NOTES ON THE FLORA OF JAVA, VI [1])

by

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Urticaceae, fam. CXXX.

Koorders, Fl. v. Tjibodas 2 (1923) 32—46; Hochreutiner in Candollea 2 (1924—1926) 336—359; Ochse, Indische Groenten (1931) 719—722; Backer, Onkruidfl. Java Suiker (1930) 203—209; Amshoff in Blumea 5 (1942—1945) 515—517. Miss Dr G. J. Amshoff started the revision of the Javanese Urticaceae, but left the definitive preparation to me.

Urtica dioica L. and **U. urens** L. have been erroneously recorded for Java (Miquel, Fl. Ind. bat. 1[2], 1859, 227; Koorders, Exk. Fl. Java 2, 1912, 126). To my knowledge no specimens were ever collected there nor elsewhere in the Malay Archipelago.

Pilea angulata (Bl.) Bl., Mus. Bot. Lugd. Bat. 2[4] (1852) 55 — *Urtica angulata* Bl., Bijdr. (1825) 464 — *Pilea stipulosa* (Miq.) Miq. in Zoll. Syst. Verz. (1854) 102 — *Urtica stipulosa* Miq., Pl. Jungh. 1 (1851) 28.

Pilea glaberrima (Bl.) Bl., Mus. Bot. Lugd. Bat. 2[4] (1852) 54 — *Urtica glaberrima* Bl., Bijdr. (1825) 493 — *Pilea smilacifolia* (Wall. ex Voigt) Wedd. in Ann. Sci. Nat. sér. IV, 1 (1854) 186 — *Urtica smilacifolia* Wall. ex Voigt, Hort. Suburb. Calcutta (1854) 279 — *Pilea miconiaefolia* Miq. in Zoll. Syst. Verz. (1854) 102, 106.

Pilea leucophaea (Bl.) Bl., Mus. Bot. Lugd. Bat. 2[4] (1852) 53 — *Urtica leucophaea* Bl., Bijdr. (1825) 493.

Amshoff, l. c. 515 considered this species (sphalm. *leucophlaea*) conspecific with *Pilea subpuber* Miq., which is, however, a quite different plant.

Pilea melastomoides (Poir.) Bl., Mus. Bot. Lugd. Bat. 2[4] (1852) 54 — *Urtica melastomoides* Poir. in Lamk., Encycl. bot. suppl. 4 (1816) 223 — *Urtica trinervia* Roxb., Fl. Ind. 3 (1832) 582 — *Pilea trinervia* (Roxb.) Wight, Icon. (1852) t. 1973; Blume, Mus. Bot. Lugd. Bat. 2[4] (1852) 57 — *Pilea oreophila* (Miq.) Miq., Fl. Ind. bat. 1[2] (1859) 235 — *Urtica oreophila* Miq., Pl. Jungh. 1 (1851) 27 — *Pilea pellucida* Bl., Mus. Bot. Lugd. Bat. 2[4] (1852) 54.

Pilea microphylla (L.) Liebm. in Vidensk. Selsk. Skr. 5[2] (1851) 302; Blume, Mus. Bot. Lugd. Bat. 2[4] (1852) 44 — *Parietaria microphylla* L., Spec. Pl. 2 (1753) 1492.

Pilea peploides (Gaud.) Hook. et Arn., Bot. Beech. Voy. (1841) 96; Blume, Mus. Bot. Lugd. Bat. 2[4] (1852) 50 — *Dubrueilia peploides* Gaud., Freyc. Voy. Bot. (1826) 495.

[1]) Note IV in Blumea VI, No. 1, 1948, 310.

Debregeasia longifolia (Burm. f.) Wedd. f. **dichotoma** (Bl.) Bakh. f., comb. nov. — *Urtica dichotoma* Bl., Bijdr. (1825) 499 — *Debregeasia dichotoma* (Bl.) Wedd. in Arch. Mus. Paris 8 (1855—1856) 462.

Parietaria debilis Forst. f. Cf. Van Steenis in Bull. Jard. Bot. Buitenzorg sér. III, 17[4] (1948) 400.

Boehmeria glomerulifera Miq. var. **neglecta** (Bl.) Bakh. f., comb. nov. — *Boehmeria neglecta* Bl., Mus. Bot. Lugd. Bat. (March 1856) 200.

Chamabainia cuspidata Wight. Cf. Amshoff in Blumea 5 (1942—1945) 593, 594.

Java, Western part, Preanger Regencies, Mt. Patoeha, alt. 1850 m: *Van Steenis* 6965 (L, BZ), collect. Dec. 1935, sterile, distr. sub *Droguetia pauciflora* Wedd.

