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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

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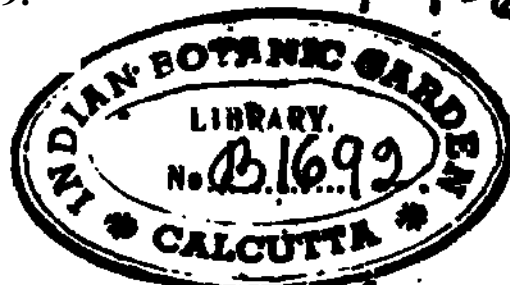
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JONES PLAOTAHU

PLATE 1201.

SENECIO CHEESEMANI, Hook

COMPOSITÆ, Tribe SENECEIONIDEJE SENEIO

*Hootc f. n- sjp. ; arbiiscTLla> rainx
-lanceolatis acuminatis irye&n lax^r
>resse niveo-lanatis, panic'uH ett:
flaxidnloso-toTiientosis, brat óeis e
—2-bx-acteolats, involxiçri l*a.si ar
.embranaceis .glabratis, flor^bixs a
revioribus, pappi seti& sca.be "Talis, a
Northern Xsland, at thie TliaTnes*

pntex 6—15-x>éclafis, "cortice atro,
> atro-porpixreis. *Folia* 3—5-po
bata v. cordato-2-loba, lobis scepe
ribixs apicibus ^laxidxilosis, nervis
3ari. *PcundcnJiXcL* pedalls et ixltrc
nlosis siecitate atro-pTLrpnreis
blbo-purpixraceis ; br'acteis inferior
. *Capitvula*, ^--poll, longa, obconii
nançis Riibnlatin ïnsf.rnnf.ri - flr\

A very distinct species, remarkable for its very large panicles and sweet-scented white flowers. Its position among the New Zealand species is near *8. perdicioides* and *sciadophilus*.—J. D. HOOKER.

Fig. 1. Capitulum and bracteoles. 2. Bracts of involucre. 3. flowers of disk. 4. Ditto of raj. 5. Style arm of disk flower. All enlarged.

When describing *Oorysanthes Gheesemani* (Tab. 1120) I left in doubt certain points of structure, in respect of which I differed from the discoverer of the plant and from the artist whose figure is quoted above. These I am now enabled to clear up by means of specimens in spirits, kindly communicated by Mr. Cheeseman.

In none of these do I find the ligulate process figured, nor anything in its place. The base of the lip is produced downwards on each side of the mesial line into a conical hollow obtuse short spur, between which spurs the two lateral sepals, reduced to subulate ascending processes, are projected as represented in figs. 1 and 2. I find no trace of petals. The lamina of the lip varies much in shape; it appears usually as represented at fig. 1, but sometimes as in *g.* 2, and in a few cases it is reduced at the apex, having no reflected portion.

As a species, *O. Gheesemani* is very clearly allied to the Australian *G. fimbriata*, Br., differing chiefly in the spurs of the lip and absence of petals.

A specimen of *O. (Nemetoceras) maerantha*, Hk. f. (Fl. N. Zealand. 1. 24C, t. LVII.; Handbook, p. 266), sent by Mr. Cheeseman with the above, shows that the petals are inserted at the base of the lip at its outer margin, one on each side[^] apparently on a level with the lateral sepals, which are placed between the petals, that is to say, nearer to the mesial line of the lip. The lip is twisted from the base, so that access to the pollen and stigma is gained from the base of the flower, not as in *Oorysanthes Gheesemani*, by the mouth of the lip. If this arrangement is constant, and prevails through the other plants upon which I established the genus *Nemetoceras*, in the New Zealand Flora, it may indicate the propriety of retaining that genus instead of merging it in *Corysanthes*, as I have done in the 'Handbook of The New Zealand Flora.' The whole genus demands an attentive study from the local observer, in respect both of structure and mode of impregnation.

—J. D. HOOKER.

PLATE 1202.

INGA ACUMINATA, Benth.

LEGUMINOSAE, Suborder MIMOSEAE.

I. **acuminata**, Benth. in Hook. Lond. Journ. iv. 600, glabra v. vix pilosula, foliolis 2-5-jugis ovato-lanceolatis v. ovali-oblongis acuminatis glabris laevibus nitidis, glandulis subsessilibus, spicis subglobosis pedunculatis, bracteis persistentibus brevibus, calyce glabriusculo insigniter acuminate, corolla sericeo-hirsuta calyce longiore.

HAB. Isle of Trinidad, West Indies, Lochhart.

Arborea, praeter corollam glabra v. innovationibus leviter puberulis. Foliorum rhachis cum petiolo 1-3-pollicaris, undique alata, alis cuneatis inter juga ultima saepe 4 lin. latis inter v. infra inferiora angustioribus; glandules inter foliola cujusve paris scutellata subsessilis; foliola ultima 3-4-pollicaria, inferiora minora, omnia tenuiter coriacea, nitidula. Pedunculi in axillis superioribus v. in apicibus ramorum aphyllis 1-2-pollicares. Ovipitula primum depresso-globosa, demum interdum fere ovoidea, 6-9 lin. diametro, dimissa. Bracteffi linea parum longiores. Calyx angustus, striatus, saepe 4 lin. longus. Corolla angusta, 5-6 lin. longa, dense sericeo-pilosa. Stamina ultra 20, corolla duplo longiora, filamentis intra corollam in tuum connatis. Ovarium, glabrum. Legumen ignotum.

The acuminate buds distinguish this species from all others of the species.—G. BENTHAM.

Fig. 1. Flower. 2. Corolla cut open, showing the pistil. 3. Bud.

PLATES 1203-1204.

Balfourodendron Benthianum, Mello.

RUTACEAE, Tribe TODDALIEAE.

Balfourodendron, Mello, gen. nov. Flores hermaphroditi. Calyx parvus 4-partitus, lobis ovatis. Petala 4, squalia, ovato-elliptica, basi breviter angustata, patentia, subinvolutione imbricata. Stamina 4 cum petalis alternantia, inclusa; filamenta breviter linearisubulata glabra; anthera ovato-cordata biloculares longitudinaliter dehiscentes. Discus carnosulus, cupularis, profunde 4-plicatus, basi ovario adnatus. Ova-

rium 4-lobum sessile; stylus terminalis, brevis; stigma simplex indivisum; ovula in loculis gemina, collateralia, pendula. *Fructus* siccus, coriaceus, indehiscens, profunde et late verticaliter 4- (rarius 3-)alatus, alis saepe inaequalibus, rotundatis, nervosis. Semina (in spp. nostris abortiva) * exalbuminosa, elongato-cylindracea v. clavata; testa tenui; embryo cotyledonibus cequalibus plano-convexis; radícula supera' (De Méllö).—*Arborescens. Folia alterna v. opposita, S-foliolata, foliolis integris, pellucido-punctatis*. *Paniculæ scepvus terminates, multifloræ; flores parvi.*"*

B. eburneum, *O. de Méllö mss. in Herb., sp. tunica*, ramulis ultimis cum petiolis atque inflorescentia breviter pubescentibus, foliolis membranaceis oblongo-ellipticis vel oblanceolatis, plus minus acuminatis, basi angustatis, petiolulatis, integris, glabrescentibus, iatermedio lateralibus 683pius paullo majore, ramis floriferis quam folia brevioribus, ramulis patentibus, pedicellis brevibus calyce equilongis v. eodem longioribus, ovario puberolo.—*Esenbeckia Riedeliana*, Engler in Mart. El. Bras. But. p. 142.

HAB. Campinas, Prov. St. Paulo, South Brazil, *Senhor J. O. de Héllö. Eiedel. Sello.*

Foliola 3-5 poll, lon[^]a; petiolus 1-2[^] poll, et petioluli 0-f poll, longi. Flores 1|—2 lin. cHam. . Fructus 2-2[^]. poll, latus.

This plant was sent to the late Mr. Daniel Hanbury by Senhor Joaquim Gorrea de Méllö, and communicated by him to the Kew Herbarium, in order that it might be examined, and, if it proved to be the type of a new genus, published under the name of *Balfourodendron¹ eburneum*. Although it is doubtless the plant of Dr. Engler cited above, yet the consolidation of the carpels and the general form of the fruit (which was unknown to Dr. Engler), justify generic separation from *Esenbeckia*, and indeed remove it technically to the tribe *Toddaliece*. Senhor de Méllö says the seeds are habitually nearly all abortive. He had to open forty or fifty fruits before he could find a single seed. He describes the wood as nearly white, heavy, and of compact texture.—D. OLIVER.

Fig. 1. Flower, *a.* calyx-lobe, *b.* petal. 2. Stamen, with anther, back and front. 3. Ovary and disk, vertical section. 4. Transverse section of ovary, with surrounding disk.

¹ ' As I wished to dedicate my plant to Professor Balfour, I would have preferred to call it *Balfouria* or *Huttonia*; but the former name having already been given by R. Brown to a genus of Apocynæe, and the latter by Stenberg, to a fossil Cryptogam, I could not think of any other name which should recall that of the eminent Professor but *Balfourodndron*'—Senhor de Mello, in letter to Mr. Hanbury, 1874.

PLATE 1205.

SPHINCTACANTHUS GRIFFITHII, Benth.

ACANTHAGBII, Tribe JUSTICEII.

Sphinctacanthus, Benth., in Benth. et Hook. Gen. PL ii. 118.

S. Griffithii, Benth. *lc* species unica.

HAB. — Mishmee in East Bengal, Griffith.

Suffrutex elatior, glaber. *Folia* ovali-elliptica, acuminata, membranacea, 3-6 pollicaria, in petiolum longiusculum contracta. *Paniculi* terminalis, e spicis 3 v. 5 laxis simplicibus 3-4-pollicaribus composita. *Bracteae* minutae. *Flores* oppositi v. suboppositi, sessiles v. brevissime pedicellati, ad axillas bractearum solitarii. *Calyx* alte 5-fidus, linea paullo longior. *Corolla* tubus ovoideo-inflatus, fere 3 lin. longus, ad faucem constrictus; limbi labia ad 2 lin. longa, posticum eastivatione interius erectum, concavum, apice anguste breviterque 2-lobum; anticum subquadratum, 3-partitum, lobis angustis linearibus reflexo-patentibus aequalibus. *Stamina* 2, ad faucem affixa, erecto-conniventia, labio postico breviora, filamentis brevibus basi transverse affixis pilosulis; antheris oblongis, 2-locularibus, loculis parallelis aequalibus muticis contiguis; staminodia nulla. *Discus* cupularis. *Stylus* filiformis, apice leviter incrassatus, obtusus, integer; ovula in quoque loculo 2. *Capsula* ignota.

This plant bears the manuscript name of *Justicia orohioides*, but can only be retained in that genus if it be restored to its original comprehensive extent, and the specific name appeared scarcely justified by the aspect of the specimens.—Q. BENTHAM.

Fig. 1. Flower. 2. Corolla cut open.



PLATE 1206.

EXOCARYA SCLEBIOIDES, Benth.

GTPERACBIE, Tribe HYPOLTTRE.

Exocarya, Benth. gen. nov. *Spiculce* parvulro, umbellato-paniculatae, floribus 1-2 summis Lermaphroditis, 2-3 inferioribus masculis.

Glumes nudiqne imbricate, infimo plurimre vacuae. *Flores* compressi. *Squamae* hypogynae 2 exteriores (bracteolae?) laterales subopposito complicate carinatae, 2 interiores planae v. concavae, glomse parallelae. *Stamina* 3. *Stylus* basi dilatatus, ramis stigmatosis (stigmatibus) 2 filiformibus. *Nux* e glumis exserta, styli basi dura continna coronata.—Caulis foliatus. Inflorescentia fere *Fimbristylis*, bracteis 2-3 exterioribus longis foliaceis.

E. scleroides, Benth., species unica.—Cladum scleroides, F. Muell. *Fragr. ix. 12.*

HAD. New South Wales, northern districts, and adjoining districts of Queensland, *Leichhardt, O. Moore, WUcox.*

Caules e rhizomate repente 2-pedales, tenues, triquetri, undique foliati. *Folia* graminea, longa, plana, 1-2 lineas lata, in acumen longe subulatum attenuata, vagina clausa. *Panicula* laxa, decomposita, subumbellata, ramis valde inaequalibus, longioribus 4-6 pollicaribus, interioribus abbreviatis, omnibus pedicellis filiformibus, primariis basi confertis v. parum distantibus. Bractee involucrantibus exteriores 2-3 longe foliaceae, inflorescentiam tamen raro superantes, interiores parvas, setaceae. *Spicula* pedicellate, oblonga, fusca, 1-1¹ lin. longa. *Glumae* obtusae, inferiores vacuae ad 6, gradatim minores. *Flores* saepius ad 3, inferiores masculi, 1 v. 2 superiores hermaphroditi, omnes ceterum similes, squamis hypogynis gluma parvis brevioribus. *Nux* ovoideo-oblonga, obtusissima ad 2 lin. longa, omnino exserta, basi glumis emarcedis stipata; styli basis incrassata in ovario distinctissima, in nucem matura continna fere oblitterata.

It was probably on account of the general resemblance of the nut to that of *Cladum* that E. Mueller referred this plant to the latter genus, although the structure of the flower, which he had overlooked, is so different. In technical characters it approaches very nearly to *Mapania* (*Paiulanopijillum*) and is, as it were, intermediate between that and *Hypolytrum*, differing from the former in the interior flat hypogynous scales being 2 only, not 4, and from the latter in the presence of those two; but the elegant slender habit, the inflorescence, the minute spikelets and exserted nuts give it a very different aspect from either genus.—G. BENTHAM.

Fig. 1. Two spikelets, one in front. 2. Hypogynous scales. 3. Flower, one hypogynous scale removed so as to show the pistil and stamens. 4. Ovary, longitudinal section. 5. Fruit, longitudinal section showing the seed. 6. Albumen, longitudinal section showing the basal embryo.

PLATE 1207.

MIMOSA INVOLTCBATA, *Benth.*

LEGUMINOSJ., Suborder MIMOSEJ.;

M. involncrata, *Benth. in Hook. Journ. Bot.* iv. 386, fruticcsa, inennis, floccoso-tomentosa et plumoso-pilosa, pinnis unijugis, foliolis multijugis linearibus incanis, capitulis depresso-globosis bracteis lanceolatis involucratis, floribus 4-meris 4-andris.

HAB. SouthJBrazil,-*Sello.*

Frutex ut videtnr humilis, basi radicans, ramis floridis ^-1-pedalibns parum ramulosis. *Tomentum.* in parte superiore et in pedunculis densnm, pilis basi plnmosis intermixtum, in parte inferiore breve, scabrnsm, incanum. *Stipulce* 2-3 lin. long®, rigidul©, striatss, setaceo-acuminatiB, incano-tomentellse, margine ciliolatae. *Petiolus* communis vix stipulis eequilongus; pinns 1-1£ pollicares, stipellis minutissimis. *Foliola* 12-15-juga, 2\$-3 lin. longa, rigidula, obtusiuscula, margine minute serrato-ciliata, basi obliqua, ntrinque tomento stellato cana, subtus obscure 1-2-nervia. *Pedunculi* in axillis superioribus semipollicares. *Capitula* cernua, 6-8 lin. diametro. *Bracteae* involucris pluriseriatee, arete imbricatsB, lanceolateB, interiores 4-5 lin. long©, pilis longis mollibus lanateB; exteriores breviores, cano-tomentos89, striatae, ciliatro. *Calyx* parvus, pilis longiusculis tenuibus ciliatns. *Corolla* tnbulosa, 2J lin. longa, apice sericeo-pilosa, csBterum glabra, 4-fida. *Stamina* 4, bracteas parnm excedentia. *Legumen* ignotum.

The peculiar inflorescence distinguishes this species from all others of this extensive genus.—G. BENTHAM.

Fig. 1. An inner bract of the involucre. 2. Flower. 3. Anther, back and front view. 4. Ovary and style, longitudinal section.

PLATE 1208.

ANCYLANTHUS MONTBIBOI, *Oliv.*

RUBUCEJ., Tribe YANGUEBIE^.

A. Honteiroi, *Oliv.*, frutex 4-pedalis, ramulis glabratis cinereis, iiodis hirsutis, foliis parvis late ellipticis ovatisve obtusis basi rotundatis

utrinque hirtopubescentibus, breviter petiolatis, stipulis late ovato-rotundatis abrupte apiculatis, floribus axillaribus solitariis pedunculatis hirtis citrino-flavidis plus minus decurvis, calycis lobis oblongo-lanceolatis obtusiusculis tubo paullo longioribus, corollas lobis ovato-lanceolatis acutis intus glabris apice appendice subdorsali brevissima subulata hirta apiculatis.

HAB. Delagoa Bay, J*. *J. Monteiro*.

Bamuli ultimi saepe oppositi patentim divaricati, rigidiusculi, graciles. *Folia* 1-1 poll, longa 1-2 poll, lata; petioli 1 lin. longus. *Flores* 1-1 poll, longi; calyx 1/2 poll, longus; pedunculi 2-3 lin. longi. *Antherae* ore tubi corollae insertae sessiles, oblongo-lineares. *Ovarium* 2-loculare; stylus breviter exsertus; stigma cylindraceo-calyptiforme apice obtusi 5-lobulatum et basi intus sum.—D. OLIVER.

Fig. 1. Flower. 2. Corolla laid open. 3. Ovary, transverse section. 4. Stigma (which should not be distinctly sulcate).

PLATE 1209.

SCYTANTHUS LAURIFOLIUS, *T. Anders.*

ACANTHACEAE, Tribe JUSTIGIEA.

Scyanthus, *T. Anders.*; *Benth. et Hook. Gen. Pl. ii. 1093.*

S. laurifolius, *T. Anders, l.c. species unica.*

HAB. West tropical Africa, Old Calabar, Gaboon and Cameroons rivers, *O. Mann.*

Frutex, ad fl. Calabar 4-5 pedalis, ad fl. Cameroon 8-12-pedalis (*G. Mann*), undique glaberrimus. *Folia* ovali-elliptica, apice breviter et abrupte acuminata, basi supra petiolum rotundata v. cuneata, coriacea, nitida, cujusve pars valde inaequalis, majore 3-5-pollicari, altero duplo triplove minore proportione latiore ovato v. interdum subcordato. *Racemus* simplex, terminalis v. mox oppositifolius v. pseudo-axillaris, demum 6-10-pollicaris. *Bractea* minima. *Flores* secus rachin sparsi, brevissime pedicellati. *Calyx* late campanulatus, apertus vix linea longior, lobis 5 triangularibus. *Corolla* rubra, tubo a basi postice subgibba declinato fere cylindraco 3/4 lin. longo; limbus 5-lobus, sub-2-labiatus, lobis rotundatis, 2 posticis brevioribus antice longiore abscissione extimis, lateralibus antice parum brevioribus abscissione intimis. *Stamina* 4, didynama, infra medium tubum affixa, inclusi, filamentis inferne crassiusculis villosulis; antherae oblongae, 2-loculares, loculis parallelis discretis saepe muticis j staminodium

posticum parvum, clavatum. *Discus* nullus. *Stylus* basi crassiusculus, supra ovarium ovatum carnosum subarticulatus, apice integer* ovula in quoque loculo ovarii 2. *Gapsula* ovata v. oblonga, crassa, demum indurata, 4-6 lin. longa, basi obtusa nee in stipitem contracta. *Semina* immatura ovoidea, valde rugosa.

The specimen figured belongs to the smaller form from the Old Calabar river; the taller shrub from the Cameroons has the leaves less acuminate, more coriaceous, and the calyx-lobes narrower, but still appear to belong to one species.—G. BENTHAM.

Fig. 1. and 2. Flower. 3. Corolla cut open. 4. Anther, front and back view. 6. Pistil, the ovary cut longitudinally.

PLATE 1210.

GASTBANTHUS SCHLECHTENDALII, Moritz.

ACANTHACEAE, Tribe Jusnieae.

Oastrapanthus, Moritz; *Benth. et Hook. Oen. PL* ii. 1107.

O. Schlechtendalii, Moritz, *PL Exs. species unica*.

HAB. Venezuela, damp shady places at the hacienda Camburas, near Las Lajas, between Caraccas and La Victoria, *Ernst*; near the Colony of Tovar, *Moritz*, n. 1724, *Fendler*, n. 813 (in flower) n. 2034 (in fruit).

Frutex elatior (*Ernst*) ramis foliisque minute puberulis glabrescentibus. *Folia* ovali-elliptica, acuminata, 6-10-pollicaria, membranacea, intrinsece viridia, basi in petiolum longiusculum contracta. *Spices* intra folia summa v. in axillis superioribus sessiles v. brevissimae pedunculatae, densiflorae, glanduloso-villosae, 8-10-pollicares. *Bracteae* oppositae, in spica florida breviter eminentes, in fructifera sub villis reconditae. *Flavae* sessiles v. breviter pedicellatae, ad axillas bractearum subterni, pedunculo communi brevissimo fulti. *Calyx* 5-6-lin. longus, segmentis 5 linearibus subaequalibus, pilis longiusculis glandulosis demum rufescentibus vestitus. *Corolla* lutea, rubro-vittata, ad 9 lin. longa, glabra, tubo basi breviter supra ovarium constricto, dein ventricosoinflato, apice contract*); limbus brevis, labio postico assivatione interiore anguste ovato integro 1[^] lin. longo, anterioribus lobis 3 brevissimis latis obtusis. *Stamina* 2, medio tubo affixa, demum exserta; antheras* oblongo-lineares, 1-loculares, medio dorso affixae; staminodia nulla. *Discus* annularis, stylus filiformis, apice integer. *Gapsula* oblonga,

calyce longior, basi in stipitem solidum contracta. *Semina* 4 v. abortu pauciora, orbiculata, plano-compressa, foveolato-rugosa.—G. BENTHAM.

Fig. 1. Flower. 2. Anther, back and front view. 3. Capsule.

PLATE 1211.

OBEACANTHUS MANNII, *Benth.*

ACAJPHACEJS, Tribe JUSTICIEÆ.

Oreacanthus, *Benth. in Benth. et Hook. Oen. Pl. ii. 1104.*

O. Mannii, *Benth. 1. c. species unica.*

HAB. Gameroons Mountains, West Tropical Africa, at an elevation of 7,000 feet, *O. Mann.*,

Herba elata, 8-12-pedalis (*Mann*), præter paniculam puberula v. glabrescens. *Folia* ovali- y. oblongo-elliptica, acuminata, majora semipedalia, membranacea, in petiolum longiusculum contracta. *Pedunculi* tenninalis, laxepyramidata, 6-8-pollicaris, glandulo-pubescent. *Bracteae* primariae parvae, sub cymarum ramis lineam longas v. minores. *Cymae* oppositae, pedunculatae, laze dichotomae, pluri- saepius multiflorae. *Flores* omnes pedicellati. *Calyx* 2 lin. v. demum 3 lin. longus, segmentis 5 angustis subsequibus glanduloso-pilosis. *Corolla* glabra, tubo brevi, fauce ampla subcampanulata calycem cequante; limbi labia tubo longiora, inter se squilonga, posticum sestivatione interius, anguste oblongum, integrum, erecto-patens; anticum patens, alte 3-fidum, lobis planis. *Stamina* 2, prope basin tubi affixa, longe exserta, filamentis filiformibus; anthera parva, oblongae, 1-loculares, medio dorso affixae, apertra late membranaceae; staminodia nulla. *Discus* cupularis. *Stylus* filiformis, apice integer. *Capsula* oblonga, calyce triplo longior, basi in stipitem solidum longe contracta. *Semina* 4 v. abortu pauciora, compressa, crassiuscula, rugosa.—G. BENTHAM.

Fig. 1. Flower. 2. Anther, back and front view. 3. Capsule. The filaments are often longer and more slender than represented in the plate.

PLATE 1212.

EVANDRA ABISTATA, R. Br.

CYPERACEA.; Tribe RHYNCHOSPORE-E.

E. aristata, R. Br. Prod. 239, caule foliato, spiculis laxe paniculati, glumis aristatis.

HAD. King George's Sound and adjoining districts, South-west Australia.

Catties e rhizomate crasso 2-3-pedales, obtuse triquetri. *Folia* secus caulem distantia, elongata, angusta ac plana, margins scabra, vagina clausa nigricante subpollicari; radicalia vagina longa aperta. *Panicula* longa, semipedalis ad pedalis, laxa, secunda, pedunculis filiformibus ad axillas bractearum fasciculatis, aliiB spiculam unicam aliis spiculas 2-3-ferentibus. *Bracteae* inferiores foliaceae longiusculae, superiores parvas glumaceae, omnes subulato-acuminatae v. aristatae. *Spiculae* oblongae, f-f-pollicares, 2-florae. *Ghimo*B undique imbricatae, vacuab 12-15 v. plures, extimab minimaB, coeterab gradatim majores, fuscaB v. nigricantes, rigidae, acutissimae, pleraaque aristatae, superiores margine scariose; summae floriferae 2, inferior vacuis interioribus conformis nisi margine latius scariosa, superior paullo brevior, mutica, obtusa, tennis et hyalina. *Flos* uterque hermaphroditus v. inferior abortu masculus. *Stamina* 16-20 v. interdum plura; filamenta brevia; basi cum ovarii basi breviter connata; anther© lineares, glumas subaequant, appendice lineari. *Ovarium* basi cum filamentis confluent, superne liberum pubescens. *Styli* rami stigmatosi v. stigmata 8. *Nux* matura ad huc ignota.—G. BENTHAM.

Fig. 1. Upper hermaphrodite flower and flowering glume. 2: Anther. 3. Pistil, the adnate base of the filaments removed.

PLATE 1213.

EVANDRA PATTCIFLORA, R. BR.

CYPERACEA.; Tribe RHYNCHOSPORE-E.

E. pauciflora, R. Br. Prod. 239, foliis ad basin caulis confertis, spiculis ad apicem caulis 2-3 sessilibus, glumis acutis acuminatisve nec aristatis.

HAB. King George's Sound, South-west Australia, *B. Brown, Drummond.*

Caules 2-3-pedales, tenues, prater basin aphylli. *Folia* radicalia v. ad basin caulis conferta, praelonga, angusta, basin versus in vaginam longam apertam dilatata. *Spiculce* in speciminibus visis 2 v. 3, in capitulum seu fasciculum terminalem confert® sessilesque. *Bractem* involucrantem 2, foliaceam, angust®, valde inequales, capitulo longiores, basi dilatat®, una interdum 3-4-plo longiore suberecta, capitulo tunc sublaterali. *Spiculce* semipollicares in *E. aristatce* subsimiles, sed glum® non arcitatus®, flores 2 v. 3 semper solo hermaphrodito. *Stamina* in spiculis examinatis nunc vix 15 nunc ultra 20. *Ovarium* glabrum etsi stylus leviter papilloso-pubescent.—GL BENTHAM.

Fig. 1. Spikelet. 2. Flower. 3. Anther. 4. Pistil. 5. Ovary, longitudinal section.

PLATE 1214.

MADAROSPERMA TRAILLIANUM, *Benth.*

ASCLEPIADEJE, Tribe CTNANCHEJE.

Madarosperma, *Benth. in Benth. et Hook. Gen. Pl. ii. 1241.*

Sl. Traillanum, *Benth. Z. c, species unica.*

HAB. Amazon province, North Brazil, in the gap on the Rio Negro near Barra, and at San Gabriel da Cachoeira, *Spruce, n. 1361*, and 2389; in the gap on the Rio Padawiri, *Traill.*

Caulis volubilis, ramosissimus, pubescens, succo lacteo, supra frutices alte scandens. *Folia* opposita, breviter petiolata, ovata, utrinque puberula v. demum supra glabrata, majora sesquipollicaria, ramealia multo minora, floralia saepius vix semipollicaria. *Flores* parvi, flavovirentes, in cymulis v. fasciculos axillares sessilesque v. brevissime pedunculatos dispositi. *Calyx* 5-partitus, pubescens, segmentis suborbiculatis margine membranaceis semilinea brevioribus. *Corolla* urceolata, glabra, linea paullo longior, tubo subgloboso, fauce contracta, lobis 5 oblongis in alabastro angustissime dextrorsum obtegentibus in rostrum erectum conniventibus, demum recurvo-patentibus, intus papillosis. *Corona* squamæ 5, basi dilatata, tubo stamineo affix®, erectæ, antheris fere ad medium adnatas, superne liber®, ligulatis, subrecurvis, gynostegium superantes. *Stamina* basi corollæ affixa, filamentis in tubum brevissimum connatis; anther® membrana inflexa terminat®, auriculis baseos prominulis. *Pollinia* in quoque loculo solitaria, oblonga, apicem versus affixa, pendula. *Stigma* eras-

msculum, vertice subplanum. *Folliculi* oblique suborbiculares, 5-6 lin. longi et lati prater rostrum obliquum 2-3 lin. longum. *Semina* pauca, obovata, plano-compressa, margine attenuate) grosse dentata, coma destituta.

The habit and small flower of this plant are nearly those of *Metastelma*; but besides the form of the corolla the genus is distinguished from nearly the whole order by the seeds absolutely without any coma.—G. BENTHAM.

Fig. 1. Flower-bud. 2. Flower expanded. 3. Corona. 4. Pollen-masses. 5. Fruit. 6. Seed.

PLATE 1215.

CATOPHERIA SPICATA, *Benth.*

LABIATE, Tribe OCIMOIDEÆ.

Catopheria, *Benth. in Benth. et Rook. Gen. Pl. ii. 1173.*

C. Spicata, *Benth.* foliis amplis basi in petiolum angustatis, spica oblonga v. elongata multiflora, corolla calyce subdimidio, genitalibus plus duplo longioribus.—*Orthosiphon spicatus*, *Benth. in DC. Prod. xii. 53.*

HAB. New Grenada, Parroquia de Carmen, *Purdie*, Convention in the same province of Ocaña, *Schlim. n. 714.*

Caules herbacei (v. suffruticosi?) erecti, elati, tetragoni, pubescentes v. demum glabrati. *Folia* pefciolata, ovata v. elliptica, acuminata, eroso-subdentata, basi breviter in petiolum decurrentia, pube brevi scabriuscula, majora 8-10-pollicaria. *Spica* terminalis, densa, 3-6-pollicaris supra folia summa pedunculata. *Folia floralia* bracteffiformia! colorata, acumine tereti pubescente terminata floribus s»pius breviora. *Calyx* subinflato-tubulosus, puberulus (rubescens?), per anthesin semipollicaris, fructifer deflexus fere pollicaris, dente postico tubo fere ffiquilongo ovato obtuso marginibus reflexis vix v. non decurrentibus lateralibus cum anticis in labium inferius brevissime 4-dentatum coalitis. *Corolla* tubus calyce subinclusus; limbus vix dimidio lonrior" labio postico latissimo obscure 4-dentato, antico integro leviter concavo' *Stamina* corollam duplo excedentia v. paullo longiora- anther© ovate, loculis primum subparallelis connectivum marginantibus apice confluentibus, demum explanatis. *Discus* annularis, fere cupularis minuto-dentatus. *Stylus* apice subgloboſo-capitatus vix emarginatus' *Nuculas* compressinsculaB, ISBVOS.

Besides the two species described in *DC. Prod.*, as the section *Goto*, *ferta* of *Orthosiphon*, there is a third gathered by Ghiesbrecht in Chiapa

(Mexico), *Q. chicupen&is*, A. Gray, with the dense spike of *C. spicata*, but with shorter broader flowers, and very much longer stamens. The leaves are also more rounded at the base and tomentose-pubescent underneath.—O. BENTHAM.

Fig. 1. flower. 2. Anther before opening, and back view when open. 3. Calyx. 4. Nutlet.

PLATE 1216.

PABPHA ALPINA, B. Br.

CTPERACEJE, Tribe RHTNCHOSPOBEJ.

C. alpina, B. Br. *Prod.* 230.

HAB. Mountains of Tasmania, Victoria, and New Zealand, chiefly at an elevation of from 4,000 to 5,000 feet.

• *Caules* e basi perenni 4-6-pollicares v. in speciminibus vegetioribus subpedales. *Folia* ad basin caulis eo multo breviora, rigidula, obtusa, plana v. concava, J-1J lin. lata, vagina lata membranacea aperta v. folii intimi breviter clausa. *Inflorescentia* breviter corymbosa, nunc in capitulum conferta, nunc magis evoluta, sesquipollicaris, fasciculis inferioribus breviter pedunculatis. *Bractee* involucrantes 2 exteriores foliaceae, inflorescentiam saepius ffringentes v. breviter superantes; bractee interiores parvae, glumaceae. *Spiculce* 1-florae, compressae, lanceolatae, vix 4 lineas excedentes in speciminibus minoribus, 6-7 lin. longae in vegetioribus. *Glumce* distichae, saepius 4, tenuiter membranaceae, fere hyalinae etsi rigidulae, praeter costam enerves, 2 extimae vacuae breves, tertia maxima pariter vacua, quarta florifera ea paullo minor. *Setae* hypogynae 6, post anthesin auctae, plumosae, glumam superantes, demum recurvo-patentes sub fructu persistentes pappum basalem simulantes. *Stamina* 3. *Ovrium* styli basi incrassata cum co continua terminatum. *Stigmata* 3, filiformia. *Nux* ovoidea, fere 2 lin. longa, styli basi rigida parum incrassata coronata.

The genus *Carpha*, as established by Brown, included five Australian species, which, as he suggested, were not very closely allied. It has since been variously extended or reduced, and F. Mueller has proposed to merge it into *Chcetospora*. In the Flora Australiensis I have thought it more natural to limit it to the species here figured, one closely allied to it from the extreme south of America, and a New Caledonian one with a large panicle of small spikelets.—G. BENTHAM.

Fig. 1. Spikelot. 2. The same, the small outor glumes removed. 3. Pistil. 4. Emit,

PLATE 1217.

NOTOCHASTE HAMOSA, *Benth.*

LABIATE, Tribe STACHYDEJS.

Notochaste, *Benth et Hook. Gen. PL ii. 1215.*

N. hamosa, *Benth. in Wall. Pl. As. Bar. i. 63, species unica.*

HAB. Nepaul, *Wallich*; East Himalaya, *Griffith*; Sikkim at an elevation 3f 4,000 to 8,000 feet, / *D. Hooker.*

Gaulis herbacens, erectus, bipedalis et ultra, ramosus, obsolete tetragonus, brevissime pubescens. *Folia* longe petiolata, 3—5-pollicaria, ovata, acuminata, serrato-crenata, basi oblique rotundato-cuneata, venoso-rugosa, utrinque viridia, adulta glabriuscula, juniora subtus tomentosa; floralia conformia. *Verticilli* axillares, dense multiflori, fructiferi globosi, calycem aristis bracteolisque similibus corollas superantibus dense glomerati, petiolo multo breviores. *Calyx* tubulosus, 5-nervis, aequalis, absque aristis 3-3|-lin. longus, dentibus 5 rostratis membranaceis concaviusculis, costis dorsalibus sub apices dentium in aristas longas subulatas rigidas apice uncinatas productis. *Corolla* purpurascens, tubo incluso intus exannulata; limbus aristis calycinis brevior, 2-labiatus, labio postico erecto concavo galeato, antico patente 3-fido, lobis parum inaequalibus. *Stamina* 4, didynama anticis longioribus, sub galea ascendente; antheraB per paria approximate, 2-loculares, loculis divaricatis demum subconfluentibus. *Discus* squalis. *Stylus* apice 2-fidus, lobis subulatis subsqualibus. *Nuculce* anguste oblongae, tetra, apice obtusae subtruncatae, glabro. —G. BENTHAM.

Fig. 1. Flower. 2. Calyx, cut open, seen from inside. 3. Anther, after the pollen is shed. 4. Summit of the style.

PLATE 1218.

DACRYDIUM WESTLANDICUM, *T. Kirk.*

GONIFERAE, Tribe TAXINEAE.

D. westlandicum, *T. Kirk*, ramulis sterilibus gracillimis pediculis, foliis pollicaribus laxè imbricatis erecto-patentibus subulatis

compressa decurrenti-adnatis, ramulis fructiferis strictis foliis brevissimis carinato-trigonis arcuatis imbricatis obtusis, nuculis minutis oblongis.

New Zealand, Middle Island; in swampy land at Hokitika, Westland, *Thos. Kirk* (White silver pine).

. Mr. Kirk says of this pine, 'In Westland I met with a new *Dacrydium*, with the young leaves resembling those of the Kahikatea (*Podofarpus dacrydivides*), the old those of a very fine state of *Dacrydium Colensoi*, Hk. f. I have only immature fruit. The timber is different from any other New Zealand kind, and is valued for its durability. It is found in swampy land, and called the white silver pine; it appears to have been confounded with the Kahikatea.'

The only New Zealand *Dacrydium* which the specimen I possess of this plant at all resembles is the Rimu (*D. cupressinum*, Don), which has similar but more rigid leaves on the barren branchlets, and very much stouter fertile branchlets, with more or less spreading leaves.—
J. D. HOOKER.

1. Leaves of barren branchlet. 2. Apex of fertile branchlets. 3. Fruit. All enlarged.

PLATE 1219.

DACBYDIUM KIRKII, *F. Muell*

CONIFERS, Tribe TAXINEJE.

D. Kirkii, *F. Muell in BO. Prodr.* xvi. pars 2, 495. Arborea, ramulorum sterilibus foliis pollicaribus et ultra linearibus leviter falcatis subacutis planis patentibus v. erecto-patentibus, ramulis fertilibus cum foliis subcylindratis foliis brevissimis obtuse carinato-trigonis densissime imbricatis, nuculis apices versus ramulorum axillaribus oblongis compressis striatis apice rotundatis.

New Zealand, Great Barrier Island, alt. 2,000 ft., *T. Kirk*; Manukao harbour, and Tatirangi range, *T. F. Cheeseman*.

Arbor dioica, 40-60-pedalis, trunco 2-3 ped. diametro; cortice rufo-brunneo, ligno rufo; rami patentes demum ascendentes. *Folia* ramis junioribus non floriferis 1-1½ poll, longa, disticha v. sparsa, in petiolum brevissimum semi-tortum angustata, coriacea, mutica, nitida, costa supra distincta subtus obscura, marginibus tenuiter cartilagineis; ramuli fructiferi apicem versus arboris densissime fastigiati dichotome ramosi, foliis parvis opacis densissime imbricatis' et appressis tecti. *Amenta*

§ tenninalia, sessilia, solitaria, £-£ poll, longa, squamis laxe imbricatis ; 9 terminalia, solitaria, £-£ poll, longjt, e sqnamis fmctiferis 3-5-tumidis. *Nuculce* 3-5 compress®, anglis rotundatis, obscure striatae.

This tree somewhat resembles *Cunninghamia lanceolata*, but that its habit and foliage give it a softer appearance. Very old trees on the mountains entirely lose their large leaves, but on the lowlands they are retained sometimes to the height of 40 feet, and occasionally both kinds of leaves and fruit may be seen on the same branch. A small tree, producing male catkins and entirely without its early leaves,, was observed near the summit of Munga hills.—*J. Kirk*.

This noble species is most nearly allied to *D. Colensoi*, but differs so conspicuously in the size of the foliage that there can be no difficulty in recognising it.—*J» D. Hooker*.

Fig. 1. Sterile branch and leaves. 2. Enlarged view of fertile do. 3. Female catkin. 4. Nucules. All but No. 1 enlarged.

PLATE 1220.

