

ADDENDA, CORRIGENDA ET EMENDANDA

As was done in the preceding volume p. 592-599 it seemed useful to correct some errors which have crept into the text of volumes 4 and 5 as well as to add some additional data, new records, and new species or other taxa which came to our knowledge and are worth recording.

Though we strive to make this a work of precision I have given up all hope that I will ever succeed in editing a volume in which no corrections in references and authority of taxa will appear to be necessary. This may be possible in a century from now when the entries in Index Kewensis are completed, when all books have nicely been extracted, and their dates of publication have been fixed once and for all by zealous librarians.

Valuable help in framing these addenda was received from Dr R. C. BAKHUIZEN VAN DEN BRINK *f.*, additions of the *Convolvulaceae* I owe to Dr S. J. VAN OOSTSTROOM, of the *Flacourtiaceae* and *Proteaceae* to Dr H. SLEUMER, of the *Umbelliferae* and *Juncaceae* to Mr J. H. KERN, of the *Goodeniaceae*, *Dichapetalaceae*, and *Burseraceae* to Mr P. W. LEENHOUTS, of the *Burmanniaceae* to Dr F. P. JONKER.

Printing errors have only been corrected if they might give rise to confusion.

Volume and page number are separated by a colon.

Page numbers provided with either *a* or *b* denote respectively the left and right columns of a page.

Ancistrocladaceae

- 4: 8 Start the first sentence as follows: WALL. Cat. (1829) 1052; ARNOTT, *etc.* Further line 5, add behind '250': *n om. conserv.*

In the Rules of nomenclature it has been erroneously stated that *Ancistrocladus* WALL. Cat. (1829) 1052 is a *nomen nudum*. WALLICH expressly introduced it as a *nomen novum* for *Wormia* VAHL, 1810, *non* ROTTB. 1783.

Aponogetonaceae

- 4: 12 *Aponogeton loriae* MARTELLI.

Malayan specimens of *Aponogeton* have been found in the Van Kleef Aquarium, Singapore, said to have been brought in from Johore. If the identification is right, which I am not able to verify, the locality is very unusual as one would expect to find in West Malaysia a continental Asiatic species and not an East Malaysian-Queensland species. The discovery was made public by PURSEGLOVE in his commemorative pamphlet in honour of H. N. RIDLEY (1955) p. 8.

Mr SINCLAIR wrote me (Jan. 25, 1956) that he grew the plant in a tank. It flowered and he had a drawing made which shows the sheath still present when the extremely fragrant flowers had opened, but he did not observe how long the sheath persisted and whether it is circumsciss and caducous. The most distinctive feature about the plant was the vegetative budding. Young plantlets profusely form from buds and then roots appear. These plantlets finally drop off and fall to the bottom where they soon grow. The rootstock is vertical and oblong and densely clothed with thin fibrous roots. Dr H. C. D. DE WIT has the same species from Siam and it is now cultivated in the Leyden Botanic Gardens for future observation of the flowering state.

Burmanniaceae (F. P. JONKER)

- 4: 15 2a. *Burmannia ledermannii* JONKER, Monogr. (1938) 107, 126, f. 9.

Dr P. VAN ROYEN collected at the base of Mt Cycloop, Netherlands New Guinea, between Skyline and Kujabu River, n. 4478, 240 m alt., a fairly large number of specimens belonging to this species which, hitherto, was only known from one collection in the Carolines (Palau Isl.: Babelthaop, LEDERMANN 14486).

From the new material it appeared that the type material collected by LEDERMANN consists of monstrous specimens. In the place of the anthers shortly stipitate stigmas occur. The perianth limb is very short and the inner perianth lobes are missing. The VAN ROYEN material also shows the same malformations in a number of specimens. In one case the stigmas replacing the anthers appeared to be long-stipitate. In some flowers the three anthers are absent and not replaced by stigmas; in other cases the normal anthers are missing but in the place of one or two a stigma occurs.

Normal flowers which also occur in the VAN ROYEN collection are narrowly winged, the wings slightly narrower than the perianth tube. Outer perianth lobes erect, ovate, apiculate, 2 by 1½ mm; inner ones linear-lanceolate, obtuse, c. 4/5 mm long. Anthers sessile, at the base of the inner perianth lobes. Connective quadrangular, provided with two divergent, slightly papillose, apical crests and a basal, hanging, acute spur. Flower wings ½ mm wide, running from the upper half of the limb to below the base of the ovary.

The species differs from *B. geelvinkiana* BECC. by its basal hanging connective spur which is absent in that species and by its flower wings running from the upper half of the limb to below the base of the ovary.

According to the collector the limb and wings are light purple, the tube and the ovary yellowish green.

The question arises whether the specific epithet is legitimate as Art. 67 of the International Code of Botanical Nomenclature (1950) says that a name must be rejected when it is based on a monstrosity. As it was not based on monstrous specimens of an already known species and no other name for the species exists, I prefer to maintain the specific epithet and to avoid the introduction of a new name.

- 4: 21 Line 8 from bottom replace '3' by: 6.

Moringaceae

- 4: 45 *Moringa oleifera* LAMK.
With a ruthless application of the Rules the oldest correct name for the species seems to be *Moringa pterygosperma* GAERTN. LAMARCK included in his *M. oleifera* a reference to *Balanus myrepsica* GARSULT (1764) which, though his description is entirely based on *M. oleifera* and does not contain any characters of *Moringa myrepsica* (GARS.) THELL. (*syn. M. aptera* GAERTN.), would in the eyes of some systematists illegitimize his combination.

The question is what is meant in the Code by 'circumscription'. If LAMARCK had, in his lengthy description of *M. oleifera* taken in characters of *M. myrepsica* and mixed these with those of *M. oleifera*, or based his description entirely on the diagnosis of GARSULT, his name were to be rejected. It appears that he made a mistake by his tentative reduction of *M. myrepsica* and that it was his intention to describe a species differing from *M. myrepsica*. Therefore, I cannot see valid reasons for not accepting the combination *M. oleifera*.

Juncaginaceae

- 4: 57 *Scheuchzeria palustris* L.
Additional research with the diatom tracer method has shown that the doubtful specimen from Java almost certainly was collected in Central Europe, cf. VAN STEENIS, Taxon 5 (1956) 157.

Amaranthaceae

- 4: 73 *Celosia argentea* L. var. *cristata*.
Add to the synonyms: *Celosia castrensis* DIETR. Pflanzenreich 1 (1775) 246, based on Rumph. Herb. Amb. 5, t. 84.
In a cytological study by W. T. GRANT (Bot. Gaz. 115, 1954, 323-336) it is said that *C. argentea* would have $2n = 72$ chromosomes and the var. *cristata* $2n = 36$ and the hybrid $2n = 56$ chromosomes.

GRANT classified the tetraploid cockscomb as a variety under the diploid *C. argentea*. He assumes it not to be of recent origin and advances the hypothesis (*l.c.* 332b) "that it is an allopolyploid between cockscomb and a related species".

Simultaneously he inferred (*l.c.* 334a) that *C. argentea* must be "considered to be derived from the cockscomb".

This would represent, I feel, genetically a most unusual situation as it implies that the cockscomb would have been the ancestral species. It is known only in cultivation, however, and the argument of GRANT (*l.c.* 334b) "that there is probably an insufficient number of flowers producing seed for the cockscomb to maintain itself in nature" seems far-fetched and ecologically unwarranted; it might have been rare on that argument, but not extinct.

I expect that further chromosome countings must reveal diploid *C. argentea*; my common sense tells me that this must be the ancestral plant from which a polyploid cockscomb arose as a sport and was saved by ancient man as a curiosity.

- 4: 81b *Digera muricata* (L.) MART.
Add: now also found in the Botanic Gardens, Singapore, as a weed and collected in the Philippines, Cebu Isl., in fields, ELISABETH Co 38 (UP, L), Dec. 27, 1953.
- 4: 91a, *Alternanthera repens* (L.) GMEL. Linn. Syst. Nat. ed. 13, 2 (1791) 106; LINK, En. Pl. Berol. 1 (1821) 154; STEUD. Nom. ed. 2, 1 (1840) 65; O.K. Rev. Gen. Pl. (1891) 536.—*Achyranthes repens* LINNÉ, Sp. Pl. 1 (1753) 205.—*Illecebrum achyrantha* LINNÉ, Sp. Pl. ed. 2 (1762) 299.—*Alternanthera achyrantha* FORSK. Fl. Aeg.-Ar. (1775) lix, 28; R. BR. Prod. (1810) 417.
LINNÉ (1753) described this plant with a reference to DILLENUS (Hort. Elth. 1, p. 8, t. 7, f. 7) who cultivated, described, and pictured a specimen which he got through GERARD and which came from Tucuman (The Argentine) as '*Achyranthes repens foliis bliti pallidi*'. LINNÉ stated that the species occurred in "Turcomannia". Whether this means Turkey or is a mistake for Tucuman is uncertain.
In the 2nd edition of the Sp. Pl. (1762, p. 299) LINNÉ deliberately changed the name into *Illecebrum achyrantha* L. with a reference to Sp. Pl. ed. 1 and without additional new data. Consequently the specific epithet *achyrantha* is superfluous and illegitimate in this combination.
FORSKÅLL who installed the genus *Alternanthera* (1775) described the species as *Alternanthera achyrantha* FORSK. without reference to earlier works and basing

himself on specimens which he had from Rosette *leg.* HAMEL. Obviously this American weed had been introduced into the Mediterranean, possibly specially near harbours. Formally the type of his species is herbarium material and not the Linnean name of 1762, though there is little doubt in my mind that he derived the epithet from it.

GMELIN (1791, *l.c.* 106), in the briefest way possible, accepted FORSKÅLL's genus, referred to FORSKÅLL, but used the epithet *repens*. Obviously his intention was to recognize the genus *Alternanthera* but to point out that the correct epithet for the species should be *repens*. He did not properly refer to *Achyranthes repens* L. 1753, but the custom in this work was to make reference only to authors who used the same generic name as GMELIN himself accepted; in this case FORSKÅLL was the only one. Through this procedure many basionyms have been suppressed in this work.

It should be admitted that in the same work GMELIN entered under *Illecebrum* (*l.c.* 427) *I. achyrantha* L. copying it from Sp. Pl. ed. 2 (1762) with proper reference to DILL. Hort. Elth. Obviously he did not realize that in this way he entered the same species twice.

In my opinion it is reasonable that the nomenclatural synonymy should run as cited above.

I do not believe that *A. pungens* H.B.K. is specifically different.

4: 93a, Read: *Alternanthera ficoidea* (L.) R. BR. 594b *ex* LINK, En. Pl. Berol. 1 (1821) 164.

This appears the earliest legitimate transfer and correct authority.

