HOOKER'S
ICONES PLANTARUM;
OR,
FIGURES, WITH DESCRIPTIVE CHARACTERS AND REMARKS,
OF NEW AND RARE PLANTS,
SELECTED FROM THE
KEW HERBARIUM.

FOURTH SERIES.

EDITED FOR THE BENTHAM TRUSTEES BY

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Director, Royal Gardens, Kew.

VOL. VI.
OR VOL. XXVI. OF THE ENTIRE WORK.

Mo. Bot. Garden,
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Mo. Bot. Garden,
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Furcraea macrophylla, Baker.

Amaryllideae. Tribe Agaveae.

F. macrophylla, Baker (sp. nov.); species ex affinitate F. cubensis et F. Selloe, sed multo major.

Caudex brevis, 1–2 ped. altus. Folia dense rosulata, ensiformia, viridia, 6–7 ped. longa, medio 3–5 poll. lata, basi 2 poll. lata et 1 1/2 poll. crassa, e medio ad apicem et basin attenuata, prope basin valde incrassata, costa faciali prominente prædita, facie laevia, dorso scabra, aculeis marginalibus remotis magnis uncinati pungentibus apice corneis rubro-brunneis. Flores in paniculam laxam amplam deltoidem dispositi; inflorescentia cum pedunculo 25–30 ped. longa, ramulis fructiferis et bulbilliferis. Perianthii segmenta lineari-oblonga, ovario æquilonga. Stamina quam perianthium triplo breviora, filamenti valde incrassatis. Ovarium cylindricum, glabrum, sursum attenuatum, 1 poll. longum. Fructus oblongus, trisulcatus, 2 poll. longus et 1 poll. diametro.

West Indies or Central America.

This plant is known only from the Bahamas. Leaves of it were sent to Kew in 1889 by Mr. J. H. Hart, F.L.S., Superintendent of the Royal Botanic Gardens at Trinidad, who had received them from the Bahamas, through Sir William Robinson, Governor of the Colony and formerly also of the Bahamas. At the beginning of 1896, Dr. Morris, during a short visit to the Bahamas, made a collection of leaves, flowers, fruit, and bulbils of this interesting plant, thus supplying full material for its description. He found it only in the island of New Providence, as a garden plant. It is probable, therefore, that it has been introduced into the Bahamas, and is not a native of those islands. When fully developed, the plant is of a very striking character. It is the largest species of Furcraea known. So far it has not been cultivated for its fibre. Dr. Morris also brought with him fifty young plants, which are now under cultivation at Kew.—J. G. Baker.

Fig. 1, plant, about 1/6 of natural size; 2, leaf; 3, bulbil; 4, flower from which the perianth has been removed; 5, stamen; 6, pistil; 7, capsule.—1, 4, 5 and 6 enlarged; 2 reduced; 3 and 7 natural size.
Nemesia Bodkinii, Bolus.
Plate 2502.

NEMESIA BODKINII, Bolus.

Scrophularineae. Tribe Hemimerideae.

N. Bodkinii, Bolus (sp. nov.); corolla fauce late aperta, tubo calcarque valde inflatis a congeneribus distincta.

*Herba annua, spithamea, basi lignosa, pedicellis calycibus corollae fauceque pubescentibus exceptis glabra. Rami ascendententes, oppositi, decussati, angulati, foliati. Folia sessilia vel infima petiolata, lanceolata vel linearia, acuta, grosse dentata, crassa, $\frac{1}{3}$–1 poll. longa. Racemi terminales, laxe pauciflori, pedicellis ebracteatis, 6–8 lineas longis. Corolla tubus inflatus, fauce hiante; labium superius majus, laciniiis 4 rotundatis inter se æquilongis; labium inferius oblongum, integerrimum; calcar conicum, inflatum, majusculum apice emarginatum, limbo subaequilongum, tubo cum calcare 8 lin. longo. Capsula generis, matura hauad visa.*

Cape Colony: south-western region, on mountain slopes with a northern aspect, above Tulbagh Kloof, at 1,000–1,200 ft., Bodkin; Bolus, 8401.

The very open throat, inflated tube, and unconstricted continuous spur, would seem to separate this plant from the majority of the species of this genus. But it is connected by *N. strumosa*, Benth. (*Bot. Mag.* t. 7272) which exhibits similar peculiarities, though in a less degree. The flowers are remarkable in their colour, being of so dark a red-purple as to be nearly black. We are indebted for its discovery to Prof. A. Bodkin, of Cape Town.—HARRY BOLUS.

Fig. 1, a flower detached; 2, ditto, the corolla removed and the two anterior calyx-lobes spread out; 3, the corolla; 4, the same laid open; 5, stamens in position; 6, one of the longer and 7 one of the shorter stamens; 8, calyx and immature capsule; 9 and 10, different leaves.—*All except 1, 9 and 10 enlarged.*
DORSTENIA ARABICA, Hemsl.

URTiCACEE. Tribe MorEE.

D. arabica, Hemsl. (sp. nov.); D. radiatae proxima, sed differt foliorum delapsorum cicatricibus creberrimis, foliis basi cuneatis bullatis supra nitidissimis, receptaculis minoribus.


SOUTH-EAST ARABIA: without special locality, Bent.

Readily distinguished from the only other species from the region—*D. radiata*, Lam. (Kosaria, Forsk. Fl. Aegypt. Arab. p. 164, t. 20) and *D. gigas*, Schweinf. (Balf. in Trans. Roy. Soc. Edinb. xxxi. t. 95.) The former has less crowded tubercles, leaves cordate at the base and smaller receptacles; and the latter is an altogether larger and different plant. Both agree in having fleshy stems and stellate receptacles.—W. BOTTING HEMSLEY.

Fig. 1, a stipule; 2, tubercle arising from the enlarged basal scars of stipules, leaf and peduncle combine; 3, a receptacle; 4, the same in a more advanced stage; 5, tip of one of the lobes; 6, a portion of the flowers; 7, a male flower; 8, a pistil.—All enlarged.
Eryngium longipetiolatum, Hemsl.
ERYNGIUM LONGIPETIOLATUM, Hemsl.

UMBELLIFERÆ.

E. longipetiolatum, Hemsl. (sp. nov.); species inter E. longirameum et E. scaposum medium tenens, differt imprimis foliis radicalibus longe petiolatis oblongis basi cuneatis.


MEXICO: near San Cristobal, Chiapas, at 7,000 to 8,800 feet, Nelson, 3151.

This and the following seven plates illustrate, to a small extent only, the variety in habit, foliage, and fruit exhibited by the Mexican species of Eryngium.—W. BOTTING HEMSLEY.

Fig. 1, a bract; 2, a pale; 3, a fruit; 4, a mericarp; 5, a cross section of a mericarp.—All enlarged.
Eryngium paucisquamosum, Hemsl.
ERYNGIUM PAUCISQUAMOSUM, Hemsl.

UMBELLIFERÆ.

E. paucisquamosum, Hemsl. (sp. nov.) ; species elegans, gracillima, ex affinitate E. Ghiesbreghii, a quo differt foliis crassioribus oblongis crenatis, involucri bracteis numerosioribus contiguisque.


MEXICO: mountains near Tlapancingo, at 6,000 to 8,000 ft., Nelson, 2083; summit of Sierra Madre, at 9,000 to 10,200 ft., Nelson, 2213.

The specimens cited above are all in the United States National Herbarium at Washington; and complete drawings of the specimens under the former number are in the Kew Herbarium. These and other specimens were lent, through the kind offices of Mr. J. N. Rose, by the late Dr. G. Brown Goode, Assistant Secretary of the Smithsonian Institution, for my intended monograph of the Mexican species of Eryngium; the herbarium material being generally in great need of revision.—W. BOTTING HEMSLEY.

Fig. 1, a pale; 2, a fruit surmounted by the calyx-lobes; 3, a mericarp showing the narrow commissure; 4, a petal; 5, cross section of fruit, one carpel aborted.—All enlarged.
Eryngium beecheyanum, Hook. et Arn.
Plate 2506.

ERYNGIUM BEECHEYANUM, Hook. et Arn.

UMBELLIFERÆ.


Caulis erectus, 1\(\frac{1}{2}\)–2 ped. altus, a medio corymboso-ramosus, apice dichotomo-ramosus, undique glaber, ramosis pedunculisque gracillisimus. Folia radicia et caulina inferiora desunt; caulina superiora sessilia, parva, 1–2 poll. longa, anguste bipinnatisecta vel suprae palmatisecta, spinoso-dentata. Capitula numerosa, distincte pedunculata, ovoidea, 3–5 lin. longa, apice ob paleas paucas auctas breviter comosa. Involucri bracteae circiter 10–12, rigide, lineari-lanceolatae, 4–8 lin. longae, spinoso-acuminatae, integre vel medio bidentatae. Paleae flores paulo superantes, vix rigidae, lineari-subulatae. Calycis dentes ovati, apiculati, circiter \(\frac{1}{2}\) lin. longi. Petala non visa. Carpella oblonga, absque calycis dentibus circiter \(\frac{1}{2}\) lin. longa et \(\frac{1}{3}\) lin. lata, elegantem denseque papillosa, papillis minutis globosis crystallinis; vittae sepe 7, minutæ; styli calycis dentes superantes, divaricati.

MEXICO: Jalisco, Beechey; Tepic, Barclay; Santa Maria, near Cuernavaca, Hahn, 400; Oaxaca, Ghiesbrecht; Michoacan, Altamirano, 24.

At first sight this might be taken for a slender form of E. Carlinae, Delar.; but apart from its slenderness and the more numerous heads, the involucral bracts are entire or only bidentate, the paleae are relatively and absolutely shorter, and the scales or papilla on the fruit are very different. E. beecheyanum was founded on very imperfect material, and it was only by very critical comparison that its identity with good specimens was established. The matter was further complicated by several other distinct species having been confused with it.—W. BOTTING HEMSLEY.

Fig. 1, a bract; 2, a pale; 3, a flower in an advanced stage; 4, a mericarp; 5, a petal; 6, a cross section of a mericarp.—All enlarged.
Eryngium spiculoseum, Hemsl.
ERYNGIUM SPICULOSUM, Hemsl.

UMBELLIFERÆ.

E. spiculorum, Hemsl. (sp. nov.); E. comoso simile sed ramosius, multo minus rigidum, foliis cauliniis subpalmatisectis, carpellis spiculis minutis ramosis ornatis.


México: without locality, Ocampo; Michoacan, Hahn; both in the Paris Herbarium; Estado de Morelos, F. Altamirano, 18; in the United States National Herbarium.

This is one of the most remarkable species in a genus abounding in singular and elegant forms. It is exceptional, so far as my investigations go, in having distinctly pedicellate flowers, and the beautiful appendages of the fruit are quite unlike those of any other species known to me. The description and figure were prepared from specimens in the Paris Herbarium, kindly lent by Prof. Bureau for my intended monograph of the Mexican species.—W. Botting Hemsley.

Fig. 1, a pedicellate flower with pale or bracteole; 2, a petal; 3, cross section of a mericarp.—All enlarged.
Eryngium sparganophyllum, Hemsl.
Plate 2508.

ERYNGIUM SPARGANOPHYLLUM, Hemsl.

UMBELLIFERÆ.

E. sparganophyllum, Hemsl. (sp. nov.); species insignis, inermis, foliis linearibus longissimis, involucris bracteis paleis simillimis.


NEW MEXICO: Las Playas Springs, near the Sierra de los Animos, Wright, 1103.

This is so very distinct, and so very different from E. longifolium, Cav., that one wonders why it was referred to that species.—W. Botting Hemsley.

Fig. 1, portion of leaf showing one of the few minute marginal prickles; 2, a bract; 3, a pale; 4, a fruit; 5, commissural view of a mericarp; 6, section of a fruit; the apparently winged condition is owing to the section being carried through some of the scale-like appendages.—All enlarged.
Eryngium cryptanthum, Hemsl.
ERYNGIUM CRYPTANTHUM, Hemsl.

**UMBELLIFERÆ.**

**E. cryptanthum, Hemsl. (sp. nov.);** species nana, monocarpica, capitulis parvis, involucris bracteis confertis flores superantibus.


**NORTHERN MEXICO:** Sierra Madre, Seemann, 2135.

This is not even closely allied to the species with which Seemann associated it; and is remarkable for the very small flower-heads concealed within the bracts of the involucre.—W. BOTTING HEMSLEY.

Fig. 1, a capitulum in vertical section; 2, a bract; 3, a pale; 4 and 5, flowers in an advanced stage; 6, a mericarp; 7, a petal; 8, cross section of a mericarp.—*All enlarged.*
Eryngium Galeottii, Hemsl.
Plate 2510.

ERYNGIUM GALEOTTII, Hemsl.

UMBELLIFERÆ.

E. Galeottii. Hemsl. (sp. nov.); species ex affinitate E. paucisquamosi, a quo differt imprimit folis lanceolatis et involucri bracteis aculeato-dentatis.


MEXICO: Cordillera of Oaxaca at 7,000 to 8,000 feet, Galeotti, 2767; Pringle, 4746.

I find that Schlechtendal and Chamisso (Linnœa, v. p. 207) reduce E. microcephalum, Willd. to E. Bonplandi, Delar., the type of which I have since seen in the Paris Herbarium. It differs in having small ovate-oblong leaves, very short, entire bracts, papillose carpels, and remarkably long, reflexed styles. E. Ghiesbreghtii, Decne., differs strikingly in having cordate leaves.—W. Botting Hemsley.

Fig. 1, a bract; 2, a pale; 3, a flower; 4, a petal; 5, a stamen; 6, cross section of a mericarp.—All enlarged.
Eryngium columnare, Hemsl.
ERYNGIUM COLUMNARE, Hemsl.

UMBELLIFERAE.

E. columnare, Hemsl. (sp. nov.); inter species armatae foliis anguste lanceolatis ob receptaculum valde elongatum insignis.


Mexico: without locality, Graham, 217; Bates.

This is one of four or five different species which have been referred in various herbaria and books to E. pectinatum, Presl., of which I have seen no authenticated specimen; but from the imperfect description, I am rather confident that the present plant cannot be that species. In the description of E. pectinatum, Presl. (DC. Prodr. iv. p. 96) we find: ‘involucri folioli. basi grosse spinoso-dentatis’ and ‘valde accedit ad E. bromeliafolium’; but E. columnare much more closely resembles E. cymosum, Delar. (E. axilliflorum, Turcz.) Indeed the foliage is very similar, but the habit and fruit are different. The plant referred by Hooker and Arnott (Bot. Beech. Voy. p. 293) to E. pectinatum is also very near; the heads are globose, however, and the fruit clothed all over with cellular scales.—W. BOTTON HEMSLEY.

Fig. 1, a pale; 2, a young fruit; 3, cross section of the same.—All enlarged.
Calvaria major, Gærtn. f.

Sapotaceæ.


Mauritius: Montagnes des Immortelles, A. Daruty, communicated by Bouton; without special locality, W. Scott.

This is the 'Bois de Natte,' or at least one of the trees bearing that name in Mauritius. It is also called the 'Tambolacoque,' and it is doubtless the Calvaria major of Gærtner the younger; but its synonymy cannot be given with certainty. Bouton sent two different plants to Kew on different occasions, which he confused. He correctly identified one of them with Calvaria, and sent both fruits and flowering specimens; but he appears to have been wrong in supposing that Calvaria major, Gærtn. f., was the same as Sideroxylon boutonianum A. DC. (Prodr. viii. p. 179). Baker (Flora of Mauritius, p. 193) places Cal-
varia major as a synonym of Sideroxylon grandiflorum, A. DC., but his description of leaves and flowers was drawn up from specimens bearing the same name, though evidently of a different species from the one here figured. In the absence of the types of De Candolle's species, the question of synonymy must be left for the present. Calvaria is probably as distinct a genus as many others in the order, and no harm can result from temporarily restoring it. The solitary horizontal seed is remarkable.

Two or three years ago Prof. Newton sent to Kew, through Mr. I. H. Burkill, some seeds which had been unearthed with bones of the Moa. It was supposed at the time that they belonged to Calvaria major, Gaertn. f., but further investigation points to their belonging to the species named C. hexangularis, Gaertn. f., which has not been identified with any existing tree.—W. Botting Hemsley.