The genus is new for Java. In Malaysia the plant is further only known from Lombok and Celebes.

Gonostegia hirta (Bl.) Miq. var. **crassissima** Bakh. f., var. nov. — Differt a typo characteribus sequentibus: folia crassissima, subtus in nervis elevatissimis pilis recurvis paucis munita, intra nervos et in costa glabra vel subglabra, nervis basalibus 3—4, robustis, ut costa vinosis.

Java, Western part, Preanger Regencies, above Bandoeng, alt. 1550 m: *Smith and Rant* 48 (L) type spec., dupl. in BZ, fl. Apr., distrib. sub *Memorialis hirta* Wedd. This variety might possibly be considered a distinct species.

Procris pedunculata (Forst. f.) Wedd. in DC, Prodr. 16[1] (1869) 191 — *Elatostemma pedunculatum* Forst., Char. Gen. (1776) 106 — *Procris longifolia* Bl., Bijdr. (1825) 508.

Girardinia hibiscifolia Miq., Pl. Jungh. 1 (1851) 31 — an? *Girardinia heterophylla* (Vahl) Decne in Jacquem. Voy. Bot. (1844) 151, t. 153.

This species which is usually considered identical with *Girardinia palmata* Gaud., is clearly distinct, as appears from the following key:

Stems and petioles densely clothed with patent, long grey hairs, mixed with numerous, in a dried state black stinging hairs; leaves herbaceous, thick, densely wooly beneath, deeply 5—9-cleft, with deeply incised, serrate lobes, petiole thick. Peduncle of the inflorescence much shorter than the spikes . . . . . **G. palmata** Gaud.

Stems and petioles densely clothed with strongly appressed, short hairs, mixed with few, in a dried state brown stinging hairs; leaves herbaceous, thin, the undersurface sparsely beset with appressed, short hairs, hence rather rough to the touch, slightly 3—7-lobed, with very coarsely serrate-dentate lobes; petiole slender. Peduncle of the inflorescence as long as the spikes or longer . . . . . **G. hibiscifolia** Miq.

Elatostemma abangense Amsh., spec. nov.

Herba erecta tenera saepe simplex glaberrima 5—10 cm alta; *caules* basi tuberoso-incrassati, (his tuberibus probabiliter potius nodis caulinis habendis quam pro hypocotylis; vide observationes communicatas a L. van der Pijl in De Tropische Natuur 22 (1933) 93, hollandice); *folia* opposita dimorpha; folia normalia obliqua subsessilia grosse serrata, dentibus in utroque margine 3—7 late triangulatis acutiusculis, glaberrima, nervis lateralibus in utroque latere costae 3—4 longe remotis, evenia 1—6 cm longa, 0.75—1.5 cm lata, superiora manifeste longiuscule caudato-acuminata, inferiora subovata rotundata; folia nana subfoliacea glabra circa 4 mm longa; stipulae ignotae probabiliter caducissimae et minutae. ♂ *Glomeruli* subumbellati e nodis caulinis tuberculatim incrassatis enati, pedunculis 2—3 cm longis; ♂ perianthii lobis 5 corniculatis vel ecorniculatis glabris circa 2 mm longis; ♀ *inflorescentiae* sessiles densae; perianthii lobis

5 lineari-lanceolatis ecorniculatis apice longe pilosis circa 1 mm longis; *fructus* laeves 1 mm longi.

Java, Eastern part, Pasoerocan, Mt. Abang, near Mt Tengger, alt. ca. 200 m, in forest: *Backer and Posthumus* 693 (L), type spec., fl. fr. Febr.

The affinity of this species is with *Elatostemma bulbiferum* Kurz in Journ. As. Soc. Beng. 42 (1873) II, 104, which has, however, the inflorescences distinctly stalked and differs further by having according to Kurz, the tubers arising from the thickening of a hypocotyl (which may be an erroneous statement).

Missiessya Gaud., Bot. Voy. Bonite (1844) t. 93 — *Leucosyke* Z. et M. in Moritzi, Zoll. Syst. Verz. (1845—1846) 76; Unruh in Ber. Deutsche Bot. Ges. 58 (1940) 484 and in Engl. Bot. Jahrb. 73 (1943) 191; both papers inavailable to me.

Missiessya capitellata (Poir.) Bakh. f., comb. nov. — *Urtica capitellata* Poir. Encycl. bot. suppl. 4 (1816) 227 — *Leucosyke capitellata* (Poir.) Wedd. in DC. Prodr. 16[1] (1869) 235.

Connaraceae, fam. CLIV.

Connarus gracilis Bakh. f. nom. nov. — *Connarus ellipticus* (Zoll.) Schell. in Candollea 2 (1925) 108, non *Connarus ellipticus* King in Journ. As. Soc. Bengal 66 (1897) 7.

