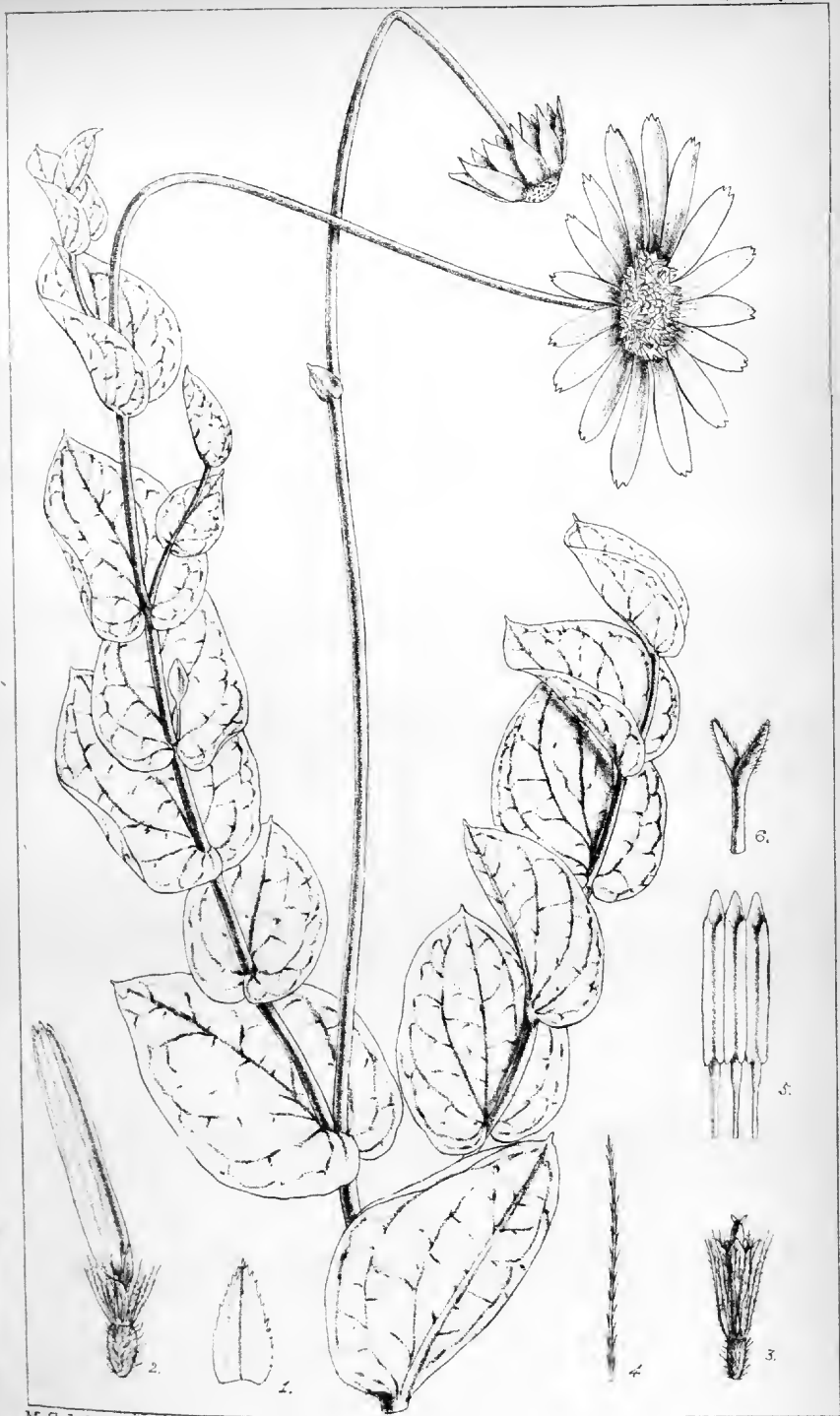
COMPOSITEÆ, § ASTEROIDEÆ.

A. perfoliatus, *Oliv.* (*sp. nov.*) herba foliosa glaberrima, ramis adscendentibus monocephalis, foliis sessilibus coriaceis late ovatis v. ovato-ellipticis basi cordatis amplexicaulibus sæpius obtusis mucronatis integris reticulatim venosis glandulis resiniferis immersis notatis, capitulis solitariis sæpe longe pedunculatis, involucris squamis paucis seriatis, exterioribus ovato-lanceolatis acutis margine late scariosis erosis interioribus oblanceolatis acutis, achæniis argenteo-pilosis, pappi setis barbatis corollam (fl. disci) æquantibus.

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

Herba ut videtur 1-2 pedalis. *Folia* sæpius internodiis subduplo longiora, 1-2 poll. longa, 1-1 $\frac{1}{4}$ poll. lata, rarius angustiora, basi lobis rotundatis. *Pedunculi* terminales monocephali 1 $\frac{1}{2}$ -8 poll. longi graciles. *Capitula* radiata 1 $\frac{1}{2}$ -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. del. et lith.

Aster perfoliatus, Oliv.

PLATE 1718.

MUSSÆNDA MUTABILIS, Hemsl.

RUBIACEÆ. Tribe MUSSÆNDEÆ.

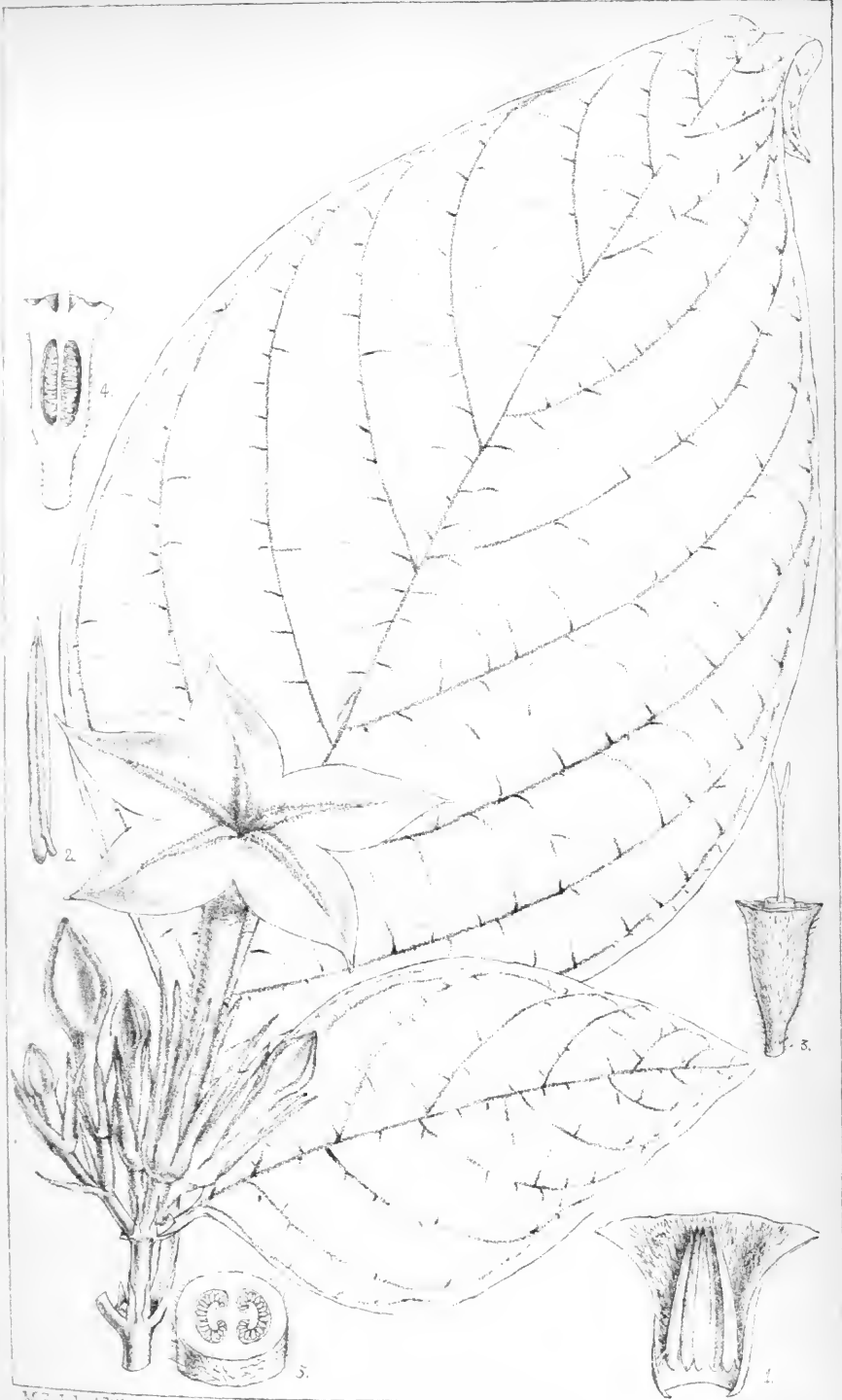
M. mutabilis, Hemsl.; præter flores glabra vel glabrescens, foliis graciliter petiolatis ovatis utrinque attenuatis, calycis lobis persistentibus æqualibus, corollæ lobis late ovatis. *Acranthera mutabilis*, Hemsl. in 'Journ. Bot.' 1887, p. 204.

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, 2-2½ 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 corollæ lobis late ovatis, &c.—W. B. HEMSLEY.

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 *Mussænda*, 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.*



Mussaenda mutabilis Hemsl.

PLATE 1719.

NASTURTIUM HENRYI, Oliv.

CRUCIFERÆ.

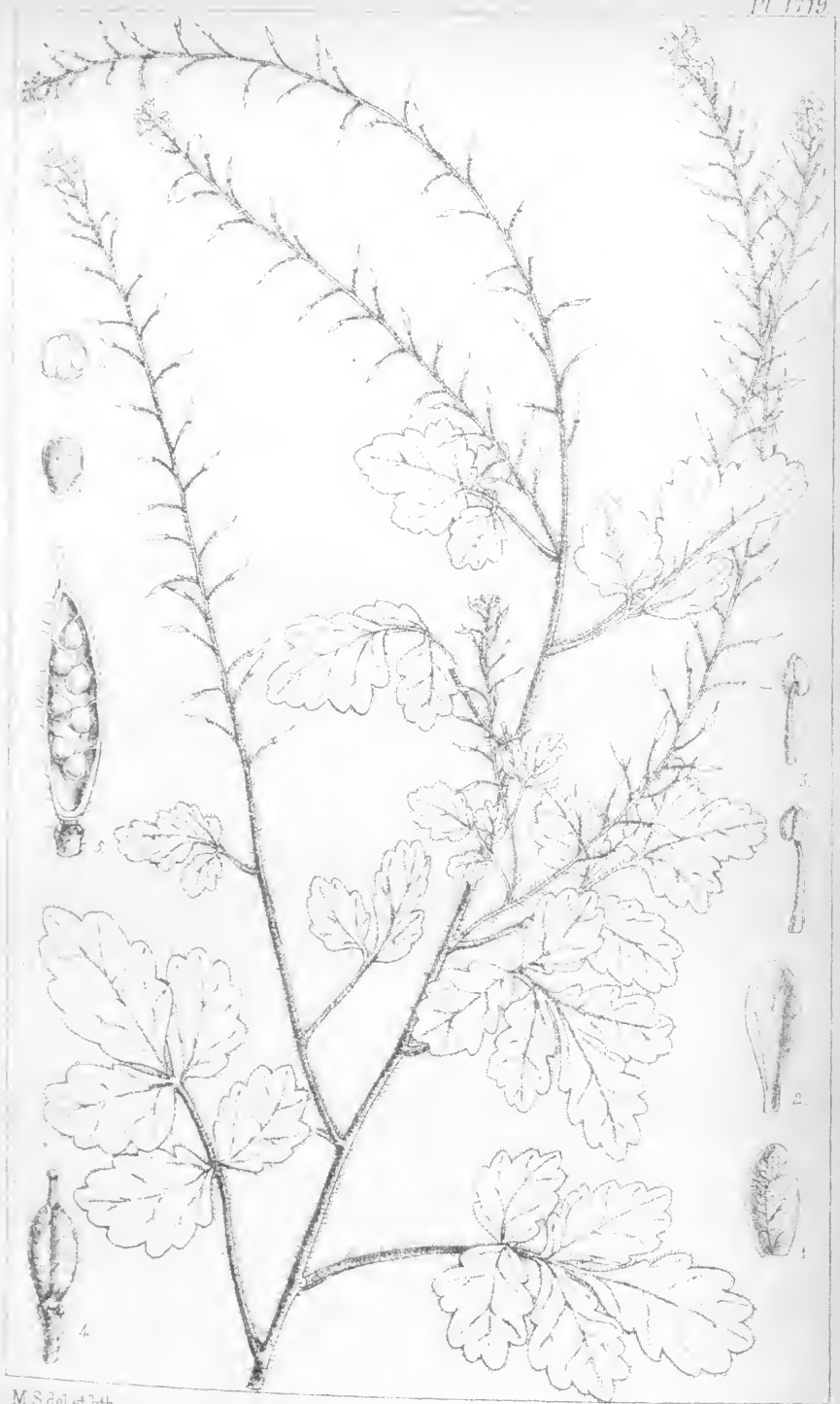
N. Henryi, Oliv. (*sp. nov.*); herba debilis, parce pilosula, caulibus gracilibus decumbentibus tenuiter albido-pilosis, foliis petiolatis pinnati-partitis segmentis ovatis v. ellipticis tenuibus obtusis obtuse crenato-dentatis supra breviter subtus longiuscule parce pilosis, lateralibus sæpius bijugis sessilibus v. basi petiolatim - angustatis, racemis terminalibus angustis sinuatis elongatis multifloris breviter pedunculatis, pedicellis fructiferis patentibus capsulam subæquantibus, capsulis brevibus ovali-oblongis subteretibus (leviter dorso compressis) sæpe oligo- v. mono-spermis, valvis tenuibus cymbiformibus, radícula incumbente.

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

Herba $\frac{1}{2}$ -1-pedalis. Flores parvi albidi. Ovula in loculis 5-8. Capsula pilis albidis patentibus parce pilosula 1-1 $\frac{1}{2}$ lin. longa, stylo brevi coronata.

This singular plant, which for the present may be left in *Nasturtium*, may prove ultimately better disposed of in *Lepidineæ* 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. Petal. 3. Stamens. 4. Ovary. 5. Same laid open. 6. Seed. 7. Embryo. Enlarged.



M. S. del. et lith.

Nasturtium Henryi, Oliv

PLATE 1720.

BOMBAX JENMANI, Oliv.

MALVACEÆ, § BOMBACEÆ.

B. Jenmani, Oliv. (*sp. nov.*); foliis glaberrimis petiolo laminæ foliolorum subæquilongo subtereti, foliolis 5-7 ovali- v. oblanceolato-oblongis breviter acute v. acutiuscule acuminatis basi in petiolulum angustatis tenuiter coriaceis supra nitidis subtus opacis pallidioribus, floribus eis *Pachiræ aquaticæ* 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 $1\frac{1}{4}$ - $1\frac{3}{4}$ poll. lata; petiolus 4 poll. longus; petiolulus $\frac{1}{4}$ - $\frac{1}{2}$ 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 Bombacæ 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.



MS del. & hth.

Bombax Jenmani. Ohv.

PLATE 1721.

PHYLLOBCEA SINENSIS, *Oliv.*

GESNERACEÆ. Tribe CYRTANDREÆ.

P. sinensis, *Oliv.* (*sp. nov.*); internodiis brevibus, foliis longe petiolatis oppositis lanceolato- vel oblongo-ellipticis acutiusculis basi in petiolum angustatis margine obscure crenulato-dentatis supra glabris subtus cum petiolo arcte fulvo-tomentellis, nervis primariis utrinque 10-12 curvatis subtus prominulis, petiolo basi dilatato amplexicaule, pedunculis axillaribus foliis inferioribus brevioribus laxè tomentellis tomento deciduo, cymis plurifloris conspicue bracteatis, bracteis herbaceis late ovatis rotundatisve obtusis sessilibus, pedicellis calyce æquilongis, lobis calycis subæqualibus oblanceolatis obtusis, corolla late campanulata lobis rotundatis subæqualibus, staminibus inclusis filamentis infra medium incrassatis.

HAB. Ichang, *Dr. A. Henry* (No. 1572).

Herba $\frac{3}{4}$ -1-pedalis. *Folia* 3-4 poll. longa, $\frac{3}{4}$ -1 $\frac{1}{2}$ poll. lata; petiolus 1 $\frac{1}{2}$ -2 poll. longus. *Pedunculi* stricti 2-2 $\frac{1}{2}$ poll. longi; *bracteæ* $\frac{1}{2}$ poll. longæ. *Capsula* torta 1 $\frac{1}{2}$ 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.

Phyllobœa sinensis, Ohw.

PLATE 1722.

LYSILOMA SABICU, *Benth.*

LEGUMINOSÆ. Suborder MIMOSÆ

L. Sabicu, *Benth. in Hook. Kew 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, *R. 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.; stipulæ obovatæ obtusæ venosæ $\frac{1}{3}$ - $\frac{1}{2}$ poll. longæ; foliola $\frac{1}{2}$ - $\frac{3}{4}$ poll. longa, $\frac{1}{4}$ - $\frac{1}{2}$ poll. lata (interdum minora). *Pedunculi* $1\frac{1}{2}$ -2 poll. longi. *Legumen* $2\frac{3}{4}$ -4(-5) poll. longum, 1 - $1\frac{1}{3}$ poll. latum; stipite $\frac{1}{2}$ -1 poll. longo.

This species, as pointed out by the late Mr. Bentham, in the 'Kew Journal' (*l. 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.—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 Kew 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.

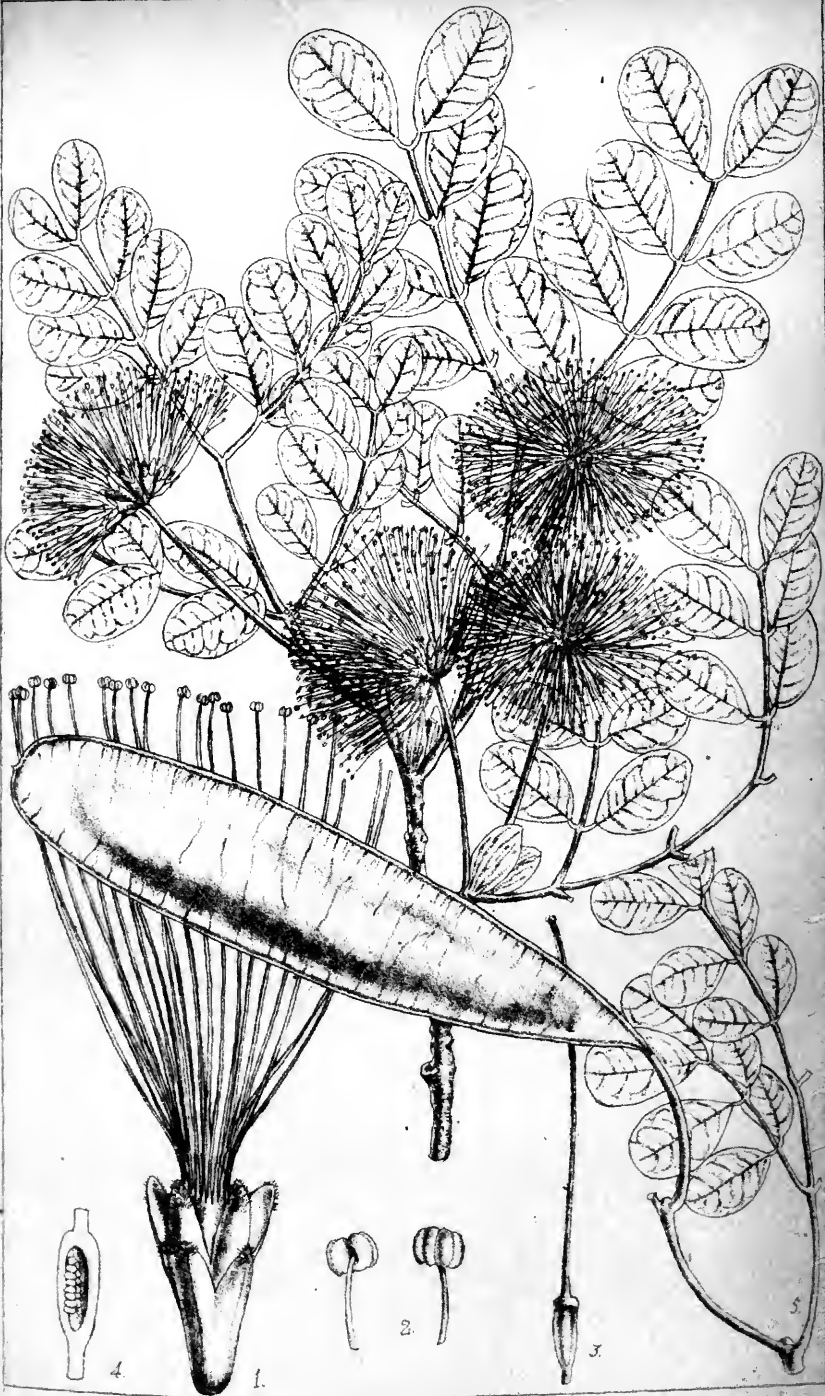


PLATE 1723.

OLDENBURGIA PAPIONUM, DC.

COMPOSITÆ. Tribe MUTISIACÆ.

