

ADDENDA, CORRIGENDA ET EMENDANDA

It seemed useful to correct some errors which have crept into the text of volume 4 as well as to add some additional data which came to our knowledge and are worth recording. Valuable help in general was rendered by Dr R. C. BAKHUIZEN VANDEN BRINK *Jr*, for additions to the *Burmanniaceae* by Dr F. P. JONKER, for *Chenopodiaceae* by Dr C. A. BACKER, for *Viburnum* by Mr J. H. KERN, for *Xyris* by Dr P. VAN ROYEN, and for a grass by Dr P. JANSEN. Printing errors have only been corrected if they may give rise to confusion.

The page numbers *a* and *b* denote respectively the left and right column.

Page:		xxiv	An additional curious example of dimorphous fruits is that of <i>Vigna hosei</i> (CRAIB) BACKER (<i>V. oligosperma</i> BACKER, <i>Dolichos hosei</i> CRAIB). Cf. BACKER & VAN SLOOTEN, Gellustr. Handb. Jav. Theonkr. (1924) 153; BACKER, Bekn. Fl. Jav. (em. ed.) 5 (1941) 153. Aerial fruits differ distinctly from those produced by flowers which are hidden in the litter of leaves covering the soil.
xviii b	The <i>Clausena</i> of unknown origin has proved to belong to <i>C. anisata</i> (WILLD.) HOOK. f. (syn. <i>C. inaequalis</i> BTH.).		
xviii b	Last sentence of 2nd paragraph to be changed into: e.g. when HALLIER pointed to the desirability of phytochemical investigation as to the presence of valericianic acid in <i>Viburnum</i> . ⁵		
xviii b	Last line of footnote read: Cf. also <i>V. valerianicum</i> ELM.	xxvii a	End of paragraph 2: the correct name for the Malaysian ' <i>Erigeron linfofolius</i> WILLD.' is: <i>E. sumatrensis</i> RETZ.
xx a	The <i>Tristania</i> of fig. 2 had been named specifically <i>T. bakhuzeni</i> BACK. (Blumea 5, 1945, 502).	xxvii a-b	The grass figured in fig. 11 is rightly <i>Isachne kinabaluensis</i> MERR., a species very closely allied to (or possibly only a race of) <i>I. pangerangensis</i> Z. & M.
xx a	<i>Macrozania</i> is now named <i>Alsomitra</i> (BL.) ROEM. Cf. HUTCHINSON, Ann. Bot., new ser., 6 (1942) 96-102 and DE WIT, Bull. Bot. Gard. Btzg III, 18 (1949) 193-200.	xxviii a	Last line of paragraph 2: omit '(L.)' in the authority of <i>Dodonaea viscosa</i> JACQ. The combination is not based on <i>Ptelea viscosa</i> L.
xxi a	Line 4 below fig. 4 read instead of ' <i>picta</i> ': <i>pictus</i> .	xxxii a	Line 11 from bottom: omit '(BL.)' from the authority of <i>Weinmannia blumei</i> PLANCH.
xxi a	Paragraph 5: The late Dr ENDERT found in Sumatra long needles on a 50 m tall tree of <i>Dacrydium</i> and maintains it to represent a separate species; cf. Tectona 18 (1925) 62. However, this should be examined more closely; there might be a dimorphism of the foliage.	xxxii b	Line 5 from top: replace <i>Dianella nemorosa</i> LAMK by the earlier name <i>D. ensifolia</i> L. which SCHLITTLER erroneously placed in the synonymy.
xxi b	Paragraph 3: According to Mr BLAKELOCK, Kew, the climbing form of <i>Evoynymus</i> in Java represents <i>E. fortunei</i> (TURCZ.) HAND.-MAZZ. (cf. Kew Bull. 1951, 268).	xxxv a	An other example of phytomorphosis is that in <i>Leersia hexandra</i> Sw. No fruit is set in Malaysia but the ovary is sometimes attacked by a fungus (<i>Testicularia leersiae</i> CORNU) which causes the ovary to expand by which it resembles a grain. Cf. VAN OVEREEM (Teysmannia 33, 1922, 395) and BACKER (Handb. Fl. Jav. pt 2, 1928, 195, footnote).
xxi b	Line 4 of § 2 replace ' <i>arguata</i> ' by: <i>arguta</i> .	xxxv a	Change in legend to fig. 26 <i>Epichloe treubii</i> into: <i>Epichloe bambusae</i> PAT.
xxi b	<i>Ditto</i> line 17 to be replaced by: <i>Coffea canephora</i> PIERRE var. <i>robusta</i> CHEV., <i>Citrus maxima</i> L.	xxxv a	Alinea 2 from bottom: the correct name for <i>Pilea trinervia</i> WIGHT seems to be <i>P. melastomatoides</i> (POIR.) BL.
xxii a	Second paragraph: the correct name of the dwarf <i>Cananga</i> seems to be: <i>Cananga odorata</i> (LAMK) HOOK. f. & Th. var. <i>fruticosa</i> (CRAIB) SINCLAIR; cf. Sarawak Mus. J. no 18 (1951) 599.	xxxv b	In 2nd line of legend of fig. 27 replace 'galled swollen fruit' by: bark-gall.
xxii b	Paragraph 2: it may be that <i>Argostemma unifolium</i> BENN. from the Malay Peninsula which shows a habit similar to that of <i>Monophyllaea c.s.</i> , belongs to the same category.	xxxv i a	Replace 2nd paragraph of sect. 20 by: <i>Kibessia sessilis</i> BL. is merely the galled state of <i>K. azurea</i> BL. (fig. 27); cf. DOCTERS VAN LEEUWEN, Bull. Jard. Bot. Btzg III, 1 (1919) 131-135.
xxii b	Third line from base replace ' <i>angusta</i> ' by: <i>augusta</i> .	xxxv i a	Paragraph 8: not BOERLAGE, but BAKHUIZEN VAN DEN BRINK <i>Jr</i> (in MS) supposed the relationship between <i>Otopetalum</i> and <i>Micrechites</i> .
xxii b	Second line from base: The correct writing of the Rutaceous genus seems to be <i>Lavanga</i> , not ' <i>Luvunga</i> '.	xxxvii a	Paragraph 2: the correct name for the common ' <i>Ziziphus fujuba</i> L.' is <i>Z. mauritiana</i> LAMK.
xxiii a	Other genera with dimorphous leaves or leaflets are <i>Arthrophyllum</i> and <i>Pterospermum</i> .	xlii a	Second line of 14th paragraph from top first letter should be: G.
xxiii b	In legend of fig. 8 read <i>Uraria</i> instead of ' <i>Uvaria</i> '.		