Rutaceae, fam. CXLV.

Koorders, Fl. v. Tjibodas 2 (1923) 121—124; Baker f. in Journ. Bot. 62 (1924) Suppl. 15, 16; Hochreutiner in Candollea 2 (1924—1926) 406—410; Ochse, Indische Groenten (1931) 639—648.

Micromelum minutum (Forst. f.) W. et A., Prodr. 1 (1834) 448; Seem., Mission Fiji (1862) 434; Merrill, Enum. Philip. 2 (1923) 335; Hochreutiner in Candollea 2 (1924—1926) 408, 409 — *Limonia minuta* Forst. f., Fl. Ins. Austr. Prodr. (1784) 33 — *Micromelum pubescens* Bl., Bijdr. (1825) 128.

This species is extremely variable. All intergradating as the size of the flowers and the indumentum of the leaves have been found. *Micromelum pubescens* Bl. is only a form with larger flowers, but differs in no important additional feature from the typical *M. minutum* (Forst. f.) W. et A. which was once collected in Central Java.

Euodia glabra (Bl.) Bl., Bijdr. (1825) 245 — *Fagara glabra* Bl., Cat. (1823) 40, descr. — *Euodia aromatica* Bl., Bijdr. (1825) 246.

Euodia incisifolia Bakh. f., nom. nov. — *Evodia triphylla* Hort. Bog. ex Back., Schoolfl. Java (1911) 179, non *Evodia triphylla* DC., Prodr. 1 (1824) 724.

Euodia macrophylla Bl., Bijdr. (1825) 246 — *Euodia accedens* Bl., Bijdr. (1825) 246 — *Euodia nervosa* K. et V. in Meded. 's Lands Plant. 17 (1896) 208.

Euodia suaveolens Scheff. var. **ridleyi** (Hochr.) Bakh. f., comb. nov. — *Evodia ridleyi* Hochr. in Icon. bog. (1904) t. 151.

Euodia trichotoma (Lour.) Pierre, Fl. Cochinch. (1893) t. 287 —

Philagonia sambucina Bl., Cat. (1823) 21, descr. — *Euodia sambucina* (Bl.) Hook. f. ex K. et V. in Meded. 's Lands Plant. 17 (1896) 216.

Citrus medica L., Spec. Plant. (1753) 782 — *Citrus javanica* Bl., Cat. (1823) 95, descr.; idem, Bijdr. (1825) 140.

Glycosmis elongata Bakh. f., nom. nov. — *Murraya longifolia* Bl., Bijdr. (1825) 137, non *Glycosmis longifolia* Tanaka, Studia Citrologia 2 (1928) 20.

Glycosmis pentaphylla (Retz.) Corr. var. **citrifolia** (Willd.) Bakh. f., comb. nov. — *Limonia citrifolia* Willd. Enum. pl. Hort. Berol. (1809) 449 — *Glycosmis citrifolia* (Willd.) Link in Trans. Hort. Soc. London 6 (1826) 72.

Fagara backeri Bakh. f., spec. nov.

Frutex scandens, usque ad 15 m altus; *ramuli* aculeati, aculeis recurvatis breviusculis, glabri; *folia* alterna imparipinnata, maiora circa 7—8-juga; rhachis foliorum 19—20 cm longus, in speciminibus floriferis aculeis recurvatis acutissimis munitus foliola plerumque opposita oblonga basi cuneata longiuscule obtuso-acuminata, in utrinque pagina glabra, integra vel crenulata crasse coriacea, in sicco sine punctis pellucidis 6.5—8 cm longa, 2.3—3.5 cm lata. *Paniculae* ad ramulorum apices aggregatae, saepe in paniculas terminales 30 cm longas confluentes longe pedunculatae; axis panicularum singularum pyramidaliter ramosus; axes laterales brevissimi inferiores oppositi, raro 3-verticillati, subhorizontales; *flores* ignoti; *fructus* constans a coccis, duobus quorum saepissime unus solummodo bene evolutus, alter abortivus; cocci evoluti obovoidei indehiscentes apice manifeste mucronulati 10—11 mm longi; *semina* lenticularia nigra, 7 mm longa.

Java, Western part, Preanger Regencies, Lengkong, in forest, alt. 700 m: *Backer* 17017 (BZ), type spec., fr. Nov.

The plant shows some resemblance with *Fagara torva* (F. v. M.) Engl. I have named it in honour of its discoverer, Dr C. A. Backer (Heemstede, Holland).

Fagara oblongifolia Bakh. f., spec. nov.