LAMPBOTHAMNUS ZANGUEBARICUS, *Hiern*.

RUBIACEJB, Tribe ALBERTE^J.

Lamprothamnus, *Hiern*. in *Oliv. Fl. Trop. Afr.*, vol. iii. p. 130 *in&d*.

Calyx basi calyculatus tubo urceolato breviter et late lobulato, lobis ffistivatione imbricatis. ' *Corolla* rotata, tubo cylindrico sursum leviter dilatato, limbo 6-7-partito, lobis ovali-oblongis patentibus cestivatione contortis. *Stamina* 6-7 vserta, fauce inserta; filamenta brevia; anther® dorso prope basin affixse, angusts lineares, recurvce. *Discus* annularis carnosulus. *Ovarium* bi- (rarius uni-)loculare; stylus elongato-clavatus exsertus superne puberulus; stigma minute bifidum; ovula solitaria, pendula. *Fructus* ignotus.—*Frutex* y. arborcscens. *Folia* *opposita oblongo- vel elliptico-lanceolata* v. *-ovata obtusiusculd, tenuiter coriacea, vetiosa, nit&iitia*. *StipuliB coriacee^ deltôtdeoe, acutçe*. *Flores* *mediocres, albiy fragrantef in corymbis umltiflora densis subterminalibus dispositi*.

L. zanguebaricns, *Hiern* 1. e. *sp. unica*.

HAB. Dar Salam, Zanzibar, *Dr. Kirk*.

Folia basi rotundata v. plus minus cordata, brevissime petiolata, 2-3^-poll. longa, 1-2-poll. lata. *Inflorescentia* folia vix superans 1½, 2i, poll. lata. *Corolla* tubo £-poll. longo, lobis § poll, longis.—*D. OLIVER*.

Fig. 1. Expanded flower. 2. Diagram showing the contorted aestivation. 3. An then. 4. Ovary and calyx-tube, in vertical section.

•PLATE 1221.

CYCLONEMA SPIKTESCENS, *Oliv.*

VERBENACEÆ.

C. spinescens, Oliv. Frutex p spinescens; rami pilis brevibus patentibus hirto-pubescentes, foliis late ellipticis vel ovatis v. rotundatis obtusis mucronatis utrinque hirto-vel subvelutino-pubescentibus subsessilibus, spinis supra-axillaribus rectis patentibus folio brevioribus, pedunculis axillaribus multifloris rectis apicem versus, bibracteolatis, bracteolis anguste linearibus, calyce campanulato 5-fido piloso lobis ovatis acatis, corollis tubo calycem paullo superante, labio superiore bipartite, inferiore tripartite, lobis obovatis apice obtusis v. late acutatis, staminibus exsertis adscendentibus, ovario glabro.—*Journ. Linn. Soc.* xv. p.-96.

HAB. Lake Tanganika or region round about, *Commander Cameron.*

Folia 1-1½ poll, longa. *Flares* 1-1½ poll, diam; calyx ½-½ poll, longus.—D. OLIVER.

Fig. 1. Flower, side and 2. Front view. 3. Anther. 4. Calyx.

PLATE 1222..

FICUS ROBOHTELSS, *Oliv.*

ARTOCARPACEÆ, Tribe FICEA.

F. NoronhaB, Oliv., arborescens, glabra, rami crassi annulati, foliis petiolatis obovato-ellipticis v. ellipticis obtusis basi obtusis v. anguste subcordatis, venis primariis lateralibus utrinque 6-7, integerrimis nervibus, stipulis caducis oblongo-lanceolatis ovatisve acuminatis, receptaculis depresso-globosis glabris laevibusque sessilibus solitariis, bracteis 2-3 basalibus coriaceis late rotundatis, floribus stipitatis sessilibusve, perianthii segmentis concavis obtusis, stigmatibus ut videtur bifido papillose

* HAB. Fernando Noronha, St. Michael's Mount (all over the upper part of the rock, reaching 30 ft. in height; aerial roots like those of the Banyan), *Mr. Moseley (Challenger Expedition).*

Folia 3-6 poll, longa, tenuiter coriacea glaberrima, nervo medio subtus prominente; petiolus J-f poll, longus. *Stipulce* 1£ poll. longro. *Beceplaoula* £-£ poll. diam.—D. OLIVER.

Fig. 1. Receptacle and basal bracts. 2. Flower. 3. Pistil.

PLATE 1223.

LOBANTHUS STENOPETALUS, *Oliv.*

LORANTHACEJE.

L. stenopetalus, *Oliv.*, ramalis teretibus gracilibus glabris, foliis tenuiter coriaceis ovali-Y. oblongo-lanceolatis plus minus acuminatis basi in petiolum angustatis integris glabris rete venarum inconspicuo, floribus racemosis, racemis axillaribus folio brevioribus, pedicellis brevibus 2-3-floris 2-3-bracteolatis, calycis puberulis margine libero sinuato v. dentato, petalis 6 angustissimis basi equaliter in tubo inflato coalitis supra medium per anthesin reflexis, antheris anguste linearibus apice apiculatis.—*Journ. Linn. Soc.* zv. p. 99.

HAB. Gorontalo, North Celebes, *Ittedel*.

Folia 4-5[^] poll, longa, 1-1J poll, lata; petiolus % poll, vel longior. *Flores* | - 1 poll, longi.—D. OLIVER.

Fig. 1. Pair of flowers with bracteoles and pedicel, enlarged. 2. Anther.

PLATE 1224.

DELPHINIUM GLACIALE, *Hook. fit. et Thorn.*

BANUNGULACEJE.

D. glaciale, *Hook. fit. et Thorns.*, caule simplici vel basi ramoso, foliis reniformibus tripartitis segmentis late cuneatis pabnatim multifidis lobis oblongo-lanceolatis obtusiuscule glanduloso-mucronatis, floribus maximis pilosis solitariis vel in racemis pancifloris corymbosis, foliosis dispositis, calcare decurvo sepalo subbreuiore.—*Flora Indica*, i. p. 53 and *Flora Brit. India*, i. p. 27.

HAB. Alpine Sikkim, 16-18,000 ft., *Dr. Hooker!* gathered also by a native collector employed by Mr. Elwes.

Herba 4-8 pollicaris tota pilis laxis patentibus hirsuta ^l et moschum putridum redolens. *Folia* 2 poll, diam, radicalia petiolo 2-3 poll, longo. *Pedunculi* erecti 1-3 poll, longi. *Flores* inflato-globosi pallide caerulei. *Sepala* membranacea nervosa 1-1[^] poll, longa late elliptica v. rotundatoelliptica, postica obtuse apiculata galeata, calcar 1 poll, longo. *Petala* lateralia obovato-lanceolata bifida laze hirta, posteriora longiora lamina oblanceolata apice bidentata. *Stamina* filamentis membranaceis inferne dilatatis, sursum sparse ciliatis. *Carpella* 5 glabrata.—D. OLIVER.

Fig. 1. Diagrammatic view of flower in front. 2. Lateral, and 3. Posterior petals.

PLATE 1225.

BOERHAAVIA. SCHOMBURGKIANA, Oliv.

NYCTAGINEAE.

B. Schomburgkiana, Oliv., canle minutissime prinoso-puberulo, glabrato, foliis subcarnosulis ovato- v. obovato-ellipticis late acutatis, obtusisve sinuatis sublobatis vel integris glabris petiolatis, pedunculis axillaribus brevibus saepius trifloris, pedicellis brevibus apice 1-3-bracteolatis, bracteolis subnullis, floribus monandris, perianthii limbo campanulato v. subtruncato carnosulo margine obtuse denticulate, fructu clavato tetragono 4-canaliculato, canaliculis parce pruinoso-glauculentibus.

HAB. Vicinity of Lake Eyre, South Australia, *Mr. Andrews* (communicated by Dr. B. Schomburgk).

Folia 1-1[^] poll, longa 1-1[^] poll, lata; petiolus 1-1[^] poll, longus. *Pedunculi* 1-2 lin. longi; pedicelli 1-1[^] lin. longi. *Perianthium* limbo 1-1[^] lin. longo. *Fructus* 1 poll, longus.—D. OLIVER.

Fig. 1. Fasciculus of flowers. 2. Stamen, style, and stigma. 3. Fruit.

PLATE 1226.

OXALIS NOKONHJE, *Oliv.*

GERANIACEE, Tribe OXALIDEE.

0. **NoronhSB**, *Oliv. sp. nov.* Caule fruticoso, simplici v. ramoso hirtopubescenti apice folioso, foliis 3-foliolatis foliolis ovato-ellipticis obtusiuscule acutatis subtus pubescentibus, lateralibus obliquis brevissime, petiolatis, pedunculis axillaribus foliossape longioribus apico tantum floriferis, pedicellis calyce saepius brevioribus articulatis, ovulis solitariis.

HAB. Island of Fernando Noronha, *C. Darwin, Mr. Moseley* ('Challenger' Expedition).

Caulis 1-2 pedalis, erectus v. interdum tortuosus et nodosus, pilis brevibus patentibus pubescens. Folia alterna; foliola 1-2 poll. longa, supra glabrescentia; petiolus adscendens 1-2½ poll. longus. Pedunculis erecti,*pubescentes, 1-3 poll. longi, vix complanati. Calyx pilosus, sepalis ovato-lanceolatis. Petala lutea, obtusa, calyce subduplo longiora. Stamina basi brevissime coalita. Ovarium glabrum profunde 5-lobum, lobis dorso tricostatis apice deinde breviter et obtuse productis; ovula solitaria.

Allied to 0. *insipida*, St. Hil., and in *fades* near Gardner's *Oxalis* (No. 2080), collected in Pianhy.—D. OLIVBK.

Fig. 1. Bud. 2. Expanded flower. 3. Essential organs after removal of sepals and petals (all enlarged).

PLATE 1227.

ANCRUMIA CUSPIDATA, *Harvey.*

LILIACEE, Suborder GILLIESIACEE.

Ancrumia, Harvey MSS. in Herb. Kew. Perianthium viride gamophyllum, tubo campanulato, limbi regularis segmentis tribus exterioribus lanceolatis acuminatis, tribus interioribus linearibus. Stamina 6 exteriora minutissima squamiformia; 6 intermedia minuta squamiformia; interiora 3, 2 perfecta filamentis filiformibus basi deltoideis,

antheris lineari-oblongis versatilibus; tertium sterile squamiforme deltoideum. *Ovarium* triloculare, stylo sublato capitato. *Capsula* ignota. — *Serba bujosa* habitu *Gageae*, scapo nudo, foliis 1-2 synanthiis linearibus ghibris, umbellae* 6-12 floris, spathe valvis lanceolatis membranaceis.

A. conspidata, Harv. M88., species unica.'

HAB. Coquimbo, Chili, Dr. Harvey*

Bulbus ovoideus, 8-9 lin. crassus. *Folia* linearia subpedalia carnosoherbacea glabra, medio 3-4 lin. lata, venis immersis. *Scopus* debilis nudus sesquipedalia vel bipedalis. *Umbella* 6-12 floris, pedicellis 1-4 poll, longis apice cernuis. *Perianthium* 10-11 lin. longum, segmentis exterioribus 3 lin. latis. *Stamina* perfecta 2 lin. longa.

Of this interesting novelty we have in the Kew herbarium, in addition to Dr. Harvey's specimens, a drawing from the life, of which the plate is a copy, and a detailed description drawn up by its discoverer, John Buchanan, Esq., of Coquimbo. He says that 'it flowers in July and August, growing on sandy and stony soil, usually under cactus-bushes and other shrubs, and that it is very common in the neighbourhood of Guayacan.'—J. G. BAKER.

Fig. 1. Flower opened out.



PLATE 1228.

LANDOLPHIA CAPENSIS, Oliv.

APOCYNACEAE, Tribe CARISSEAE.

L. capensis, Oliv. sp. nov. Frutex scandens, ramulis ultimis puberulis mox glabris, foliis coriaceis pollicaribus ovato- vel oblongo-ellipticis obtusis basi plus minus rotundatis puberulis vel supra glabris, pedunculis apice multifloris interdum breviter 2-fidis ramosisve, floribus sessilibus, calyce dense ferrugineo-hirsuto, corollae tubo hirsuto calyce 3-plo longiore segmentis patentibus oblanceolato-oblongis obtusis.

HAB. Transvaal, near Pretoria, Mr. Mr. Lea; Macalisberg Mountains, Mr. Burke; also amongst the 'Diamond Fields' plants of Mr. W. Tuck.

Folia j-1½ poll, longa, 4-8 lin. lata, coriacea plana subtus plus minus puberula venulis arete sed saepe inconspicue articulata; petiolus 1-2 lin. longus. *Pedunculi* terminales v. laterales interdum cirrhiformes, 1-2 poll, longi. *Flores* j-1 poll, lati odorati.

The fruit is described in Mr. McLea's label as of the 'size of a marble/ and 'highly scented.'—D. OLIVER.

Fig. 1. Bud. 2. Diagram of aestivation. 3. Expanded flower. 4. Stamen (enlarged).

PLATE 1229.

OHIBONIA (XABTTHOOHIBOISr) BXIGUA, Oliv.

GENTIANACBJJ, Tribe GHIBOKIEA.

C. exigua, Oliv. sp. m; herba amraa tennis glabra simplex v. superne ramosa; foliis inferioribus squamiformibus, superioribus linearibus acutis, floribus flavis in cymis paucifloris terminalibus dispositis rarius solitariis, calyce 5-fido segmentis lanceolatas acutis, corolla lobis ovato-ellipticis obtusis tubo longioribus.

HAB. South extra-tropical Africa: Orange Free State and the Diamond Fields, *Mrs. Barber*.

Herba 3-6 (-10) pollicaris erecta. *Folia* parva remota linearia, superiora 4-4 poll, longa, inferiora saepius minuta. *Pedicelli* erecti, floris centralis f-1 poll, longi. *Fructus* 6-8 lin. diam. *Galyx* 5-nerymis terapore florifero hand carinatus. *Antiwrcn* exsert© immutata. *Uya-Hum* 1-loculare; placentis 2 bipartitis multiovnliferis; stigma breviter bifidum lobulis crassiusculis.—D. OLIVER.

More like some of the smaller species of *Sebcea* than any *Chironia*, and possibly deserving generic separation.

Fig. 1. Bud, the calyx ill-drawn, bnt showing the aestivation of the corolla. 2. **Expanded flower.** 3. Pistil and 3* transverse section of the ovary. 4. Anther.

PLATE 1230.

MACGREGORIA BACEMOSA, F. Mueli

STACKHO(7SIJLCEE.

M. racemosa, F. Micell, Fragm. Phytogr. Amtral. viii. 161, species unica.

HAB. Central Australia, MacDonnell Range, *E. Giles*.

Serba annua, erecta v. adscendens, multicanalis, glabra, semipedalis v. paullo altior. *Folia* sparsa, pauca, linearia, acutiuscula, integerrima, plerumque semiplicata, summa floralia ad bracteas parvas reducta. *Pedicelli* in axillis superioribus solitarii, uniflori, plerumque 2-4 lin. longi. *Calycis* segmenta linearia, lineam longa, basi brevissime carinata. *Petala* 5, libera, omnibus in tubum calyce longiorem conniventibus, laminis patentibus, oblongis, 2-2½ lin. longis. *Stamina* 5, omnibus petalorum breviora, filamentis brevissimis liberis; anthera appendice parva ovata terminata. *Ovarium* liberum, sessile, sub-5-lobum, styli basi dilatata adnata crassiuscula coronatum. *Styli* lobi intus stigmatosi 5, sessiles radiato-patentes. *Fructus* carpella 5 indehiscentia, 1-sperma. *Semen* erectum, albumine carnosum. *Embryo* rectus, radícula brevi infera.

This pretty plant, evidently allied to *Stactchousia*, differs, however, essentially in the pentamerous ovary, and the remarkable fleshy cap or base of the style crowning the apex of the carpels.—*Ot.* BENTHAM.

Fig. 1. Bud. 2. Flower expanded. 3. Petal. 4. Stamens, back and front view. 5. Pistil.

PLATE 1231.

CHORITJENIA CAPENSIS, *Benth.*

UMBELLIFERE, Tribe SESELINEJI.

Choritonia, *Benth. in Benth. et Hook. Gen. Pl. i. 907; Pappia, Sond. et Harv. Pl. Cap. ii. 502, non Eckl. et Zeyh.*

C. capensis, *Benth. l.e. species unica.*

HAB. South Africa, Nieuwejaarspruit, *Zeyher*; in sandy localities where water occasionally lodges, Griqualand West, *M. E. Barber*.

Herba ut videtur annua, parvula, subcaulis v. prostrata, praeter fructum glabra. *Caules* (sen radii primarii umbellae inter folia radicalia sessilis?) plures (5-10) valde inaequales, plerumque 3-pollicares, prostrati v. divaricati, apice umbellulam densam foliosam simplicem v. in longioribus proliferam ferentes, caeterum aphylli. *Folia* dissecta, segmentis paucis linearibus brevibus, radicalia saepius petiolo J-J-pollicari fulva, floralia umbellulas involucrantia similia nisi sessiliora, omnia tamen flores superantia. *Flores* sat numerosi, minimi, inter folia radicalia ad basin caulium et ad apices simplicium v. ad ramificationes proliferorum dense conferta subsessilia. *Calycis* dentes lati breves v.

obsoleti. *Petala* alba, late ovata, induplicato-valvata, apice inflexa, costa dorso impressa intus prominente. *Fructus* (adhuc yiz perfecte matnas) ovatus, a dorso valde compressus, setis seu papillis crassis hyalinis pube brevi intermixtis obtectus, lineam fere longus, juncis inconspicuis prater lateralia quae marginem crassinisculam formant. *Vesiculae* oleosae globosae v. oblongae, dissitae, juxta margines carpelulorum utrinque serie verticali dispositae (e vittis disruptis oriundae).

The singular arrangement of the vesicles, which replace the vittae in this little plant, as well as the peculiar habit and inflorescence, distinguish it as a genus from all other Utricularifera.—G. BENTHAM.

Fig. 1. Flower. 2. A petal, seen from inside. 3. Vertical section of one carpel, showing the vesicles and the terminal stylopod. 4. Transverse section of the two carpels, showing the position of one vesicle in each.

PLATE 1232.

ONCINOTIS HIETA, *Oliv.*

APCYNACEAE, Tribus EUCHECHITIDEAE.

O. hirta, *Oliv. sp. nova*; ramis teretibus pilis brevibus ramulosis v. subfurfuraceis citrinis tomentellis, foliis obovato-oblongis obtusis breviter apiculatis basi rotundatis, subtus stellato-hirtis supra glabris, nervis lateralibus utrinque 5-7, racemis axillaribus foliis longioribus simplicibus v. parce ramosis, floribus fasciculatis interruptis.

HAB. Loango, West Tropical Africa, *H. Boyaux*.

Folia breviter petiolata, 2-4^l poll, longa 1^l-2^l poll. lata. *Bractea* minute, late ovata, concava. *Mores* 1 poll, longi, subsessiles. *Calyx* tomentosus segmentis ovatis obtusiusculis. *Corolla* lobis oblongo-lanceolatis tubo subaequilongis patentibus recurvis, fauce squamis brevibus obtusis insertis instructa, tubo intus ad insertionem staminum pilis reflexis dense villosis basin versus glabro. *Antherae* nudaes lineares acuminatae; filamenta brevissima penicillata. *Discus* lobis 5 ovario hirsuto brevioribus carnosulis ad medium coalitis. *Fructus* D. OLIVER.

Fig. 1. Expanded flower. 2. Estivation. 3. Stamens and squama of the faux. 4. Anther. 5. Ovary and lobes of disk. 6. Style and stigma.

PLATE 1233.

PABINABIUM CAPENSE, *Harvey*.EOSACE^m, Tribe CHBTSOBALANEJE.

F. capense, *Harv.*, *Fl. Capensis*, ii. 597. Fruticulus depressus: foliis oblanceolato-oblongis v. ovalibus acutiusculis obtusisve basi angustatis, subtus albido-tomentellis supra glabrescentibus, cymis paniculatis raris subsessilibus multifloris piloso-tomentosis, bracteis ovatis acutis intus glabris.

HAB. Cape of Good Hope, Aapjes river, *Zeyher and Burke*; near Pretoria, Transvaal, *Mr. McLea*. Collected also at 'Sesheke' in 1860 by *Dr. Kirk*.

Folia 2-3 poll, longa, 1-2 poll, lata; pedicelli brevissimi. *Inflorescentia* sropius pyramidata 1-2 poll, longa et lata; pedicelli 1-2 lin. longi vel flores subsessiles. *Calyx* lobis ovato-lanceolatis acutis tubo ad faucem intus dense annulatum hirsutum. *Petala* anguste obovata calycis lobos viz. requantia. *Stamina* antherifera circiter 8. *Ovarium* biloculare dense hirsutum.

The above description applies to the ordinary form of the plant; but a broad-leaved form, varying in stature from a few inches to the size of a chestnut tree (according to Dr. Welwitsch), occurs in Angola. The fruit is edible.—D. OLIVER;

Fig. 1. Flower. **2.** Flower laid open, the ovary concealed by the dense hairs lining the throat of the calyx. **3.** Fetal. **4.** Anthers. **6.** Pistil and transverse (diagrammatic) section of ovary.

PLATE 1234.

FEFLONIA AMAZONICA, *Benth.*ASCLEPIADE^a, Tribe CYNANCHEJB.

P. amazonica, *sp. n.*, foliis membranaceis, corona exteriori explanata alto 5-fida, lobis late connatis dentatis.

HAB. Tabocal, Rio Purus, on the Upper Amazon, / *W. H. Trail*.

^a *Suffrutex* volubilis, alte scandens, lactescens, glaber. *Folia* opposita, longiuscule petiolata, oblonga, acuta v. acute acuminata, 2-3-pollicaria, membranacea. *Gymce* ad racemum simplicem redact©, in una axilla paris pedunculate, folio breviores, 4-6* flora, ebracteata. *Pedicelli* £ poll. y. demum pollicem longi. *Galycls* segraenta parva, obtusa. *Corolla* expansa £ poll, diametro, albido-flavescens, alte 5-fida, lobis lato-lanceolatis aestivatione valvatis. *Corona* exterior ad basin gynostegii brevis affixa, fere 5-partita, lobis late cuneatis trnncatis dentatis supra basin coroll© horizontaliter expansis eaque 3-6-plo brevioribus; interioris squamse. oblongo-lineares erects, dorso antheraram plus minus adnatee, apice incurvo eas superantes, membrane terminali arete adpressre sed ab ea liber©. *Stigma* subglobosum, umbone parvo superatum. *JPolliculi* perfecti desunt, juniores post anthesin parum aucti ovoideo-oblongi, breviter acuminati.

The genus *P&plonia* was established by Decaisne on a single Brazilian species with more ovate thicker leaves, smaller flowers, with the outer corona less spreading and less deeply divided.—G. BENTHAM.

Fig. 1. Corolla and gynostegium. 2. Gynostegium, vertical section, showing the stylo within the staminal tube and two of the lobos of the outer corona. 3. Two prtvlung lubes of the outer corona and two erect narrow incurved lobes adnate to the bucks of the stamens. 4. Pair of pollen mosses.

PLATE 1235.

CBATEBISPEBMUM LAURINUM, *Benth.*

RUBIACE*., Tribe VANGUERIEA:.

C. lanrinum, *Benth. in, Hook. Fl. Nigrit.* 411; foliis oblanceolato-vel obovato-oblongis breviter apiculatis basi cuneatis tenuiter coriaceis venulis ultimis subtus prominalis reticalatis, stipulis subtruncatis basi connatis, pedunculis axillaribus petiolo longioribus multifloris, alabastris glabris, corollas lobis intus pilosulis, stylo (in spp. nostris) incluso.—Hiern in Oliv. Fl. Trop. Afr. iii. 160; *Coffea laurina*, Sm., DC. Prod, iv. 499.

HAB. West Tropical Africa, Sierra Leone, *T. Vogel* and others; Senegambia, *Heudeht*; Bagroo River, *O. Mann*.

Folia glaberrima 3-8 poll, longa, 1J-2J poll, lata; petiolus £-| (-1) poll, longus. *Pedunculi* saBpius supra-azillares ^-1 poll, longi; bractedc deltoiden brevissine. *Flores* ^ poll, longi in cymis trichotomis sessiles.

Calyx limbo brevissimo 5-denticulato. *Oorolla* tubo superne dilatato, limbi lobis ovato-lanceolatis. *Bacca* £-£ poll. diam.—D. OLIVEE.

Fig. 1. Expanded flower. 2. Longitudinal section of ovary and base of corolla. 3. Do. of fruit.

PLATE 1236.

LAMPBA VOLCANICA, *Benth.*

COMMELTNACEJ.

L. volcanica, *Benth. Fl. Hartw.*, 95, *species unica*.

HAB. In the crater of the Volcan de Agna in Central America, at an elevation of 14,000 feet.

Herba semipedalis, erecta, glabra. *Folia* inferiora pauca, ad vaginam amplam laxam hyalinam reducta, superiora numerosa, in involu-
crum conferta, vaginis brevibus laxè imbricatis, laminis 2-3-pol-
licaribus lanceolatis breviter acuminatis basi parum angustatis utrinque
glaberrimis, marginibus basi breviter ciliatis nudisve. *Flores* ad 20, in
capitulnm intra folia sessile conferti, pedicellis brevissimis crassis.
Perianthii segmenta exteriora herbacea, in tubum angustum apice
3-dentatum demum hinc fissum 1[^] ad 1¹/₂ poll. longam coalita; interiora
tenuiter corollina, unguibus in tubum gracilem cylindraceum perianthio
exteriore subduplo longiorem coalita, laminis 3 equalibus patentibus
7-8 lin. longis latisque. *Stamina* 6, roqualia, tubo perianthii interiora
affixa, filamentis liberis e tubo exsertis lamina brevioribus glabris;
anthers lineari-lanceolatis, loculis rima longitudinali dehiscentibus.
Ovarium in fondo perianthii sessile, oblongum, 2 lin. longum, 3-locu-
lare, styli basi incrassata acuminatum. *Ovula* in quoque loculo 6,
per paria inter se distanter superposita, infima ascendens, supe-
riora, pendula v. unum cunctisve paribus ascendens. *Stylus* glaber,
breviter exsertus, apice in discum margine stigmatum dilatatus.
Fructus ignotus, ex ovario verisimiliter capsularis.

Of this curious plant only a single specimen is known, gathered by
Hartweg in the crater of the Volcan de Agna, near Guatemala, in
August 1840. My friend Mr. Salvin, on his last journey to that
country, kindly undertook to search for it, but his ascent of the
mountain was not at the same time of year, and he could find no trace
of it. It is said to be very ornamental, and its introduction to our
greenhouses would be very desirable.—Q. BENTHAM.

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Fig. 1. Flower. 2. Anther.

PLATE 1237.

TBIOHLOBA PEBUVIANA, *Baker.*

LILIACEÆ, Suborder G-ILLIESIACEJS.

^a *Trichlora*, *Baker.* *Perianthium* viride regalare polyphyllum, segmentis tribus exterioribus lanceolatis acuminatis, tribus interioribus parvis latis obovato-cuneatis. *Stamina* 3 perfecta segmentis exterioribus opposita*, filamentis lanceolatis, antheris ovato-globosis versatilibus; 3 segmentis interioribus opposita minuta squamiformia. *Ovavium* profunde trigonum; stylus cyathiformis, ramis tribus lanceolatis. *Gapsula* ignota.—*Herba* hirsuta habitu *Gagece*, foliis 3-4-linearibus glabris, scapo nudo, umbellis 4-6-floris, spathe valvis linearibus membranaceis.

T. peruviana, *Baker.* *Species unica.*

HAB. Lima, Peru (four specimens in Herb. Kew, without collector's name).

Bulbus ovoideus, 5-6 lin. crassus, collo elongato, tunicis membranaceis. *Folia* carnosio-herbacea, glabra, subpedalia, 1-2 lin. lata, venis immersis. *Scopus* debilis, nudus, G-J-pollicaris. *Unibellae* 4-6-norse, pedicellis gracillimis 6-18 lin. longis. *Perianthii* segmenta exteriora 7-8 lin., interiora 1 lin. longa. *Genitalia* perianthii segmentis interioribus asquiflonga.—J. G. BAKES.

Fig. 1. A flower opened out. 2. Inner perianth-segments, stamens, and pistil. 3. An anther and upper part of a filament.

PLATE 1238.

SIPHOMBRIS FCETENS, *Hiern.*

BUBIACEÆ, Tribe PISDEBIEJ.

S. foetens, *Hiern in Oliv. Fl Trop. Africa*, iii. 229, frutex scandens, ramis pubescentibus, foliis longe petiolatis ovatis apice abrupte apiculatis basi rotundatis truncatis cordatisve supra scabride puberulis subtus breviter hirsuto-tomentellis, pedunculis axillaribus folio subfiquilongis vel in paniculis terminalibus dispositis apice cymis multifloris

breviter ramosis congestisve gerentibus, calycis hirti segmentis subulatis rigidulis apice recurvis corollas tubo brevioribus, fructibus compressis ovato-ellipticis epicarpio papyraceo parce hirtello.

HAB. On the Zambesi and its tributary the Shire, Dr. *Kirk*.

Folia 2 poll, longa 1-J-lf poll, lata; petiolus laminâ saepius brevior, stipules ovato-lanceolatae. *Pedunculi* rectiusculi pubescentes 2-3 poll, longi; cymre poll, latfl. *Flores* flavidi foetidi subsessiles v. brevissime pedicellati; bractea lineares v. subulate. *Calyx* scabrido-puberulus segmentis quam tubo 3—4-plo longioribus. *Corolla* segmentis ovato-oblongis intus hirtis. *Stamina* exserta. *Stylus* apice bitidus ramis recurvis angustis. *Fructus* J poll, longus calycis limbo corcmatus.

Dr. Kirk describes the whole plant as 'abominably fetid.'⁹ The structure of the fruit is singular. After the irregular rupture of the papery epicarp the two pyrenes remain suspended, each by a slender carpophore, which becomes free on the outer face of each pyrene, the disk of which is radiately ridged, and the margin produced into a continuous wing-like expansion.—D. OLIVES.

Fig. 1. Bud. 2. Expanded flower. 3. Longitudinal section of ovary. 4. Fruit. 6. Outline of same in transverse section. 6. Diagram showing relation of carpophores and attached pyrenes. 7. Pyrene and carpophore.

PLATE 1239.

NEURACHNE MUNROI, *F. Muell.*

~~GRAMINEA~~), Tribe ANDEOPOGONBJJ. •

N. Munroi, *F. Muell. Fragm. Phyt. Austr.* viii. 200, spica anguste cylindracea breviter sericea, gluma extima acutiuscula subnuda, secunda acuminata margine longe ciliata.

HAB. Deserts of the Darling, in the interior of New South Wales, *Beckler*.

Caules e basi ramosa sublanata v. glabrescente erecti, rigiduli, ^-1-pedales. *Folia* ad basin caulis angusta, in sicco convoluta, caulina pauca, vagina longa non ciliata, nodis villosulis. *Spica* angusta, cylindracea, 1-2-pollicaris, rhachi pubescente. *Spicula* angusta, 2-J-3 lin. longae, basi fasciculo pilorum brevium cincta. *Oluma* exterior tenuis, 5-7-nervis, glabra v. margine ciliis raris cincta, acuta at non acuminata, 2a. longior, rigidior, prominule 7-nervis, acute acuminata, juxta marginem praesertim in parte inferiore longe ciliata, pilis

tamen in spica multo minus conspicuis quam in *N. alopecuroidea*; 3a. brevior, angustior, multo tenuior 5-nervis, glabra, paleam parvam sessilibus fovens; terminalis florida multo brevior, tenuissima, hyalina. *Palea* pariter hyalina Bed major, basi utrinque auriculata, dorso 2-costata.—G. BENTHAM.

Fig. 1. Spikelet seen from the back of the outer glume. 2. Second glume, back view.

PLATE 1240.

NEURACHNE MITCHELLIANA, *F. Huell*

GRAMINEAE, Tribe ANDROPOGONEAE.

N. Mitchelliana, *Nees in Hook. Lond. Journ.* ii. 410, spica anguste cylindracea breviter villosa, gluma externa margine ciliata dorso supra areolam latam cavam transversim callosa, callo pilis longis patentibus ciliato, secunda infra medium margine longe ciliata.

HAB. Interior of New South Wales, deserts from the Darling to the Barrier Range, *Mitchell, Victorian Expedition, and others.*

Caules basi nodosa lanata plures, erecti, subpedales, fere ad apicem foliati, apice sub spica saepe lanati. *Folia* patentia, brevia, plana, rigidula, parce ciliata, ligula dense ciliata. *Spica* anguste cylindracea, 1-1½-poll, longa, rhachi pubescente. • *Spiculae* ad 2 lin. longae, fasciculo pilorum cinctae. *Gluma* externa plurinervis, superne angustata sed obtusa, margine ciliata, dorso in parte inferiori areola late ovata cava margine callosa cincta notata, intra areolam tenuissime membranacea, supra areolam callo transversali longe piloso aucta; 2a. prima aequilonga, infra medium lata longeque ciliata dorso pubescens, superne glabriuscula; 3a. brevior, glabra v. viz pubescens nec ciliata, pariter vacua v. paleam parvam fovens; terminalis florida minor, tenuis, glabra. *Palea* subaequilonga, tenuis, 2-costata.—G. BENTHAM.

Fig. 1. Spikelets seen from the back of the outer glume. 2. Outer glume seen from the inside.

PLATE 1241.

NEURACHNE ALOPECTTBOIDEA, *B. Br.*

GRAMINEJ.; Tribe ANDROPOGONEJ.

ITenrache, *B. Br.* *Spiculce* flore nnico terminali perfecto in spicam ovoideam v. cylindr,aceam confertce. *Glumce* 4, 2 exteriores majores plurinerves vacuro; 3a. minor, tenuior, sub-5-nervis, paleam parvam saepius fovens; terminalis florida tennis, hyalina, tenniter 3- 5-nervis. *Palea* glume floridaa sequalis v. major, tennis, hyalina, 2-costatu. *Styli* 2, distincti. *Caryopsis* libera, glnmis inclnsa.

N. alopecuroidea, *B. Br. Prod.* 196, Spica ovoidea v. breviter oblonga sericea, glnmis exterioribus acuminatis, prima dorso secnnda margine longe ciliatis.

HAB. Southern colonies of Australia, from the western districts of Victoria to King George's Sound and Swan River.

Qramen perenne, erectnm, 1-1[^]-pedale, glabrn. Folia ad basin canlis brevia, plana, rigidula, canlina panca, parva; vagina ad oram* dense ciliata. *Spica* ovoidea v. oblonga, latiuscula, densa, f-1 poll, longa, dense sericea, glumarum tamen acnminibns viridibus prominentibus. *SpiculcB* numerosse, sessiles, ad 3 lin. long©, nonnullra ad basin spicfB minores, steriles v. ad glnmam unicam reducteB. *Gluma* exterior 5-7-nervis, acnte acnminata, pilis longis patentibns margine dorsoque ciliata; 2a. pariter vacua, paullo major longiusque acuminata, 7-9-nervis, margine pilis longis patentibus ciliata; 3a. paullo minor, vix acuminata, nervis paucioribus breviter pubescentibus nee longe ciliatis, paleam v. floris rudimentum fovens; terminalis florida parva, tenuis, fere hyalina, tenuiter 5-nervis. *Palea* tennis, glume? florid© aequilonga v. paullo longior, prominenter 2-costata.

The genus *Neurachne*, originally established for this species, has been generally placed amongst Panicete, but the very reduced thin and hyaline flowering glume and palea, notwithstanding the absence of any twisted awn, appear to me to be characteristic of the Andropogonere, where it would take its place near *Perotis* and a few other genera in which the spikelets are arranged all round the rhachis of a simple spike or raceme.—*Gr.* BENTHAM.

•Fig. 1. Outer empty glumes of the spikelet seen from the back of the lowest. 2. Lowest glume seen from inside. The spike drawn was a rather longer **and** narrower one than usual.

PLATE 1242.

PLAGIOSETUM REFRACTUM, *Benth.*

GRAMINEAE, Tribe PANICEA:

Plagiosetum, *Benth. gen. nov. Spiculce* 1-floro, ramis sterilibus pedunculi 3-4 setaceo-multifidis involucratro, in involucre solitariis v. gemma sessiles inarticulate, involucris in racemo simplici pedunculatis cum pedunculo spiculaque fructifera articulatim deciduis. *Glumce* 4, 3 exteriores multinerves vacua, terminalis florida minor demum cum palea indurata, caryopsin includens.

P. refractum, *Benth.*, *species unica. Pennisetum refractum*, F. Muell. *Fragm.* viii. 109; *Setaria refracta*, F. Muell. *Fragm.* iii. 147.

HAB. Interior of Australia, Cooper's Greek, *Hovrith's Expedition*, Alice Springs, *Giles*.

Oraemen glabrum, divaricato-ramosum, prostratum v. ramis ascendentibus subpedale. *Folia* suiguata, plana, subulato-acuminata. Bacemum rhachis 3-6-pollicaris. *Pedunculi* secus rhachin distantes, rigiduli, complanati, infra involuorum 3-4 lin. longi, primum erecti demum patentes v. reflexi, ima basi articulati, cum involucro spiculaque matura decidui, apice 3-4-fidi, ramis in setas longas capillares divisas, involucrum constituentes. Spicula intra ramos sessiles, addita rarius altera in uno ramo altius sessili. *Glumce* vacua 3, multinerves, 2a. gluma subaequalis, inferior triente brevior; gluma florida *Setarice* vacuis minor, fructifera cum palea semiinclusa valde indurata, levis v. sub lente minute rugosa. *Styli* a basi distincti.

I had at first, when the drawing was made, followed F. Mueller in referring this curious grass to *Pennisetum*, regarding it only as a very distinct section, but General Munro has shown me that that would require too great a modification of the generic character of *Pennisetum*, which, added to the very great difference in habit, has induced me to adopt it as a distinct genus.—G. BENTHAM.

Fig. 1. Involucre and spikelet. 2. Empty glume, seen from inside. 3. Flowering glume embracing the palea.

PLATES 1243,1244.

SPINIFEX PABADOXTTS, *Benth.***GRAMINEÆ**, Tribu PANICEJE.

S. paradoxus, *Benth. Fl. Austral*, vii. *ined.* Spicis nn: pauci-spiculatis globoso-capitatis, rhachibus in aristam brevissimam productis, marium bracteis capitulo brevioribus foeminearum demum acutis obliquis heteromorphis. *Neurachne paradoxa*, R. Br. App. Sturt Exped. '26; *Panicum pseudoneuracme*, F. Muell. Fragm. viii. 199.