- xlvia Last line of legend to fig. 34, replace 'genuina' by: *borneensis*.
- xlviib Line 8 from top, omit '(4)'.
xlviib Fourth line of 4th paragraph add after 'family': (4).
- xlviib & xlixa My preliminary identification of the Sumatran '*Schima brevifolia* HOOK. f.' was wrong, according to Dr BLOEMBERGEN (Reinw. 2, 1952, 178); the specimens being probably referable to *Gordonia* or *Laplacea*. Therefore, its name should be omitted as an example of the altitudinal distribution behaviour alluded to.
- xlixa In the figure the altitudinal figures should start with 900 and those printed should be each lifted one line.
- lb Line 16 from bottom '(1925)' should be: (1928).
- liiia For a more detailed map of *Hibbertia* see p. 150.
- lxxva Second line of 2nd paragraph read: GARCIA DA ORTA.
- clb Second line of 3rd paragraph read instead of Wilhelmina Mts: summit of Mt Doorman.
- clib Paragraph 5, line 6, last letter should read: C.
- cxxx-clvii In 1950 Dr F. H. ENDERT rightly drew my attention to the fact that DE WIT has entirely failed to give an adequate evaluation of the astounding botanical work accomplished by forest services generally and the Bogor Forestry Institute in particular. Invaluable papers on forest composition contained in the journal 'Tectona' by ENDERT and others have only partially been given attention, while on the other hand trivial and sketchy papers of amateurs were duly recorded. This makes the whole treatment of chapters 80 onwards distinctly unbalanced. I had in mind asking Dr ENDERT to write an entire new essay devoted solely to the work accomplished by the Forestry Research Institute at Bogor, as a re-writing of the chapters is out of question. Unfortunately Dr ENDERT died early in 1953 and I can find nobody to perform this task.
- 3 Unfortunately it has appeared that the name *Acer niveum* BL., an almost consistently used new combination for *Acer javanicum* JUNGH. non BURM., is not the correct name for this species, apart from the question whether it is conspecific with the earlier *A. oblongum* WALL., which is here not considered. A careful scrutiny of the nomenclatural value and exact dates of the references showed that the correct name is *A. laurinum* HASSK. The essential synonymy, which should replace the one given on page 1, is as follows:
1. *Acer laurinum* HASSK. in HOEVEN & DE VRIESE, Tijds. Nat. Geschied. & Phys. 10 (1843) 138; Cat. Hort. Bog. (Oct. 1844) 222; Flora 30 (28 Aug. 1847) 518; MIQUEL, Fl. Ind. Bat. 1, 2 (1859) 582, Suppl. (1860-61) 200, 511.—*A. javanicum* JUNGH. [in HOEVEN & DE VRIESE, Tijds. Nat. Geschied. & Phys. 8 (1841) 391, *nomen nudum*] Monatsber. Verh. Ges. Erdkunde Berlin 3 (Jan. 1842) 96, *descr.*; Topogr. & Naturw. Reisen Java (1845) 390, *descr.*, 434; non *A. javanicum* BURM. f. Fl. Ind. (1768) 221.—*A. niveum* BL. Jaarb. Kon. Ned. Mij Aanmoediging Tuinbouw over 1844 (issued later than May 1845 and eventual reprints in each case posterior to Oct. 1844, cf. footnote on p. 84!); Rumphia 3 (1847) 193.—*A. cassiae-folium* BL. Rumphia 3 (1847) 193.—*A. philippinum* MERR. Govt Lab. Publ. no 35 (1906) 36.—*A. curranii* MERR. Philip. J. Sc. 4 (1909) Bot. 285.
4 Add to distribution of *A. laurinum* HASSK.: Timor.
7 Add to distribution of *Helmholtzia novoguineensis*: Jappen Island (Sarurai pr. Serui, AET & IDJAN 22).
8 The correct authority for *Ancistrocladus* is: *Ancistrocladus* WALL. [Cat. (1832) 1052] ex WIGHT & ARNOTT, Prod. 1 (1834) 107, *nom. cons.*
8 Line 12 from bottom read instead of '*Hugoniaceae*': *Hugoniaceae*.
9b *Ancistrocladus tectorius* has recently been collected in East Borneo (Sg. Wain, pr. Balikpapan, KOSTERMANS 4315, flowers red or dull white, stalks of inflorescence reddish).
10b Line 2 from bottom, add after WALL.: (Cat. 10557) ex DC. Prod. 16² (1868) 603.
12b Besides the BRASS-specimens of *Aponogeton loriae* I saw several others from New Guinea: CHALMERS a. 1885; Sugairee, ARMIT a. 1883; Oriomo River, GIULIANETTI a. 1897).
15 Add in the key:
13a. Outer perianth lobes obovate, fleshy in the upper part. Inner lobes linear to oblanceolate, almost 1 mm long. Connective with 2 apical divergent, acute crests. Flower-wings broad, half-rhomboid to half-cuneate.
13a. B. *candida*
13a. Outer perianth lobes triangular obtusely apiculate, with thick, fleshy margin, not fleshy in the upper part. Inner lobes orbicular or lanceolate, often minute. *Proceed to 14.*
18a Add to 2nd paragraph (distribution of *B. championii*): Moluccas (W. Ceram, Biv. iii-Horale, N of summit G. Lumut, alt. 460 m. April 1938, EYMA 3196).
19a Insert before 14. *Burmannia lutescens*:
13a. *Burmannia candida* GRIFF. ex HOOK. f. Fl. Br. Ind. 5 (1888) 665; JONKER, Mon. Burm. (1938) 147; Fl. Mal. I, 1 (1938) 19b.—*B. candida* GRIFF. var. *coerulea* HOOK. f. ex WILLIAMS, Bull. Herb. Boiss. II, 4 (1904) 362.— non *B. candida* (BL.) ENGL.