Fig. 1, calyx and pistil; 2, portion of corolla with stamens and staminodes attached; 3, a stamen; 4, a staminode; 5, pistil; 6, cross section of the ovary; 7, a fruit, copied from Gaertner; 8, a seed; 9, vertical section of a fruit, the pericarp much dried, showing the horizontal embryo; 10, cross section of a seed, showing the fibrous inner layer of the testa; 11, a similar section, below the cavity containing the albumen and embryo, showing traces of the vascular bundles which run from the peduncle to the inner testa; 12, a seed, from which the outer testa has been removed, seen from above; 13, the same, from below; 14, embryo.—Figures 1-6 enlarged; the rest natural size.
Plate 2513.

ALOE NUTTII, Baker.

LILIACEÆ. Tribe ALOINÆ.

A. Nuttii, Baker (sp. nov.); ad A. Cooperi accedit; differt perianthii tubo elongato oblongo, foliis multo angustioribus.


East Central Africa: Fwambo, south-east of Lake Tanganyika, A. Carson; W. H. Nutt.

This new Aloe belongs to a group having acaulescent rosettes of long scarcely fleshy narrow leaves, which is represented by six species in Cape Colony and three in Tropical Africa. The number of Aloes known in Tropical Africa now amounts to nearly forty, and every new district that is explored yields new species.—J. G. Baker.

Fig. 1, portion of leaf; 2, flower; 3, anthers; 4, pistil.—All enlarged.
Echinops bromeliacolius, Baker.
ECHINOPS BROMELIAEFOLIUS, Baker.

**Composite. Tribe Cynaroideae.**

**E. bromeliaefolius**, Baker (*sp. nov.*); a speciebus omnibus hactenus cognitis differt foliis linearibus longitudinaliter crebre nervosis.


**East Central Africa**: Nandi, *Scott Elliot*, 7001.

This very curious new species of *Echinops* was gathered by Mr. Scott Elliot on his expedition to explore Mount Ruwenzori, on his route between Mombasa and Uganda, at an elevation of probably 6,000–7,000 feet above sea-level. Of the species already known in Tropical Africa it comes nearest the Abyssinian *E. longifolius*, A. Rich.—*J. G. Baker*.

Fig. 1, portion of leaf; 2, a one-flowered capitulum and involucere; 3, portion of receptacle; 4, 5, 6, 7 and 8, bracts of involucere; 9, corolla; 10, achene with pappus; 11, pappus, unrolled; 12, three stamens; 13, style-branches.—*All enlarged.*
Tagca viridis Hems!
Tacca viridis, Hemsl.
Plates 2515 and 2516.

TACCA VIRIDIS, Hemsl.

TACCACEAE.

T. viridis, Hemsl. (sp. nov.); inter species foliis divis is foliis palmatisectis distincta.


INDIA. Presented to Kew by Messrs. James Veitch & Son in 1895. It is probably from the Malayan Peninsula.

Ripe fruit of this was not obtained until after the plate was printed off. It is very similar to that of T. pinnatifida, Forst.—W. Botting Hemsley.

Plate 2516: fig. 1, section of bracteole; 2, a flower; 3, vertical section of a flower; 4, extrorse stamen attached to perianth; 5, hooded connective containing the anther-cells; 6, a lobe of the stigma showing the pore.—All enlarged.
Coelarthron Brandisii, Hook. f.
Plate 2517.

COELARTHRON BRANDISII, Hook. f.

Gramineae. Tribe Andropogonae.


Cauli prostrati, ad nodos radicantes, graciles, albidi, glabri; rami florentes ascendentes vel erecti, 3–6-foliati, 6–9 poll. longi, foliis infinis approximatis a summo longe distantibus, internodiis superioribus 2 e vaginis exsertis. Foliorum vaginae arctae, glabrae; ligulæ breves, ovatæ, obtusæ, glabrae; laminæ lanceolatae, utrinque acuminatae vel acutæ, membranaceæ, flaccideæ, glabrae, tenuiter nervose, 1–2 poll. longe, 2–3½ lin. latæ. Spicæ solitariae, strictæ vel leviter incurvæ, secundæ, albidæ, glabrae, 1–1½ poll. longæ; rhachis fragilis; internodia clavata, tubulosa, plano-convexa, apice truncate, spiculis sessilibus breviora. Spicula imbricatae, geminate; par infimum imperfectum; caetera paria heterogama altera spicula sessili hermaphroditæ altera pedicellata plus minusve vel interdum admodum redacta. Spicula sessili, a dorso compressa, 1½ lin. longa; gluma i ovato-oblonga basi in callum minutum barbatum producta, apice obscure truncate, in dorso glabro canaliculata marginibus in flexis angustis carinis supra medium ciliatis; gluma ii cymbiformis, apice suboblonga, 1–nervis, ciliata, sub apice aristata, arista gracili torta glumam circumciter æquante; gluma iii vacua, a dorso complanata, oblonga, quam ii paulo brevior, tenuis, marginibus angustissimis inflexis, flexuris ciliatis; gluma iv minuta, ovato-oblonga, bifida, glabra, 3–nervis, e sinu aristata, arista gracili geniculata columna torta fusca, seta albidæ; palea minuta, ovata, obtusa, glabra, hyalina. Spicula pedicellata inermis, pedicello complanato lineari vel clavato-lineari ciliato.

BURMA: high ground, generally where there is teak, Brandis.—O. STAFF.

Fig. 1, two pairs of spikelets; 2, glume i, seen from inside; 3, sessile spikelet, with glume i removed; 4, glume ii; 5, glume iii; 6, glume iv; 7, palea; 8, flower, showing only one stamen; 9, lodicule.—All enlarged.
Efulensia clematoides, C.H. Wright.
Plate 2518.

EFULENSIA CLEMATOIDES, C. H. Wright.

Passifloraceae. Tribe Passiflorae.


West Tropical Africa: Cameroon region, Efulen, G. L. Bates, 422.

This genus is most nearly allied to the West African Crossostemma, Planch., with which it agrees in having a uniseriate corona, 5 stamens and a sessile ovary, but differs in its compound leaves and divided style.—C. H. Wright.

Fig. 1, flower; 2, portion of corona seen from within; 3, two stamens and pistil; 4, dorsal view of young stamen; 5, section of ovary.—All enlarged.
Anona Prestoei, Hemsli.
Anona Prestoei, Hemsl.
ANONA PRESTOEI, Hemsl.

ANONACEÆ.

A. Prestoei, Hemsl. (sp. nov.); species foliis amplis fructu fibroso-lignoso magno sphaeroideo insignis.


TROPICAL AMERICA: cultivated specimens from Trinidad, Prestoe; Hart.

Specimens of this remarkable tree were first received in 1883, from Mr. H. Prestoe, then superintendent of the Trinidad Botanic Garden, with a note that it had been brought under his notice by the Hon. Leon Giuseppi, and was probably a native of Venezuela. The present superintendent, Mr. J. H. Hart, has completed the material. It is very near the Mexican A. involucrata, Baill. in foliage, but it wants the enveloping bracts, at least in the stages in which it is represented at Kew, and it is thought desirable not to risk confusing two species under one name. Baillon does not describe the singular fruit.—W. Botting Hemsley.

Plate 2519: fig. 1, the three inner petals; 2, the innermost petal.—Both natural size.

Plate 2520: fig. 1, a flower from which the petals have been removed; 2, stamens; 3, carpels; 4, a seed; 5, section of the same from which the testa has been removed; 6, portion of testa showing some of the projections which cause the ruminated appearance of the albumen.—All more or less enlarged except 4, which is natural size.
Sacoglottis amazonica, Benth.
SACOGLOTTIS AMAZONICA, Mart.

Humiriaceæ.


TRINIDAD: Irios forest, Cedros, *Crueger*; *J. H. Hart*. Also in the delta of the Amazon, *Martins*.

The singular drift-fruit of this tree was known to European writers nearly three centuries ago. Clusius seems to have been the first to describe and figure it, in his *Exoticorum Libri Decem*, lib. ii. cap. 19 (1605). It is remarkable for the numerous large resin-chambers in the endocarp. Dr. D. Morris has given the history of it in *Nature*, liii. pp. 64–66 (1895).—W. BOTTING HEMSLEY.

Fig. 1, a flower; 2, a sepal; 3, andreeum; 4, stamens; 5, pistil; 6, cross section of ovary; 7, a fruit; 8, a fruit denuded of its epicarp (copied from *Nature*); 9, one of the divisions into which the fruit finally breaks up; 10, a seed.—*Figures* 1–6 enlarged, 7–10 natural size.
Tradescantia orchidophylla, Rose et Hemsl.
Plate 2522.

TRADESCANTIA ORCHIDOPHYLLA, Rose et Hemsl.

Commelinaceae.

T. orchidophylla, Rose et Hemsl. (sp. nov.); T. fusca similis sed foliis orbicularibus sessilibus differt.


I have only seen a single specimen of this remarkable species of Tradescantia. In habit it resembles T. fusca, Lodd. (Pyrrheima Loddigesii, Hassk.), a Brazilian species cultivated early in the century; but it is at once distinguished by its sessile, orbicular leaves.—W. Botting Hemsley.

Fig. 1, a flower, natural size; 2, the same, enlarged; 3, views of a stamen, enlarged; 4, pistil, enlarged.
Notoceptrum natalense, Baker.
NOTOSCEPTRUM NATALENSE, Baker.

Liliaceae. Tribe Hemerocallideae.

N. natalense (Baker in Fl. Cap. vi. 285); habitu et foliis omnino specierum typicarum angolensium, recedit perianthii tubo segmentis triplo longiore.


Natal: Klip river country, Mrs. Katherine Saunders; Wood, 3895.

The genus Notosceptrum has entirely the habit of Kniphofia, from which it differs by its short bell-shaped perianth. When I originally described in 1877 the two Angolan species collected by Welwitsch I did not separate them from Kniphofia. This was done by Mr. Bentham, when he worked out the order for the 'Genera Plantarum.' None of the species have been brought into cultivation, and this is the first time the genus has been figured.—J. G. Baker.

Fig. 1, bract; 2, perianth; 3, pistil.—All enlarged.
Balsamodendron Playfairii, Hook. f.
Plate 2524.

BALSAMODENDRON PLAYFAIRII, Hook. f.

BURSERACEÆ.


EAST AFRICA: Somali coast, Playfair.

This plant yields the Hotai gum-resin. As the above synonymy shows, it has been referred to two other species. In a set of admirable sketches of the fruits and leaves of several species of Balsamodendron communicated to the Director of Kew by Dr. Schweinfurth, are some marked Hildebrand, n. 1382 (1875), which the author identifies, in the place cited, with B. Playfairii, but it has relatively long petioles, often toothed leaflets and a rugose or tubercled endocarp, and is the same as that figured in Bentley and Trimen’s ‘Medicinal Plants’ as B. Myrrha. As stated in the Kew Bulletin 1896, p. 87, this appears to be closely allied to B. (Commiphora) Schimperi.—W. BOTting HEMSLEY.

Fig. 1, leaves; 2, a flower; 3, a petal; 4, stamens, disk and pistil; 5, disk and pistil; 6 and 7, fruit; 8, fruit from which a portion of exocarp has been removed showing the smooth endocarp; 9, section of a fruit showing the aborted ovules.—All more or less enlarged.
Asperella Duthiei, Stapf.
Plate 2525.

ASPERELLA DUTHIEI, Stapf.

Gramineæ. Tribe Hordeæ.


India: Tihri Parhwal, 7,000–8,000 feet, J. F. Duthie, 14564. China: Chienshih, south-west Hupeh, A. Henry, 5918.—O. Staff.

Fig. 1, a ligule; 2, rhachilla with modified terminal glume; 3, a pair of spikelets; 4, flowering glume; 5, palea; 6, a lodicule; 7, pistil.—All enlarged.
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ERRATUM

In the letterpress to plate 2512, p. 2, line eleven from the top, for Moa read Dodo.
Stilbe mucronata, N.E. Br.
STILBE MUCRONATA, N. E. Brown.

Verbenaceae.

S. mucronata, N. E. Brown (sp. nov); S. phylicoidi affinis, sed foliis reflexis subts tomentosis facile distinguitur.

Frutex 1–2 ped. altus, erectus, ramosus, ramis dense villosos-tomentosis. Folia conflerta verticillata, 4–5-na, reflexa vel patentia, rarissime suberecta, 2–4 lin. longa, \(\frac{1}{3}\) lin. lata, linearia vel anguste deltoideo-attenuata, brevissime mucronata, juvenia sericeo-tomentosa, mox supra glabra, subts tomentosa, margine revoluta. Capitula subglobosa, alba, circa 6 lin. diam. Bracteae anguste lanceolatae vel oblongatae, acuta, calyce subaequilongae, vel interdum late lanceolatae, apicem plus minusve foliiferae mucronatae quam calyx longiores, dorso marginibusque dense villosos-barbatis, 1\(\frac{1}{2}\)–2\(\frac{1}{2}\) lin. longae, \(\frac{1}{2}\)–\(\frac{3}{4}\) lin. latae. Calyx infundibuliformis, 1\(\frac{1}{2}\)–1\(\frac{3}{4}\) lin. longus, ultra medium 5-lobus, lobis lanceolatis acutis, intus marginibusque dense villosos-barbatis dorso infra acicem glabris. Corolla tubus infundibuliformis, 1\(\frac{1}{2}\)–1\(\frac{3}{4}\) lin. longus, utrinque glaber, lobi quinque, 1 lin. longi, in basi \(\frac{1}{2}\) lin. lati, erecti, lineari-attenuati, acuti, intra dense villosos-barbatis. Stamina 4, e sinibus corolle enata, 1\(\frac{1}{2}\) lin. longa. Ovarium glabrum, uniloculare; stylus fere 2 lin. longus, glaber. Ovula 2, e basi ovarii erecta.—Phyllica mucronata, E. Mey. in Drège Zwei Pfl. Docum. p. 84, nomen tantum.

South Africa: Lowrys Pass, Stellenbosch Division, at 1,000-2,000 feet, Burchell, 8221; Drège. Houwhoek Mountains, Caledon Division, at 1,400 feet, April, 1895, Bolus, 8409; between Palmiet River and Lowrys Pass, Burchell, 8172.—N. E. Brown.

Fig. 1, leaf, seen from beneath; 2, flower and bracts; 3, bract; 4, corolla laid open; 5, anther; 6, pistil; 7, longitudinal section of ovary. All enlarged.
Cadaba termitaria, N.E.Br.
Cedera termitaria, N. E. Brown (sp. nov.); C. farinosa affinis, differt floribus majoribus apetalis et nectario androphoro adnato.

Ramorum cortice cinereo, ramuli horizontaliter patentes, \( \frac{1}{2} - 2\frac{1}{2} \) poll. longi, dense albido-pulverulenti. Folia petiolata, coriacea, obovato-oblonga, obtusa, pulverulenta, 3–7 lin. longa, 1\( \frac{1}{2} \)–3 lin. lata, petiolis 1–1\( \frac{1}{2} \) lin. longis. Flores 1–3 ad apices ramulorum dispositi. Pedicelli 2\( \frac{1}{2} \)–4 lin. longi. Sepala exteriora compresso-cymbiformia acuta, 6 lin. longa, 2\( \frac{1}{2} \) lin. lata, interiora plana ovata, acuta, 6 lin. longa, 3–3\( \frac{1}{2} \) lin. lata, omnia viridia pulverulenta. Petala nulla. Stamina 5, fere ad apicem gynophori adnata, filamenta 3\( \frac{1}{2} \)–4 lin. longa. Gynophorum 19 lin. longum, curvatum. Nectarinm posticum, 6 lin. longum, 2\( \frac{1}{2} \)–3 lin. latum, androphoro omnino adnatum, ovato-oblongum, valde compressum, ore obliquum, basi rotundatum saccatum.

South Tropical Africa: Mashonaland, at 4,300 feet, Hartley; Marshall.