HAB. Desert interior of extratropical Australia, from the Darling to Cooper's Creek and Lake Eyre, *Dallachy, Giles, Andrews, and others.*

Plantae juniores et masculae laxae ramosae, foliis nonnullis longis planis flaccidis; foemineae fructiferae divaricato-v. fasciculato-ramosae, rigidae, fragiles. *Capitula mascula* in vagina brevi folii floralis sessilia, quasi lateralia, globosa 1-1.5 poll. diametro, e spiculis seorsim spicis 2-3-spicalatis plurimis subsessilibus composita, rhachi spicarum v. pedicello brevissimo spicularum in aristam spicula ipsa breviora producta. *Bractea* sub spicis spiculive lanceolata, 1-2 exteriores spicula vix breviores, caeterae parvae angustae. *Spiculae* ad 3 lin* longae, exteriores Reaping in pedicello brevissimo solitariae, interiores in pedicellis parum elongatis saepe 2. *Glumae* herbaceae, 3-5-nerves, 2 exteriores vacuae paullo minores, 2 interiores paleam circumlongam 2-costatam et stamina 3 foventes. *Capitula foeminea* masculis latiora, irregularia, bracteis per anthesin lato lanceolatis spiculas aequantes stipata. *Spiculae* in capitulo per se sessiles. *Glumae* 4, 2 exteriores vacuae herbaceae 7-9-nerves, 3a. paullo longior, tenuior, pariter nervosa et vacua v. paleam parvam angustam fovens; terminalis florida vix brevior, tenuis, nervis vix conspicuis. *Palea* tenuis, tenuiter 2-nervis. *Styli* a basi distincti, stigmatibus longis plumosis. In *capitulo fructifero* bractea exteriores 3-5 varie auctae rigidulae membranaceae patentes 1-pollicares, alia lato-lanceolata v. ovata? aequales, alia valde obliquae latea irregulariter venosae et saepe hinc unidentatae. *Garyops* gluma terminali paleaque induratis brevibus inclusa.

When Brown suggested that this curious plant might be an anomalous *Neurachne* he had only seen fragments of female specimens, which had nothing to indicate that they might not have been hermaphrodite

with the stamens fallen away. E. Mueller, with more perfect specimens, male and female, before him, referred it to *Panicum* on account of the smooth hardened fruiting glume and palea. He unfortunately, however, overlooked the absolutely dioecious character of the plant, which, as well as the capitate inflorescence, appears to me to refer it to *Spinifex*, notwithstanding the apparent discrepancy arising from the small size of the heads of spikes or spikelets, and from the rachis or pedicels being produced only into very short points, which, however, are the true representatives of the long spines so prominent in the common maritime species of *Spinifex*.

The troublesome prickly Graminee, known to Australian explorers by the name of *Spinifex*, belong to the very different genus *Triodia*.
—G. BENTHAM.

PLATE 1248, male plant.—Fig. 1. Two spikelets on a common pedicel, produced into a very short point. 2. A spikelet with its four glumes and two paleas, the pedicel produced into a short point.

PLATE 1244, female plant.—Fig. 1. Spikelet with three outer empty glumes, the 3rd with a narrow palea, the 4th enveloping the flower. 2. Flowering glume embracing the palea. 3. A bract at the time of flowering. 4. Bracts and glumes of the fruiting spikelet.

PLATE 1245.

BUMEX NEGLECTUS, *T. Kirk*.

POLYGONACEA.

B. neglectus, *T. Kirk*, in Trans. N. Z. Inst. ix. (1876) 493. Herbuk 1-3-pollicaris perennis; foliis rosulatis petiolatis oblongis v. ovali-oblongis crenato-nndulatis obtnsis basi truncatis v. in petiolum pins minus angustatis, canle e basi dense florifero v. racemo superne interrupto, pedicellis sfippius recarvis, floribus bermapbroditis, perianthio campannlato fruefcu basi incrassato segmentis ejusdem exterioribus tabo sequilongis late oblongo- vel quadrato-ovatis obtasis, interioribus paallo longioribas lanceolatis acutiusculis dorso calliferis deinde ntrinque breviter 1-2-dentatis.

HAB. Cook Strait, North Island, *T. Kirk*. Mr. Kirk cites shingly

beaches, Wellington and Dusky Bay (Mr. Buchanan), in his paper cited above.

Folia 1-2 poll, longa; petiolus lamina subsquilonus. *Perianthium* fructiferum 2-2[^] lin. longum.—D. OLIVER.

Fig. 1. Perianth laid open. 2. Fruiting perianth. 3. Same in section.

PLATE 1246.

IRVINGIA BARTERI, *Hook. fit.*

SIMARUBEIE.

I. Barteri, *Soohfil. in Trans. Linn. Soc* xxiii. 167; foliis nitentibus ellipticis v. oblongo-ellipticis apiculatis v. breviter acuminatis basi cuneatis, racemis pauci- v. plurifloris in paniculis axillaribus sffipius folio brevioribus dispositis, calycis lobis ovato-rotundatis, petalis late ellipticis bbtusis, stylo filiformi, fructu globoso pericarpio carnosio.—*Oliv. Fl. Trop. Afr.* i. 314; *Mangifera gabonensis*, A. Le Gonite in *Journ. Phaam.* xxxi. 275.

HAB. West Tropical Africa, Prince's Island, and Rivers Muni and Camaroons, *Messrs. Barter and Mann.*

Arbor 30-50 pedalis, glaberrima. *Folia* tenuiter coriacea, breviter petiolata, 3-4 | poll, longa, 1[^]-2[^] poll, lata; stipules subulato-lineares caduce. *Pedicelli* soepe fasciculati, 1-3 lia. longi. *Drupa* globosa 2[^] poll. diam. | endocarpio osseo.

A detailed account of this plant is given by M. Baillon in *Adansonia*, viii. 82.—D. OLIVER.

F g. 1. Flower, enlarged. 2, Longitudinal section of ovary and disk.

PLATE 1247.

IRVINGIA MALAYANA, *OUv.*

SrMAEUBEJ).

I. malayana, *OUv. in Hook. Fl. Brit. Ind. i. 522*; foliis coriaceis oblongo- vel ovato-ellipticis apice breviter acutatis basi late rotundatis v. interdum subcordatis, racemis axillaribus fasciculatis paniculatisve folio brevioribus.

HAB. Mafacca, *Dr. Maingay.*

Folia 4-7 poll, longa, 1-3 poll, lata; petiolus 4-7 lin. longus. *Pedicelli* 1 lin. longi.

Dr. Maingay, in his MS. notes on this plant, states that the leaves are 'very minutely but distinctly pellucido-punctate.' I cannot discern these in the dry state, the leaves being coriaceous, but this character, coupled with the absence of bitter taste in the wood, renders the genus doubtfully Simarubaceous, as remarked by Dr. BailJon. Dr. Maingay thought it allied to *Glycosmis*. His specimens are accompanied by dried fruits 2-2½ ins. long, drupaceous, with a rather thick bony putamen, becoming fibrous as it passes into the mesocarp. The seeds present, within the rather thick testa, a narrow belt of albumen, as I take it, on the outer sides of the large cotyledons. The floral structure is very similar to that of *J. Barteri*, and the occurrence of the genus *Irvingia* in Malaya adds another interesting link to the connection between the Malayan, Madagascar, and West Tropical African floras indicated by the singular genera, common to each, *Paropsia* and *Anisocyphyllea*. *Notes*, too, strengthens this relationship.—D. OLIVER.

Fig. 1. Flower, enlarged; stamens removed. 2. Longitudinal section of ovary and disk.

PLATE 1248.

STENOGYNE ROTUNDIFOLIA, *A. Gray.*

LABIATE, Tribe PRASIEA:.

S. rotundifolia, *A. Gray in Proc. Amer. Acad. v. 347*, suffruticosa, foliis glabris rotundis crenatis basi truncatis cordatisve, verticilliswis 4-6-floris, pedicellis petiolo dimidio brevioribus, calyce glabro

breviter dentato, filamentis villosis, corolla elongata intus villosa exannulata.

HAB. Sandwich Islands, Haleakala in E. Mani, at an elevation of 6,000 to 7,000 feet, *H. Mann* and *Brigham*.

Caules rigidi, acute v. obtuse tetragoni, retrorsum scabro-pubescentes. *Folia* late ovata v. orbiculata, crenato-serrata, majora pollicaria basi late cordata, ramealia minora basi integra, crassiuscula, glabra v. basi ad venas parce hirtella, petiolo 2-3 lin. longo. *Flores* recurvi, pedicellis 1-2 lin. longis hirtellis. *Galyx* oblique campanulatus, glaber v. junior parce ad venas hirtellus, 10-nervis, breviter et inaequaliter 5-dentatus. *Corolla* pollicaris, incurva, extus tomentosa, tubo superne latiore; labium superius erectum, 3 lin. longum, latiusculam, emarginatum, inferius patens, breve, brevissime lateque 3-lobum. *Stamina* breviter e labio superiore exserta, filamentis villosulis. *Antherarum* loculi distincti, divaricati, demum reflexi. *Nucules* crassae, calyce parum breviores, exocarpio carnosio, dorso rotundatae, intus angulatae.—
G. BENTHAM.

Fig. 1. Flower. 2. Pistil. 3. Stamen. 4. Nutlet seen from inside.'

PLATE 1249.

ACHYROSPERMUM FRUTICOSUM, *Benth.*

LABIATE, Tribe STACHYDEJE.

A. fruticosum, *Benth. Lab. Gen. et Sp.* 643, caule duro, foliis ovatis, verticillastris G-10-floris in spicam crassam basi subinterruptam confertis, corolla incurva calyce plus duplo longioro.

HAB. Interior of Madagascar, province of Emirna, *Bojer*.

Caules in speciminibus ultra-pedales, dnri quasi lignosi sed ex schedula Bojeriana herbacei, teretes, puberuli v. glabrati. *Folia* 2-4-pollicaria, breviter acuminata v. fere obtusa, crenata, pilis rigidub's conspersa, petiolo 1-pollicari superne dilatato. *Spica* terminalis intra folia summa subsessilis, 3-5-pollicaris, primum undique densa demum basi subinterrupta. *Bracteae* (folia floralia bractesiformia) fere semipollicares, late, membranaceae, in spica juniore quadrifariam imbricatae. *Flores* brevissime pedicellati, rosei (v. albidii?). *Calyces* membranacei, latiuscule tubulosi, pubescentes, subincurvi, 4 lin. longi, ore parum obliquo breviter 5-dentato. *Corolla* 9-10 lin. longa, extus

pubescens, tubo incurvo, ad faucem parum dilatato; labium superius 14 lin. longum, erectum, latum, emarginatum; inferius paulo longius, patens, late 3-lobum. *Stamina* e labio superiore exserta, antheris ovatis loculis parallelis. *Ovarium* post anthesin paulo auctum hirsutum, lobis truncatis supra squamellis prominentibus quasi crenulatum. *Nuculce* mature adhuc ignotae.

This very distinct species, said to be very ornamental, was placed in *Achyrospemium*, from its inflorescence, and from the minutely scaly apex of the young nucules, although it is not known what form they assume when ripe. The flowers are very much larger than those of any other known species of *Achyrospemum*.—Gr. BENTHAM.

Fig. 1. ffwor 2. Pistil.



PLATE 1250.

HETERACHNE GULLIVERI, *Benth.*

GRAMINEAE, Tribe FESTUCACEAE.

Heterachne, Benth. Spiculce planis, flore unico hermaphrodite fertili, glumis supra florem plurimis vacuis v. paleam parvam foventibus, l'hachi sub flore articulate supra florem flexuoso continuo. *Glumce* exaristate, carinatae, 2 exteriores vacuae persistentes, florida superioresque cum fructu deciduae, carina alata, lateribus 1-nerviis. *Pdlea* glumes Bubaequalis, dorso 2-alata. *Styli* breves, distincti. *Caryopsis* palea glumaque inclusa, libera.

H. Gulliveri, Benth. Fl. Austral, yii. ined., spiculis suborbiculatis fasciculato-capitatis, fasciculis in spicam interruptam pedunculatam dispositis.

HAB. Between Norman and Gilbert Rivers, Carpentaria, North Australia, *Gulliver*.

Serba gracilis, erecta, subsemipedalis, glabra. *Folia* angusta. *Spicularum fasciculi* subglobosi, 2-3 lin. diametro, in spicam terminalem pedunculatam dispositi, sessiles, inferiores distantes, superiores sessiles. *Spiculce* sessiles, orbiculatae, vix lineam diametro. *Ehachis* fasciculorum hispidula, spicae glabra. *Glumae* exteriores vacuae florida

breviores, extima uninervis, secunda trinervis, carina subalata; florida superioresque 3-nerves carina alata. *Palea* gluma paullo brevior, dorso alia 2 latia crassinervis apice ciliolata ancta. *Bhachis* spicul^o supra florem insigniter flexuosa.

The genus has been established for this species and the *Poa abortiva*, R. Br. (*H. Brownii*, Benth.), which is a stouter plant with dense sessile heads of spikelets and more numerous empty glumes. It is allied to *Ectrosia* in the numerous empty glumes above the flower, to *Elytrophora* in the broadly winged palea.—G. BENTHAM.

Fig. 1. Spikelet. 2. flowering glume. 3. Palea. 4. Diagram of the flower, consisting of the glume and its dorsal wing, the palea and its two wings, two lodicules, three stamens, and ovary.



PLATE 1251.

TOBENIA SCHWEINFURTHII, *Olio.*

SCROPHULARIACEÆ.

T. Schweinfurthii, *Oliver, sp. nova*, caule elongato erecto viz ant parum ramoso quadrangulo glabro, foliis oppositis parvis trinerviis inferioribus approximates ellipticis obtusis superioribus distantibus gradatim ramis ovali-lanceolatis acutis, inflorescentia terminali subcapitata, bracteis subnullis flore brevioribus, pedicellis brevissimis, calyce 5-angulato v. 5-costato breviter et acute 5-fido, corollas tubo calyce longiore, limbi labio superiore integro rotundato, labio inferiore 3-partito lobo centrali obovato lobis lateralibus paulo longiore, palato pilis paucis claviformibus ornato, staminibus anticis basi appendice brevi capitata anctis.

HAB. Bongo land (No. 4009), *Dr. Schweinfurth ! Nape, Nigritania, Barter !*

Caulls 1½-2 ft. altus superne pance foliosus. *Folia* longiora | - 1 poll, longa.—D. OLIVEB.

Fig. 1. Calyx. 2. Flower. 3. One of the anterior longer stamens with basal appendix. 4. Capsule enclosed in calyx, and stigma.

PLATE 1252.

MEDUSAGYSTE OPPOSITIFOLIA, *Baker.*

TERNSTKEMIACEA.

M. oppositifolia, *Baker, Flora Maur. and Seychelles, 17.* ^rntex ramosus glaber, foliis oppositis breviter petiolatis coriaceis ellipticis v. oblongo-ellipticis obsenre et distanter crenato-dentatis apice obtnsis retnsisive, paniculis terminalibus laxis foliis vix longioribus, pedicellis flore longioribus gracilibns basi articalatis, sepalis rotundatis coriaceis, petalis obovatis obtusis calyce 2-3plo loneioribns, stylis 17-24 orario Bubaeqnilongis. re j *i

H? • Exposed places in Mah6, Seychelles ; 1,800 ft. above the sea, *Mr. J. Home !*

Ramuli tevetes nodosi. Folia 1-2 poll, longa, basi rotundata v. subcuneata, ntrinque (in sicco) plus minus reticulatis; petiolus 1-2 lin. longns. Pedicelli 1-1 poll, longi rigidiasculi. Flores J poll. lati.

Of this singular plant we only possess the flowering specimens collected in Mahé by Mr. Home, described by Mr. Baker in his Flora. The fruit is unknown.—D. OLIVER.

Fig. 1. Expanded flower. 2. Before expansion. 3. Longitudinal section of ovary. The ovules are geminate, inserted about the middle of the cell, one ascending, the other pendulous.

PLATE 1253.

VITIS SARCOCEPHALA, *Schiveinf.*

AMPELIDEA;

V. sarcocephala, *Schweinfurth M88. in Herb.*—Scandens; ramis striatis parce lanatis deinde glabrescentibus, foliis digitatim 5-7-foliolatifl, foliolis ovali- v. oblanceolato-oblongis acuminatis dentato-serratis basi in petiolulum angustatis, supra glabratis subtus pallide- v. ferrugineo-tomentosis v. adpresse pilosis, floribus 5-meris dense capitatis brevissime pedicellatis, pedicellis compressis lanatis perianthiis occultatis; capitulis pedunculatis solitariis subglobosis; calyce lobato lobis deltoideo-rotundatis tenuibus lanatis, petalis ovato-ellipticis recurvis, ovario truncate longitudinaliter sulcato glubro, stigmatibus sessilibus, baccis ellipsoideis, testa ossea faciebus longitudinaliter exsculptis.

HAB. Tropical Africa, Djour-lan (2042: 2370), *Dr. Schweinfurth!*

Foliola 3-6 poll, longa, 1-2 poll, lata; petiolus 1-4 poll, longns; petioluli 1-1 poll, longi. Pedunculi cirrhiferi 2-5 poll, longi. Capitula f-1 poll, diametro. Baccæ 1-1 poll, longas 1-2-spermatif. Semina compressa, facie interiora profunde bisulcata.—D. OLIVER.

Fig. 1. Flower. 2. Same after removal of petals and stamens. 3. Form of bony testa in transverse section, the upper bisulcate face being toward the axis.

PLATE 1254.

BRACHYBOTBYS PARIDIFOBMIS, Maxim.

BORAGINEJE.

Brachybotrys, *Maximowicz* M88. — Calyx 5- (v. 6-) partitus, laciniis lanceolatis v. ovato-lanceolatis, in fructu conniventibus. Corolla rotata profunde 5- (v. 6-) fida, laciniis oblongo-ellipticis obtusis venulosis basi squamula brevi rotundata instructis. Stamina 5 tubo inserta, filamentis linearibus, antheris oblongis exsertis filamentis cequilongis. Ovarium lobis 4 distinctis brevibus obtusis; stylus filiformis exsertus indivisus persistens, stigmatibus parvis. Nucule 4 tetraquetrae faciebns subcequimagnis lucidis levibus subplanis pilosiusculis, basali horizontali, areola punctiformi ad angulum basalem internm inserto. Discus glandulosus circa basin nacularum obsoletus.

B. paridiformis, *Maxim.* (*Lithospermearum* genus novum, *Maxim.* Diag. PL NOT. xi. p. 543).

HAB. Southern Mandshuria (in fruit August 1860) *Maximowicz!* Chienshan, North China, and Kwandien Mountains (April and June, in flower), *Mr. John Ross!*

Herba 1[^]-2-pedalis, caule rhizomate stolonifero repente erecta, e basi foliis membranaceis linearibus, inferioribus amplexicaulibus, instructo. *Folia* 5-7 patontia subverticillata summo cauli inserta, 2-7 poll, longa, elliptica v. obovato-elliptica, cuspidato-acuminata, basi in petiolum brevissimum attenuata, penninervia, superne scabriuscula subtus adpresse strigosa. *Gyma* terminalis nuda pedunculata (demum subfoliis occultata pendula), pedunculus 1[^]-2 poll, longus. *Flores* i poll. diam. *Calyx* fructifer 4 lin. longus. *Nuculce* nigrescentes ad spectu nularum *Eritrichii* et *Endogonice*, sed fere bilineales.

Specimens of this interesting plant, received last year from Mr. John Ross, were identified by M. Maximowicz with the undescribed Mandshurian genus collected by him only in fruit and referred to, as cited above, in his 'Diagnoses.' M. Maximowicz has most courteously supplied us with a specimen of the fruit of his plant, together with drawings and a detailed description of it, which I have made use of in drawing up the above description.—D. OLIVER.

Fig. 1. Flower. **2.** Two lobes of the corolla with their basal squamae and stamens. **3.** Fruit with the calyx-segments turned back. **4.** Nuts, anterior and posterior views, o. Base of style with scars of the removed nuts.

PLATE 1255.

EXOCHORDA SERRATIFOLIA, 8. Moore.

ROSACEJS, Tribe SPI&SEJS.

E. serratifolia, Moore *sp. nov.* foliis manifeste petiolatis ovatis vel cuneato-lanceolatis acutis serratis basin versus integris subtus pubescentibus, calycis limbi lobis rotundato-ovatis obscure crenulatis, floribus subsessilibus, petalis obcordato-spatulatis quam in *E. grandiflora*, Ldl. longioribus et comparate angustioribus.

#HAB. In the K Chinese Province of Chienshan, J. Boss.

Caulis aliquot pruinosis. *Folia* ad 2£ unc. long, et 1 unc. lat. ; petioli ad £ unc. long., pubescentes. *Petala* f unc. long.

Abundantly distinct from *E. grandiflora*, Ldl. The genus has hitherto been monotypic, Baillon having referred his *E. ? Davidiana* to *Nuttallia*.—S. MOORE.

Fig. 1. Ovary with the back of a carpel removed to expose the ovules.

PLATE 1256.

HANNOA SCHWEINPURTHII, Oltw.

SIMARUBEJL.

H. Schweinfurthii, Oliver, *sp. nov.*—Frutex glaberrimus; folia 3-7-foliolata, foliolis coriaceis anguste oblongo-oblancoatis obtusis v. subacutis basi attenuatis, pedunculis folio brevioribus 1-2-paucifloris erectis saepe elongatis, floribus pedicellatis flavidis, calyce saepius inaequaliter 3-4-fido lobis integris v. 1-2-dentatis, petalis 6-9 calyce 2-4-plo longioribus oblongis apice recurvis, staminibus 12-14, carpellis 5 (-G), fructiferis 1-2 drupaceis ellipsoideis.

HAB. Central Africa* Niam-niani Land (2893 : 2898). *Dr. Schweinfurth!*

Frutex parvus 2-3 pedalis, ramulis hornotinis teretibus longitudinaliter striatis e caudice brevi lignoso crasso fastigiatim erectis. *Folia* £1 ped. longa, imparipinnata, foliolis elongatis, lateralibus 1-3-jugis,

3-6 poll, longis §-1£ poll, lafcis, basi seepius longe angustatis. *Pedunculi* axillares v. terminales erecti 1-6 poll, longi, pedicelli ^-1 poll, longi. *Fructus* §-f long. longnB, pericarpio osseo l»vi.—D. OLIVER.

Fig. 1. Flower, enlarged. 2. Stamens. 3. Pistil. 4. Fruit-carpel.

PLATE 1257.

QYNCOLOSTEMON DENSIFLORUS, Benth.

LABIAM, Tribe OCIMOIDE^.

*S. densiflori*B, *Benth. in B. Mey. Comm. Pl. Afr. 231 and in DC. Prod. xii. 54, foliis ovatis acutis integerrimis y. rarins subdentatis, thyrsu denuo spiciformi, calycibus rectis viscoso-villosis, corollae tabo calyce plus duplo longiore.*

HAB. South Africa, Natal district, *Drege, Krauss, n. 96, Sutherland, Mrs. Hutton*, from the coast up to 1,000 ft. elevation.

Frutex erectus 2-pedalis v. altior, ramis strictis molliter pnbescentibus. *Folia* opposita in axillis BBBpis fasciculata, breviter petiolata, 3-4 lin. v. majora fere semipollicem longa, acuta, coriacea, cano-pnberula v. dcum glabrata, costa prominna venis obscuris. *Verticillastri e cymis* oppositis dense spiciformibus in thyrsnm densum spiciformem trzninalem 3-5-pollicarem conferti v. inferiores parum dissiti. *Folia floralia* caulinis conformia nisi minora, superiora parva bracteseformia. *Calyx* ad 3 lin. longus, lobis 4 inferioribns longiuscule setaceis, snmmo latiore brevior leviter decurrente. *Corolla* tubas rectus, superne ampliatus, 7-8 lin. longus, labiis brevibus latis patentibus, superiore breviter latequo 4-dentato, inferiore integerrimo concavo. *Stamina* exserta, declinata, filamenta inferiora fere ad apicem connata antheris bre\issime stipitatis, superiora breviora, libera. *Antherarum* loculi divaricati confluentes. *Discus hypogynus* lobatus, postice ovaria superana. *Stylus* exsertus lobis stigmatosis brevibus subulatis.

Fig. 1. Flower. 2. Disk and ovary.

A grave error has unfortunately crept into the published generic character of *Syncolostemon*, the union of the two lower filaments upon which the name was founded being ignored. The descriptions of Drege's Labiatie were drawn up by myself and sent to E. Meyer who revised them and published them in his *Commentaria*, and wherever no error had been detected were copied into the *Prodromus*. Whether the error now discovered originated with me, or was the result of verbal alterations in copying out here or in Germany, it is impossible now to ascertain.—G. BJSNTUAM.

PLATE 1258.

SAXIPEAGA ROSSII, *Oliv.*

SAXIFRAGES.

S. (§ *Stomerfa*), *Kozsii*, *Oliver*, *sp. nov.*, acaulis, foliis radicalibus, lamina rotundata palminervia, glabra v. glabrescentia, basi cordata sinu rotundato, plus minus profunde 5-7-9-fida, laciniis ovatis v. ovato-lanceolatis acutis inaequaliter serratis, scapo folia verosimiliter superante, superne pilosulo v. puberulo, inflorescentia paniculate* multiflora pubescente, pedicellis flore subaequilongis, calyce campanulato stepius 6-fido, laciniis oblongo-lanceolatis obtusiusculis, petalis oblongis calyce brevioribus, ovario semi-infero.

HAB. North China; hills south of the Korean Gate and elsewhere 'on almost inaccessible and bare rocks, called by some Mandschurian Ivy.' *Mr. J. Boss!*

Ilhizoina repens crassiusculum squamiferum. *Folia* 3-5 poll, longa atque lata; petiolus 3-4 poll, longa. *Flores* ^-J P°U- diam., saepius 6-meri. *Stamina* 6 petalis alterna et eisdem breviora.

Judging from our specimens the leaves probably attain a larger size than noted above.—D. OLIVER.

Fig. 1. Flower. 2. Same in vertical section, enlarged.

PLATE 1259.

MISANTECA ANACABDIOIDES, *Benth.*~~LAURINEAE~~ Tribe P&BSEACEJB.

Misanteca, *CMm. et BcM.* (*Symphysodaphne*, *A. lfi&.*)₉ *Char*, *emend.* *Flores* hermaphroditi. *Perianth* tubus carnosus ovoideus v. obovoideus; limbi segmenta 6, brevissima. *Stamina* perfecta 3, ordinis tertii, in columnam carnosam circa pistillum connata, e perianthio breviter exserta, singula apice extrorsum 2-locellata, additis interdum locellis 1-2 parvis inferioribus cassis; staminodia ordinis primi et secundi brevia v. obsoleta, ordinis quarti desunt. *Ovarium* in stylum brevem contractum, columna staminea inclusum. *Fructus* (ubi notus) perianthii tubo aucto indurato cupulato truncato insidens.—Arbores fru-

ticsve American®. *Folia* sparsa, coriacea, pennivenia. *Pamēuloe* ad basin innovationum pedunculate, cymulis capitatis multifloris y. laxis paucifloris.

M. anacardioides, *Benth.*, foliis obovato-oblongis obtusissimis basi in petiolum contractis glabris, panicuto cymnlis laxe paucifloris.—*Acro-diclidium anacardioides*, B. Spruce PL Exs. n. 2961; Meissn. in DC. Prod. xv. i. 86.

HAB. North Brasil, in low woods near San Carlos del Bio Negro, *Spruce*, n. 2961.

Arbuscula v. s&pius frutex 10-pedalis, facie *Anaca/rdii occdentalis* ramnlis nc^ellis puberulis mox glabratis. *Folia* apices versus ramulorum conferta ex obovato oblonga, 3-6-pollicaria, apice rotundata, basi in petiolum brevem longiuscule angustata, coriacea, glaberrima, pennivenia et tenuiter reticulato-venulosa. PaniculiB ad basin innovationum non stricte axillares, foliis breviores, parce ramoso, tenues, pberulce. Cymul© paucse, breviter pedunculate, floribus in cymula 3-6 pedicellatis. Bracteco minimi©, caducissimoe. Perianthium obovoideo-subglobosum vix J lin. diametro, lobis brevissimis latis obtusis. Staminodia ordinis priini et secundi rarius adsunt parva. Antberarum locelli inferiores ad maculas glabras reducti.

Fig. 1. Perianth showing the protruding end of the staminal column. 2. Staminil column. 3. Ovary.

Owing to the general neglect of the characters derived from the stamens of *Laurinps* and the reliance for generic distinction upon the fruit alone, the four species nhich we would unite under *Chamisso's Mimnteca*, connected by a very remarkable and exceptional staminal structure, are to be found under four different genera in the *Prodromus*, the fruit being unknown in three of them and therefore only guessed at in determining on their generic names; these four species are—

1. *M. capitata*, Cham, et Schl., Meissn. in DC. Prod. xv. 1, 96, foliis ovali-elliptieis breviter acuminatis petiolatis glabris v. subtus puberulis, paniculae cymulis dense multifloris capitotis ad apicem pednnculi subsessilibus.—Mexico.

2. *M. cubensis*, *Benth.*, foliis ovali-ellipticis acuminatis petiolatis glabris v. subtus puberulis, pauculae cymulis plurifloris laxiusculis pedicellatis.—*Symphysodaphne Cubein's*, A. Rich. EL Cub. III, 190, t. 67; Cuba, *Linden*, ». 1993.

This species has the foliage of *M. capitata* with the inflorescence of *M. anacardioklet*-. It is referred both by *Grisebach* and by *Meissner* to *Acro-diclidium jamai-cense*, as a broad-leaved variety, and is indeed very nearly allied to that species which seems to connect the two genera, as the thick stamens are more or less united at the base though free at the summit. It has, however, the large glands at the base of the stamens of *Acro-diclidium*, although no staminodia as in most *Misanteca*.

3. *M. anacardioides*, *Benth.*, uti supra.

4. *M. crassiramea*, *Benth.*, ramis crassis suberoso-rugosis, foliis sessihbus elliptico-oblongis obtusis supra glabris subtus villosis, paniculae cymulis plurifloris laxiusculis.—*Orcodaphne? cramramca*, Meissn. in DC. Prod. xv. 1, 117; Brasil, near the town of *Goyaz*, *Burchell*, ». 6758, and probably the same locality, *Poht*.—Gr. BKNTUAX.

PLATE 1260.

MYBISTICA SAGOTIANA, *Benth.*

MTBISTICEA.

M. (*Gymnacranthera* ?) **Sagotiana**, *Benth. sp.* ».., foliis nitidulis preter costam elevatam tenuissime v. obscure penniveniis, paniculis masculis axillaribus, floribus secus ramulos parvis pedicellatis fasciculatis, perianthio globoso-campanulato alte 3-fido, antheris 6-8 stipiti brevissimo adnatis erectis, apice muticis brevissime liberis.

HAB. Acarouary, French Guiana, *Sagot*, n. 1-195.

Bami divaricati. *Folia* oblongo-lanceolata, 3-5 poll, longa, 1[^]-2 poll, lata, breviter et obtuse acuminata, petiolo 3-5 lin. longo fulta. *Paniculcs* folio multo breviorcs, ima basi in ramulos 2-3 divaricatos simplices v. vix ramosos divisra. *Flares* secus ramulos ad nodos dissitos elevatos nnmerosi, pedicellis ad 1 lin. longis. *Perianthiwn* vix semilineam diametro fere ad basin divisum, segmentis ovatis. *Stamina* in massam subsessilem fere globosam connata, antheris fere ad apicem circa stipitem brevissimum adnatis. *Flores famdnei* ignoti.

The arrangement of the anthers distinguishes this from all the published species, but is very near that of the old world section *Gymnaceranthera* and the American section *Compsonenra*, which it is proposed to unite under the former name.—G. BENTHAM.

Fig. 1. Male perianth. 2. The same open. 3. Mass of stamens from the open flower. 4. The same from a young bud.



PLATE 1261.

MYBISTICA MICROCEPHALA, *Benth.*

MYRISTICEA.

M. (*Irya*) **microcephala**, *Benth. sp. n.*, foliis subtus crebre penniveniis, paniculis masculis axillaribus ramosis, capitulis numerosis parvis globosis, perianthio 3-fido subsessili, antheris 3-4 brevibus ad apicem columns elongatis exsertse vix clavato adnatis.

HAB. Island of Fernando Po, *Mann, n. 572.*

Arbor 60-80-pedalis. *Folia* oblonga, acuminata, basi suboblongiter cordata, scope pedalia, venis primariis subtus elevatis transversis parallelis ad utrumque latus costs in speciminibus nostris 30-50, supra depressis parum conspicuis. *Paniculæ* masculinæ axillares, ramosae, 2-4-pollicares. *Capitula* pisiformia vix 1½ lin. diametro, apices versus ramulorum conferta, numerosa. *Flores* in capitulo numerosi, subsessiles. *Perianthium* ½ lin. diametro. *Columina* staminea primum inclusa, in flore evoluta perianthio conspicue longior. *Flores* femineae ignoti.

This and the species figured in the following plate are the first nutmegs *tliai* have been found in tropical Africa, and both are due to the exertions of Mr. Mann. Their nearest ally is certainly the *M. Horsfieldii* of the Malayan Archipelago, which was raised to a distinct genus by Willdenow, reduced to a section of *Myristica* by Alph. De Candolle, but which might well be included in one section with the *M. Irya*, G. BENTHAM.

Fig. 1. Perianth. 2. The same open. 3. Stamens seen from above.

PLATE 1262.

MYRISTICA MANNII, *Benth.*

MTEISTICEJE.

M. (Irya) Mannii, Benth sp. n., foliis subtus elevato-penniveniis, paniculis masculis axillaribus, capitulis paucis globosis multifloris, perianthio 3-fido in pedicellum brevem contracto, antheris 3-6 brevibus ad apicem columnæ elongatae clavatis adnatis.

HAB. Old Calabar and Cameroon rivers, *Mann, n. 2290 and 752.*

Arbor 40-50-pedalis. *Folia* obovali v. anguste oblonga, acute acuminata basin versus parum inæqualiter, 6-10 poll, longa, 2-3 poll, lata, coriacea, supra nitidula subtus scabriuscula et glabra, venis primariis 10-20 subtus elevatis supra parum conspicuis, basi obliqua, petiolo 2-3 lin. longo. *Paniculæ masculinæ* ad axillas breves, ferrugineo-tomentosæ, e ramulis paucis apice monocephalis compositee. *Capitula* globosa, 6-9 lin. diametro, floribus dense confertis etsi breviter podicellatis. *Perianthii* limbus 3-partitus, 1½ lin. diametro. *Columina*

staminea tennis, perianthio conspicue brevior, apice leviter incrassata antheris sffipius 3. *Flares fosminei* ignoti.

With the globose inflorescence of *M. Horsfieldii* and *M. microcephala*, this species is at once distinguished by the very much larger and fewer flower-heads.—G. BENTHAM.

Fig. 1. Male perianth. 2. The same open. 3. Section of the same, showing the Staminal column and the thick texture of the perianth.

PLATE 1263.

PALMEBIA SCANDENS, *F. Muellh*

MONIMIACEJ, Tribe **MONIMIEÆ.**

P. scandens, *F. Muell. Fragm. Phyt. Austral*, iv. 152 *andv.* 2 ; *Bentli. VI. Austral*, v. 291, staminibus ad 20, disco centrali villosissimo.

HAB. Buckingham Bay, Queensland, *DallacJiy.*

Frutex alte scandens, ramnulis nunc cano-tomentellis nunc pubescenti-lanatis. *Folia* opposita, brevissime petiolata, ovata v. late elliptica, breviter acuminata, 3-5 poll, longa, utrinque cano-tomentella v. supra glabrata. *Flores* dioici in paniculas axillares laxae racemiformes foliis breviores dispositi, inflorescentia mascula subramosa, feminea brevior simplicior; pedicelli secus rachin fasciculati perianthis vix longiores. *Fl. §. Perianthium* hemisphaericum, vertice planum, lobis 4-5 supra stamina conniventibus et in apices lineares intra antheras reflexas productis. *Discus* centralis bene receptaculum cavum villosulum centro nudum, in peripheria antheras 16-20 subsessiles pluriseriatis ferens; antheras tamen diu perianthio clauso occultas. *FL § Perianthium* paullo minus, intus dense villosum, carpella plurima sessilia includens. *Perianthium fructiferum* auctum carnosulum irregulariter subglobosum, carpella drupacea subglobosa sessilia includens, exocarpio tenui endocarpio osseo. *Semen* pendulum, testa membranacea, hilo longiusculo. *Embryo* perfectus adhuc ignotus.—G. BENTHAM.

Fig. 1. Male perianth when first full grown. 2. The same as it at length partially opens showing the stamens. 3. Fruiting perianth. 4. Section of the same showing the hollow glabrous scars left by the drupe. 5. Anther.

PLATE 1264.

CHYMOCOCCA EMPETEoidES, Meissn.

THTMEUBAGEA, Tribe EUTHYMELEJS.

C. empetroides, Meissn. in DC. Prod. xiv. 665, single species.

HAD. S. Africa, about Simon's and Table Bays, Echlon, Harvey, Wright.

Fruticulus laxe ramosissimus, simillimus *Passerince filiformi* et *P. rigidce*, ramulis cano-tomentosis. *Folia* opposite, laxiuscula, triquetrolinaria, obtusa, 1-1[^] lin. longa, internodio subssqualia v. longiora, crassiuscula, lrovia v. rugulosa, basi paullo latiora, floralia superiora S89pe latiora. *Flores* axillares, solitarii, sessiles, secus ramulos snbdistantes v. spicam comosam sparsifloram formantes, folio florali vix dnplo longiores. *Perianthium* nrceolatnm, tnbo supra ovarinm constricto demum subgloboso, limbi lobi 4, patentes, tnbo vix breviores, fance intus nnd^» *Stamina* 8, fanci affixa, exserta, longiora tamen vix lobos superantia. *Discus* hypogynus 0. *Ovarium* subsessile, glabrum, stylus filiformis, stigmatate depresso-globoso. *Fructus* baccatus, perianthii tubo parnm aucto inclnsus v. perianthio demum decidno denudatus, longindinaliter striatus, pericarpio crassinsculó carnosio. *Semen* albuminosnm, testa crassinsoula demum Crustacea.

Generically separated by Meissner from the true *Passerinas* solely on account of the baccate not nncamentaceous fruit.—Gk BENTHAM.

Fig. 1. Perianth with ezserted stamens. 2. Stamen. 3. Pistil, the ovary cut longitudinally showing the ovule.

PLATE 1265.

GOODALLIA GTTIANENSIS* BentL

THTMELJQACB^, Tribe EUTHYMELEJE.

O. guianensis, Senth. in Hook. Lond. Journ. iv> 633, single species.

HAB. British Guiana, SchombwrgJc^ n. 142, Appun.

Frutex arborescens, divaricato-ramosissimus, prooter inflorescentiam glaber v. ramuli novcelli tonuiter aericeo-pilosi, mox giabri, puncticn-

lati. *Folia* alterna, breviter petiolata, late ovata obovata v. fere orbiculata, obtusissima v. retusa, integerrima, basi rotundata v. cuneata pleraque pollicaria, pennivenia et transverse v. oblique reticulato-venulosa, in ramulis vegetioribus rarius angusta et multo minora. *Spicas* terminales, paucifloro, fere in capitulum sessilem contracto. *Flores* dioici, brevissime pedicellati, masculi 2} lin. longi, feminei majores. *Perianthium* ntriusque sexns sericeo-tomentosum, fere ad medium 5-fidum, lobis obtusis in flore femineo angustioribus quam in masculo, tubo praesertim floris masculi intus sub fauce villosa. *Squama* 10, lineares, tubo prope basin affixae eique plus minus adnatae. *Stamina* in flore masculo 10, fauci affixa, longiora lobis opposita iis fere dimidio breviora, rudimento ovarii nullo. *Staminodia* in flore femineo 0. *Ovarium* sessile, dense pilosum. *Stylus* demum exsertus, stigmate capitato penicillato. *Fructus* perianthio aucto persistente inclusus, pericarpio vix carnosus, *Seminis* testa crustacea, albumen parvum v. 0. The peculiar position of the scales of the perianth at the base of the tube distinguishes this plant from all other *Thymelaeaceae* except *Fernandesia*, which, with a very different habit and inflorescence, has 4-merous flowers and other minor distinctive characters.—G. BENHAM.