- Slender saprophyte, 6–16 cm high. *Stem* usually simple, only branched at the top into the inflorescence, 1–5-flowered, beset with small, reduced, scalelike, lanceolate, acute leaves, 2–5 mm long. Larger leaves often acuminate or subulate, sometimes imbricate in the lower stem part. Radical, rosulate, leaves lacking. Bracts similar to the stem scales, about 3 mm long. *Flowers* white or white with yellow or blue, 6–10 mm long, prominently 3-winged. *Outer perianth-lobes* about 2 mm long, obovate, obtuse, thick and fleshy in the upper part. Inner lobes erect, linear to oblanceolate, obtuse, almost 1 mm long. *Perianth-tube* cylindrical, slightly swollen in the upper part, about 4 mm long. Anthers sessile in the perianth-throat below the inner lobes. Connective oblong with two apical, acute, divergent crests, basal hanging spur lacking. Style filiform, bearing at its apex 3 subsessile, obconical to funnel-shaped stigmas. Style with stigmas about 4 mm long. Ovary obconical to obovoid, about 2.5 mm long. *Flower wings* 5–8 mm long and up to 4.5 mm broad, half-rhomboid to half-cuneate, running from the base of the limb to below the base of the ovary.
- Distr. Tenasserim (Amherst, Mergui), W. Siam (Koh Chang), Langkawi Islands (Terutau Isl.), and *Malaysia*: Central Sumatra (Indragiri, between S. Temberan to Sanglap, Oct. 15, 1939, 400 m alt., BUWALDA 7043).
- 19a Add to distribution of *Burmanna lutescens*: Central West Celebes (E of Lindu Lake, W. slope of Mt Njilalaki, c. 1000 m alt., July 1939, BLOEMBERGEN 4017; Central Celebes, Masamba, base of West spur of Mt Kambuno, 1400–1700 m, July 1937, EYMA 1283).
- 19b Add to first paragraph: and Sumatra.
- 20a It was said that *Gymnosiphon aphyllus* BL. occurred 'throughout Malaysia'. However, it was at that time (and with it the whole genus) not yet recorded from Sumatra, but it appears to have been found in Central Sumatra (Indragiri, Muara Padjanki, about sea-level, April 1939, BUWALDA 6455). The identification is not wholly certain as the specimen is in fruit.
- 23b Line 8 from top add: Tembeling, twice collected (CARR *s.n.*, July 1929; CORNER 23829, Nov. 1930, type).
- 25a In the synonymy of *Geomitra clavigera* BECC. the reference to *Thismia clavigera* F.v.M. should read: Pap. & Proc. R. Soc. Tasm. for 1890 (1891) 235.
- 27 To the references of the genus *Sphenoclea* should be added: , *nom. cons.*—*Pongati* ADANS. Hist. Nat. Sénégal (1756), *ed. angl.* (1759) 152, *nom rejic.*—*Pongatium* JUSS. Gen. (1789) 423.
- 27 First line: Date of DC. Prod. 8 is 1839, not '1939'.
- 28 In the legend under the figure 'A rich-flowered individual' should be replaced by: From an unpublished painting (c. 1820) probably from ROYLE or CAREY, in the Kew Herbarium.
- 32 Line 5, add after 322: LAM & VAN ROYEN, *Blumea* 7 (1952) 152.
- 32b The distribution of *S. paniculatum* is extended to include Central Celebes, Moluccas (Ceram), and the whole of New Guinea.
- 35a The page of description of *Stackhousia intermedia* is not '174' but: 281.
- 37 Third line, year of LINDL. Nat. Syst. ed. 2 is: 1835.
- 42b Add to Distr.: Moluccas (Aru Isl., Maikor, leg. BECCARI).
- 45 The authority for the genus *Moringa* should read: [BURM. Thes. Zeyl. (1737) 162, t. 75] ADANS. Fam. 2 (1763) 318; JUSS. *etc.*. Add at the end: PAX in E. & P. Pfl. Fam. ed. 2, 17b (1936) 693.—*Hyperanthera* FORSK. Fl. Aeg.-Ar. (1775) 67.
- 47a First line change '(1748)' into: 1784.
- 48b Line 12 from top, change the letter *S.* into *Saururopsis*.
- 51a Line 2 change '1837' into: 1838.
Line 9 from bottom replace '287' by: 278.
- 54b In the 1st line of the 7th paragraph it should be: *f. inutile*.
- 57a Last line omit komma at the end.
- 61b Line 4 from bottom omit: (*gillevraei*) and add to line 5 *ditto* behind 106: (*gillivraei*).
- 62b Line 4 at end of line, change '552' into: 512.
- 64a Line below figure replace '*l.c.*; MIQ. *l.c.* 682' into: Bijdr. (1825) 243; MIQ. Fl. Ind. Bat. 1, 2 (1859) 682;
- 68 A second collection of *Torrenticola queenslandica* has turned up from SE. New Guinea: Brown River, CARR 12956, 100 m alt., 27.8.1935; this possesses also sterile shoots which I described and figured (of a 2nd Queensland collection) in Proc. R. Soc. Queensl. 62 (1952) 67, pl. 3. These sterile shoots have 3-fid leaves of which the side-lobes are minute but the central, filiform lobe up to 1½ cm long.
- 69 For *Alternanthera ficoidea* under 'Uses' read: *A. ficoidea*.
- 71a Line 19 from top of column replace '1828' by: 1824.
- 72 Fifth line of species 2. '*polyperma*' should be: *polysperma*. Further: '12' in last line from bottom should be: 20.
- 72b After '3. *Deeringia tetragyna* ROXB.' insert: Fl. Ind. 2 (1824) 512.
- 74 Under *Allmania* the volume of HOOK. Lond. J. Bot. is: 1.
- 74a The exact citation of *Allmania nodiflora* is: 1. *Allmania nodiflora* (L.) R.Br. [in WALL. Cat. (1832) 6890, *nomen nudum*] ex WIGHT in HOOK. Lond. J. Bot. 1 (1834) 226, t. 128; *etc.*
- 74b Insert in synonymy of '*Allmania nodiflora*': *Achyranthes nodiflora* ROXB. Fl. Ind. 2 (1824) 495;
- 75a Line 4 from top, add at the end: *nomen nudum*.