4: 94a, *Alternanthera brasiliensis* (TORNER) O.K. 594b Add: Recently also found in the Philippines: Mindanao, Davao City, *pr.* Bago Oshiro, F. S. GACHALIAN *c.s.* PNH 33542, Feb. 12, 1955.

4: 94a, *Alternanthera philoxeroides* (MART.) GRI- 594b SEB.; SINCLAIR, Gard. Bull. Sing. 14 (1953) 35.

Add to Distr.: Singapore, SINCLAIR, *l.c.*

Umbelliferae (J. H. KERN)

4: 114 Read at the end of fork 6b of the key: 3. *Trachymene*. Read at the end of fork 20b of the key: 12. *Petroselinum*.

4: 118 Replace line 2 of the key by the following: 8. Leaves at least 5 times as long as broad.

8a. Leaves rosulate, narrow cuneate-spathulate, 2-9 cm by 4-7 mm, with (1-3(-5) obtuse teeth. Calyx lobes obtuse . . . 4. *T. rigida*

8b. Leaves not rosulate, terete-filiform, 1 1/2-2 1/2 cm by 1/2 mm, apiculate. Calyx lobes apiculate. 17. *T. filiformis*

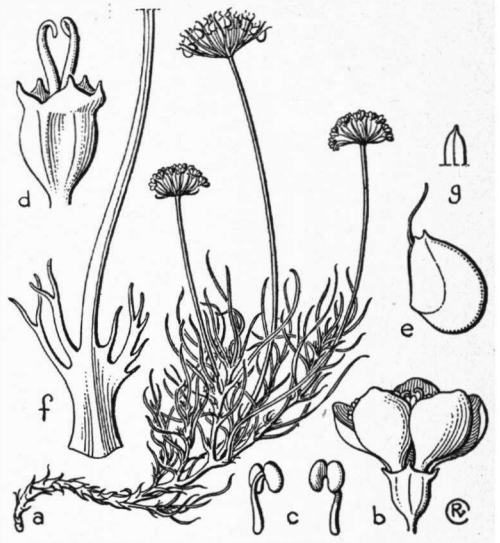


Fig. 1. *Trachymene filiformis* STEEN. a. Flowering branch, $\times 2/3$, b. flower, $\times 10$, c. stamens, $\times 12$, d. flower beyond anthesis, $\times 16$, e. mericarp, $\times 4$, f. leaf-base with laciniate sheath, $\times 4$, g. its apiculate tip, $\times 7$ (EYMA 4320).

4: 125 17. *Trachymene filiformis* STEEN. Nova Guinea n.s. 7 (1956) 8, f. 1.—Fig. 1.

Glabrous, branched dwarf shrub, apparently of tufted habit, c. 30 cm diam. Leaves on the stems, not rosulate, densely set, terete-filiform, entire, glabrous, with a ventral groove, acute, apiculate, 1 1/2-2 1/2 cm by 1/2 mm; sheath laciniate, c. 1 1/2 mm. Umbels solitary, terminal between a whorl of sympodial side-branches on 3-7 cm long peduncles exceeding the foliage, in fruit up to 10 cm. Involucral bracts c. 10, linear, acute, 4-7 by 1/5 mm. Pedicels c. 15-30, 3-4 mm long, spreading, rather erect in fruit. Flowers rose-white. Calyx lobes persistent, broadly triangular, apiculate. Petals broad-elliptic, c. 1 mm long. Styles 1 mm. Mericarps 3 by 2 mm, on pedicels up to 7 mm.

Distr. *Malaysia*: Western New Guinea (Wissel Lake region: EYMA 4320, RAPPARD 3312).

Ecol. Heaths on limestone, 1600-1800 m.

Note. Unfortunately no material was available to Dr BUWALDA when he made his revision. It keys out next to *T. rigida* BUW. but is very different from that species by the non-rosulate leaves, the laciniate sheath, the terete-filiform leaf, and the apiculate calyx lobes.

4: 125 *Sanicula europaea* L. In a revision of the genus R. H. SHAN & L. CONSTANCE (Un. Cal. Publ. Bot. 25,

1951, 1-78) have split the specific population as accepted by BUWALDA into two replacing microspecies which have in my opinion merely racial rank. The Malaysian microspecies is called *S. elata* HAM. ex DON. occurring from S. Africa to Japan and the Moluccas.

4: 128 *Oreomyrrhis andicola* HOOK. f.

Add to the generic and specific distribution: Formosa.

M. E. MATHIAS & L. CONSTANCE have split the species more finely than BUWALDA, but their microspecies are in my opinion of racial rank, cf. Univ. Cal. Publ. Bot. 27 (1955) 347-416, 25 fig.

4: 140 Add under *Daucus* the following key and description:

KEY TO THE SPECIES

1. Coarse plant. Compound umbels long-peduncled, with numerous, regular rays. Umbellules many-flowered. Pedicels incurved after anthesis. Larger petals 1-4 mm, rayed. Central flowers not sessile, often sterile, and with red petals. Mericarps 3-4 mm long 1. *D. carota*
1. Not coarse. Compound umbels sessile, the uppermost ones seemingly peduncled; rays 2-5, irregular in length. Umbellules 1-6-flowered. Pedicels not incurved after anthesis. Petals c. 1/2 mm. Central flower often sessile, not sterile, not red. Mericarps 4-5 mm long.
 2. *D. glochidiatus*

2. *Daucus glochidiatus* (LABILL.) FISCHER, MEYER & LALLEMANT, Ind. IX Sem. Hort. Petrop. Suppl. (1843) 11; Linnaea 18 (1844) 209; THELL. in Hegi, Ill. Fl. Mitt. Eur. 5² (1926) 1503, f. 2574; in Fedde, Rep. 23 (1926) 156, f. 2; BLACK, Fl. S. Austr. 2, ed. 3 (1952) 659.—*Scandix glochidiata* LABILL. Nov. Holl. Pl. Sp. 1 (1805) 75, t. 102.—*Caucalis glochidiata* POIR. in Lamk. Enc. Suppl. 2 (1811) 137; DC. Prod. 4 (1830) 216.—*D. brachiatus* SIEB. ex DC. Prod. 4 (1830) 214; BENTH. Fl. Austr. 3 (1866) 376; BAILEY, Queensl. Fl. 2 (1900) 727.—*Scandix 'pectinata'* [sphaem. pro *glochidiata*] HOOK. f. Fl. Tasm. 1 (1860) 161, in syn.—*D. pusillus* (non MICHX.) F.V.M., fide BENTH. Fl. Austr. 3 (1866) 376, in nota.—Fig. 2.

Annual. *Stems* slender, erect, almost glabrous to more or less hispid, (2-)20-30 cm. *Leaves* with slender petioles, bipinnate, ultimate segments ovate, incised, minutely mucronulate. Compound umbels irregular, very loose, sessile, those at the apex of the stems seemingly peduncled; involucre bracts 2-3, pinnatisect; rays 2-5, very unequal, the longest ones in fruit longer than the involucre; bracts of the involucre unequal, short,

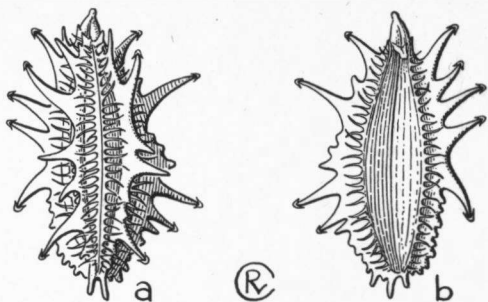


Fig. 2. *Daucus glochidiatus* (LAB.) FISCHER, MEYER & LALLEMANT. a. Mericarp from outside, b. from inside, both $\times 7$ (VAN STEENIS 18458).

usually entire; pedicels very unequal, longer than the fruit (but central flower often sessile or almost so). *Fruit* slightly compressed, ovoid or ellipsoid, 4-5 mm long; carpophore subulate, somewhat incrassate at the base; primary ribs with fine bristles, secondary ribs with strong bristles glochidiate at the top.

Distr. Australia, Tasmania, New Zealand; a few times introduced with Australian wool into Europe (Scotland, France, Switzerland); in *Malaysia*: Lesser Sunda Islands, Portug. Timor (Mt Tata-mailau, Jan. 5, 1954, VAN STEENIS 18458, Bo, BM, L.).

Ecol. A common herb in grassy *Eucalyptus* forest, 2500-2950 m. The fruits must be easily dispersed by animals.

Notes. Closely related to *D. montanus* HUMB. & BONPL. ex SCHULT. from S. America, and united with this species by HOOKER f., Fl. Tasm. 1 (1860) 161 and URBAN, Fl. Bras. 11¹ (1879) 350.

Very polymorphic, especially in the shape of the fruit bristles. The Timor specimens belong to *var. glochidiatus*, in which the bristles of the secondary ribs are laterally compressed and often confluent at the base into a narrow crest (in *var. pachyacanthus* THELL. in Fedde, Rep. 23, 1926, p. 159, they are conical-subulate, almost terete in cross-section, and not confluent at the base).

According to THELLUNG *var. glochidiatus* can be divided into 2 subvarieties: *subvar. glochidiatus* (*subvar. platyacanthus* THELL. in Fedde, Rep. 23, 1926, p. 158, f. 2b) with bristles strongly dilated at the base into a triangular basal part, and *subvar. leptacanthus* (THELL.) *stat. nov.* (*D. brachiatus* SIEB. ex DC., s.s.; *D. glochidiatus* *var. leptacanthus* THELL. l.c., s.s., f. 2a) with bristles slightly dilated into the lanceolate basal part. The Timor plants belong to *subvar. glochidiatus*.

The species can easily be distinguished from *D. carota* L. by its annual habit, the

few-rayed, sessile umbels; pedicels very unequal, not incurved after anthesis; fruit 4–5 mm long.

Dilleniaceae

4: 141 Bottomline add: *Korosvel* ADANS. Fam. Pl. 2 (1763) 442, *descr.*, 544.—

4: 152 *Acrotrema costatum* JACK.
This species has definitely appeared to occur in North Sumatra. In 1957 excellent material became available, collected by the late Mr H. SURBECK, collected Oct. 24, 1941, near Badiri, along the road from Sibolga to Padang Sidempuan (Tapanuli Res.) on moist steep rocks above Sibolga. The collector's notes read: Pretty plant with dark-green leaf rosette and yellow flowers. Flowers mostly 5 in a raceme.

Juncaceae (J. H. KERN)

4: 213 *Juncus prismatocarpus* R. BR.; KERN, Gard. Bull. Sing. *in the press*.
Add to Distr.: Malay Peninsula, Cameron Highlands (summit of Batu Brinchang, 2000 m, BURKILL 783; Brak Pressure Tank, 1500 m, BURKILL 823).