An? *frutex* scandens; *ramuli* ut rhaches foliorum et petioli modice dense aculeis curvatis parvis glabris obsiti, glabri; *folia* alterna; rhaches foliorum 6.5—19 cm longi; foliola 7, raro 5, oblonga vel lata lanceolata, basi cuneata saepe obliqua, acuminata, acumine retuso grosse crenata tenuiter coriacea translucida glabra, subtus in costa aculeis curvatis 1—3 mm longis minuta vel inermia punctis pellucidis ca. 50 magnis praedita, 5—7 cm longa,, 2—3.5 cm lata, brevissime petiolata. *Paniculae* axillares brevissime pilosae inermes, pedunculo brevi computato, 2—7.5 cm longae; *flores* incompleti, solitarii vel 2—3 aggregati, 4-meri; pedicelli piloselli 2 mm longi; *sepala* ovata acutiuscula glabra 0.5 mm longa; *petala* ovato-oblonga 2—2.5 mm longa; *cocci* evoluti 1—4, apice rotundati mutici, glabri 5.5—7 mm longi; *semina* lenticularia nigra, 5—6 mm longa.

Java, Western part, Preanger Regencies, Mt. Megamendoeng: *Blume* 1814 (L), typus floris; Mt. Papandajan: *Blume* s.n. (L), typus fructus.

The plant shows some ressemblance with *Fagara torva* (F. v. M.) Engl.

Fagara pendjaluensis Bakh. f., spec. nov.

Frutex aculeatus, ex Koorders non scandens, circa 2 m altus; *ramuli*, praecipue juniores pilis patentibus minutis dense vestitis, aculeati aculeis

gracilibus recurvatis acutis glabris circa 1 mm longis; *folia* alterna circa 2—4-juga, rhachi, petiolo communi brevi computato, 7—11 cm longo, aculeis minutis instructo; foliola opposita 3—7 ovalia vel late ovato-oblonga, basi rotundata vel late cuneata, brevissime acuminata laeviter crenulata vel subintegra, juniora in utraque pagina sparse pilosiuscula, vetustiora in nervis solum pilosa, subtus in costa non vel vix aculeata subtus margine excepto punctis pellucidis magnis paucis ad permultis munita 4—7 cm longa, 2.5—3.5 cm lata, subsessilia; *paniculae* axillares racemiformes, pedunculo angulato pilosello circa 2 cm longo, axibus lateralibus brevissimis; *flores* ignoti; *fructus* cocci, quorum 2—3 normaliter evoluti glabri extus sulcato-venosi, endocarpio secedente circa 6 mm longi subsessilia; *semina* lenticularia, circa 5 mm longa, testa nigra.

Java, Western part, Preanger Regencies, islet of Noesa Gede in Lake of Pendjaloe in forest, alt. 720 m: *Koorders* 47693 β (L), type spec., fr. Aug.

This plant shows resemblance with *Fagara torva* (F. v. M.) Engl., but the leaves are much smaller.

Araliaceae, fam. CLIX.

Koorders, Fl. v. Tjibodas 2 (1923) 220—229; Baker f. in Journ. Bot. 62 (1924), Suppl. 44, 45; Hochreutiner in Candollea 2 (1924—1926) 481—490; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1207—1210; Ochse, Indische groenten (1931) 64—71; Van Steenis in Bull. Bot. Gard. Buitenzorg ser. III, 174 (May 1948) 390—395.

Aralia dasyphylla Miq. var. **urticifolia** (Bl. ex Miq.) Bakh. f., comb. nov. — *Aralia urticifolia* Bl. ex Miq. in Ann. Mus. Bot. Lugd. Bat. 1 (1863—1864) 9.

Aralia ferox Miq. Cf. Van Steenis in Bull. Bot. Gard. Buitenzorg ser. III. 174 (May 1948) 394.

Aralia montana Bl. var. **crassifolia** Bakh. f., var. nov. — Differt a typo characteribus sequentibus: Petioli et rhaches foliorum dense piloselli; foliola crassiuscula tenuiter serrata, subtus pilis fulvis dense vestita.

Java, Western part, Preanger Regencies, Malabar: *Teysmann* s.n. (L); Batavia, Mt. Salak: *Koorders* β 24141 (BZ, L), fr. Sept.; without locality: *Reinwardt* s.n. (L); idem: *Junghuhn* s.n. (L), type spec., sub H. L. B. 899.33—35.

Boerlagiodendron moluccanum (Miq.) V. Ooststr., comb. nov. — *Trevesia moluccana* Miq., Fl. Ind. bat. 1[1] (1855) 748 — *Boerlagiodendron palmatum* (Zipp. ex Boerl.) Harms in Engl. u. Prantl, Die Nat. Pfl. Fam. 3[8] (1894) 31 — *Eschweileria palmata* Zipp. ex Boerl. in Ann. Jard. Buitenzorg 6 (1887) 116.