- 75a Line 7 from top, add before MOQ.: MART. Beitr. Amar. 1825 (Nova Acta Leop. 13, 1826, 287); *etc.*
- 75a Line 9 from top after 'MART'. replace 'ex' by: Beitr. Amar. 1825 (Nova Acta Leop. 13, 1826, 287); *etc.*
- 75b Add to distribution of *Allmania nodiflora*: Billiton (BECCARI).
- 76a *Amaranthus gracilis*: There is no unanimity of opinion on the correct name of this species; according to MERRILL (Amer. J. Bot. 23, 1936, 609-611) it should be called *Amaranthus viridis* L. Among LINNAEUS's citations two refer to it and two not and there is no absolute certainty that the Linnean specimen was really the basis of his description though it agrees with his description. Personally I would be inclined to follow MERRILL's carefully considered opinion which is anyhow much better substantiated than that of THELLUNG.
- 81 In the reference to *Cyathula* place: 'non LOUR.' between brackets before: BLUME.
- 81b Line 1, insert behind 'cata': DC. Hort. Monsp. (1813) 103.
- 83 Add to distr. of the genus *Pupalia*: and the Northern Territory of Australia.
- 83a Last line, omit after 'DC.': 'ex'.
- 83b Line 1, lower part of column add after '(1813)': 102.
- 84 Notes on 8. *Aerva*: the full synonymy of *Aerva persica* (BURM. f.) MERR. is: *Iresine javanica* BURM. f. Fl. Ind. (1768) 212 (*sphalm.*) 312, t. 60, fig. 1.—*Illecebrum javanicum* L. Syst. Veg. (ed. MURRAY), ed. 13 (1774) 206; AITON, Hort. Kew. ed. 1, 1 (1789) 289; WILLD. Sp. Pl. 1, 2 (1797) 1205.—*Achyranthes javanica* PERS. Syn. 1 (1805) 259.—*Aerva javanica* JUSS. Ann. Mus. Paris 11 (1808) 131.—*Achyranthes incana* ROXB. Fl. Ind. 2 (1824) 495.
- 84b Add to distribution of *Pupalia lappacea*: Central East Borneo: W. Kutai, Kombeng, limestone rock in low forest, Nov. 1925, ENDERT 5402; and Arnheimsland (SPECHT *a.* 1950).
- 85b Add at the end of the references to *Aerva sanguinolenta*: ZIPP. ex SPAN. Linnæa 15 (1841) 345, *nomen nudum*.
- 85b Line 11 under *A. sanguinolenta* replace '509' by: 503.
- 86a Line 4-5 from top of synonymy of 1. *Nothosaerva brachiata*, substitute for '*Illecebrum brachiatum* LINNÉ, Mant. (1767) 23': *Achyranthes brachiata* LINNÉ, Mant. 1 (1767) 50.—*Illecebrum brachiatum* LINNÉ, Mant. 2 (1771) 213.
- 87a The correct authority for 1. *Centrostachys aquatica* is: (R.Br.) WALL. in ROXB. Fl. Ind. 2 (1824) 579, 497.
- 88a Line 18 from references, add after *Achyranthes argentea*: LAMK, Enc. 1 (1785) 545.
- 89a Add before 1st line from top: Malay Peninsula (rare on Cameron's Highlands, HENDERSON *in litt.* 1950).
- 89b Add to distr. of *Ptilotus conicus*: Sumba.
- 91 In key, species 3 should be named: *ficoidea*.
- 91a After *Alternanthera repens* (L.), omit the reference to STEUDEL. It is O. KUNTZE who made the valid transfer. STEUDEL (Nomencl. ed. 1, 1821, 34 and ed. 2, 1, 1841, 65) only listed it *pro syn.*
- 92a The correct authority for *Alternanthera sessilis* is: (L.) DC. Cat. Hort. Monsp. (1813) 77; R.Br. ex SWEET, Hort. Suburb. Lond. (1818) 48; ROTH in R. & S. Syst., *etc.*
- 93a The first 4 lines of the synonymy of 3. *Alternanthera ficoidea* should be:
3. *Alternanthera ficoidea* (L.) R.Br. ex GRISEB. Fl. Br. West Ind. Isl. (1864) 67.—*Gomphrena ficoidea* LINNÉ, Sp. Pl. (1753) 225.—*Illecebrum ficoideum* LINNÉ, Sp. Pl. ed. 2 (1763) 300.—*A. ficoidea* (L.) R.Br. ex R. & S. Syst. 5 (1819) 555, *non A. ficoidea* BEAUV. Fl. Owar. 2 (1807) 66, fig. 1 *quae est A. sessilis* (L.) DC.—*Gomphrena polygonoides* LINNÉ, Sp.
- 94a The author of the basonym of *Alternanthera brasiliانا* is apparently TORNER, not: 'L'. Cf. ROTHMALER in FEDDE, Rep. 50 (1940) 73. Insert in the 2nd line behind *brasiliانا*: TORNER, Cent. II. Pl. (1756) 13;
- 94a Add to the synonymy of 5. *Alternanthera brasiliانا*: *Psilotrichum malaccense* SUESSENGUTH, Mitt. Bot. Staatssamml. München 6 (1953) 194, *syn. nov.*
- 94a Add to the distribution of *Alternanthera philoxeroides*: Recently also found in SE. Borneo, in a swamp near the road from Bandjermasin to Martapura.
- 94b Paragraph 2, add a note at the end of *Alternanthera brasiliانا*:
Note. The specimen on which SUESSENGUTH based a new species from 'Malacca, leg. COMMERSON' consists of miserable, immature stem tips. As COMMERSON did not visit the Malay Peninsula (*cf.* Fl. Mal. I, 1, 1950, 113b) the specimen is certainly erroneously localized; it came probably from the New World. This is an other instance showing of how eminent importance it is to consult the records in Flora Malesiana before describing new species from Malaysia, and creating *horribilia botanica*.
- 96b Add at end of references to 2. *G. celosioides*: RAIZADA, J. Bomb. Nat. Hist. Soc. 48 (1949) 675. Add to Distr.: In 1949 this alien was collected in the N. Moluccas (Morotai).
- 96b Delete '(POIR.)' after *Gomphrena canescens*.
- 100 It was unfortunately overlooked that a sixth species had recently been rightly recorded for the Malaysian flora. This necessitates a modification of the first part of the key to the species given on page 100. We give below the new reading:
1. Young vegetative parts and outside of perianth without an indumentum of white or pink vesicles. Undersurface of leaves with (sometimes rather indistinct) yellow glands. Stigmas 2-5. Embryo

encircling only 1/2-2/3 of the seed. Strongly smelling when bruised.

- 1a. Perianth-segments not or indistinctly keeled on the back. Top of ovary and fruit studded with yellow glands. Stigmas 2-5, usually 3 or more. Fruiting perianth concealing the fruit. Fruit usually horizontal, rarely vertical.

1. *Ch. ambrosioides*

- 1a. Perianth-segments in their upper half with a very conspicuous broad dorsal keel. Top of ovary and fruit glandless. Style 1, deeply bifid. Fruiting perianth appressed against the fruit but (because of their narrowness) not concealing it. Fruit always vertical. Leaves at most 2 1/2 cm long, deeply dentate or pinnatisect . . .

1a. *Ch. carinatum*

- 1. Young vegetative parts and outside of perianth with an indumentum of white or pink vesicles. Undersurface of leaves without any yellow glands. Stigmas 2. Embryo encircling almost the entire seed. Not or faintly smelling when bruised. Proceed sub 2 of the key on p. 100.

101b Add before species 2, the following:

1a. *Chenopodium carinatum* R.Br. Prod. (1810) 407; BENTH. Fl. Austr. 5 (1870) 162; BAILEY, Queensl. Fl. pt 4 (1901) 124; ASCH. & GR. Syn. 5, 1 (1913) 91; MERR. & PERRY, J. Arn. Arb. 39 (1948) 154.—*Blitum carinatum* C. A. MEY. Fl. Alt. 1 (1829) 11; MOQ. in DC. Prod. 13, 2 (1849) 81.—*Blitum glandulosum* MOQ. in DC. Prod. 13, 2 (1849) 82.—*Ch. glandulosum* (MOQ.) F.v.M. Fragm. 7 (1869) 11.