O. Papionum, DC. *Prodr.* vii. 12; caule florifero elongato erecto 1-2-cephalo, foliis subradicalibus oblanceolatis obtusis basi longe angustatis rigide coriaceis supra glabris subtus tomentosis 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 tomentosis.

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

Folia 6-8 poll. longa 1-2 poll. lata. *Scapus* 2-2½-ped. erectus teres glabratus. *Capitula* 2½-4 poll. diam. turbinato-hemisphærica. *Flores* radii bilabiati, labio antico ligulato albo tridentato ½-¾ poll. longo; flores disci lobis linearibus subæqualibus. *Ovaria* sericeo-pilosa; pappi setis longe 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 involucral scales.—D. OLIVER.

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



PLATE 1724.

STOCKSIA BRAHUICA, *Benth.*

SAPINDACEÆ.

S. brahuica, *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 inflatis cordiformibus trivalvis loculicide dehiscentibus, seminibus subglobosis lævibus pisiformibus exalbuminosis, cotyledonibus spiraliter tortis.

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

Fructus 1-1½ poll. diam., valvis (in sicco) papyraceis extus pubescentibus.

It is not necessary to repeat here the floral characters sufficiently given by Mr. Bentham (*l.c.*). We are enabled to figure the plant thanks to a small collection made by Mr. J. H. 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. Petal. 3. Stamen. 4. Rudimentary ovary. 5. Ovary of ♂ 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.*



PLATE 1725.

CARAGANA DECORTICANS, *Hemsl.*

LEGUMINOSÆ. Suborder PAPILIONACEÆ.

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

HAB. Kurram 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. *Pedunculi* graciles, sæpissime geminati, folia æquantes vel superantes, supra medium articulati. *Calyx* glaber vel cito glabrescens. *Petala* glabra, 9–12 lineas longa. *Ovarium* glaberrimum, multiovulatum, stylo elongato curvato. *Legumen* sessile, crustaceum, læve, $1\frac{1}{2}$ –2 poll. longum, compressum, acuminatum. *Semina* oblonga, lævia.

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

'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.'—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.*



VOL. VIII.—PART II.]

[MARCH.

HOOKER'S
ICONES PLANTARUM;

OR,

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, EDIN., AND GLOTT., CORRESP. MEMB. INST. FRANCE:

LATE DIRECTOR OF THE ROYAL BOTANICAL GARDENS, KEW.

VOL. VIII., D

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PLATE 1726.

NANOLIRION CAPENSE, *Benth.*

LILIACEÆ. Tribe ASPHODELEÆ.

N. capense, *Benth. in Benth. et Hook. fil. Gen. Plant.* iii. 793; *Herpolirion capense*, Bolus in Journ. Linn. Soc. xviii. 395.

HAB. In summo cacumine saxoso montis Winterhoek prope Tulbagh, Africa austr., *H. Bolus* (No. 5170).

'Herba perennis acaulis graminoides glabra cæspitosa bipollicaris; rhizoma gracile repens stoloniferum, flagellis hypogæis filiformibus. Folia linearia congesta rigida, basi membranacea scapam arcuato cingentia, sursum complicata, dorso crebre nervata, acumine calloso desinentia, flores parum superantia, 1-2 centim. longa, 2 mill. lata. Scapus subnullus filiformis umbellatus, 1-2- v. rarius 3-florus; bracteæ foliis subconformes basi vaginantes, vetustiores 8-18 mill. longæ; pedicelli floriferi ascendentes subcarnosi flavi, fructiferi decurvati indurantes diu persistentes, 6-8 mill. longi. Perianthium pallide cæruleum, 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 æquante. Capsula subglobosa leviter 3-lobata, 5 mm. longa et lata, loculicide dehiscens, seminibus in loculis geminis collateralibus erectis translucens.'—*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 here-with 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. D. et lith

Nanolirion capense Benth

PLATE 1727.

POLYXENA HÆMANTHOIDES, Baker.

LILIACEÆ. Tribe SCILLEÆ.

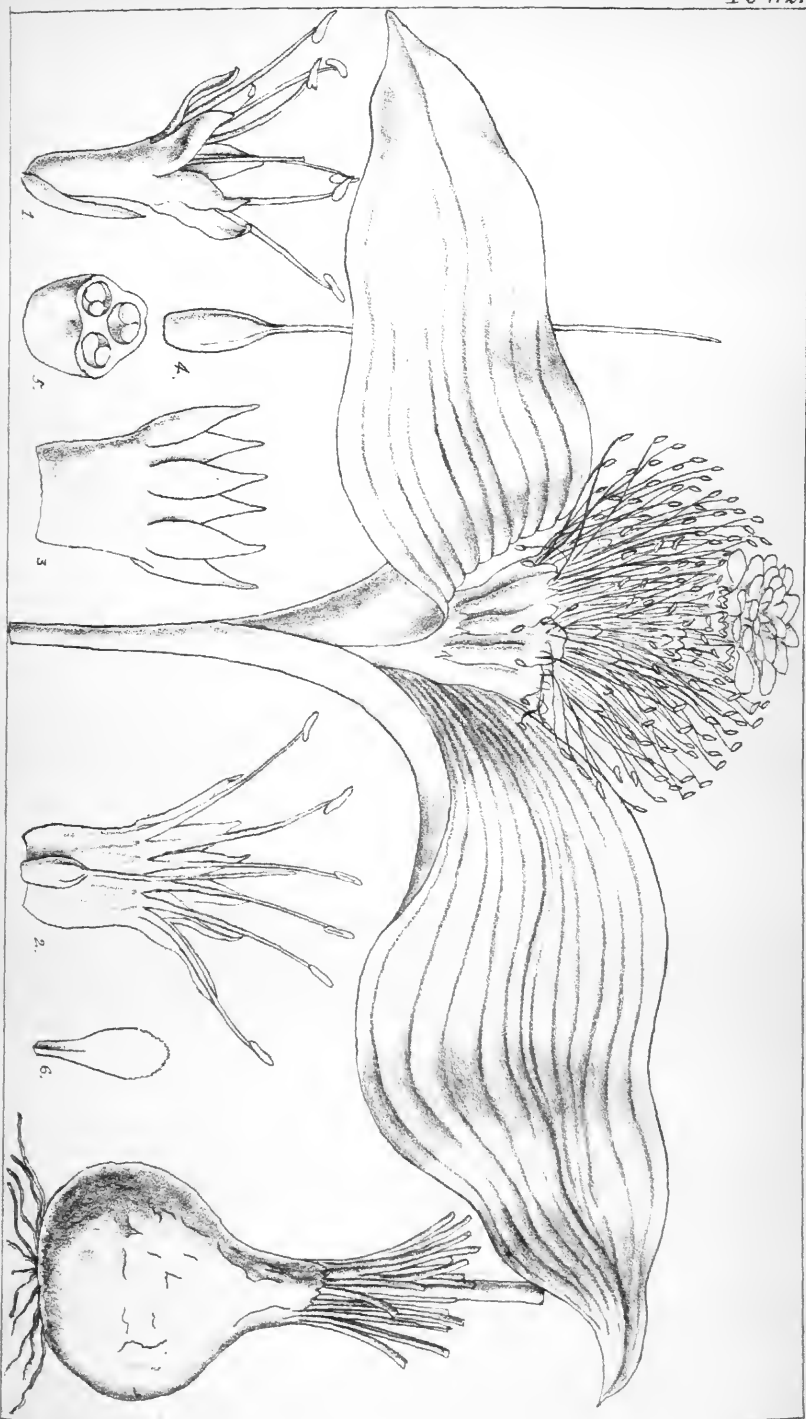
P. hæmanthoides, Baker (sp. nov.); bulbo magno subgloboso, pedunculo brevissimo subhypogæo, foliis 2 patulis humifusis oblongis acutis glabris subcarnosis conspicue multinervatis margine scabris, floribus permultis in capitulum globosum congestis, pedicellis brevissimis vel subnullis, bracteis parvis 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 lit.

Polyxena hæmanthoides, Baker.

PLATE 1728.

ANGRÆCUM SAUNDERSIÆ, Bolus.

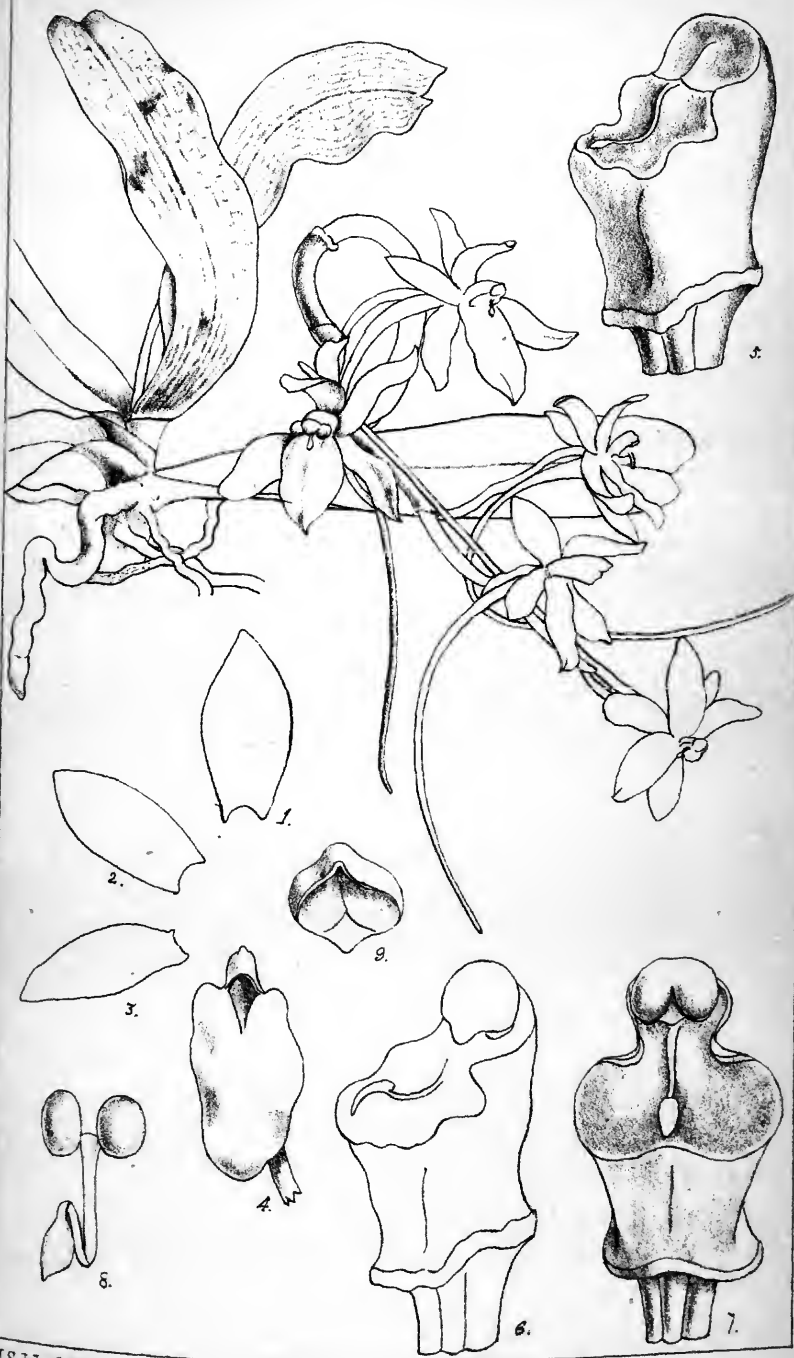
ORCHIDACEÆ. Tribe VANDEÆ.

Angræcum Saundersiæ, Bolus (*sp. nov.*); caulis brevis simplex herbaceus; folia disticha ligulata basi angustata apice acute et oblique biloba, coriacea, obscure reticulata, 8·0–11·0 cm. longa; racemi axillares penduli, foliis longiores pauciflori (–5-flori); flores pedicellati albi; sepala et petala lateralia lanceolato-oblonga subconsimilia, sepalo postico declinato, petalis lateralibus demum reflexis, 1·2 cm. longa; labellum oblongum parum majus, patens, basi in calcar filiforme 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 pollinium unica, rostello exacte conformis eoque arcte adpressa; ovarium filiforme, gracile, cum pedicello 1·5–2·2 cm. longum. (*Ex exempl. 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.

Angræcum Saundersiæ. Bolus



M.S. del. et lith.

Satyrium princeps, Bolus.

PLATE 1729.

SATYRIUM PRINCEPS, *Bolus*.

ORCHIDACEÆ. Tribe OPHRYDEÆ.

Satyrium princeps, *Bolus* (*sp. nov.*); glabrum, erectum, robustum, 40-85 centim. altum; folia 2, radicalia, ovato-subrotunda, acuta, carnosâ, multinervia, humistrata, 10-22 cm. longa, 8-18 cm. lata; scapus rectus, validus, vaginis inferioribus erecto-patentibus cucullatis acuminatis membranaceis apice sub-foliaceis, superioribus sensim minoribus acutis, omnino membranaceis; spica dense multiflora, oblonga, 10-25 cm. longa; bracteæ lanceolatæ, acutæ, membranaceæ, multinerviæ, inferioribus reflexis floribus brevioribus, junioribus erectis; flores patentes, subnutantes, laciniis perianthii alte solutis; sepala lateralialia oblique oblonga, abrupte acuta, patentia, 1.4 cm. longa, inter medium angustius ligulatum apice ampliatur, obtusum, deflexum, æquilongum; petala lanceolata, acuminata, e medio usque ad apicem serrulata, deflexa, sepalis æquilonga; labellum galeatum, ore subrotundo, 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; glandulæ lanceolatæ acuminatæ, apice approximatæ; lobus stigmatiferus rhomboidens, latior quam longus, superne marginatus, emarginatusque; ovarium oblongum, costatum, circa 1.7 cm. longum. (*Ex exempl. plur. viv. sub num. 5929 distrib.*)

HAB. In dunis arenosis juxta litus maris, sinu St. Francis Bay. prope Port Elizabeth, flor. Sept., legit *R. Hallack*.—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 INULOIDEÆ.

I. rhizocephala, Schrenk; foliis angustioribus; involucri bracteis viridibus, corollis liguliformibus pappo fere duplo longioribus, achæniis 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. HEMSLEY.

Fig. 1. An involueral 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 Kew Herbarium.



M. S. del et lith

Inula rhizocephala, Schr.

PLATE 1731.

INULA RHIZOCEPHALOIDES, *Clarke*.

COMPOSITE. Tribe INULOIDEÆ.

I. rhizocephaloides, *Clarke*; involucri bracteis angustioribus longioribus apice coloratis, floribus liguliformibus pappam paullo superantibus, achæniis glabris.—*Compositæ Indicæ*, 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 involucreal 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. Iel et hth.

Inula rhizocephaloides, C.B.C.

PLATE 1732.

TRICHOLEPIS TIBETICA, *Hook. f. et Thoms.*

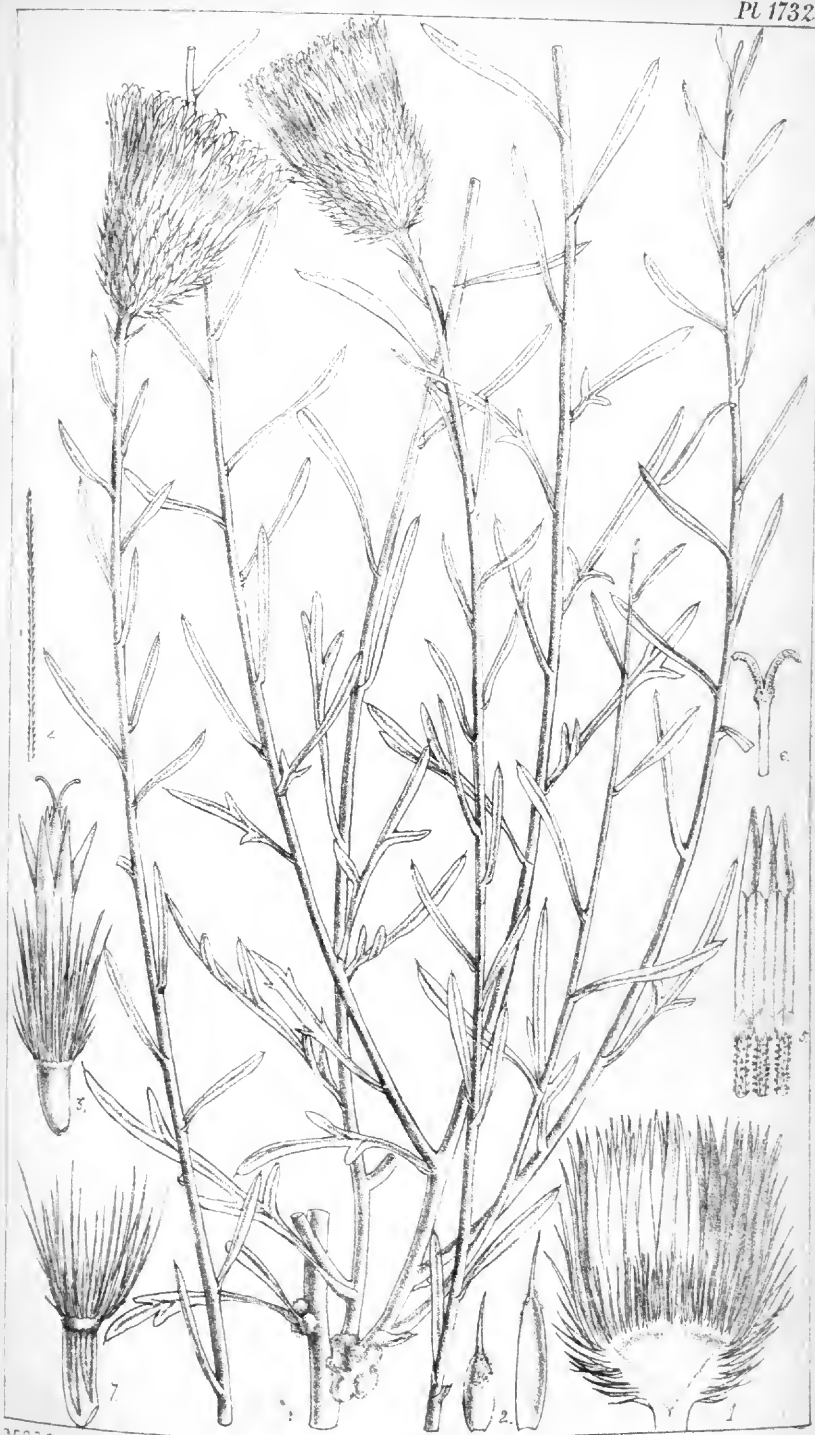
COMPOSITÆ. Tribe CYNAROIDEÆ.

T. tibetica, *Hook. f. et Thoms.*; involucri bracteis exterioribus brevibus aculeiformibus patulis, interioribus linearibus longioribus sed quam flores brevioribus, achæniis costatis simul rugulosis.—Clarke, *Compositæ Indicæ*, 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.*



M. S. del. et lith.

Tricholepis tibetica, Hk.f. & T.

PLATE 1733.

TRICHOLEPIS SPARTIOIDES, *Clarke*.

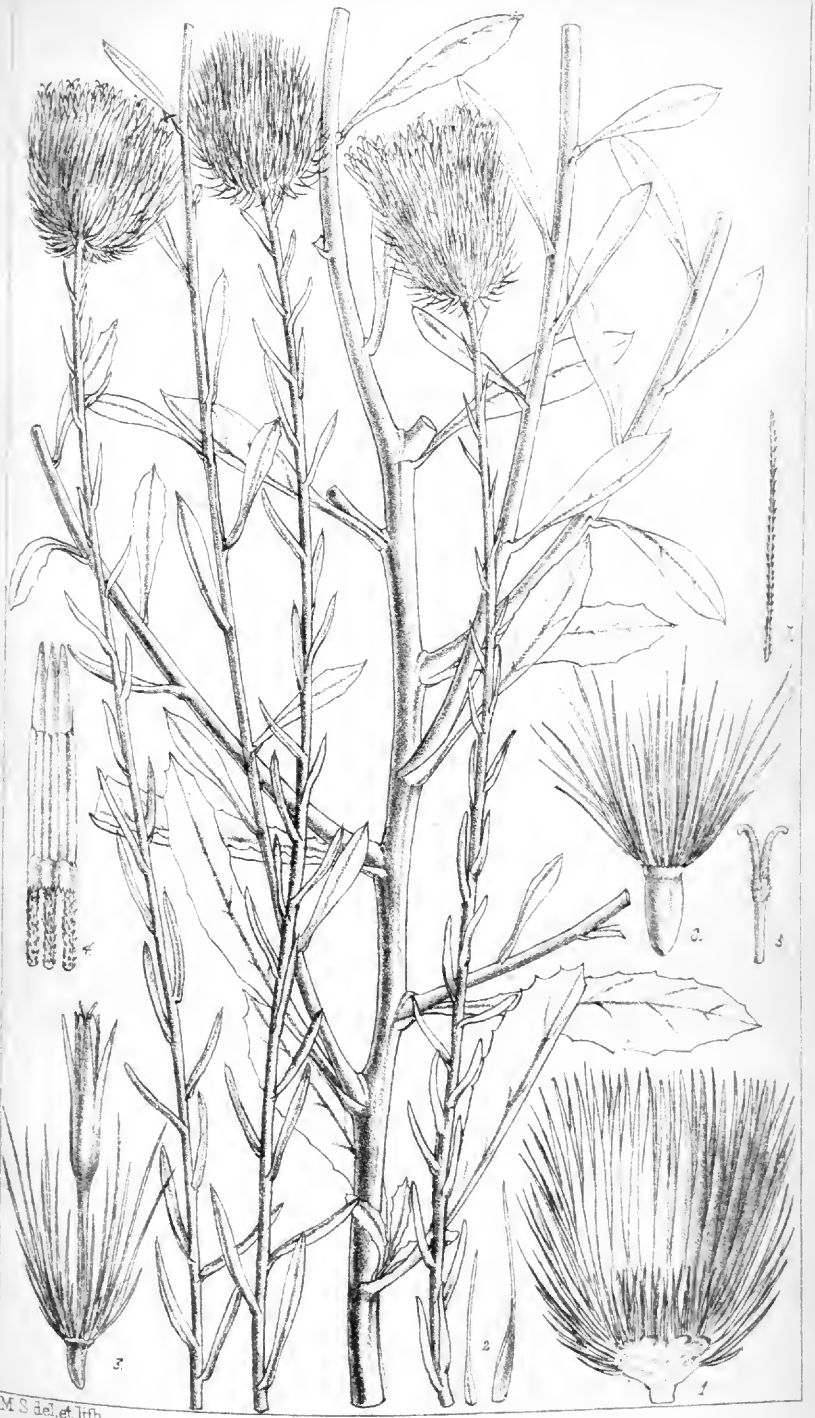
COMPOSITÆ. Tribe CYNAROIDEÆ.