Pedaliaceae

4: 217b *Sesamum indicum* L.; STEEN. Nova Guinea n.s. 6 (1955) 34.
Add: also found in South New Guinea, *pr. Sg. Aendua* (Uta), 3 m, AET (exp. LUNDQVIST 522, July 13, 1941 (Bo, L)).

4: 218a Line 6 from top replace part of citation by: Beskr. Guin. Pl. 2 (1827) 56;
This paper is a pre-issued reprint from Vid. Sel. Phys. og Math. Skr. ser. iv, . . .

Phytolaccaceae

4: 232b Add under Excluded:
Phytolacca ? javanica OSBECK, Dagbok Ostind. Resa (1757) 276, is, according to MERRILL, Am. J. Bot. 3 (1916) 583, *Terminalia catappa* L. (*Combretaceae*).

Flagellariaceae

4: 248 The genus *Hanguana* is probably not a *Flagellariaceae* but would belong in the affinity of the *Xanthorrhoeaceae*, according to SMITHON, Kew Bull. 1956, p. 491 (1957). According to ERDTMAN (Pollen Morph. 1, 1952, 180) the pollen structure is distinctly different from that of *Flagellaria* and *Joinvillea* and ERDTMAN suggested to remove it to an other family. The pollen shows a slight resemblance to that of *Lomandra*.

Pontederiaceae

4: 258b *Monochoria hastata* (L.) SOLMS *var. elata* (RIDL.) BACKER.
Nov. 1957 I found this variety also in clay ditches along the large road from Bangkok northward through the rice bowl of Siam. It is a very distinct variety.

Corynocarpaceae

4: 263 1. *Corynocarpus cribbianus* (F. M. BAILEY) L. S. SMITH, Proc. R. Soc. Queensl. 67 (1956) 31.—*Cyanocarpus cribbiana* F. M. BAILEY, Queensl. Agr. J. 1 (1897) 370.—*Helicia cribbiana* F. M. BAILEY, Queensl. Fl. 4 (1901) 1327; SLEUM. Blumea 8(1955) 15.—*Corynocarpus australasica* C. T. WHITE, Contr. Arn. Arb. 4 (1933) 57, t. 5; *cf.* STEEN. Fl. Mal. I, 4 (1951) 263.

The following field notes were given from fresh material in Queensland: Understorey tree up to 18 m by 30 cm. Fruit a subglobular, fleshy drupe; exocarp thin and smooth and a bright pinkish red colour; mesocarp a whitish coloured flesh; endocarp 1–1½ mm thick.

Sonneratiaceae

4: 282 As an additional distinguishing character between *Sonneratia alba* and *S. caseolaris* the colour of the filaments has been mentioned. In Port. Timor I found, however, near Dili, in Dec. 1953, specimens of undoubted *S. caseolaris* (VAN STEENIS 17999) of which the stamens were entirely bloodred. This character should be omitted from the key.

Dipsacaceae

4: 291 Line 1. *Triplostegia mairei* LÉV. has been reduced to *Chrysosplenium macrophyllum* OLIVER by HARA, J. Fac. Sc. Un. Tokyo sect. III, 7 (1957) 86.

Dioscoreaceae

4: 305b *Dioscorea palawana* PRAIN & BURKILL. Add: an isotype of MERRILL's collection is in SING.

Xyridaceae

4: 367 Line 6 from top add: *Kotsjiletti* ADANS. Fam. Pl. 2 (1763) 60, *descr.*, 544. This generic synonym is based on RHEEDE, Hort. Mal. 9, t. 71; it is synonym of *Xyris indica* L.

Droseraceae

4: 378 3a. *Drosera rotundifolia* LINNÉ, Sp. Pl. 1 (1753) 281; DIELS, Pfl. Reich Heft 26 (1906) 93.

ssp. bracteata KERN & STEEN. Nova Guinea n.s. 6 (1955) 279.

Leaves in rosettes, patent, $3\frac{1}{4}$ –7 cm petioled, blade roundish, 4–10 by 5–18 mm. *Stipules* 5–8 mm, halfway adnate, the upper half divided into narrow subsetaceous segments. *Peduncle* solitary, erect, $\frac{1}{2}$ –2 cm, glabrous, 3–10-flowered. Pedicels not exceeding 2 mm. *Bracts* ligulate, concave, with a broad insertion, c. $4\frac{1}{2}$ by $1\frac{1}{4}$ mm, minutely glandular-denticulate, broadly rounded at the apex. *Sepals* connate at the base, oblong, minutely glandular-denticulate, c. 5 by $1\frac{1}{2}$ mm. *Petals* white, spatulate, c. 5–6 by 3 mm. *Stamens* 4–5 mm. *Ovary* ellipsoid, 3 mm; *styles* 3, each arm 2-parted with a club-shaped top, $1\frac{1}{2}$ –2 mm. *Seeds* minute, narrow-fusiform, with a prolonged testa.

Distr. The species in all temperate and warm-temperate parts of the northern hemisphere, the nearest station to Papua being Japan, the subspecies endemic in *Malaysia*: West New Guinea (Wissel Lake area, *pr.* Arupa).

Ecol. Sphagnum swamps at c. 1750 m. *Fl.* March.

Vern. *Gagura*, Kapouka.

Notes. This is the only record of this species on the southern hemisphere and it came very unexpected; from its station in New Guinea we would conclude that it might occur in intermediate stations somewhere in the Moluccas, Central Celebes, or Luzon.

Comparable distributional areas: isolated (obviously relic) stations in the Papuan highland and mountain swamp flora of genera or species which have their main areas on the northern hemisphere are not unknown; we point to the records of *Androsace umbellata* (LOUR.) MERR., *Triplostegia glandulifera* WALL., and *Hydrocotyle vulgaris* L. which are more or less equiform to that of *D. rotundifolia*.

We have compared the Papuan specimens in great detail with very numerous specimens of the typical form, but can find only one very distinct difference in the floral bracts, which in the typical form, *ssp. rotundifolia*, are consistently filiform to very narrow-lanceolate (up to $\frac{1}{4}$ mm wide), very acute, and more or less caducous.

In both subspecies the place of insertion of the bracts can vary: at the base of the pedicels, higher up along the rachis, or even on the pedicels just below the calyx.

In the key on p. 378 it would come close to *D. spatulata* which is found in similar habitats and belongs in the same *sect. Rossolis*, but it can at once be distinguished from that species by its erect scape,

the orbicular leaf-blade, the \pm glabrous inflorescence, and the remarkable fusiform seeds.

- 4: 379b Add in the map of the localities of *Drosera spatulata* a dot on the north of the Malay Peninsula for Kedah Peak (HOLTUM 14880), *cf.* STEEN. *Blumea* 7 (1954) 595.

Convolvulaceae (S. J. VAN OOSTSTROOM)

- 4: 390 Change in the key:
 15. Stigmas filiform or elliptic.
 16. Stigmas filiform.
 16a. Stigmas 2 . . . 10. *Convolvulus*
 16a. Stigmas 4 . . . 12a. *Polymeria*
 16. Stigmas elliptic . . . 8. *Jacquemontia*
 15. Stigmas globular.
- 4: 393a 3. *Cuscuta timorensis*. The correct name for this species is *C. cassyoides* NEES *ex* ENGELM. *Trans. Ac. Sc. St Louis* 1 (1859) 513; YUNCKER, *Mem. Torr. Bot. Cl.* 18 (1932) 250; MEEUSE, *Bothalia* 6 (1957) 651.
- Distr.* East to South Africa and *South Malaysia*: East Java (Asem Bagus) & Lesser Sunda Islands (Timor, Wetar), an extraordinary type of distribution.
- 4: 395 Add to the synonyms of *Evolvulus* L., besides those mentioned in VAN OOSTSTROOM's monograph, *l.c.* p. 19–20: *Vistnu* ADANS. *Fam. Pl.* 2 (1763) 245, *descr.*, typified by *Vistnu-clandi* RHEEDE, *Hort. Mal.* 6, t. 64.
- 4: 395 After line 5 from bottom add:

KEY TO THE SPECIES

1. Peduncles well developed, a little shorter to much longer than the leaves. Sepals lanceolate, acute or acuminate. Corolla shallowly lobed, pale blue or rarely white . . . 1. *E. alsinoides*
1. Peduncles absent or very short. Sepals ovate-oblong to oblong, obtuse or acutish. Corolla distinctly lobed, white . . . 2. *E. nummularius*
- 4: 398b After line 22 from top add:

2. *Evolvulus nummularius* (LINNÉ) LINNÉ, *Sp. Pl.* ed. 2 (1762) 391; OOSTSTR. *Mon. Evolv.* (1934) 114.—*Convolvulus nummularius* LINNÉ, *Sp. Pl.* ed. 1 (1753) 157.—*Fig. 3.*

A perennial herb. Stems few to several, prostrate and rooting at the nodes, slender, 10–40 cm long, with patent hairs, glabrescent. *Leaves* distichous, mostly broadly ovate, elliptic or orbicular, 4–15(–25) by 3–15(–18) mm, rounded, truncate or subcordate at the base, rounded or emarginate at the apex, glabrous on both sides or appressed-pilose beneath; petiole 1–5(–12) mm long.

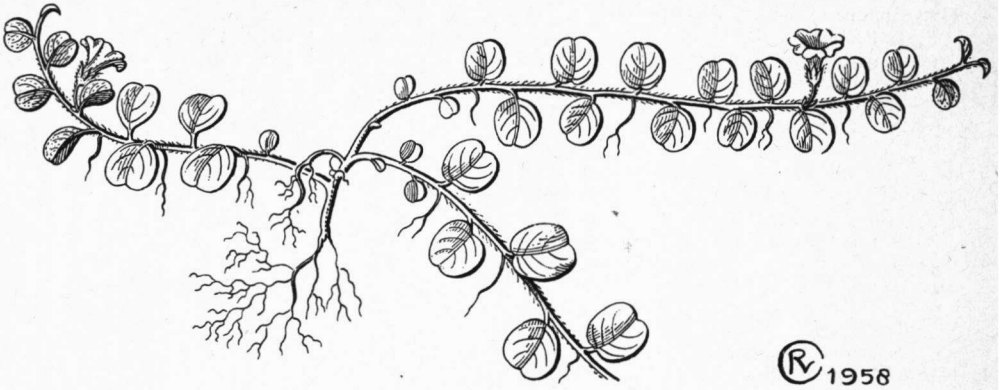


Fig. 3. *Evolvulus nummularius* (L.) L. Habit, $\times 3/4$.