This species somewhat resembles C. farinosa, Forsk., in appearance, but is at once distinguished by the absence of petals and by the large, much compressed nectary, adnate to the androphore, in which character it differs from all the other species of the genus. From C. natalensis, Sond.—figured in Harvey’s The$ Cap. i. t. 60—it is distinguished by its larger flowers and much shorter pedicels, as well as by the adnate nectary. Its discoverer, Mr. G. A. K. Marshall, notes on his label that it ‘grows only on the large ant-heaps made by termites’ and that it is the ‘food plant of the butterflies Teracolus Walprenesii, Butl., and T. Topha, Wal.’ By an oversight the flowers were drawn in an inverted position.—N. E. Brown.

Fig. 1, a sepal; 2, a flower, sepals removed; 3, anthers. All enlarged.
Bulbine mesembryanthemoides, Haw.
PLATE 2528.

BULBINE MESEMBRYANTHEMOIDES, Haw.

LILIACEÆ.

B. mesembryanthemoides, Haw. in Tilloch Phil. Mag. 1825, p. 31; species insignis folii subterraneis ab omnibus distincta.


SOUTH AFRICA: among shrubs near the Zwartkops River, Uitenhage Division, Zeyher, 1068; Albany Division, Bowker.

Concerning this curious plant Professor P. Macowan, who has sent tubers to Kew, writes: 'I am sending you a little postal-box containing _Bulbine mesembryanthemoides_ from Wolve Fontein. It is not easily detected; the two swollen leaves lie almost underground, and at the flowering stage have almost always lost by exsiccation such part as protrudes into the hot pulsating Karoo atmosphere. The underground part is alive and green, the ragged brown projecting tips are quite dead. I am fortunate in being able to distribute it in a fruiting state.' The accompanying plate was prepared almost entirely from a coloured drawing in the Kew collection by James Bowie, dated 1823.—N. E. Brown.

Fig. 1, a flower; 2, the same with two of the perianth-segments removed; 3, apex of style and stigma; 4, transverse section of ovary. _All enlarged._
Pentzia virgata, Less.
Plate 2529.

**PENTZIA VIRGATA, Less.**

**Compositæ. Tribe Anthemideæ.**


**South Africa**: common, especially in dry regions, from Little Namaqualand and Worcester Division to Albany and the Orange Free State.

This is much relished by sheep, and valuable as a fodder plant in dry, hot countries where few other plants will succeed. It is said to impart a peculiar and agreeable flavour to mutton. For further particulars see *Kew Bulletin*, 1896, p. 129.—N. E. BROWN.

Fig. 1–3, various forms of leaves; 4, bract from the involucre; 5, a floret; 6, anthers; 7, style branches and stigmas; 8, an achene. *All enlarged.*
Crassula acinaciformis, Schinz.
Plate 2530.

CRASSULA ACINACIFORMIS, Schinz.

Crassulaceæ.

C. acinaciformis, Schinz in Bull. Herb. Boiss. ii. 204; species habitu aloiformis distinctissima.


South Africa: Houtbosch, Transvaal, Rehmann, 6375; hillsides, in damp places near Barberton, at 2,000–4,000 ft. Galpin.

This plate was prepared from a plant raised at Kew from seed, and dried specimens, sent by Mr. Galpin.—N. E. Brown.

Fig. 1, margin of leaf; 2, a bracteole; 3, a flower; 4, pistil and hypogynous scales. All enlarged.
Euphorbia grandicornis, Goebel.
Plates 2531 and 2532.

EUPHORBIA GRANDICORNIS, Goebel.

Euphorbiaceæ.


SOUTH AFRICA : Umfolosi River, Zululand, Stone.

Described and figured from a plant cultivated at Kew. This remarkable and very distinct species seems more nearly related to E. lemaireana, Boiss. than to any other described species, but is readily distinguished from all by its very long, stout spines. The involucres appear to be entirely unisexual, all that I have examined being male, without a trace of a female flower within them. At their base, however, completely concealed under the bracts are two very rudimentary lateral involucres, in each of which a very young female flower was found, which possibly under natural conditions may develop and fructify, but in the Kew plant has not done so ; the whole inflorescence falling off after the pollen is shed.—N. E. Brown.

Plate 2532: Fig. 1, inflorescence; 2, longitudinal section of an inflorescence; 3, part of an involucre showing the glands and the scales at the throat; 4, a scale from the throat of the involucre; 5, bracteoles; 6, male flowers. All enlarged.
Ficus heteromorpha, Hemsl.
Ficus heteromorpha, Hemsl.
Plates 2533 and 2534.

FICUS HETEROMORPHA, Hemsl.

URTIACEAE. Tribe Artocarpeae.

F. (§ Eusyce) heteromorpha, Hemsl. (sp. nov.); inter species sinenses ob folia per-variabilia insignis.


China: various localities in the provinces of Kiangsi, Hupeh, and Szechuen. A. Henry, 1933, 3439, 3924, 3965, 5541, 6362, 6550, 7443; T. L. Bullock, 227, 228; A. E. Pratt, 719.

The leaves of this species are exceedingly variable, but there is almost always a trace, though sometimes very obscure, of the lobing which is so fully developed in the principal figure in plate 2533. There is less variability in the receptacles, which are always sessile, and the smooth bark is usually of a red-brown colour. Mr. Bullock's 227 (plate 2534), bearing female flowers, was only a foot high; and Mr. Henry describes his 5541, bearing male receptacles, as a shrub two feet high. On the other hand, his 7443, which is very much like Mr. Bullock's 228, of which a leaf is represented in plate 2534, is described
as a tree twenty feet high, though this may have resulted from an error. All the other numbers, where dimensions are given, are small shrubs.—W. Botting Hemsley.

Plate 2533: The principal figure and the dissections of the male and gall flowers are from Mr. Henry’s 6362, and the upper of the detached leaves his 3439, the lower his 1933. Fig. 1, a male receptacle; 2, section of the same; 3, a male flower; 4, a gall flower; 5, section of the same enclosing Cynips; 6, female from Henry’s 7443; 7, pistil; 8, fruit; 9, embryo. All enlarged.

Plate 2534: The branch bearing female flowers is Mr. Bullock’s 227, and the dissections are from the same; the detached leaf on the right is his 228, which he regarded as the same species as 227; the detached leaf to the left is Mr. Henry’s 3965. Fig. 1, a female receptacle; 2, section of the same; 3, female flower; 4, pistil. All enlarged.
Ficus kingiana, Hemsl.
Plate 2535.

FICUS KINGIANA, Hemsl.

URTIACEÆ. Tribe ARTOCARPEÆ.

F. (§ Sicydium) kingiana, Hemsl. (sp. nov.); species ex affinitate F. sikkimensis, a qua differt foliis supra scabridis et pedunculis longioribus.

Frutex vel arbuscula 15-20-pedalis, ramulis fructiferis confertis gracillisimis glabris, internodiis quam folia multo brevioribus. Folia breviter petiolata, tenuia, demum vix coriacea, supra scabrida, lanceolata, interdum usque ad 5 poll. longa, sed sepius multo minora, acuminata, basi cuneata, integra, a basi triplinervia, venis subtus demum sat conspicuis. Receptacula ad axillas foliorum geminata, inaequaliter pedunculata, scabriuscula, globosa, circiter 3 lin. diametro; pedunculi graciles, ad medium bracteis 2 minuti instructi, longiores 3-4 lin. longi. Bracteae ad os receptaculi minuter, appresse. Flores masculini sessiles, monandri (rarissime pseudo-hermaphroditii); perianthii segmenta 3, vel interdum 2, oblonga. Flores gallipari sessiles; perianthii segmenta oblonga, ovario stipitato. Flores feminæi stipitati, ovario sessili.

Formosa: Tamsui, Oldham, 547, 548; Kelung, Ford, 40; Takow, Henry, 708, 708a; Bankinsing, Henry, 166; South Cape, Schmürer, hb. Henry, 925, 1337.

It is doubtful whether this species should not be placed in Dr. G. King's section Palæomorpha, and near F. gibbosa, Bl.; but the pseudo-hermaphrodite flowers appear to be exceedingly rare, and in other respects it strongly resembles F. sikkimensis, Miq.—W. BOTting HEMSLEY.

The small branch at the top and the figures 1-3 are from Mr. Ford's 40. The larger branch as well as figure 4 is from Mr. Henry's 708a. Figures 5-8 are from Mr. Henry's 1337. Fig. 1, male receptacle; 2, section of the same; 3, a male flower; 4, a gall flower; 5, female receptacle; 6, section of the same; 7, a female flower; 8, pistil. All the numbered figures enlarged.
Ficus stenophylla, Hemsl.
Plate 2536.

FICUS STENO PHYLLA, Hemsl.

URTI CÆÆ. Tribe ARTO C ARPEÆ.

F. (§ Eusyce?) stenophylla, Hemsl. (sp. nov.); species foliis angustis a F. pyriformi receptaculis breviter pedunculatis sphaeroides differt.

Frutex paucipedalis, jam a 2 ped. altus fructificans, glaber vel glabrescens, ramulis gracilibus internodiis brevissimis. Folia brevis-sime petiolata, tenuia, vix coriacea, lineari-lanceolata, 2-4 poll. longa, 4-8 lin. lata, utrinque attenuata vel basi subrotundata, levia, venis inconspicuis. Receptacula feminea tantum visa, subsessilia, vel breviter pedunculata, conoidea vel sphaeroides, 4-5 lin. diametro, glabra vel leviter puberula. Involucrum bracteæ minutæ, rotundatae, persistentes. Bractæ ad os receptaculi exteriore sub erectæ.

China: Hainan, A. Henry, 8716; Szechuen, on the Min River, E. Faber, 446; Hupeh, various localities, A. Henry, 2963, 4350, 4350, A.

It is with some amount of misgiving that this has been separated from F. pyriformis, Hook. et Arn., though by a combination of characters it is easily distinguished, at least so far as the material under observation is concerned. — W. BOTTING HEMSLEY.

The large branch and figures 1-6 are Mr. Henry's 8716, and the remainder his 446. Fig. 1, female receptacle; 2, section of the same; 3, a flower; 4, pistil; 5, ripe achene in section; 6, embryo. All enlarged.
Omphalea megacarpa, Hemsl.
OMPHALEA MEGACARPA, Hemsl.

EUPHORBIACEÆ. Tribe Crotoneæ.

0. megacarpa, Hemsl. (sp. nov.); foliis membranaceis lanceolatis, fructu maximo.

Frutex alte in arbores scandens, caulibus 300-400 ped. longis. Folia paucu delapsa tantum visa, graciliter petiolata, membranacea, lanceolata, cum petiolo 8-12 poll. longa, 2-3 poll. lata, undique glabra, subtus pallidiora, venis primariis lateralibus utrinque circiter 6 longe arcuatis, venis ultimis tenuissimis sed sat conspicuis. Flores . . .

Fructus ovoidus et 2-spermus vel depresso globosus et 3-spermus; pericarpium carnosó-fibrosum; septa demum omnino evanescentia. Semina subhemisphærioidea vel subtrigona, arillo (?) crasso pulposo-carnoso albido omnino vestita; testa crustacea, brunea, verruculosa; albumen copiosum, oleiferum; embryo centralis, cotyledonibus latis planis orbicularibus.

West Indies: Tobago, Dr. M. Gilloway. There are seeds in the Museum from the same island, communicated by Mr. M. A. Gillespie. There are also cultivated specimens from Trinidad, J. H. Hart, and Grenada, W. E. Broadway. The latter adds that he is informed that it grows wild in the mountains of Grenada.

Mr. Broadway, Curator of the Botanic Garden, Grenada, notes that the "nuts" are edible. Mr. Gillespie states that the negroes use the seeds as a drug and have great faith in their sustaining powers on long journeys. Mr. Hart, Superintendent of the Botanic Garden, Trinidad, believes, from practical experience, that the seed will afford a valuable and safe, bland purgative. The albumen is the part employed. The seed bears the name of Hunter-man's nut in Trinidad.

It is a little uncertain whether the pulpy layer covering the crustaceous testa is of the nature of an aril, or merely a soft layer of the testa itself; our material being insufficient to trace its development. Mr. Hart has tested this pulp and found that it contains
fifty per cent. of starch. The seeds of *O. diandra*, *L.*, are very much like those of *O. megacarpa*, but the foliage is very different. I have not succeeded in finding an adequate description of the fruit and seed of any of the West Indian species. Besides the West Indian and tropical American species, the genus is represented in Madagascar, the Malay Archipelago, and Eastern tropical Australia. —W. BOTTING HEMSLEY.

Fig. 1, a leaf of medium size; 2, a 2-seeded fruit, a portion of the pericarp removed, showing one of the hemispherical seeds as it appears when enveloped in the aril; 3, a seed from which a portion of the aril has been removed; 4, a seed from which the whole of the aril has been removed; 5, a section of the same showing the embryo. *All natural size.*
Machilus Thunbergii, Sieb & Zucc
MACHILUS THUNBERGII, Sieb. & Zucc.

Laurineæ.


Eastern Asia: Hongkong and Chekiang westward to Szechuen, in China; also in Formosa, Japan, and the Corean Archipelago.

Shavings of the wood of this tree yield a mucilage, when soaked in water, which is used by Chinese ladies in ‘bandolining’ their hair. Dr. E. Bretschneider (Notes on some Botanical Questions connected with the Export Trade of China, 1880, p. 14) mentions the shavings as being exported from Canton to Peking under the name of mei ko pao hua (i.e. cosmetic glue shavings), and their probable source as Sterculia platanifolia. In 1895 G. M. H. Playfair, Esqr., H.B.M. Consul at Ningpo, sent to Kew specimens in leaf of a tree, called tiao chang, which he had collected in the mountains near Ningpo, with the information that shavings of the wood were used for the purpose described above by the women of that part of China. These specimens were identified as Machilus Thunbergii, Sieb. et Zucc., and flowering specimens subsequently received from the same gentleman confirmed the identification. Mr. Playfair further adds, on the authority of Mr. A. Henry, that the Canton shavings are from the same tree.—W. Botting Hemsley.

Fig. 1, an unexpanded flower; 2, an expanded flower; 3, androecium; 4, anther with its valves closed; 5, the same open; 6, one of the inner stamens and 2 stipitate glands; 7, a staminode; 8, pistil in section; 9, embryo. All more or less enlarged.
Dracaena Ombet, Kotschy & Peyr.
PLATE 2539.

DRACAENA OMBET, Kotschy et Peyr.

LILIACEÆ. Tribe Dracænæ.


East Tropical Africa: mountains of Anguab, west of Suakin, at 2,500–4,000 ft., Heuglin; mountains of Erkanit, west of Suakin, at 5,000 ft., Schweinfurth, 250; mountains of Erythraea, 4,500–6,500 ft., Schweinfurth.

The Nubian Dragon’s-blood tree differs from the well-known Canarian species by its shorter, thicker leaves, shorter pedicels and smaller flowers, with scarcely any tube. It grows gregariously upon the hills of Nubia and Northern Abyssinia, mixed with Acacias and frutescent Euphorbias. The panicles are developed in May and June, and the flowers are a favourite food of camels. The Tigrina name is Asa-ara and the Tigré name Arob.—J. G. Baker.

Fig. 1, section of leaf; 2, an expanded flower; 3, stamens; 4, pistil. All enlarged except 1, which is natural size.
Impatiens Flanaganæ, Hemsł.
Plate 2540.

IMPATIENS FLANAGANÆ, Hemsl.

Geraniaceæ. Tribe Balsamineæ.

I. Flanaganæ, Hemsl. (sp. nov.); ab I. capensi, species sola ex Africa australi hactenus cognita, magnitudine et plantæ et florum valde differt.


South Africa: Woods on the banks near the mouth of the St. John's river, Pondoland, Mrs. Flanagan; Bolus, 8729.

The number of species of Impatiens now known to inhabit the mountains of tropical Africa is considerable, but the very distinct one here figured is, I believe, only the second one found within the limits of Cape Colony. It is named after Mrs. Flanagan, the first discoverer, and wife of Mr. H. G. Flanagan, an ardent botanical explorer of South-Eastern Africa.—W. Botting Hemsley.