T. spartioides, *Clarke*; involucri bracteis numerosissimis setiformibus, achæniis ecostatis.—*Clarke, Compositæ Indicæ*, p. 241; *Jurinea chætolepis*, *Boiss. Fl. Or. iii.* p. 570.

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

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

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 spartuoides, C.B.C.

PLATE 1734.

SAUSSUREA LEPTOPHYLLA, *Hemsl.*

COMPOSITÆ. Tribe CYNAROIDEÆ.

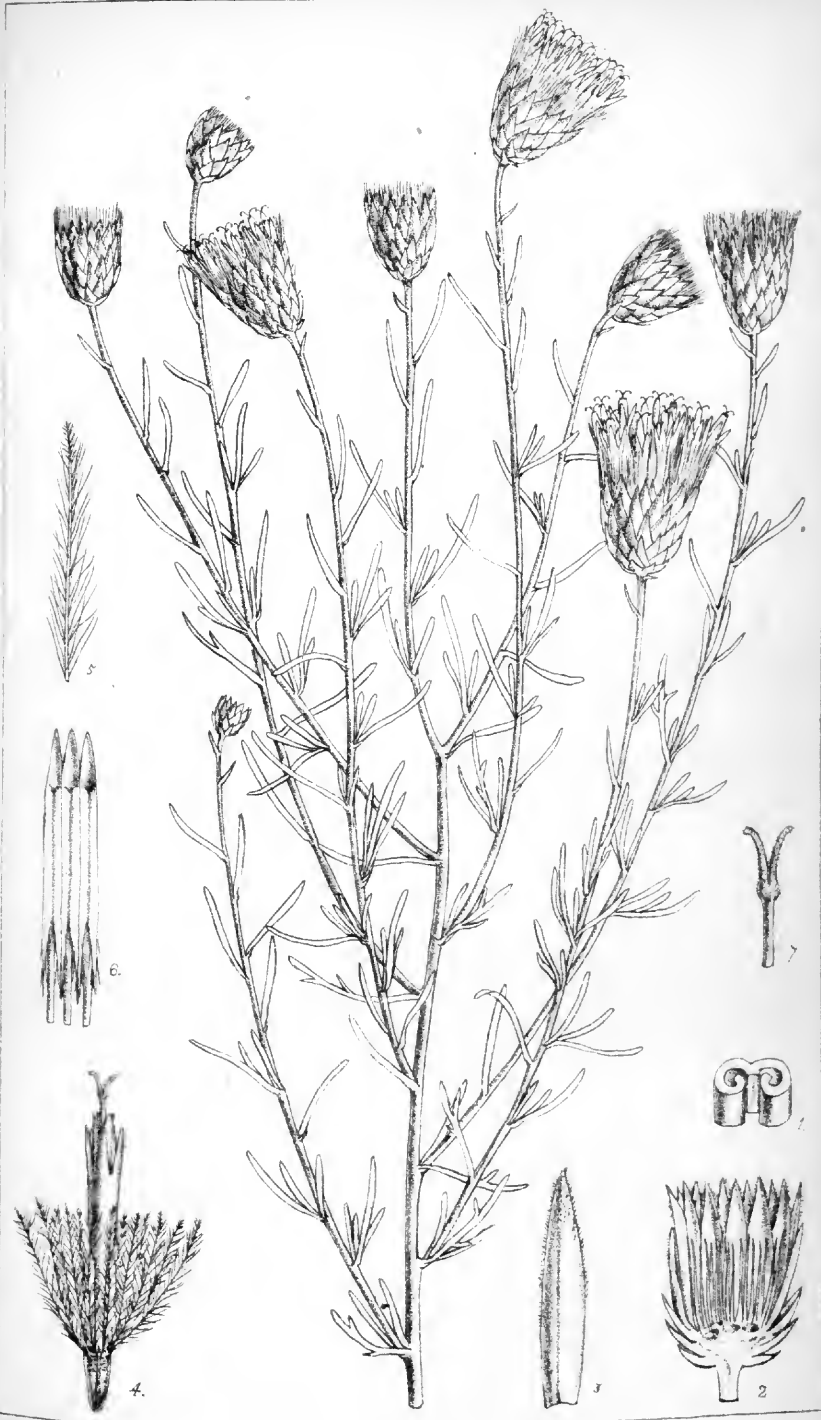
S. leptophylla, *Hemsl.* (*sp. nov.*); ramosissima, facie foliisque *Jurineæ elegantis* et spp. aff.; differt capitulis brevioribus pappi setis uniseriatis etc.

HAB. Shah Salim, at 9,700 feet; Gilgit Expedition, *Dr. Giles.*

Herba sublignosa, glabra, ramulis gracilibus viridibus striatis. *Folia* angustissima, marginibus arcte revolutis, pseudoteretia, 4–8 lineas longa, caulina inferiora interdum 2–3-lobata. *Capitula* terminalia, solitaria, pedunculis foliiferis; involucri bracteæ 7–8-seriatæ, rigidæ, rectæ, acutissimæ, primum leviter arachnoideæ; receptaculi paleæ angustissimæ, achæniis multo longiores. *Achænia* 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. HEMSLEY.

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 lth.

Saussurea leptophylla, Hemsl.

PLATE 1735.

SAUSSUREA DECURRENS, *Hemsl.*

COMPOSITE. Tribe CYNABOIDEÆ.

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, laxè corymbosa; involucri bracteæ 7-8-seriatæ, glabræ vel minutissime puberulæ, rigidæ, acuminatissimæ; receptaculi paleæ molles, gracillimæ, achæniis multo longiores. *Achænia* matura non visa; pappus albus, flore brevior, setis longe plumosis, exterior nullus.—W. B. HEMSLEY.

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



M.S. de, et. lrt

Saussurea decurrens, Hemsl.

PLATE 1736.

SAUSSUREA GILESII, *Hemsl.*

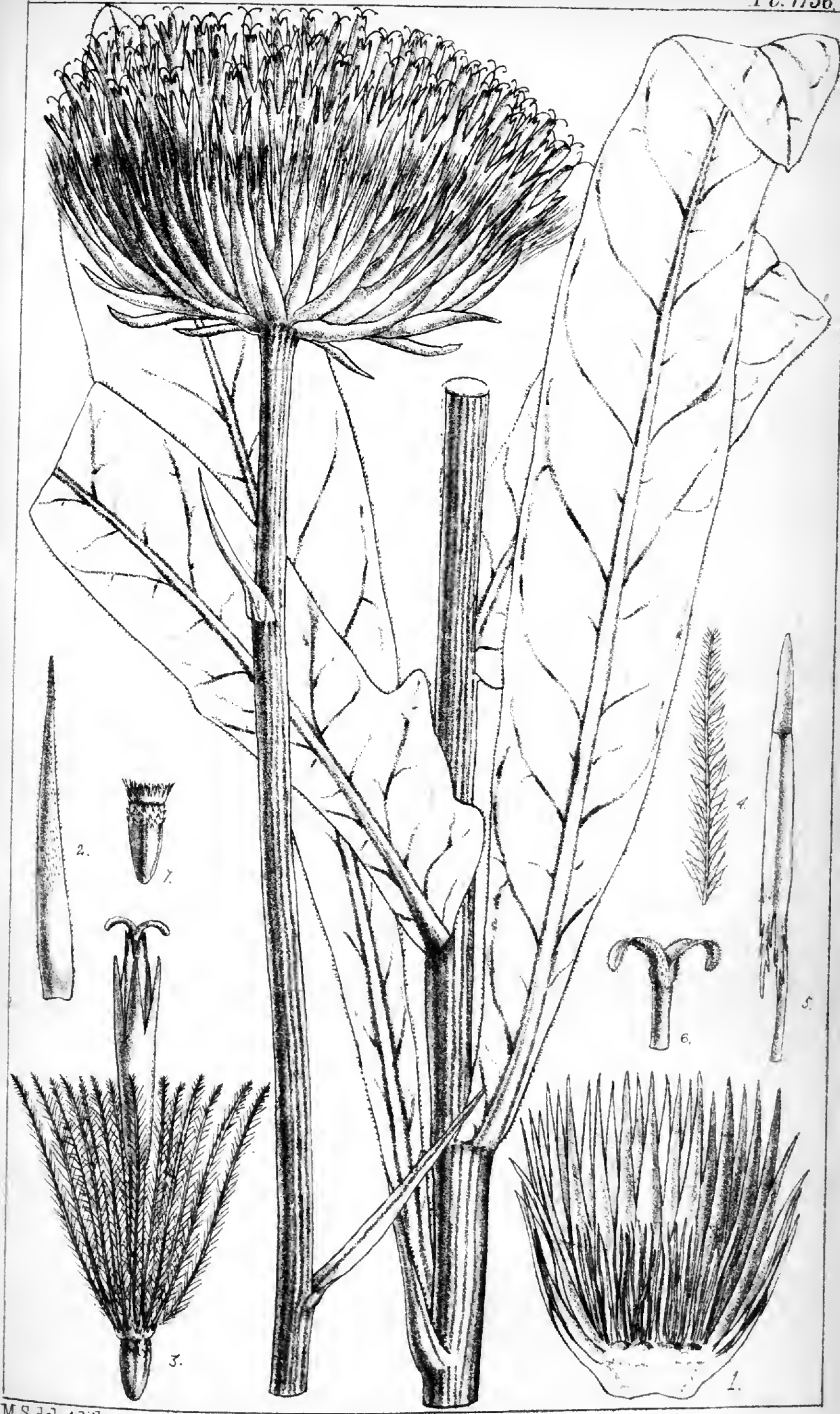
COMPOSITÆ. Tribe CYNAROIDEÆ.

S. Gilesii, *Hemsl.* (*sp. nov.*); species ex affinitate *S. glandulosæ* elatior foliis integris, involucri bracteis numerosioribus, achæniis squamuliferis etc.

HAB. Dorah Pass, 12,000 to 14,000 feet; Gilgit Expedition, *Dr. Giles.*

Herba erecta $1\frac{1}{2}$ – $2\frac{1}{2}$ ped. alta, scabrida, caulibus crassiusculis striatis monocephalis. *Folia* (caulina tantum visa) sessilia, tenuia, anguste lanceolata, acuta vel subobtusata, usque ad 6 poll. longa, basi subauriculata, vel inferiora in petiolum attenuata. *Capitula* magna, longe pedunculata; involucri bracteæ numerosissimæ, pauciseriatæ, elongatæ, lineari-lanceolatæ, acutissimæ, subherbaceæ, demum coriaceæ, hispidulæ; receptaculi paleæ angustæ, acutæ, achæniis longiores. *Achænia* matura non visa, squamulifera; pappus albidus, setis longe plumosis, exterior cupulatus.—W. B. HEMSLEY.

Fig. 1. Section of receptacle. 2. Bract. 3. Flower. 4. Bristle of pappus. 5. Stamen. 6. Part of style and stigma. 7. Young achene. *Enlarged.*



M. S. del et lith.

Saussurea Glesii, Hemsli.

PLATE 1737.

STATICE GILESII, Hemsl.

PLUMBAGINEÆ.

S. Gilesii, Hemsl. (*sp. nov.*); aff. *S. Griffithii*, Aitch. et Hemsl. differt imprimis spiculis circiter 6-floris.

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

Herba perennis, scaposa, glabra, glauca, minute lepidota. *Folia* dense rosulata, crassa, coriacea, obovata vel spathulata, 1-2½ poll. longa, apice aculeato-mucronata. *Scapus* solitarius, flexuosus, 12-15 poll. altus, sæpius simplex sed interdum ramulis 2-3 brevibus lateralibus instructus, ad vel infra medium floriferus. *Spiculæ* 3-10-floræ (sæpius 5-6-floræ), sessiles, bracteis bracteolisque similibus latis brevibus fere omnino scarioso-hyalinæ; bractea 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 lith.

Statice Gilesii, Hemsl

PLATE 1738.

TABEBUIA LONGIPES, Baker.

BIGNONIACEÆ. Tribe TECOMEÆ.

T. longipes, Baker (*sp. nov.*); arborea, glabra, foliis unifoliolatis oblongis rigide coriaceis longe petiolatis, floribus in paniculam subsessilem corymbosam dispositis, bracteis parvis lanceolatis, calycis tubo oblongo segmentis ovatis irregularibus, corollæ tubo late infundibulari segmentis 5 orbicularibus subæqualibus, fructu subcylindrico elongato, seminibus late membranaceo-alatis.

HAB. British Guiana; wet savannahs at Hooroo-bea, Jenman, 3723.

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

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

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



PLATE 1739.

CHELIDONIUM LASIOCARPUM, Oliv.

PAPAVERACEÆ. Tribe EUPAPAVEREÆ.

C. lasiocarpum, Oliv. (*sp. nov.*); herba 1-1½-pedalis parce pilosula, foliis tenuibus lyrato-pinnatipartitis, segmentis lateralibus ovato-oblongis acutatis irregulariter dentatis inferioribus brevioribus terminali late ovato-rotundato inæqualiter late dentato, pedunculis 4-5-fasciculatis folio brevioribus pilosulis, sepalis pilosulis apiculatis caducis, petalis obovato-rotundatis, stylo longiusculo glabrato stigmatate capitato, capsula cylindrica elongata hirtella longitudinaliter dehiscente, valvis angustis placentas cum stylo persistente nudantibus, seminibus cristatis.

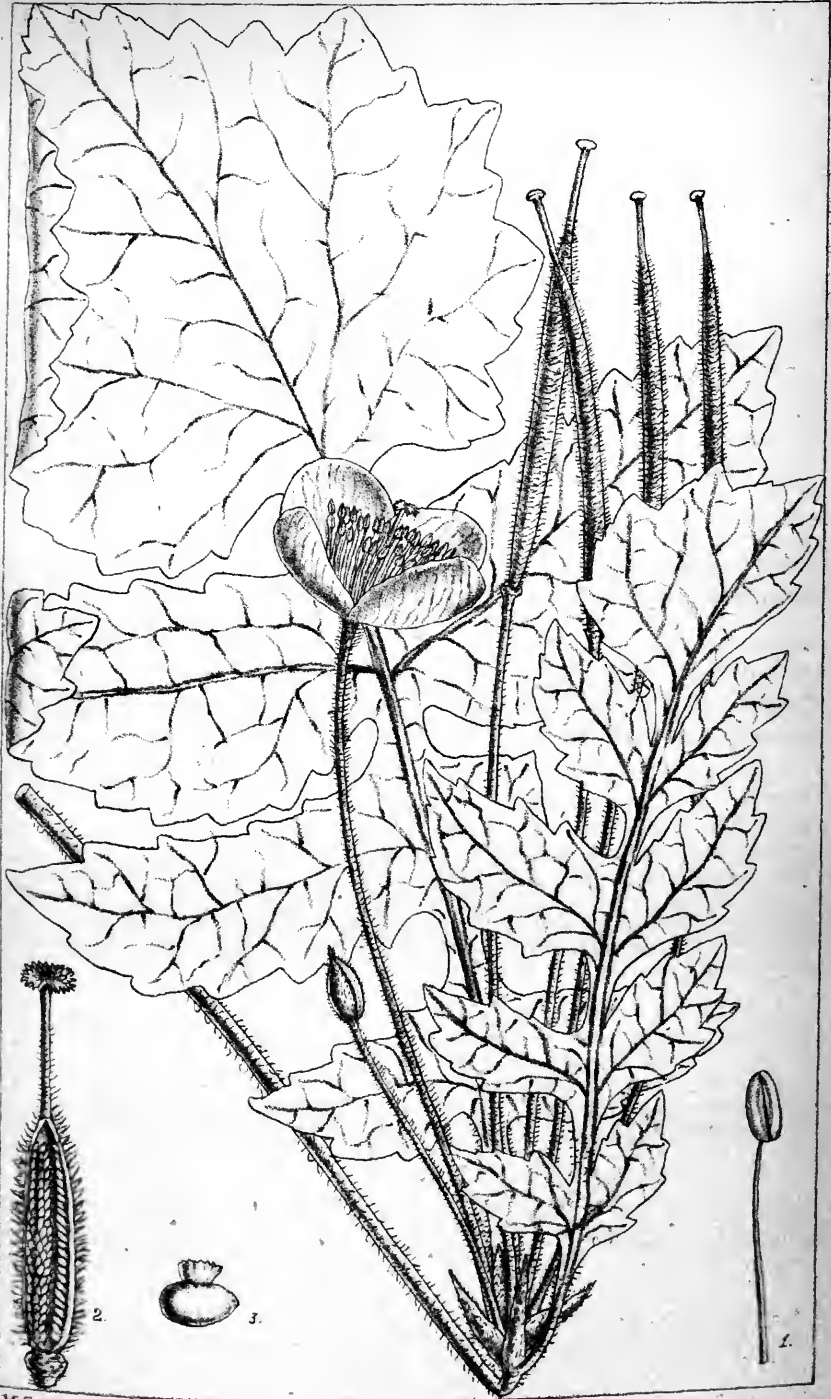
HAB. Nan-t'o, Prov. Hupeh, cultivated only; originally introduced from Szechwan, Dr. A. Henry (No. 3885).

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 Papaveraceæ 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. del et lith.

Chelidonium lasiocarpum, Oliv.

PLATE 1740.

ACTINOTINUS SINENSIS, Oliv.

CAPRIFOLIACEÆ.

Actinotinus, Oliv. (*gen. nov.*). Flores hermaphroditi, exteriores majores neutri. Calyx tubo campanulato-turbinato, limbo 5-fido lobis deltoideo-ovatis dorso incrassatis. Corolla epigyna campanulato-rotata 5-fida, lobis ovato-ellipticis obtusis æstivatione imbricatis, fl. exter. neutri corolla oblique ampliata unilateraliter 4-5-lobata, lobis interioribus minoribus. Stamina 5 basi corollæ inserta leviter exserta, antheræ dorsifixæ oblongæ. Ovarium inferum 1-loculare, ovulum solitarium pendulum; stylus conicus, stigma 3-lobulatum.—Arbuscula 10-pedalis, ramulis ultimis teretibus crassitie pennæ cygni glabris. Folia opposita longe petiolata digitata, foliolis 7 oblongo-ob lanceolatis acuminatis basi angustatis concinniter serrulatis petiolulatis. Cymæ breviter pedunculatæ umbelliformes terminales puberulæ pilis interdum paucis stellatis, floribus ♂ fasciculatim congestis.