Fig. 1. Female perianth. 2. Section of the same. 3. Pistil. 4. Section of the male perianth showing the stamens. 5. Stamen.

PLATE 1266.

AGASTACHYS ODORATA, 22. BR.

PBOTEACEAE, Tribe PERSOONIEAE

A. odorata, R. Br. in *Trans. Linn. Soc.* x. 158; *Benth. Fl. Austral.* v. 379, *single species*.

HAB. South and west coasts of Tasmania.

Frutex dumosus, 5-9-pedalis, undique glaber. *Folia* in ramulis erectis conferta, alterna, oblongo-lineariter, obtusa, brevissime petiolata, 1-3-pollicaria, crasso-coriacea, nitidula, proter costam avenia, siccitate saepe nigricantia. *Spicas* numerosae, ad axillas superiores solitariae, abae floridae, folia subduplo superantes, paniculam terminalem foliatam formantes. *Flores* numerosi, sub bracteis brevibus solitarii, sessiles, suaveolentes, albi. *Perianthium* 3-3J lin. longum, segmentis linearibus mox solutis per anthesin recurvis. *Stamina* infra medium segmenti affixa, filamentis anthera lineari brevioribus. *Ovarium* 3-angulare, in

M. africanum brevem contractum, stigmato oblongo laterali. Fructu (adhuc S n S 3-quetur, angulis 2 lateralibus in alam crassmsculam, expansis, terio antioo minus prominente. Owdum, sub apice lateraliter affixum, pendulum.

Flower of which three of the four segments a transverse section of the young fruit.

3. Pistill, vertical section showing the ovule.

The ripe fruit has not been observed ^ it is probably indehiscent and not much altered from the enlarged ovaries described.—G. BENTHA*.

PLATES 1267-1268.

MANNIOPHYTON AEEICANUIff, *Muell. Arg.*

EUPHOBBIACEJi.

M. africanum, *M. afr.* (*Argvo.*) ^ ^ ^ O/. ^ . ^ i- ^ iobis ^ obovaS late ovitia cnsmdatis intogris vel palmatim 3-5-fiihs lobw obovaro-Sbtngt verleffhoribus o^Ique ojato.oblongis bre.^ ter J — ^ tniDra nervis exceptifl demum glabratw, subtus praxapue m nerviB S t i s SnicX«illaribus ractmiformibns foliis superantibuB plus SB h S'te ^ ro U a fl. i campannkta stamina suteqnante ore undnlato.

HAB Prince's Island and Old Calabar, W. Tropical Africa, G. MZ?i S land (No. 3191, 3581). *Dr. Schweinf^rth!*

Folia 4-7 uoll. longa 4^10 poll, lata; petioli 3-6 poll, longi. . Pant-c£ pedtncSS inctaS, (i) fl ped. long»; bracte» pary» lmeares. *PedieelU* (fl. *) breves calyce vix longiores. Mneller H c)

I think the Angolan species distinguished by Dr. Mueller {i. c.) doubtfully distinct from *M. africanum*.—T>. OLIVER.

PIATB 1267.-rig. 1- Eednced outiine of palmatifid leaf. 2. Staminate flower. 3. Stamen*, after removal of calyx and corolla.

FLJLTB 1268.—Fig. 1. Pistillate flower, after the fall of the petals.

PLATE 1269.

ENTEROSPERMUM LITTORALE, *Eiern.*

RUBIACEJE, Tribe GAEDENIEJJ.

E. littorale, *Hiern. in Oliv. Fl. Trop. Africa*, iii. 93; foliis obovato-ellipticis y. oblanceolatis plus minus obtusis basi cuneatis coriaceis glabris lucidis, venis secundariis rarius utrinque 4-5, stipulis coriaceis erectis ovato-oblongis deciduis, cymis terminalibus multj[^]oris corymbiformis folia baud superantibus, pedunculis tricbotomis compressis, calycis limbo obtuse dentato, corollas tubo calyce 3-5plo longiore, fructu pisiformi endocarpio crustaceo, albumine profunde ruminato.

HAB. Prov. of Zanzibar, *Dr. Kirk! Hildebrandt!*

Frutex 6-12 ped. ramosus, glaber; ramulis obtuse 4-gqnis. *Folia* 2-3[^] poll, longa, 1-1f poll, lata; petiolis £-J poll. *Corolla* lobis tubo brevioribus oblongis v. ellipticis obtusis. *Antherce* sessiles exsertae. *Stylus* longiuscule exsertus, indivisus, apicem versus leviter clavatus. *Fructus* [^]-i poll. diam.—D. OLIVER.

Fig. 1. Flower. 2. Vertical section of ovary, showing geminate ovules. 3. Seed. 4. Same in section showing embryo and ruminated albumen. 5. Embryo yet more enlarged.

PLATE 1270.

LEPISTEMOJST AFRICANTTM, *Oliv.*CONVOLVULACEJ, Tribe CONVOLVULE[^].

L. africanum, *Oliver, sp. nov.*, caule hirtio, foliis cordiformis repando-vel dentato-lobatis pilis brevibus subappressis hirtis, cymis umbelliformibus sessilibus v. breviter pedunculatis 3-oo -floris, pedicellis floressse soquilongis, sepalis ovato-ellipticis acutiusculis dorso pilis longiusculis laxis hirsutis, squamis corollae fornicatis concavis ovato-lanceolatis, disco continuo ovario fere roquilongo, capsulis tarde dehiscentibus ovoideis basi setosis apice obtusis, semiibus subglobosis, testa minute reticulata.

. HAB. Zambesi-land, *Dr. Kirk!* Djur-land (No. 1430). *Dr. Schweinfwih!*

Folia 2-4 poll, longa et lata, seapius acuta, dentibus acutis obtasisve seape deltoideis; petiolus ad 3-poll. longas. *Flores* petiolo breviores; pedunculo communi brevissimo, sespe ramnoso. *Sepala* ovato-elliptica concava, exteriora acuta, dorso laxe hirsuta, sub fructu persistentia turn plus minus recurva. *Corolla* tubo calyce 2-3-plo longiore, limbo 5-lobato, lobis late ovato-deltoideis. *Fructus* ^-poll. diam.-^D, OLIVER.

Fig. 1. Flower. 2. Stamen and anteposed scale, front and side view. 3. Pistil and surrounding disk. 4. ^Estivation of corolla-lobes.

PLATE 1271.

DIDYMJEÆ MEXICANA, *Eoohf.*

RUBIACE-E, Tribe GALIEJE.

Didymaa, *Hook.f. in Benth. and Hook.f. Gen. Plant*, ii. 150.

D. mexicana, *Hoohf. I. c., species unica.*

HAB. Mexico; on the Peak of Orizaba, alt. 10,000 ft. *Bates, Linden* (No. 1403), *Galeotti* (No. 4405), *Bourgeau* (No. 98 and 3050), *F. Mueller* (No. 1519), *Liebmann* (Rub. No. 255).

Herba debilis, habitu *Mubice*, siccitate aterrima v. fusca, flaccida, implexo-ramosa, foliosa, sparse puberula, ramis ramulisque gracilibus fragilibus 4-gonis. *Folia* parva, £-1 poll, longa, patula v. recurva, opposita, subsessilia v. petiolata, lanceolata y. ovato- v. lineari-lanceolata, acuminata, rarius ovata et subacnta, enervia, basi rotundata acuta v. in petiolum angustata, marginibus ssepius recurvis; petiolo rarissime J poll, longo; stipules utrinque geminee, intra-petiolares, subulatoe, demum recurves, persistentes. *Flores* minuti, axillares, solitarii v. ramulis abbreviatis 1~3ni, pedicello brevissimo in fructu elongato. *Calycis* *tubus* turbinatus, laovis, cum pedicello non articulatus; limbus 0. *Corolla* infundibulifbrmi-campanulata v. subrotata, ad medium 4-fida, lobis triangulari-ovatis obtusiusculis valvatis. *Stamina* 4, inter lobos corollsB inserta, filamentis brevibus subulatis; antherea dorso affix®, oblongro, obtusoa. *Discus* depresso, ovarium 2-loculare; stylus brevis crassus, ramis 2 brevibus divaricatis, apice et intus papillosis;

ovula in loculis solitaria, septo infra medium affixa, amphitropa. *Fructus* didymus, lobis globosis carnosulis, altero rape minore v. imperfecto. *Semina*—J. D. HOOKER.


 1. Flower. 2. Corolla laid open. 3. Stamen. 4. Vertical section of ovary.

PLATE 1272.

ACTINOSTROBUS PYRAMIDALIS, *MIQ.*

A. pyramidalis, *Miq. Pl. Preiss.* i. 644; foliis interdum dimorphis inferioribus ~~S~~se acicularibus elongatis superioribus vel omnibus parvis basi appressis, antherarum squamis rotundatis, strobilis globularibus. *Parlat. in DC. Prod.* xvi. ii. 444: *Benth. VL Austr.* vi. 239. *Callitris actinostrobos*, *F. Muell. Burd. Exped.* 19.

HAB. Western Australia, Swan River, *Preiss and others*; K. George's Sound, *Baxter*; Murchison River, *Oldfield*.

Folia acicularia ad \wedge unc. long., erecta vel patentia. *Amenta* mascula linearia, obtusa, ad $2\frac{1}{2}$ lin. long.; antherarum cellule 2-4. *Strobili* vix \$ unc. long., interdum sessiles.

In the single cone submitted to examination some of the carpels (ovules) came away with the scales and were invariably sterile, while the innermost ones, which remained on the axis, were all larger, triquetrous and fertile. Is this a constant peculiarity P—S. MOOBE.

Fig. 1. Portion of branch with male inflorescence. 2. Two-celled anther. 3, 4. Front and side view of seed with subtending scale. 5. Young female cone. 6. Outer ovuliferous scale of same (front view). 7. Inner ovuliferous scale.

PLATE 1273.

ARISTOLOCHIA SOMALIENSIS, *Oliv.*

ARISTOLOCHIACEJ.

A. somaliensis, *Oliver*[^] *sp. nov.* Suffrutescens, repens v. scandens; foliis lineari-lanceolatis coriaceis apice acutis v. obtusiusculis mucronatis leviter recurvis subtus valide longitudinaliter nervosis basi utrinque auriculato-uncinatis margine scabriusculis sessilibus, floribus axillaribus pedunculatis solitariis, bracteis ovatis ovario 3-4*plo longi-

oribus, perianthii utriculo inflato subgloboso, tubo curvulo superne leviter dilatato ore in limbo circulari abrupto amplicato facie pilosulo, ovario 6-loculari, columna styli in lobos 6 deinde incurvos divisa.

HAB. Kismayo, South Somali land, *Dr Kirk!*

Folia f-1j poll, longa, basin versus 1/2-3/4 poll. lata. *Pedunculus* 1 poll, longi. *Bracteae* 1/2-1 poll, longae, 1 poll. late). *Perianthium* 1/2-2 poll, longum, limbo circiter 1 poll. lato.—D. OLIVER.

Kg. 1. Column with continuous marginal membrane surrounding the stigma decurved. 2. Same with the membrane recurved. 3. Six lobes of stigma from above, surrounded by the upturned marginal membrane.

PLATE 1274.

ORTHOSIPHON LINEABIS, *Benth.*

LABIATE, Tribe OCIMOIDEA.

O. linearis, *Benth. sp. nov.*, ramis tenuibus ascendentibus v. erectis, foliis sessilibus anguste linearibus, corolla tubo calyce plus duplo longiore superne ampliata, filamentis anticis plus minus connatis.

HAB. South Africa, Malabale land, *G. O. Oates.*

Vlanta pars inferior deest, ramuli ascendentes suberecti fere filiformes, glabri v. pilis brevibus raris conspersi. *Folia* angustissimo linearia, fere subulata, crassiuscula, supra concava, integerrima, pollice breviora, floralia minuta. *Verticillastri* in summo ramo pauci distantes, 3-6-flori. *Pedicelli* tenues calyce breviores. *Calyx* patens v. demum nutans, per anthesin tubulosus 1 lin. longus, post anthesin ampliatus ovoideus, 3 lin. longus, glaber, 10-nervis, dente postico lato obtuso breviter decurrente, inferioribus breviter setaceo-acuminatis. *Gorollae* tubus rectus, 3 lin. v. paullo longior, basi tenuis, superne peltata in faucem ampliatus; limbi labia patentia, posticum brevelatum late 4-dentatum, anticum longius ovatum integerrimum. *Stamina* longiuscule exserta, declinata; filamenta anticorum breviter v. ultra medium connata, postica libera. *Antherae* parvae, loculis divaricatis confluentibus. *Stylus* apice minute incrassatus.

Fig. 1. Flower. 2. Lower stamens, the upper portion.

With the essential characters of *Orthosiphon* this species differs from the rest of the genus in the very narrow foliage and in the union of the two lower filaments, showing in the latter respect an approach to the genus *Syncolostemon*.—Q. BENTHAM.

PLATE 1275.

CABDWELLIA SUBLIMIS, *F. Muell.*

PKOTEACEA, Tribe EMBOTHBIEJB.

C. snblimis, *F. Muell. Fragm. Plyt. Austral*, v. 24; *Benth. Fl. Austral*, v. 538, *single species*.

HAB. Mountains about Rookingham Bay, Queensland, *Dallachy*.

Arbor 80-90-pedalis, ramnulis novellis inflorescentiaque minute cano-tomentellis, foliis adultis glabris. *Folia* alterna pedalia et longiora, abrupte pinnata, foliolis 4-10 oppositis v. alternis longiuscule petiolulatis ovatis oblongisve obtusis coriaceis venosis supra viridibus subtus pallide glaucis fulvisve 3-8 poll, longis. *Racemi* ad apices ramorum paniculati, foliis longiores v. breviores. *Flores* hermaphroditi, secus rhachin racemorum per paria brevissime pedicellati. *Bracteae* 0 v. caducissimae. *Perianthium* obliquum, tubo semipollicari, latere inferiore hiante, apice attenuate sub limbo oblique subgloboso recurvo. *Antherae* ovatae, in laminis cavis sessiles. *Glandidae* hypogynae 4, globoseae. *Ovarium* breviter stipitatum; stylus elongatus, apice dilatatus in discum obliquum medio stigmatosum. *Ovula* 1&-16, sub apice lateraliter affixa, 2-seriatim deorsum imbricata. *Fructus* crassus, lignosus, demum folliculatim dehiscens, apertus 3 poll, diametro. *Semina* pauca, plana, oblonga, margine alseformi cincta, 3 poll, longa J poll. lata.

Fig. 1. Flower. 2. Apex of style and stigma, front and side view. 3. Ovary and disk. 4. Ovary, longitudinal section. 5. Seed. 6. Embryo.

The genus, with the descending ovules and the perianth nearly of *JStenocarpus*, has a very different inflorescence and aspect and differs also in the hypogynous glands, the broad thick hard fruit, and in the shape of the seeds.—Gk BKNTHAM.

PLATE 1276.

KICKXIA AFRICANA, Benth.

APOCYNACEJE, Tribe ECHITIDEJJ.

K. africana, *Benth. sjp. n. 9* cymis densis multifloris, pedicellis brevibus, glandulis calycinis in squamellas subconnatis, antheris dorso non incrassatis.

HAB. West Tropical Africa, Bagroo river and Fernando Po, *Mann, n. 817*; *Bonny, Kalbreyer*.

Arbor 15-20-pedalis, cortice pallide maculato. *Folia* breviter petiolata, ovata v. oblonga, breviter et obtuse acuminata, basi rotundata v. angustata, coriacea, nitidula, pennivenia, venis primariis utrinque 8-15 parallelis fere ad marginem extensis, rete venularum inconspicua. *GymcB* axillares, pedunculo 1-4 lin. longo fere, ramosissimæ, ramulis pedicellisque 1-2 lin. longis. *Oalyx* vix 2 lin. longus, segmentis obtusis; glanduke interiores ad basin calycis oo, plus minus per paria v. plures connate. *Corollas* tubus breviter exsertus; limbi lacini vix 4 lin. longæ, lineares, contortas, in alabastro dextrorsum obtegentes, per anthesin patentés flavescentes. *Stamina* inclusa, filamentis brevissimis pilosis. *Discus* hypogynus in squamellas 5 latas truncatas crenatas partitus. *Fructus* folliculo 2, 4-6-pollicares, coriacei. *Semina* anguste fusiformia, subsemipollicaria, in folliculo reflexa, basi in aristam filiformem fere sesquipollicarem longissimè retrorsum sordideque comosam, producta. *Albumen* hand copiosum. *Cutyledones* contortuplicatæ.

Fig. 1. Diagram of the aestivation of the corolla in bud. 2. Flower expanded. 3. Calyx-segment, inner surface, showing the glands at the base, which are, however, often more united than here shown. 4. Stamen, the lower compartments of the anther always without pollen. 5. Ovary and hypogynous disk. 6. Seed. 7. The same, transverse section.

The previously known Javanese *K. arborea* Bl. has the same foliage, but the flowers are fewer, 2J inches long on pedicels of 1 to 1J inch.—G. BBNTHAV.

PLATE 1277.

ECHIOCHILON LONGIPLORUM, *Benth.*

BORAGINÆ, Tribe BORAGES.

E. longiflorum, *Benth. sp. n.* glabrum, glaucescens, corolla? tubo calyce 4-5-plo longiore.

HAB. Near Aden to the north-west, only a single plant seen, *Mr. Wykeham Perry*.

Herba dura, divaricato-ramosa, pedalis, ex omni parte in vivo glaucescens v. pallide c8Drulescen3, glaberrima. *Folia* alterna, sessilia, oblongo-linearia v. sublanceolata, integerrima, crassa, subcarnosa, majora in specimine 6-8 lin. longa, superiora floralia gradatim in bracteas abentia. *Spicce* terminatae, 4-6-pollicares, tenues, rigidulae, unilaterales, foliis floralibus sen bracteis nempe ad unam latam floribus ad alteram dejectis. *Mores* dissiti, vix stricte axillares, pedicello rigido calyce multo breviores. *Calyx* inaequaliter 4-5-partitus; lobo postico nano v. deficiente. *Corolla* coerulea, tubo 4-5 lin. longo basi tenuiter cylindraceo, ad faucem ampliato, limbi labium superius erecto-patens, latum, 2 lin. longum, inferius ad marginem recurvum reductum. *Antherae* oblongo-lineares, inclusae, filamentis brevissimis, infra medium tubi affixae. *Stylis* filiformis, apice sub stigmate parvo 2-lobo annularis. *NUCIB* fere pyramidatae, basi subcordatae, tuberculoso-rugosae y. fere muricatae, areola latiuscula gynobasi conicae affixae.

Fig. 1. Flower. 2. Portion of the corolla-tube laid open, showing the stamen. 3. Summit of the style. 4. Nutlets: *a* inner view, *b* outer view.

Notwithstanding some little discrepancies in the shape of the areola by which the nutlets are attached, this plant clearly belongs to the genus *Echiochilon*, of which the previously known species is a much more scrubby plant, woody at the base and very hispid. The lower lip of the corolla is also much broader than in our plant, and the tube shorter.—G. BENTHAM.

PLATE 1278.

CYATHOGTNE VIRIDIS, *Muell Arg.*

EUPHORBIACEAE, Tribe PHYLLANTHEAE.

C. viridis, *Muell. Arg. in DC. Prod. xv. ii. 226, single species.*

HAB. West Tropical Africa, on the Gaboon river and Corisco bay, *O. Mann.*

¹ *Ilerha* c basi perenni radicante erecta, pedalis, subsimplex, glabra v. pilis appressis raris conspersa, catile duriusculo at tenui. *Folia* alterna, petiolata, oblongo-Y. ovali-elliptica, breviter et obtuse acuminata, basi angustata, 2-4-pollicaria, integerrima, tenuiter herbacea, pennivenia, venis primariis paucis distantibus tenuibuR. *Flares* dioici, in spicas v. racemos axillares simplices v. parce ramosos folio breviores disposita, secus rhachin tenuem sub quaque bractea solitarii, masculi subsesSfies, fceminei pedicellati. BractesB parvsB, diu persistentes. *Calyx* floris & vix semilinea longior, sepalis 5 latiusculis SBstivatione imbricatis. *Glandules* disci minuted vix conspicuae. *Stamina* exserta, sepalis opposita; antherarum loculi in alabastro penduli, sub anthesi patentes at vix erecti. *Ovarii* rudimentum apice in cyathnm membranaceum expansum. *Gahjx* floris ? fere maris, minus alte tamen divisus. *Ovarium* 3-loculare, loculis 2-ovulatis. *Styli* 3, lineares, erecti, crassiusculi, apice stigmatoso brevissime bifido.

Fig. 1. Male flower. 2. Stamen. 3. Female flower. 4. Style.

The genus is united by Baillon with *Antidesma*, though placed by Mueller in a different subtribe. It certainly is nearly allied to *Antidesma*, but the herbaceous habit and the structure of the female flowers appear to be quite sufficient to keep it distinct, independently of the fruit, which is unknown in a ripe state; but from the slightly enlarged ovary, it is not the one-seeded drupe of *Antidesma*, but probably the ordinary Euphorbiaceous 3-celled capsule dividing into 2-valved cocci.—GK BKNTITAM.

PLATE 1279.

LACHNOSTYLIS CAPENSIS, Turcz. (L. HIRTA, Muell. Arg.)

EUPHORBIACEJE, Tribe PHYLLANTHE*.

I. capensis Turcz. in Bull Soc. Imp. Nat. Hose. 1846,503. L. hirta, Muell. Arg. in BO. Prod. xv. ii. 224, single species.

HAB. Cape Colony, South Africa, chiefly in the Uitenhage district.

Frutex ramosissimus, dense foliosns. *Folia* alterna, breviter petiolata, oblonga v. obovalia, obtusa, integerrima, coriacea, tenuiter pennivenia, •J-li-pollicaria. *Stipules* minuto, caduce. *Flores* dioici, axillares, masculi fasciculati v. brevissime cymulosi, foeminei solitarii, breviter pedicellati, ebracteati. *Sepala* 5, membranacea, pubescentia. *Petala* 5, sepalis breviora. *Discus* in flore \$ latus, villosissimus, in flore \$ parum prominulus. *Stamina* 5, filamentis in medio disco in coluninam tenuem alte coalitis, superne liberis radiato-patentibus; antherarum loculi paralleli, contigui, rima longitudinali dehiscentes. *Pistilli* rudi-

menta 3, brevia, filiformia, columnam terminantia. *Ovarimi* in flore \$ globosum, dense villosissimum, 3-loculare, loculis 2-ovulatis. Styli breves, plani, recurvo-patentes, 2-fidi. *Capsida* pericarpio crassiuscula crustaceo in coccos 2-valves dissiliens. *Semina* subglobosa, laevia, testa crassiuscula membranacea. *Albumen* tetraedricum, fere ad membranam carnosulam embryonem includentem redactum. *Cotyledones* latissimae, confusae, varie contortuplicatae, radice sursum flexa.

PLATE 1279.—Fig. 1. Male flower. 2. Female flower. 3. Embryo. 4. Section of the same with the surrounding albumen.

The fruit of this curious genus was unknown until *Burchell's* specimens, n. 4823 and 5213 were received at Kew, which show its close affinity to the Brazilian and Guiana genus *Discocarpus*,

Mueller's name *Lachnostylis hirta*, taken from the Prodrômus, was inadvertently inscribed on the plate, without perceiving that Turczaninow's *Lachnostylis capensis* had the right of priority as being the oldest correct name. Mueller changed it under the modern very objectionable practice of detaching the adjective of an old incorrect name to combine it with the substantive of a more recent but correct name, and thus frame a third new one which cannot record the old one without explanation, and only adds a perfectly useless synonym. In the present case there was not even the excuse that Turczaninow ought to have recognised his plant in a Linnean *Clusia*.—Gr. BRNTHAM.

PLATE 1280.

CHORIOPHYLLUM MALAYANUM, *Benth*

EUPHORBIAEAE, Tribe PHYLLANTHEAE.

Choriophyllum, *Benth. gen. nov.* *Flares* dioici, apetalii. *Discus* 0. *FL. #*: *Sepala* 4, rarina 5-6, membranacea, lata, valde imbricata. *Stamina* 4, circa receptaculum v. ovarii rudimentum conicum affixa, sepalis opposita, filamentis liberis exsertis. *Antherae* dorsifixae, loculis extrorsum contiguis parallelis longitudinaliter debiscentibus. *FL. \$*: *Sepala* 4, crassa, carnosula, lata, circa ovarium arete imbricata. *Ovarium* 3-loculare; styli distincti, breves, erecti, apice brevissime patentes, crassi, obtusi, indivisi. *Ovula* in loculis gemina. *Capsula* in coccos bivalves a columella persistente dissiliens. *Semina* in loculis gemina vel abortu solitaria, oblonga, testa crustacea nitida. *Albumen* carnosum. *Cotyledones* planae, lat89. *Arbor* glabra. *Folia* opposita, breviter petiolata, integerrima, coriacea, tenaciter pennivenia. *Bacemi* \$ ad axillam v. ad nodos vetustos subterni, v. prope basin oppositi ramosi, folio breviores, floribus parvis necus rari in cymis paucis laxis dispositi. *Flares* \$ in specie sessilibus pauci, sessiles.

C. malayanum, *Benth. species n. n.*

HAB. Malayan Archipelago and Peninsula. Singapore, *Wallich Cat. Herb. Ind. n. 7975*; Malacca, *Griffith, Maingay, Penang, Maingay*; Borneo, *Beccari*, n. 3270, 3305, 3329, 3344.

Arbor procera (*Maingay*), nndiqae glabra. *Folia* quoad formam magnitudinem at etiam venationem variabilia, nunc anguste oblonga 2-3-pollicaria, nunc prorsertim in speciminibus fructiferis ovata 3-6-pollicaria, apice obtusissime rotundata v. breviter obtuse acuminata, rari-acea, nitida, venis primariis botis in folio juniore conspicuis, demum irregulariter reticulato-venulosa. *Inflorescentia* masculae folio 2-3-plo breviores, floribundae, floribus parvis glabris. *Spices* foeminae per anthesin viz semipollicares 3-4-florae. Capsules columella semipollicaris.

Fig. 1. Hale dower in bud. 2. Male flower open.. 3. Stamens. 4. Female flower. 5. Ovary, transverse section.

This genus is evidently nearly allied to the New-Caledonian *Longetia* with which Baillon thinks it might be united. The inflorescence is rather that of *Buraavia* from the same island, distinguished by Baillon chiefly by the arillus or strophiole crowning the seed, and consisting of numerous closely packed fleshy filaments. Maingay describes the same in the seeds of *Chrriopyllum*, but all trace of it disappears from the dried seed, possibly falling off as the capsule bursts open. In all our fruiting specimens (from Wallich, Griffith and Maingay) the seeds and valves of the cocci are loose, the columella alone remaining persistent. *Choriophyllum* differs from both *Longtia* and *Buraavia* in the stamens constantly equal in number to the sepals and opposite them round a broad conical central receptacle or disk.—Gh BKNTHAM.

PLATE 1281.

MABEYA MICBANTHA, *Mitell Arg.*

EUPHOBIACEAE, Sub-tribe ACALYPHEJS.

M. micrantha (genuina) *Muell. Arg. in DO. Prod.* xv. ii. 792, foliis obovali oblongis vix obtuse acuminatis integerrimis v. rarissime paucidentatis, spicis gracillimis.

HAB. West Tropical Africa, isle of Fernando Po, *Vogel, Mawn*; Nun river, *Mann*.

Frutex 10-15-pedalis ramosissimus v. arbuscula 20-25-pedalia. *Folia* alterna, breviter petiolata, obovali-oblonga, 3-6-pollicaria, tenuiter coriacea, glabra, subtus prorsertim pallida. *Spicce* in axillis superioribus simplices, folio saepius longiores, rhachi rigide filiformi. *Flares* secus rhacbin dissite glomerati, nunc omnes in glomerulo masculi, nunc in quoque glomerulo una foemina, duo v. plures masculi. *Calyx* floris masculi in alabastro globosus, clausus, per anthesin valvatim 3-partitus

rarins 4-partitus. *Stamina* 10 ad 20, antherarum loculis distinctis oblongis substipitatis, in alabastro pendulis demum ascendentibus, apice dehiscentibus. *Floris* feminei sepala 4-6, parva, imbricata, sub fructu patentia. *Styli* 3, recurvi, crassiusculi, indivisi, papilloso-plumosi. *Capsula* parva, pubescens, 3-cocca.

Fig. 1. Male flower. 2. Anther and portion of filament. 3. Portion of fruiting spike. 3- Capsule seen from underneath ~~with~~ the persistent perianth. 4. Capsule and styles.

Mueller considers the two species published in the Niger Flora under *Acalypha* as varieties of one. If that view be adopted, Baillon's name, *Mareya vpicata*, would have the right of priority.

PLATE 1282.

TETRADENIA FRUTICOSA, *Benth.*

LABIATE, Tribe SATUREINEJE.

T. fruticosa, *Benth. in DO. Prod.* xii. 159, *single species.*

HAB, Madagascar, near Tanararivou, *Helsing and Bqjer, Lyall.*

Frutex, ramis viz tetragonis cano- vel submfo-tomentosis. *Folia* petiolata, ovata v. oblonga, crenata, basi rotundata, mollia, mgosa, supra viridia tomentoso-pubescentia, subtus cano-tomentosa. Verticillastri 6-10-flori, dense spicati. Spicae numerosae, cylindraceae, subpollicares, pedunculatae, ad apices ramorum racemoso-paniculatae, panicula densa floribunda. Flores minuti, sessiles. Folia floralia sub paniculis ramisque caninis conformia at gradatim minora, sub pedunculis minoribus parva bractesiformia, sub verticillastri minima, bractea sub floribus minutiflora v. 0. Calyx minutus, post anthesin decumbens, extus cano-tomentosus. Corolla calycem duplo superans, lobis 5 latis patentibus subaequalibus, 2 posticis basi connatis. Stamina exserta, patentia, antherarum loculi divaricati mox confluentes. Disci glandulosi 4, nec omnes aequales ovario longiores, nec 2 ceteris breviores. Nuculae matura ignota.—*Gr. BENTHAM.*

Fig. 1. Floral leaf or bract subtending the verticillasters. 2. Calyx. 3. Corolla and stamens. 4. Anthers. 5. Hypogynous disk and ovary.

PLATE 1283.

EUPHBASIA (ANAGOSPERMA) DISPERMA, *Hookf.*

SCBOPHULABINE2B, Tribe EUPHRASIES.

E. (Anagosperma) disperma, Hookf.; canlibus repentibus tenuissimis intertextis sparse glanduloso-puberulis, foliis minutis patulis ovato-lanceolatis acuminatis, glaberrimis, marginibus integerrimis plauis floribus solitariis axillaribus, calyce brevi, corollse tubo elongato angustissimo, antheris magnis exsertis, ovarii locnlis 1-ovalatis.

New Zealand: Okarita in the South Island, *Mr. Hamilton (T. Kirk)*.

Perpusilla, canlibus 2-3-pollicaribus flexuosis filiformibus, radiculos exiles emittentibus, pilis flexuosis apiue ut videtur glandulosis sparsis. *Folia* per paria sparsa, \$ poll, longa, basi angustata sed vix petiolata, apice acutissima, enervia. *Flores* solitarii, erecti, breviter.pednnculati. *Calyx* subsqualis, ad medium 5-fidus, lobis ovatis acutis erectis. *Corolla* pro planta maxima, ~~scricca~~ erecta; tubo ^—J poll, longo sparse piloso, inferne gracillimo, superne sensim elongato-infundibulari; limbus parvus, bilabiatus, labio superiore erecto obcordato 2-lobo, inferiore paulo brevior 3-lobo, lobis late oblongis ssquilonis medio latiore retuso. *Mtamina* 4; antherss magnsB, lobis labii inferioris fere asquilonis, ellipsoidese, acutae, loculis basi contiguis aristato-acuminatis. *ttylus* gracillimus, stigmatate circinnatim incurvo. *Ovarium* late ovoideum, 2-loculare, loculis 1-ovulatis; ovula ab apice loculi pendula, lineari-clavata.

An exceedingly curious plant, differing from its congeners, and, indeed, from all other *Scrojhhularinece* in its solitary ovules. This character, together with its solitary axillary flowers, and the extraordinary length of the corolla-tube, would constitute of it a very distinct genus, were it not for the New Zealand *E. repens*, which has the same habit, and long flower, and of which the cells of the ovary have each two superposed ovules. The fruit is known in neither of these species: if indehiscent in both, they would form a genus, instead of a sub-genus, under which I now place them, with the name *Anagosperma*, from the reduced number of seeds.—J. D. HOOKER.

•Fig. 1. Flower. 2. Back and front views of anthers. 3. Stigma. 4. Longitudinal section of ovary—all enlarged.

PLATE 1284.

LEIDESIA CAPENSIS, *Muell Arg.*

EUPHORBIAEAE, Subtribe ACALTPHEA.

L. capensis, *Muell. Arg. in DC. Prod.* 17. ii. 793, foliis ovatis utroque latere 4-7-dentatis, bracteis masculis subacutis.

HAB. Cape of Good Hope, damp shady places in the Cape district, received from numerous collectors.

Herba annua, tenera, diffuse ramosa, glabra, semipedalis ad pedalis. *Folia* alterna v. rarius hinc inde subopposita, longe petiolata, ovata, obtusa v. brevissime obtuseque acuminata, obtuse dentata, pleraque pollicaria, tenuiter membranacea, pennivenia. *Racemi* terminales v. in dichotomis ramorum, tenelli, 1-pollicares. *Flores* masculi minimi, apicem versus racemi in fasciculos plures dispositi, bracteis sub fasciculis parvis acutis saepius setoso-ciliatis. *Calyx* in alabastro globosus, clausus, sub anthesi valvatis 3-partitus, patens. *Stamina* 4-7; antherarum loculi ovoideo-globosi, distincti, primum penduli paralleli, post anthesi saepe divaricati. *Flores* feminei ad basin racemi pauci, singuli bractea foliaceo stipati. *Perianthum* 0. *Styli* 2 lineares, patentes. *Capsula* 2-cocca.—G. BENTHAM.

Tip. 1. Cluster of male flowers. 2. Female flower. 3. Single male flower, the anther-cells rather too close.

PLATE 1285.

CARDAMINE PAKADOXA, *Hance.*

CRUCIFERAE.

C. paradoxa, *Hance in Seemann's Journ. Bot.* vi. (1868), p. 111, glabra, foliis petiolatis 3-foliolatis, foliolis majusculis petiolulatis ovatis v. ovato-lanceolatis obtusiusculis crenato-v. sinuato-dentatis, lateralibus basi truncatis late rotundatisve, racemis terminalibus paucis paniculatis, pedicellis demum patentibus flore subquilonis, siliquis immaturis breviter stipitatis ellipticis utrinque acutatis stylo persistente rostratis, seminibus saepe solitariis pendulis funiculatis.

HAB. Canton Province, South China, *Mr. Sampson and Dr. Eance.*

Caules erecti v. adscendentes 1-1[^]-ped. glabri sulcati. *Foliola* 1-1-J-poU. longa, J-J-poll. lata; petiolulus foliol. terminalis 2-6 lin. longus; petiolus foliorum infer. 2-3-poll. longus. *Racemi* graciles 1J-3-poll. longi; flores 2-2J lin. diani. albi. *Sepala* adscendentia oblanceolata obtusa. *Petala* calyce longiora oblanceolato-spathulata obtusa integra[^]gsi[^] angustata.

Our specimens do not afford seeds sufficiently matured for analysis.—D. OLIVES.

Fig. 1. Flower. 2. Ovary laid open.

PLATE 1286.

-STILBANTHUS SCANDENS, *Hookf*

AMARANTHACEE, Tribe AMABANTHEJE.

Stilbanthus, *Hook f. Gen. nov.* Flores hermaphroditi, bracteati et 2-bracteolati. *Perianthium* basi non induratum, elongatum, nitidum, foliolis 5 eTectis ovato-lanceolatis acutis nervosis dorso sub apice sericeo-barbatis, ezterioribus latioribus. *Stwinina* 5, filamentis elongatis ciliolatis basi breviter connatis, staminodiis interjectis flBquilongis ligulatis penicillatis; antherae didymse, 2-loculares. *Ovariwn* oblongum, oompressum, apice penicillatum; stylus filiformis, stigmatate capitellato; ovulum 1, oblongum, ab apice funiculi basilaris ascendens pendulum. *Utricukut* perianthis indutus, oblongus, apice villosus, compressus, membranaceus, indehiscens. *Semen* verticale, inversum, late oblongum, testa tenuiter coriacea brunnea, arillo 0; embryo annularis, hippocrepicus, radícula ascendente.—Arbor trunco robusto, alte scandens, ramulis herbaceis dependentibus, obtuse 4-gonis, ramulis foliisque pubescentibus. Folia opposita, petiolata, ampla, elliptico-ovata, caudato-acuminata, integerrima, nervis arcuatis. Flores pro ordine magni, spicati, albi, splendentes, spicis pedunculatis in paniclas trichotome ramosas terminates ferrugineo-pubescentes dispositis; bracteis bracteolisque late ovatis aristato-acuminatis scariosis nitidis.

HAB. Forests of the Sikkim Himalaya at elevation of 4-6000 feet; *Herb. Griffith, J. D. H. Fl. August, Sept.*

This is the finest specimen of the Natural Order hitherto discovered, climbing to a great height, and festooning forest trees with its copious foliage and abundant silky glistening flower's. It belongs to the subtribe

Achyranthece, and to the division with conspicuous staminodes, and differs from *Achjranthes* itself in habit, in the elongate scarious perianth which is not indurated at the base, and in the long slender staminodes.—J. D. HOOKEE.

Fig. 1. Flower and bracteoles. 2. Stamens, staminodes and pistil, *enlarged*.

PLATE 1287.

UAPACA GUINEENSIS, *Mxtell* Arg.

EuPHORBiACEE, Tribe PHYLLANTHEJJ.

U. gnianensis, *Muell. Arg. in DC. Prod.* xv. ii. 490 ; ' floribus luteis, involucris foliis coriaceo-membranceis, calyce masculino inaequaliter 5-partito cum filamentis parce pubescentibus, antheris rigidis infuscatis apice hand bilobis, connectivo valido incrassato hispidulo, rudimento ovarii hispido, fructu 2-4-loculari ellipsoideo verruculoso.'

HAB. West Tropical Africa, Fernando Po, *Vogel*; Nupo and Nun river, *Ba/rter*.