Schefflera aromatica (Bl.) Harms in Engler u. Prantl, Die Nat. Pfl. Fam. 3[8] (1894) 38 — *Aralia aromatica* Bl., Bijdr. (1826) 871 — *Paratropia serrata* Miq., Fl. Ind. bat. 1[1] (1855) 757 — *Heptapleurum serratum* (Miq.) Seem. in Journ. Bot. 3 (1865) 79.

Schefflera fastigiata (Miq.) Vig. in Ann. Sci. Nat. sér. IX, 9 (1909) 350 — *Paratropia fastigiata* Miq. in Ann. Mus. Bot. Lugd. Bat. 1 (1863—1864) 24 — *Heptapleurum laeve* K. et V. in Meded. 's Lands Plant. 42 (1900) 42 — *Schefflera laevis* (K. et V.) Kds., Exk. Fl. Java 2 (1912) 714, in clavi.

Schefflera junghuhniana (Miq.) Harms in Engler u. Prantl, Die Nat.

Pfl. Fam. 3^8 (1894) 38 — *Paratropia junghuhniana* Miq., Fl. Ind. bat. 1^1 (1855) 758.

Schefflera lucescens (Bl.) Vig. in Ann. Sci. Nat. ser. IX (1909) 355 — *Aralia lucescens* Bl., Bijdr. (1826) 872.

I reduce the following species to varieties of this extremely polymorphic species.

1. var. **typica.** — *Aralia pergamacea* Bl., Bijdr. (1826) 873 — *Schefflera pergamacea* (Bl.) Vig. in Ann. Sci. Nat. ser. IX, 9 (1909) 350 — *Sciodaphyllum lucidum* Bl., Bijdr. (1826) 877 — *Paratropia lucida* (Bl.) Miq., Fl. Ind. bat. 1^1 (1855) 754 — *Sciodaphyllum longifolium* Bl., Bijdr. (1826) 876 — *Schefflera longifolia* (Bl.) Vig. in Ann. Sci. Nat. sér. IX, 9 (1909) 356, pr. p., typo incluso. — *Paratropia polyphylla* Miq., Fl. Ind. bat. 1^1 (1855) 760.

2. var. **grandifolia** (K. et V.) Bakh. f., comb. nov. — *Heptapleurum grandifolium* K. et V. in Meded. 's Lands Plant. 42 (1900) 40 — *Schefflera grandifolia* (K. et V.) Kds., Exk. Fl. Java 2 (1912) 714.

3. var. **rigida** (Bl.) Bakh. f., comb. nov. — *Aralia rigida* Bl., Bijdr. (1826) 874 — *Schefflera rigida* (Bl.) Harms in Engler u. Prantl, Die Nat. Pfl. Fam. 3^8 (1894) 38.

Schefflera polybotrya (Miq.) Vig. in Ann. Sci. Nat. sér. IX, 9 (1909) 352; Koorders, Exk. Fl. Java 2 (1912) 713; Hochreutiner in Candollea 2 (1924—1926) 486 — *Paratropia polybotrya* Miq., Fl. Ind. bat. 1^1 (1855) 755.

Schefflera scandens (Bl.) Vig. in Ann. Sci. Nat. sér. IX, 9 (1909) 348; Koorders, Exk. Fl. Java 2 (1912) 713 — *Sciodaphyllum scandens* Bl., Bijdr. (1826) 878.

Schefflera subavenis (Bl.) Hochr. in Candollea 2 (1924—1926) 485 — *Sciodaphyllum subavene* Bl., Bijdr. (1826) 876 — *Paratropia corona-sylvae* Miq., Fl. Ind. bat. 1^1 (1855) 755 — *Schefflera corona-sylvae* (Miq.) Vig. in Ann. Sci. Nat. sér. IX, 9 (1909) 305 — *Schefflera corona-sylvae* (Miq.) Kds., Exk. Fl. Java 2 (1912) 713 — *Paratropia brachybotrya* Miq., Fl. Ind. bat. 1^1 (1855) 755.

Schefflera subavenis (Bl.) Hochr. var. **eurhyncha** (Miq.) Bakh. f., comb. nov. — *Paratropia eurhyncha* Miq. in Ann. Mus. Bot. Lugd. Bat. 1 (1863—1864) 24 — *Heptapleurum eurhynchum* (Miq.) Seem. in Journ. Bot. 3 (1865) 78 — *Schefflera eurhyncha* (Miq.) Vig. in Ann. Sci. Nat. sér. IX, 9 (1909) 349.

Asclepiadaceae, fam. CLXXIII.