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

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

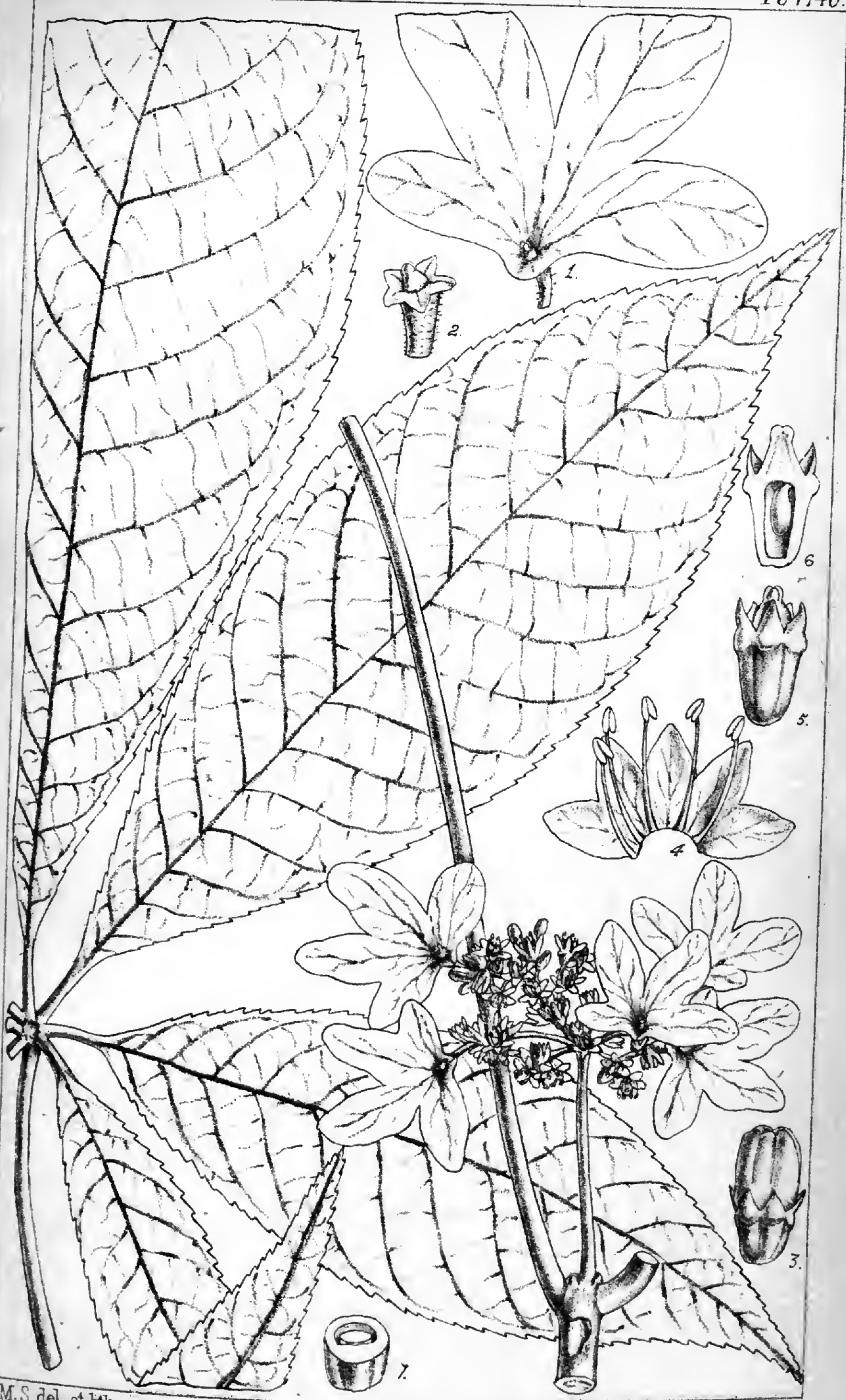
Folia exstipulata supra glabrata subtus tenuiter pubescentia; foliola majora 6-9 poll. longa $1\frac{3}{4}$ -3 poll. lata; petiolus teres puberulus 6-10 poll. longus petioluli $\frac{1}{3}$ -1 poll. longi v. foliolis lateralibus breviores. Cymæ 2-3 poll. diam.; flores neutri 1 poll. diam., pedunculus $\frac{3}{4}$ -1 $\frac{1}{2}$ 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 *Æsculus*, 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.*



M.S del, et lith.

Actinotinus sinensis, Oliv.

PLATE 1741.

DECUMARIA SINENSIS, Oliv.

SAXIFRAGACEÆ. Tribe HYDRANGÆÆ.

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

HAB. Ichang, Prov. Hupeh, China, *Dr. Aug. Henry* (No. 3434).

Folia $1\frac{1}{2}$ -2 poll. longa, $\frac{2}{3}$ -1 poll. lata; *petiolus* $\frac{1}{4}$ - $\frac{1}{2}$ 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.S. del et lith

Decumaria sinensis, Oliv.

PLATE 1742.

HAMAMELIS MOLLIS, *Oliv.*

HAMAMELIDÆ.

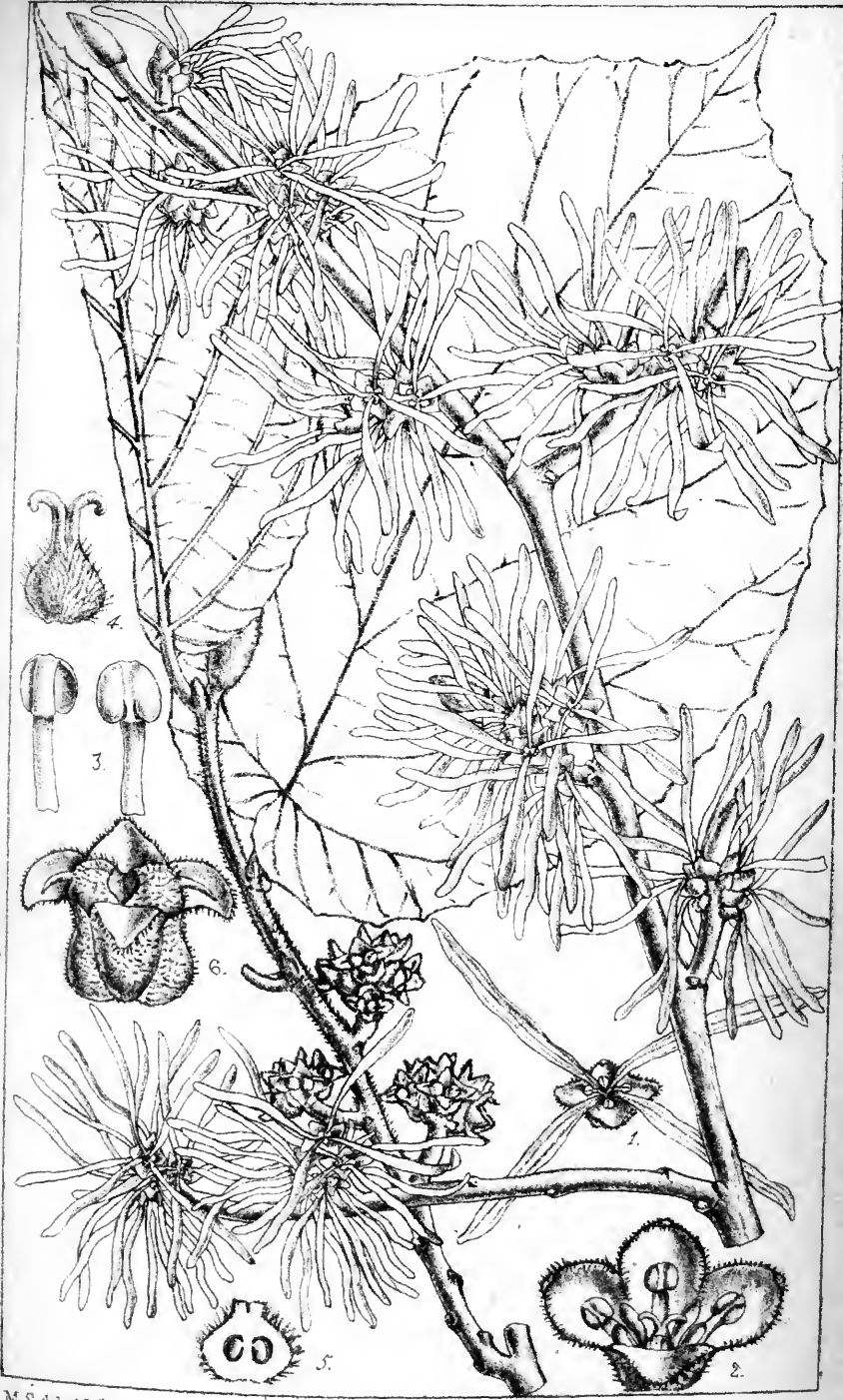
H. mollis, *Oliv. (sp. nov.)*; foliis late obovato-ellipticis cuspidatis basi oblique cordatis sinuato-denticulatis supra minute subscabride stellulato-pubescentibus subtus dense stellato-tomentosis, breviter petiolatis, stipulis caducis dense tomentosis.

HAB. Patung, Prov. Hupeh, China, *Dr. Aug. Henry* (No. 3791, 3793A).

Arbor 10-30-pedalis. *Folia* 4-5 poll. long., $2\frac{1}{2}$ - $3\frac{1}{2}$ poll. lata; petiolus tomentosus $\frac{1}{4}$ - $\frac{1}{2}$ poll. longus; stipulæ intus glabræ $\frac{1}{4}$ - $\frac{1}{2}$ poll. longæ.

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

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.*

POLYGONACEÆ.

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. Ind.* v. 32 (*cum 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 amplexicaule, Don, var.

PLATE 1744.

CHRYSOSPLENIUM MACROPHYLLUM, Oliv.

SAXIFRAGACEÆ. Tribe SAXIFRAGACEÆ.

C. macrophyllum, Oliv. (sp. nov.) § Innovationes epigææ, §§ Folia alterna (Maximowicz, *Chrysosplenium* in *Mélanges Biolog.* xi. p. 218), foliis radicalibus leviter carnosulis late obovatis obtusissimis basi in petiolum longiusculum cuneatim angustatis, petiolo marginibus pilis longis laxis ferrugineis lanuginosis, caule subnudo, bracteis ellipticis oblongisve cornuto-dentatis floribus breviter pedicellatis longioribus, floribus sæpius 4-meris, staminibus 8 filamentis elongatis calyce duplo longioribus (v. 2 sæpe breviora v. 0), capsula $\frac{2}{3}$ -libera truncata biloba stylis persistentibus horizontaliter divaricatis coronata, seminibus castaneis nitidis minutissime pilosulis.

HAB. Nan-t'ò, Prov. Hupeh, China, *Dr. Aug. Henry* (No. 3846).

Folia radicalia; lamina $2\frac{1}{4}$ -4 poll. longa, $1\frac{1}{3}$ - $2\frac{1}{2}$ poll. lata, petiolus 1 - $2\frac{1}{2}$ 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 Thoms.—D. OLIVER.

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



M. S. del. et lith.

Chrysosplenium macrophyllum, Oliv.

PLATE 1745.

ISOPYRUM HENRYI, *Oliv.*

RANUNCULACEÆ. Tribe HELLEBOREÆ.

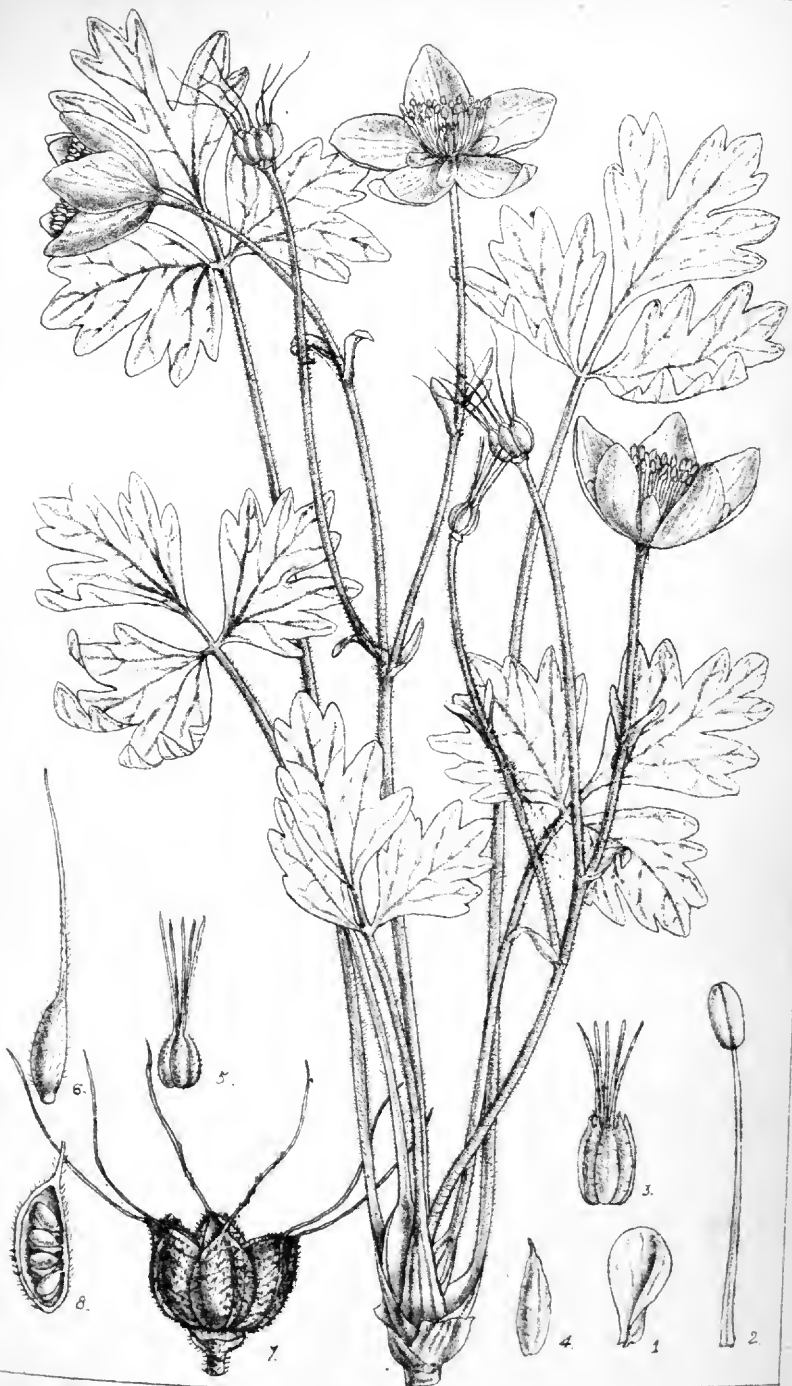
I. Henryi, *Oliv. (sp. nov.)*; foliis omnibus radicalibus longe petiolatis petiolo basi abrupte dilatato, lamina ternatim 3-partita, segmentis cuneatis inæqualiter 7-9-fidis v. 3-fidis lobis 2-3-dentatis, scapis folio subæquilongis 1-3-floris, sepalis 5 cærulescentibus oblanceolato-ellipticis obtusis 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'ò, Prov. Hupeh, China, *Dr. Aug. Henry* (No. 3820).

Folia cum petiolo elongato plus minus pubescentia, lobis obtusis; lamina $1\frac{1}{2}$ -2 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. del. et lith.

Isopyrum Henryi, Oliv.

PLATE 1746.

CIMICIFUGA CALTHÆFOLIA, Maxim.

RANUNCULACEÆ. Tribe HELLEBOREÆ.

C. calthæfolia, Maximowicz MSS.; 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 ∞ , 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, seminibus 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 $\frac{3}{4}$ -1 $\frac{1}{2}$ -ped. radice fibrosa fibris dense ferrugineo-pilosis. Folia glabrata membranacea v. tenuiter coriacea 3-4 $\frac{1}{2}$ poll. lata; petiolus glaber, 4-8 poll. longus. Scapus erectus folia superans glaber; racemus interruptus puberulus; bracteæ lanceolatæ acuminatæ pedicellis pubescentibus breviores. Flores parvi $\frac{1}{4}$ - $\frac{1}{3}$ poll. diam. Folliculus $\frac{1}{2}$ - $\frac{3}{4}$ 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.

Cimicifuga calthæfolia, Max.

PLATE 1747.

ENGELHARDTIA NUDIFLORA, Hook. f.

JUGLANDEÆ.

E. nudiflora, Hook. f. (*sp. nov.*); puberula, ramulis petiolis folisque subtus glandulosis, foliolis 2-6-jugis subsessilibus coriaceis ellipticis oblongis cuneato-obovatisve obtusis v. subacutis integerrimis v. apices versus crenato-serratis, bracteis masculis 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 folisque subtus hirtello-pubescentibus glandulisque minutis aureis conspersis. *Folia* breviter petiolata, petiolo brevi cum rachi 2-2½ poll. longa; foliola coriacea, 1-2½ poll. longa, supra fusca, subtus brunnea opaca, nervis sub-6-jugis, arcuatis, supra impressis, subtus elevatis. *Spicæ* masculæ axillares, 1-1½ pollicares, graciles; bracteis ad axim in ramulos antheras solitarias gerentes fissis, rachi ramisque teretibus puberulis. *Antheræ* minutæ, quasi breviter pedicellatæ. *Spicæ* femineæ axillares, subsolitariae, graciles, florentes erectæ, pedunculatæ, 2-3 poll. longæ, fructiferæ pendulæ, 6-7-pollicares. *Bracteæ* 1-flores, 3-fidæ, floriferæ glandulosæ; fructiferæ membranaceæ, 1-1½-pollicares; lobo medio lineari v. obovato-oblongo obtuso, basi hirsuto, lateralibus subduplo longiore. *Nux* parva, globosa, ⅙ 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 TENAX, N. E. Br.

URTICACEÆ. Tribe URTICEÆ.

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, paniculis ex axillis defoliatis subsessilibus.

HAB. Inanda, Natal, J. M. Wood (No. 3837).

Frutex 8-10-pedalis. *Folia* alterna, lamina 1-3 poll. longa et lata; petiolus $\frac{1}{2}$ -2 $\frac{1}{2}$ 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. Kirkman, 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.

Urena tenax, N.E. Br.

PLATE 1749.

LIMACIA SAGITTATA, *Oliv.*

MENISPERMACEÆ. Tribe COCCULEÆ.

L. sagittata, *Oliv. (sp. nov.)*; ramulis gracilibus sulcatis parce hirtellis, foliis petiolatis oblongo-lanceolatis obtusiuscule acuminatis mucronatis basi sagittatis v. hastato-sagittatis subtus præcipue 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, antheræ ovatæ. *Staminodia* (fl. ♀) oblonga petalis brevioribus. *Carpella* 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. Petal and staminode. 7. Carpels. 8. Raceme of same. 9. Carpel, longitudinal section. *Excepting fig. 8, enlarged.*



M.S. del. et lith.

Limacia sagittata, Oliv.

PLATE 1750.

ABUTILON SINENSE, Oliv.

MALVACEÆ. Tribe MALVEÆ.

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

HAB. S.W. China, *F. S. A. Bourne*; Ichang and Nan-t'ò 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 $1\frac{3}{4}$ -2 poll. longi decurvi; pedunculi articulati fructiferi erecti. *Fructus* $\frac{3}{4}$ 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'ò 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 hth.

Abutilon sinense, Oliv.

VOL. VIII.—PART III.] 

[MAY.

HOOKER'S ICONES PLANTARUM;

OR,

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, EDIN., AND GLOTT., CORRESP. MEMB. INST. FRANCE:

LATE DIRECTOR OF THE ROYAL BOTANICAL GARDENS, KEW.

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M.S. del et lith.

Brachyclados lycioides, Don.

PLATE 1751.

BRACHYCLADOS LYCIOIDES, G. & D.

COMPOSITE. Tribe MUTISACEÆ.

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

HAB. Patagonia; '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, *Tweedie*; Prov. Mendoza, on the Rio d. Diamante, *Gillies*; Chili, Concepcion, *Bridges*.

Frutex 2-4-pedalis, ramulis hornotinis cano-tomentosis. *Folia* $\frac{2}{3}$ -1 poll. longa, 1-2 lin. lata, brevissime petiolata, petiolis tomentosissimis. *Pedunculi* 1-2 poll. longi. *Capitula* 1-1 $\frac{1}{2}$ 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. Ray-floret. 2. Setæ of pappus. 3. Disk-floret. 4. Stamens. 5. Style. 6. Ovary and pappus. *Enlarged.*



M.S. del. et lith.

Boopis crassifolia. A. Gray.

PLATE 1752.

BOOPIS CRASSIFOLIA, A. Gray.

CALYCERÆ.

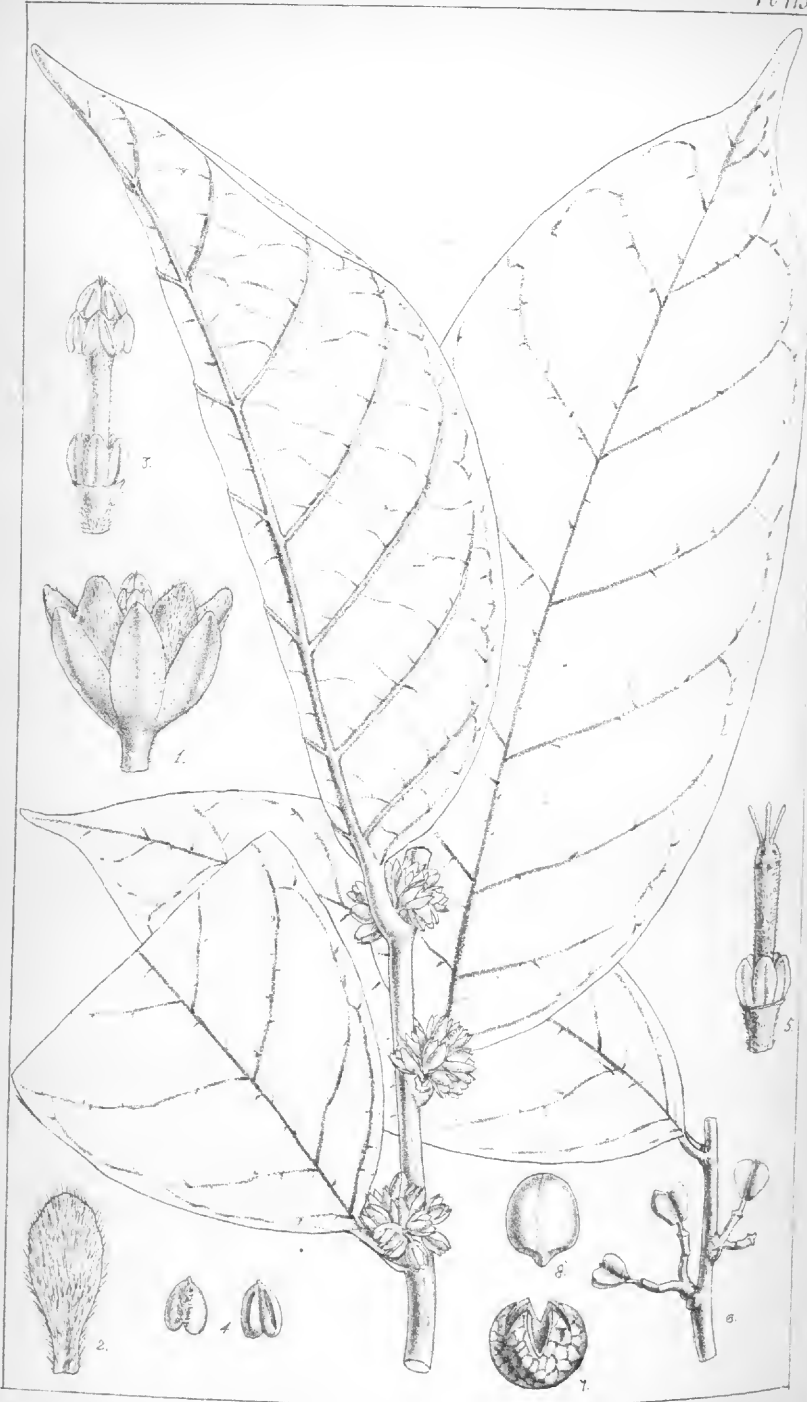
B. crassifolia, A. Gray in Proc. Am. Acad. v. 321: glaberrima, caule ramoso adscendente, foliis rigidulis carnosulis lineari- v. ovali-oblongis acutis obtusiusculisve mucronatis repando-sinuatis spinuloso-dentatis sessilibus semiamplexicaulibus, capitulis pedunculatis, involucri carnoso profunde 5-6-fido, segmentis lanceolatis oblongisve vel foliaceis repandisque, achæniis liberis dimorphis majoribus spinulis 4-5 cartilagineis inæqualibus coronatis, spinulis lanceolato-acuminatis, dorso in alis pericarpium decurrentibus, minoribus cum lobis calycinis brevioribus ovato-deltoideis acutis cartilagineo-induratis.—*Acicarpa crassifolia*, Miers, Contrib. ii. 40, pl. 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 (*l.c.*) with Mr. Miers's reference of the plant to *Acicarpa* should have left it in *Boopis* rather than in *Calycera*. For I find our single fruiting specimen to have conspicuously dimorphic achenes, so that I should not hesitate to refer it to *Calycera*, though I prefer to let the figure go under an already published name. Indeed Dr. Gray himself says (*l.c.*), '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 *Calycera*.'