Fig. 1, a flower-bud in an advanced stage; 2, spurred sepal; 3, outer petal from a bud; 4, andræcium. All enlarged.
Mairia coriacea, Bolus.
MAIRIA CORIACEA, Bolus.

Composite. Tribe Asteroideæ.

M. coriacea, Bolus (sp. nov.); inter species subcaulescentes foliiis amplis crassissimis et scapis numerosis distinctissima.

_Herba_ caudice incrassato fusco-lanato. _Folia_ 2 vel 3, radicalia, valde coriacea, obovato-spatulata, 4–7 poll. longa, apice rotundata, deorum attenuata, integra vel interdum apicem versus obscure lobulata, superne glabra, inferne interdum araneoso-lanata, deum glabrescentia, venis distantibus prominentibus. _Scapi_ 4–6, sæpe monocephali, 2–4 poll. alti, atque bractee lineares purpurei, tomentosi. _Involutrum_ turbinatum 9–12 lin. diametro, bracteis 2–3 seriatis, exterioribus lanceolatis, interioribus linearibus, omnibus denticulatis acutis purpureis tomentosis. _Flores disci_ flavi, involucrum paulo superantes, acheniis eorum fertilibus. _Flores radii_ purpurei, involucrum $1\frac{1}{2}$ vel fere 2-plo excedentes.

South Africa: Houw Hoek, Caledon Division. Cape Colony, at 1,100 to 2,500 ft., Bolus, 6940; Schlechter, 7440.—H. Bolus.

Fig. 1, a ray-flower; 2, a disk-flower; 3, pappus of ray-flower; 4, anthers; 5, style of disk-flower. _All enlarged._
Glossostemon Bruguierii, Desf.
Glossostemon Bruguieri, Desf.

Sterculiaceae. Tribe Dombeyee.

G. Bruguieri, Desf. in Mém. Mus. Par. iii. p. 238, t. 11; species unica.


South Arabia: Interior of Hadramaut, Hirsch, 170. Mesopotamia: in the desert around Kerkuk and at the foot of Mount Tell Kokab, Haussknecht; Aucher; barren sandstone in the Hamrir range, between 60 and 70 miles north of Bagdad, Mockler. Western Persia: Dizful, Loftus.

Kew is indebted to Rear-Admiral R. W. Blomfield for excellent specimens of this interesting plant, collected, or procured, by Colonel
Mockler, H. B. M. Consul-General at Bagdad. Ripe fruit was previously unknown. The plant figured in plate 2460 as a Dombeya, proves, as Dr. G. Schweinfurth pointed out to us, to be a young state of Glossostemon, which, however, is better placed in the Dombeyee than in the Buettneriee. It has none of the special floral characteristics of the latter group, and the fruit is not like that of any genus of either group, though it probably has the double dehiscence, loculicidal, and eventually septicidal, of Dombeya itself.

This plant bears the name of moghath at Bagdad, and some account of its uses will shortly appear in the Kew Bulletin.—W. Botting Hemsley.

Fig. 1, a sepal; 2, a petal; 3, a staminode and adherent stamens; 4, anthers; 5, ovary; 6, one of its numerous appendages, some of which develop into hard spines on the fruit; 7, cross section of the ovary; 8, a seed; 9, embryo intact; 10, cross section of the same with cotyledons partly unrolled; 11, embryo unrolled. All enlarged.
PLATE 2543.

ERYNGIUM REPTANS, Hemsl.

UMBELLIFERÆ.

E. reptans, Hemsl. (sp. nov.); habitu E. nasturtiifolii, a quo differt foliis dentatis vel serratis, nec lobatis, capitulis globosis ecomatis.


GUATEMALA: Quezaltenango, Bernoulli & Cario, 2745.

This is represented in the Kew Herbarium by two small plants, and in the Berlin Herbarium by one from the same collectors. It is not closely allied to any species.—W. BOTTING HEMSLEY.

Fig. 1, a bract; 2, a pale; 3, a fruit; 4, a carpel; 5, a transverse section of the same. All enlarged.
Eryngium deppeanum, Ch et Schl.
Plate 2544.

**ERYNGIUM DEPPEANUM, Ch. & Schl.**

*Umbellifera.*

**E. deppeanum, Ch. et Schl. in Linnaea, v. p. 207;** inter species armatas foliis brevibus crebre aculeato-dentatis et capitulis parvis distinguitur.


**Mexico:** Cerro Colorado, *Schiede & Deppe.*

The accompanying figure was prepared from a specimen in the Berlin Herbarium, which if not actually the type is doubtless the species described under the above name. I have not seen any specimen in any other herbarium which I could refer without doubt to this species; but a longer series of specimens would be necessary, to enable one to form a correct judgment as to the amount of variation exhibited by this and allied species. I am indebted to Dr. Engler, the Director of the Berlin Botanic Garden, for the loan of the specimens of the Mexican *Eryngia* contained in the herbarium attached thereto. Like the other herbaria that I have seen, it contains several forms not met with elsewhere.—**W. Botting Hemsley.**

Fig. 1, portion of a leaf; 2, a bract; 3, a pale; 4, a fruit; 5, a cross section of the same. *All enlarged.*
Eryngium Schaffneri, Hemsli.
ERYNGIUM SCHAFFNERI, Hemsl.

Umbelliferae.

E. Schaffneri, Hemsl. (sp. non.) ; ab E. Bonplandi caulibus mono- cephalis et foliis oblongis breviter petiolatis differt.


Mexico: mountains near Guajimalpan, Schaffner, 376 ; in Pine woods, Nevada de Toluca, at 10,000 feet, Pringle, 4283.

This is another species which I have only seen in the Kew and Berlin herbaria. It has been referred to E. Bonplandi, the fruit of which is figured in plate 2546.—W. Botting Hemsley.

Fig. 1, a bract ; 2, a pale ; 3, a flower ; 4, a petal ; 5, a carpel. All enlarged.
Eryngium leptopodum, Hemsl.
Plate 2546.

ERYNGIUM LEPTOPODUM, Hemsl.

UMBELLIFERÆ.

E. leptopodum, Hemsl. (sp. nov.); species ex affinitate E. Bonplandi sed gracilior foliis breviter petiolatis capitulis oblongis carpellis fere esquamatis.


Mexico: Real del Monte, State of Mexico, Coulter, 106, 1152; Paso Nuevo, Ehrenberg, 177.

I have only seen this in the Kew and Berlin herbaria. It is remarkable among its allies for extreme slenderness and almost complete absence of scales on the fruit. The dissections of E. Bonplandi are from the type specimen in the Paris herbarium labelled Santa Rosa, Guanaxuato, Bonpland.—W. Botting Hemsley.

Fig. 1, a bract; 2, a pale; 3, a flower; 4, a petal; 5, a stamen—of E. leptopodum, Hemsl.

Fig. 6, a bract; 7, a pale; 8, a fruit; 9, a carpel; 10, a transverse section of the same—of E. Bonplandi, Delar. All enlarged.
ERYNGIUM CERVANTESII, Delar.

UMBELLIFERÆ.

E. Cervantesii, Delar. Eryngor. Hist. p. 47, t. 18, f. 1 (male); ex affinitate E. reptantis, a quo differt foliis radicalibus fere linearibus paucicrenulatis, carpellorum squamis biformibus.


Mexico: Jacal, in the State of Hidalgo, in grass by ponds, W. Schumann, in the Berlin herbarium,

The only specimens I have seen of this species are those referred to above. It is perhaps easily overlooked, or it may be rare, for many trained collectors have botanised in the region where it grows. Delaroche described it from an imperfect specimen received by Humboldt and Bonpland from Cervantes himself, who had given it the name of E. viviparum. It is very distinct and different from all other Mexican species, and the scales or appendages of the fruit, which are of two kinds, passing abruptly from one to the other, are the most elegant I have examined.—W. Botting Hemsley.

Fig. 1, a bract; 2 and 3, pales; 4, a flower; 5, a petal; 6, section of a carpel and seed showing the embryo; 7, a cross section of a carpel about the middle; 8, one of the upper carpellar appendages; 9, one of the lower ditto. All enlarged.
Cacoucia splendens, Hemsl.
Plate 2548.

CACOUCIA SPLENDENS, Hemsl.

COMBRETACEAE.

C. splendens, Hemsl. (sp. nov.); ex affinitate C. velutinae, differt imprimis racemis longissimis bracteis amplis luteo-albidis.


WEST TROPICAL AFRICA: Cameroon river, G. Mann, 2208.

This and the two plants represented in plates 2549 and 2550 were included by Lawson in his C. bracteata, and it has been deemed better to give each a new name rather than arbitrarily assign his name to any one of them.—W. BOTTING HEMSLEY.

Fig. 1, section of the lower part of a flower opened out showing the horizontal scales which shut off the lower part of the calyx-tube as a separate chamber; 2, a petal; 3, anthers. All enlarged.
Cacoucia platyptera, Welw.
CACOUCIA PLATYPTERA, Welw.

Combretaceae.

C. platyptera, Welw. in Trans. Linn. Soc. xxvii. p. 24; C. spen denti similis sed floribus multo minoribus pedicellis brevioribus bracteis minus conspicuis differt.


West Tropical Africa: Fernando Po, Barter, 2057; Mann, 158; Kalbreyer, 42; Golungo Alto, Welwitsch, 1752.

This may perhaps be connected by intermediate forms with C. splendens, of which the fruit is unknown. Should this be so, Welwitsch's name, which antedates Lawson's composite species by two years, will be the one to retain.—W. Botting Hemsley.

Fig. 1, a section of the lower part of the calyx and the ovary; 2, a petal; 3, anthers; 4, a fruit. All except 4 enlarged.
Campylogyne exannulata, Hems.
CAMPYLOGYNE EXANNULATA, Hemsl.

Combretaceae.


C. exannulata, Hemsl. (sp. unica).


West Tropical Africa: Golungo Alto, at 1,000 to 2,400 ft., Welwitsch, 4349; Pungo Andongo, Welwitsch, 4350.
That *Cacoucia platyptera*, Welw. and *C. splendens*, Hemsl. should have been referred to the same species is not surprising, but that this plant should also have been included is incomprehensible. I had already decided to raise it to generic rank before examining Welwitsch's specimens in the British Museum, and on going there found that Welwitsch himself had come to the same conclusion. Accompanying the excellent specimens is a full description and an analysis of the flower, together with the name given above. The absence of horizontal scales, forming a sort of diaphragm in the calyx tube in *Cacoucia*, and the adherent geniculate style are the reasons for separating it from the genus named.—W. Botting Hemsley.

Fig. 1, a flower laid open and the ovary in vertical section; 2, a petal; 3, stamens; 4, a young fruit. *All enlarged, except 4.*
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VOL. VI.
OR VOL. XXVI. OF THE ENTIRE WORK.

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LOESELIA CORDIFOLIA, Hemsl. et Rose.

POLEMONIACEÆ.

L. cordifolia, Hemsl. et Rose (sp. nov.); species elata, ramis lateralibus insigniter divaricatis, foliis caulinis omnibus sessilibus amplexicaulis.


_México_: Tepic, Jalisco, Palmer, 1862.

The drawing of this distinct species was made from a specimen belonging to the United States National Herbarium, lent, with others, for the purpose of elucidating the genus. It is nearest to _L. amplectens_, Benth., a partial analysis of the flower of which is given for comparison. —W. Botting Hemsley.

Fig. 1, a bract; 2, a flower-bud; 3, an expanded flower; 4, anthers; 5, pistil; 6, vertical section of ovary—of _L. cordifolia_, Hemsl. et Rose.

Fig. 7, an expanded flower; 8, pistil and portion of calyx laid open; 9, vertical section of ovary—of _L. amplectens_, Benth. _All enlarged._
**PLATE 2552.**

**LOESELIA INVOLUCRATA, G. Don.**

**POLEMONIACEAE.**

*Loeselia involucrata, G. Don, Gen. Syst. iv. p. 448;* ramulis lateribus floriferis elongatis gracillimis fere nudis, bractearum setis brevibus.


**MEXICO:** Tequila, Jalisco, Palmer, 370; Colima, Palmer, 1175.

*Loeselia involucrata, G. Don, and L. ciliata, Linn., were confused by Bentham (DC. Prodr. ix. p. 319, 1845), and the confusion has been continued by most, if not all, botanists ever since. Indeed, it has been supposed that they were one and the same species, but Mr. J. N. Rose, Assistant Curator of the United States National Herbarium at Washington, having specimens of several species (including the new one represented on Plate 2551) under observation, suspected the truth, and arrived at a correct conclusion. The writer has since compared Mr. Rose’s specimens with the types of the two species in the British Museum and with the type of *Hoitzia lupulina,* Hook. et Arn., in the Kew Herbarium, and verified Mr. Rose’s view that the following synonymy, a part of which has been ascribed to *L. involucrata,* all belongs to *L. ciliata,* Linn. *Gilia ciliata,* Benth. Pl. Hartw. p. 325; *Hoitzia lupulina,* Hook. et Arn. Bot. Beech. Voy. p. 441; *Loeselia aristata,* G. Don, Gen. Syst. iv. p. 248; *Hoitzia aristata,* H.B.K. Nov. Gen. et Sp. iii. p. 167; and nearly all the specimens that have been referred to *involucrata* belong to *ciliata.* The former is apparently comparatively rare, whereas the latter ranges from North Mexico to Panama, and includes the specimens under the following numbers in the Kew Herbarium:—Cerro de Pinal, SERIES IV. VOL. VI. PART III.
PASSIFLORA FUCHSIIFLORA, Hemsl.

Passifloraceæ.

P. fuchsiiflora, Hemsl. (sp. nov.); species ex affinitate P. spicataæ, a qua differt floribus ad ramos annotinos vel vetustiores fasciculatis, sepalis petalisque suberectis.


British Guiana: Demerara river, Jenman, 6540.

Mr. Jenman describes this as an exceedingly ornamental species; its orange-coloured, sweet-scented flowers being produced in great profusion. It resembles Dilkea Wallisii, Mast. (Mart. Fl. Bras. xiii. i. t. 106), both in foliage and flowers, and also in the latter being borne on the old wood. The resemblance of the flowers to those of some species of Fuchsia having included genitalia, such as F. dependens, Hook., for example, is very striking.—W. Botting Hemsley.

Fig. 1, portion of flower laid open; 2, a filament of the upper corona; 3, a portion of the lower corona; 4, upper portion of androecium and gynoecium; 5, a fruit with the remains of the androecium at the base; 6, a seed enveloped in the aril; 7, a seed from which the aril has been removed. All enlarged except 5, which is natural size.
Plate 2554.

TACHIADEUS ELATUS, Hemsl.

Gentianaceae.

T. elatus, Hemsl. (sp. nov.) ; inter species affines magnitudine foliorum et longitudine florum insignis.

Frutex 4-5 ped. altus (Gerrard), undique glaber, caulibus vel ramis rectissimis teretibus, internodiis quam foliis brevioribus. Folia petiolata, subcoriacea, ovato-lanceolata, cum petiolo circiter unciali 4-6 poll. longa, acute acuminata, basi subrotundata, distincte trinervia. Flores ad apices ramorum dense cymosi, erecti, breviter pedicellati, cymis 3-12-floris. Sepala fere libera, arcte imbricata, coriacea, persistentia, margine tenuiora, lanceolata, acuta, vix carinata, 7-9 lin. longa. Corolla hypocrateriformis, 5-7 poll. longa, tubo apicem versus gradatim ampliato; lobi ovati, acuti, patentes. Stamina prope faucem affixa, inclusa, filamentis brevissimis. Stylus brevissime exsertus. Capsula oblongo-ovoidea, 12-15 lin. longa, basi subito angustata sed vix stipitata, apice stylo indurato coronata; semina numerosissima, minuta, globosa, conspicue foveolata.

Madagascar: without locality, Gerrard; Humblot, 7; Baron, 6682; Curtis.

This is one of a number of Madagascar plants remarkable for the length of the tube of the corolla. Ixora siphonantha, Oliv. (plate 2236 of this work), is another example; and Angraecum sesquipedale, Thouars (Bot. Mag. t. 5113), exhibits a similar phenomenon in the prodigious length of its spur.—W. Botting Hemsley.