Beccari, Malesia 2 (1886) 248—275; Koorders, Fl. v. Tjibodas 3 (1918) 60—65; Hochreutiner in Candollea 6 (1934—1936) 474—482; Tsiang in Sunyatsenia 3^{2-3} (May 1936) 160—239; idem in idem 4^{1-2} (June 1939) 54—131.

Phyllanthera bifida Bl., Bijdr. (1826) 1048; idem, Mus. Bot. Lugd. Bat. 2^8 (Oct. 1849) 126, fig. XXII.

Of this apparently extremely rare species possibly two varieties occur in Java. The typical form possessing rather broad leaves, 2.5—3.5 times as long as wide, was found on Mt. Salak (in Western part). A form with very narrow leaves, 4—5.5 times as long as wide, has been found near

Tjadasmalang, S.W. of Bandoeng. Already King and Gamble in Journ. As. Soc. Bengal 74 (1908) 508, 509 paid attention to those differences in leaf-shape. The material at my disposal was too scanty to decide on the systematic value of this disparity.

Finlaysonia obovata Wall., Pl. As. Rar. 2 (1831) 48, t. 162; Merrill, Interpr. Herb. Amboin. (1919) 434 — *Finlaysonia maritima* Back. ex Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1293, non *Secamone maritima* Bl., Bijdr. (1826) 1050.

Atherandra Decne in DC., Prodr. 8 (1844) 497 — *Atherostemon* Bl., Mus. Bot. Lugd. Bat. 2^8 (Oct. 1849) 126.

Atherandra acuminata Decne in l. c. (1844) 497 — *Atherandra acutifolia* Decne in l. c. (1844) 497 — *Atherandra cuspidata* Bl., l. c. 2^{10} (Jan. 1850) 147 — *Atherandra pubescens* Bl., l. c. 2^{10} (Jan. 1850) 147, fig. XXVI — *Atherostemon javensis* Bl., l. c. 2^8 (Oct. 1849) 126, fig. XXIII.

Cryptostegia grandiflora R. Br. in Bot. Reg. (1819) t. 435 — *Cryptostegia glaberrima* Hochr. in Ann. Conserv. et Jard. Bot. Genève 11—12 (1908) 89—91 — *Cryptostegia madagascariensis* Bojer, Hort. Maurit. (1837) 212.

In my opinion this genus consists of one species only, though possibly varieties may be distinguished; the trifling differences do not warrant to treat *C. glaberrima* and *C. madagascariensis* as distinct species.

Cryptolepis javanica (Bl.) Bl., Mus. Bot. Lugd. Bat. 2^{10} (Jan. 1850) 146, fig. XXV — *Leposma javanicum* Bl., Bijdr. (1826) 1049 — *Cryptolepis laxiflora* Bl. var. *obversa* Miq., Fl. Ind. Bat. 2 (1856) 467.

Cynanchum L.

Thunberg, Observ. in Cynanch. (??) 7, 8 described two species said to occur in Java:

C. capillare Thunb. and **C. macrophyllum** Thunb. non Persoon. These plants are wholly unknown to me; possibly they do not belong to this genus.

Cynanchum javanicum (Kds.) Bakh. f., comb. nov. — *Marsdenia ? javanica* Kds. in Koorders-Schumacher, Syst. Verz. I, Java, Asclep. (1912), descr. brevis; Koorders, Exk. Fl. Java 3 (1912) 104.

Cynanchum muricatum (Bl.) Boerl., Handl. Fl. Ned. Ind. 2 (1899) 436; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 113.

Cynanchum ovalifolium Wight, Contr. (1834) 57; Merrill, Interpr. Herb. Amboin. (1917) 435; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1294 — *Cynanchum laeve* (Bl.) K. Schum. in Engl. u. Prantl, Die Nat. Pfl. Fam. 4^2 (1895) 292, non Persoon, Syn. 1 (1805) 27.

Cynanchum zollingeri (Miq.) Boerl., Handl. Fl. Ned. Ind. 2 (1899) 436 — *Cynoctonum zollingeri* Miq., Fl. Ind. bat. 2 (1856) 479.

I do not agree with Boerlage that Miquel's plant is identical with *Holostemma laeve* Bl. = *Cynanchum ovalifolium* Wight. Miquel emphatically stated the species to have membranaceous laeves; this is certainly not the case with *Cynanchum ovalifolium* Wight. I believe Miquel is correct in placing his plant in the vicinity of *C. dimidiatum* (Hassk.) Boerl. I have seen no material. It may be allied to *C. hoedimeerium* Bakh. f.

Cynanchum hoedimeerium Bakh. f., spec. nov.