Annual, 10-35 cm long. Main-stem creeping at the base, higher up ascending, much branched, with ascending-erect branches, strongly smelling when bruised (same smell as *Ch. ambrosioides*). All vegetative parts rather densely clothed with shortish glandular hairs, not powdery; leaves also with many longer ordinary hairs. Leaves rather shortly but distinctly petioled or the highest subsessile, ovate-oblong, obtuse, coarsely obtusely dentate or subpinnatisect, usually thickish and ± rugose, 3/4-2 1/2 cm long; highest floral leaves often very small. Flowers sessile, in the axils of nearly all leaves, in small, dense, subglobular clusters; clusters forming together a narrow interrupted leafy spike. Tepals 5, erect-incurved, narrowly oblong from a much narrowed base, acute, very concave, ± 1 1/4 mm long, on the back, from about the middle to near the top, with a longitudinal broad, ± triangular keel; keels with truncate tips, forming stellately spreading wings to the perianth, long-hairy. Stamen (not seen) 1. Ovary glandless; style 1, longish, deeply bifid. Fruiting perianth appressed against the fruit but not concealing it. Fruit erect, broadly oval, compressed, sharply keeled all around. Seed shining dark-brown, ±

2/3 mm diam.; pericarp inseparable; embryo encircling ± one half of the seed.

Distr. Australia, in Malaysia: NE. New Guinea (vicinity of Kajabit Mission), possibly adventive rather than native in New Guinea.

Ecol. Open places, near villages, tobacco-fields, c. 550 m.

- 103b Line 2 of column under *Spinacia*, replace 'expansa MÜRR.' by: *tetragonoides* (PALLAS) O.K.

- 104a Bottom line, insert between '5' and '111': (1799).

- 105 Reference to *Suaeda*, substitute at the end '18' by: t. 18, *nom. cons.*

- 105a Line 2, omit '(ubi?)' and insert after '192': *Halocnemum australasicum* MOQ. Chen. Mon. En. (1840) 110.

- 105a Line 3 from bottom of references of *Suaeda maritima*, insert after 'MOQ.': Ann. Sc. Nat. 23 (1831) 316.

- 106a Line 4 from bottom of references to *Salsola kali*, insert after 'MOQ.': Chen. Mon. En. (1840) 147.

- 106b Distr. add: Sumbawa & Aru Islands.

- 107 Read here and further for 'Aegialites': *Aegialitis*.

- 112 First paragraph, add behind references of *Limonium*: *nom. cons.*

- 113 Recently quite some material of *Umbelliferae* has become available which was not examined by the late Dr BUWALDA. This will possibly be dealt with in a later supplement in vol. 5.

- 114 6. *ChaerEOFOLIUM* in key, read: 6. *Anthriscus*.
- 116b Add to distr. of *Hydrocotyle vulgaris* in New Guinea: Wissel Lake Region, Wea delta, EYMA 4922.

- 118 13. *T. flabelliformis* in key, read: 13. *T. flabellifolia*.

- 122a The authority for 10. *Trachymene arfakensis* is: (GIBBS) BUW.

- 125b Ditto for 16. *Trachymene caerulea*: (HOOK.) GRAH.

- 126 Change in key 2nd line into:
1. Radical leaves trisect. 2. *E. moluccanum*

- 127 Substitute for genus 6. *ChaerEOFOLIUM*: 6. *Anthriscus* PERS. emend. HOFFM. Umbell. 1 (1814) 38, *nom. cons.*—*ChaerEOFOLIUM* HALL. Hist. Stirp. Helv. 1 (1768) 327, *nom. rejic.*

Its only species mentioned here should be called:

1. *Anthriscus cerefolium* (L.) HOFFM. with the printed references as synonyms.

- 127a Replace the wrong provisional description by:

2. *Eryngium moluccanum* STEEN. n. sp.—Fig. 5a.

Rhizoma conspicua. Caules agglomerati. Folia basalia trisecta, chartacea, longe petiolata, superiora sensim brevius petiolata usque senilia, summa simplicia. Capitula pauci (2-4) flora, pedunculata, pedunculis 3-4 ex eadem axilli ortis. Flores ♂, nonnulli