Arbor 50-pedalis. *Folia* breviter petiolata, obovata v. obovali-oblonga, obtusa v. vix brevissime obtuseque acuminata, semipedalia v. usque ad pedalia, coriacea, pennivenia, venis primariis distantibus subtus prominulis. *Involucra* tern mascula quam feminea pedunculo 6-9 lin. longo fulta, ad axillas v. ad nodos foliorum delapsorum solitaria, ovoideoglobosa, 3-4 lin. diametro, mascula amentum subglobosum, foeminea florem unicum includentia. *Flores* § in rhachi lineari densissime conferta, calycibus cujusve floris hand facile distinguendis, segmentis parvis linearibus valde inaequalibus filamentisque pubescentibus. *OvaHum* floris £ intra involucrum (v. calycem?) sessile, glandulis disci hypogyni subdistinctis. *Styli* petaloideo-dilatati, crassiusculi, margine breviter lobati, supra ovarium arete reflexi. *Fructus* ellipsoideus v. fere globosus, siccitate sulcato-rugosus v. lasevis, pollicem diametro, exocarpio crasso carnosio, endocarpio 3-pyreno.

Fig. 1. Involucre in bud. 2. Male amentum with the involucre open. 3. Male flower, the calycine segments represented as too numerous, but the flowers are so very closely packed that it is difficult to distinguish the calyx of each. 4. Ovary and style. 5. Fruit. 6. The same, transverse section.

Two or three of the African species of *Uapaca* are so very closely allied that our specimens scarcely suffice to distinguish them accurately. I have therefore copied *Mueller's* diagnosis, the specimen here figured having been determined by him; the so-called calyx of the female flower is so exactly like the male involucre, that it is difficult not to regard it rather as a one-flowered involucre than a calyx.—GK BENTHAM.

PLATE 1288.

CCELODEPAS WALLICHIANUM, *Benth.*

EUPHORBIACEA, Tribe CBOTONEJ.

C. WallicMannm, *Benth. sp. n.*; foliis subsessilibus ample oblongo-lanceolatis integerrimis v. vix sinnatis coriaceis, spicis axillaribus interruptis superioribus androgynis inferioribus brevibus foemineis, antherarum loculis introrsum pendulis, stylis dilatatis fimbriato-ramosissimis.

HAB. Penang Hills, *G. Porter*, *Wall. Cat. Herb. Ind. n. 9098.*

Arbor? inflorescentia excepta glabra, ramulis subangulatis. *Folia* alterna, 6-10-pollicaria, subacuminata, integerrima v. apicem versus obscure sinuato-crenata, basi petiolo brevissimo crasso v. vix ullo rotundata. subcordata, tenuiter coriacea, nitidula, prominenter pediculis et reticulato-veuulosa. *Stipulce* parvae, subulatae. *Spicce* superiores 1-1¹-pollicares, rhachi cano-tomentella. *Flores* superiores masculi minimi, sessiles, per 2-3-glomerati, glomerulis globosis dissitis sessilibus bractea minuta vix conspicua subtensis; inferiores v. in spicis inferioribus omnes (4-6) foeminei, intra bracteas minimas solitarii sessiles. *Perianthium* globosum, per anthesin breviter valvatum 3-4-fidum, stamina et ovarii rudimentum obtegens. *Stamina* 6-8, filamentis crassis medio dilatatis, basi uniseriatim connatis; antherarum loculi a connectivo inflexo introrsum penduli, leviter divergentes. *Ovarii* rudimentum crassum, apice dilatato-truncatum, stamina et perianthium obtegens. *Perianthium* 2 cupulare, ovario arete appressum, extus tomentosum, lobis brevibus. *Ovarium* pubescens. *Styli* a basi dilatati et breviter connati, erecto-patentes, late et irregulariter lobati, lobis dentatis et facie superiore dense fimbriatis.

Fig. 1. Male flower. 2. Stamens enclosing the rudimentary ovary. 3. Stamens. 4. Female flower. 5. Ovary, transverse section.

This species comes nearer to the original *C. bantamensis* Hassle, than to the *C. lalycinum* figured by Beddome, but is quite distinct from both in foliage as well as in the flowers. All have the peculiar androecium exceptional in the order.



PLATE 1289.

DICCELIA BECCABIANA, *Benth.*

EUPHORBIACEA, Tribe PHYLLANTHE-E.

Dicoelia, *Benth.*, *gen. nov.* *Flores* monoici, petaliferi. *Discus* 0. *FL. §*: *Calyx* parvus, 5-fidus. *Petala* 5, valvata, crassa, extus conveza, intus apice crasso-carnosa, infra medium concava, linea elevata centrali quasi in locellos duo divisa. *Stamina* 5, petalis alterna, filamentis brevibus distinctis; antherarum ljcii majusculi, paralleli, distincti, in alabastro in locellis petalomm contiguorum recepti. *Ovarii* rudimentum 3-5-fidum, lobis ultra petala in appendices lineares hamatos productis. *FL. ?*: *Calyx* alte 5-fidus, petalis paullo brevior. *Petala* ovata, obtusa, concava, haud incrassata, leviter imbricata. *Ovarium* subglobosum, 3-sulcum, pubescens, 3-loculare; styli distincti v. basi viz connati, lineares, rigiduli, indivisi, erecti, apice inflexi breviterque stigmatoso-dilatati. *Ovula* in loculis gemina sub obturatore unico. *FrucUis* . . . —*Frutex* v. arbor. *Folia* alterna, ampla, integerrima, pennivenia. *Bacemi* in axillis superioribus solitarii, florum fasciculis secus rhachin dissitis plerisque androgynis.

D. Beccariana, *Benth.*, *single species.*

HAB. Borneo, *Beccari*, *n. 1397.*

Frutex videtur v. arbor, inflorescentia ezcepta glaber. *Folia* in petiolo 1-2-pollicari subarticulata, in speciminibus nostris 8-10-poll. longa, 3-4-poll. lata, tenuiter coriacea, nitidula, venis primariis subtus prominentibus dissitis marginem arcuato-approziinantibus, venulis viz conspicuis. *Stipules* parvee caducaB. *Bacemi* longiusculi at foliis breviores, tenuiter cano-puberuli. *Bractem* parvaB, secus rhachin dissitra. *Flores* sub quaque bractea 3-7, pedicellis 1-1[^]-lin. longis f uli, centrali ssBpius foemineo lateralibus masculis; fasciculus igitur est cymula rhachi communi haud evoluto; flores singuli viz lineam diametro v. fceminei paullo raajores. *Fructus* desideratur, sed ez ovario post anthesin parum aucto capsula ad normam tricocca videtur, semine juniore non lateraliter dilatato.

Fig. 1. Male flower before opening. 2. The same, expanded. 3. Female flowers. 4. Anthers seen from inside. 5. Ovary, longitudinal section, showing the two ovules of one cell.

The singular petals of the male flower are only to be met with in *Galearia*, to which genus I should have referred this plant, had not the two ovules in each cell removed it to a different tribe. The inflorescence is also monoecious and axillary, not terminal, and there are some other differences in the flowers, besides that the young seeds show no tendency to acquire the peculiar form of those of *Galearia*.—*G. BENTHAM.*

PLATE 1290.

BEICHENBACHIA HIRSUTA.

NTCTAGINEJE.

Perianthium involucre, tubulosum, ore brevissime **obscure**. 4-5-dentato, dentibus erectis lanceolatis obtusiusculis subaequalibus v. 2-3 ceteris longioribus induplicato-valvatis. *Stamina* 2, rarissime 3, hypogyna, incisa, filamentis elongatis filiformibus complanatis; anthera dorso affixa, obtusa, localis sejunctis oblongis. *Ovarium* oblique oblongum, compressum, basi attenuatum, apice oblique truncatum, stellato-tomentosum; stigmatibus e papillis subterminalibus; ovulum basilare, anatropum, funiculo brevi. *Utriculus* basi perianthii accrescentis tenuiter coriacei basi subcostati inclusus, pericarpio coriaceo-tomentoso. *Semen* subglobosum, basi rostellatum, sessile, erectum, leviter compressum, testa tenuiter crustacea piceo-nitida, albuminis strato tenui carnosio; embryonis uncinati cotyledones conduplicatae, radícula cotyledonum longitudine, apice acuto rostellato testa incluso. Frutex v. arbuscula pilis stellatis griseo-pubescentibus, ramulis teretibus. Folia breviter petiolata, alterna, ovata, basi acuta, apice glandula nuda obtusiuscula terminata, nervis supra obscuris subtus tenuibus arcuatis. Florae numerosi, axillares, fasciculati, pedicellate tomentosi, pedicellis basi minute bracteolatis.

R. hirsuta; Spreng. in Bull. Soc. Philom. 1823, p. 54, 1. 1.

HAB. Brazil, Sprengel; Paraguay, in hedges at Assumption. Balansa.

Arbuscula ramosissima, 2-3-metralis (Balansa). Folia 1-2-poll. longa, supra luride viridia, subtus grisea v. juniora albescentia; petiolo gracile pollicari. Flores suberecti v. patentes, pedicello gracili. *Perianthium* 1-poll. longum, fructiferum elongatum, tenuiter coriaceum, 10-nervosum, sed vix costatum, dentibus saepe irregularibus, tubo intus glabro. *Stamina* 3 rarissime occurrunt, quorum 2 collateralia; filamentorum lateribus complanatis ovarii oppositis glaberrimis; antherarum loculi aequales v. subinseuales. *Ovarium* stellato-pubescentibus, apicem versus tomentosum oblique truncatum et stigmatiferum.

A very little known plant, of which there is no other description or figure than that quoted above. I do not find the tips of the leaves to be produced into the spindle-shaped body figured by Sprengel, but to terminate in an obtuse glabrous gland.—J. D. HOOKER.

Fig. 1. Flower. 2. Stamina and ovary viewed from the edge of the ovary. 3. Stamen and ovary viewed from the flattened side of the latter. 5. Section of ovary with ovule. 6. Ovule. 7. Seed, transverse section,—all enlarged.

PLATE 1291.

ACALYFHA SPINESCENS, *Benth.*

EUPHORBIACEAE, Tribe CROTONEJE.

f. spinescens, *Benth.*, *sj*. n., fruticosa, divaricato-ramosa, spinis axillaribus armata, foliis subsessilibus ovatis grosse crenatis penniveniis, spicis nnisexualibus, masculis brevibus tenuibus, foemineis 1-bracteatis v. dissite 2-bracteatis, bracteis foemineis orbiculato-cordatis grosse pluri-crenatis sublobatis.

HAB. Malayan Archipelago, Gorontalo in North Celebes, *Riedel*.

Frutex ut videtur divaricato-ramosissimus, ramis rigidulis lamibus albis. *Spince* axillares v. interdum folio abortiente laterales (pedunculi v. ramuli abortientes?) nunc nudi 1-pollicares, nunc paullo longiores infra apicem folium v. spicam ferentes. *Folia* 1-2-pollicaria. *Spices masculce* in specimine pleraeque infra apicem spinse solitariae, sessiles, tenellae, 4-8 lin. longae. *Mores* minimi secus rhachin glomerulati, glomerulis approximatis bractea viz conspicua subtensis. *Calyx* alte 4-fidus. *Stamina* 8; *Spice foemineae* ad axillas foliorum v. interdum spinis solitariae, rhachi filiformi. *Bractea* interdum unica, terminalis, sed saepius additur altera supra medium rhacheos sessilis, per anthesin 1 lin., demum 3 lin. diametro, crenaturis 7-13. *Flos* intra bracteam solitarius sessilis. *Sepala* 3, minuta. *Ovarium* dense hirsutum. *Styli* laciniati uti antheras generis.

Fig. 1. Portion of male spike. 2. Male perianth in bud. 3. The same, open. 4. Anther. 5. Female flower and bract.

The habit and numerous strong spines of this species give it a very different aspect from the remainder of this extensive genus, the only approach to it being in the Australian *A. eremorum*, Muell. Arg., and *A. capillipea*, F. Muell., both of which are, however, abundantly distinct in foliage and inflorescence.—GK BENTHAM.

 PLATES 1292, 1293.

MELANOCHYLA TOMENTOSA.

ANACARDIACEA, Tribe ANACARDIEA.

M. tomentosa, *Hook. / Fl. Brit. Ind.* ii. 38; ramulis petiolis inflorescentia et costa foliorum subtus velutino-tomentosis, foliis oblongis v. obovato-oblongis acuminatis basi rotundatis v. subcordatis nervis subtus prominentibus.

HAD. Malacca, *Maingay*.

Eamuli robusti, pilis ferrugineis mollibus dense tomentosi. *Folia* 6-14 poll, longa, 2-4 poll, lata, dnra, supra lrevia opaca costa tenui, subtus pallida, nervis utrinque 20-35 valid is arcuatis pubescentibus ; petiolo robusto £—J poll, longo. *Panicula* elongata, laxe ramosa, rhachi villosa, ramulis pubescentibus. *Fl.* <J minuti, pedicellis sub-cymosis brevibus. *Calyx* ad medium 5-lobus, lobiſ obtusis. *Petala* oblonga, obtusa, valde coriacea, intus villosa, extus pubesceWt.* *Filamenta* rigidula, demum petalis aequilonga. *Drupa* ellipsoidea v. globosa, aurantiaca, ferrngineo-pubescentis, sarcócarpio resina atra repleto.—J. D. HOOKER.

PLATE 1292.—Fig. 1. Male flower. 2. The same cat open vertically—both enlarged.

PLATE 1293.—Fig. 1. Transverse section of drupe—of the natural size.

PLATE 1294.

ELATEBIOSPERMUM TAPOS, *Blume*.

EUPHORBIACEJ., Tribe CBOTONEJE.

E. Tapos, *Blume, Bijdr.* 621; *Muell. Arrj. in DO. Prod.* xv. ii. 1131, *Singls species*.

HAB. Java, *Blume*; Malacca, *Griffith, Maingay*.

Arbor pncherrima, coma densa oblonga, partibus novellis sanguineis (*Griffith*), tota glabra. - *Folia* alterna, ad apicem petioli longiusculi subarticulata, oblonga, breviter acuminata, integerrima, basi rotundata, 4-8-pollicaria, tenuiter coriacea, pennivenia et inter venas primarias reticulato-venulosa, petiolo apice •2-glanduloso. *Siipulce* caducissinue, ex *Griffithio* virides. *Pedunculi* ad apices ramulorum ad basin innovationum plures, 2-3-pollicares, foliis multb breviores, cymam laxe trichotomam ferentes, flore centrali sessili v. breviasime pedicellato femineo, cffiteris masculis. FL. £ : *Calyx* globosus, sepalis 4-5 valde iznbricatis. *Stamina* 10-18, receptaculo craspiusculo villosa imposita, filamentis brevibus liberis. *Antherce* oblongae, erectoe, loculis adnatis parallelis. *Ovarii* rudimentum minutum v. 0. FL. ? : *Sepala* saepius 6, quam in mare paullo majora, caducissima. *Discus* hypogynus parum prominulus. *Ovarium* villosum, 3-loculare, loculis 1-ovulatis, apice breviter contractum; styli brevissimi, crassi, in stigmata divaricato-biloba fere semilunata patentia dilatati. *Gapsula* subglobosa, 1^ poll, diametro, leviter 3-sulca, in coccos 2-valvis elastice dissiliens, exocarpi6 carnosocoriaceo, endocarpio

duro. *Semina* oblonga, crassa, 1[^]-poll. longa, medio dorso subcarinata, facie interiore sub apice hilo parvo affixa, testa coriaceo-crustacea nitida. *Albumen* prater membranam papyraceam embryonem includentem 0. *Cotyledones* magne, oquales, crasso-carnosiffi, radianla **minima** inter eas retracta.

Fig. 1. Male flower with the sepals removed, showing the stamens and bud. 2. Male bud. 3. Female flower with one of the sepals turned down, showing the ovary. 4. Ovary, transverse section. 5. Styles seen from above. 6. Two-valved cocculus after dehiscence having expelled the seed. 7. Seed, transverse section. 8. Cotyledon (*about one-third natural size*).

Blume describes the seeds as 'subpulposo-arillata.' Maingay in his notes says, with a query, 'Arillus none?' The dried seeds show no arillus, but in many Euphorbiaceae, what is called a pulpy arillus is often the pulpy external layer of the testa, which disappears when dry. In Maingay's specimens, I find a whitish cellular substance lining the testa outside the membrane which encloses the embryo.—
G. BENTHAM.

PLATE 1295.

PBOCRIS LIEVIGATA, *Blume*.

UBTIGACEJS, Tribe UBTICEJ:.

P. tovigata, *Blume, Bijdr. 508, Wedd. in DO. Prod. xvi. i. 192*, foliis oblique oblongo-lanceolatis acuminatis superne paucidentatis, floribus masculis capitulisque foamineis ad nodos ssspius defoliate fasciculatis, perianthio foemineo minimo cyathiformi subintegerrimo.

HAB. Widely spread over Tropical Africa and in East India, from Ceylon and the Peninsula to Eastern Bengal and Sikkim, chiefly on the trunks of trees.

Caules epiphytici, carnosuli, 1-i-pedales, simplices v. parce remosi. *Folia* disticha, 3-6-pollicaria, basi in petiolum brevem contracta, membranacea v. crassiuscula, oblique pennivenia, addito ssppe folio minimo subopposito. *Flores* dioici, pedicelli masculi ad nodos fasciculati, tmiflori, 1-2 lin. longi. *Ferianthium* alte 5-fidum. *Stamina* primm perianthio breviora, antheris snpra filamenta inflexis, demum elasticè porrecta perianthio longiora. *Gapitula* foeminea 1[^]-2-lin. diametro, pedunculis fasciculatis vix linea longioribus, receptaculo carnosulo. *Ferianthium* minimum vix prominulum. *Achamia* omnino exserta, ovata, obtusa v. acutioscula, vix semilineam longa.

Fig. 1. Male perianth opened, showing the stamens with the filaments bent

inwards before they spread out elastically, after which they are longer than the perianth. 2. Female head of fruits.

This species differs much from the rest of the genus in inflorescence, as well as in the female perianth. The small abortive leaves, which in many specimens are opposite or nearly opposite to the perfect ones, were entirely wanting in the specimen drawn, as in several others.—G. BENTHAM.

PLATE 1296.

MJESOBOTRYA FLORIBUNDA, *Benth.*

EUPHORBIACEJE, Tribe PHTLLANTHEA.

Mjesobotrya, *Benth.*, *gen. nov.* *Flares* dioici, apetalii. FL. ♂; *Calyx* 5-fidus, lobis leviter imbricatis. *Disci* glandules 5 staminibus alternis. *Stamina* 5, lobis calycinis opposita, filamentis liberis; antherarum loculi distincti paralleli. *Ovarii* radimentum crassum hirtellum. FL. ♀: *Calyx* maris. *Discus* cupulatus, integer. *Ovarium* 2-loculare; styli brevissimi, crassiusculi, recurvo-patentes, bifidi. *Ovula* in loculis gemina. *Fructus* globosus (indehiscens?), pericarpio membranaceo-coriaceo (in vivo carnosulo?), loculo altero abortu vacuo altero monospermo. *Frutex* (v. arbor P). *Folia* alterna, integerrima, pennivenia. *Flores* utriusque sexus ad axillas racemosi.

M. floribunda, *Benth.*, *single species.*

HAB. Tropical Africa, Niamniam and Monbnttu lands, *Schweinfurth*. *Frutex* videtur elatior, glaber nisi pilis paucis brevibus ad innovationes pubescens. *Folia* alterna, petiolo 1-pollicari fulta, ovalia v. obovali-oblonga, apice rotundata v. breviter obtuse acuminata, 3-6-pollicaria, integerrima, novella membranacea, demum tenuiter coriacea, venis primariis distantibus, intra marginem arcuato-anastomosantibus, venulis transversis haud numerosis. *Stipules* vix conspicuae. *Racemi* masculi ad axillas fasciculati v. basi ramosi, 1-2-pollicares, rhachi tenui glabra, floribus minimis brevissime pedicellatis dissite glomeratis, bracteis minimis; feminei ad axillas solitarii v. gemini, per anthesin 1-2-pollicares, floribus parvis sessilibus numerosis at sub quaque bractea solitariis; fructiferi elongati, interdum folio vix breviores. *Fructus* late ovoideus v. fere globosus, 2-3 lin. diametro, ox *Schweinfurth* purpurens.

Fig. 1. Male flower, one lobe turned down showing the glands alternating with the stamens. 2. Stamens. 3. Female flower. 4. Ovary and disk, longitudinal section. 5. Ovary, transverse section.

This belongs to the group of genera united by Baillon with *Antidesma*, but re-

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tained as distinct by all other botanists. Amongst them it is nearest allied to the American *Hieronyma*, but has neither the scurfy indumentum nor the drupaceous fruit of that genus, and the calyx is rather more deeply lobed. It has neither the one-celled ovary of *Antidesma* nor the dehiscent cocci of *Thecacoris*. The fruit in Schweinfurth's excellent specimens is not quite ripe, but has evidently reached its full size, and occasionally the seed is fully formed externally, but not ripe enough to show its internal structure.—G. BEKTHAM.

OVWTV

 PLATE 1297.
LEPIDOTUHUS LAXIFLORUS, *BenOL*

EUPHORBIACEJE, Tribe CROTONKSS.

L. laxiflorus, *sp. nov.*, stipulis linearibus, foliis ovatis membranaceis breviter acuminatis basi rotundatis, spicis masculis laxis, bracteis ovatis obtusis, ovario dense, fructu brevissime hispidulo.

HAB. Tropical Africa, Niarniam country, *Schweinfurth* n. 2956 and 3072.

Arbuscula 15-20-pedalis, partibus novèUis subsericeo-hispidulis, demum glabratis. *Folia* alterna, petiolata, 2-3-pollicaria, leviter lateque crenata, basi non v. vix cordata, membranacea, pennivenia et basi 3-nervia, tenmtep transversim reticulata. *Stipulce* angustissimeB, 2-3 lin. longae. *SpiccB* masculee in ramis annotinis defoliatis ad nodos solitariaB, basi squamis ferrugineis imbricatis stipatas, 2-4-pollicares. *Flores* secus rhachin dissite glomerati, parvi, breviter pedicellati. *Bracteae* subglomerulis fermgineffi, ovataa, obtnsaa, concavsB, integerrimce, 1-2 lin. longsB, persistentes. *Calyx* in alabastro globoaus, per anthesin in segmenta 3-4 valvatim fissus. *Stamina* 8. *Spica* foBmineae tenues, in axillis inferioribus v. ad apices ramorum homotinorum foliatorum solitarii, floribus paucis dissitis sub bractea minuta sessilibus solitariisque T. ebracteatis. *Sepala* 2-3, parva, valde inaBqualia. *Disci* bypogyni glandulae 3-4. *Ovarium* pilis minimis dense hispidum, stylis 3 longe subulatis indivisis. *Gapsula* jam valde aucta sed in specimenibus adhuc immatura, globoso-tridyma.

Fig. 1. Male flower open, seen from above. 2. Stamen, seen from the back. 3. Female flower. 4. Ovary, transverse section.

The species is evidently nearer to the Madagascar *L. alntfdiw*, of which I have seen no good specimens, than to the western *L. occidentalis*, but differs from both as well in the shape of the leaves as in the much longer and looser male spikes. An imperfect male specimen from tho Niger, *Barter*, may possibly belong to *L. laxiflorus*.

PLATES 1298, 1299.

NEOBOUTONIA AFRICANA, *Muell Arg.*

EUPHORBIACEAE, Tribe CROTONEAE.

M. africana, *Micell Arg. in DC. Trod. xv. ii. 892*, foliis subtus pube minuta stellulata canescentibus, paniculæ masculinæ ramulis longis laxifloris.

HAB. Tropical Africa, Angola, *Welwitsch*; Niamniam Land, *Schweinfurth*.

Frutex elatns y. *arbor* 15-20-pedalis, ramis inflorescentia et foliorum pagina inferiore pilis minutis stellulatis conspersis. *Folia* alterna, longiuscule petiolata, inferiora late orbiculato-cordata fere pedalia, summa late ovata, omnia integerrima, pennivenia et transverse venulosa, basi 5-nervia, supra glabra, subtus pallide canescentia. *Paniculae* in axillis summis simpliciter ramosae, masculinae sepe pedales, feminae 2-4-pollicares, superiores foliis subtendentibus valde reductis paniculam terminalem basi foliatam efficiunt. *Florae* masculinae parvae, secus ramulos dissite glomerati, foeminae sub quaque bractea solitariae. *Calyx* in alabastro globosus clausus, per anthesin in segmenta 2-3 fissus. *Stamina* 15-20, filamentis brevibus crassiusculis erectis; antheras erectas, prope basin affixas, loculis introrsum parallelis. *Ovarii* rudimentum 0. *Calyx* 9 alte 5-fidus, sub ovario patens, segmentis prius leviter imbricatis. *Ovarium* globosum, stellato-tomentosum. *Styli* breves, rigiduli, recurvo-patentes, 2-partiti. *Fructus* junior globosus non sulcatus.

PLATE 1298.—Male specimen. Fig. 1. Bud. 2. Flower expanded. 3. Stamen, front and back view.

PLATE 1299.—Female specimen. Fig. 1. Flower. 2. Styles seen from above. 3. Ovary, transverse section, represented as in the specimens laterally compressed, probably in drying. Both taken from Schweinfurth's specimens, with which Welwitsch's male specimens agree perfectly.

The *Conceveiba africana*, *Muell. Arg. in DC. Prod. xv. ii. 897*, from Prince's Island, West Tropical Africa, *Mann*, of which the male only is known, is evidently a second species of *Neoboutonia*, in which I can discover no difference from *N. africana*, except in the hispid petioles and principal veins of the leaf underneath, and the shorter branches of the panicles which, as in *N. africana*, form a large terminal compound stellately tomentose panicle. The specific name *africana* being pre-occupied in the genus, I have called it *N. Mannii*. I cannot conceive the grounds upon which it was referred to the American genus *Conceveiba*, from which it differs as much in habit as in character.—G. BENTHAM.

PLATE 1300.

BICINODENDRON AFBICANTTS, *Muett. Arg.*EUPHORBUCE[^]., Tribe CROTONE[^]..

E.- africanus, *Muell. Arg. in BO. Prod.*, xv. ii. 1111, *species unica*.
Jatropha Heudelotii, *Baill.*; *Muell. Arg. l.c.* 1083.

HAB. West Tropical Africa, Bagrtib- river and Fernando Po, *Mann*,
 in Senegambia *Heudelot*, and in forest districts of Angola, *Welwitech*.

Arbor 30-pedalis, ramis crassiusculis lflvibus; innovationes folia novella et inflorescent.® pilis minute stellatis tomentosse v. fere lepidote. *Folia* alterna, longe petiolata, ampla, digitatim 5-7-foliolata v. minora 3-foliolata; foliola oblongo-obovata, acuminata, margine minute paacidentata, basi longe angustata, majora 6-9-pollicaria, membranacea, pennivenia, inter venas obscure venulosa. Stipul© magnro, late ovatre orbiculatas v. subpeltatae, grosse dentataB v. lobatee, persistentes. *Paniculce* mascule ad folia summa axillares v. ad apicem ramis plures subfasciculatoe, laxe pyramidato-ramossB, 1-1[^]-pedales. *Flores* masculiparvi, subglobosi, cymulosi, cymulis apices versus ramorum paniculaa pluribus breviter pedunculatis. *Bracteae* sub pedunculis minutce, sub pedicellis v. floribus obsolete. *Calyx* late campanulatus, dense tomentosus, alte 5-fidus, lobis latis obtusis imbricatis. *Petala* in corollam subglobosam, calyce paullo longiorem, breviter lateque 5-lobum connata. *Stamina* 10-15, receptaculo crassiusculo villosio glandulis 5 cincto inserta, filamentis liberis basi villosis, superae glabris rectis corollam vix superantibus, summo apice brevissime inflexis. Antherse oblong89, dorsifixae, loculis parallelis contiguis longitudinaliter dehiscentibus. *Ovarii* rudimentum nullum. *

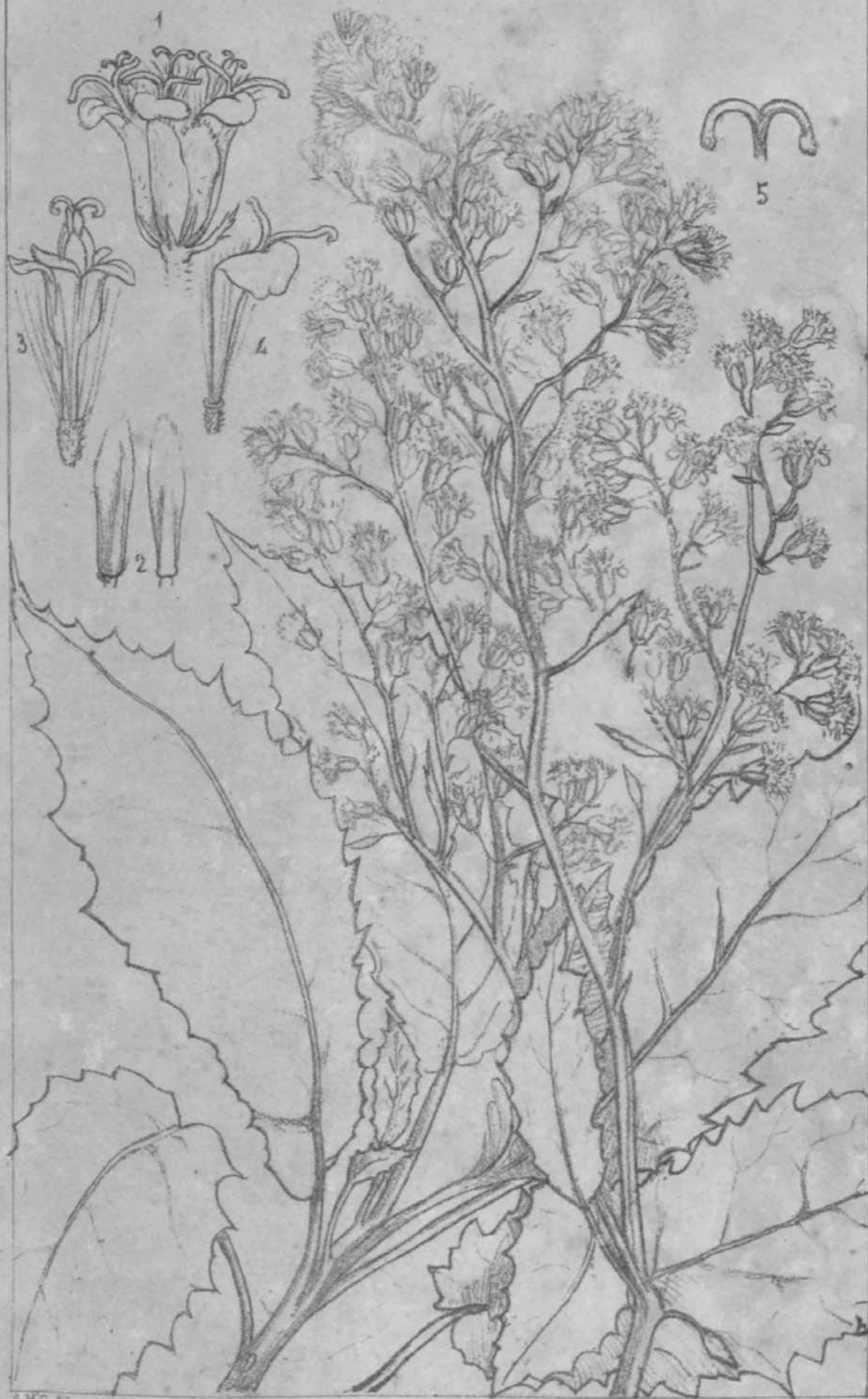
Fig. 1. Male flower at the time of opening. 2. The same, the calyx and corolla removed, showing the glands, the receptacle, and stamens.

Our specimens from Mann and from Welwitsch are all males only, as here figured. The female has only been described from Heudelot's specimens, by Biullon, who, not knowing the males, referred the plant to *Jatropha*, notwithstanding the wide difference in habit and inflorescence. He has since, however, recognised the identity of his plant with Mueller's *Ricinodendron*. Mueller describes the petals as cohering only, not connate; but we find them perfectly united and inseparable without tearing, as in *Manniophyton*. In the female flower they are said to be free.—G. BKNTHAM.

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A.M.C. del.

Senecio Cheesemani, Hk.f.



A.M.C. del.

Halfourodendron eburneum, Mello.



»-.* AM C del.

Balfourodendron eburneum Mello.



O W

A.M.C. del.

Spinctacanthus Griffithii, Bentl.



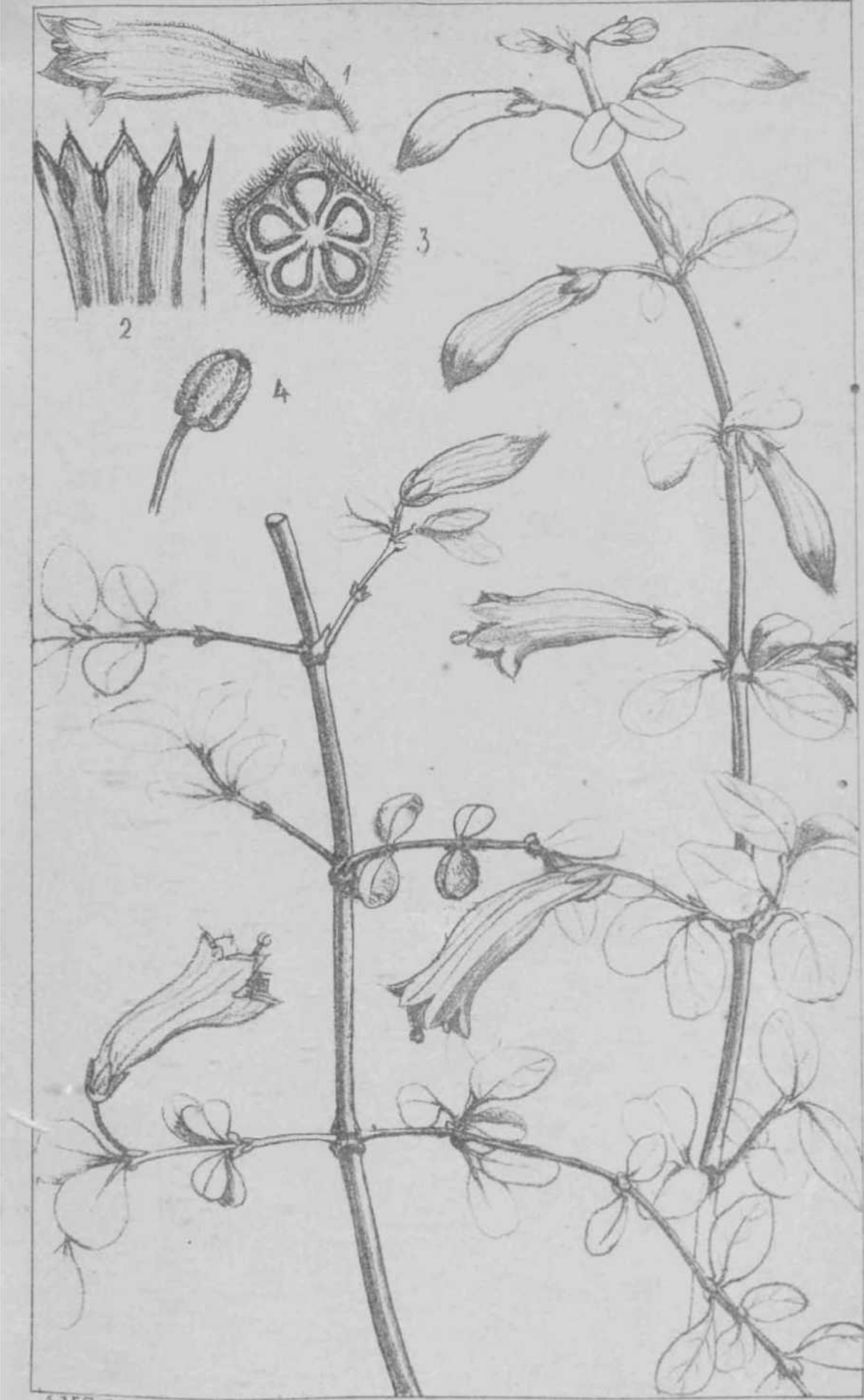
ABⁿel

"*Exocarya scleroides* Benth.



AM.C del

Mimosa involuorata Benth-



A.M.C. del

* *Ancyranthus Monteiroi* Gilv.



A.M.C. del

Scytanthus laiofolius T And.



GasLranthus ScMechtendalii Mor.



A.M.C. del.

Oreacanthus Mannri Ben th.



A.M.C. del

Evai idra aristata R. Br.



A.M.C. del

Evandra pauciflora R.Br



A.M.C del

Madarosperma Trailiana, Bent.



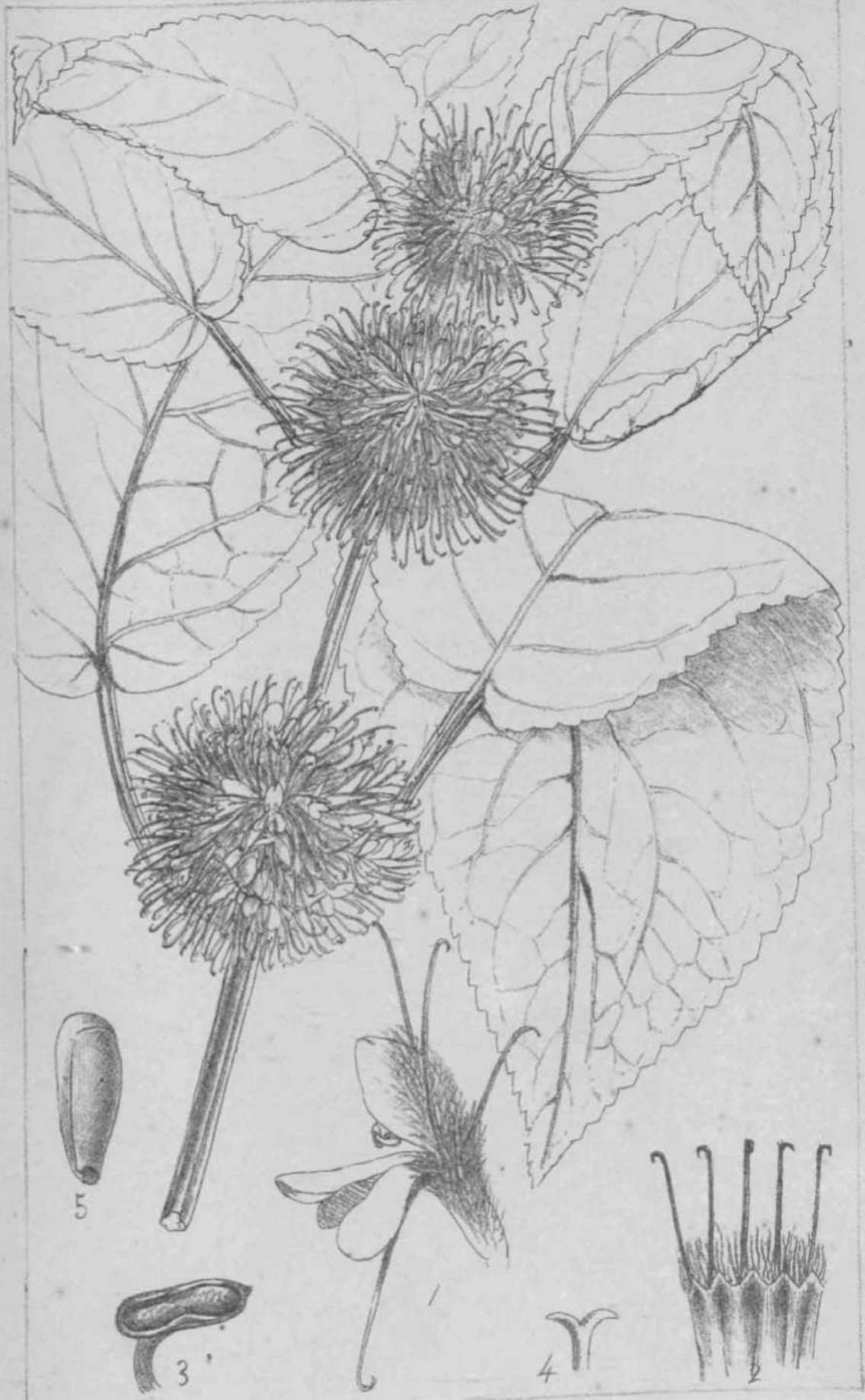
A.M.C. del

Catophea spicata Benth. •



A.M.C del.