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.

Trigonopleura malayana, Hk. f.

PLATE 1753.

TRIGONOPLEURA MALAYANA, Hook. f.

EUPHORBIACEÆ. Tribe CROTONEÆ.

Trigonopleura, Hook. f. Flores axillares, cymoso-fasciculati, dioici?
Fl. masc. Sepala 5, oblonga, coriacea, late imbricata. Petala paullo longiora, obovato-spathulata, utrinque villosa. Disci glandulæ basin columnæ stamineæ cingentes, erectæ. Stamina ad 8, filamentis in columnam cingentem pubescentem confluentia, apicibus liberis; antheræ oblongæ, extrorsum dehiscentes, loculis connectivo pubescenti adnatis. Pistillodia 3, subulata, apici columnæ affixa. *Fl. fem.* ignoti. Capsula parva, 3-loba, incana epicarpio secedente; cocci 3, ossei, columellæ 3-alatæ affixi, alis columellæ 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. Brit. 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 $\frac{1}{6}$ - $\frac{1}{4}$ poll. longo; stipulis minutis, ovato-oblongis, pubescentibus. Flores numerosi, ebracteati, cymuli axillares v. ad cicatrices foliorum delapsorum siti. Sepala inæqualia. Petala sicca rufo-pubescentia, coriacea, interdum apice v. uno latere emarginata. Columna staminea sicca rufo-tomentosa. Capsula $\frac{1}{2}$ poll. diam. Semina placentæ in-crassatæ (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. Petal. 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 but fig. 6 enlarged.



M.S. del. & lith.

Berberis (Mahonia) gracilipes, Oliver.

PLATE 1754.

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

BERBERIDACEÆ.

B. (*Mahonia*) **gracilipes**, *Oliv.* (*sp. nov.*); glaberrima, foliis 7-foliolatis, foliolis oblanceolatis apice spinoso-acuminatis basin versus cuneatim 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, 4,000 feet; Prov. Szechwan, China, *Rev. E. Faber.*

Folia 1-1½ ped. longa; foliola 3-5 poll. longa, $\frac{3}{4}$ -1 $\frac{3}{4}$ (-2) poll. lata.
Racemi 1-1½ ped. longa; pedicelli $\frac{1}{2}$ - $\frac{3}{4}$ poll. longi. *Flores* $\frac{3}{4}$ 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. Petal. 3. Stamen. 4. Ovary. *All enlarged.*



M.S. del. et lith.

Heliotropium gymnostomum, Hemsli.

PLATE 1755.

HELIOTROPIUM GYMNSTOMUM, Hemsl.

BORAGINÆ. Tribe HELIOTROPEÆ.

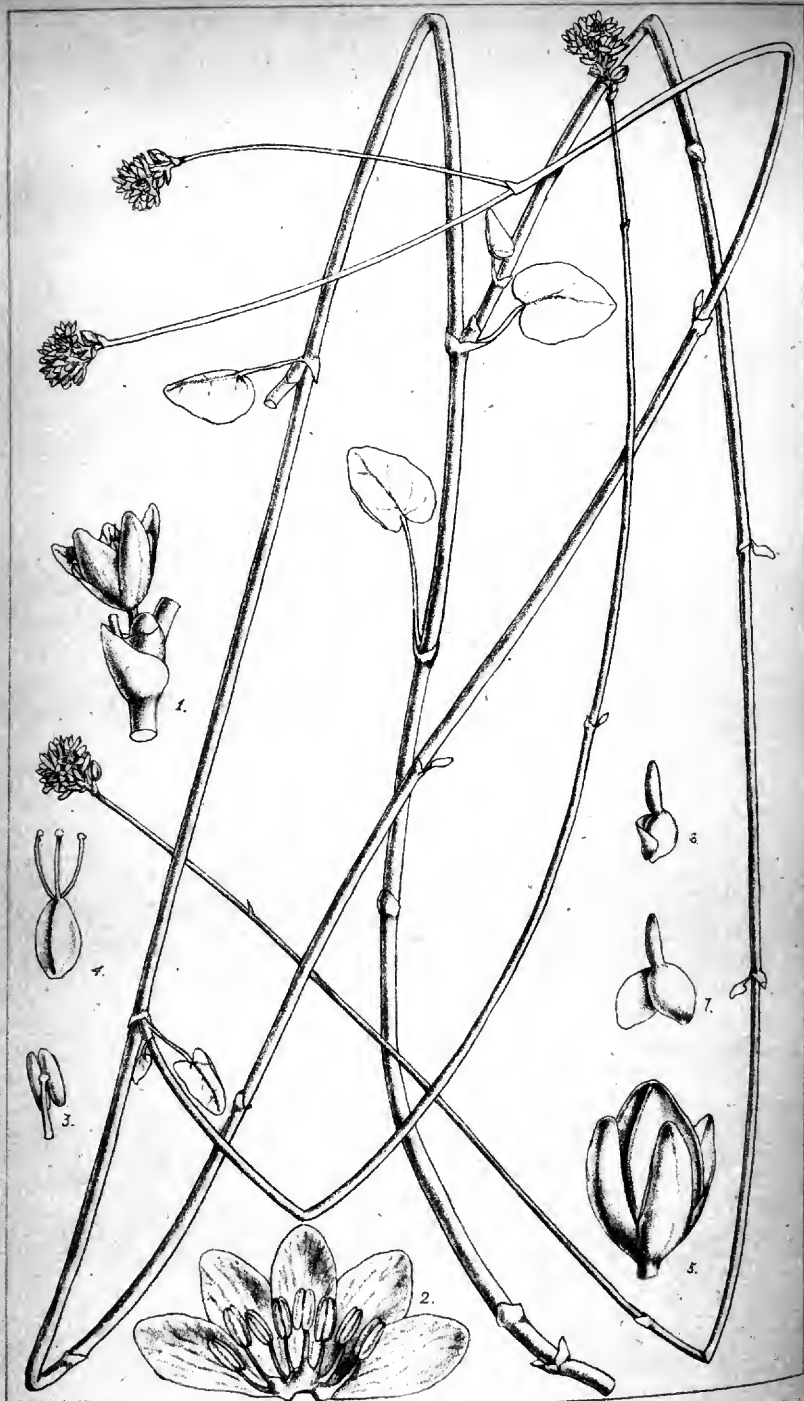
H. gymnostomum, Hemsl. (sp. nov.); H. cabulico simillimum, differt imprimis corollæ tubo intus omnino glabro.

HAB. Gilgit Expedition: Roshan, at 1,000 feet, *Dr. Giles.*

Herba perennis, erecta, multicaulis, ramosa, 12-15 poll. alta, ramulis gracilibus leviter strigosis. *Folia* petiolata ovata, cum petiolo $\frac{1}{2}$ -1 poll. longa, strigosa, scabrida. *Flores* dissiti vix 3 lineas longi; calycis strigosi segmenta vix acuta; corollæ tubus extus dense strigosus supra medium leviter constrictus, lobis æstivatione abrupte inflexis; antheræ medio tubi corollæ insertæ; ovarium glabrum, stylo brevi stigmatæ conico puberulo. *Nuculæ* glabræ tubo persistenti strigoso corollæ arcte vestitæ.

This is easily distinguished among the species with a comparatively loose inflorescence and similar foliage by the corolla being naked within. The ripe nutlets are so closely invested by the persistent hairy tube of the corolla, as to be taken for hairy themselves.—W. B. HEMSLEY.

Fig. 1. A flower with the tips of the corolla lobes still inflexed. 2. Corolla laid open. 3. Pistil. 4. Fruit invested in the persistent tube of the corolla. 5. A nutlet. *All enlarged.*



M.S. del. et lith.

Polygonum Gilesii, Hemsl.

PLATE 1756.

POLYGONUM GILESII, *Hemsl.*

POLYGONACEÆ. Tribe EUPOLYGONEÆ.

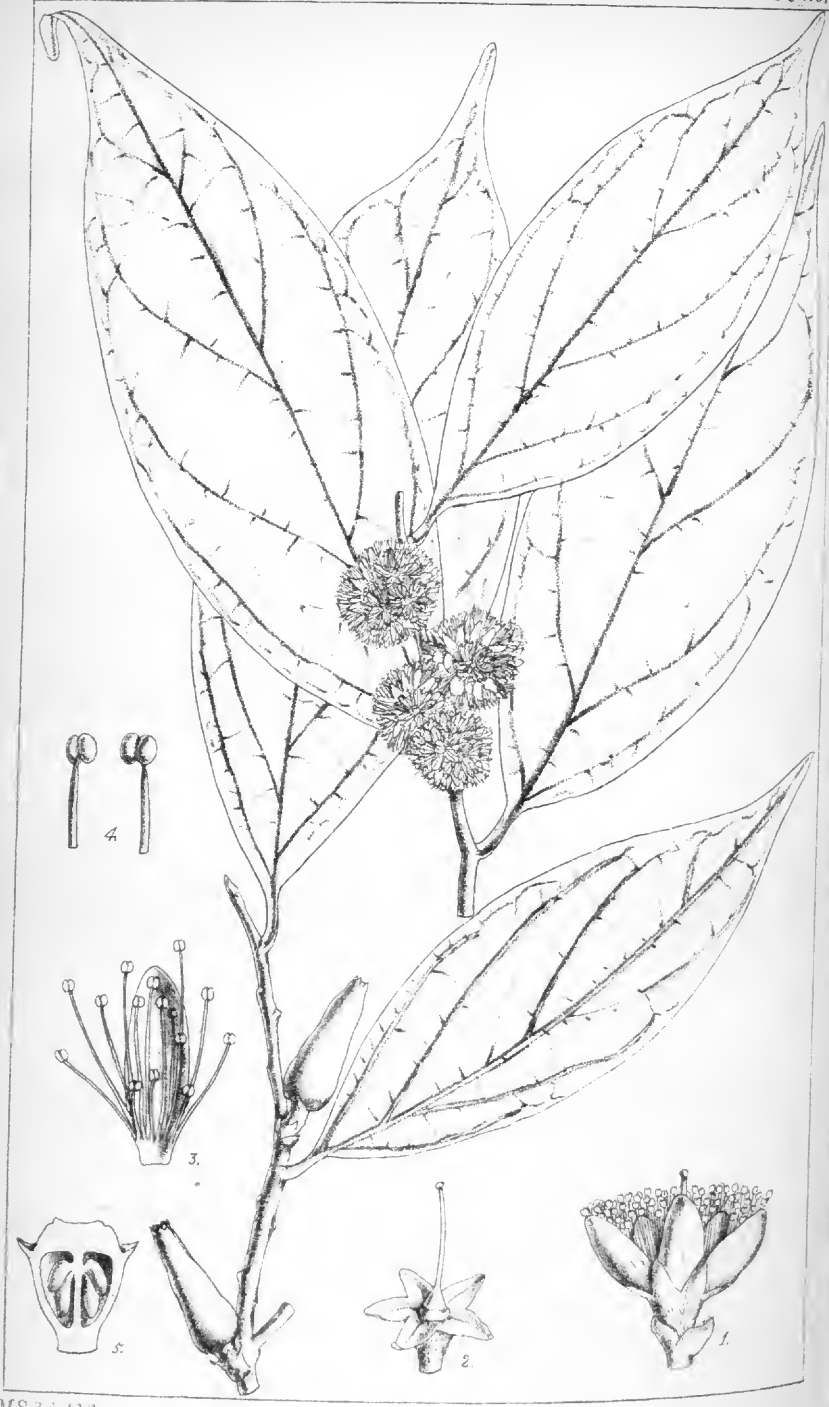
P. (§ *Cephalophilon*) *Gilesii*, *Hemsl.* (*sp. nov.*); caulibus ramisque elongatis gracilibus sublignosis viridibus fere aphyllis, floribus in capitulas parvas terminales dispositis, nucula perianthio longiore.

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

Herba ? undique glabra, ramulis superne filiformibus aphyllis saltem tripedalibus. *Folia* in parte inferiori caulis parcissima, distincte petiolata, crassiuscula cordata, circiter 6 lineas diametro, stipulis parvis squamæformibus. *Flores* parvi, ut videtur albi, brevissime pedicellati; perianthii segmenta oblonga obtusa; stamina 8 inclusa, antheræ 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 *Genisteæ*.—
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. 5. Fruit. 6 and 7. Embryo in different positions. *All enlarged.*



M.S. del et lith.

Symplocos Curtissii, Ohv.

PLATE 1757.

SYMPLOCOS CURTISII, *Oliv.*

STYRACACEÆ.

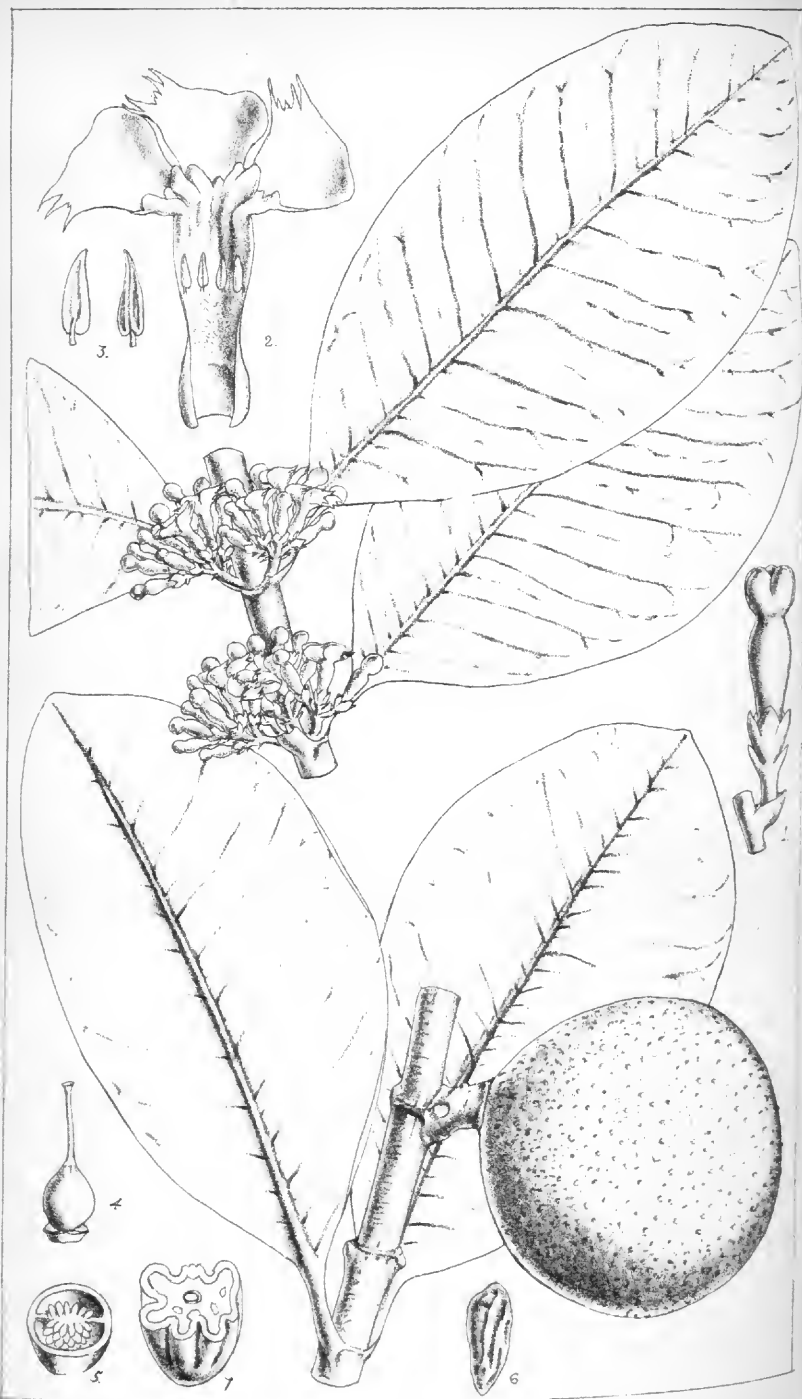
S. Curtisii, *Oliv.* (*sp. nov.*); glabra, ramulis gracilibus crassitie pennæ corvinæ, foliis ellipticis utrinque attenuatis acuminatis breviter petiolatis tenuiter coriaceis nervis utrinque 4-5 incurvis, floribus in fasciculis parvis densis sessilibus axillaribus dispositis, calycis lobis ovatis obtusis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

HAB. Penang, *Mr. C. 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, $1\frac{1}{4}$ - $2\frac{1}{4}$. (-3) poll. lata; petiolus $\frac{1}{6}$ - $\frac{1}{4}$ poll. longus. *Fructus* $\frac{2}{3}$ - $\frac{3}{4}$ poll. longus.

I 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. del. et lith.

Melodinus coriaceus, Oliv.

PLATE 1758.

MELODINUS CORIACEUS, *Oliv.*

APOCYNACEÆ. Tribe CARISSEÆ.

M. coriaceus, *Oliv.* (*sp. nov.*); glaber, ramis crassitie pennæ cygni teretibus sublævibus, foliis coriaceis ellipticis v. obovatis obtusis basi plus minus cuneatim in petiolum angustatis, venis primariis haud prominentibus utrinque 13-16, floribus axillaribus in cymis brevissimis sessilibus plurifloris dispositis, corollæ tubo apice constricto carnosulo glabro, lobis obliquis apice fimbriato-dentatis, fructibus globosis nitentibus pericarpio minute tuberculatim ruguloso, testa cavernosa sulcatim intrusa albumine ruminato.

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

Folia 3-4 poll. longa, $1\frac{1}{2}$ -2 poll. lata; petiolus $\frac{1}{3}$ - $\frac{1}{2}$ poll. longus. *Flores* $\frac{1}{4}$ poll. longi. *Fructus* $1\frac{1}{2}$ 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, Oliv.

PLATE 1759.

RHAMNUS HETEROPHYLLUS, Oliv.

RHAMNACEÆ.

R. 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 subtriplinervis, stipulis subulatis petiolo brevioribus, floribus hemisphæricis viridibus brevissime pedicellatis, calyce 5-fido lobis deltoideo-ovatis, petalis minutis ovatis interdum bidentatis antheris subæquilongis v. obsoletis, fructibus globosis tripyrenis.

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

Folia rotundata minora $\frac{1}{4}$ - $\frac{1}{3}$ poll. lata; lanceolata majora $\frac{3}{4}$ - $1\frac{1}{2}$ 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. *Enlarged.*



M.S. del et lith.

Cocculus affinis, Oliv.

PLATE 1760.

COCCULUS AFFINIS, Oliv.

MENISPERMACEÆ. Tribe COCCULEÆ.

C. affinis, Oliv. (*sp. nov.*); glaberrimus, foliis rotundato-rhomboides obtusis obsolete crenato-sinuatis integrisve basi angustissime peltatis 5-nerviis, adultis tenuiter coriaceis reticulato-venosis longiuscule petiolatis, floribus in cymis axillaribus pedunculatis umbelliformibus solitariis fasciculatisve dispositis, sepalis late obovato-ellipticis, petalis calyce brevioribus rhomboides lobo centrali deltoideo acuto lobis lateralibus stamen amplectentibus, antheris tetragonis 4-lobatis calyce subæquilongis, 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 lævibus. *Folia* $1\frac{3}{4}$ - $2\frac{1}{2}$ poll. lata; *petiolus* 2- $2\frac{1}{2}$ poll. longi. *Pedunculi* (fl. ♂) graciles +-poll. longi. *Flores* 2-3 lin. lati. *Drupæ* 4 lin. longæ, 3- $3\frac{1}{2}$ lin. latæ.