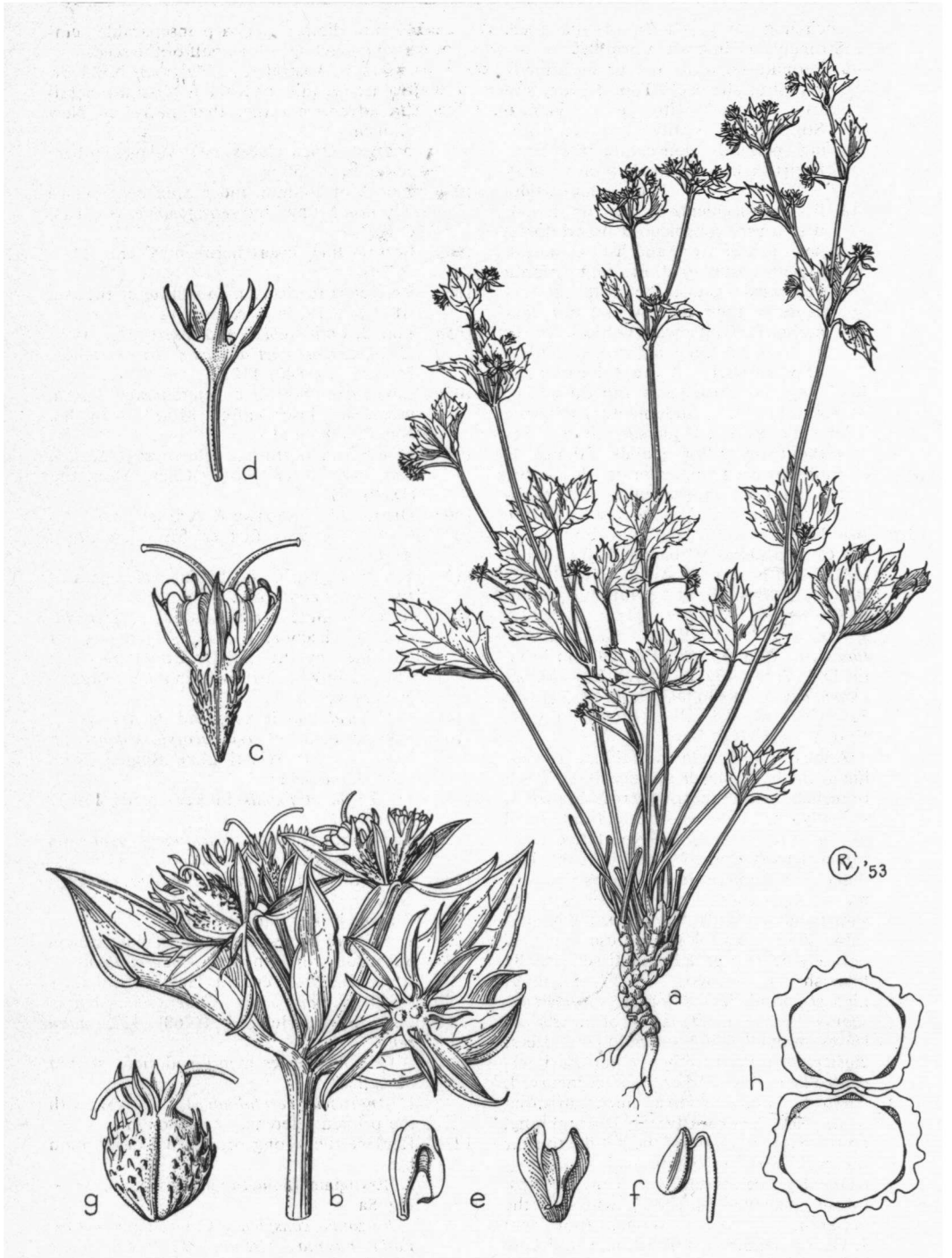


Fig. 5a. *Eryngium moluccanum* STEEN. a. Habit, $\times \frac{2}{3}$, b. partial inflorescence, $\times 5$, c. ♂ flower, $\times 10$, d. sterile flower, $\times 10$, e. petal, lateral and ventral, $\times 13$, f. stamen, $\times 13$, g. fruit, $\times 10$, h. fruit in section (vittae hatched, $\times 20$ (after type)).

imperfecti petalis organisque sexualibus ± carentes. Bracteae involucales lanceolatae, interdum spinulis 1-2 instructae. Bracteae florales integerrimae, tenuiores.

Plant glabrous, up to 30 cm. Rootstock firm, covered by the brown withered sheath-bases. Stems tufted, erect, little branched, ribbed; lowest internode 10 cm, upper ones gradually shorter. *Leaves* green, 3-parted, the basal ones incised to $\frac{2}{3}$, cauline ones to $\frac{1}{3}$ - $\frac{1}{2}$, but similar in shape and gradually somewhat smaller, the highest simple, oblong. Petiole terete, not winged, thin, that of the basal leaves up to 10 cm, higher up gradually diminishing in length to about nil; *blade* hardly subcoriaceous, when flattened suborbicular or even broader than long in outline, base broad-cuneate, sharply set off against the petiole, $1\frac{1}{2}$ - $2\frac{1}{2}$ by $1\frac{1}{2}$ -3 cm; segments ovate, acute, edge with thick-margined, coarse, spiny teeth; nerves and main veins prominent, reticulations not so. *Heads* 3-4, umbellately clustered together at the nodes and apices of the stems, $\frac{1}{2}$ -1 cm peduncled. *Involucral bracts* lanceolate, entire or with a coarse spiny tooth on either side and a spiny tip, $1\frac{1}{2}$ by 3 mm, some more coriaceous and larger than the others. Floral bracts in the head mostly absent, in shape and texture resembling the smaller involucral bracts. *Flowers* white, 1-3 fertile and ♂, 1-2 sterile, stipitate by the linear aborted ovary. *Fertile flowers*: ovary obconical, studded with papillae which increase in size apically, \pm 1 mm long. *Sepals* lanceolate, $\frac{2}{3}$ mm long, persistent, pointed. *Petals* strongly inflexed, sulcate, $\frac{4}{5}$ mm high, the inflexed half with a pointed tip and often connected with the erect half by a hymen. Stamens rose; filaments $\frac{3}{4}$ mm; anthers obovate, $\frac{2}{3}$ mm. Styles spreading, recurved in fruit, persistent, 2 mm. *Sterile flowers*: ovary stalk-like, $1\frac{3}{4}$ mm; sepals as in the fertile flowers; petals and sexual organs absent a reduced gynoeceum excepted. *Mericarps* separated by a narrow groove, semi-globular, the upper papillae hardened, subspinulose, in section obtusely 5-angled $2\frac{1}{2}$ by $1\frac{1}{4}$ mm; thickest vittae near the commissure, further one under each rib alternating with faint additional ones.

Distr. *Malaysia*: Moluccas (Central Ceram, G. Binaya, below 'The Gate', EYMA 2286, type BO, isotypes L, K, A).

Ecol. On rock, one specimen, c. 3000 m, fl. fr. 26 Nov. 1937.

Note. A species which cannot be placed satisfactorily with WOLFF's monograph, possibly belonging to sect. *Campestris* WOLFF. (I am not very much impressed with the natural delimitation of the sections distinguished by him.) The most aberrant feature of the new species is the depauperation of the heads, a phenomenon which,

however, is observed in several other microtherm genera represented in the Austral-Antarctic region and in New Guinea (cf. *Trachymene*, *Oreomyrrhis*). I found this also in a specimen of *Eryngium expansa* F.v.M.¹ (C. E. HUBBARD 3730) where there are only 6-7 flowers per head.

The depauperation gave some difficulties with the generic identification of the Ceram plant, one of the remarkable finds by my late colleague Dr EYMA, as in its heads the floral bracts—the characteristic of the genus by which it is recognized from others in the subfamily *Saniculoideae*—are absent or scarcely distinct from the involucral bracts. However, I found that the small involucral bracts correspond with the number of flowers (and therefore probably represent marginal floral bracts). In young heads there was also sometimes a bract between the flowers *inside* the row of involucral bracts, which settles that floral bracts are, essentially, present.

The affinity of this species is apparently remote. It is not at all related to the Australian ones, and nothing similar is recorded from the Subantarctic where, for plant geographical reasons, its alliance should be found. This remote status points to high antiquity and historic-plant-geographically it should be classed with *Papuzilla* and a few other chance survivors of an ancient mountain flora. It may well turn up in the highlands of New Guinea.