Fig. 1, upper part of corolla-tube laid open to show attachment of stamens; 2, anthers; 3, ovary; 4, stigma. All enlarged.
Plate 2555.

RHIGIOPHYLLUM SQUARROSUM, Hochst.

Campanulaceæ.

R. squarrosum, Hochst. in Flora, xxv. p. 232 (sp. unica).


South Africa: mountains between Caledon and Elim, from 700 to 1,000 feet, Bolus, 8525.

So far as we can ascertain, this singular campanulaceous plant had not been collected since Krauss first discovered it, about the year 1840, until Mr. Harry Bolus re-discovered it, in the same district, in 1896. Mr. Bolus's specimens are apparently the only ones in this country.—W. Botting Hemsley.

Fig. 1, a flower; 2, vertical section of ovary, with style and part of calyx-limb; 3, corolla laid open, showing attachment of stamens; 4, stamens. All enlarged.
PLATE 2556.

ACIPHYLLA LYALLII, Hook. f.

UMBELLIFERÆ.


Herba perennis, omnino glabra, caulibus subsimplicibus 1–2 ped. altis. Folia rigidissima, radicalia longe petiolata, pinnata, foliolis 5–9 linearibus aculeato-acuminatis; stipulae fere aciculatae, longe adnatae. Flores dioici vel polygami, in umbellas pauciradiatas dispositi. Carpella vix alata, valleculis 1–2-vittatis, commissura 2-vittata.

A figure of this plant has been given here, partly because leaves of A. Hectori, Buchan. (Trans. New Zeal. Inst. xiv. p. 346, t. xxvii.), were mixed with the original specimens and included in the description, and partly because there were no good figures of the fruit of any species of the genus. Mr. Thos. Kirk, Government Biologist, Wellington, New Zealand, suspected some confusion, and we are now able to clear it up at Kew.—W. BOTTING HEMSLEY.

Fig. 1, receptacle of male flower; 2, a ripe fruit; 3, 4, 5, 6, transverse sections of carpels. All enlarged.
P. Fordii, Hemsl. (sp. nov.); species unica Asiae incola hactenus cognita.


Hongkong: Wright, 107, 473; woods in Happy Valley, Ford, 612.

Imperfect specimens of this tree, collected on the United States Pacific Exploring Expedition, have lain in herbaria for nearly fifty years, and Mr. Ch. Ford, the Superintendent of the Hongkong Botanic Garden, sent good specimens of the male to Kew in 1881. He has since sent copious material from which the accompanying plate was prepared. From Mr. Ford's notes we learn that about 100 trees exist; and in a later communication he mentions that only about five per cent. of them are female. We have followed Engler (DC. Monogr. Phaner. iv.) in retaining the genus Poupartia, previously only known from Bourbon and Mauritius, and referred to Spondias. The floral structure of the Hongkong plant is exactly the same as that represented by him (loc. cit. t. 7); but it is difficult to decide which is the best course when dealing with a single species.—W. Botting Hemsley.

Fig. 1, a branch bearing pseudo-hermaphrodite flowers; 2, portion of the under-side of a leaf, showing tufted hairs in the axils of the veins; 3, a pseudo-hermaphrodite flower; 4, a petal from the same; 5, genitalia; 6, a portion of a male inflorescence; 7, a male flower; 8, the same laid open; 9, a branch bearing solitary axillary female flowers; 10, a female flower; 11, barren stamens from female flower; 12, vertical section of ovary; 13, cross section of ovary; 14, a branch bearing fruit; 15, a fruit from which the epicarp has been removed; 16, a seed; 17, embryo. All, except 1, 6, 9, 14, 15 and 16, more or less enlarged.
STAAVIA DODII, Bolus.

Bruniaceae.

S. Dodii, Bolus (sp. nov.); S. glutinoso similis, at foliis et bracteis involucris oblongis retusis planis brevioribus facile recognoscenda.


South Africa: On a rocky ridge near Smit'swinkel Bay, on the Cape Peninsula, at 700 feet, Capt. Wolley-Dod, 2641.

Described and drawn from living specimens kindly communicated by the collector, who has made many valuable additions to our knowledge of the flora of the Cape Peninsula. The plant is a striking one, curiously resembling a Composite (e.g. Osmites). It was found growing somewhat plentifully within a small area, and it is remarkable that being so near to Cape Town it should have escaped the notice of so many earlier collectors.*—H. Bon.

Fig. 1, leaves, from one of which the deciduous apiculus is absent; 2, bracts of the involucre; 3, a flower and three bracteoles; 4, hairs from the receptacle; 5, vertical section of a flower; 6, portion of the calyx-limb; 7, views of the outer and inner surfaces of a petal—note the nectary at the base on the inside; 8, stamens; 9, a ripe fruit; 10, the same from which the calyx has been removed. All enlarged.

* Kew previously possessed specimens of this plant, without locality, communicated by Admiral Sir F. Gray, in 1860; and also one from the late Dr. Lindley, without either locality or collector's name.—W. Bottig Hemslay.
LAPORTEA LONGIFOLIA, Hemsl.

Urticaceæ. Tribe Urticeæ.

L. longifolia, Hemsl. (sp. nov.); subarborescens, foliis angustis longissimis pendulis.


New Guinea: Introduced into cultivation by Messrs. J. Veitch and Sons, by whom the plant, here figured and described, was presented to Kew.

This species is only known to us from the cultivated plant described above. It is sufficiently characterised by the long, narrow leaves with very numerous and conspicuous lateral veins.—W. Botting Hemsley.

Fig. 1, portion of the under side of a leaf, showing superficial glands and hairs; 2, a partially expanded male flower; 3, the same fully expanded; 4, anthers. All enlarged.
PITTOSPORUM SPATHACEUM, Burkill.

P. spathaceum, Burkill (sp. nov.); species P. undulato, Vent. sepalis connatis aliquatenuis similis.


TONGA ISLANDS: Vavau, Crosby, 200.

This species is an extreme form, connected with the rest of the genus through the Australian P. undulatum. The completely spathaceous calyx, narrower petals, and the obovate blunt leaves distinguish it readily. The colour of the petals appears to have been mauve or purple; but as no notes accompany the dried specimen it is not possible to speak with certainty.—I. H. Burkill.

Fig. 1, a flower; 2, stamens; 3, pistil; 4, cross section of ovary. All enlarged.
MICROULA TIBETICA, Maxim.

**Boraginaceae.**

*M. tibetica, Maxim. Mél. Biol. x. p. 682 (1877); inter species cognitas hujus generis unica quod aculelescens vel subaculeescens est.


Tibet: various localities, chiefly in the western part, from 15,000 to 18,500 feet, Thompson, Strachey & Winterbottom, Thorold, Deasy & Pike, Welby & Malcolm, Przewalski.

A second figure of this singular plant has been given, because further material has proved, as Professor D. Oliver suspected (see the letterpress to plate 2207), that the original *Microula* and the original *Tretocarya* are the same plant. Among the specimens collected by Mr. Arnold Pike, Captain Deasy’s Expedition, are some which bear nutlets exhibiting the characteristics of the two supposed genera. *Tretocarya* therefore must be reduced to *Microula*, and *T. sikkimensis*, Oliv. (plate 2255 of this work) becomes *M. sikkimensis*, Hemsł. There is a third species, *M. tanguatica*, Maxim., a native of alpine regions in Kansuh, North-western China. The question arises, however, whether the genus as thus constituted is tenable or whether it should not be reduced to *Anchusa*.—W. Botting Hemsley.

Fig. 1, a bracteole; 2, unicellular hair from the same; 3, a flower; 4, pistil and portion of calyx; 5, corolla, laid open; 6, pistil, advanced stage; 7 and 8, ripe fruits from the same plant (Deasy & Pike, 848); 9, a ripe fruit from another plant (Welby & Malcolm). All enlarged.
Plates 2563 and 2564.

**PHYLLANTHODENDRON MIRABILIS, Hemsl.**

**Euphorbiaceae.**


Siam: the garden of the temple of Wat Cheng, Bangkok, Rob. Schomburgk.

When arranging some of the manuscripts in the Kew library some sketches and a description of this remarkable tree by Sir R. Schomburgk were found, and a short search resulted in the discovery of some dried specimens of it, received at Kew in 1863. In his account of this tree, Sir R. Schomburgk states that he was informed that it inhabited the summit of Kow Nagh, a mountain or hill about ten or twelve days' journey up the Menam river. The deciduous branches misled him, and he arrived at the conclusion that they were pinnate leaves, bearing flowers in the axils of the leaflets. He also, by some...
mischance, mixed some pinnate leaves with them, and was led to believe that he had made a very remarkable discovery. Mueller mentions this plant as being singular in the genus *Phyllanthus* in its floral characters, particularly in having a disk of petaloid glands. Generic rank has been given it here, because I believe that *Phyllanthus*, as extended in De Candolle's *Prodromus*, is an unmanageable conglomeration of species. Sir Joseph Hooker and other botanists have already restored *Glochidion*.—W. BOTTING HEMSLEY.

Plate 2563: Sterile and fertile branches and detached leaf. *Natural size*. Fig. 1, a male flower; 2, segments of the disk; 3, androecium. *All enlarged.*

Plate 2564: Sketch showing habit, and a leaf. *Natural size*. Fig. 1, a female flower; 2, lower portion of one of the inner segments of the perianth with two of the ligulate segments of the disk; 3, pistil; 4, cross section of ovary. *All enlarged.*
Plate 2565.

LUCUMA HARTII, Hemsl.

Sapotaceæ.

L. Hartii, Hemsl. (sp. nov.); a L. multiflora (supra, t. 2498) foliis majoribus, floribus tetrameris sessilibus, fructu majore recedit.


Trinidad: Maraval, Hart, 4324.

According to Mr. J. H. Hart, to whom Kew is indebted for specimens, this tree bears the name of 'contrevent' in Trinidad. From imperfect material received in 1890, it was at first supposed to be L. multiflora, A. DC., but it proves to be very distinct, and apparently previously undescribed.—W. Botting Hemsley.

Fig. 1, a flower; 2, corolla laid open showing the stamens and staminodia; 3, pistil; 4, cross section of an ovary; 5, a fruit in vertical section showing two seeds; 6, a seed; 7, embryo; 8, cross section of the same. Figures 1-4 enlarged; 5-8 natural size.
Plates 2566 and 2567.

PACHYLOBUS EDULIS, G. Don.

Burseraceae.

P. edulis, G. Don, Gen. Syst. ii. p. 89; foliolis 11–17, fructu oblongo vel anguste ovoideo 2–3 poll. longo.


West Tropical Africa: Island of St. Thomas, G. Don; Old Calabar, Thomson; Cameroons, Mann; Preuss; Buchholz; Cazengo, Welwitsch, 4482, 4483; Wathen Station or Ngombe, thirty-four miles below Stanley Pool, Bentley.

Canarium Schweinfurthii, Engl., a genuine Canarium, having a thick, exceedingly dense and hard endocarp, has been confused with Pachylobus edulis, G. Don. Both trees yield an edible fruit, and bear similar or perhaps in some districts the same names; and the leaves are sufficiently alike to deceive a superficial observer. The first-named is evidently very widely spread (Engl. Pfl. Ost. Afr. B. pp. 199, 312,
412, 475), ranging from near the west coast in Angola eastward to the lakes and northward to Uganda. *Pachylobus edulis* is cultivated from St. Thomas and the Cameroons to the Congo, at least; and it is figured here in consequence of Kew having received from the Rev. W. H. Bentley, of the Congo Baptist Mission, fruits purporting to represent the wild and cultivated varieties of the same tree; in reality the fruits of the two trees under consideration. Numerous specimens from different localities seem to establish the specific identity of *P. Saphu* with *P. edulis*. Indeed, Don's original specimen of the latter is labelled 'safu'; and Don states (loc. sup. cit.) that the tree was a native of St. Thomas, and its fruit was sold in the island under that name. By an oversight the radicle of *Pachylobus* is described as the plume (Stängchen) both in Engler's *Jahrbücher*, as cited above, and in Engler and Prantl's *Natür. Pfl. Fam.* iii. 4. p. 242.— W. Botting Hemsley.

Plate 2566: Fig. 1, a cluster of male flowers. *Natural size.*
Plate 2567: Fig. 1, a male flower; 2, a hair from the same; 3, androecium of the same; 4, a female or pseudo-hermaphrodite flower; 5, genitalia of the same; 6, vertical section of ovary; 7, a fruit; 8, a fruit from which a part of the pericarp has been removed showing the embryo from which the testa has been removed; 9, the embryo seen from the reverse side; 10, side view of the same; 11, the same in section; 12, embryo from which several of the cotyledonary lobes have been removed, showing the long hairy radicle directed upwards; 13, radicle lying in a groove of one of the cotyledonary lobes; 14, a single lobe; 15, part of radicle and slightly developed plume of a germinating embryo. *Figures 1–6 enlarged; 7–15 natural size.*
Carpodinus Dulcis, Sabine.

Apocynaceae.


West Tropical Africa: Senegambia, Heudelot; Sierra Leone, Freetown, Martello Tower Hill, G. Don; Bunce Island, in the Lower Sierra Leone River, K. & F. all over the inland country to the headwaters of the Niger, and common on the laterite plateau, Scott Elliot, 4249, 4275a, 4294, 5091, 5127.

According to G. Don, the fruit resembles a lime in size and appearance, and is eaten by the natives, who know it by the name of ‘sweet’ Pishamin, in contradistinction to the ‘sour’ Pishamin, which is Carpodinus acida, a very obscure species, of which there is no authentic specimen in existence.

Carpodinus is distinguished from Landolphia in Bentham and Hooker’s Genera Plantarum by the position of the stamens, which are said to be inserted near the base of the tube in Landolphia, and near the mouth of the tube in Carpodinus; by the presence of a horny
albumen in the seeds of *Landolphia*, and the absence of albumen in those of *Carpodinus*, and by the cymes being terminal in *Landolphia*, and axillary in *Carpodinus*. These definitions require correction. The position of the stamens in the species generally admitted as belonging to *Landolphia* varies from almost basal to apical, and the seeds of both genera are albuminous in all the species examined; the albumen is horny, and the cotyledons very thin and broad, occupying a plane central cavity. The third character, however, divides the species under consideration into two fairly easily recognisable groups, one having only terminal (or pseudo-axillary), and the other having mainly axillary inflorescences. The species belonging to the first group represent what is generally recognised as the genus *Landolphia*, whilst the others correspond to the genus *Carpodinus*. Nor is this division purely artificial; for the characters afforded by the position of the inflorescence are always associated with certain conditions in the structure of the flowers, although they are not so conspicuous or so well defined. In *Landolphia* the style is generally rather short, in *Carpodinus* always long. As the anthers surround the stigma in both genera, and the filaments are short, this determines the relative position of the stamens in the tube, so that in *Landolphia* the stamens are inserted near the base of the tube, where the corolla tube is long, but more or less towards the mouth of the tube, where the corolla tube is short; whilst, on the other hand, the insertion is always near the top in *Carpodinus*. A further distinctive character is offered by the inflorescence, those of *Landolphia* being, on the whole, profusely ramified and many-flowered, as compared with the usually very reduced and few to 1-flowered cymes of *Carpodinus*. Similar relations seem to exist with respect to the number of seeds, *Landolphia* producing more numerous seeds in each fruit than *Carpodinus*; but here the observations are still too few to allow a definite conclusion. With the generic diagnoses of *Landolphia* and *Carpodinus* thus revised it seems to be preferable to transfer *Carpodinus calabaricus*, Stapf, to *Landolphia*, and, indeed, specimens belonging to this species have since been described as *L.? bracteata* by Dewèvre. The inflorescences are always terminal (or pseudo-axillary) in this species; the style, however, is rather long for *Landolphia*, and the stamens are inserted at the middle of the slender tube.—O. STAPF.

Fig. 1 a flower; 2, calyx-lobes from the inside to show absence of glands; 3, corolla laid open; 4, stamens; 5, pistil; 6, cross section of ovary. *All enlarged.*
Plate 2569.