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

Fig. 1. Staminate flower. 2. Petal and stamen. 3. Petal, 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 Curtisii, Oliv

PLATE 1761.

BUETTNERIA CURTISII, *Oliv.*

STERCULIACEÆ. Tribe BUETTNERIÆ.

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

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

Folia 5-7 poll. longa, $1\frac{1}{4}$ -2 poll. lata, basi triplinervis; petiolum 2-3 lin. longus; stipulæ subulatæ 2 lin. longæ.

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

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



M.S.uel et al.

Mapoa pittocarpoides, Oliv

PLATE 1762.

MAPPIA PITTOSPOROIDES, *Oliv.*

OLACINEÆ. Tribe ICACINEÆ.

M. pittosporoides, *Oliv.* (*sp. nov.*); frutex, ramulis hornotinis hirtis strigillosive demum glabrescentibus, foliis oblongo-ovalibus oblanceolatisve acuminatis basi in petiolum longiusculum attenuatis, integris, supra glabris v. in costa media parce strigillosis, subtus præcipue in nervis parce strigillosis v. minute hirtellis, cymis multifloris terminalibus breviter pedunculatis hirtis, calyce late cupulato 5-dentato dentibus deltoideis acutis extus parce hirto, petalis inferne coalitis extus strigosis intus villosulis, ovario dense hirsuto 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, $\frac{5}{8}$ -1½ (-2) poll. lata; petiolus $\frac{1}{4}$ - $\frac{3}{4}$ poll. longus. *Flores* flavidi $\frac{1}{3}$ 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. et lith.

Euonymus macrocarpus, Camb.

PLATE 1763.

EUONYMUS MACROCARPUS, *Gamble*.

CELASTRACEÆ. Tribe CELASTRÆÆ.

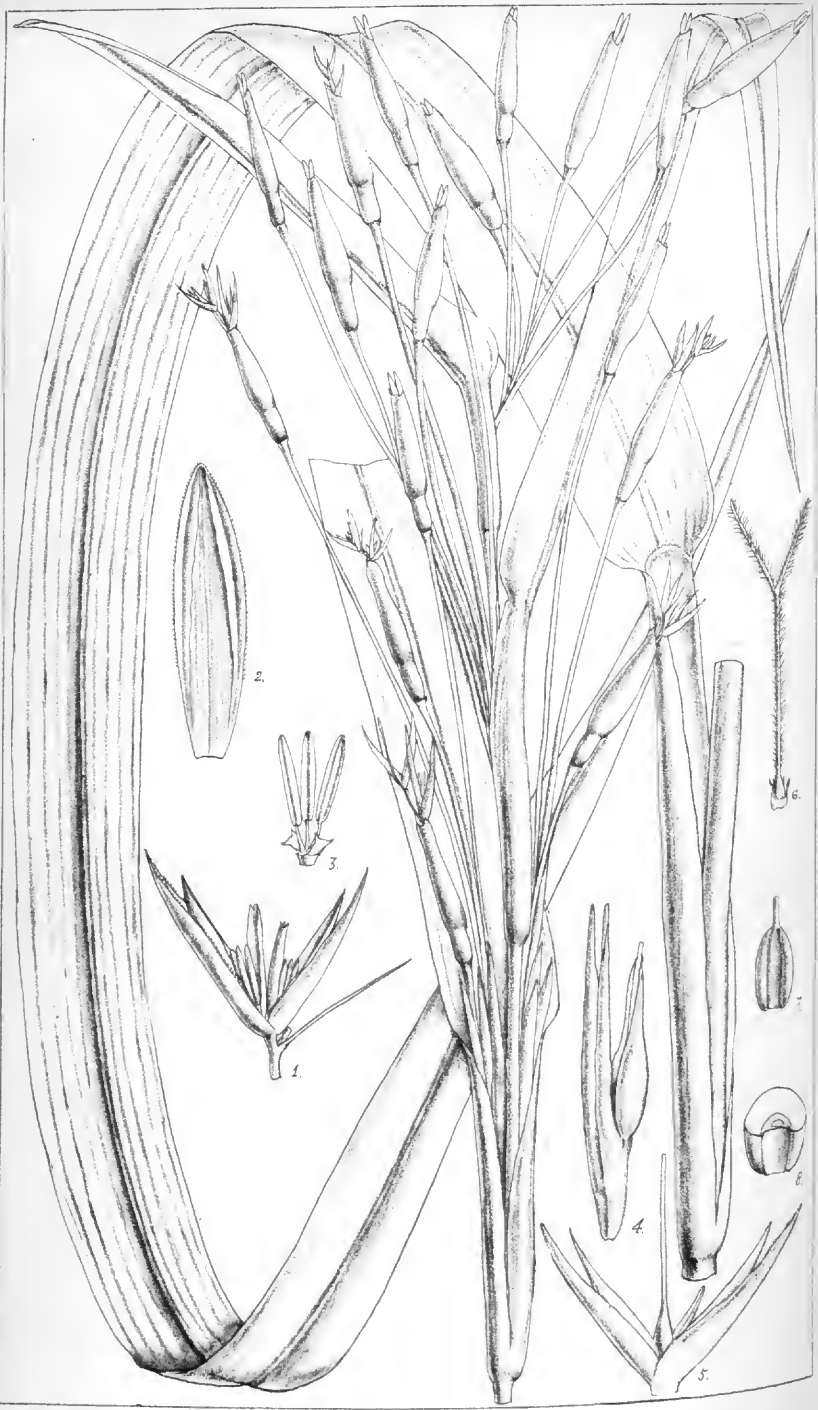
E. macrocarpus, *Gamble, MS. in Herb. Kew.*; frutex glaber alte scandens, foliis coriaceis ovali-oblongis sæpius acuminatis obtuse callososerrulatis, nervis utrinque 7-8, cymis axillaribus breviter pedunculatis paucifloris pedicellis flore subæquilongis, petalis rotundatis crispato-denticulatis, ovario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

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

Folia 3-4 poll. longa, 1-1½(-1¾) poll. lata; petiolus ½ poll. longus. *Pedunculi* sæpius 3-flori ½-1 poll. longus. *Flores* ¼-¾ poll. diam.; ovula 3 v. 2. *Fructus* 1½ 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. Petal. 3. Seed and arillus. 4. Seed, transverse section. *Enlarged.*



MS. del. et lith.

Coix Lachryma, L. var. stenocarpa.

PLATE 1764.

COIX LACHRYMA, L., var. stenocarpa.

GRAMINEÆ. Tribe MAYDEÆ.

C. Lachryma, L.; *Kunth, Enum. Plant.* i. 20, var. *stenocarpa*; a forma typica differt tantum: involucris interdum superpositis elongatis anguste cylindraceis, basin versus et ad apicem sæpius leviter angustatis.

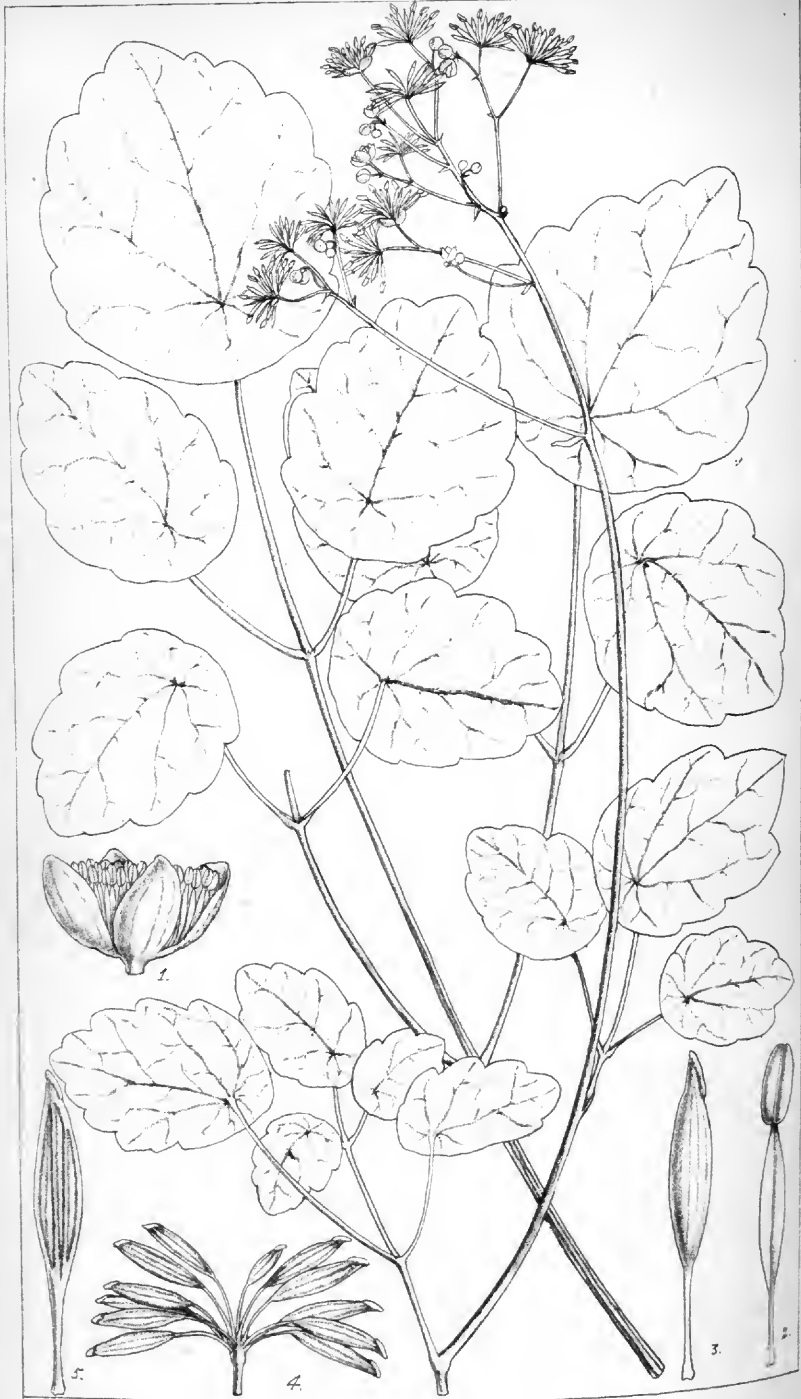
HAB. 'Burma,' communicated by *Dr. G. Watt*, Reporter on Economic Products to the Indian Government. We have also a form, with shorter involucre, collected at Mergui by *Mr. Griffith*.

Dr. Watt says the strong involucre 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 involucre, 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 involucre are known to 'the Assamese and the Meris, and called by them the "Cowr 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 *Martius, 'Flora Bras.'* (Gramineæ), ii. pt. 2, tab. 10.

Our involucre 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 $1\frac{1}{2}$ 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.

Thalicttrum ichangense, Lec.

PLATE 1765.

THALICTRUM ICHANGENSE, *Lec.*

RANUNCULACEÆ. Tribe ANEMONEÆ.

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

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

Radix fibrosa, fibris fusco-tomentellis. *Folia* radicalia petiolo 5–8 poll. longo; petioluli ultimi $\frac{1}{2}$ –2 poll. longi; foliola $\frac{3}{4}$ –1 $\frac{3}{4}$ poll. lata, folia caulina superiora sæpe 1-foliolata. *Inflorescentia* sparsa folia superantia; pedicelli adscendentes 2–10 lin. longi. *Flores* albi. *Achæmia* $1\frac{1}{2}$ lin. longa stipite leviter longiora.

M. Lecoyer kindly allowed me to submit to him fragments of this (and of the following) species. He regards *T. ichangense* as approaching *T. Przewalskii*, Maxim., in his section 'Microgynes § 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. Stipitate achene, detached (the nervation has come out too strongly in the print). *Enlarged.*



M.S.del, et lith.

Thalictrum microgynum, Lec.

PLATE 1766.

THALICTRUM MICROGYNUM, *Lec.*

RANUNCULACEÆ. Tribe ANEMONEÆ.

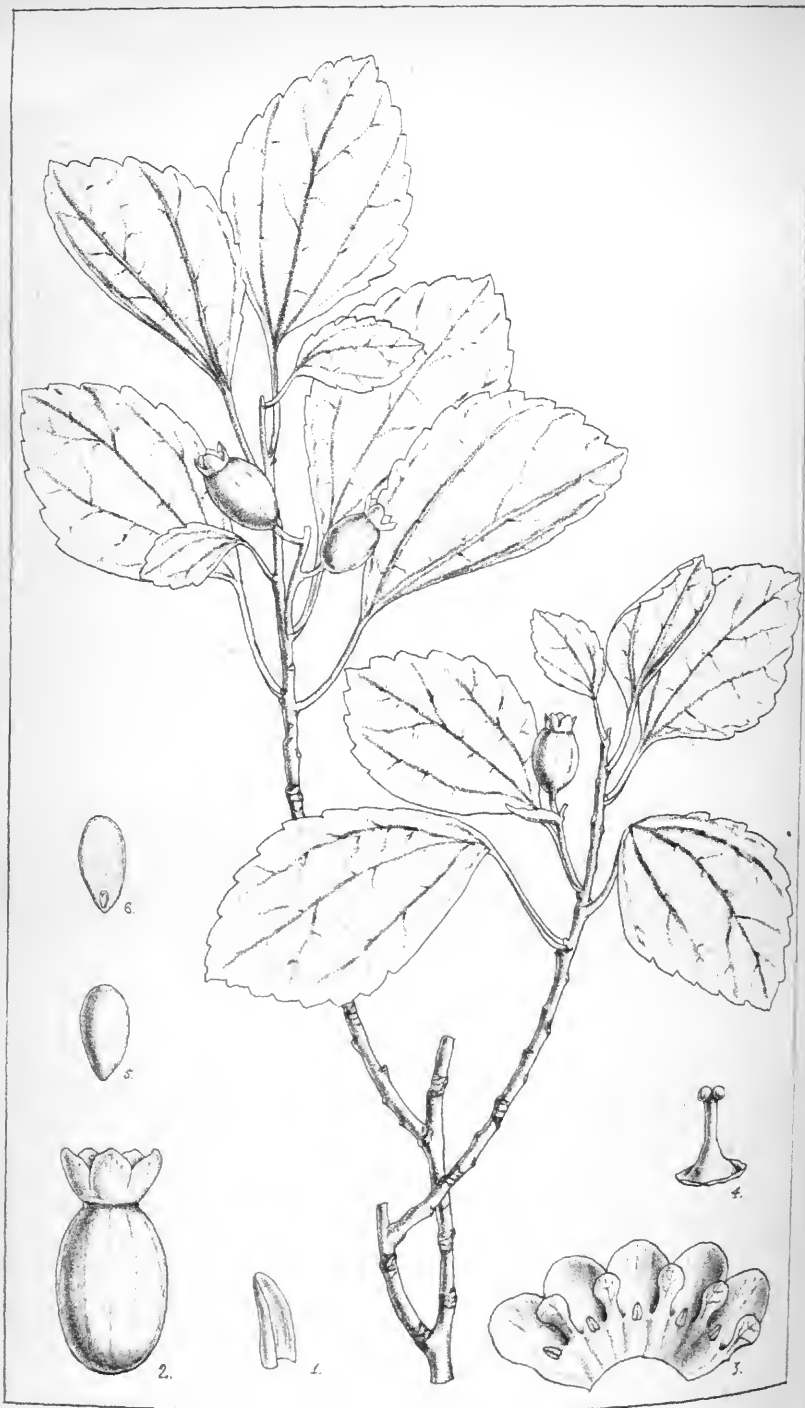
T. microgynum, *Lec. in litt.*; herba 1-2-pedalis glabra, foliis radicalibus 2-3-pinnatis, foliolis mediocribus ovatis v. terminali obovato subtrilobatis lobis obtuse crenato-dentatis mucronulatis longiuscule petiolulatis subtus venosis pallidioribus, paniculis foliosis, pedunculis plus minus subumbellatim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

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

Foliola 1-1½(-2) poll. longa, basi rotundata v. late cuneata. (*Flores* ♂. *Filamenta* filiformia; *anthera* linearis mutica.—*M. Lecoyer*, who found a stamen remaining on a fragment sent to him.) *Achænia* 1 lin. longa, stipite subæquilonga 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 S del et lith.

Ribes pachysandroides, Oliv.

PLATE 1767.

RIBES PACHYSANDROIDES, *Oliv.*

SAXIFRAGACEÆ. Tribe RIBESIÆ.

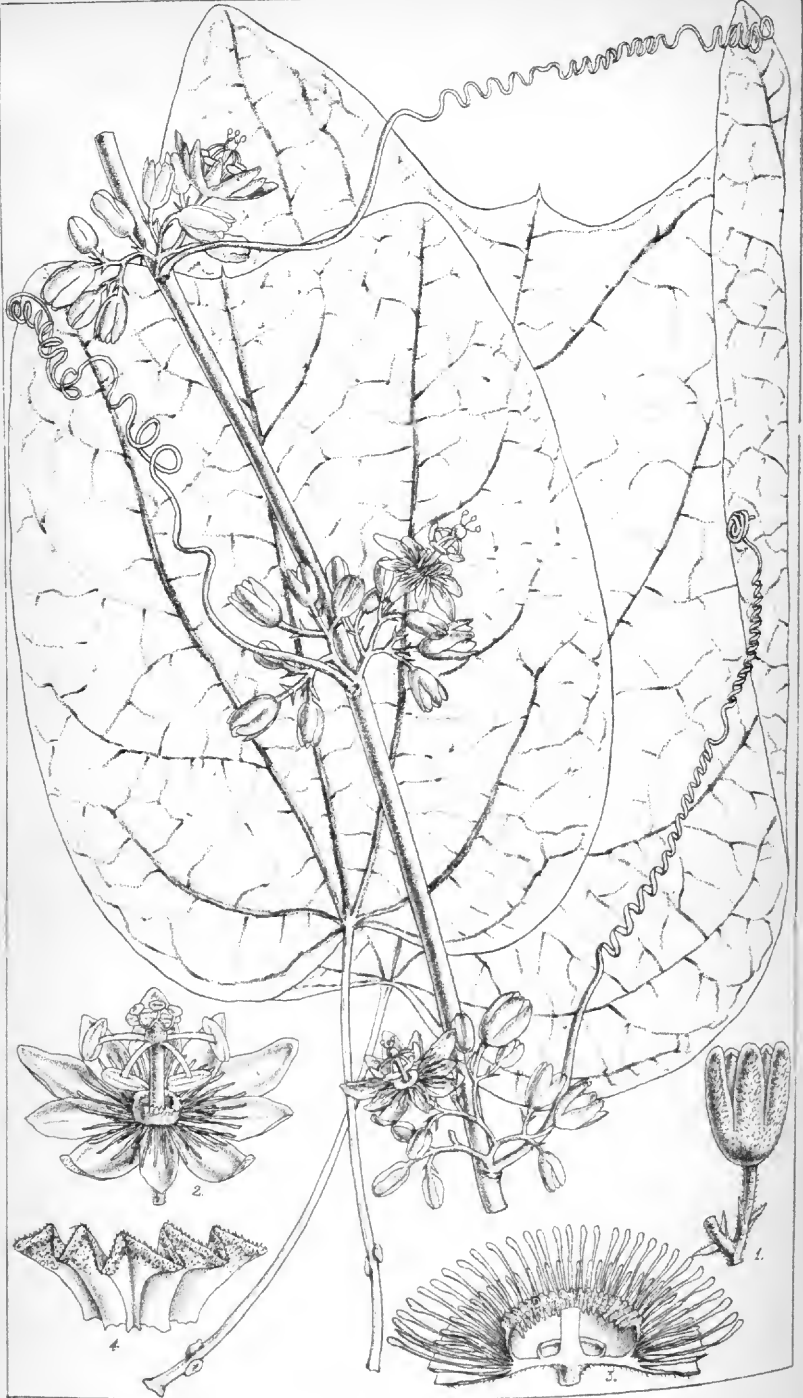
R. pachysandroides, *Oliv.* (*sp. nov.*); fruticulus $\frac{1}{2}$ -1-pedalis adscendens, ramulis ultimis puberulis mox glabratis, foliis obovatis triplinerviis supra medium crenato-dentatis tenuiter coriaceis glabris, racemis axillaribus pauci-(2-3-)floris, bracteis oblongis deciduis pedicello longioribus, 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. E. Faber.*

Folia $1\frac{1}{2}$ - $1\frac{3}{4}$ poll. longa, $\frac{3}{4}$ -1 poll. lata; *petiolus* $\frac{1}{3}$ - $\frac{1}{2}$ 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 lith.

Passiflora cupiformis, M.T.M.

PASSIFLORA CUPIFORMIS, M. T. M.

PASSIFLORACEÆ.

P. cupiformis, Mast. (*sp. nov.*) (§ *Decaloba*, subsect. *Polyanthea*); ramis striato-sulcatis; foliis longe petiolatis, petiolis versus basin biglandulosis, 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 extus puberulis; petalis sepalis vix brevioribus conformibus, flavidis (?); corona fauciali duplici, filis extimis petalis vix dimidio brevioribus, filis intimis minoribus, corona membranacea arcte plicata, margine inflexo dentato fimbriifero; ovario globoso albido-pilosulo.

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

Fruticulus scandens cirrifer, rami pilosuli. Folia 5 poll. longa, 4 poll. lata, palmatim 3 costata pilosula. Petioli 3 poll. longi, versus basin utrinque glandula majuscula pulviniforme muniti. Alabastra clavato-oblonga. Flores expansi diametro $\frac{1}{2}$ -pollicares.