Flowers 1 or 2 in the leaf-axils; peduncle none or very short; pedicels 2–6 mm long. Bracts linear or lanceolate, $1/2$ – $1\frac{1}{2}$ mm long. *Sepals* ovate-oblong to oblong, obtuse or acutish, $2\frac{1}{2}$ –4 mm long, sparsely pilose or glabrous, the margins ciliate. *Corolla* rotate to broadly funnel-shaped, white, the distinctly lobed limb c. 8 mm diam. *Ovary* glabrous. *Capsule* globular, glabrous, 4-valved. *Seeds* 4 or less, black or brown.

Distr. America, from Mexico to the northern Argentine, West Indies; tropical Africa, Madagascar; naturalized in India; in *Malaysia* found in one locality on the W. coast of the Malay Peninsula (Port Dickson: MONOD DE FROIDEVILLE 772, a. 1946), obviously a recent introduction.

Ecol. The only specimens known from the Malay Peninsula were collected in open, stony places along a cart-track in a cut down rubber-plantation.

subglobose, 1–2-celled, 2–4-valved. *Seeds* 1 or 2, pilose or sometimes glabrous.

Distr. A genus of c. 8 species in Australia; one of these also in New Caledonia and Malaysia.

1. *Polymeria pusilla* R. BR. Prod. 1 (1810) 488; BENTH. Fl. Austr. 4 (1869) 434; BAILEY, Queensl. Fl. 4 (1901) 1072; GUILLAUMIN, Fl. Nouv.-Caléd. (1948) 303.

A small herb. Stems thin, almost filiform, 5–40 cm long, creeping, rooting at the nodes (or sometimes twining?), appressed-pilose to glabrous. *Leaves* with slender petioles, ovate to nearly kidney-shaped (or linear), widely cordate at the base with rounded or obscurely angular auricles, the blade shortly attenuate into the petiole, retuse and minutely mucronate at the apex, 4–15 by 3–12 mm, glabrous above, shortly pilose beneath; petiole 3–12 mm, shortly pilose. *Peduncles* axillary, 2–10 mm long, 1-flowered, shortly pilose; pedicels much longer than the calyx, 4–10 mm long, glabrous; bracts minute, linear, $3/4$ –2 mm long. *Sepals* elliptic or ovate-oblong, all shortly pilose except for the glabrous margins of the inner ones; outer sepals 3–5 mm, inner ones $2\frac{1}{2}$ – $4\frac{1}{2}$ mm long. *Corolla* white, about twice as long as the calyx, with pilose midpetaline bands. Style articulate near its base; stigmas 4, filiform.

Distr. Australia (Queensland), New Caledonia, in *Malaysia*: Timor (Portuguese Timor: VAN STEENIS 18124).

Ecol. Pyrogenous grassland on the Fuiloro plateau at 400 m, creeping together with *Goodenia koningsbergi* (BACKER) BACKER ex BOLD. between tufts of *Schoenus falcatus* R. BR., *Themeda australis* (R. BR.) STAPP, *Fimbristylis marianna* GAUD., and specimens of *Pimelea* sp., *Alysicarpus bupleurifolius* DC., *Eriosema chinense* VOGEL, etc.

4: 439 After line 5 from top add:

12a. POLYMERIA

R. BR. Prod. 1 (1810) 488; BENTH. Fl. Austr. 4 (1869) 431; BAILEY, Queensl. Fl. 4 (1901) 1071; GUILLAUMIN, Fl. Nouv.-Caléd. (1948) 303.

Mostly small annual or perennial herbs, glabrous or hairy; stems prostrate or erect, rarely twining. *Leaves* usually entire. *Peduncles* axillary, 1–3-flowered; bracts minute. *Sepals* 5, herbaceous, subequal or the outer ones much broader, mostly acute or acuminate. *Corolla* regular, small, funnel-shaped to campanulate, plicate, with subentire or angular limb, pink or white. *Stamens* 5; filaments adnate to the corolla, filiform; pollen ellipsoid, smooth. *Ovary* 2-celled, each cell with 1 ovule; style 1, simple, filiform; stigmas 4–8, rarely 2, linear. *Capsule*

- 4: 439 Change in the key of *Merremia*:
 7. Pedicels with thick undulate ring or with warts immediately below the calyx.
 7a. Stems and leaves densely hairy. Outer sepals 15–18 mm long. Filaments inserted c. 12 mm above the corolla-base, 16–18 mm long. Style c. 28 mm long . . . 23. *M. similis*
 7a. Plants glabrous or nearly so. Outer sepals 11–12 mm long. Filaments inserted c. 5–6 mm above the corolla-base, 5–7 mm long. Style c. 13 mm long. . . . 24. *M. pacifica*
 7. Pedicels without thick ring or warts below the calyx.
- 4: 444b 5. *Merremia emarginata* (BURM. f.) HAL-LIER f.
 Add to Distr.: Neth. New Guinea (Merauke).
- 4: 450b 14. *Merremia boisiana* (GAGNEP.) OOSTSTR. var. *boisiana*.
 Add to Distr.: Sumatra (Tapanuli).
- 4: 453a 21. *Merremia peltata* (L.) MERR.
 Add to Distr.: Siam.
- 4: 454 After 23. *Merremia similis* ELMER add:
 24. *Merremia pacifica* OOSTSTR. Blumea 3 (1939) 263, fig. 1, a–g.—Fig. 4.

A twiner. Stems terete, smooth, fistulose, up to 5 mm diam., glabrous or with a few scattered hairs in the apical portion. *Leaves* broadly ovate to orbicular, 10–14 by 10–11 cm, broadly cordate at the base, abruptly acuminate to cuspidate at the apex with a narrow acute mucronulate acumen, glabrous or sparsely hairy above near the base; lateral nerves 9–10 on either side of the midrib, curved at the margin; secondary nerves many, parallel; tertiary nervation distinctly reticulate beneath; petiole 3–5 cm long, glabrous or with short scattered hairs. *Inflorescences* axillary, 15–20 cm long; peduncle terete, glabrous or nearly so, branched close to the apex; branches 3–6 mm long. Pedicels with a thick undulate ring below the calyx, glabrous, 2½–3½ cm long, in fruit erect, up to 5 cm. Bracts caducous. *Sepals* concave, membranaceous with pellucid margins and with glandular dots on the inner surface, the outer ones obovate to suborbicular, rounded or retuse and mucronulate at the apex, 11–12 mm long; the inner ones often broader, retuse and mucronulate at the apex, as long as the outer ones or a little shorter, c. 8–9 mm; the calyx enclosing the fruit as a cup, with sepals to 18 mm long. *Corolla* campanulate to funnel-shaped, c. 3–5 cm long, white with a yellow centre, very shallowly 5-lobed, glabrous or with some hairs at the apex of the midpetaline bands. Filaments inserted c. 5–6 mm

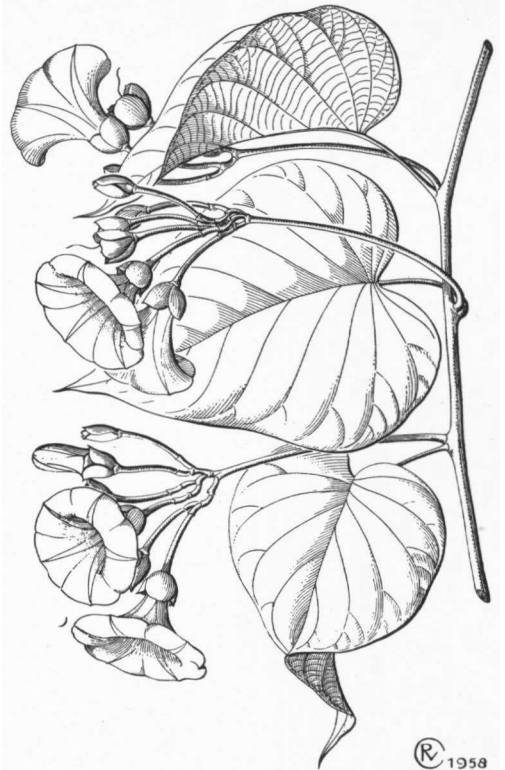


Fig. 4. *Merremia pacifica* OOSTSTR. Flowering branch, $\times \frac{1}{3}$ (BRASS 28540).

above the corolla-base, 5–7 mm long, papillose on the much broadened base; corolla-tube inside with 2 hair-lines below the base of each filament. Anthers straight or slightly twisted, glabrous. Ovary glabrous. Style c. 13 mm long. *Capsule* ovoid or globular, c. 2 cm long, dark brown.

Distr. Polynesia (Fiji Islands) and Malaysia (Papua, Rossel Island: BRASS 28540).

Ecol. In rain-forest regrowths; at c. 80 m.

- 4: 459 Change in the key:
 8. Sepals entirely glabrous (sometimes mucronate, or dentate on the nerves).
 8a. Outer sepals with 3 dentate keels. 22a. *I. fimbriosepala*
 8a. Outer sepals not keeled and not dentate.
 9. etc.
- 4: 460 Change in the key:
 22. Leaves with 3–4 nerves on either side of the midrib. Plant more or less tomentose with stellate hairs, or glabrescent to glabrous, except at the nodes . . . 33. *I. asterophora*

22. Leaves with 7 or more nerves on either side of the midrib. Plant glabrous, or with simple hairs.

22a. Leaves with 7-9 nerves on either side of the midrib, deeply cordate at the base . . . 36a. *I. abrupta*

22a. Leaves with 10-15 nerves on either side of the midrib, shallowly cordate to truncate at the base.

36. *I. illustris*

4: 469b 12. *Ipomoea tiliacea* (WILLD.) CHOISY.
Add to Distr.: Papua and Australia (Queensland).

4: 472a No 16 must be read as follows:

16. *Ipomoea ochroleuca* SPANOGHE, *Linnaea* 15 (1841) 340 ('*ochroleuca*'); MIQ. *Fl. Ind. Bat.* 2 (1857) 614 ('*ochroleuca*'); OOSTSTR. *Blumea* 3 (1940) 523 ('*ochroleuca*').—*I. kentrocarpa* HOCHST. ex RICH. *Tent. Fl. Abyss.* 2 (1851) 70; HALLIER *f. Bot. Jahrb.* 18 (1893) 139; *ibid. l.c.* 28 (1899) 41; BAKER & RENDLE, *Fl. Trop. Afr.* 4, 2 (1905) 163.—*I. ophthalmantha* HALLIER *f. Bot. Jahrb.* 18 (1893) 141.