BASSIA THURSTONII, Hemsl.

Sapotaceae.

B. Thurstonii, Hemsl. (sp. nov.); inter species polynesiacas folii amplis, floribus magnis distincta.


Fiji: without locality, but probably from the island of Suva, Thurston.

The late Sir John Bates Thurston sent the specimens, from which this drawing was made, to Kew, in 1895, together with the testa of a seed of a species of Chelonespernum, probably C. unguiculatum, Hemsl., on the supposition that they were from the same tree. It was at first taken for granted that the seed and flowering branches were of the same species; but further investigation gives rise to great doubt on this point, as the floral structure is quite different from that of C. majus, Hemsl., the only species of which the flowers are known with certainty—at least, the only one of which flowering specimens and fruit were received together. Further material, however, is required before the genus can be satisfactorily defined. With regard to the retention of the generic appellation Bassia in preference to the more recently adopted Illipe, the latter was simply given in the place cited (Linn. Mant. ii. App. p. 563) as a native name, i.e. "Illippe Malabaron- rum."—W. Botting Hemsley.

Fig. 1, part of corolla and stamens, one abnormal; 2, hairs from the inside of the corolla and filaments; 3, a petal; 4, anthers; 5, vertical section of ovary; 6, cross section of ovary. All enlarged.
HEVEA SPRUCEANA, Muell. Arg.

Euphorbiaceae.


North Brazil: Santarem, Spruce, 999.

This has been figured because two other species, H. pauciflora, Muell. Arg., and H. confusa, Hemsl., have been confused with it, and one, or both, of these, the only known British Guiana species, are in cultivation, and have been reported on as Hevea spruceana. The material under observation is insufficient to define these three species satisfactorily; but the publication of figures and descriptions of what we have may assist cultivators and collectors by indicating what is required to complete the definitions. In the first place it is impossible to refer the seeds represented on plate 2575 (figures 12–15) to their species with absolute certainty. But as only one of them (H. confusa) appears to be cultivated in the West Indies, it is probable that figures

* For analysis of flowers see plate 2573, figures 14–17.

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12 and 13 belong to that species, and 14 and 15 to *H. pauciflora*. The leaves sent with the latter point to the correctness of this identification.

**H. confusa**, Hemsdl. (sp. non.); species inter afoines foliis obovato-lanceolatis vel obovato-lanceolatis crassis coriaceis et floribus parvis albo-tomentosis et ovario glabro distinguetur.


**British Guiana**; without locality, Rob. Schomburgk, 817; Rich. Schomburgk, 1381; Mazaruni river, Prestoe; Jenman, 621; Essequibo river, Jenman, 1332; Trinidad Botanic Garden, cultivated, Hart, 3554.

When Bentham published *Siphonia pauciflora*, Spruce (Hook. Kew Journ. Bot. vi. p. 370) he suggested that specimens in the Hookerian herbarium from British Guiana, collected by Schomburgk, Parker, and Hancock, might be the same species. Subsequently Mueller Arg., in the place cited above, included Schomburgk’s specimens under *Hevea pauciflora* without a doubt; and later (Fl. Bras. xi. 2. p. 300) he described Spruce’s type (2691) of *pauciflora* under the name of *H. membranacea*; under *H. pauciflora* he included Schomburgk’s Guiana specimens, and also gave Spruce’s locality of *H. pauciflora*, but without a number. The types of all the species collected, and partly described and named by Spruce, and published by Bentham, are in the Kew Herbarium, and the only course is to retain the names for the species to which they were originally applied. Parker and Hancock’s British Guiana specimens, mentioned by Bentham, are true *H. pauciflora*, so far as can be determined from leaves alone. Further, Jenman (725 and 2450) and in Thurn (200) have both collected *H. pauciflora* on the Mazaruni river, British Guiana. Of the distinct *H. guianensis*, Aubl., in which the anthers are 5 only and in one whorl (see pl. 2573, fig. 9), we have only seen specimens from French Guiana. The details of the flowers of *H. confusa* are given in plate 2574, figures 1–3; and the seed in plate 2575, figures 12 and 13.—W. Botting Hemsley.
HEVEA BENTHAMIANA, Muell. Arg.

EUPHORBIACEÆ.

H. benthamiana, Muell. Arg. in Linneæ, xxxiv. p. 204; ad H. discolem arcte accedit, recedit foliis floribusque ferrugineo-pubescentibus, alabastris acutis, seminibus ovoideis.


NORTH BRAZIL: Uaupés River, Spruce, 2560. VENEZUELA: cultivated, Bovallius.

Mueller Arg. (Fl. Bras. xi. 2, p. 301) quotes Spruce's 3326 under this species, but the specimens are so very young that it is impossible to refer them with certainty. The cultivated specimens from Venezuela consist of mature leaves and ripe seeds; the former, having been sent in alcohol, are blanched and have a somewhat different appearance. It is possible, however, that this identification may prove erroneous. The specimens were sent as H. brasiliensis, which they certainly are not.—W. Botting Hemsley.

Fig. 1, portion of the under surface of a leaf; 2, flower-buds, the terminal female, the lateral male; 3, a male flower, with the perianth laid open; 4, andræcium; 5, a female flower, part of the perianth removed; 6, vertical section of ovary. All enlarged.
HEVEA MINOR, Hemsl.

EUPHORBIAE.

H. minor, Hemsl. (sp. nov.); pro genere omnibus partibus parvis, seminibus albis immaculatis.


NORTH BRAZIL: in low woods on the Casiquiare river, Spruce, 3457.

This is so very distinct in the smallness of all its parts, and particularly in its small white seeds, that we have not hesitated to establish it on incomplete material.—W. BOTTING HEMSLEY.

Fig. 1, ventral view of seed; 2, dorsal view of the same. Natural size.
PLATES 2573 and 2574.

HEVEÆ SPECIÆRUM PLURIÆM ANALYSES.

EUPHORBIACEÆ.

These plates are intended to elucidate the floral structure of some of the species of Hevea. The drawings were all made from type specimens, except those representing H. brasiliensis and H. guianensis, concerning which, however, there is perhaps no doubt, as they are quite distinct from each other, and have been generally recognised. Unfortunately, flowers of the same stage of development could not always be obtained, consequently the conditions for comparison are not so satisfactory as they might be. Many more flowers were examined than were drawn, and the conclusions arrived at may not, in all cases, appear justified by those represented; but finality is not claimed for these investigations. Mueller laid great stress on the disk, and established his H. janeirensis (Fl. Bras. xi. 2. p. 706) on the assumed absence of disk in the male flowers and some other minor characters. We cannot distinguish it from H. brasiliensis. These glands are often exceedingly minute, and easily overlooked in young flowers. The androecium affords much more reliable characters, though they are probably not absolutely constant. Usually the anthers are ten in number, and arranged on a slender column in two contiguous or separated whorls; but in H. guianensis, Aubl., there are only five, arranged in one whorl. In H. lutea, Muell. Arg., there are from 5 to 7 anthers in a broken whorl or whorls.—W. BOTTING HEMSLEY.


BRAZIL: 'Province of Rio de Janeiro,' *Glaziou, 4911 (janeirensis).

Plate 2573: Fig. 1, an expanded female flower and bud of a male flower; 2, pistil.

BRAZIL: 'Rio de Janeiro,' * Glaziou, 8921.

Fig. 3, a male flower; 4, androecium.

* Almost certainly an error, as there is no other record of any species so far south. Perhaps cultivated.
North Brazil: Pará, Spruce, 136.

Fig. 5, a male flower; 6, androecium; 7, a female flower.


French Guiana: specimen ex Herb. Mus. Par. 6, without either locality or collector’s name.

Fig. 8, a male flower; 9, androecium; 10, pistil.


North Brazil: on the banks of the Uaupés River, Rio Negro, Spruce, 2527.

Fig. 11, a male flower; 12, perianth of female flower laid open, showing the disk; 13, pistil.


North Brazil: Santarem, Spruce, 999.

Fig. 14, a male flower laid open; 15, androecium; 16, a female flower laid open; 17, vertical section of ovary.


North Brazil: Rio Negro, Spruce, 1171.

Fig. 18, flower buds; 19, a young male flower; 20, androecium; 21, pistil.


British Guiana: Mazaruni River, Jenman, 621.

Plate 2574: Fig. 1, an expanded female flower, the perianth falling away in a circumsciss manner, and buds of male flowers; 2, androecium; 3, pistil and part of disk detached.

British Guiana: Mazaruni River, Jenman, 725.

Fig. 4, pistil and male flowers; 5, androecium and disk; 6, a female flower; 7, perianth and disk, or staminodia.

North Brazil: On the banks of the Uaupés River, Rio Negro, Spruce, 2691.

Fig. 8, a male flower; 9, androecium; 10, pistil.


North Brazil: Near San Carlos on the Rio Negro, Spruce, 3139 (apiculata).

Fig. 11, an expanded female flower and male flower buds; 12, an expanded male flower; 13, androecium; 14, pistil.

North Brazil: Mouth of Uaupés River, Rio Negro, Spruce, 2088 (lutea).

Fig. 15, an expanded female flower and male flower-buds; 16, young male flowers; 17, androecium; 18, pistil.

East Peru: at 2,000 ft., Lechler, 2360 (peruviana).

Fig. 19, female and male flower-buds; 20, a male flower laid open; 21, pistil. Figures all enlarged; the flowers uniformly + 3.
H. confusa, *Hemsl. supra sub t. 2570*?

**British Guiana**: Prestoe, received in 1881.

Figs. 12 and 13, seeds.

**H. pauciflora**, *Muell. Arg. in Linnaea, xxxiv. p. 203*?

**British Guiana**: Mazaruni River, *im Thurn*, 200.

Figs. 14 and 15, seeds.

**H. benthamiana**, *Muell. Arg. in Linnaea, xxxiv. p. 204*?

**Venezuela**: Bovallius, cultivated on the Pulido estate, Venezuela.

Figs. 16 and 17, seeds.

*All the figures, except 11, natural size.*
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HEVEA SIMILIS, Hemsl.

EUPHORBIACEAE.

H. similis, Hemsl. (sp. nov.); species ex affinitate H. discoloris, Muell. Arg., a qua differt foliolis angustioribus, floribus multo majoribus, perianthii segmentis lanceolatis acutis tubum aequantibus.


BRAZIL: without locality, Ferreira, 745.

Nothing more definite is known of the native country of this species, which has been confounded with H. discolor, Muell. Arg. in the Herbarium. It strongly resembles this species in foliage, but the flowers, especially the males, are much larger, and the perianth quite different in shape.—W. BOTTING HEMSLEY.

Fig. 1, expanded female flower and buds of male; 2, a male flower laid open; 3, perianth of a female flower; 4, pistil. All enlarged.
PLATE 2577.

HEVEA DISCOLOR, Muell. Arg. et H. species indeterminata.

EUPHORBIACEÆ.

The figures on this plate are from two unpublished engravings, numbered respectively 10 and 11, in the Herbarium of the British Museum, copied by permission of the Keeper for the use of Kew. Neither artist's nor engraver's name appears on the engravings, and no clue to their origin has been discovered. Even the handwriting, evidently that of a foreigner, has not been identified. Figures 1–3 are from the engraving numbered 10, and have been reproduced on account of their abnormal character. It is impossible to say to what species they belong, or whether they belong to more than one species. Probably to more than one, as figures 2 and 3 represent the extremes met with in the structure of the andræcium of different species. In the very numerous flowers dissected by Miss Smith and myself, we found the andræcium very uniform (see Plates 2573 and 2574). Figures 4–7 from the engraving numbered 11 are almost certainly of H. discolor, Muell. Arg. This differs from all the others of which I have seen fruit in having a pointed capsule and longer seeds. An unpublished name appears on the sheet, and the words "folia glabra in alis sp. pubentia." In this character H. discolor differs from several of the other species of the genus.—W. BOTTING HEMSLY.

Fig. 1, a pistil and adventitious stamens; and 2 and 3, andræcia, of an unknown species of Hevea. Fig. 4, entire capsule; 5, two separate carpels of the same; 6, fully dehisced carpel; and 7, a seed, of H. discolor, Muell. Arg. Figures 1–3 enlarged; 4–7, natural size.
Plate 2578.

**FICUS LAURIFOLIA, Lam.**

**URTICACEÆ.** Tribe Artocarpeæ.

**Ficus (Urostigma) laurifolia, Lam.; species F. leucosticta, Miq., guianensi maxime affinis.**


Described from specimens cultivated in the garden of Signor H. Ragusa at Palermo, and in the gardens of Cairo and Alexandria.

It was probably introduced into Egypt from Palermo some thirty years ago. Whether South America is its native place or not is uncertain. Lamarck (*Encyc. ii. p. 495) described it first in 1792, from a plant grown in the Jardin des Plantes at Paris, and specimens from the Herbarium of Jussieu are still preserved in the Museum of that institution. In 1806 Willdenow (*Sp. Plant. iv. p. 1137) again described the plant from a specimen cultivated in the Berlin Botanic Garden, naming it *F. martinicensis*; and Kunth (*Ind. Sem. Hort. Berol. p. 16*) in 1846 redescribed it and renamed it *F. rhododendrifolia* from specimens in the same garden. In Steudel's *Nomenclator* (ed. 2, i. p. 637) the name *F. nerifolia*, Reinw., is published for this species, as a naked name. In 1853 Miquel (in Martius's *Fl. Brasil. iv. pt. 1, p. 96*) named the plant *Urostigma Kunthii*, recognising the names...
F. martinicensis, F. rhododendrifolia and F. neriifolia as synonyms; in 1867 (Ann. Mus. Lugd. Bat. iii. p. 221) he revived Reinwardt's name F. neriifolia, but a few pages later (loc. cit. p. 298) changed it to F. Kunthii. Lamarck's name had thus been completely lost; it may now be restored, and all the names mentioned above must stand as synonyms.—G. Schweinfurth.

Fig. 1, calyptriform bract enclosing the young geminate receptacles; 2, a male flower with three bracteoles; 3, the same laid open and bracteoles removed; 4, a fertile female flower and bracteoles. All enlarged.
ERYNGIUM ROSEI, Hemsl.

UMBELLIFERÆ.

E. Rosei, Hemsl. (sp. nov.); ad E. scaposum, Turcz., magis accedit, foliis more Alepideae margine setoso-aculeatis insigniter differt.

Herba perennis, subscaposa, undique glabra. Folia coriacea, indivisa, radicalia distincte petiolata, valde inaequalia, oblonga, oblongo-obovata, elliptica, vel interdum fere orbicularia, abseque petiolo $\frac{1}{2}$-2 poll. longa, margine crebre longeque setoso-aculeata, venis immersis obscuris; petiolus infra medium vaginatus, laminam equans vel brevior; folia caulina pauxa ad basin ramulorum inflorescentiae tantum, radi caloribus similis, sed sessilia et minora. Scapi vel caules floriferi 6-9 poll. alti, apice sapius 3-ramosi vel potius 3-pedunculati, rarius 1-4 pedunculati, pedunculis sepe bibracteatis. Capitula parva, subglobosa, abseque bracteis 3-5 lin. diametro. Involuti bracteæ 9-12, stellatim divaricate, crassæ, rigide, oblongo-lanceolatæ vel oblanceolatæ, 6-9 lin. longæ, inter se obtegentes, sapios integre, interdum 1-4-dentatae, dentibus apiceque aculeatis, supra margineque albo-dentibus. Paleae rigide, e basi latiuscula linearis-oblungae, vix acutæ, floræ paullo superantem. Calycis dentes ovati, apiculati sed vix aculeati, circiter $\frac{1}{2}$ lin. longi. Petala apice 4-denticulata. Carpella (matura non visa) squamis biformibus ornata, squamæ in parte superiore majores, lanceolatæ, erectæ, catæra papilliformes; vitæ, ut videtur, 5; styli suberecti.

MEXICO: between Dolores and Santa Gertrudis, and other localities, J. N. Rose, 2035, 3456, 3526.