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 $2\frac{1}{4}$ 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 præditis; cymis axillaribus ramosis petiolo æquantibus; floribus 1 poll. diam. tubo pateriformi; sepalis oblongis obtusis glabris ecorniculatis glandula tamen prope apicem dorso munitis; petalis conformibus sepalis subæquilongis; coronæ faucialis 1-serialis filis petalis tertia parte brevioribus angulatis, basi maculatis; corona membranacea arcte plicata margine inflexo denticulato fimbriifero; ovario pyriforme glabrescente vel vix pilosula.

P. obscura, Griffith, MSS. in Herb. Kew., hand Lindl.

HAB. In Mont. Khasia, Griffith!; Nunklow, Hook. fil. et Thoms. (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.

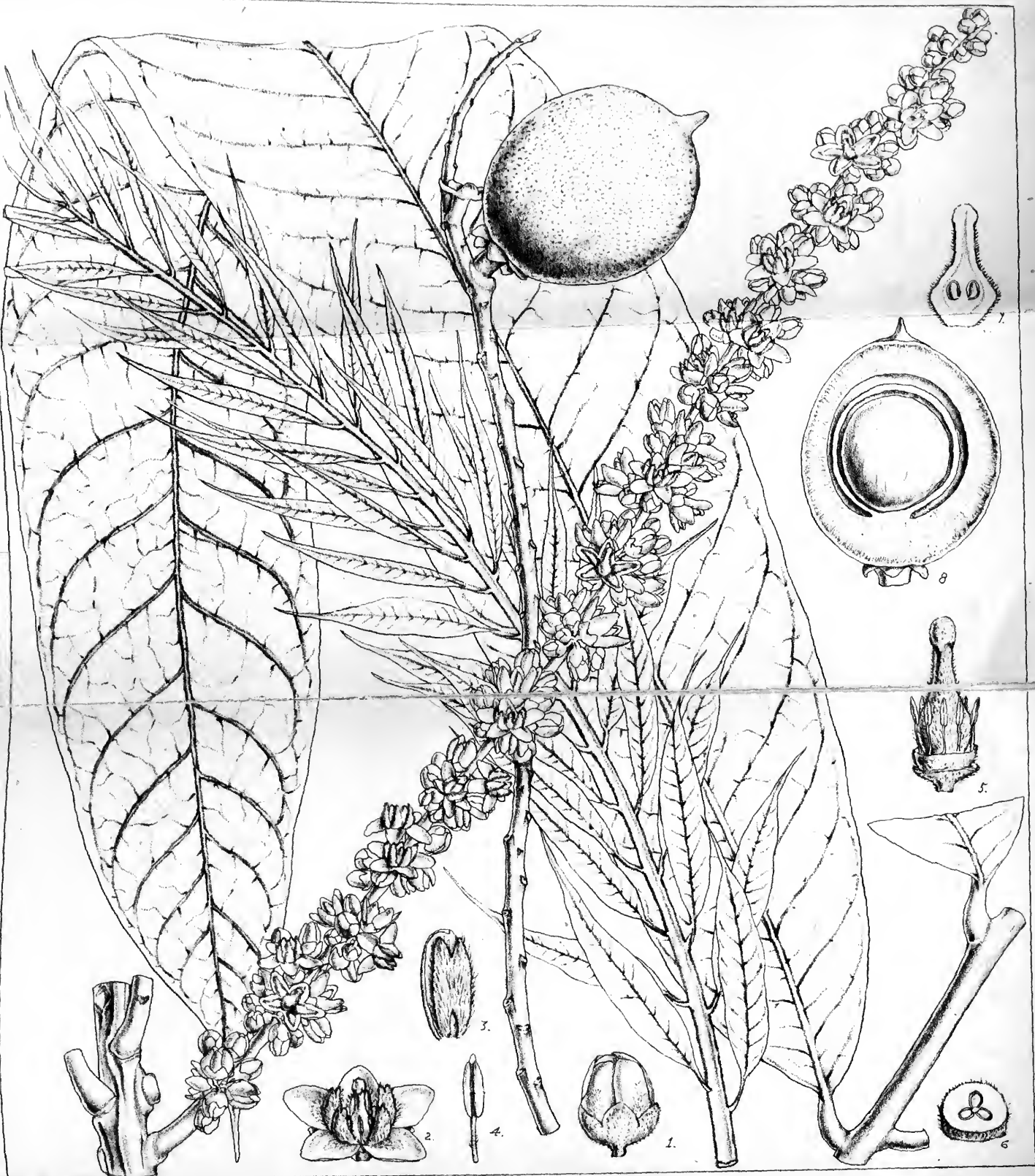


PLATE 1769.

TALISIA PRINCEPS, Oliv.

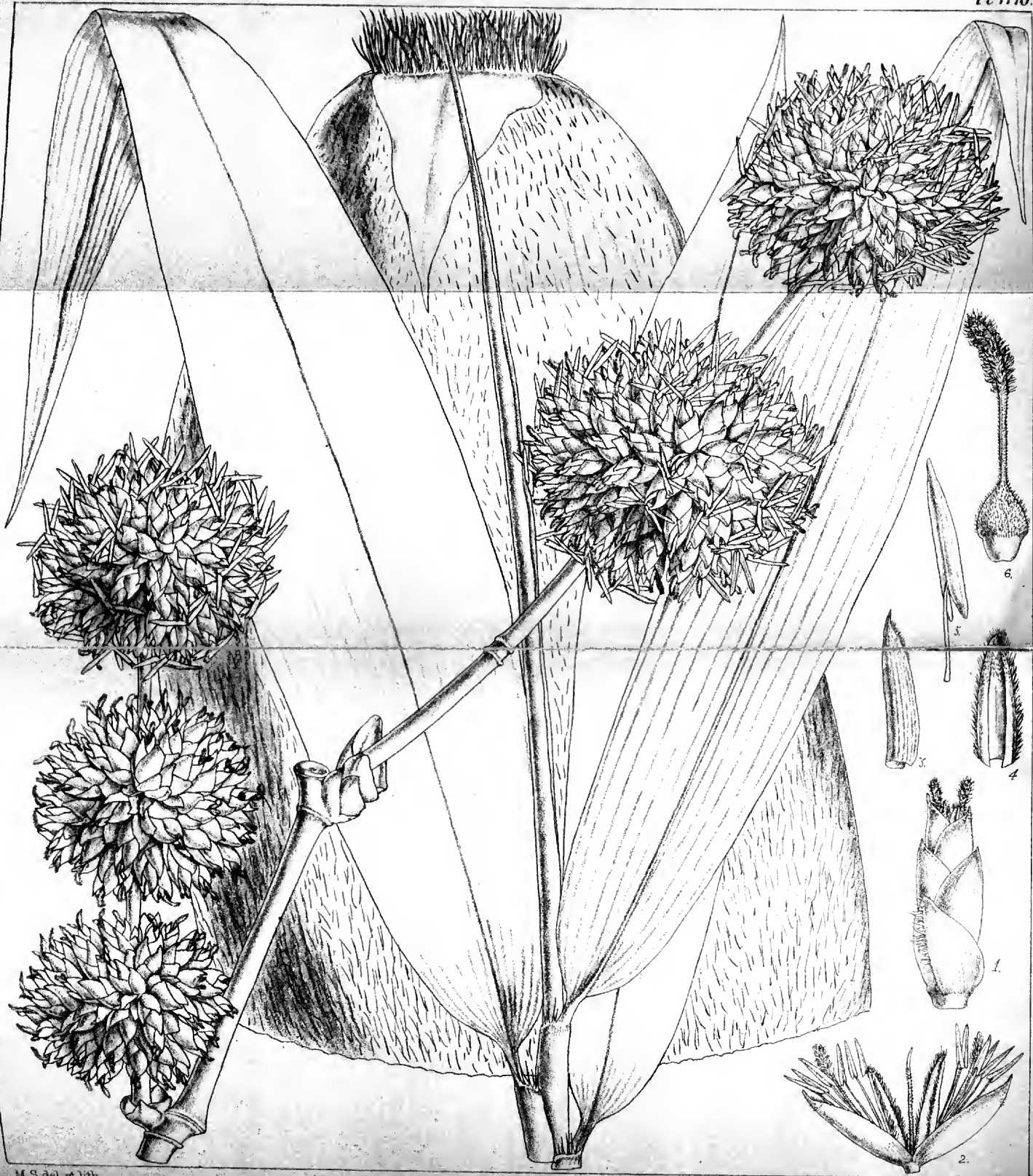
SAPINDACEÆ.

T. princeps, Oliv. (*sp. nov.*); truncus erectus simplex 20-40-pedalis; foliis ($3\frac{1}{2}$ -6 ped. longis) circ. 40-foliolatis foliolis suboppositis v. alternis elongato-oblongis gracile acuminatis basi oblique rotundatis v. late cuneatis petiolatis, nervis primariis utrinque circ. 27-29, tenuiter coriaceis, supra glabris subtus præcipue in costa parce hirtellis, rhachide subtereti pubescente, floribus fasciculatis brevissime pedicellatis racemosis in panicula ampla terminali dispositis, pedunculis fulvo-tomentellis, calyce pubescente 5-fido lobis ovatis obtusis, petalis calyce duplo longioribus ovato-ellipticis dorso basin versus hirtellis unguiculatis, squama dense et longe villosa supra unguem inserta petalo paullo brevior, disco breviter cupuliforme hirtito, filamentis anguste linearisubulatis apicem versus parce hirtellis glabrativse, fructibus globosis breviter apiculatis leviter rugulosis, monospermis, pericarpio crasse coriaceo.—*Theophrasta pinnata*, Jacq. Fragmenta p. 49, tabb. 64 (fig. 2), 65, 66; *Brownea princeps*, and *B. erecta*, Lind. Cat. (Otto et Dietr., Allgemeine Gartenzeitung, 1855, p. 147).

HAB. Venezuela, *fide Jacquin, l.c.* (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 (*Sapindaceæ*) 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.*



M.S. del. et lith.

Dendrocalamus sikkimensis, Gamble.

PLATE 1770.

DENDROCALAMUS SIKKIMENSIS, *Gamble.*

GRAMINEÆ. Tribe BAMBUSEÆ.

D. sikkimensis, *Gamble, MSS. in Herb. Kew.*; culmo subarboresco alto, cataphyllis extus tomentellis inferne etiam setis rigidulis reflexis dense intertextis indutis, intus glabris, apice ad basin laminæ rudimenti ligula setacea (setis permultis pluriseriatis longiusculis) instructis, foliis oblongo-lanceolatis acuminatis basi rotundatis breviter petiolatis. Supra longitudinaliter striatis glabris, subtus parce setuloso-villosulis, ligulis setaceis, vaginis glabris, paniculæ ramulis ultimis rigidis internodiis crassitie pennæ corvinae, capitulis dissitis subglobosis, spiculis lanceolatis sæpius bifloris glumis inferioribus vacuis circ. 4 late ovatis distiche 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 Royal 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 setæ. Ordinary leaves usually from 6 to 10 (5-12) inches long, and 1-2 ($2\frac{1}{2}$) inches broad. Flower-heads at intervals of 1-2 inches, about $1\frac{1}{2}$ inch in diameter. Spikelets $\frac{3}{4}$ inch long.—D. OLIVER.

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



M.S. del. et lith.

Derris Fordii Oliy

PLATE 1771.

DERRIS FORDII, *Oliv.*

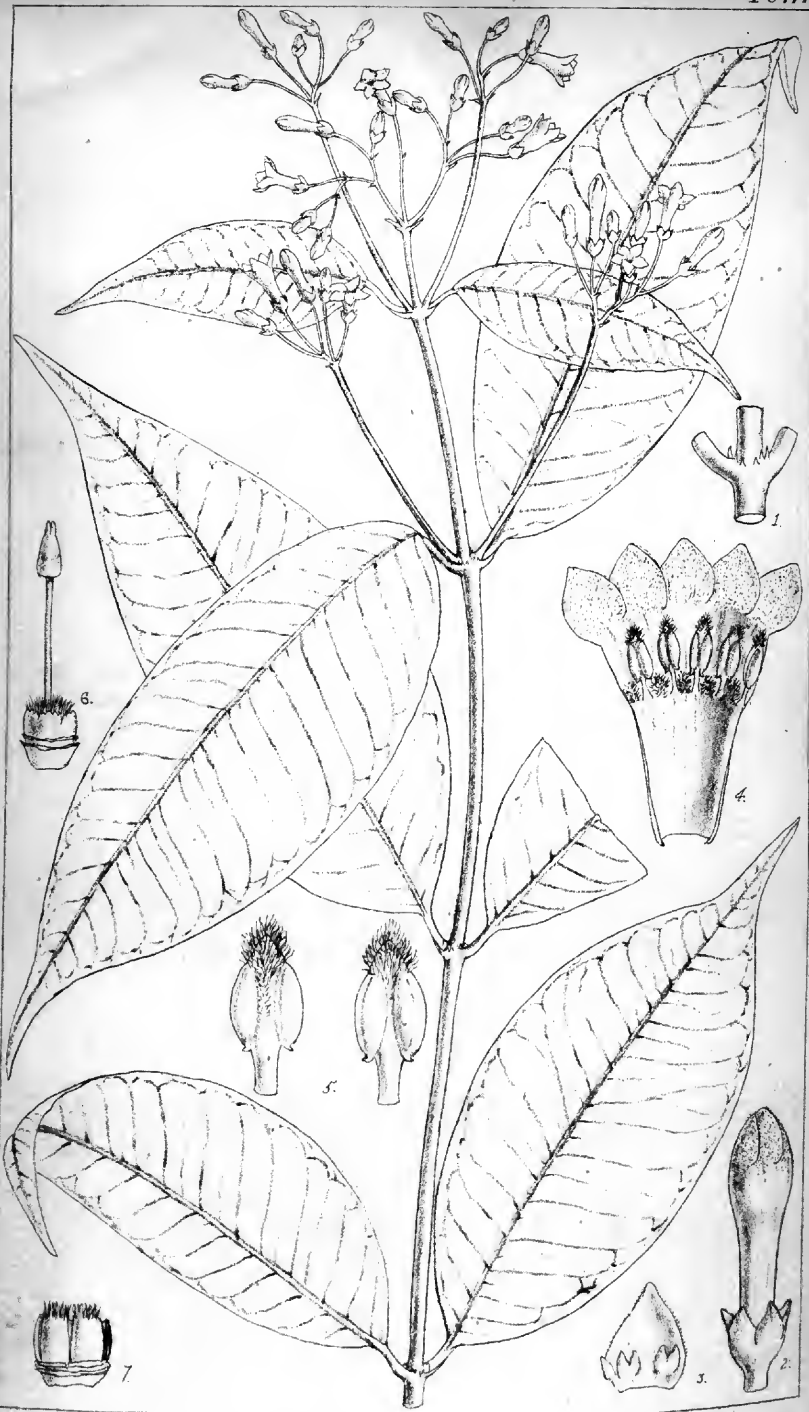
LEGUMINOSÆ. Tribe DALBERGIEÆ.

D. Fordii, *Oliv.* (*sp. nov.*); glabra, foliis 7-5-foliolatis, petiolatis, foliolis ovali- v. ovato-oblongis obtusiuscule acuminatis petiolulatis, membranaceis, nervis primariis utrinque 6-7, paniculis axillaribus subsessilibus pedunculis lateralibus divaricatis, pedicellis gracilibus calyce subæquilongis, calyce oblique campanulato labio inferiore breviter et late rotundato-lobulato, vexillo basi nudo lamina late obovato-elliptica leviter cucullato emarginato, staminibus monadelphis filamento postico basi libero, ovario sessile pluriovulato, legumine compresso oblongo tenuiter coriaceo sæpius 1-4-spermo sutura ventrali anguste alato.

HAB. Prov. Kwangtung, China, *C. Ford* (Nos. 50, 55, 58).

Folia 7-10 poll. longa; foliola 3-3½(-4½) longa, 1-1½(-1¾) lata; petioluli 2-3 lin. longi. *Panicula* 6 poll. longa multiflora patentim ramosa. *Flores* albi, 4-5 lin. longi. *Legumen* 2-3½ poll. longum.—
D. OLIVER.

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



M. S. del et lith.

Sindechites Henryi, Oliv.

PLATE 1772.

SINDECHITES HENRYI, Oliv.

APCYNACEÆ. Tribe ECHITIDÆÆ.

Sindechites, Oliv. (*gen. nov.*). *Calyx* parvus 5-fidus lobis ovatis, basi intus squamellis circ. 15 instructus. *Corolla* hypocrateriformis, tubo cylindræo superne leviter dilatato calyce 4-6-plo longiore, fauce nudo, limbi lobis dextrorsum obtegentibus ovatis obtusis tubo 4-5-plo brevioribus. *Stamina* supra medium tubi inserta; filamentis superne liberis anguste linearibus; antheræ basi bidentatæ v. brevissime sagittatæ, connectivo apice producto ovato-oblongo acutato piloso, loculis basi in appendiculas breves cartilagineas obtusiusculas 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 lævibus. *Folia* opposita petiolata lanceolato-oblonga v. ovato-lanceolata acuminata, subtus pallidiora venis primariis late divergentibus utrinque circ. 20. *Inflorescentia* pluriflora terminalis; pedicelli graciles flore subæqui-longi, bracteæ minutæ lanceolatæ.

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

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

Folia 3-4 poll. longa, 1-1½ poll. lata; petiolus 2-3 lin. longus. *Flores* albi, 5-6 lin. longi.

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

Dr. Baillon, who is working at Apocynaceæ for his 'Histoire des Plantes,' would give *Sindechites* 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 squamæ. 4. Corolla laid open. 5. Anthers. 6. Pistil and disk. 7. Ovaries. *Enlarged*.



M.S. del et lith

Ischaemum angustifolium. Hack.

PLATE 1773.

ISCHÆMUM ANGUSTIFOLIUM, Hackel.

GRAMINEÆ. Tribe ANDROPOGONEÆ.

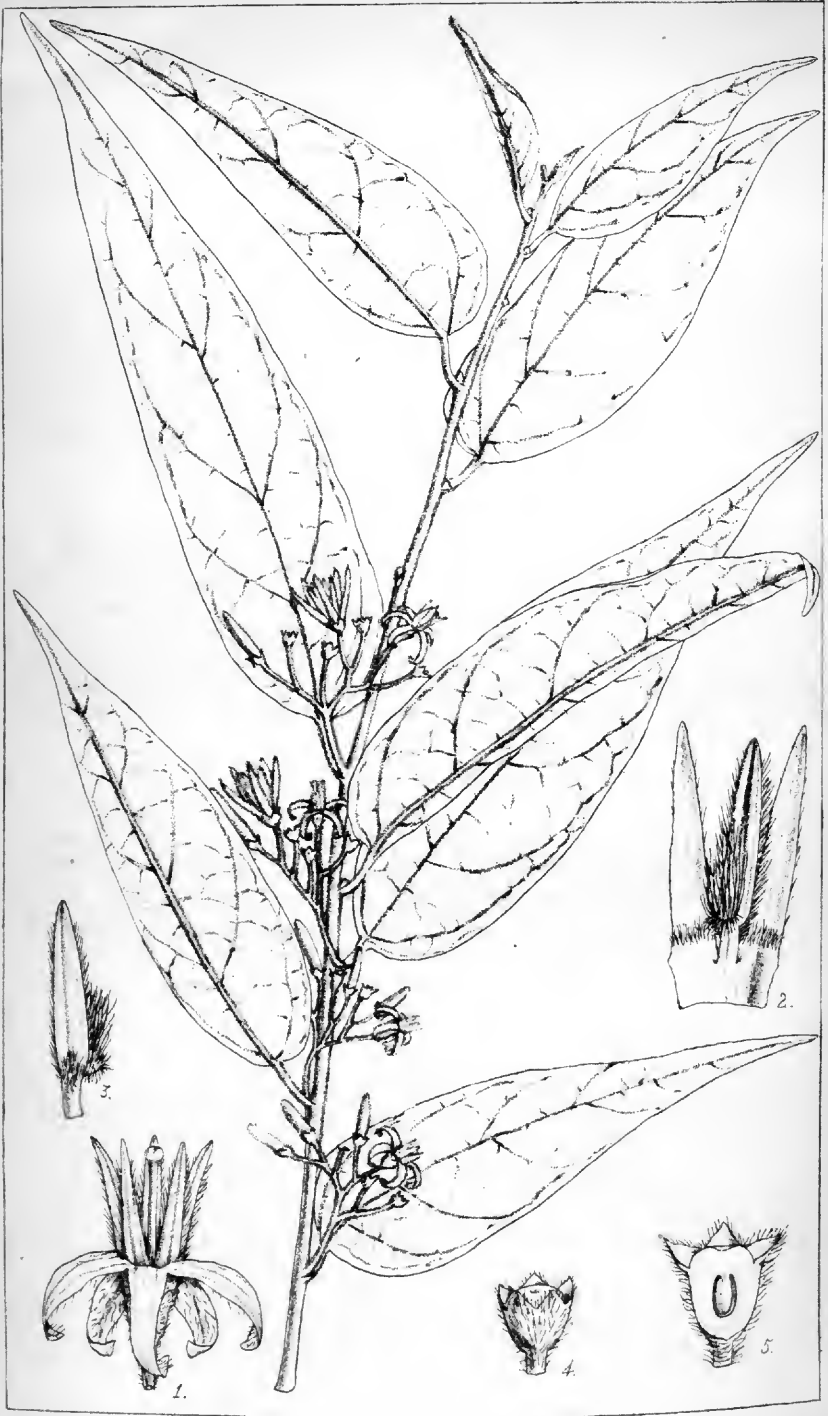
I. angustifolium, Hackel in *A. de Cand. Monogr. Phan.* vol. vi. (*ined.*); culmis foliisque dense cæspitosis basi sæpius lana intertexta copiosa indutis, foliis superne anguste linearibus striatis marginibus sæpius arcte involutis facie interiore parce pilosulis glabrativè extus glaberrimis, spicis sæpius 2-4-nis exsertis undique (pilis rigidiusculis ad basin spicularum dense fasciculatis) fulvo-hirsutis, spiculis sæpius bifloris, flore sup. ♂, flore inf. ♂ glumis exterioribus subæquilongis 7- v. gl. inf. 5-nervis dorso pilis fasciculatis instructis; fl. ♂ gl. inf. 1-nervis longiuscule aristata, arista terminali gl. sup. late ovata hyalina apicem versus ciliata; fl. ♂ glumis hyalinis ciliatis, lodiculis denticulatis.