Sinistrorsum volubilis caule gracili tenuiter pilosello; *folia* ovato-cordata vel triangulari-cordata, lobis basalibus rotundatis, saepe paulum con-

niventibus breviter atque acutissime acuminatis, in utraque pagina pilis longiusculis albis sparsis praedita, 5-nervia subtus nervis lateralibus elevatis percursa, 3—12 cm longa, 2—9 cm lata, petiolo 2—5 cm longo; axillae foliorum saepe foliis falcato-subcordatis parvis brevipetiolatis praeditae.

Flores inter folios eiusdem jugi in inflorescentias racemiformes paucivel multiflores dispositi, 5-meri; *inflorescentiae*, pedunculo 0.8—2 cm longo computato, 1.5—4 cm longae, modice ad densiuscule patule pilosellae; pedicelli 4—9 mm longi; *calyx* ciliatus extus pilosellus; laciniae demum patulae, oblongae acutae virides, saepe purpurascentes 1.8—2 mm longae; *corollae* laciniae late patule pilosellae, intus glabrae, extus pallide virides intus praecipue in apice purpurascentes, 3—3.5 mm longae gynostegium inter coronae squamas in stipitem cylindricum valde carnosum 0.8—1 mm longum quam pars superior multo angustiorem contractum; *pollinia* 0.25—0.35 mm longa, translatoribus duplo longiora; *corona* cupuliformis membranacea 2—2.5 mm alta, in margine superiori post singulam antheram lacinia lata praedita et cum ea alternans lacinia breviore atque angustiore; coronae laciniae latiores apice breviter lobata; lobus medius triangularis acutus ultra stigma porrectus; coronae laciniae angustiores lineares vel anguste triangulares integrae vel breviter 2—4-lobatae, circa 0.35 mm longae; *antherarum* membrana in stigmate accumbens semiorbicularis obtuso-rotundata irregulariter crenata; styli sibi appliciti longiusculi; *folliculi* maturi ignoti, immaturi ovato-lanceolati acuminati uno latere applanati obscure tuberculati extus densiuscule patule et brevissime piloselli usque ad 9 cm longi; *semina* glabra.

Java, Western part, islet of Purmerend, in the Bay of Batavia: *den Hoed* and *van der Meer* 488 (L), type spec., fl. Apr. Eastern part, Tjabak, S.E. of Blora: *Koorders* β 42517 (BZ), fl. Febr.; Asem Bagoes, E. of Sitoebondo, in busch, alt. 5 m: *Backer* 8209 (BZ), fl. May. Without locality: *Junghuhn* s.n. (L), fl. fr.

Celebes, Mt. Padang: *Rachmat* (exp. Van Vuuren) 323 (L, BZ), fl. July.

Allied to *Cynanchum dimidiatum* (Hassk.) Boerl., but certainly not identical, differing e. g. by the structure of the flowers and the inflorescence.

This species has been named in honour of Mr. G. den Hoed and Mr. P. van der Meer, who together made very valuable collections of Javan plants; they collected mainly in the neighbourhood of Batavia.

Ischnostemma carnosum (R. Br.) Merr. et Rolfe in Philipp. Journ. Sci. 3 (1908) 121; Merrill, Enum. Philipp. Plants 3 (1923) 342 — *Oxystelma carnosum* R. Br., Prodr. (1810) 462 — *Cynanchum carnosum* (R. Br.) Schltr. in Perk. Fragm. Fl. Philipp. (1904) 120 non Hort. ex DC (1844); Domin in Bibliot. bot. 89 (1928) 531.

Calotropis gigantea (L.) Dryand. in Ait., Hort. Kew ed. 2, 2 (1811) 78; Greshoff, Nutt. Ind. Pl. 1 (1894) 153—156, t. 36; Merrill, Interpr. Herb. Amboin., (1917) 434, 435; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1293; Backer, Onkruidfl. Java Suiker (1931) 504, 505; Hochreutiner in Candollea 6 (1934—1936) 474; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 105, 106.

Asclepias curassavica L., Spec. Pl. (1753) 215; Backer, Onkruidfl. Java Suiker (1931) 503, 504; Hochreutiner in Candollea 6 (1934—1936) 474; Bruggeman, Indisch Tuinboek (1939), 102, fig. 74; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 102—104.

Stephanotis floribunda Brongn. in Ann. Sci. Nat. sér. II, 7 (1837) 30; Bruggeman, Indisch Tuinboek (1939) 66, fig. 22.

Oxystelma esculentum (L. f.) R. Br. in Mem. Wern. Soc. 1 (1809) 40; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 102.

Secamone R. Br., **Toxocarpus** W. et A. and **Genianthus** Hook. f.