Stems twining, thin, slender, glabrous or sparsely, shortly and patently pilose; old stems ovate with yellow, lacerate bark. *Leaves* ovate to broadly ovate, 3½-8 by 2½-7 cm, cordate at the base, with rounded lobes, shortly to long-acuminate at the apex, with acute or obtusish mucronulate acumen; mostly glabrous on both sides, the margins sometimes shortly fimbriate; petiole thin, 1-4 cm. *Inflorescences* axillary, peduncles thin, ½-5(-6½) cm, glabrous or with very short patent hairs, cymosely one- to several-flowered. Pedicels much longer than the calyx, 1½-3(-4½) cm, smooth, glabrous, or hairy like the peduncle, thickened towards the apex in fruit. Bracts minute, oblong to triangular. *Sepals* equal in length or the outer ones a little shorter, 5-6½ mm long, oblong to ovate-oblong, with acutish, obtusish, rounded or truncate and slightly emarginate, mucronulate apex, glabrous; outer sepals with thick centre and thin, pale margins, inner ones thinner. *Corolla* widely funnel-shaped, c. 4-5½ cm long, yellow (orange-yellow, sulphur-yellow or cream-coloured), with a purple centre (always?), glabrous, the pubescent apical parts of the midpetaline bands excepted. Stamens and style included; filaments unequal in length, hairy at the base. Ovary glabrous. *Capsules* on reflexed pedicels, broadly ovoid, crowned by the style-base, 10-11 mm high, straw-coloured, 2-celled, 4-valved, at the base with the reflexed sepals. *Seeds* 4, black, shortly pubescent or farinose, c. 4-6 mm long.

Distr. Tropical Africa; in *Malaysia*: Lesser Sunda Islands (Timor, Alor), North Borneo; New Caledonia.

Ecol. In Timor on rocks near the sea; according to Mrs WALSH restricted to that habitat; in Borneo the species was collected in a fairly open situation on the bank of a small stream, at 20 feet altitude.

4: 478a After 22. *Ipomoea stolonifera* (CYRILL.) J. F. Gmel. add:

22a. *Ipomoea fimbriosepala* CHOISY in DC. *Prod.* 9 (1845) 359; HALLIER *f. Bot. Jahrb.* 18 (1893) 143; Bull. Soc. R. Bot. Belg. 37 (1898) 97; Bull. Herb. Boiss. 7 (1899) App. 1, 48; BAKER & RENDLE, *Fl. Trop. Afr.* 4, 2 (1906) 199.—*I. choisyi* MONTR. *Mém. Ac. Sc. Lyon* 10 (1860) 237.—*Aniseia hastata* MEISSN. in Mart. *Fl. Bras.* 7 (1869) 319.—*I. phylloneura* BAKER, *J. Linn. Soc. Bot.* 21 (1885) 426.—*I. smithii* BAKER, *Kew Bull.* (1894) 73.—Fig. 5.

A herbaceous twiner. Stems terete or striate, glabrous or hirsute. *Leaves* ovate, ovate-deltoid, oblong, oblong-lanceolate or linear-oblong, 5-12 by 1-6 cm, cordate-sagittate or hastate at the base with rounded or acutish auricles, acuminate or attenuate to the obtuse, emarginate and minutely mucronate apex, glabrous; petiole 1-5 cm long, mostly glabrous, smooth, or sometimes minutely warty. *Inflorescences* axillary; peduncles nearly absent to 5(-9) cm long, cymosely one- to few-flowered at the top. Pedicels more or less angular, 1¼-3 cm, thickened in fruit. Bracts ovate or ovate-oblong, acuminate, mucronulate, 5-15 mm long. *Sepals* herbaceous, unequal, the outer ones longer, 15-20, in fruit up to 25 mm long, ovate, acute to acuminate, mucronulate (mucro filiform), with broad incurved margins, their back strongly 3-keeled; keels more or less irregularly dentate; inner sepals ovate, acuminate, mucronulate, about ¾ as long as the outer ones, not keeled. *Corolla* funnel-shaped, c. 4 cm long, glabrous, pale purple with a deep purple centre. Stamens and style included; filaments pilose in their basal portion. Ovary glabrous. *Capsule* ovoid or globose, c. 1½ cm long, 4-valved, the valves pale brown outside, whitish inside. *Seeds* c. 5 mm long, black, minutely puberulent.

Distr. Tropical America, tropical Africa, Madagascar, in *Malaysia* (New Guinea: Territory of New Guinea, Eastern Highlands Distr., Goroka Subdistr., near Gitunu village: HOOGLAND & PULLEN 5288), Pacific (New Hebrides, New Caledonia, Austral Isl.: Raivavae and Rapa).

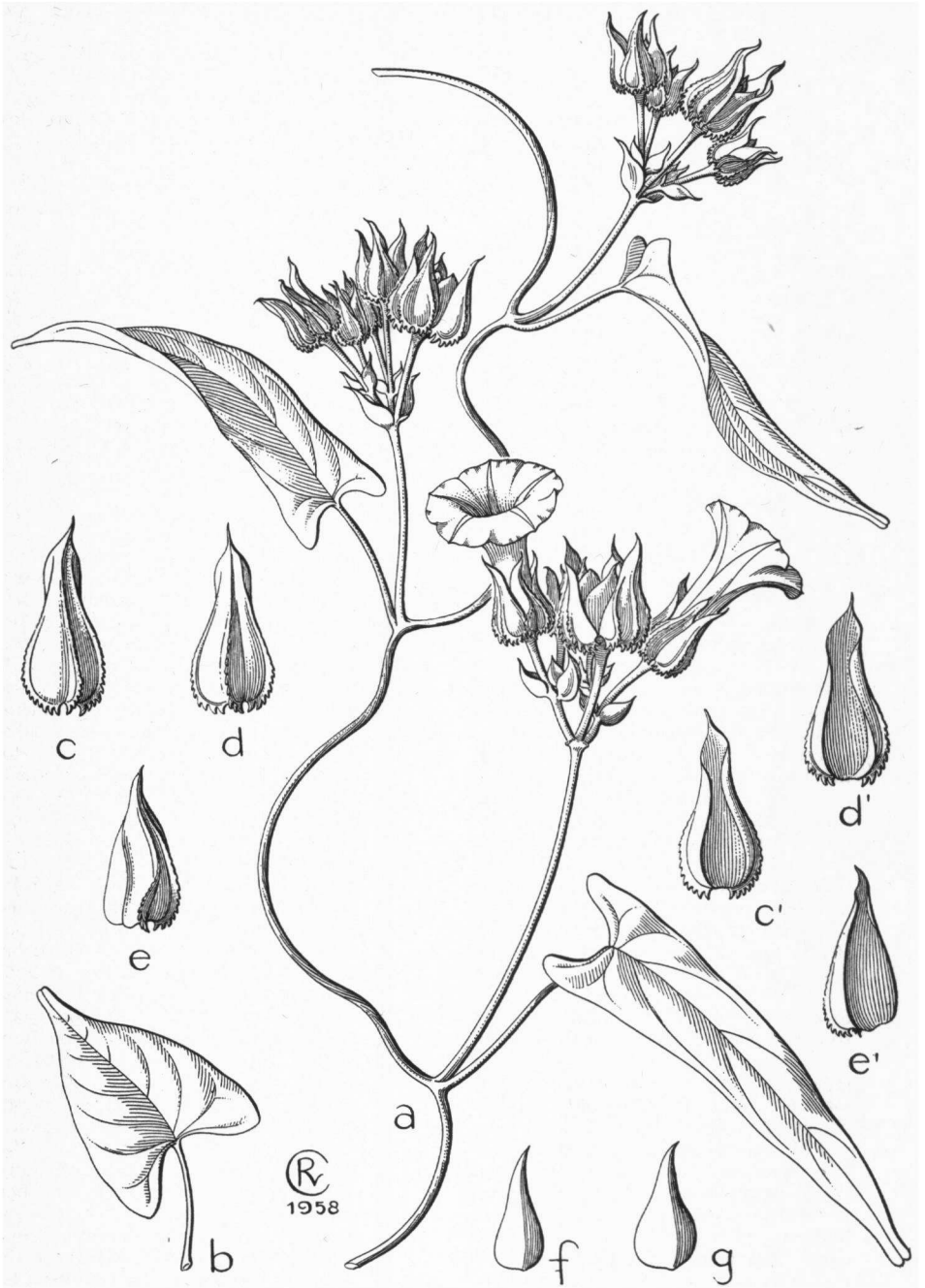


Fig. 5. *Ipomoea fimbriosepala* CHOISY. a. Flowering branch, $\times 1/2$, b. leaf, $\times 1/2$, c-g. sepals 1-5, from the outside, c'-e'. sepals 1-3, from the inside, all nat. size (all after HOOGLAND & PULLEN 5288, except b E. ULE 5196).

Ecol. In New Guinea only found in one locality at c. 1500 m in a depression in grassland, fairly common.

4: 481a Line 9 from bottom:

For species 30. *Ipomoea angulata* the correct name is *I. hederifolia* LINNÉ, Syst. Nat. ed. 10 (1759) 925; OOSTSTR. Nova Guinea n.s. 6 (1955) 28.

4: 485b After 36. *Ipomoea illustris* (CLARKE) PRAIN add:

36a. *Ipomoea abrupta* R. BR. Prod. 1 (1810) 485; BENTH. Fl. Austr. 4 (1869) 421; BAILEY, Queensl. Fl. 4 (1901) 1062. —*Convolvulus abruptus* SPRENG. Syst. 1 (1825) 596.

A woody twiner, glabrous or nearly so. Stems terete, fistulose, *Leaves* ovate, 5–9 (–15) by 5–7(–10) cm, deeply cordate at the base, shortly acuminate at the apex with an obtuse or retuse, mucronulate acumen; nerves 7–9 on either side of the midrib; petiole slender, 3–6(–10) cm long. *Inflorescences* axillary; peduncles shorter than the petioles, cymosely one- to several-flowered. Pedicels angular, slightly thickened towards the calyx, in fruit up to 2½–3 cm long. *Sepals* slightly unequal, glabrous, coriaceous, with wrinkled back (in fruit), ovate, obtuse; outer ones 7½–10 mm long (in fruit up to 15 mm); inner ones a little shorter (in fruit up to 10–12 mm long). *Corolla* funnel-shaped, 7½–9 cm long. Stamens and style included. Ovary glabrous. *Capsule* broadly ovoid or globose, c. 12 mm high (according to BAILEY up to 2½ cm diam.), apiculate by the long style-base. *Seeds* 3–4, c. 6 mm long, with long silky hairs near the margins and along these.

Distr. Australia (N. Australia, Queensland), in *Malaysia*: Thursday Island (JAHERI a. 1901).

4: 485b Line 13 from bottom. *Corolla* pink or pale lilac. Add.; rarely white.

4: 487a Line 6 from bottom. Add to Distr.: tropical Australia.

4: 489b Line 11 from bottom. Add to Distr.: Siam.

4: 495 Change in the key:

10. Stamens and styles about as long as or longer than corolla; corolla smaller, c. 3 cm long or less.

10a. Lateral nerves 5–6 on either side of the midrib. Upper surface of leaves glabrous or nearly so.