HAB. Widely spread in the drier regions of India from the Himalaya 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 identifications, 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 cultivated in small patches by the Sonthals in the Rajmehal 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 eriopoda*, Hance.'—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. Spikelet. 3. Palea of ♂ flower. 4. Staminate floret. 5. Lodicules. 6. Pistil. *Enlarged.*



M. S. Del et lith.

Alangium Faberi, Oliv.

PLATE 1774.

ALANGIUM FABERI, *Oliv.*

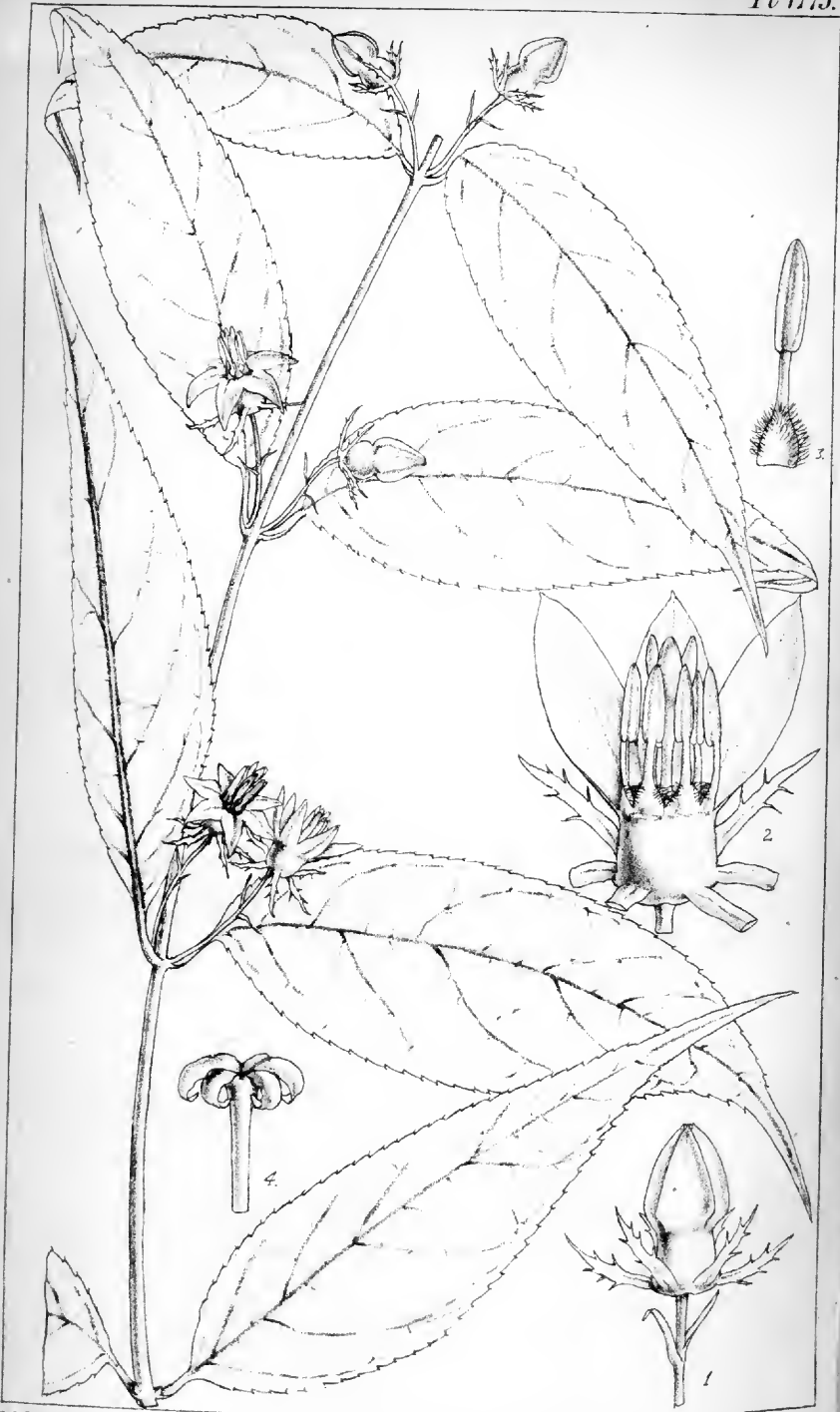
CORNACEÆ.

A. Faberi, *Oliv.* (*sp. nov.*); frutex, ramulis ultimis gracilibus tere-
tibus strigillosis demum glabratis, foliis oblongo-lanceolatis acuminatis
basi late rotundatis subcordatisve, supra parcissime adpresse setu-
losis subtus præcipue in costa venulisque parce strigosis, petiolis
brevibus strigosis, cymis sæpius 5-10-floris breviter pedunculatis axil-
laribus, floribus pedicellatis, pedicellis rectis cum calyce turbinato
strigosis, petalis basi leviter cohærentibus, filamentis adnatis, antheris
linearibus inferne dense setoso-hispidis.

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

Folia 3-4 poll. longa, basi $\frac{2}{3}$ - $1\frac{1}{3}$ poll. lata; petiolus 1-6 lin. longus.
Cymæ folio multo breviores. *Flores* $\frac{1}{4}$ - $\frac{1}{3}$ 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.*

CAMPANULACEÆ. Tribe CAMPANULÆÆ.


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, corollæ 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 $\frac{1}{8}$ poll. longus. *Pedunculi* graciles bibracteolati $\frac{1}{2}$ - $\frac{2}{3}$ 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.*

VOL. VIII.—PART IV.] 

[OCTOBER.

HOOKER'S ICONES PLANTARUM;

OR,

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, EDIN., AND GLOTT., CORRESP. MEMB. INST. FRANCE:

LATE DIRECTOR OF THE ROYAL BOTANICAL GARDENS, KEW.

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M S del. et lith.

Stichoneuron membranaceum, Hk. f.

STICHONEURON MEMBRANACEUM.

ROXBURGHIAEÆ.

Stichoneuron, *Hook. f. in Benth. & Hook. f. Gen. Plant.* v. iii. p. 747.

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

HAB. Silhet and the Khasia hills in Eastern Bengal; DE SILVA (*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* 3–5½-pollicaria, alterna, subdisticha, breviter petiolata, tenuiter membranacea, oblongo- v. ovato-lanceolata, acuminata, basi 3-nervia, deinde pinnatim paucinervia, nervulis transversis parallelis creberrimis tenuissimis; petiolo $\frac{1}{10}$ -poll. longo. *Pedunculi* axillares, solitarii, stricti, rigiduli, 1–1½ poll. longi. *Flores* ad apicem pedunculi numerosi, minimi, pedicellati, subumbellatim conferti, erecti; umbellula bractea parva lanceolata instructa; pedicellis $\frac{1}{4}$ – $\frac{1}{3}$ poll. longis, rigidis, inæquilongis, basi bracteolatis, bracteolis setaceis. *Perianthium* pedicello articulatam, ovario obconico adnatam, subcampanulatum, 4-fidum; lobi triangulari-ovati, crassi, patentés, valvati. *Stamina* 4, basi loborum affixa, iisque longiora; filamentis crassis; antheræ parvæ, loculis discretis 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 *Roxburghiaceæ* 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 *Stemona* (*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 flowers. 5. Flower with ovary laid open. 6. Apex of stamen. 7. Pollen. 8. Ovule, longitudinal section. 9. Ovule. *All much enlarged.*



M.S. del et l. fr.

Musa proboscidea, Cliv

PLATE 1777.

MUSA PROBOSCIDEA, *Oliv.*

SCITAMINEÆ. Tribe MUSEÆ.

M. proboscidea, *Oliv. (sp. nov.)*; cauloma pluripedale cylindricum (haud bulboso-dilatatum), foliis ovali-oblongis breviter petiolatis; spadice pendulo longissimo bracteis (fl. ♂ gerentibus) late ovatis obtusis floribus $2\frac{1}{2}$ -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 lævibus 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.



5.



2.



1.



4.



6.



3.



PLATE 1778.

PARNASSIA FABERI, Oliv.

SAXIFRAGACEÆ. Tribe SAXIFRAGÆÆ.

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

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

Folia lamina 3-8 lin. longa. *Flores* $\frac{1}{3}$ 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. OLIVES.

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



A.



1.



3.



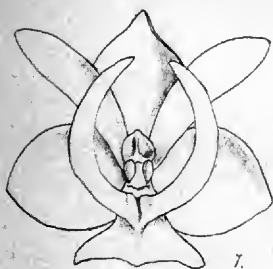
4.



2.



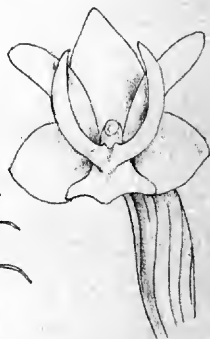
5.



6.



B.



7.

M.S. del, et lith.

A. *Oberonia Clarkei*, Hk. f.
 B. _____ *tenuis*, Lindl.

PLATE 1779.

A. OBERONIA CLARKEI, *Hook. f.*

B. OBERONIA TENUIS, *Lindl.*

ORCHIDEE. Tribe MALAXIDEE.

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

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

Planta 2-pollicaris. *Folia* $\frac{1}{2}$ poll. lata, striata, obtusa v. subacuta. *Scapus* basi folio supremo adnatus; spicæ rachis filiformis. *Flores* rubri, ad $\frac{1}{30}$ poll. lata, labello sepala subæquante.

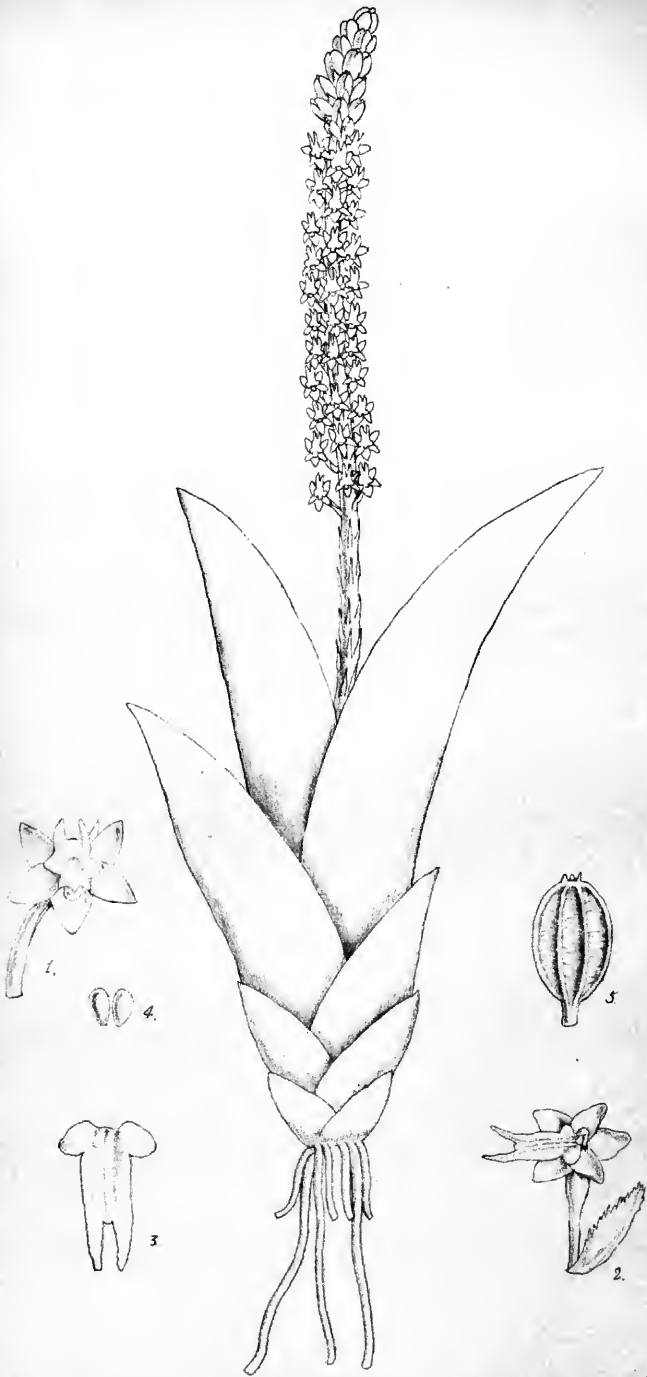
O. tenuis, *Lindl. Fol. Orchid. No. 16*; parvula, foliis brevibus lineari-oblongis, scapo multibracteato, bracteis lanceolatis setaceis flores pedicellatos superantibus, petalis linearibus integerrimis, labelli lobis lateralibus erectis linearibus falcatis petalis æquilongis, terminali brevi dolabriformi.—*Malaxis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

CEYLON; at Hittâwake.—*Thwaites.*

Planta 2–2½-pollicaris. *Folia* $\frac{1}{2}$ – $\frac{2}{3}$ 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.

Oberonia Falconeri, Hk. f.

PLATE 1780.

OBERONIA FALCONERI, *Hook. f.*

ORCHIDÆ. Tribe MALAXIDÆ.

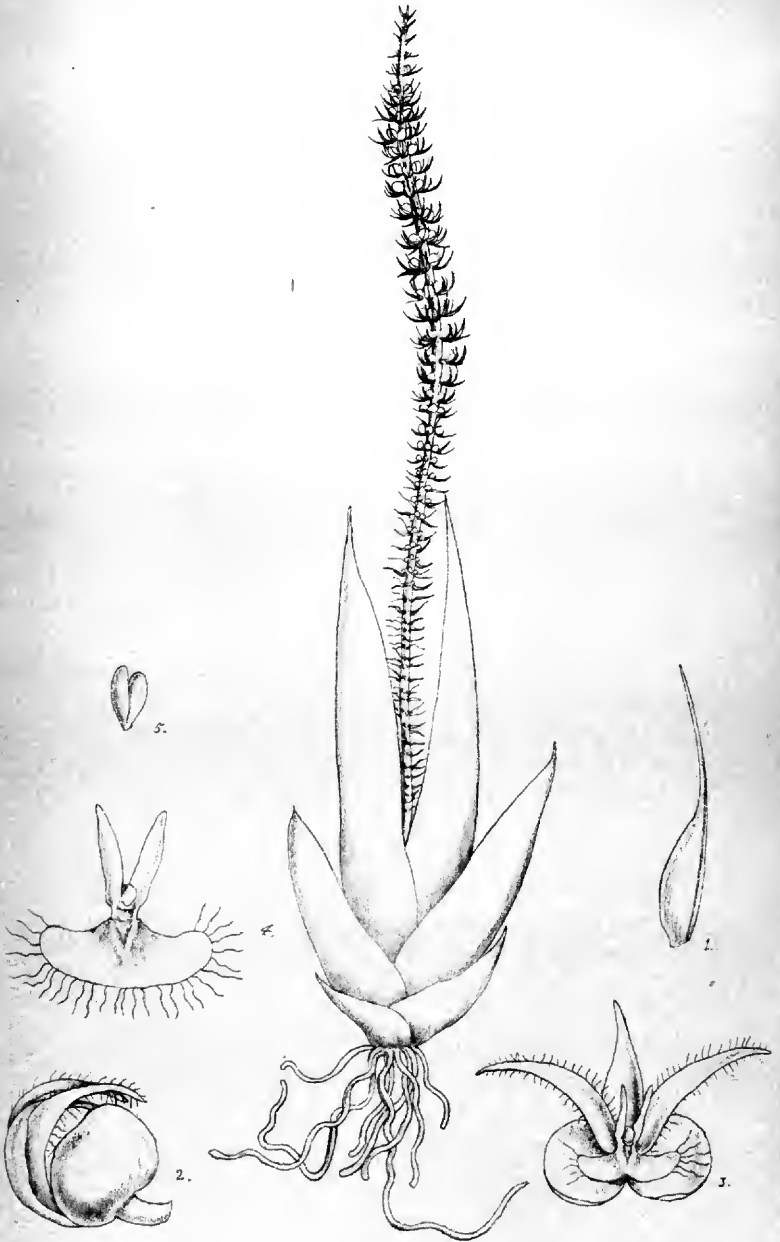
O. Falconeri, *Hook. f. (sp. nov.)*; foliis late ensiformibus acutis subfalcatis, scapo robusto multibracteato, racemo densifloro erecto v. decurvo, bracteis oblongis serrulatis flores subæquantibus, petalis ovato-oblongis obtusis, labello oblongo v. subquadrato lobis lateralibus parvis rotundatis v.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

HAB. TROPICAL HIMALAYA; Kumaon, *Wallich, Falconer*. BEHAR, *J. D. H. CHOTA NAGPORE, C. B. Clarke*. THE CONCAN, *Law, &c.*

Folia coriacea 1–2 poll. longa, $\frac{1}{4}$ – $\frac{1}{2}$ poll. lata, inferiora sensim minora. *Scapus* teres foliis brevior; racemus 3–5-pollicaris, rachi valida. *Flores* ad $\frac{1}{2}$ poll. lati, flavo-virides. *Capsula* 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.*



MS del, et lith.

Oberonia Scyllæ Lindl.

PLATE 1781.

OBERONIA SCYLLÆ, Lindl.

ORCHIDÆ. Tribe MALAXIDÆ.

O. Scyllæ, Lindl. *Fol. Orchid. Oberon*. No. 28; foliis linearibus lanceolatisve acuminatis scapo squarroso-multibracteato bracteis lanceolatis apicibus setaceis flores verticillatos non superantibus, sepalis lateralibus maximis orbicularibus, dorsali lanceolato multo majoribus, petalis lineari-lanceolatis falcato-recurvis ciliatis, labelli parvi lobis lateralibus linearibus erectis, terminali lunato integerrimo crinito. *Malaxis Scyllæ*, 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* $\frac{1}{2}$ – $2\frac{1}{2}$ poll. longa, $\frac{1}{6}$ – $\frac{1}{3}$ lata, inferiora sensim minora. *Scapus* cum racemo 5-pollicaris, bracteis flaccidis hyalinis patulis crinitus. *Flores* pro genere majusculi, incurvi. *Sepala* lateralia indusium floris bivalve efficientia. *Petala* sepalis multo longiora, alabastro incurva et marginibus sepalorum lateralium 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. Pollinia. 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.

ORCHIDEE. Tribe MALAXIDEE.

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

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

Folia 4-7 poll. longa, $\frac{1}{2}$ - $\frac{3}{4}$ poll. lata, fere recta. *Scapus* foliis brevior. *Spica* 3-pollicaris, curva v. decurva. *Flores* $\frac{1}{10}$ 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 v. acutis, scapo subalato, spica elongata gracili decurva, bracteis ovatis dentatis fimbriatis flores minutos sessiles dense imbricatos non superantibus, petalis lineari-oblongis, labello quadrato lateribus integris v. dentatis, apice obscure 2-lobo 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 3-5 poll. longa, $\frac{1}{3}$ - $\frac{3}{4}$ lata, subfalcata. *Scapus* 1-2-pollicaris, folio non adnatus. *Spica* 4-7 poll. longa. *Flores* $\frac{1}{8}$ 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. ZEYLANICA*. 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*.

1 cm. longus; segmenta proventu lanceolata parum inæqualia, glabra. Corolla 35 mm. longa, 12 mm. lata, parum curvata, extus pilosula, alba (Ford); lobi vix 8 mm. longi. Capsula non visa.

HAB. China, Ichang; *Dr. Henry* (nn. 4894, 4215 A).

3. **H. Henryi**, *C. B. Clarke* (*sp. nov.*). Herba 4–6 dm. alta, (nisi corolla) glabrata. Folia usque ad 16 cm. longa, 8 cm. lata, glabra, in pagina superiore a cystolithis sæpe inspersa; petioli superiores alati, basi sæpe (subcymbæformi-) connati. Pedunculi 1–6 cm. longi, subterminales et ex axillis superioribus orti; inflorescentia revera sympodio-dichotoma; sed aggregata, specie sæpe capitata. Bracteæ, calyx, corolla, stamina ut *H. subcapitata*.—Species *H. subcapitata* admodum affinis; magis robusta differt foliis in pagina superiore glabris, a cystolithis inspersis, et petiolis superioribus insigniter connatis.

HAB. China, Ichang; *Dr. Henry* (n. 4215).—C. B. CLARKE.

Dr. Henry says the 'flowers are white and waxy-looking.'

Fig. 1. Calyx and pistil. 2. Tube of corolla, showing insertion of stamens and staminodia. 3. Anther. 4. Ovary. 5. Transverse section of same. *Enlarged.*