This very distinct species is named after the collector, J. N. Rose, Ph.D., Assistant Curator of Botany in the Smithsonian Institution, Washington, U.S.A. The drawings were made from specimens lent by that institution, through the courtesy of the Secretary, Mr. S. P. Langley. It is remarkable for the marginal tentacle-like bristles of the leaves, a character it has in common with the closely allied South African genus Alepidea. — W. Botting Hemsley.

Fig. 1, a pale; 2, a flower; 3, a calyx lobe; 4, a petal; 5, a very young mericarp; 6, cross section of the same. All enlarged.
Plate 2580.

ERYNGIUM TENUISSIMUM, Hemsl.

UMBELLIFERÆ.


_Mexico_: Jalisco, Beechey.

This species was founded on the single specimen here figured, and I have seen no specimen in the various herbaria I have examined that I could refer to it. _E. tenue_, Hook. et Arn., is referred to _E. Wrightii_, A. Gray, in the _Index Kewensis_, but it does not appear on what authority this reduction was made. It may possibly be a starved state of some species, though I have been unable to discover the connection. It certainly is not the Texan _E. Wrightii_.—W. BOTTING HEMSLEY.

Fig. 1, a bract; 2, a flower; 3, a petal. _All enlarged._
Plate 2581.

ERYNGIUM NASTURTIIFOLIUM, Juss.

UMBELLIFERÆ.


Herba biennis vel annua, undique glabra, a basi multiramosa, pro-strata vel suberecta, caulibus a basi usque ad extremitates floriferis. Folia vix coriacea, radicalia pinnatifida vel lyrato-pinnatifida, 1½-3 poll. longa, lobis aculeatis vel subinermibus; caulina pinnatifida vel sub-palmatifida lobata. Capitula numerosissima, in axillis foliorum solitaria, brevissime pedunculata, oblonga, 4-6 lin. longa. Involucrè bracteæ circiter 7, rigideæ, anguste lanceolate, 3-5 lin. longe, apice pungentes. Paleæ bracteis similes sed minores, flores longe superantes. Calycis lobi oblongi, apice subpungentes. Petala apice minute 5-dentata. Carpella minuta, infra apicem appendicibus hyalinis spiculiformibus ornata, circa apicem appendicibus oblongis cavis apiculatis uniseriatis instructa, columna centralis (rostrum) intra has appendices elongata, calycem gerens; vitæ 5, minute, intrajugales.

Mexico: Acaponeta, Territory of Tepic, J. N. Rose, 1425.

When the drawing for this plate was made, the plant represented was believed to be specifically distinct from E. nasturtiifo'ium, Juss., as all the other specimens I had seen were of decidedly prostrate habit, and the leaves more herbaceous (almost fleshy), and almost unarmed. But the dissections of the flowers and fruit present no differences whatever, and specimens were found intermediate in habit and foliage. This species and E. Cervantesii have an exceedingly elegant fruit, bearing two kinds of soft cellular appendages, as described above. The following numbers in the Kew Herbarium belong to this species: Kerber, 388; Rovirosa, 381; Palmer, 302, 384 and 1112; Bourgeau, 2070; Berlandier, 2196 and 2323. The plant doubtfully referred by Hooker and Arnott (Bot. Beech. Voy. p. 293) to E. Cervantesii, Delar., also belongs here.—W. BOTTING HEMSLEY.

Fig. 1, dorsal view of a bract; 2, ventral view of a bract; 3, a flower; 4, a petal; 5, a young mericarp; 6, a scale from the upper part of the fruit; 7, a scale from the lower part of the fruit; 8, cross section of a mericarp, All enlarged.
D. Carnegiei, Hemsl. (sp. nov.); florum capitulis parvis paniculatim dispositis.


Australia: interior of the north-west, in about 126° long. and 22° 30' lat., Carnegie.

This is one of a few plants collected by the Hon. David Carnegie on his famous journey across the desert in 1896. It was found on the steep sides of sand-ridges over an area covered by two or three days' travel. Its perfume he describes as resembling that of lavender. An imperfect specimen (202), collected by McDougal Stuart on his journey in the interior of Australia in 1859, may belong to this species, as well as another fragment (65), collected in the vicinity of Lake Eyre by a Mr. Andrews, in 1875.—W. BOTTING HEMSLEY.

Fig. 1, a flower; 2, pistil and part of calyx; 3, corolla laid open; 4, vertical section of ovary; 5, cross section of the same; 6, a branched hair from the ovary. All enlarged.
ODONTOSPERMUM PYGMAEUM, O. Hoffm.

COMPOSITE. Tribe Inuloidee.


North Africa to Baluchistan: inhabiting very dry or desert regions in Algeria, Upper Egypt, Arabia, Palestine and Baluchistan, but apparently not found in Persia.

The object of figuring this plant was twofold: first to give a complete representation of it, including leaves, flowers, and fruit, and secondly to show how it differs from typical O. aquaticum. It is interesting on account of its remarkable rapid hygroscopic properties, and as being, according to some authorities, the true 'Rose of Jericho' of mediaeval writers. In habit and ash-grey colour it is usually easily distinguished from typical O. aquaticum, which has an even wider range in the Mediterranean region, including South Europe, from Spain eastward through Greece &c. But we have not succeeded in finding any obvious differences in the flower-heads, flowers, or achenes. It was intended to figure only typical O. pygmaeum, but later investigations seem to prove that figure 1 and the dissections, figures 5-9, belong to a reduced state of O. aquaticum, assuming that they are specifically different. Figure 1 is of a plant collected by Porta and Rigo in Spain, No. 311 (Almeria in collibus aridissimis, solo calcareo) and named 'Asteriscus aquaticus, Mœnch,
forma pygaea, Schultz.' Whether this name was intended to designate a reduced form of *O. aquaticum* as distinguished from *O. pygmaeum* is uncertain.—W. Botting Hemsley.

Fig. 1, an entire plant in flower of *O. aquaticum* (Porta and Rigo, 311); 2, ditto of *O. pygmaeum* in fruit with the bracts closely folded over the ripe achenes (Palestine, Dammann & Co.); 3, the same after being immersed in water a few minutes; 4, a leaf (Baluchistan, Stocks, 764); 5, a ray-flower; 6, ditto seen from below; 7, a disk-flower and pale; 8, anthers; 9, stigma (Porta & Rigo, 311); 10, a bract from the inner series of the involucre; 11, an achene; 12, a portion of the pappus (Dammann & Co.). Fig. 1-4 natural size; the rest enlarged.
**SARARANGA SINUOSA, Hemsl., mas.**

**Pandanaceae.**

*Sararanga, Hemsl.* in *Journ. Linn. Soc.* xxx. p. 216, t. 11; et xxxii. p. 488; *Stapf*, loc. cit. pp. 479-487, tt. 4-7 (generis character hic emendatus et auctus). *Flores dioici.* *Florum* masculinorum spatha ignota; spadix elongatus, 1½-2½ ped. longus, anguste paniculatus, ramis primariis lateralis subverticillatis brevibus (1½-5 poll. longis) densissime ramulosis multifloris, bracteis per anthesin jam delapsis; *flores* distincte pedicellati; perianthium gamophyllum, breve, cupulatum, margine obscure lobulatum vel crenatum; stamina numerosa, libera, filamentis apice filiformis deorsum incrassatis (obclavatis), antheris amplis versatilibus, pollinis granis ellipsoideis minute papillaris. *Florum* feminorum spatha foliacea, folio parvo simillima, sed omnino inermis, circiter bipedalis; spadix amplissimus, pendulus, 4-5 ped. longus, densissime racemoso-paniculatus, rhachi prope basin usque 4½ poll. diametro, ramulis compressis; *flores* breviter pedicellati; perianthium liberum, subcarnosum, gamophyllum, truncatum vel irregulariter 3-4-lobatum, fructiferum occultum; staminodia nulla; gynacei carpella numerosissima, uniovulata, sinuoso-biseriata, seriebus nunc e centro gynaecei trifurcatis, ramificationibus bifurcatis, nunc valde irregularibus, serierum dispositio stigmatibus sessilibus magnis discoideis vel hippocrepiformibus bene indicata. *Fructus* parvus, carnosus, drupoides, irregulariter 2-4 lobatus, multipyrenus, pyrenis osseis unispermis; semen a funiculo elongato et basi fere anguli interni loculi pendulum, embryone conoideo basilari.

*S. sinuosa, Hemsl.* (sp. unica). *Arbor* pandaniformis, sed foliiis non spiraliter dispositis, radices aèreas haud emittens, usque ad 60 ped. alta, truncus nodo altitudine 20-30 ped. tantum ramoso, ramis paucis divaricatis. *Folia* ad apices ramorum congesta, quadrifariam disposita, crassissima, coriacea, lineari-lanceolata, usque ad 10 ped. longa et 4½ poll. lata, precipue basin et apicem versus atque in margine et secus costam aculeis parvis vel minutis instructa, apice vix acuta.

**Solomon Islands:** Siotia, Island of Florida, Comins. Also in several other islands of this group and in Jobie I., New Guinea.

The accompanying plate and above description practically complete the definition of the remarkable genus *Sararanga,* but as only a very
imperfect male inflorescence has reached Kew, details of the spathe and bracts are wanting. As recorded in the *Kew Bulletin* (1898, p. 100), the Rev. R. B. Comins sent a short branch bearing a mature female inflorescence (fruiting spadix), and a male inflorescence in a very advanced stage and much damaged by insects. It was he also who discovered that the leaves are quadrifariously arranged, not spirally as in *Pandanus*. The following extracts are from his notes accompanying the specimens: ‘Having seen the plates and descriptions of *Sararanga sinuosa* . . . I thought I recognised the same, or something very similar, growing freely on the edges of a swamp, near our Mission Station of St. Luke’s, Sicta. I was further interested in the particulars of the same given by the officers of H.M.S. “Penguin” (*Kew Bulletin*, 1895), with which in the main our specimens seem to agree. It certainly seems to prefer damp situations, although we have a few on the hill-side thirty or forty feet above the swamp. They grow in clumps of three or four amongst other ordinary Pandanaeae. I however searched in vain for young seedlings. The leaves furnish an extra strong fibre valued for tying the thatch and beams of houses. It never has any adventitious roots, but a general thickening of the stem at its base. It rises from twenty to thirty feet and then branches, more regularly than most Pandanaeae, the branches running at an angle of 45° to 60° from the base line . . . The description of the female flowers and fruit agrees with what I found, but when we come to leaves I have to point out what I imagine to be a very important difference. I could detect no screwthread, such as one expects in a *Pandanus*, and the leaves run in fours [four lines] each one above its fellow in a direct line . . . Female flowers and fruits abounded, but I was at a loss to find male blossoms in a proper state to forward to Kew. I observed various trees with a terminal inflorescence on an altogether smaller scale . . . having the typical 4-leaved stem, and so I hoped I had found what I was searching for; but all were dried and much injured by insects, so that I hesitated to gather them. I have sent the best I could get, and will try for better specimens at another time of year. I had no microscope or means of making a more exact examination of the structure.’ At first these specimens looked hopeless, but after much washing we got rid of the dead insects and excreta and found some perfect flowers.—W. Botting Hemsley.

Fig. 1, a male flower; 2, a stamen; 3, a pollen-grain. *All enlarged; the pollen x 1000.*
LIMACIA MONILIFERA, Burkill.

_Menispermaceæ._

_L. monilifera_, Burkill (sp. nov.); species _L. cuspidata_, Hook f. et Thoms., affinis, differt foliis ellipticis, carpellis basi pilis coronatis, petalis nullis, cavernulis fructus duplo majoribus.

_Frutex_ alte scandens; rami vetustiores eu brachium hominis crassi; rami juniores pilis griseis dense tecti, mox glabrescentes. _Folia_ sub-elliptica, apice obtusa vel rotundata, nec cuspidata, basi obtusa, utroque latere glabra, nitentia, 3-4 poll. longa, 2-3 poll. lata; petiolus _1½_ poll. longus. _Inflorescentia_ feminea vel in axilla folii exacte inserta vel supra basin petioli paullo remota, 1-1½ poll. longa, pilis brevibus griseis obtecta, basin versus ramos 2-3 gerens; flores ad 15, brevissime pedicellati. _Sepala_ majora _1½_ lin. longa, glabra. _Petala_ nulla. _Staminodia_ 6-7. _Carpella_ 3-4, basi corona pilorum cincta, in fructus _1½_ tantum maturescentia. _Fructus_ maturi læves, globoso-lienticulares, _4½-5_ lin. diam., quaque cavernulas duas, iis _L. cuspidatae_ duplo majores, _2_ lin. diam. tenens. _Flores_ masculini ignoti.

_SOLOMON ISLANDS:_ Lalavanola, Island of Florida, Comins, 350.

The natives use the fruits as beads, scraping off the pericarp, and stringing them through the central cavities. Such a bead is shown in fig. 7, and a portion of a necklace into which they enter in fig. 10.—

I. H. BURKILL.

Fig. 1, a female inflorescence; 2, a female flower; 3, one of the larger sepals; 4, a staminode; 5, carpels; 6, a carpel in section; 7, bead manufactured from a fruit; 8, fruit in vertical section; 9, in transverse section; 10, portion of a necklace made of beads and Limacia fruits. _Figures_ 1-9 enlarged.
RANUNCULUS INVOLUCRATUS, Maxim. et R. SIMILIS, Hemsl.

RANUNCULACEÆ.


North-Eastern Tibet: at 14,000 to 14,500 feet, without special locality, Przewalski; near Horpa Tso, at 17,300 feet, Deasy & Pike, 817.

R. similis, Hemsl. (sp. nov.); ad R. involucratum, Maxim. valde accedit, sed sepalis hirsutis, floribus luteis, carpellis dorso carinatis nec alatis differt.


Tibet: sandy earth and gravel in valleys at 17,500 feet, Thorold; in 81° 40' long. and 34° 50' lat. at 17,000 feet, Deasy & Pike; in about 82° 30' long. and 35° lat. at 16,649 feet, Welby & Malcolm.

I am still somewhat doubtful about these scapose Ranunculi, having in the first instance identified Dr. Thorold’s specimen with R. lobatus, Jacquem. (“Voy. Bot.” p. 5, t. 1, B.), taking it to be a reduced state of that species. Subsequently I thought it was R. involucratus, Maxim.; but then came a specimen in Capt. Deasy and Mr. Arnold Pike’s collection (817), figured above, which proved to be exactly Maximowicz’s plant. Although there are certain differences, I am not sure that they will not all prove to be R. lobatus, Jacquem., the differences being due to local conditions.—W. Botting Hemsley.

Fig. A. Ranunculus involucratus, Maxim. Natural size.
Fig. 1, a sepal; 2, an anther and part of filament; 3, an achene; 4, the same in section. All enlarged.

Fig. B. Ranunculus similis, Hemsl. Natural size.
Fig. 5, a sepal; 6, anthers and part of filament; 7, a carpel; 8, the same laid open. All enlarged.
**SENECIO (§ CREMANTHODIUM) DEASYI, Hemsl.**

**Composite. Tribe, Senecionideæ.**

**S. Deasyi, Hemsl. (sp. nov.); species ex affinitate Cremanthodii humilis, Maxim., sed robustior, foliis carnosis integris.**

_Herba_ perennis, subscaposa, radicibus cylindricis elongatis carnosis. _Caules_ erecti, 2–3 poll. alti, monocephali, 2–3-foliati. _Folia_ radicalia carnosa, longe petiolata, quam caules breviora, ovalia, elliptica vel oblonga, absque petiolo $\frac{1}{2}$–1 poll. longa, glabra, integra, venis immersis inconspicuis; _folia_ caulina sessilia, inferiöra vagiantia, decolorata, superiöra viridia, subtus primum plus minusve lanata. _Capitula_ multiflora, 1–1$\frac{1}{2}$ poll. diametro. _Involucri_ bractee 12–15, uniseriatae, oblongo-lanceolae, flores radii excedentes, basi connate extus araneosolanatae. _Florum_ radii _corollae_ apice rotundatae, minute trideutatae. _Achenia_ ovoidea vel ellipsoidae, glabra; _pappi_ pili molles, quam _corollae_ disci fere dimidio breviores.

_Tibet: _Horpa Tso, at 17,500 feet, where there was very little vegetation of any kind, _Deasy & Pike, 827_.