1a. *A. corneri*

10a. Lateral nerves 9 or more on either side of the midrib. Upper surface of leaves more or less densely pilose, sometimes glabrescent.

11. etc.

4: 496 Change in the key:

40. Filaments papillose or pubescent at the base.

41. Sepals glabrous. Bracts narrowly triangular, 1–2 mm long, glabrous.

38. *A. bohollensis*

41. Sepals pilose. Bracts larger, linear to filiform, 8–12 mm long, pilose.

40. *A. apoensis*

40. Filaments glabrous at the base.

42. Two outer sepals ovate-triangular, obtuse at the apex, shortly pilose outside or partly glabrous. Filaments with a large tooth at the base.

36. *A. pseudorubicunda*

42. Two outer sepals orbicular, broadly rounded at the apex, densely silvery strigillose outside. Filaments without a tooth at the base 36a. *A. lamii*

4: 504b *Argyrea corneri* HOOGL. appears to belong to section 1. *Ptyxanthus* G. DON, and has to be inserted on p. 497b after *Argyrea mollis* (BURM. f.) CHOISY. The description reads as follows:

Stems twining, to 15 m or more, terete, strigose. *Leaves* ovate, 3½–9 by 2–5 cm, obtuse or rounded at the base, abruptly acuminate to cuspidate at the apex with a narrow, acute, mucronulate acumen; upper surface glabrous except the strigose midrib, lower surface densely light-yellowish sericeous or much less hairy to nearly glabrous; midrib and 5–6 nerves on either side prominent beneath, minor nervation reticulate, inconspicuous when covered by the indument; petiole 1–2½ cm, strigose. *Peduncles* axillary, terete, short, 10–18 mm, densely sericeous, cymosely 1–5-flowered, usually 1-flowered. *Pedicels* c. 4–6 mm, sericeous. Bracts linear, to c. 10 mm long, sericeous, caducous. *Sepals* broadly ovate, broadly acute to rounded at the apex, densely sericeo-tomentose outside, one margin of sepal 3 and both margins of sepals 4 and 5 less densely hairy or partly glabrous; three outer sepals c. 8½ mm, two inner ones c. 6½–7 mm long. *Corolla* funnel-shaped, c. 2½–3 cm long, pale pinkish white outside, rose-pink inside; limb shallowly lobed; midpetaline bands with appressed hairs, rest of corolla glabrous. Style and stamens nearly as long as the corolla. Filaments dilated and glandular hairy at the base. Ovary glabrous, 2-celled. Fruit unknown.

Distr. *Malaysia*: Malay Peninsula (Pahang, Trengganu).

4: 508b After 36. *Argyrea pseudorubicunda* OOSTSTR. add:

36a. *Argyrea lamii* OOSTSTR. *Blumea* Suppl. 4 (1958) 239, fig. 1.

Stems twining, sparsely to rather densely brownish strigillose. *Leaves* elliptic or elliptic-ovate, 10–17 by 4–8 cm, rounded at the base, shortly acuminate and mucronulate at the apex, subcoriaceous, dark

green, glossy and glabrous above, paler green, glossy and sparsely strigillose beneath, mainly on the midrib; midrib and 7-8 nerves on either side prominent beneath; petiole 1½-3 cm, strigillose like the stems. *Peduncles* slender, 10-16 cm long, 1-1½ mm thick, strigillose like the stems, umbellately branched at the apex with 3-5 branches; primary branches 1¼-4 cm long, secondary ones shorter, ¾-1¼ cm long, tertiary if present still shorter. Pedicels 4-5 mm long, thickened towards the apex, densely silvery strigillose. Bracts linear or linear-lanceolate, c. 4 mm long, or the lower ones up to 8 mm long, soon caducous. Two outer *sepals* orbicular, c. 5 mm long, three inner ones orbicular or slightly broader than long, as long as the outer ones or a little shorter, all densely silvery strigillose outside; sepal 3 with one glabrous margin outside, sepals 4 and 5 with two glabrous ones. *Corolla* 5-parted, pinkish purple inside, white outside; tube cylindrical, c. 5 mm long, glabrous, lobes linear, recurved or rolled backwards, c. 18 mm long, appressed pilose outside, at the apex with a small glabrous lobule at one side (or sometimes at both sides). Filaments glabrous, inserted c. 4 mm above the corolla-base, without tooth at their ventral side. Ovary glabrous, 2-celled. Fruit unknown.

Distr. *Malaysia*: Malay Peninsula (Trengganu: SINCLAIR *c.s.* SF 40860).

Ecol. In lowland forest.

Stylidiaceae

- 4: 532 *Stylidium pedunculatum* R. BR.—*St. androsaceum* O. SCHWARZ, in Fedde, Rep. 24 (1927) 105, *nov. syn.*

Add in fig. 5 the following two Australian localities: Koolpinyah, 30 miles W of Darwin, BLEESER 411; near Grove Hill (13°28'S and 131°35'E), dull, ± olive-green tufts in a broad, flat, swampy drainage channel with sandy soil overlying clay, 90 m. July 6, 1942, S. T. BLAKE 16371.

Combretaceae

- 4: 544 13. *Combretum kostermansii* EXELL, *Blumea* 7 (1954) 557.

Scandent shrub; twigs initially fulvopilose and tomentellous, later sparsely pilose, dark-red. *Leaves* opposite, chartaceous, ovate to oblong-ovate, acuminate cordate at the base, 2-7 by 1¾-1½ cm, above shiny and almost glabrous except for the pilose midrib, beneath appressed-pilose on the nerves, not lepidote; nerves 3-6 pairs; petiole 1-3 mm, pilose. *Flower* in axillary and terminal panicles, bisexual, protogynous, 4-merous, sessile,

white; rachis fulvo-pilose. Bracts filiform, fulvo-pilose, 3-4 mm long. Lower receptacle (ovary) 1-1½ mm long, densely pilose, upper receptacle cupular, 1½ by 2½ mm, pilosulous. *Calyx* lobes ovate-acuminate, 1 by 0.9 mm. *Petals* 4, broad-ovate, apiculate, 2 by 1½ mm, pilose. *Stamens* 8, in 2 whorls, filaments 2½ mm, glabrous, initially inflexed, anthers 1 mm long, glabrous. Disk inconspicuous. Style 4 mm long, glabrous. Ovules 2.

Distr. *Malaysia*: E. Borneo (Loa Haur, west of Samarinda).

Ecol. Lowland forest, at 60 m; *fl.* May 1952.

Note. Although the specimens lack any glandular hairs Mr EXELL is of opinion that it should be placed in the *sect. Glandulosae* in the affinity of *C. nigrescens*, from which it differs in the absence of glandular hairs, the shape and size of its leaves, and the much larger petals.

- 4: 548 Line 8 from bottom, add behind square bracket: *ex* DC. Mém. Soc. Phys. Hist. Nat. Genève 4, 1 (1828) 5;
4: 566a Line 3 from bottom, add behind t. 68: —*Phytolacca ? javanica* OSBECK, Dagbok Ostind. Resa (1757) 276, *cf.* MERR. Am. J. Bot. 3 (1916) 583, *non T. javanica* MIQ.
4: 571b *Terminalia macadamii* EXELL; Nova Guinea n.s. 7 (1956) 5.

Add the description of ♂ flowers from three supplementary collections:

Flowers sessile, cream, subglobose in bud, spikes axillary, 7-20 cm long, with mainly ♂ flowers towards the apex and ♀ flowers towards the base; rachis rufous-tomentose, bracts 1 mm long, very early caducous. Lower receptacle (ovary) densely rufous-tomentose or tomentellous, 1½ mm long; upper receptacle little developed, c. ½ by 1½ mm. *Calyx* lobes somewhat recurved, deltoid, 1¾ mm long. Filaments glabrous, 3 mm, pale green with brownish anthers. Disk barbate. Style 2½ mm.

Vern. *Gahwah*, *ga'uw*, Onjob language, Koreaf, *gawiah*, Miniafi language, Utukap.

- 4: 585 *Lumnitzera* WILLD.
Add to the generic synonyms: *Funckia* DENNST. Schlüssel (1818), *nomen, non* WILLD. 1808.—*Petaloma* ROXB. Fl. Ind. ed. Carey 2 (1832) 372.—*Problastes* REINW. Syll. Pl. Ratisb. 2 (1825) 10.
4: 586a *Lumnitzera littorea* (JACK) VOIGT.
Add to the synonymy: *Petaloma alternifolia* ROXB. Hort. Beng. (1814) 90, t. 1428 in Kew, *cf.* Kew Bull. 1956, 367 (1957); Fl. Ind. ed. Carey 2 (1832) 372.—*Petaloma coccinea* BLANCO, Fl. Filip. ed. 1 (1837) 345.—*Problastes cuneifolia* REINW. Syll. Pl. Ratisb. 2 (1825) 10, type at Leyden.