Carpha alpina R.Br



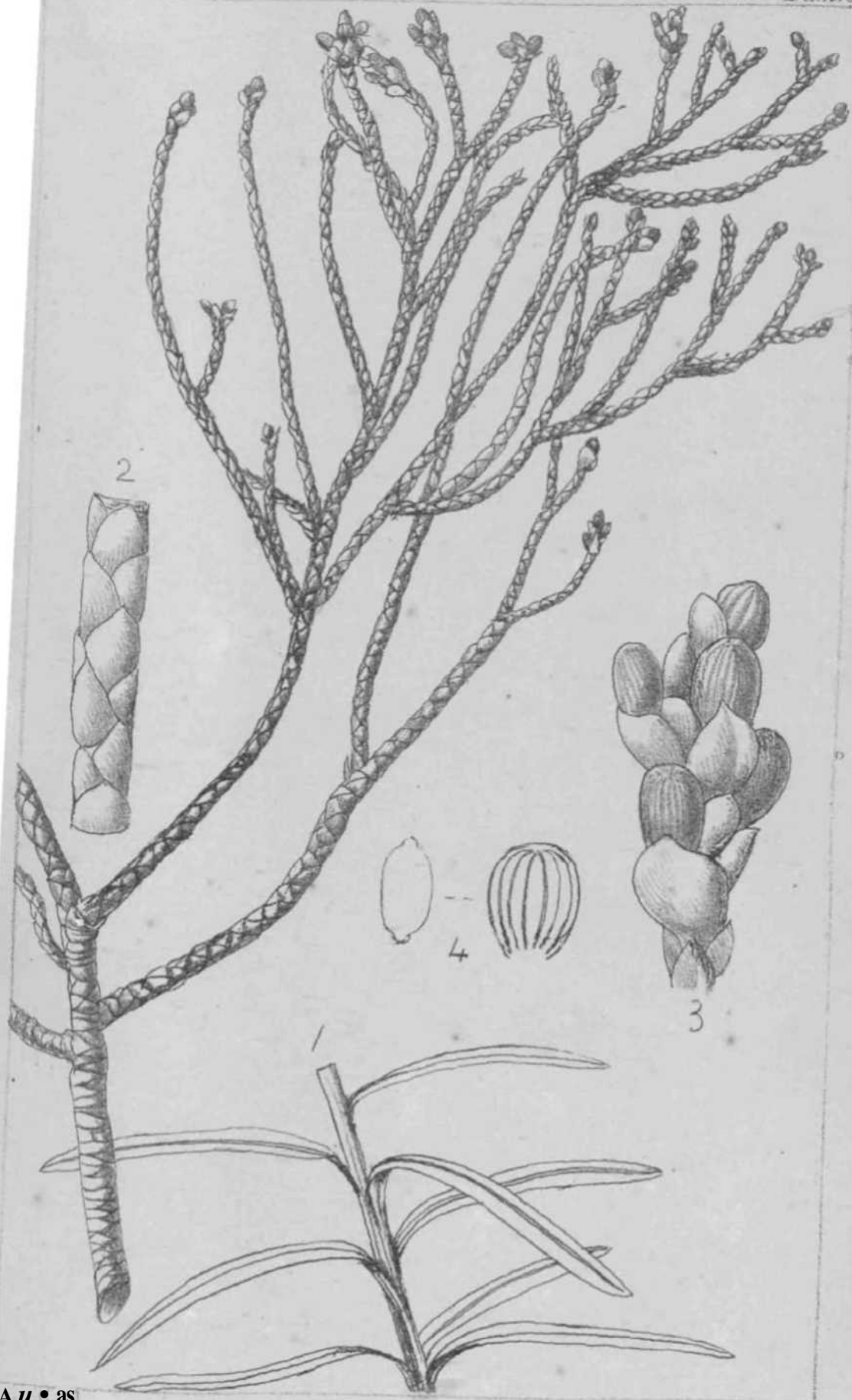
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Notochaste hamosa Benth.



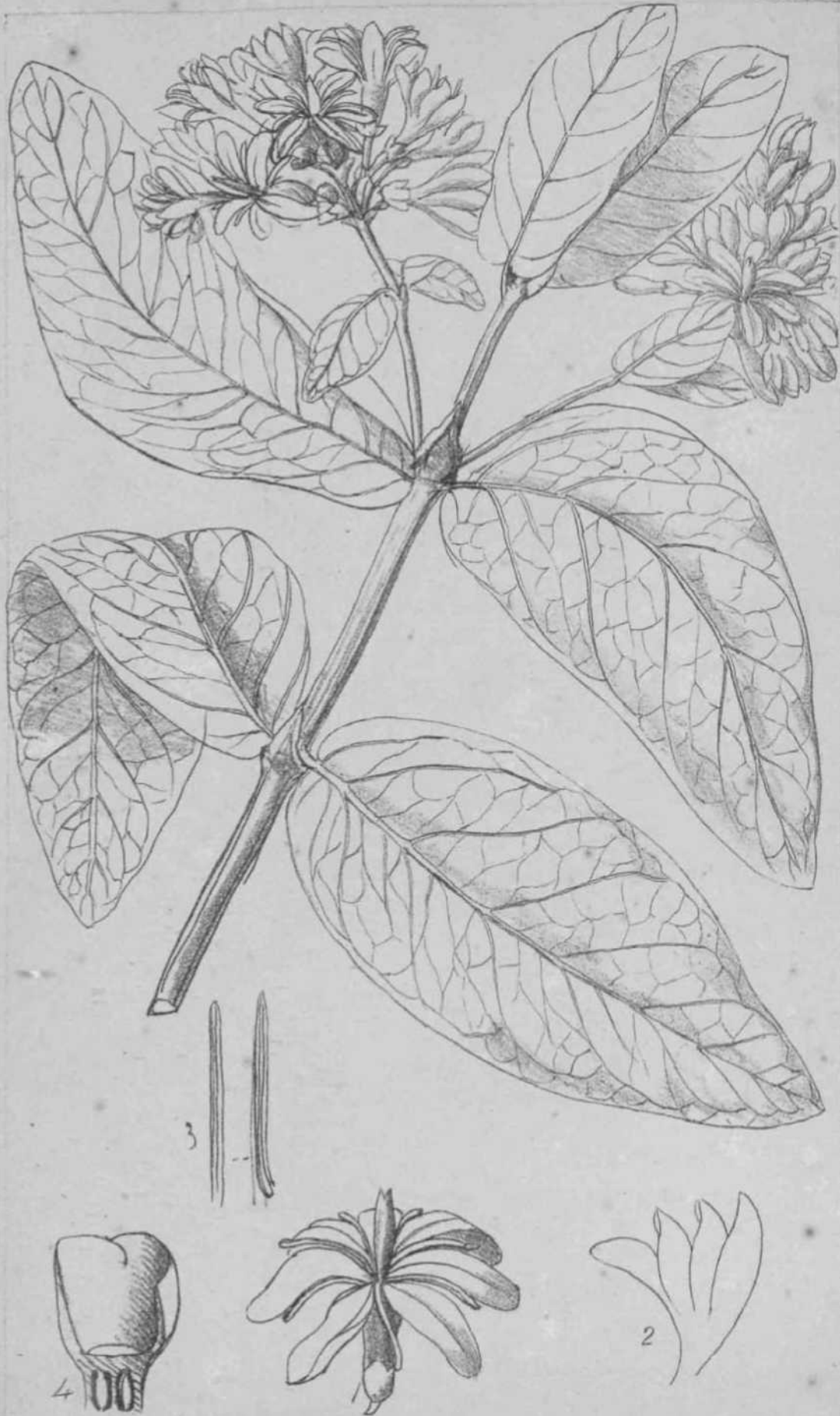
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Dacrydium Westlandicum T Kirk



Au • as

Dacrydium Kirkn. Hook f.



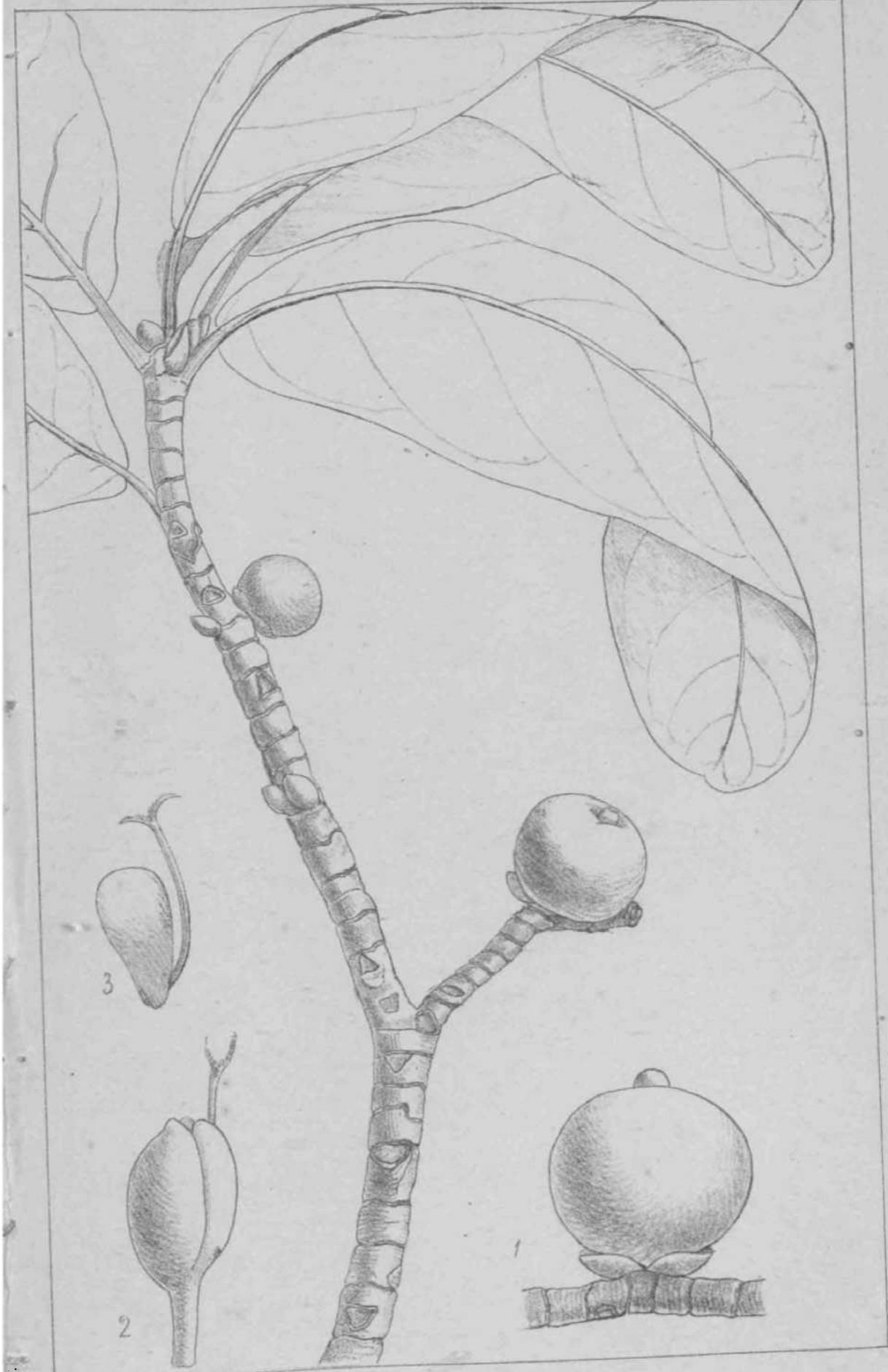
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Lampranthamrus zonguebaricus Hiern



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Cyclonema spinescens.Oliv.



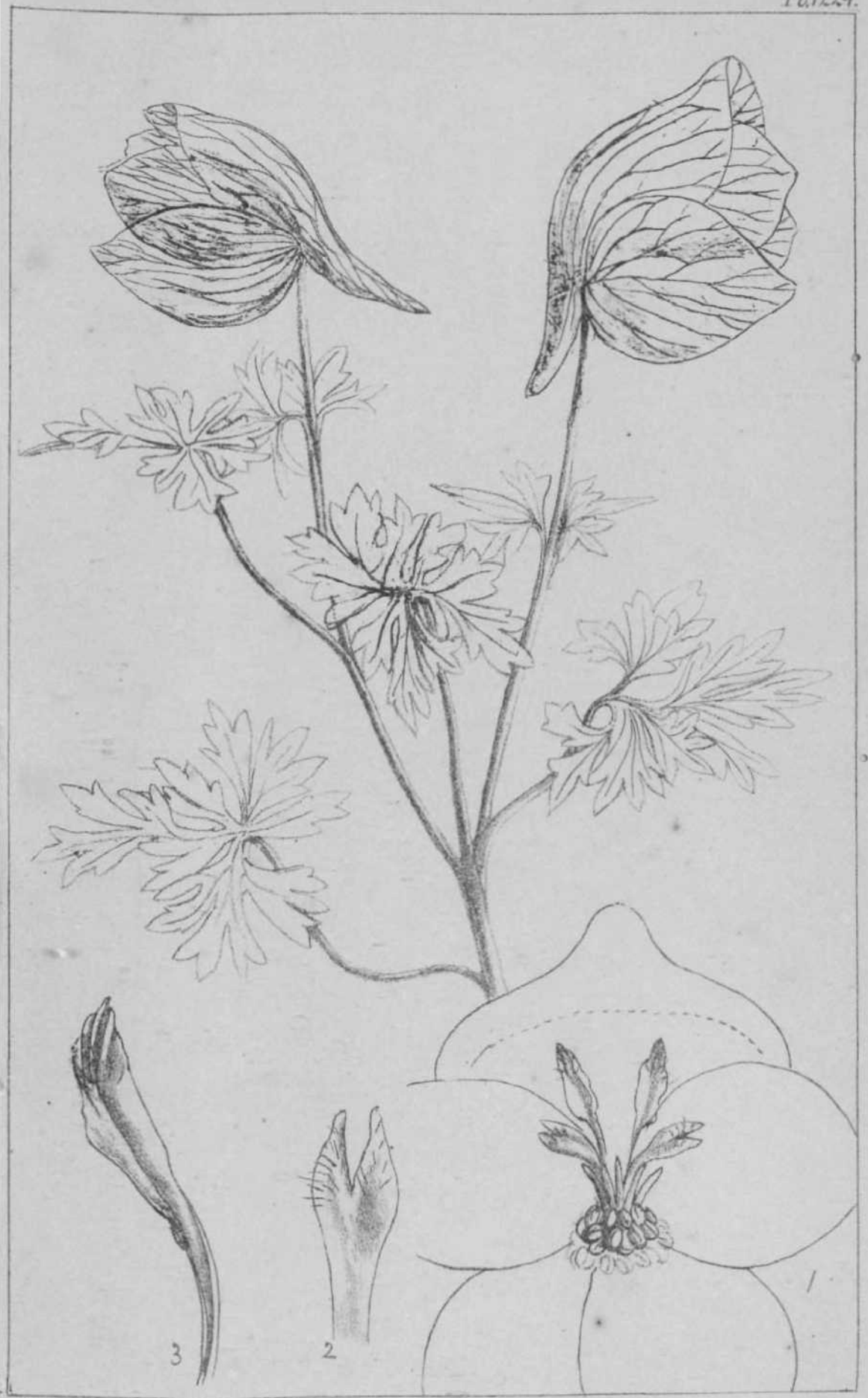
A.M.O. del.

Ficus Uoronhse. Ohv.



A 11Cdd

Loranthus sLenopetalus OUV.



A.M.C. del.

Delphinium glaciale Hk. f. & T



A. M. C. del.

Boerhaavia & Schomburgkiana. Oliv.



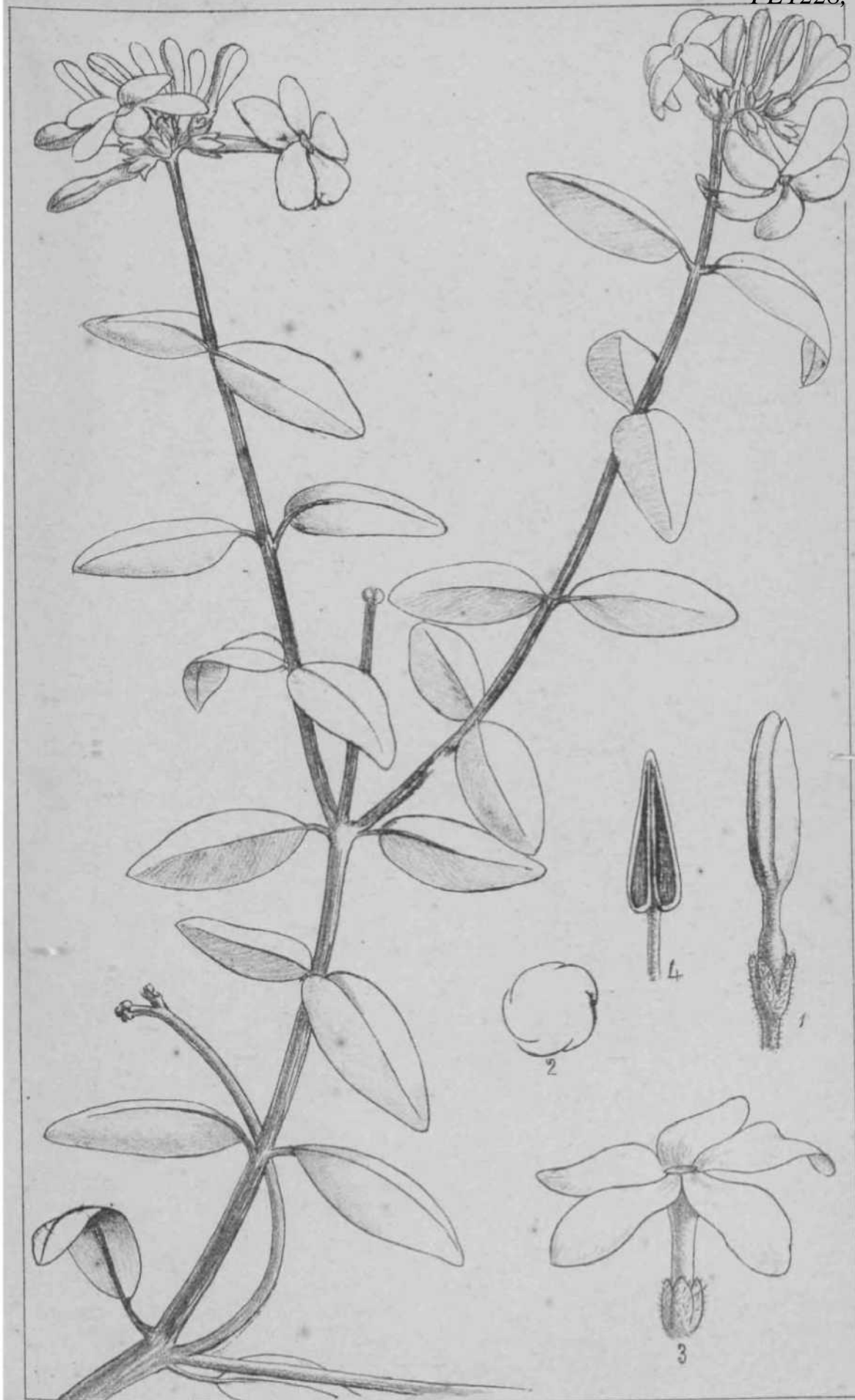
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Oxalis Noronhee OUv



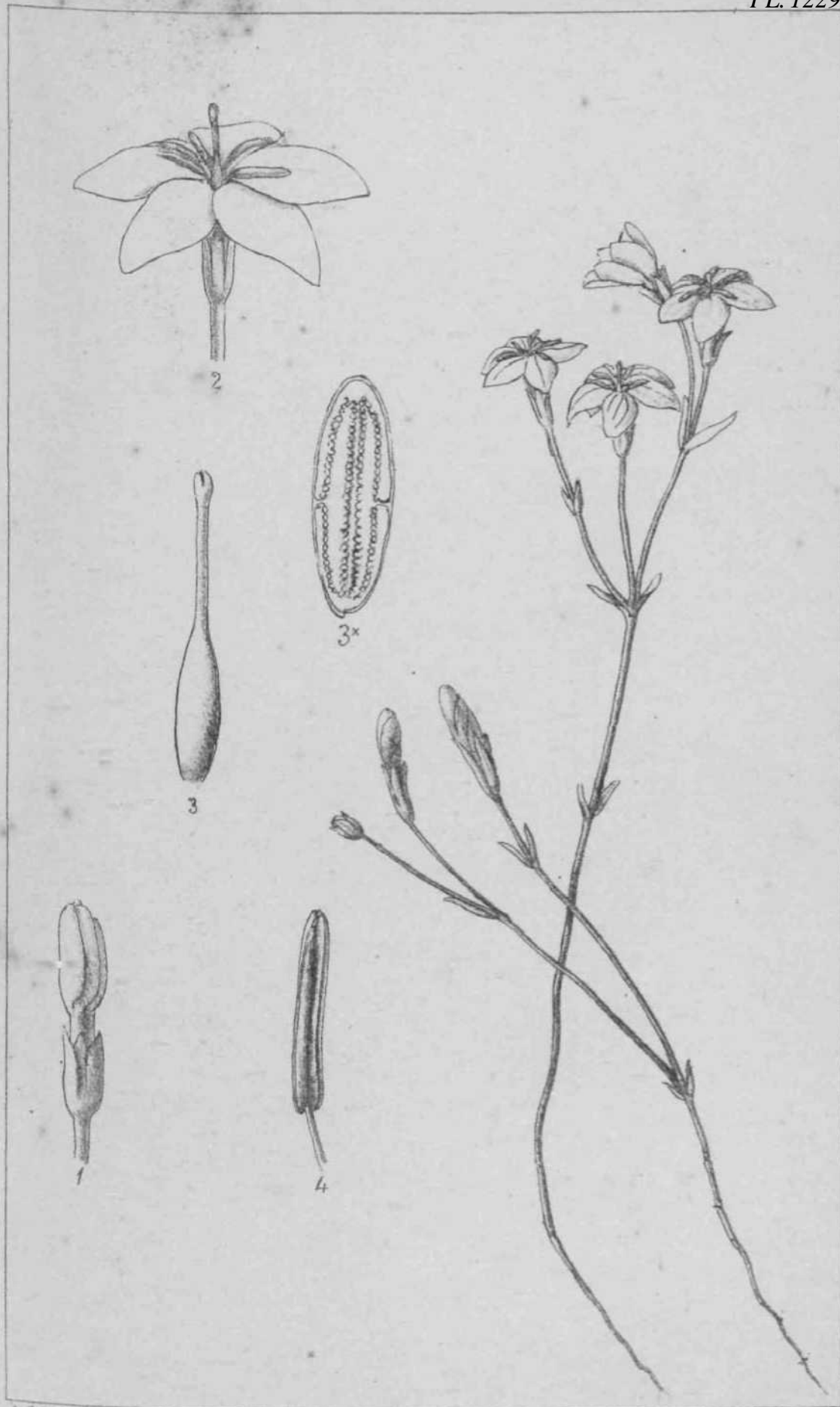
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Ancrumia. cuspidata^ Harv



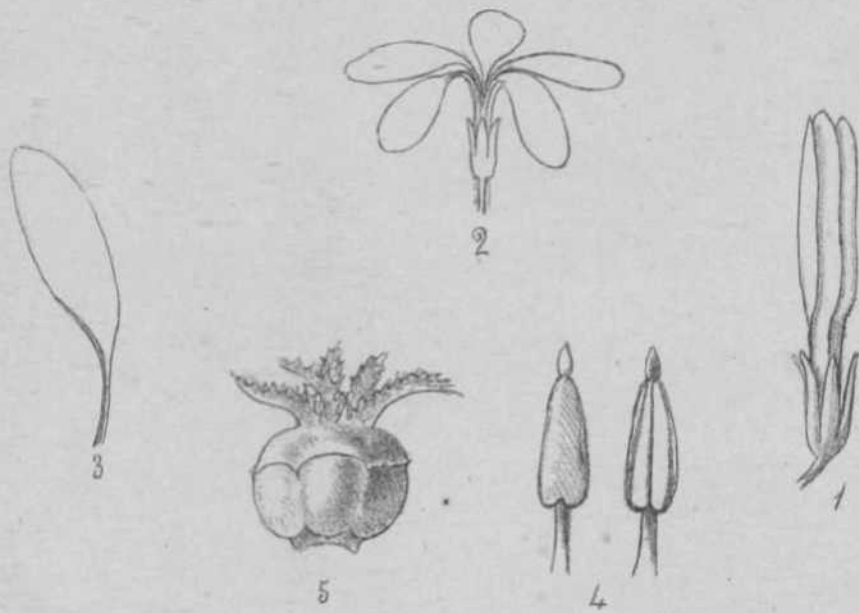
A.M.C. del.

Landolphia, capensis, OUV



A.M.C. del

Chronia-Jarithoc:aroti exifu i, Oliv.



A.M. C del

Macgregoria *raceirugera* F Muell.



AIS. C del

Ch. aritaeniSL capensis, Benth.



wrvv*

A.M. C del

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On cm otis hirtau Oliv



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Paxmariuin caupense, Iarv.



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Peplomau axnazomceu Benth.

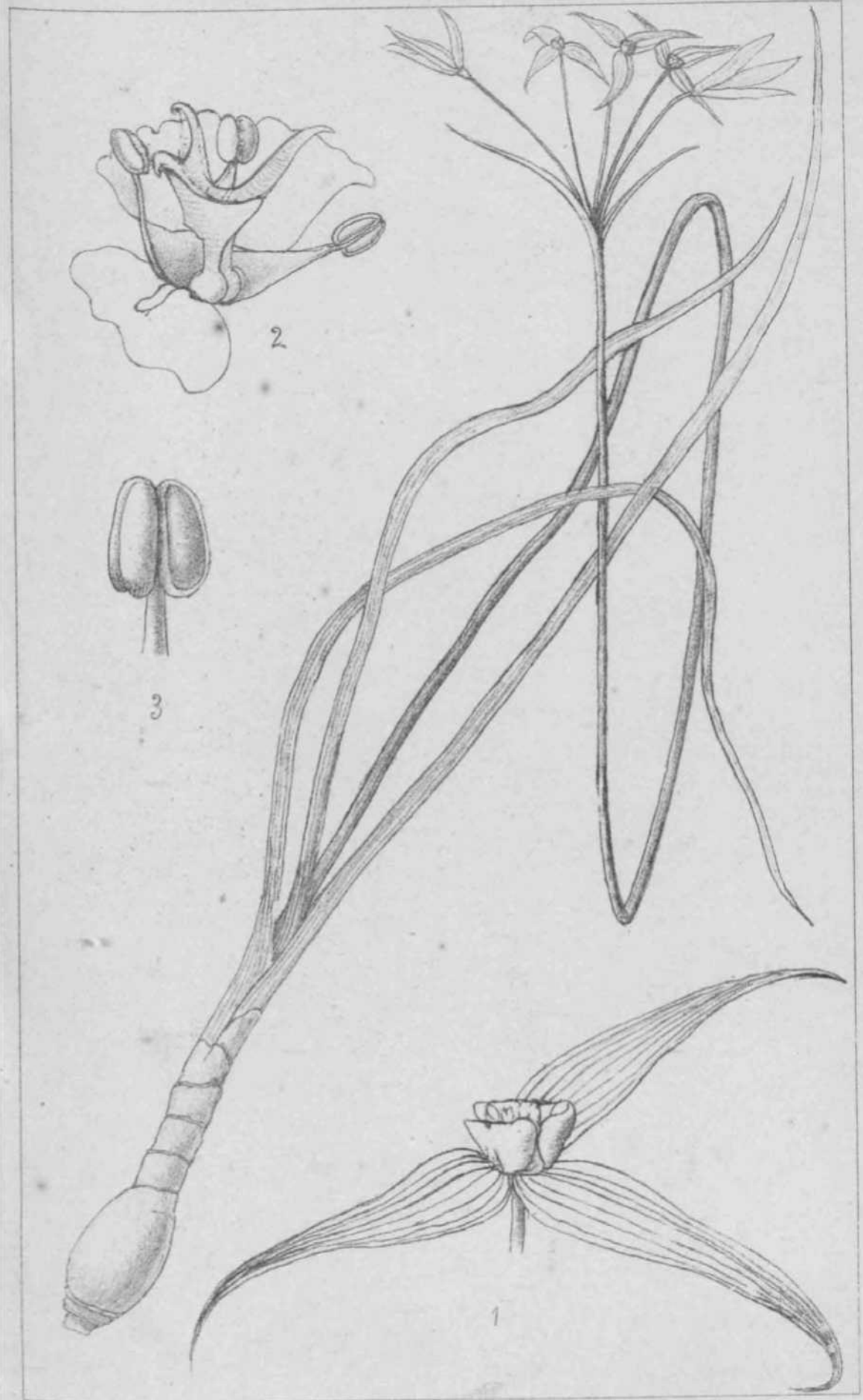


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CraLterispermum jaurinam, Be-ath.

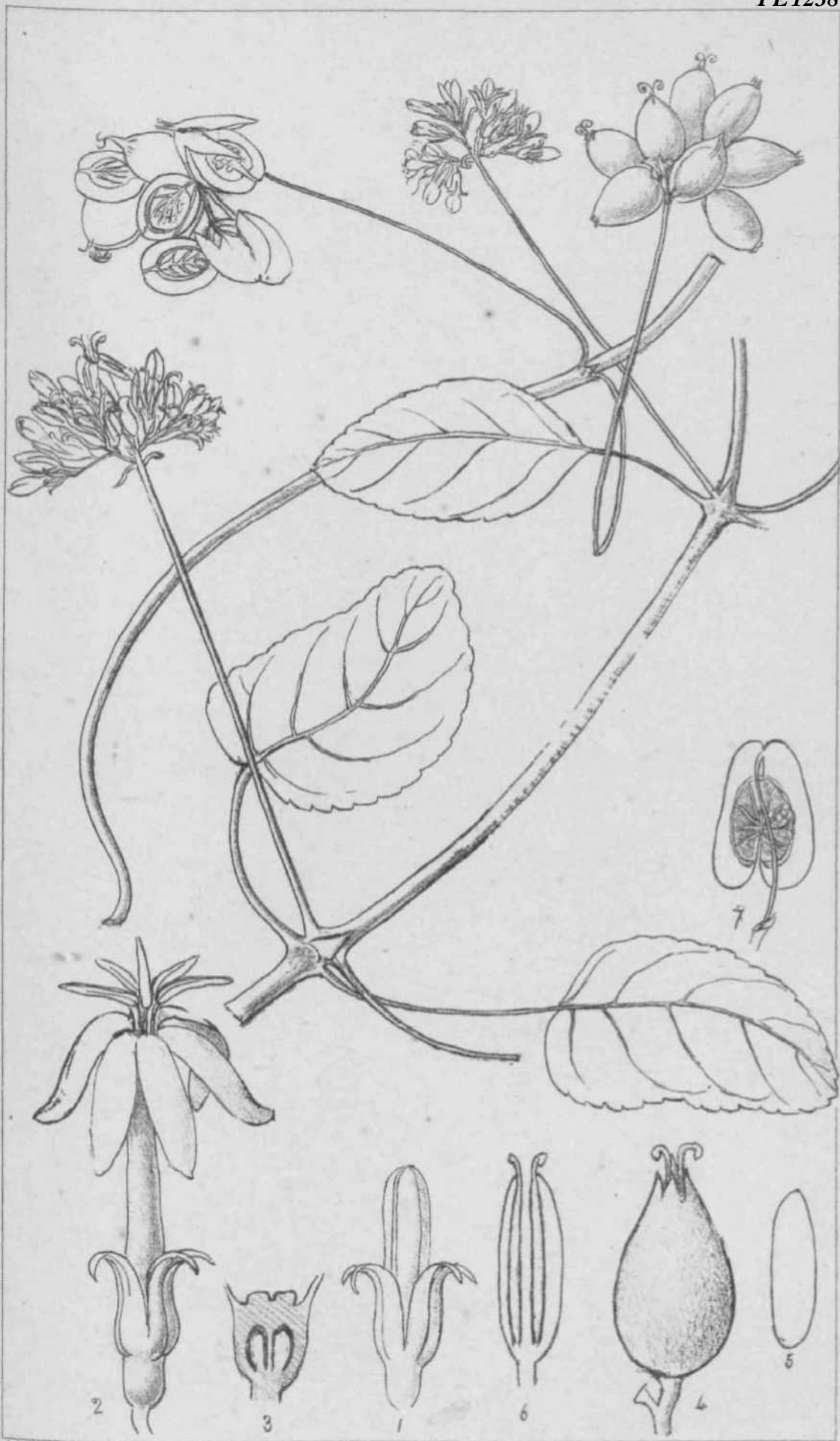


Lampra. volcanica, Benth.



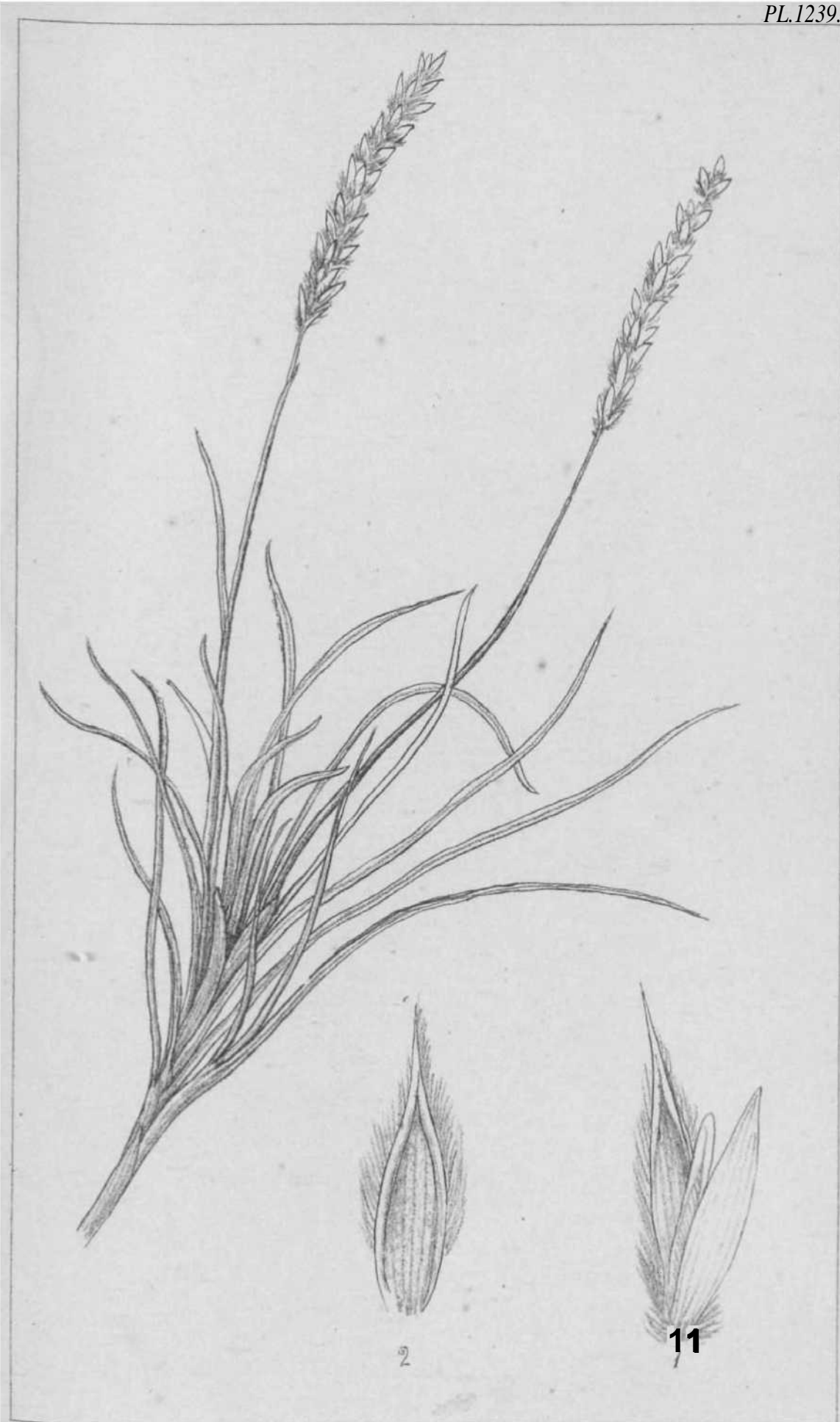
AMC del.

Trichloro peruviana, Baker



A.M.C. del.

Siphomens foetens, Hieracium



A.M.C. del.