- 127a The authority for *Torilis japonica* is: (HOULT.) DC.
- 131b *Ditto* for *Apium tenuifolium*: (MOENCH.) THELL.
- 132 *Ditto* for *Trachyspermum ammi*: (L.) SPRAGUE and for *T. roxburghianum*: (DC.) CRAIB.
- 133 *Ditto* for *Cryptotaenia canadensis*: (L.) DC.
- 136 The oldest authority for the genus *Foeniculum* seems to be: BOEHM. in LUDW. Def. Gen. Pl. (1760) 344, no 852.
- 136a Line 20 from top change WOLFF into: WOLFF.
- 141 On *Tetracera* a more elaborate treatment has been published by R. D. HOOGLAND, The genus *Tetracera* in the Eastern World (Reinwardtia 2, 1953, 185-225), which formed the basis for the treatment in F.M.
- 142 In the key to the species of *Tetracera* 'back of the carpels' means the adaxial side, which is, properly, their ventral side.
- 143a Add to the synonyms of *Tetracera scandens*: *Delima tripetala* NEES & BL. in Syll. Pl. (Ratisb.) 1 (1824) 95; BLUME ex SPR. Syst. Veg. 2 (1825) 597; G. DON, Gen. Hist. 1 (1831) 71.

(1) It is quite probable that this is an early import of *E. foetidum* L. which through isolation has acquired racial character and represents a depauperate form of it; this was already hinted at by BENTHAM. Cf. this volume p. lii, § 7.

- 145a Add to the synonyms of *T. nordtiana*: *T. floribunda* DIELS, Bot. Jahrb. 57 (1922) 440. It possibly belongs to var. *moluccana* but this cannot definitely be settled since the type is lost.
- 154 A full revision of the genus *Dillenia* was published by R. D. HOOGLAND in his thesis, a pre-issued reprint from *Blumea* 7 (1952) 1-145. This formed the basis on which the treatment in F.M. was made and in which the Latin diagnoses of new species are embodied.
- 164b 19. *D. alata* has also been found by SPECHT in Arnhemland, Northern Territory of Australia.
- 176 Line 3 of references to *Lonicera* replace at the end '10' by: 210, *nom. illeg.*
- 177a Line 11 of synonymy of 1. *Lonicera japonica*, omit: 'ZIPP. ex'.
- 180a At end of line 1 of references of *Lonicera javanica* replace '333' by: 334.
- 182 Delete in the key from the species of which flowers are unknown: *V. clemensae*.
- 182 Insert after line 6 from the top in the key: 11a. Leaves entire . . . 14. *V. clemensae* 11a. Leaves crenate-dentate.—*Proceed to 14.*
- 186b In line 3 from top the authority of *V. integririmum* is: WALL. [Cat. 457, *nom. nud.*] ex DC. Prod. 4 (1830) 324.
- 189b Add to the references under *V. clemensae*: KERN, Reinw. 2 (1952) 157, fig. 10.
- 189b Add to the description of *V. clemensae* KERN: *Inflorescence* nearly sessile, up to 8 cm long and 10 cm wide, paniculate; lowest branches 2-5-nate, middle ones opposite, upper ones alternate. *Flowers* small, c. 3 mm wide. *Calyx*-limb distinctly lobed; lobes triangular, c. 1/2 mm long and wide. *Corolla* globular in bud, rotate when open, glabrous; tube very short, 1/4 mm; lobes ovate, slightly cucullate, 1 1/4 mm. *Stamens* exerted, much shorter than corolla-lobes; filaments inserted near base of corolla, with inflexed top in the bud-stage; anthers broadly ovate, 1/2 mm long.
- 191a Last line read: *Ebulus*, not: '*Ebulum*'.
- 191b First line from top read after Tokyo: 42 (1921) 14.
- 192a Add to distr. of *Sambucus javanica*: New Guinea (Wissel Lakes between Ginamberai to Djembodini, Febr. 1939, EYMA 4618).
- 192 First word of 5th line of references under *Carlemannia* read: Jahresber.
- 200b Omit among the references to *Kalanchoë laciniata*: *Kalanchoë acutiflora* and the citations referred to it.
- 202a Add to line 15 of the references of *Kalanchoë integra*: (ANDR.). Change in line 16 the year '1812' into: 1819. Add in line 17 after '728': ; SPAN. *Linnaea* 15 (1841) 207.
- 202b Add to distr. of *K. integra*: Sumbawa, Timor.
- 205a The authority of *Bergia ammannioides* is, correctly: HEYNE ex ROTH, Nov. Sp. Pl. (1821) 219, 402.
- 207b Line 1 from top should read: *Steris javana* LINNÉ, Mant. 1 (1767) 54.—
- 214 Add to reference of *Luzula*: *nom. cons.*
- 218a Last line of paragraph 2, insert after 'DC': ex MEISN. Pl. Vasc. Gen. 2 (1836-1843) 206.
- 231a The authority of *Phytolacca tocosandra* is: LINNÉ, Syst. ed. 10 (1759) 1040.
- 232b Line 2 from bottom, change 'R.Br.' into: DC.
- 235a First line of *Piriqueta racemosa* insert after 'SWEET': Hort. Britt. ed. 1 (1827) 154;
- 236 Reference to *Turnera*, change 'ed. 2' into: ed. 5.
- 240b Add letter 'f' in fig. 2.
- 245 Under distr. of *Joinvillea* add in the 2nd line between 'the' and 'New Hebrides': Solomons,
- 256a First line of *Monochoria vaginalis* after 'PRESL': ex KUNTH, En. 4 (1843) 134; PRESL did not formally make the new combination, though he certainly intended to do so and has accordingly always been accredited by common sense with the botanical act and *eo ipso* the nomenclatural transfer. Reference to *Mollugo*, change '463' into: 89.
- 269a Line 13 from bottom insert after *Gl. dictamnoides*: BURM. f. Fl. Ind. (1768) 113;
- 283a Line 25 from bottom, omit: '*Blattii acide*', and put the pertaining reference under *S. acida*.
- 286b Omit under 5. *Sonneratia griffithii* the reference to WATSON.
- 295 Change in note under the generic description *Hematanthera* into *Nematanthera*.
- 299 Change third word of generic references into: Pl.
- 301 Last name of legend to fig. 5, read: *D. puber* BL.
- 319a In line 21 from the top replace var. *reticulata* etc. by: *D. hispida* var. *hispida*.
- 332b Omit in legend of fig. 13 the last letter of the 2nd line.
- 346a Last line read: *campestre*.
- 367 First line read: Gen. Pl. ed. 5 (1754) no 59.
- 368 Change in the key:
9. *Staminodes* absent.
9a. Leaves 50-90 by 1-2 cm. Heads with numerous flowers. Anthers with 4 acute tips. Upper part of bracts with a small triangular field of small papillae 12. *X. grandis*
9a. Leaves 1/2-8 cm long, up to 3 mm wide. Heads with one or two flowers. Anthers with 2 obtuse tips. Upper part of bracts with a narrow elliptic field of small papillae 17. *X. oligantha*
- 374a Add to ecol. of *Xyris indica*: According to Dr BEUMÉE (*in litt.* May 11, 1953) the local gregarious occurrence of *X. indica* in West Java is, according to the pre-war experience of the Agricultural Consultation Service,