- 4: 589a *Lumnitzera racemosa* WILLD. var. *racemosa*.
Add to the synonyms: *Kada-Kandel* RHEEDE, Hort. Mal. 6, t. 37.—*Funcckia karakandel* DENNST. Schlüssel (1818) 32, nomen.
- Flacourtiaceae (H. SLEUMER)**
- 5: 3 In the key to the genera 9 after 3. *Scolopia* (partly) add: 5. *Paropsia*.
- 5: 4 Replace lines 5 and 6 of the key (3, second part) by the following:
3. Sepals (or calyx lobes) and petals (3)–4–6, ± similar in size and shape.
3a. Sepals and petals hardly or not exceeding 4 mm in length. Succulent berry . . . 3. *Scolopia* (partly)
3a. Calyx lobes and petals at least 6 mm long. Rather fragile capsule.
- 5. Paropsia**
- 5: 6 The exact reference of the genus *Erythrospermum* is: *Erythrospermum* LAMK, Ill. (1792) t. 274; Tabl. Encycl. 2, 6 (1819) 407, nom. cons. prop., cf. SLEUM. Taxon 5 (1956) 197.—*Pectinea* GAERTN. Fruct. 2 (1791) 136, t. 111, nom. rejic. prop.
- 5: 7a Add to *Erythrospermum candidum* the synonym: *Pittosporum macrophyllum* LAUT. & K. SCH. in K. Sch. & Laut. Fl. Schutzgeb. (1901) 338; RECHING. Bot. Erg. Wiss. Reise Salom. Ins. (1913) 556.
- 5: 8 Add to the synonymy of *Scolopia*: *Richeopsis* ARÈNES, Not. Syst. 15 (1954) 2; Fl. Madag. fam. 150 (1954) 4, cf. CAPURON, Ess. Intr. Fl. For. Madag. (1957) 123.
- 5: 10a Line 15 from top, replace 'WALL.' by 'WIGHT'.
- 5: 12a Line 14 from top, omit the word 'bason'.
- 5: 13a Add to *Itoa stapfii* line 3 after '474': ; Suppl. I (1918) 16, t. 5a–5b.
New material of *Itoa stapfii* from New Guinea is polygamous; on the axillary, 4–5 cm long racemes the lower flowers are ♂♂, whilst the terminal flower is ♀; the latter has numerous staminodes (the anthers reduced in size) and an ovoid ovary with large, sessile, 5-fid stigma. Calyx lobes (3)–4–5(–6), in the ♀ flower c. 9 by 4 mm, but smaller in the ♂♂ ones.
The species is now known also from East New Guinea (Madang Distr., Ramu and Gogol R. valleys, 125–175 m).
- 5: 14a Line 24 from top, add to the description of the leaf of *Paropsia vareciformis*: ,with 2 (but sometimes hardly visible) ± distinct dark, rather flat glands at, or somewhat above, the base.,
- 5: 30a Line 10 from bottom, after (1873) insert: 236.
- 5: 35b *Scaphocalyx spathacea* RIDL.
This appears also to have been found in North Sumatra (Tapanuli, Padang Sidempooan, Padang Lawas: RAHMAT SI BOEAA 5050). Add to Vern.: *Kaju simburu*.
- 5: 39 Add to *Trichadenia* as a synonym: *Leucocorema* RIDL. Trans. Linn. Soc. Lond. II, Bot. 9 (1916) 29; SLEUM. in E. & P. Pfl. Fam. ed. 2, 20b (1942) 392.
- 5: 39a Add to *Trichadenia philippinensis* MERR.: STEEN. Bull. Jard. Bot. BRUX. 27 (1957) 114.—*Leucocorema latifolia* RIDL. Trans. Linn. Soc. Lond. II, Bot. 9 (1916) 29.
The species has been found recently also in E. Borneo (Isl. of Nunukan, N of Tarakan: W. MEIJER 2185), W of Makassar Straits.
- 5: 45 Under fig. 18 read ♂ instead of ♀.
- 5: 46 Under fig. 19 read ♂ instead of ♀.
- 5: 48a *Ryparosa kunstleri* KING.
Add to Distr.: Borneo.
- 5: 56 Line 27 from top, *Cordylanthus* BL.: (1852) instead of (1852).
- 5: 63a After 21. *Homalium grandiflorum* BENTH. var. *javanicum* (K. & V.) SLEUM. add:
21a. Homalium dictyoneurum (HANCE) WARB. in E. & P. Pfl. Fam. III, 6a (1893) 36; GAGNEP. Fl. Gén. I.—C. 2 (1921) 1013, f. 110; CRAIB, Fl. Siam. En. 1 (1931) 740.—*Pierrea dictyoneura* HANCE, J. Bot. 15 (1877) 339.
Tree 20–30 m. Twigs robust, glabrous. Leaves ovate-oblong, gradually attenuate towards the apex, or obtusely acuminate, base broadly attenuate to nearly rounded, coriaceous, glabrous, shining on both faces, paler beneath, olivaceous when dry, entire, (10-)12–18 by (4-)5–7(–9) cm, midrib prominent on both sides, nerves in 8–10 pairs, arched, raised on both faces, veins ± transverse, forming a dense and prominent network with the veinlets on both sides; petiole stoutish, 12–15 mm. Racemes axillary, spiciform, rather robust, shortly fulvous-tomentose, 15–20 cm including the 1–2 cm long peduncle. Flowers scattered, with several ovate imbricate basal bracts 2–3 mm. Pedicels of the lower flowers 3–2 mm, shorter to very short below the upper flowers. Bracts fan-shaped or broadly obovate, glabrous inside, pubescent outside, ± 5 mm long, subsistent. Bracteoles 2, at or near the apex of the pedicel, similar to but smaller than the bracts, subsistent. Calyx tube obconical, densely yellowish-velutinous, 3 mm; sepals 9–10, linear, subobtusely, membranous and velutinous, c. 8 by 2 mm initially, much accrescent and becoming chartaceous in later stages, finally oblong-subspathulate, nerved, c. 18 by 3–4(–5) mm. Petals 9–10, oblong, subacute, velutinous, 5–6 by 2 mm at first, finally attaining c. 10 by 3 mm. Stamens 6, ± in pairs at and somewhat above the base of each petal, further 2 or 3 between each of the subglobose grey-tomentose glands; filaments slender, patent-pilose, 3–4 mm. Ovary white-

tomentose, with 5-7 styles, these long-haired below, glabrous above.

Distr. Indochina, Siam, in *Malaysia*: Malay Peninsula (Pahang, Trengganu).

H. dictyonium is easily distinguished from the other *spp.* of the *sect. Pierrea* by the peculiar bracts.

- 5: 63 Line 6 from bottom, *Bennettia* MIQ.: (1858) instead of (1859).
- 5: 65b *Hemisclopia trimera* (BOERL.) SLOOT. Add to Distr.: W. Sumatra (G. Sago near Pajakumbuh, 900-1200 m), Malay Peninsula: Malacca, Johore, and P. Tulai (near P. Tioman, "common on rocks at sea-level in the Terminalia zone and behind"). These records practically unite the two partial areas given in fig. 27, l.c.
- 5: 70a *Flacourtia zippelii* SLOOT. New material from New Guinea proved the species to be seemingly bisexual, but in fact unisexual and dioecious. Only in specimens with ♂ flowers the stamens are well developed; the ♀ flowers, besides the ovary, have rudimentary stamens. In the group of *F. tomentella*, *F. jangomas*, *F. rukam*, *F. kinabaluensis*, and *F. indica* the ♀ flowers have no staminodes at all.
- 5: 73b Add to the synonymy of *Flacourtia rukam* ZOLL. & MOR.:—*Lightfootia indica* THUNB. Nov. Gen. 7 (1792) 107.
- 5: 77b Replace at the end of the column '(*prob. Icacinaceae*)' by: = *Microdesmis magal-lanensis* (MERR.) STEEN. (*Euphorb.*), cf. STEEN. Act. Bot. Neerl. 4 (1955) 480.
- 5: 79b *Osmeia philippina* (TURCZ.) BENTH. Add to Distr.: New Britain.
- 5: 81 Add to the synonymy of *Casearia* JACQ.: *Tardiella* GAGN. Not. Syst. 15 (1954) 32-33, cf. STEEN. Blumea 8 (1955) 170.
- 5: 86a *Casearia macrantha* GILG. Add to Distr.: Goodenough Isl.
- 5: 89b *Casearia lobbiana* TURCZ. In the Distr. omit Penang (based on CURTIS 2430, which is *Microdesmis caseariaefolia* PLANCH.).
- 5: 91b *Casearia velutina* BL. Add to Distr.: Lower Siam, Malay Peninsula (Kedah).
- 5: 99b *Casearia tuberculata* BL. Add to Distr.: Lingga Archipelago.

Butomaceae

- 5: 119b *Tenagocharis latifolia* (D. DON) BUCHE-NAU. Add: COSTERUS & SMITH (Ann. Jard. Bot. Btzg 32, 1923, 18-19) recorded a flower with 5 ovaries and 2 stamens either free or paired. Add: JOHRI (Proc. Ind. Ac. Sc. B4, 1936, 139-162) found pollen grains in the style canal and in the ovary, and in one case a pollen grain had germinated on the surface of an ovule. It is assumed that

they were drawn in by some sort of suction mechanism; it is evaluated as a primitive character.

Add to Distr.: Yunnan, cf. WU & WANG, Act. Phytotax. Sin. 6 (1937) 191.

Pentaphragmaceae

- 5: 121 Under the generic description replace after Distr.: 'Two *spp.*' by 'Monotypic'.
- 5: 123b *Pentaphragma eurypoides* GARDNER & CHAMPION. Add to Distr.: West Central Sumatra: Mt Sago (near Pajakumbuh), 1700-1800 m, MEIJER 5144; Mt Singalang (near Bukit Tinggi), 2000-2200 m, MEIJER 5221.

Malpighiaceae

- 5: 126 The correct reference for *Aspidopterys* is: JUSS. in Endl. Gen. Pl. (April 1840) 1060; Ann. Sc. Nat. II, 13 (1840) 266, *post-Endl. edit.*, cf. JUSS. l.c. 347, in *adnot.* & ENDL. l.c. 1057.
- 5: 129a *Aspidopterys concava* (WALL.) JUSS. Add to Distr.: Borneo (Sarawak: HAVILAND 2857).
- 5: 130 *Hiptage* GAERTN. The generic name *Hiptage* was obviously intended by GAERTNER as a new name for *Gaertnera* SCHREB. Gen. 1 (1789) 290, n. 735, *non Gaertneria* MEDIC. Phil. Bot. 1 (1789) 45, *nom. rejic.* (*Compos.*). Consequently GAERTNER based *Hiptage* on the same type as *Gaertnera* SCHREB., viz RHEEDE, Hort. Mal. 6, t. 59. Both names were published in 1789 and it can be taken for granted that GAERTNER knew of both.

In 1791 two other genera of the name *Gaertnera* were published viz *Gaertnera* RETZ. Obs. 6 (1791) 24 which is a synonym of *Sphenoclea* GAERTN. 1788 (*Camp.*) and *Gaertnera* LAMK [Illustr. 2 (1791) 273, t. 167] Tabl. Enc. Méth. Bot. texte 1 (?1792) 379. The latter is the well-known genus for which the name *Gaertnera* is still in use and which is at variance attributed to the *Loganiaceae* and *Rubiaceae*.

This name which is generally accepted distinctly needs conservation in order to overcome the homonymy.

- 5: 132b Line 23 from top replace 437 by: 427.
- 5: 135b Lines 4 and 5 from bottom: 'light-coloured' should precede 'blade'.
- 5: 139 For some reason or other the original spelling *Ryssopterys* BL. ex JUSS. has been rejected in the Rules of Nomenclature to be replaced by the conserved spelling *Rhysopterys* BL. *corr.* WITTST. Etym. Handwörterbuch ed. 2 (1856) 764.

Proteaceae (H. SLEUMER)

- 5: 150 Add to Wood Anatomy: CHATTAWAY, Austr. J. Sc. ser. B, 1 (1948) 279; DESCH, Mal. For. Rec. 15th (1954) 441 (hand

lens); WELCH, J. & Proc. R. Soc. N.S. Wales 58 (1925) 255.—C.A.R.-G.