NeuracWe Munroi, Y. Muell



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Meurachne Mitchelliana, Nees

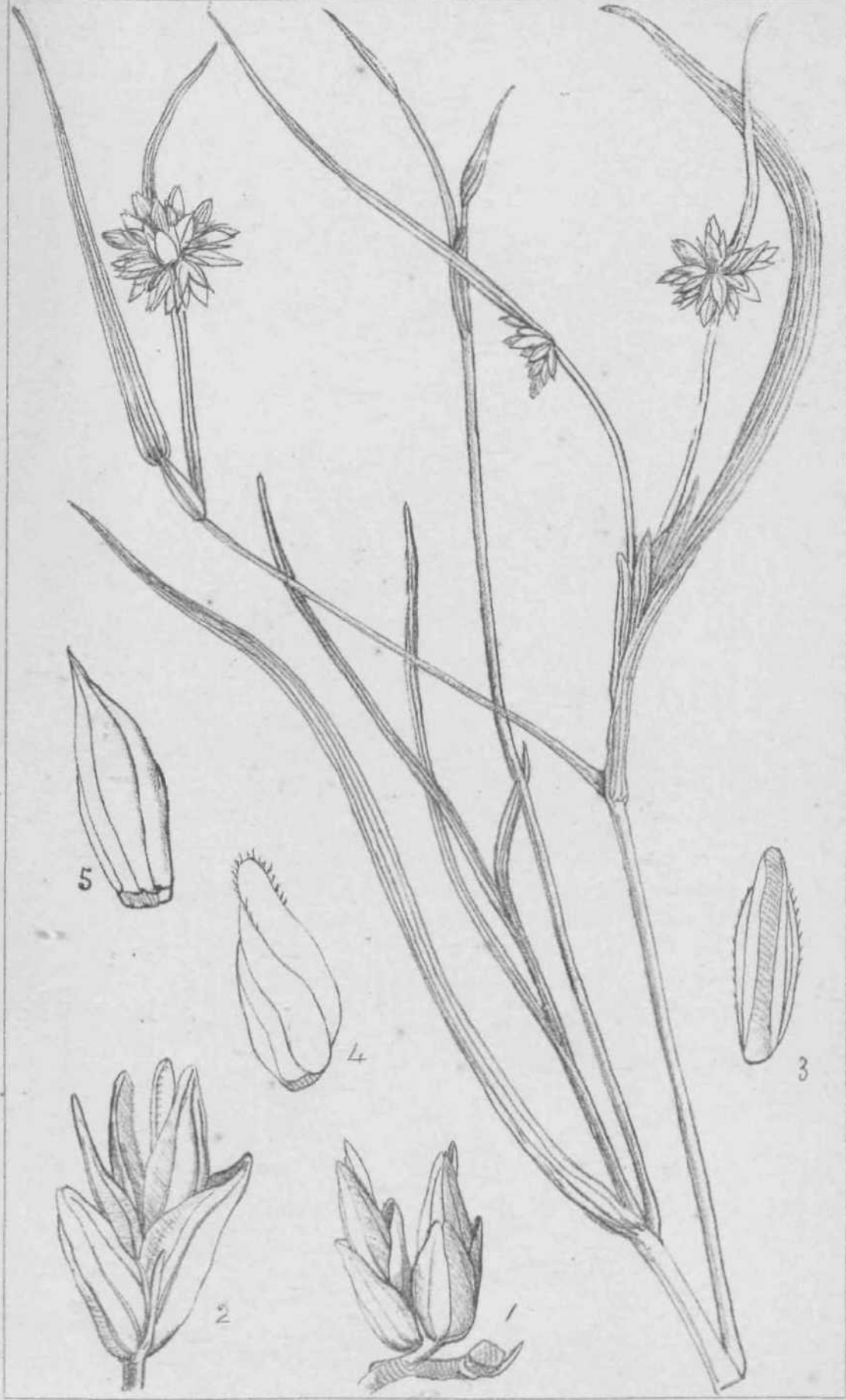


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Neuretehe alopecuroides, R. Br.



Pennisetu.ni refra.ctum, F. Muell.



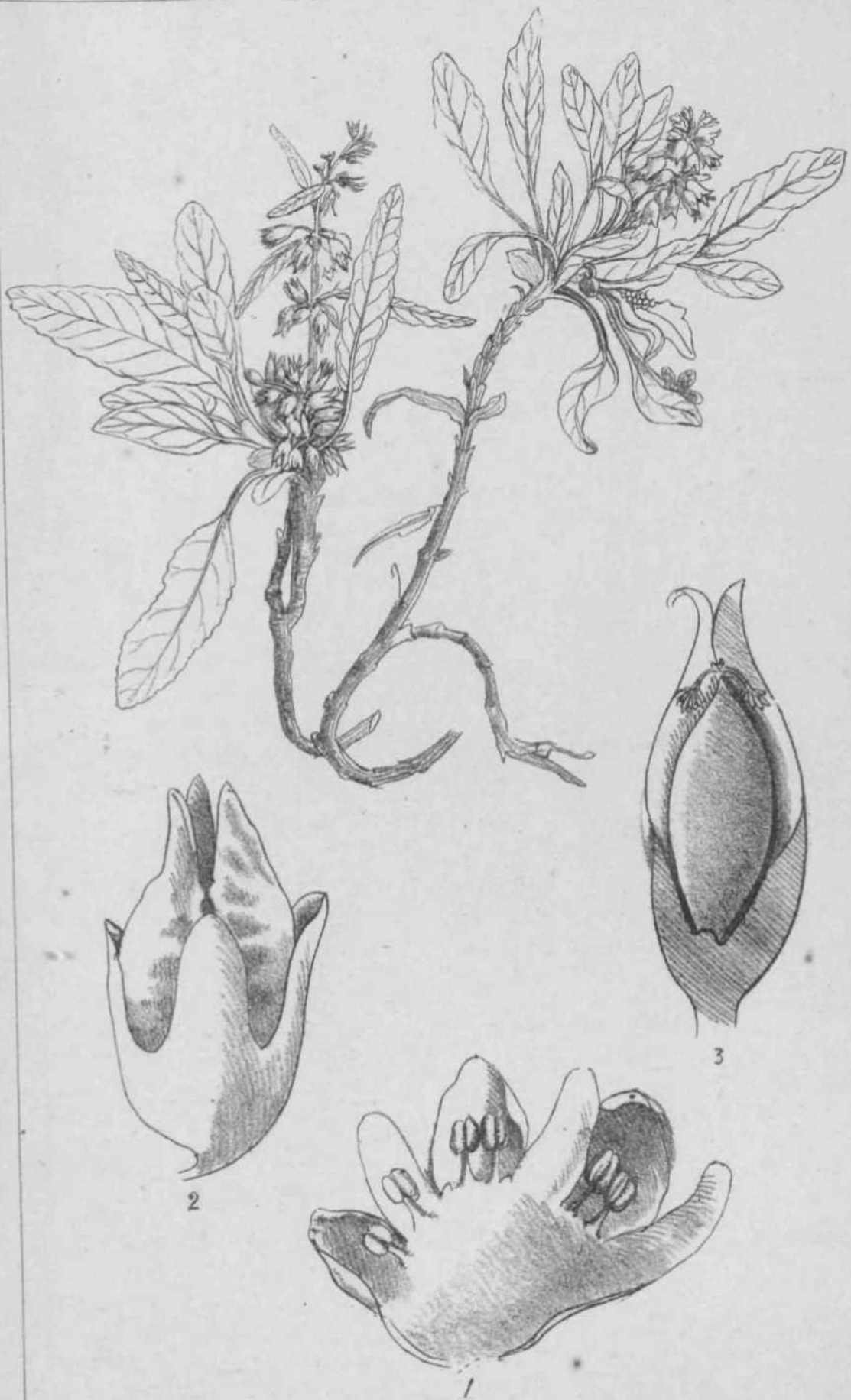
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Spimfex paxajioxus, Benth. rf •



A.M.C del

Spinifex paxadoxus, Be nth •%



AKCdal

Rumex neglectus, T. Kirk



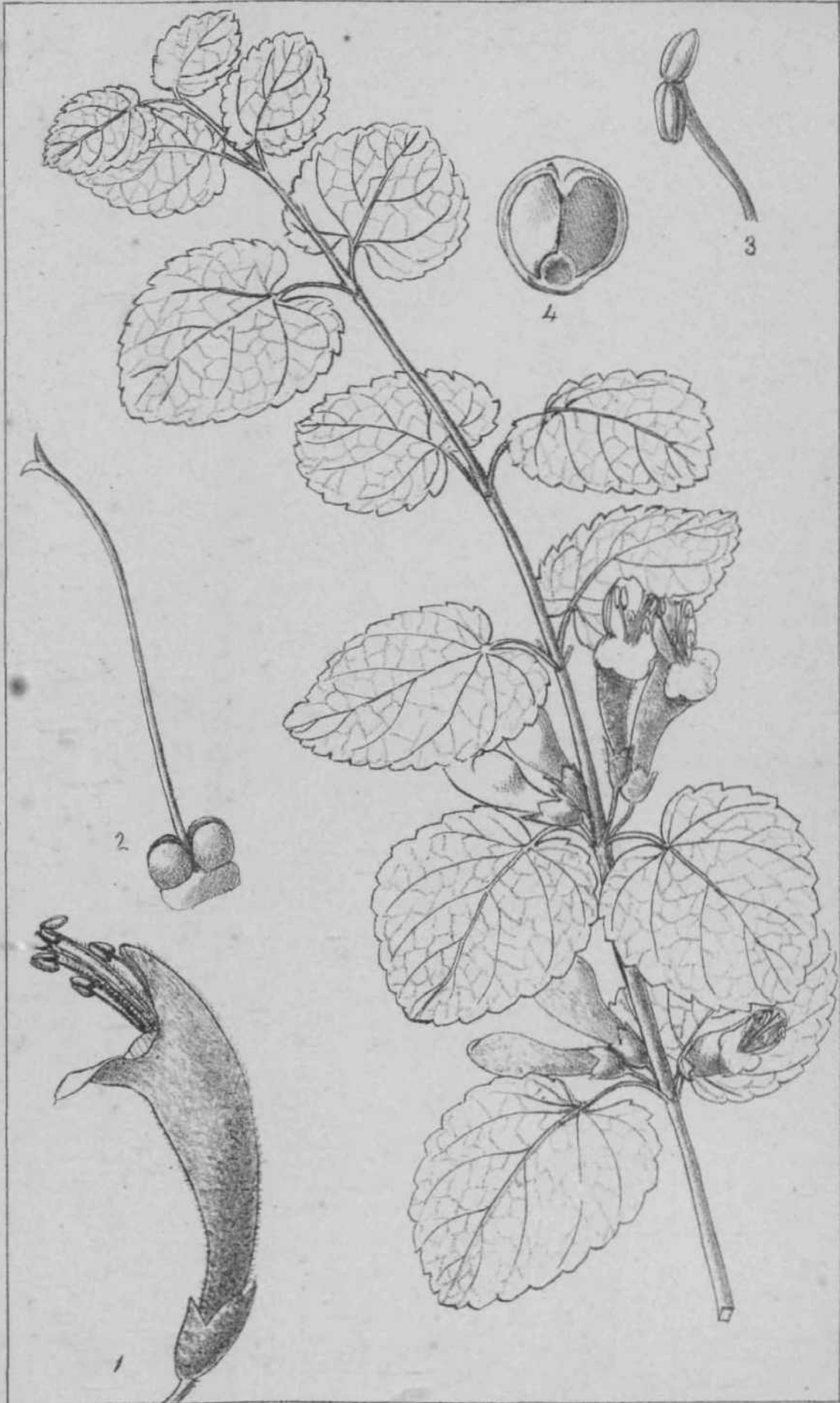
UCC del

Irvingia, Barteri, Hook & Arndt



A.M.C. del

Irvingia, malayana, OUV



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Stenogynerotundi Ioiia A Gray



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Achyrospermum fruticosum •juraBenfli.



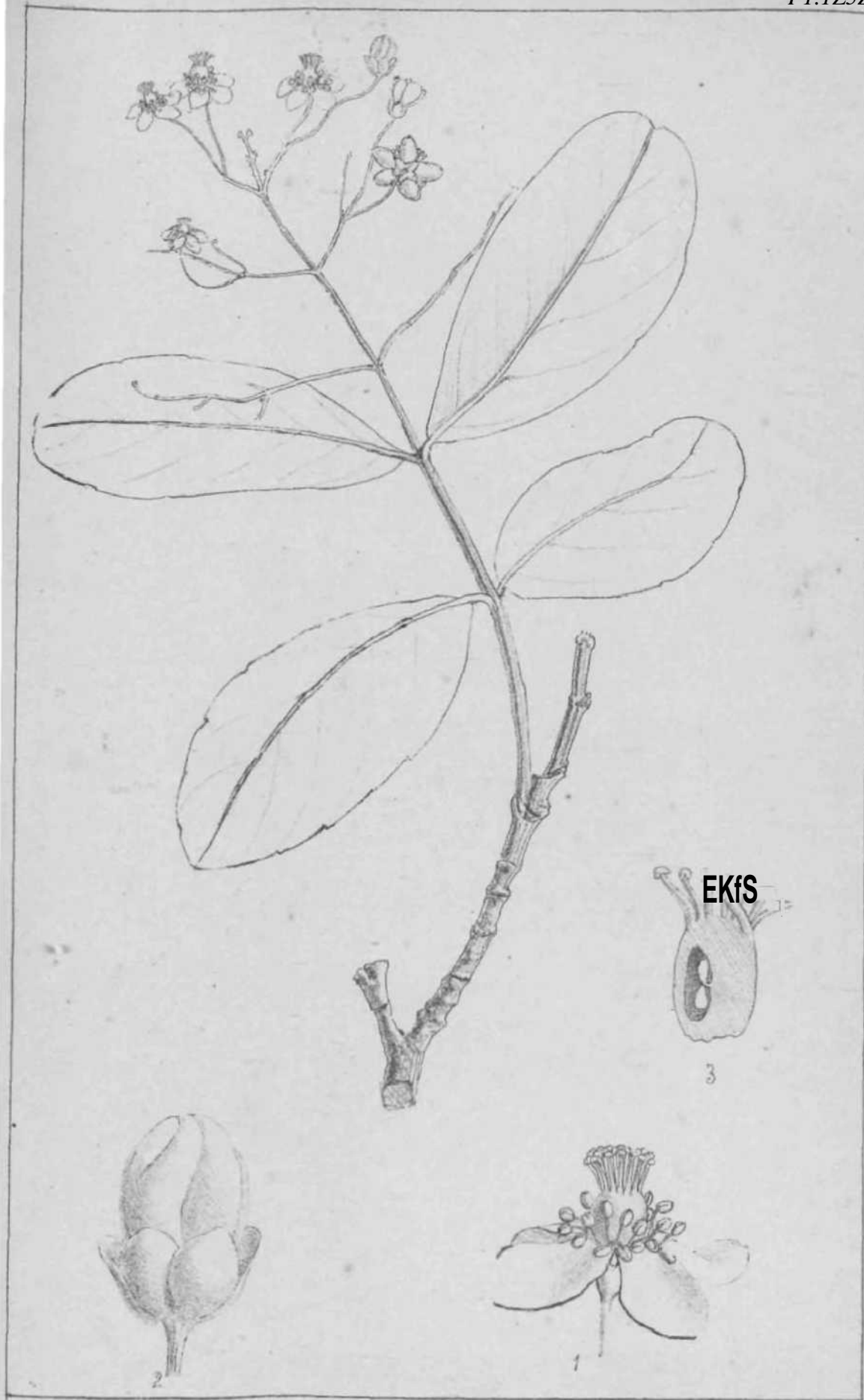
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Hebera chne Gulliveri Benth



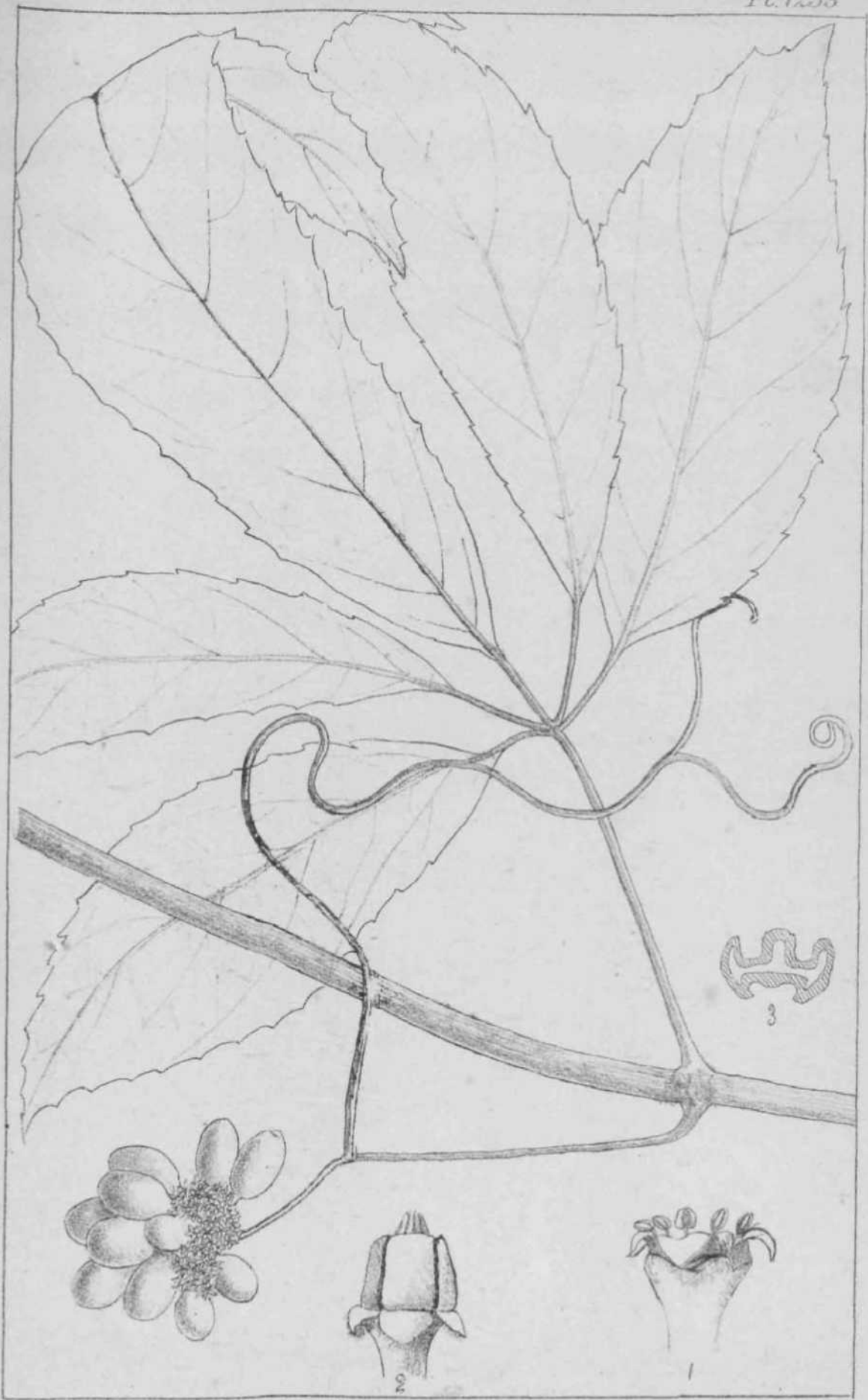
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Torenia Schwemfurlhu 01 iv.



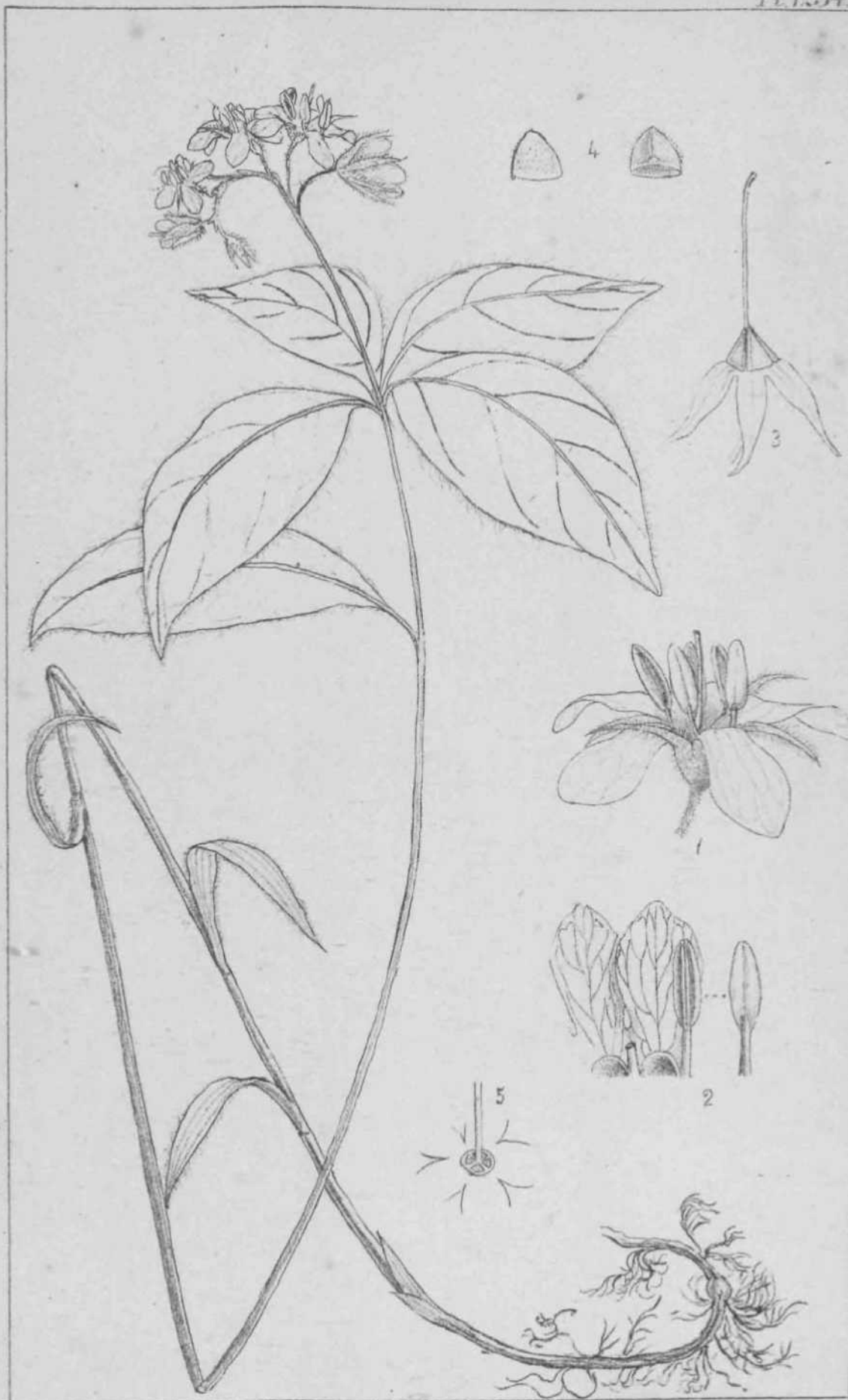
A. J. C. deL

Med. usa. gyne ppositifolia Baker



A. M. C. del.

Vitis sarcocephala. Schw.



A.M.C del

Brachybotrys paridiformis Maxim



AMC del.

Exocliorda serratifolia, S.M.



AMCiel

Hannoal Schweinfurthi Oliv



A.M.C. del.

SyncolosLemon densiflorus Bth.



A.M.C. del

Saxifraga Rossi 1 01 iv



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Misanteca anacardioides, Benth.



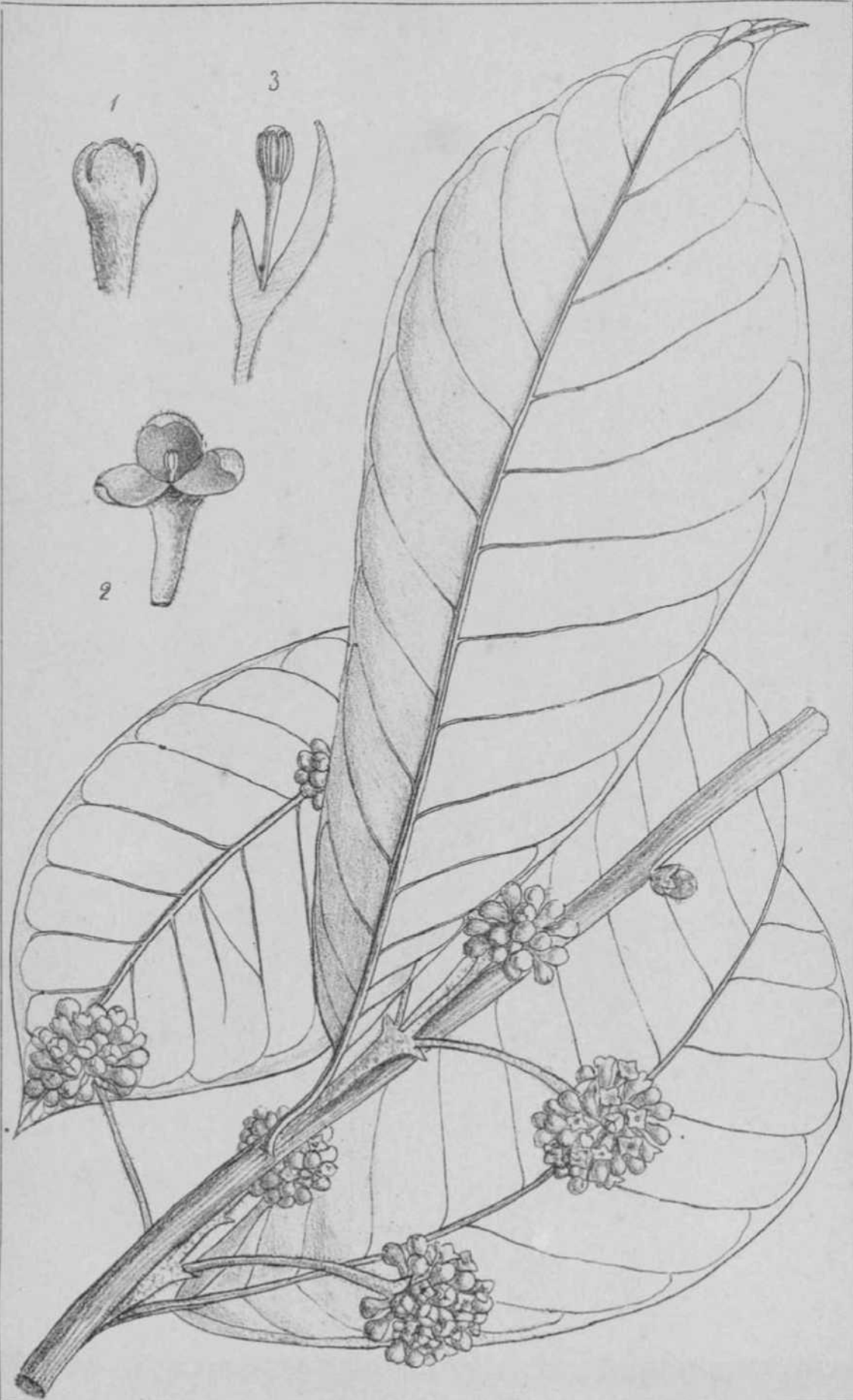
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Myristica Safoetiana Benth



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Myristicaceae microcephala BenLh



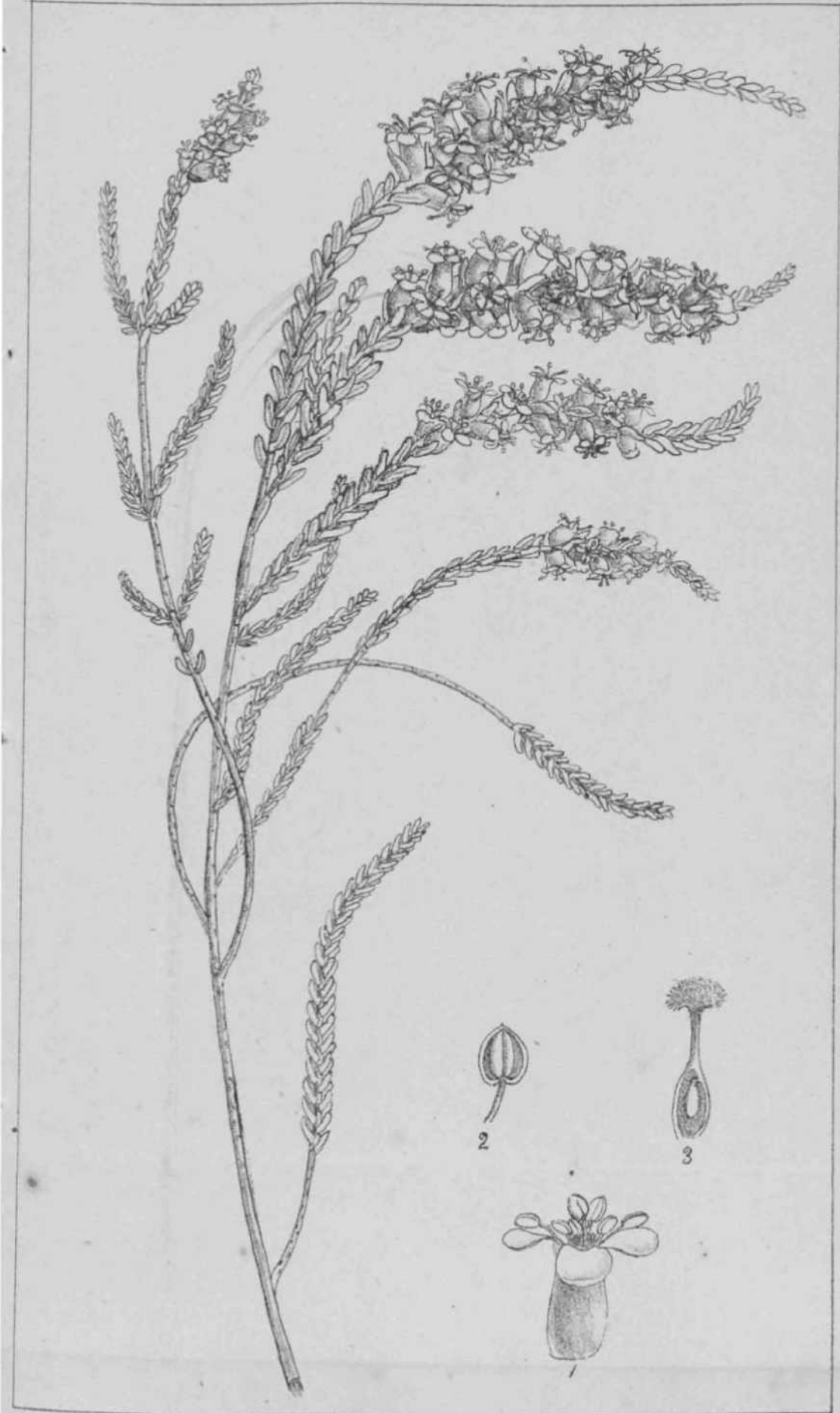
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Myristica Man mi BenLh



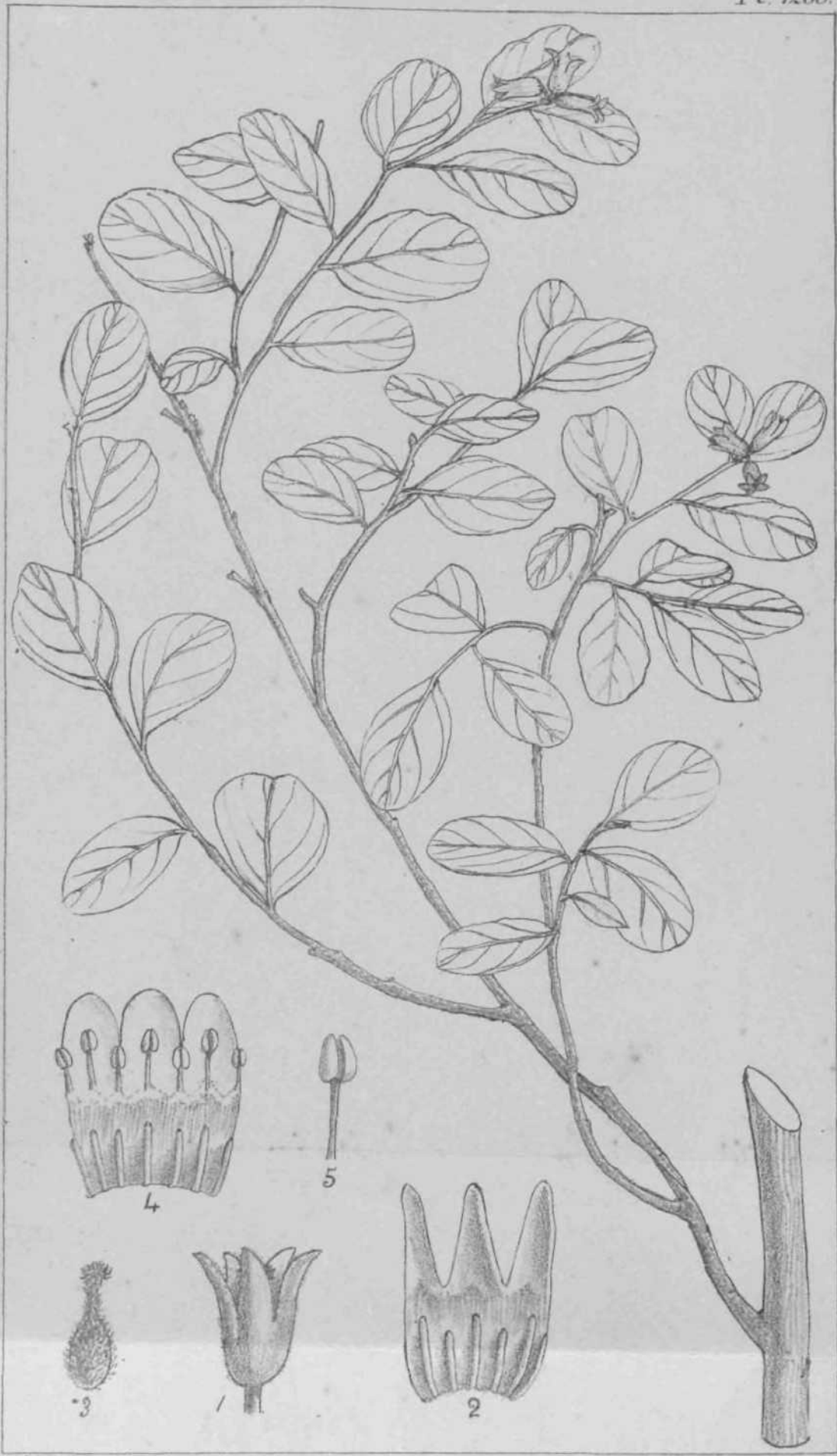
A.M.C. del.

Palmeria scandens F. Muell.



A. M. C. del.

Chymococca empetroides. Meissii,



A.M.C. del.

Goodallia gmanensis Benth



MC.del

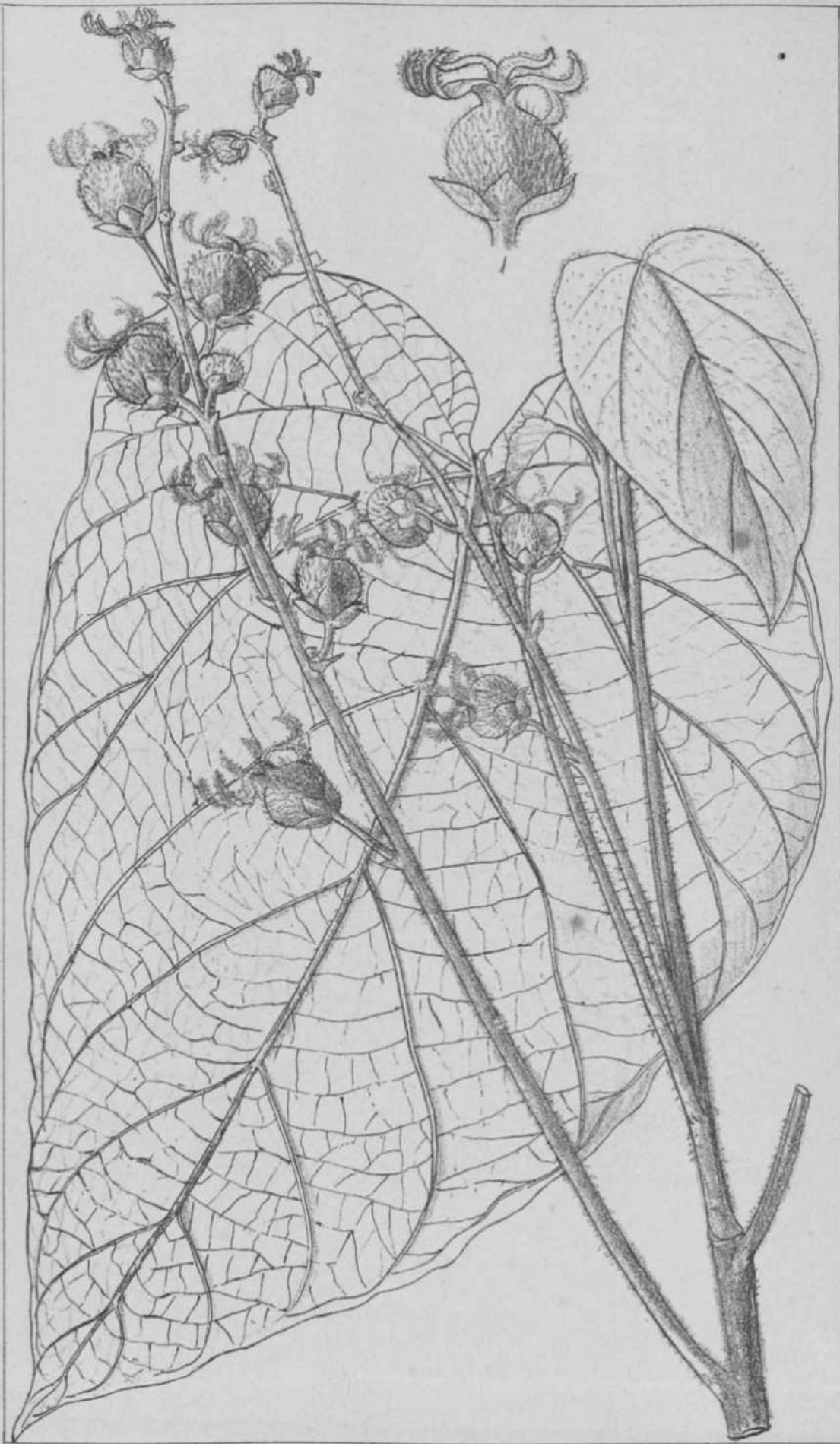
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A&astachys odorata.RBr.



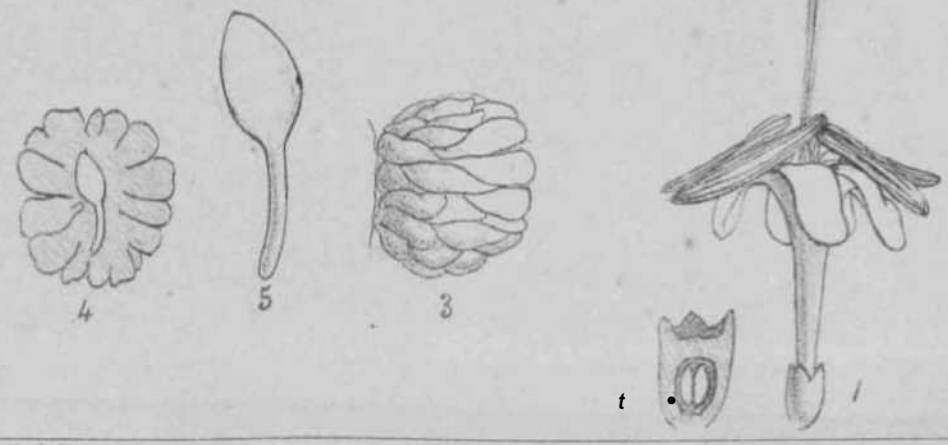
A W.C. del

Manniophyton africanum, Muell. Arg. ♂.