- especially connected with soils which are deficient in phosphate; this might point to development of *Xyris* in those rice-fields where rice is not under optimal conditions.
- 376 Add:
17. *Xyris oligantha* STEUD. Syn. Pl. Glum. 2 (1855) 288.—*X. pauciflora* WILLD. p.p., BENTH. Fl. Austr. 7 (1878) 78; NILSSON, Kongl. Svenska Vet.-Akad. Handl. 24, 14 (1892) 36; BAILEY, Queensl. Fl. 5 (1902) 1648.
Leaves ensiform, $1\frac{1}{2}$ –8 cm long, up to 3 mm wide, stiff, subfalcate, obtuse, glabrous except for the papillate margin; sheath 5–20 mm, membranous along the margin, provided with an up to 2 mm long obtuse ligule. Peduncle 1–12 cm by c. 1 mm, quadrangular, with 4 papillate ribs. Head subglobose to ellipsoid, 1–5 by 0.8–3 mm. Basal bracts ovate, $1\frac{1}{2}$ – $2\frac{1}{2}$ by 1– $1\frac{1}{2}$ mm, acute to subacute, margin membranous with 5 complete nerves papillate in a narrow elliptic region in the upper $\frac{2}{3}$. Median bracts ovate, 2–4 by $1\frac{1}{2}$ – $3\frac{1}{2}$ mm, acute, sometimes mucronate, with one complete and 4 once forked descending nerves, papillate in a narrow elliptic region in the upper fourth. Lateral sepals $2\frac{1}{2}$ –4 by c. $1\frac{1}{2}$ mm, acute, crest narrow, entire. Median sepal cap-shaped, $1\frac{1}{2}$ –2 by c. 1 mm, 1-nerved, papillate at the top. Petals 2–3 mm, limb spatulate, $1\frac{1}{2}$ – $2\frac{1}{2}$ by 1–2 mm, outer margin irregularly serrate, claw c. $\frac{1}{2}$ mm. Stamens 0.4–1.2 mm, filaments 0.2–0.4 mm, anthers 0.2–0.8 mm, emarginate at the top, broadly emarginate at the base; cells with one obtuse tip, base obtuse. *Staminodes* absent. Ovary obovoid, obtuse, 3-sided, 1-celled, $1\frac{1}{2}$ – $3\frac{1}{2}$ by 1– $1\frac{1}{2}$ mm. Styles $1\frac{1}{2}$ – $2\frac{1}{2}$ mm, 3-fid, arms $\frac{1}{2}$ –1 mm, their top fimbriate.
Distr. N. Australia (Queensland and N. Territory), in *Malaysia*: S. Moluccas (Aru Islands: Trangan Island, between Kp. Meroor and Kp. Selarin), in coastal *Melaleuca* savannahs, BUWALDA 5534a, fl. fr. July.
Notes. Its 1–2-flowered heads, absence of staminodes, 4-angled peduncle and small size characterize this species. It has been identified sometimes with *X. pauciflora* WILLD. but differs in the entire crest of the lateral sepals, the absence of staminodes, and the two-tipped anthers.
- 377 First line of generic description correct: Gen. Pl. ed. 5 (1754) no 351.
- 378b Add to distr. map of *Drosera burmanni*: S. Moluccas (Aru Islands: P. Trangan, BUWALDA 5490, 5342).
- 380a Add to references of *Drosera peltata*: STEEN. Act. Bot. Neerl. 2 (1953) 304.
- 380b Add to localities of *Drosera peltata* in New Guinea: Lake Habbema, 3225 m, Aug. 1938, BRASS 9195; East New Guinea, plateau N of Mt Giluwe, Central Highlands, May 1951, 2200 m, SHAW MAYER.
- 380 Correct in first line of generic description: Gen. Pl. ed. 5 (1754) no 350.
- 383a Read: 1. *Octomeles sumatrana* MIQUEL.
- 384a Add to distr. of *Octomeles sumatrana*: Melanesia (e.g. Bougainville, WATERHOUSE 875).
- 384a Add to Ecol.:
I have omitted to make mention of MELCHIOR's recent article on the scales which occur on the undersurface of the leaves (Ber. Deut. Bot. Ges. 62, 1950, 72–77). MELCHIOR says that these scales have either a secretory function or one of water suction. He is in favour of the latter, and compares them with the similar absorptive scales of the Bromeliaceae (*sic*). Though this function can be admitted for the latter, the ecology of *Octomeles*, one of the fastest growing trees restricted to everwet, riverine forest, preferably on wet alluvial silt, shows that MELCHIOR's opinion is not in accordance with the ecological facts.
- 385 Add to references of *Tetrameles: Anictoclea* NIMMO in GRAH. Cat. Pl. Bombay (1839) 252.
- 385b Lower part, first line, add after '407': —*Anictoclea grahamiana* NIMMO in GRAH. Cat. Pl. Bombay (1839) 252.
- 404 In addition to the revision of *Erycibe* in the Flora Dr HOOGLAND has composed a complete enumeration (review) of the genus in *Blumea* 7 (1953) 342–361.
- 435b Line 13 from top, replace '(1833–1846)' by: (1838).
- 441b Line 9–10 from bottom, omit after 'DENNST.': the brackets and '*nom. nud. ex.*'.
- 451a Add the following note to *Merremia mammosa*:
Note. The nomenclatural basis of *M. mammosa* is not quite satisfactory as no specimen of LOUREIRO has been located and the identity of *Batatta mammosa* RUMPH. (Herb. Amb. 5: 370, t. 131) to which LOUREIRO referred is under dispute, cf. VAN OOSTSTROOM, *Blumea* 3 (1939) 346–347.
- 459 Paragraph 2, replace *I. plebeja* by *I. plebeia*.
- 481a Line 18 from top add after 'Mant.': 1.
- 485b For species 37. *Ipomoea crassicaulis* the correct name is *I. fistulosa* MART. *ex CHOISY* in DC.
According to C. A. O'DONELL (Bol. Soc. Argent. Bot. 4, 1952, 175–176) BENTHAM mentions on p. 153 of the *Voy. Sulph.* that he knew the contents of the *Prodromus* of DE CANDOLLE; hence his work was almost certainly published posterior to it. This is in agreement with Miss TUCKER who stated that p. 134, containing *Batatas crassicaulis* BTH. *Voy. Sulph.*, was published in 1845 and not in 1844 (cf. J. Arn. Arb. 11, 1930, 243–244).
- 497b Line 18 from top replace 'CLARKE' by: BENTH.