Dr. W. G. Thorold collected a single specimen (33) of what appears to be the same species, at an elevation of 17,600 feet. He does not give the exact locality, but merely states that it grew in water-logged stony soil. Mr. Arnold Pike notes that it was very scarce, and describes the _flower-heads_ as having a yellow ray and orange centre.— _W. Botting Hemsley._

Fig. 1, two involucral-bracts seen from the outside; 2, a ray-flower; 3, portion of a bristle of the pappus; 4, a disk-flower; 5, anthers; 6, part of style. *All enlarged.*
SAUSSUREA WELLBYI, Hemsl.

Composite. Tribe Cynaroideae.

S. Wellbyi, Hemsl. (sp. nov.) ; ad S. Stellam, Maxim. et S. Thoroldii, Hemsl. accedit, a priore foliis basi lanatis, a posteriore foliis integris differt.


Tibet: between 90° and 96° long., and 35° and 36° lat., at 14,600 to 16,800 feet, Wellby & Malcolm.

Saussurea Wellbyi, Hemsl., is one of a small but exceedingly interesting collection of plants made by Captain Wellby and Lieutenant Malcolm on their memorable journey across Tibet, from west to east. Considering the hardships and privations they underwent, it is surprising they were able to bring away anything. Kew previously possessed no specimen of this species, nor have I been able to identify it from descriptions of species not represented in the Herbarium. A note accompanying the specimens runs as follows: 'Found widely distributed in flower during August and September.'—W. Botting Hemsley.

Fig. 1, a single flower-head; 2, a flower; 3 and 4, an outer and an inner bristle of the pappus; 5, an anther; 6, style. All enlarged.
SMILAX UTILIS, Hemsl.

LILIEÆ. Tribe SMILACEÆ.

S. utilis, Hemsl. (sp. nov. ?); ex affinitate S. ornata, Lemaire (Bot. Mag. t. 7054) differt umbellis simplicibus longe pedunculatis.


JAMAICA: cultivated, D. Morris.

This *Smilax* is the one cultivated in Jamaica, and believed to be of Venezuelan origin, though this cannot be verified by any specimens Kew possesses from that country. It has also been propagated at Kew, and sent to Ceylon and other colonies; yet it is important to remember that it does not yield the sarsaparilla known in commerce as 'Jamaica sarsaparilla.' In consequence of the original *Smilax officinalis*, H.B.K. having been founded on leaves only, much confusion has arisen, inasmuch as the leaves vary greatly on the main stems and flowering branches, and again according to the vigour of the plant. Sir Joseph Hooker (Botanical Magazine, cxv. (1889) t. 7054) has shown that the plant accepted by Flückiger and Hanbury (Pharmacographia, ed. 1, p. 639), and Bentley and Trimen (Medicinal Plants, iv. t. 289) as *S. officinalis*, H.B.K., is different, and he figures it under the name of *S. ornata*, Lemaire. He also expresses the opinion that the plant cultivated in Jamaica differs from both, and with this we agree. He further mentions that only the female was known there. Since the accompanying plate was prepared, Kew has received from Mr. J. C. Willis, the Director of the Ceylon Botanic Garden, specimens of a
male *Smilax*, which he states was received from Kew as the [cultivated] Jamaica sarsaparilla. It is not included in the above description, because there is just an element of doubt of its being the same species. The leaves might very well belong to *S. utilis*, except that in the flowering branches there is a much greater development of the basal or leafy portion of the stipules, and no, or only rudimentary development of tendrils. And the leaves disarticulate, apparently before the flowers expand, just above the point on the petiole to which the stipules are adnate. The flowers are in simple umbels, borne on very slender peduncles, sometimes solitary, sometimes in pairs. As the *Smilaces* are supposed to be strictly dioecious, and the commercial forms are usually propagated vegetatively, it is difficult to account for this male in Ceylon.—W. Botting Hemsley.

Fig. 1, portion of branch petiole and tendrils; 2, a bud; 3, an expanded female flower. *All enlarged.*
OREOMYRRHIS LINEARIS, Hemsl.

Umbelliferae.

O. linearis, Hemsl. ; a speciebus hactenus cognitis foliis linearibus indivisis gramineis differt.


British New Guinea: Mount Scratchley, 10,000–13,000 ft., and Wharton Range, 11,100 ft., Giulianetti.

This is one of a number of interesting plants collected by Mr. A. Giulianetti in the mountains of British New Guinea, and presented to Kew by Sir William MacGregor. A full account of these plants will shortly appear in the Kew Bulletin. The genus Oreomyrrhis is common to the Andes, New Zealand, and Australia, and this is apparently the first species found in New Guinea. In foliage it differs entirely from all the previously known species, whilst in other characters it is quite normal. The foliar organs are apparently flattened petioles terminating in a minute rudimentary blade.—W. Botting Hemsley.

Fig. 1, cross section of a flower-scape; 2, apex of a leaf, seen from above; 3, the same from below; 4, an involucral bract; 5, a fruit; 6, side view of a single carpel; 7, cross section of a carpel. All enlarged.
Plate 2591

QUERCUS CARLESII, Hemsl.

Cupuliferae.

Q. Carlesii, Hemsl. (sp. nov.); species ex affinitate Q. cuspidata, Thunb., differt imprimis foliis minus coriaceis glandibus minoribus sphæroideis.


This species is remarkable for its very small acorns.—W. Botting Hemsley.

Fig. 1, an acorn; 2, the same with the cup removed. Both enlarged.
**MOSELEYA PINNATA, Hemsl.**

**Scrophulariaceae.**


**M. pinnata,** Hemsl. (*species unica*).


**China:** Damp woods on the Great Black Mountain, at 9000 feet, Mengtse, Yunnan, Hancock, 302. Also from Nepal, *Wallich*; and Tonglo, Sikkim, at 8500 feet, C. B. Clarke, 35,733.

The excellent specimens of this plant presented to Kew by W. Hancock Esq., of the Imperial Chinese Customs, enable us to figure and describe it much more fully than was previously possible. It is here restored to generic rank, because it is so very different from all the genuine species of *Sibthorpia.* It is named in memory of the late Professor H. N. Moseley, F.R.S., who, although not a trained botanist, did good service for Botany on the voyage of the 'Challenger.'—W. Botting Hemsley.

Fig. 1, pistil, disk and part of calyx; 2, a hair from the calyx; 3, a corolla laid open; 4, a hair from the corolla; 5, a longitudinal tangential section through one of the cells of the ovary; 6, a cross section of the ovary. *All enlarged.*
ANISADENIA PUBESCENS, *Griff.*

**Linaceae.**

*A. pubescens, Griff.* *Notul.* iv. p. 535; caulibus puberulis per totam longitudinem foliatis.


**China:** Mengtze, Yunnan, on mossy mountains at 5000 to 6000 ft., Hancock, 367; A. Henry, 9046.

This elegant little plant was originally discovered by W. Griffith in the Khasia mountains, where various other travellers have since collected it; but I believe this is the first record of its occurrence in China. In general appearance it so closely resembles a *Plumbago* as to deceive even a practised eye, especially in a dried state. It is very inadequately figured in Griffith’s *Icones Plantarum Asiaticarum*, t. 593. Mr. Hancock describes the flowers as cream-coloured, and singularly delicate and elegant; whilst Dr. Henry indicates that they are pink.—W. Bottig Hemsley.

Fig. 1, portion of the under surface of a leaf; 2, a pair of stipules; 3, a flower with the corolla removed; 4, one of the inner sepals, which are destitute of glands; 5, a portion of the andræcum; 6, a pistil; 7, a cross section of the ovary. All enlarged.
**Plate 2594.**

**REINWARDTIA SINENSIS, Hemsl.**

**Linaceae.**

*R. sinensis, Hemsl. (sp. nov.)*; a speciebus hactenus cognitis foliis apice rotundatis, petalorum ungue per totam longitudinem angustissimo subito in laminam patentem expanso differt.


China: Mengtze, Yunnan, on rocky mountains at 5000 ft., A. Henry, 9081b.

Fig. 1, calyx and pistil; 2, stamens; 3, ovary; 4, cross section of the same; 5, capsule; 6, one carpel; 7, oblique section of the same from the back. *All enlarged.*
Plate 2595.

ZANTHOXYLUM MULTIFOLIOLATUM, Hemsl.

Rutaceae. Tribe Zanthoxyloideae.

Z. multifoliolatum, Hemsl. (sp. nov.); inter species chinenses foliolis circiter pollicaribus 10-25-jugis insignis.


China: Mengtze, Yunnan, at 4500 to 6000 ft., Hancock, 449; A. Henry, 9998.

Fig. 1, portion of a leaflet; 2, a male flower; 3, a female flower; 4, pistil; 5, a fruit; 6, a seed. All except 4 enlarged.


There is no doubt that the specimens quoted above from Baluchistan, Sind, and Rajputana belong to the species described and figured here. In identifying them with the Concan plant, I have followed Dalzell and Gibson, Sir Joseph Hooker, and Sir Dietrich Brandis. I must, however, remark that the Concan plant has rather thinner leaflets and that its fruit is not known.—*O. Stapf.*

Fig. 1, a flower; 2, androecium and pistil; 3, vertical section of ovary; 4, cross section of ovary; 5, a fruit, half natural size; 6, basal portion, natural size; 7, a seed, natural size; 8, an embryo with one cotyledon removed; 9, a seed of *M. pterygosperma*, natural size; 10, a seed of *M. aptera*, natural size. *Where not otherwise indicated enlarged.*

**SERIES IV. VOL. VI. PART IV.**
ARTEMISIA PALLENS, Wall. ex Bess.

Compositae. Tribe Anthemideae.


Herba annua vel biennis vel triennis, \( \frac{1}{2} \)–1 ped. alta, tota lanuginosocanescens. Caulis crassiusculus, ramosus. Folia inferiora et intermedia petiolo ad \( \frac{3}{4} \) poll. longo suffulta, ambitu rotundata, 2-pinnatisecta, \( \frac{3}{4} \)–1 \( \frac{1}{4} \) poll. longa lataque, pinnis utrinque 3, laciniis linearibus obtusis 1 \( \frac{1}{2} \)–3 lin. longis, superiora gradatim minora, minus dissecta, brevius petiolata vel sessilia, summa lineari-oblonga vel subpatulata, dentata vel integra. Capitulæ globosa 2–3 \( \frac{1}{2} \) lin. diametro, in racemos compositos vel paniculâs foliâs laxè dispositâs, summa brevissimâ inferioris longius pedunculata vel ob folia ramorum sterilâs vel substeriliâs specie pedunculo \( \frac{1}{2} \)–\( \frac{3}{4} \) poll. longo foliato suffulta; phylla circiter 15–20, extima oblonga, obtusa, concava, crassiuscula, herbarce, margine tenuiter hyalino tenuissime lanato-ciliato, intermedia perlata, cucullata vix vel paulo breviora, flabellatim venosa, margine hyalino latiore, intima minora, multo tenuiora; receptaculum nudum. Flores marginales feminei, circiter 1 lin. longi; flores discoidei hermafroditi, subcampanulati, \( \frac{3}{4} \) lin. longi, omnes fertiles, glabri. Antheræ \( \frac{3}{4} \) lin. longae connectivo in subulam tenuem paulo breviorem producto.—Wight, Contrib. p. 20. DC. Prodr. vi. p. 120. Clarke, Compos. Ind. p. 163. Hook. f. Fl. Brit. Ind. iii. p. 329. A. paniculata, Roxb. Hort. Beng. p. 61; Fl. Ind. iii. p. 418; Icon. ined., non Lam.

INDIA: Cultivated in the Bombay and Madras Presidencies, Wall. Cat. 3302; Herb. Wight, 1463; Woodrow.

The affinity of A. pallens does not lie with the other annuals of the section Abrotanum, but rather with A. judaica, Linn., a suffrutescent species of Egypt, Northern Arabia, and Southern Syria, which has a rather similar involucre—although the bracts are smaller and thinner and the outermost comparatively shorter—and very similar corollas and anthers. A. pallens is extremely rare in herbaria, and hitherto has been
a very obscure species, which was placed by Sir Joseph Hooker, l.c., amongst the dubia. Roxburgh’s *A. paniculata* was referred in *Fl. Brit. Ind.* iii. p. 325 to *A. vulgaris*, probably on the strength of the fact that a specimen from Bombay named thus in the Kew Herbarium is actually *A. vulgaris*. Roxburgh’s figure, however, represents exactly the state of *A. pallens*, which was distributed by Wight under 1463. The leaves as drawn agree perfectly with those of Woodrow’s specimens, and the involucre shows distinctly the outer bracts longer than the inner. Roxburgh describes the plant as “a very slender, suberect, flaccid, thinly branched under-shrub,” which “in three years has only attained to the height of one or two feet.” As Woodrow’s specimens and also Wallich’s (Linnean Society’s herbarium) are evidently annual, it would appear that *A. pallens* may, under favourable conditions, become subperennial, though scarcely gaining in size or strength.

There is no evidence that *A. pallens* has been observed in a wild state, and it is very probable that it was introduced into the Dekkan Peninsula, where it is cultivated and used as an offering at certain Hindoo festivals. According to Roxburgh (*Hort. Beng.* p. 61), the specimens grown in the Calcutta Garden, and named by him *A. paniculata*, were communicated by a Mrs. Honeycomb, and supposed to have come from Persia; in his *Flora Indica*, l.c., however, he says: “The native place of this plant I cannot well ascertain. It was introduced into the Botanic Garden from the interior of Bengal,” whereby he probably means the Circars, the district where Heyne most likely got the specimens which Wallich quotes under *Artemisia pallens*, 3302 B.—O. Staff.

Fig. 1, a flower-head; 2, a part of the involucre seen from the inside; 3, 4, and 5, bracts of the involucre—outer, intermediate, and inner; 6, an outer, female flower; 7, an inner, male flower; 8, an anther; 9, upper part of style with stigma. *All enlarged.*
**Plate 2598.**

**FRA XinUS (§ C R NUS) MALACOPHYLLA, Hems.**

**Oleaceae.**

F. malacophylla, Hems. (sp. nov.); inter species gerontogas foliolis crassis mollibus velutino-tomentosis facile distinguuitur.


**China:** Mengtze, Yunnan, at 4000 to 5000 feet, Hancock, 311; A. Henry, 9970.

This remarkably distinct ash, distinct in its thick, softly tomentose leaves, was first sent to Kew by Mr. W. Hancock, and subsequently by Dr. A. Henry, from the same locality. In foliage it is nearer some of the American species than any of those hitherto discovered in Asia.—W. Botting Hemsley.

Fig. 1, a flower; 2, a pistil; 3, fruit; 4, section of fruit. *All except 3 enlarged.*
PETROCOSMEA IODIOIDES, Hemsl.

Gesneraceæ. Tribe Cyrtandreae.

P. § Anisochilus, Hemsl. (sect. nov.) ; corollæ labio postico quam antico multo minore complicato stylum amplexente.

P. (§ Anisochilus) iodioides, Hemsl. (sp. nov.) ; a P. minore, Hemsl. foliis cordato-rotundatis differt.


China: Mengtze, Yunnan, on rocks at 7000 to 9300 feet, Hancock, 301 ; A. Henry, 10,259.

This and P. minor, Hemsl. (pl. 2600) differ from the previously described species in having a very much reduced, nearly erect, upper lip, which embraces the exserted style.—W. Botting Hemsley.

Fig. 1, three segments of the calyx and pistil; 2, corolla and stamens; 3, cross section of ovary. All enlarged.
PETROCOSMEA MINOR, Hemsl.

Gesneraceæ. Tribe Cyrtandreæ.

P. (§ Anisochilus) minor, Hemsl. (sp. nov.); ex affinitate P. iodioidis, Hemsl. a qua differt foliis ovato-lanceolatis.


W. Botting Hemsley.

China: Menglze, Yunnan, on rocks at 6000 to 7000 feet, Hancock, 428; A. Henry, 9154.

Fig. 1, portion of calyx and pistil; 2, a corolla and stamens; 3, a detached stamen; a cross section of the ovary. *All enlarged.*
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