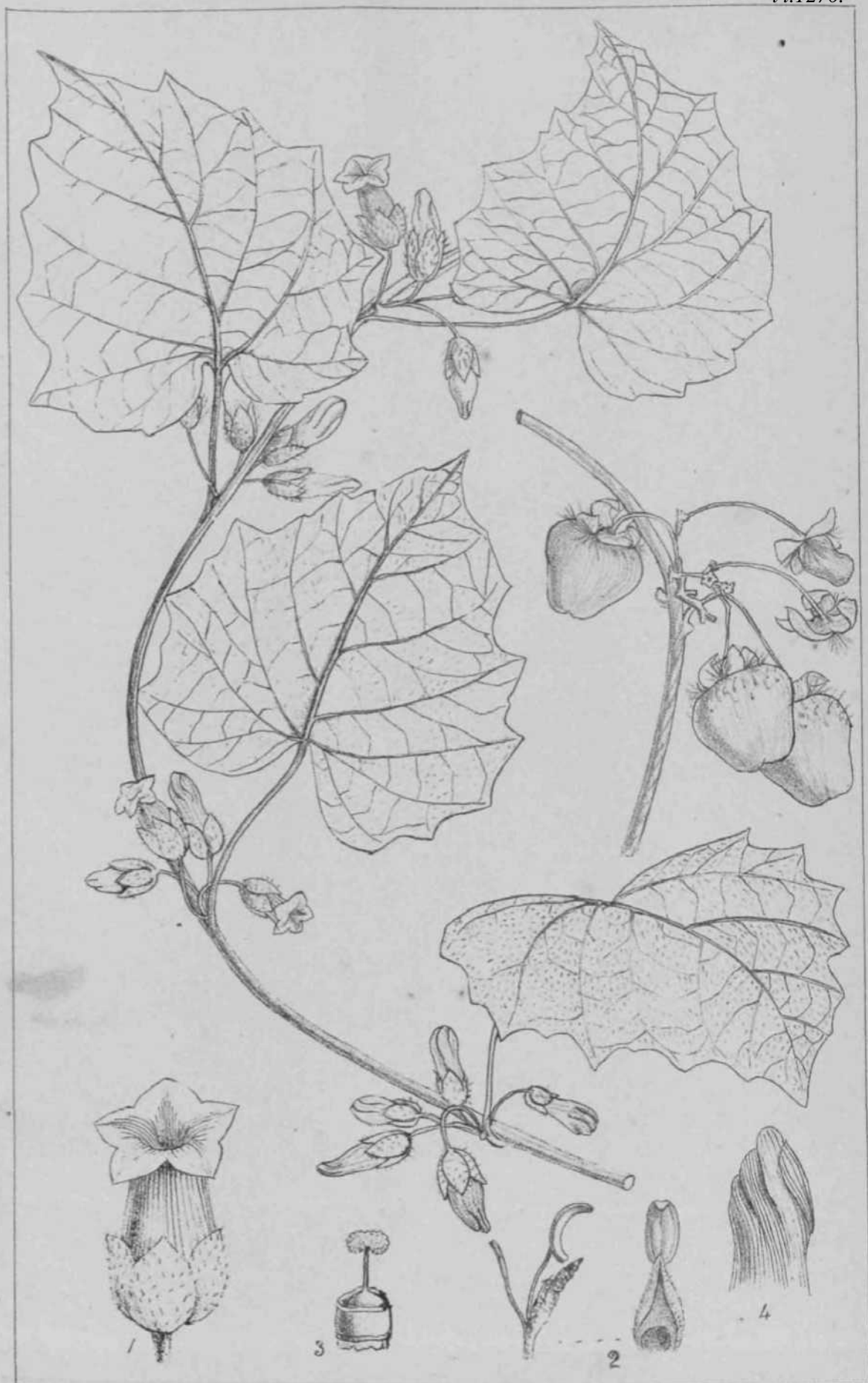
AM C. del

Manmophyton africanum, Muell. Arg. S.



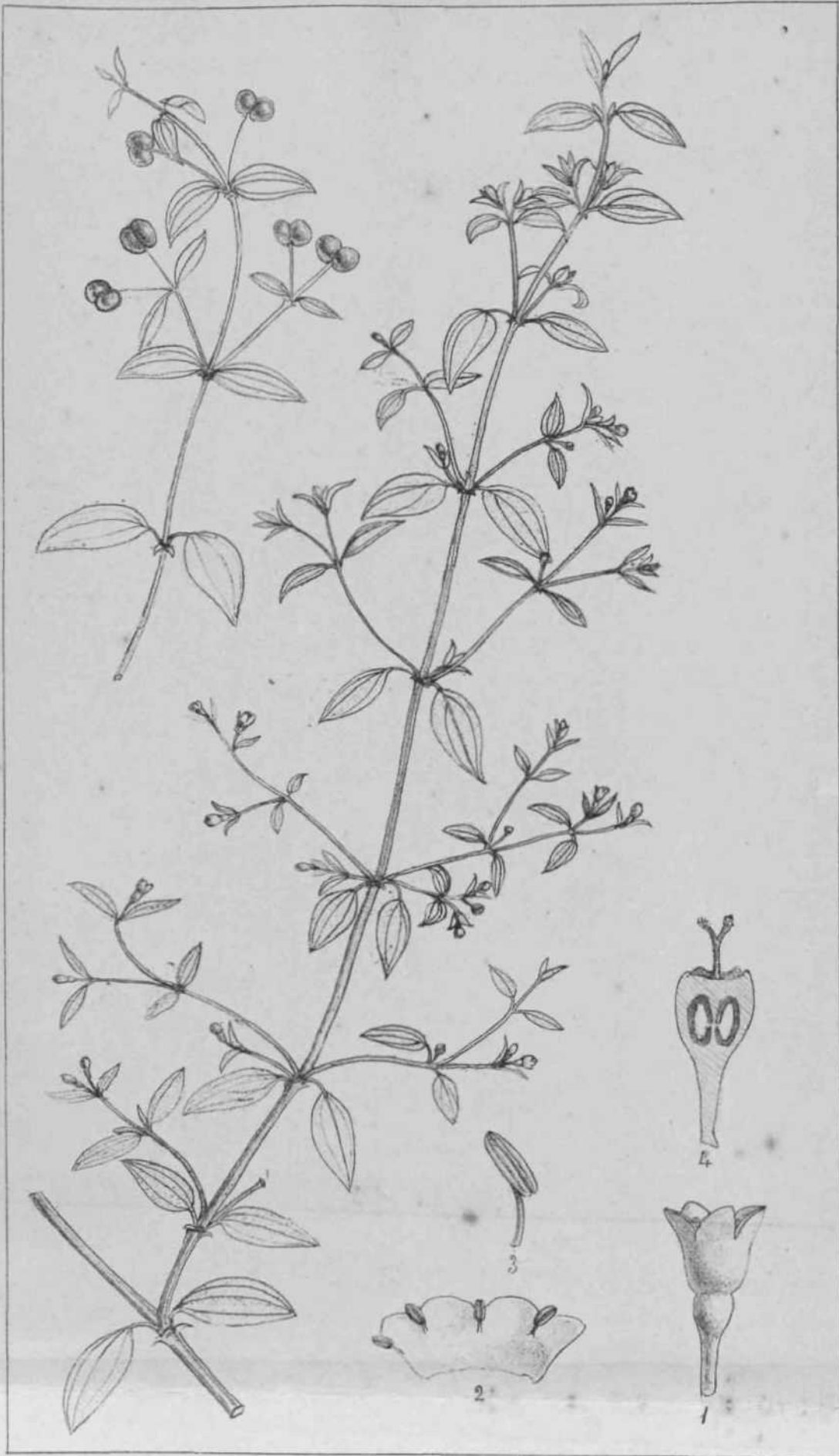
A.M. . . . a ei

Enteros *Thermum littorale*. Hiern.



AttCW

Lepistemon africanum Ohw.



AKCid

Didymaea mexicana, Hock.f.



A.M.C. del.

Acunostrobilus pyramidalis Miq.



A.M.C.ael

Aristolochia som alien sis Oliv.



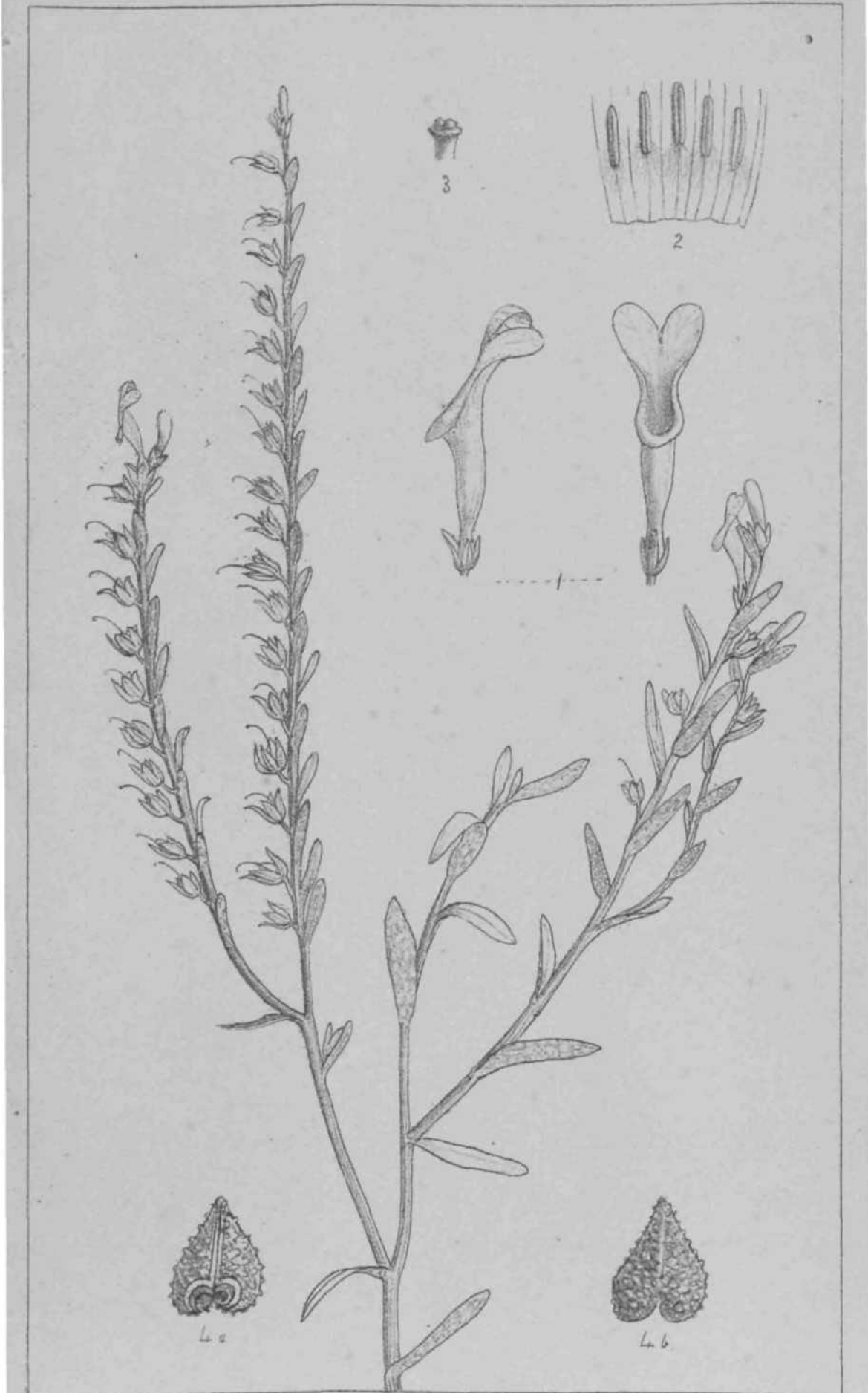
A.M.C. del

Orthosiphon linearis Benth.



AMC. del

Cardwellia sublinns, F Muell.



A.M.C. del.

Echiochilon lontfilbrum Benth



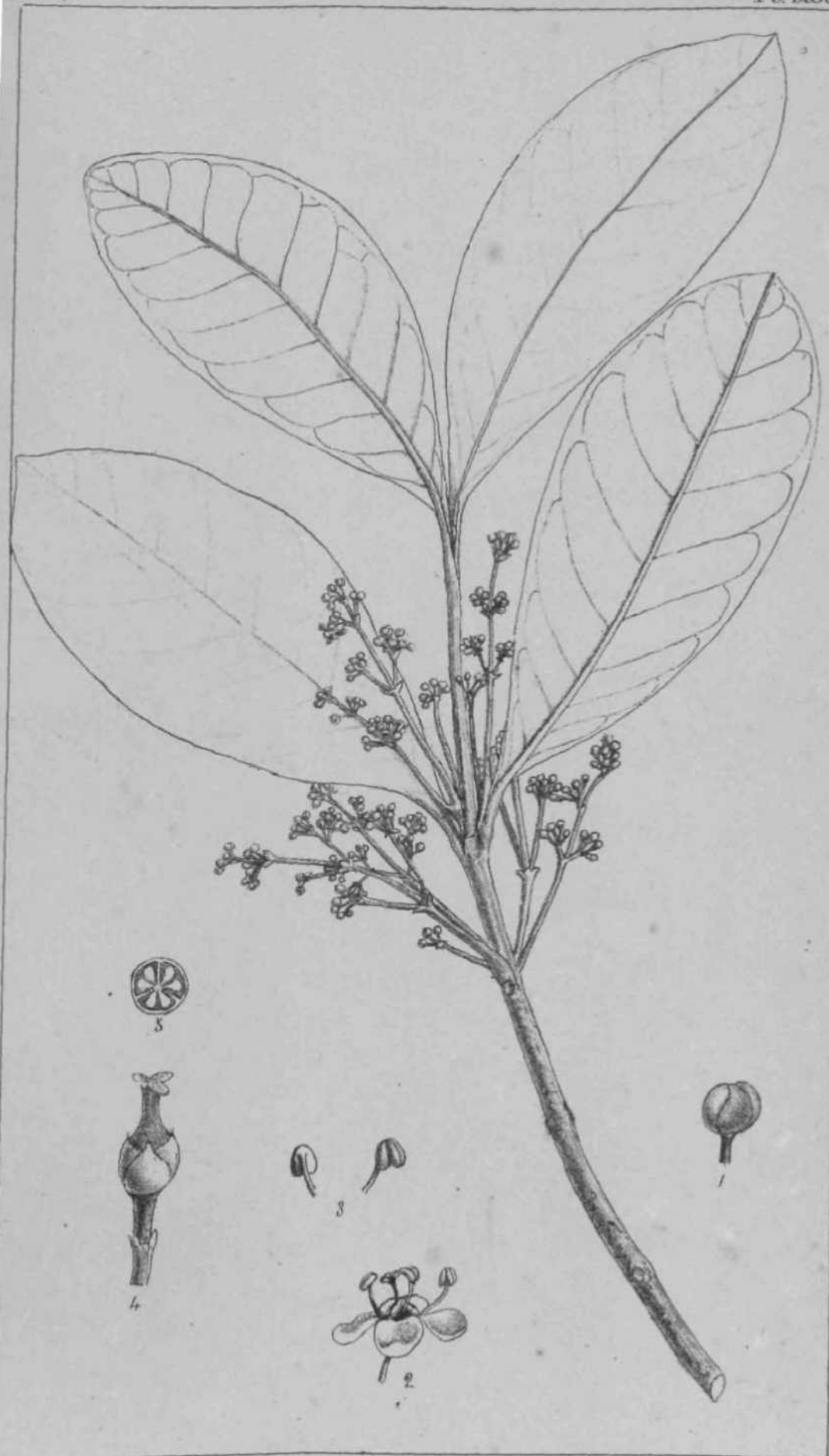
AMC del

Cyathogyne vindis Muell. Artf



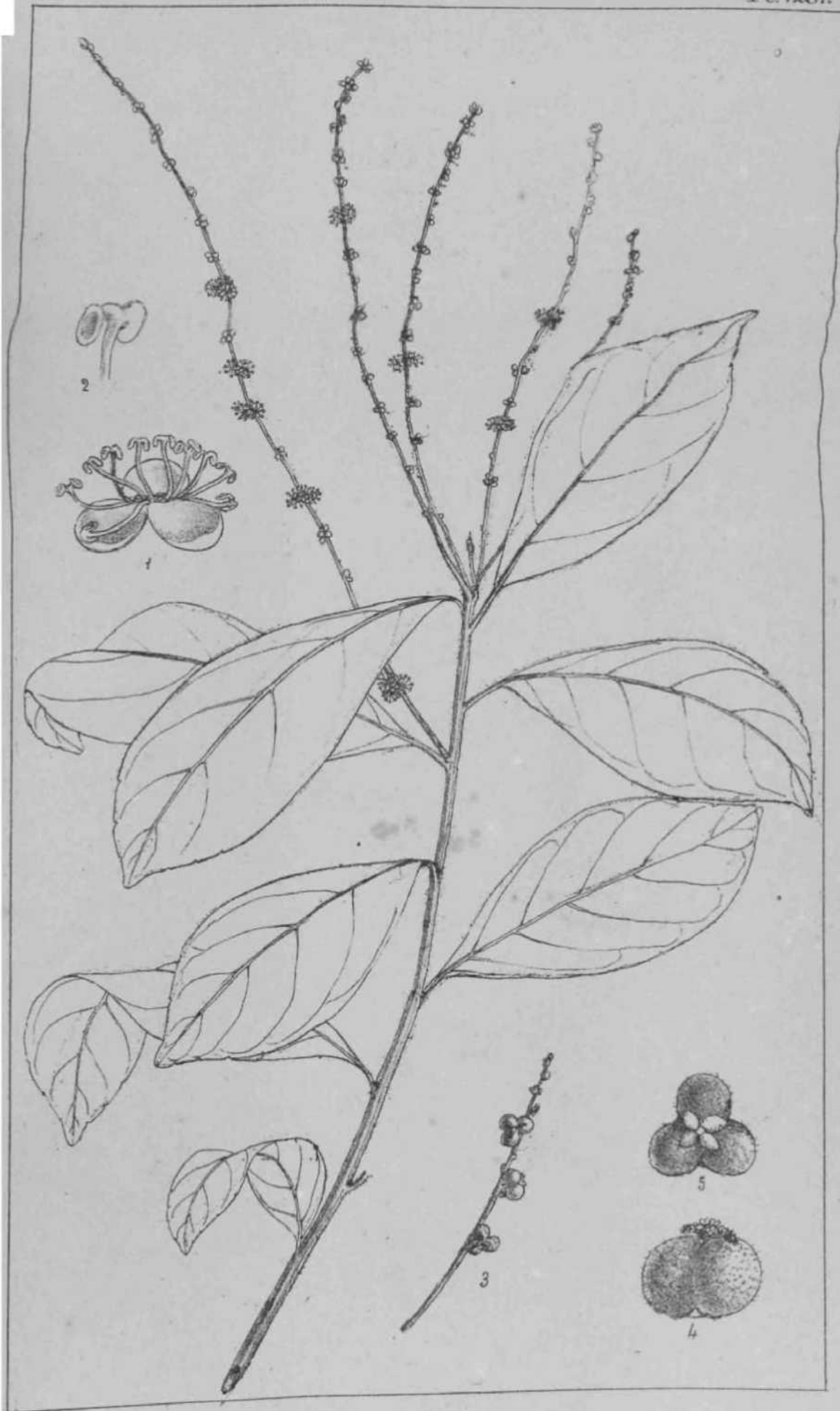
A.M.C. del.

Lachnostyhs hirta. MuellArg.



A.M.C. del.

Choriophyllum malayairum Benth.



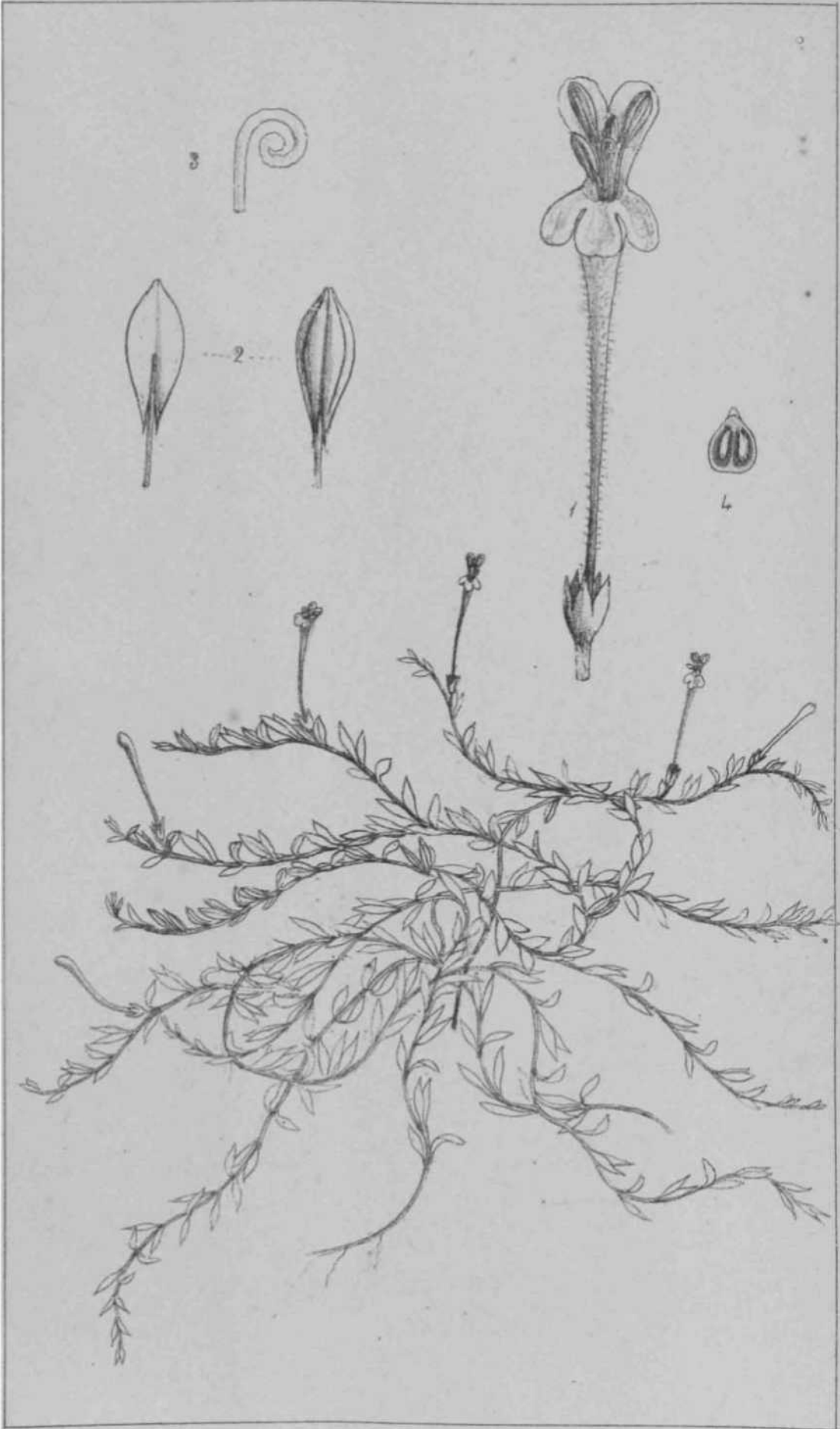
A.M.C. del

Mareya micrantha Muell. Arg.



FIG. 22

Tetradenia fruticosa, Benth



AMC del.

Euphrasia disperma. Hoo'k.f.



A.M.C. del.

Leidesia capensis, MuellArg.



A.M.C. del.

Cardamine paradoxa, Hance.



A.M.C. del.

Lilian Urns scandens, Hook. f.



A.M.C.ael.

Uapaca guineensis, Muell. Arg.



A.MC.del

Coelodepas WaHiohiaaum, Benth



A. M. C. del.

Dicoelia Beccanana, Benth.



A.M.C del.

Reichenbachia hirsuta, Spreng.



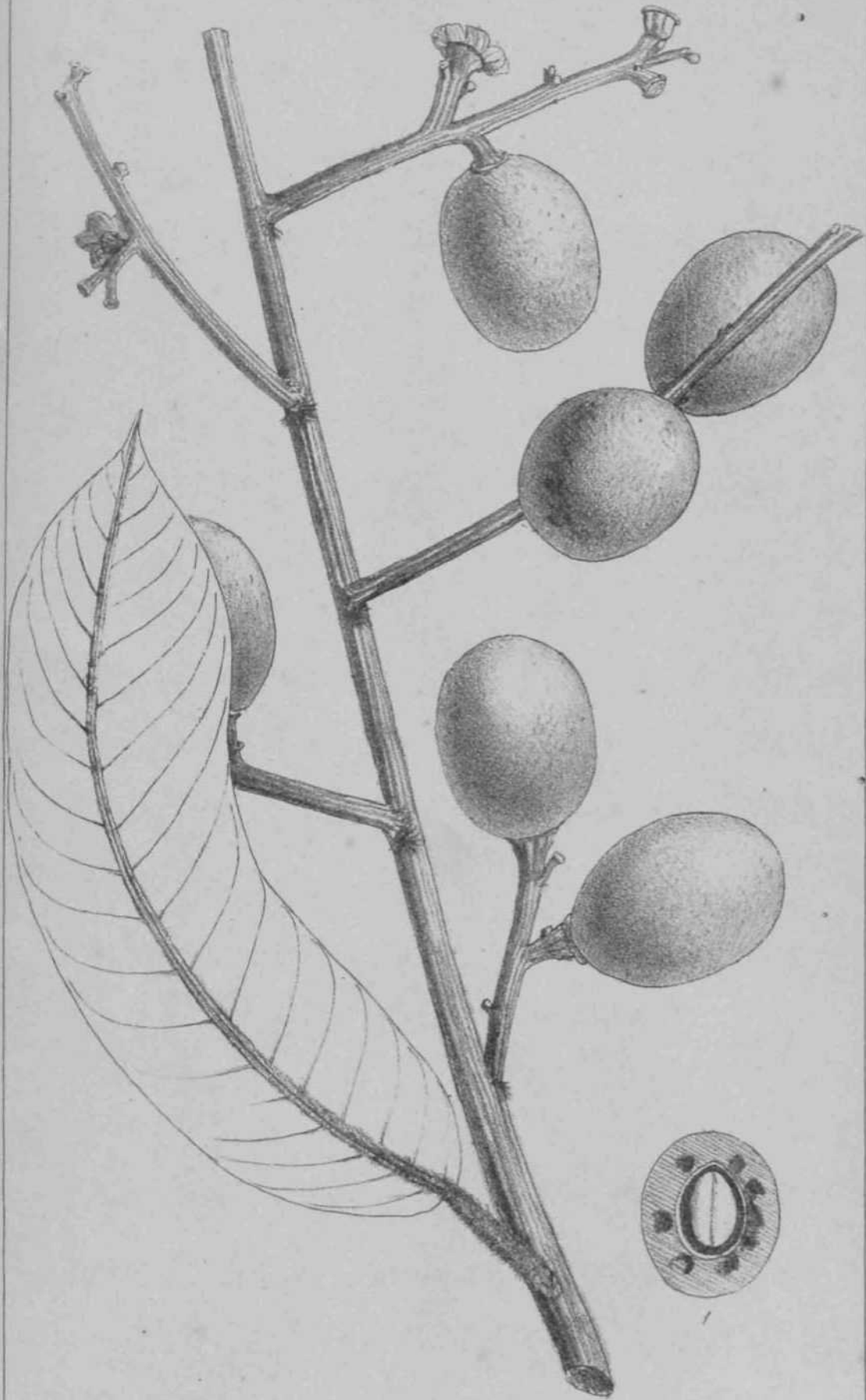
A.M.G. del.

Acalypha spinescena, Benth.



AMC.del.

Melanochyla xomentosa Hk.fv



A.M.C. del.

Melanochyla tomentosa Hk. f.*

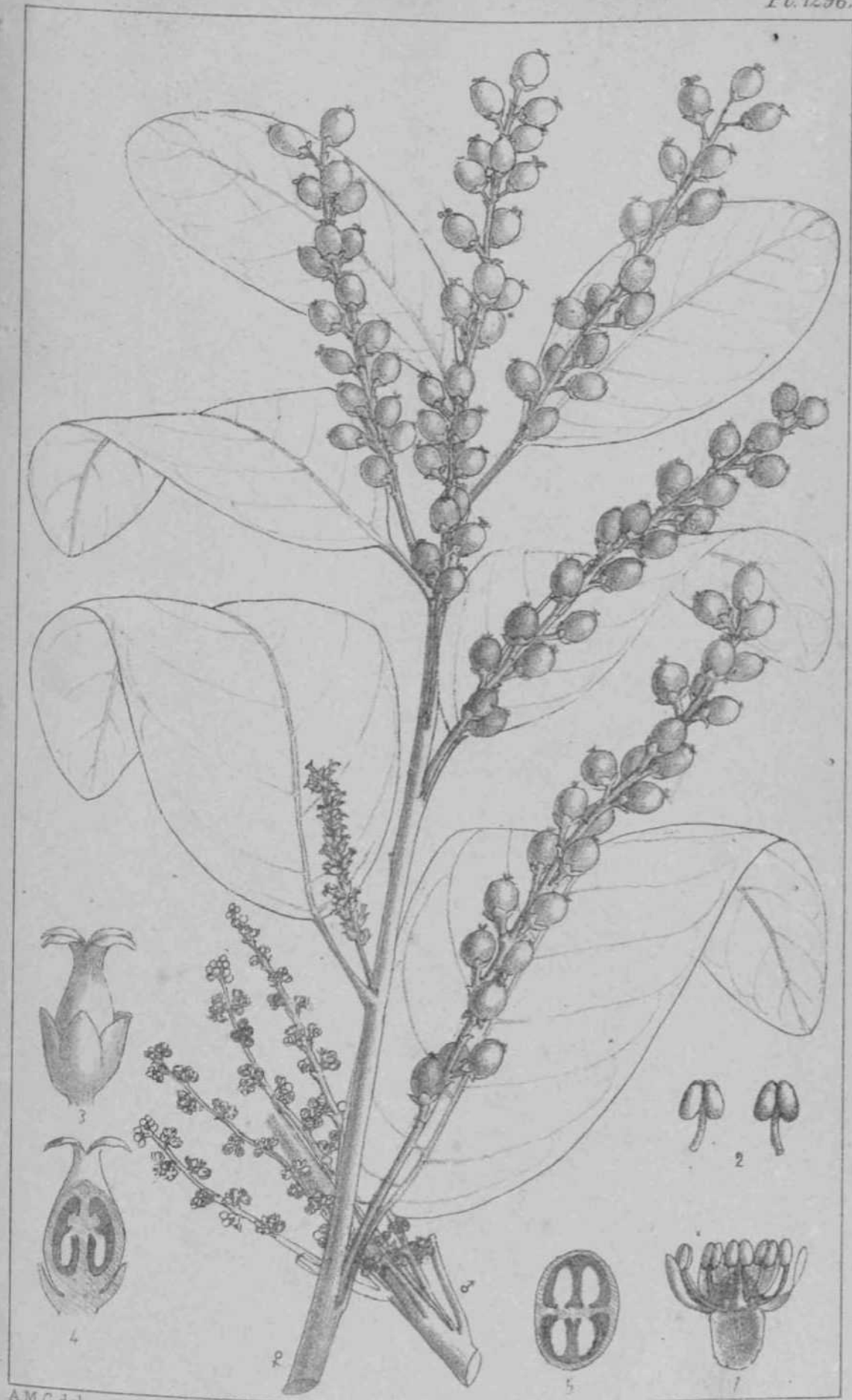


M.C. del.

Elateriospermum Tapos Bl.



ftocris laevifata, Bl



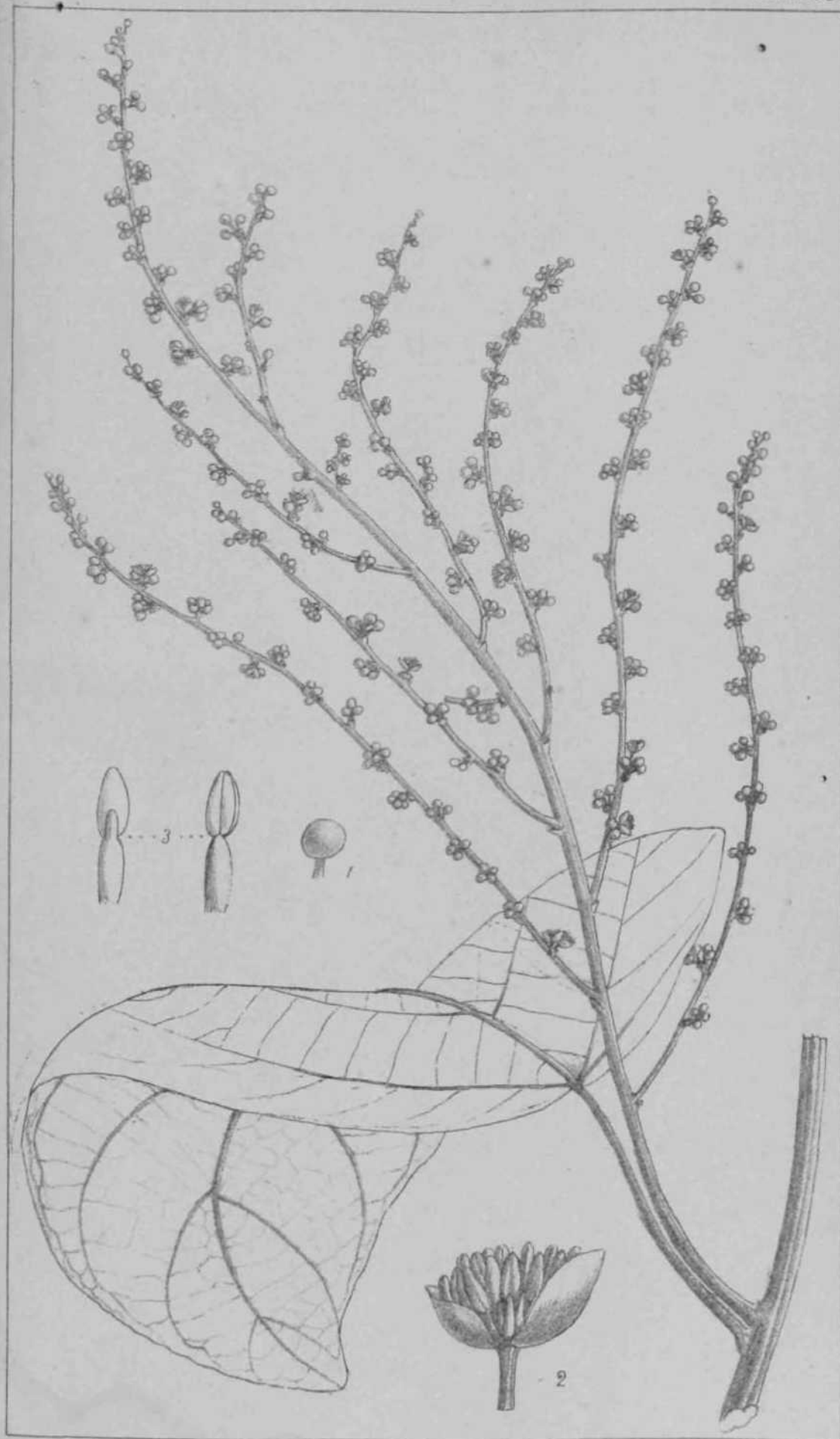
A.M.C. del.

Mærobotrya floribunda Benth



A.M.C. del.

Lepido turn s l&xiflorus, Benth



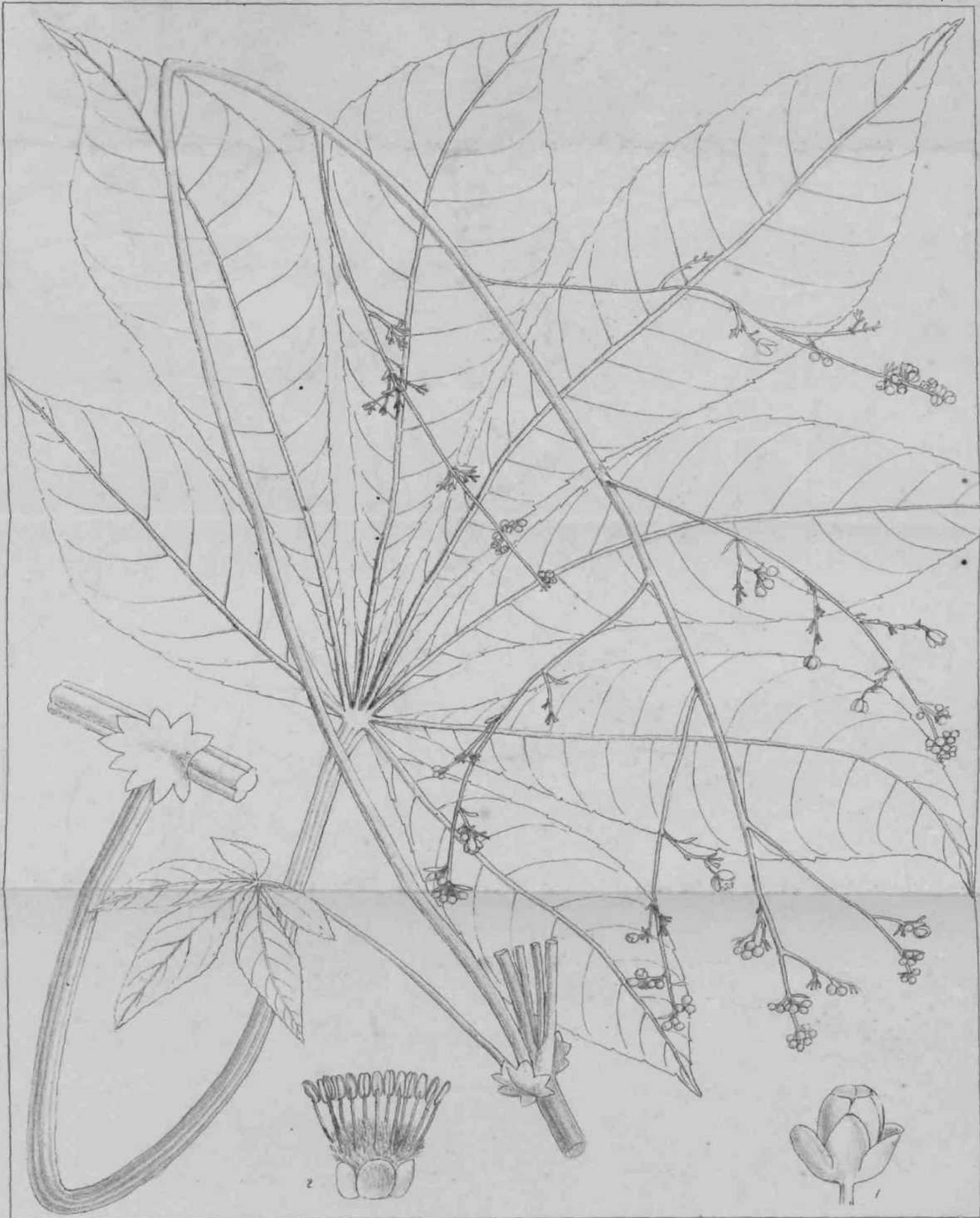
AM C.dol

Neoboutoma africajia, Muell. Arg.



A.M.C. del.

, Neoboutonia africana, Muell Arg. ?



M.C. del.

Ricmodendron africajius, Muell, Arg