- 5: 154b *Gevuina papuana* (DIELS) SLEUM.
Add to Distr. in New Guinea: recently found in primary mountain forest at Sioriep (Ransiki, Vogelkop Peninsula) and at the base of Mt Cyclops near Hollandia (between Ifar and Ormu, rather common in mossy forest at 950 m). The material now at hand demonstrates all transitions between a simple and a pinnate leaf in the same specimen.
- 5: 163a *Finschia ferruginiflora* WHITE.
Add to Distr.: also found in the Western Highlands of Papua (Upper Wahgi valley).
- 5: 197a Line 7 from top: *M. integrifolia* is considered to be a distinct species by L. S. SMITH, Proc. R. Soc. Queensl. 67 (1956) 39. It seems that the clones with edible nuts of *M. 'ternifolia'* originated from this species.

Bursaceae (P. W. LEENHOUTS)

- 5: 224b Line 17 from top: replace 1200 by 2000. *Dacryodes kingii* (ENGL.) KALKMAN.
In my opinion this species is probably conspecific with *D. laxa*.
- 5: 225b *Dacryodes elmeri* H. J. LAM differs in my opinion only very slightly from *D. incurvata* (ENGL.) H. J. LAM.
- 5: 232a Line 6 from bottom: replace 1–5-jugate by 1–6-jugate.
- 5: 234a Add to the synonymy of *Santiria apiculata* BENN.:—*Haplobobus borneensis* H. J. LAM, Fl. Mal. I, 5 (1956) 245, cum cit.; cf. H. J. LAM, Blumea 9 (1958) 270.
- 5: 238 Prof. H. J. LAM is publishing in Blumea 9 (1958) a revised revision of *Haplobobus*. The lamentable absence of sufficient material still offers great difficulty in correlating specimens and delimiting specific populations. As even in the new revision out of the 17 recognized species 7 have been provided with a question mark, and of 2 species only flowers are known, of 2 only ♂ flowers, of 4 only ♀ flowers, and of 3 only fruits, it appears that a subfinal revision has better to be postponed until the forest flora of New Guinea will have been more thoroughly explored.
- 5: 247b *Scutinanthe brevisepala* LEENH. l.c.; Nova Guinea n.s. 8 (1957) 176.—Fig. 6c.
Add to the description: ♀ Inflorescences as the ♂ ones 3–10 cm long. ♀ Flowers as the ♂ ones, differing only by the non-dehiscent anthers, and better developed, c. 3 mm high, glabrous, pistil. Ovary 2-celled, the columnar style distinctly demarcated against the ovary; stigma slightly 4-lobed. *Infructescences* with 1–2 fruits; calyx saucer-shaped, slightly undulate, c. 1/2 cm diam. *Fruits*

slightly oblique, acute-ovoid, acuminate, constricted or shortly stalked at the base, young ones up to 1 1/2 by 1 cm.

- Add to Distr.: East New Guinea: Morobe Distr., near Lae. *Fr.* Feb.
- 5: 249 *Canarium* STICKM.
I have prepared a doctor's thesis containing a world revision of the genus which will appear in Blumea 9 (1958). As far as the Malaysian species are concerned only a few additions appear necessary in the revision in this Flora.
- 5: 261b *Canarium lamii* LEENH.
Tree up to 20–35 m. Add to Distr.: New Guinea.
- 5: 281a *Canarium kostermansii* LEENH.
Infructescences racemose, 10–20 cm long, with 3–6 fruits; calyx funnel-shaped, 3-lobed, c. 1 cm diam. Fruits spindle-shaped, 3 by 1 1/4 cm, glabrous; pyrene slightly 5-angular in cross-section, smooth, lids c. 2 mm thick. *Seed* 1, sterile cells moderately reduced.
Add to Distr.: Also collected in Br. N. Borneo, at c. 600 m alt. *Fr.* Oct.
- 5: 289b *Canarium chinare* GRUTTERINK & H. J. LAM.
Add to Distr.: Also collected in East New Guinea (Milne Bay Distr.).
- 5: 296b *Canarium angustifolium* (BL.) MIQ. under Excluded.
This has appeared finally to belong to a sapling of *Meliosma* (*Sabiaceae*), but the specific identity will obviously remain obscure forever.
- #### Dichapetalaceae (P. W. LEENHOUTS)
- 5: 312a *Dichapetalum gelonioides* (ROXB.) ENGL. ssp. *sumatranum* (MIQ.) LEENH.
Add to Distr.: Malay Peninsula.
- #### Goodeniaceae (P. W. LEENHOUTS)
- 5: 336b *Velleia spathulata* R. BROWN.
Add to Distr.: Louisiades Arch. (Sudest Isl.).
- 5: 339a *Lechenaultia filiformis* R. BROWN.
Add to Distr.: New Guinea (Hollandia) and Louisiades Arch. (Sudest Isl.).
- 5: 339 *Scaevola* LINNÉ.
Material of a new, endemic, Papuan species of *Scaevola* became unfortunately available too late for including it in the revision. In the key to the species it comes under 2, but differs from both species opposed there by *solitary*, axillary flowers.
- 5: 340 Bottom line (under fig. 3) replace '(MILL.) KRAUSE' by 'VAHL'.
- 5: 342b After 2. *Scaevola micrantha* PRESL add:
2a. *Scaevola pauciflora* LEENH. Nova Guinea n.s. 8 (1957) 175.—*Scaevola* sp. LAM, Sargentia 5 (1945) 103.—Fig. 6a–b.

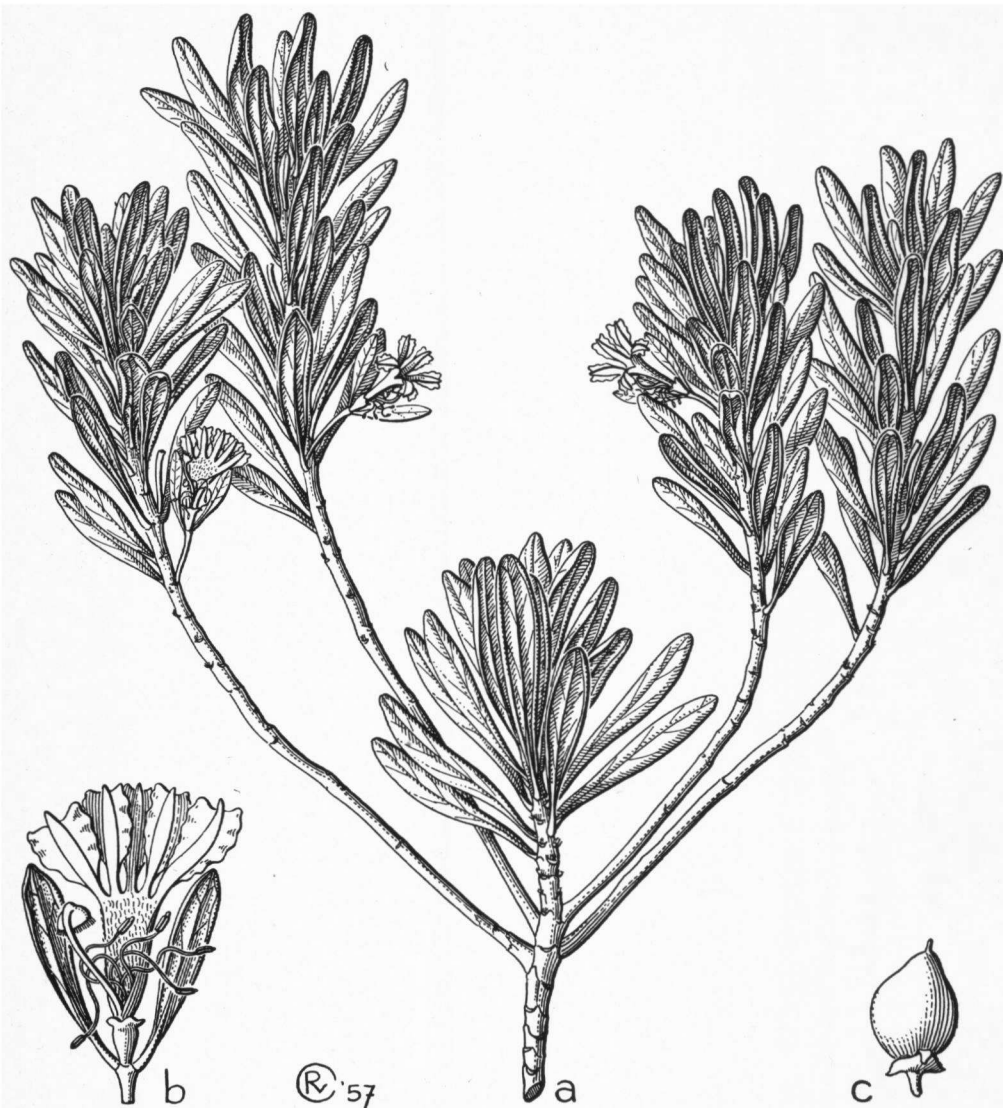


Fig. 6. *Scaevola pauciflora* LEENH. a. Habit, $\times 2/3$, b. flower with bracteoles, $\times 2 1/2$.—*Scutinanthe brevisepala* LEENH. c. Young fruit, $\times 4/3$ (a & b from LAM 1837, c from NGF 8762).

Small shrub, c. 40 cm, candelabrum-like branched, glabrous except for hair tufts in the leaf axils. Leaves tufted at the twig ends, indistinctly petioled, spatulate, obtuse, $2 1/2$ – $4 1/2$ by $1 1/2$ – $3/4$ cm, stiff-coriaceous; margin revolute, entire; nerves and veins indistinct. Flowers solitary, sessile on top of a c. $1 1/2$ cm long peduncle. Bracteoles spatulate, 13 by 2 mm. Calyx with a $1 1/2$ mm high free margin, indistinctly lobed. Corolla $1 1/2$ cm long, yellow-white, inside the tube densely long-hairy, mar-

gins of the lobes fimbriate at the base. Style glabrous, the margin of the cupular indusium excepted.

Distr. *Malaysia*: West New Guinea (Mt Doorman, once collected).

Ecol. Open mountain slope with low shrubs, c. 3000 m. Fl. Oct.

Note. Belongs to *sect. Scaevola* and allied to *S. micrantha* PRESL but distinctly different by smaller, much narrower, glabrous, not distinctly petioled leaves with revolute margin, by solitary, larger,

distinctly sessile flowers, and a glabrous style.

Hydrocharitaceae

- 5: 407a *Thalassia hemprichii* (EHRENB.) ASCHERS.
Add to Distr.: This plant has also been recorded from Micronesia (Carolines & Marshall Islands).

Restionaceae

- 5: 420a *Leptocarpus disjunctus* MAST.
Add to Distr., collections in Siam: Songkla (= Singgora) KERR 15087, 15087A; Muang Samsip, pr. Ubon, KERR 8353 (all in Herb. Dep. Agric. Bangkok).

C. G. G. J. VAN STEENIS