A thorough revision of these genera and their nearest allies is highly desirable. I maintain them for the present, because I have not been able to study critically all species described. *Toxocarpus* and *Genianthus* consist of very heterogeneous elements, and I am convinced that a future, comprehensive revision of this group will show the existence of more than 3 genera. The suggestion that all these genera will have to be reduced to one genus only is, in my opinion, unwarranted. They show striking differences in habit.

Secamone lanceolata Bl., Bijdr. (1826) 1051 — *Secamone micrantha* (Decne) Decne in DC, Prodr. 8 (1844) 501; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 57 — *Tylophora micrantha* Decne in Nouv. Ann. Mus. Paris 3 (1834) 377. Decaisne's species is only a form with rather thin leaves. The type specimens of both species are in the Rijksherbarium, Leyden.

Genianthus blumei (Decne) Boerl., Handl. Fl. Ned. Ind. 2 (1899) 436 — *Toxocarpus blumei* Decne in DC, Prodr. 8 (1844) 506; Hochreutiner in Candollea 6 (1934—1936) 475 — *Secamone fulva* (Bl.) Kds., Exk. Fl. Java 3 (1912) 87 — *Secamone macrophylla* Bl. var. *fulva* Bl., Bijdr. (1826) 1050.

Genianthus ellipticus (Bl.) Bakh. f., comb. nov. — *Leptadenia ? elliptica* Bl., Bijdr. (1826) 1066 — *Secamone blumei* Decne in DC, Prodr. 8 (1844) 502.

Toxocarpus insularis (Miq.) Bakh. f., nov. comb. — *Secamone insularis* Miq., Fl. Ind. bat., Suppl. Sumatra (1862) 557.

Toxocarpus maritimus (Bl.) Miq., Fl. Ind. bat. 2 (1856) 476 — *Secamone maritima* Bl., Bijdr. (1826) 1050.

This plant is not identical with *Finlaysonia maritima* Back. ex Heyne.

Toxocarpus glaucus Decne in DC, Prodr. 8 (1844) 505; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 71, 72, t. 20.

This species is unknown to me.

Toxocarpus griffithii Decne in DC, Prodr. 8 (1844) 505; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 77, t. 23.

Toxocarpus longipetalus Merr. in Univ. Calif. Publ. Bot. 15 (1929) 257; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 84.

Javanese specimens of this species are unknown to me.

Toxocarpus villosus (Bl.) Decne in DC., Prodr. 8 (1844) 506; Hochreutiner in Candollea 6 (1934—1936) 474; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 82, t. 25 — *Secamone villosa* Bl., Bijdr. (1826) 1050; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1294; Backer, Onkruidfl. Java Suiker (1934) 505, 506.

Toxocarpus rhopalophorus Back., spec. nov.

Volubilis; *caules* tenues, novissimi pilis adpressis longiusculis crassis fuscis densiuscule obsiti, vetustiores glabri, cortici fusco verrucellis multis praedito; *folia* lanceolata vel ovato-lanceolata, basi rotundata, ad petiolo insertionem subcordata, sinu basali angustissimo acute acuminata, in utra-

que parte costae elevatae percursa nervis lateralibus multis late patentibus marginem non attingentibus tenuibus in sicco pallidis, in utraque pagina primo dense, dein sparse pilis adpressis longiusculis crassis fuscis obsita, supra in sicco dense et tenuissime reticulate venosa, 4.5—7 cm longa, 1.85—2.75 cm lata; petiolus supra longitudinaliter sulcatus, primo dense appresse fusco-pilosus dein glaber. *Cymae* brevissime pedunculatae 4—6-flores, ramulis brevibus patulis, axibus densiuscule pilis adpressis fuscis obsitis; flores fragrantissimi; pedicelli tenues glabri 1.25—1.5 cm longi; *calyx* circa 2 mm altus, intus eglandulosus; laciniae ovato-triangulares, obtusae breviter ciliatae ceterum glabrae; *corolla* a basi usque ad laciniarum apicem 15—16 mm metiens; tubus anguste campanulatus ruber, extus glaber intus ornatus areis 5 longitudinalibus longe albo-pilosis cum laciniis corollae alternantibus; laciniae in alabastro sinistrorsae dein late patentes lineares vel linearilanceolatae obtusae glabrae luteae 9—10 mm longae; *coronae* lobi staminibus paulum longiores 1 mm longi, apicibus liberis ovato-triangularibus 0.5 mm longis, intus prope apicem ligula subulata rubra corona paulum excedente 0.25 mm longo instructis; *antherarum* membrana brevissima; *pollinia* erecta obovata vel late oblonga 0.1—0.12 mm longa; stigmatis pars apicalis clavatus 3—3.5 mm longus, supra basin brevem tenuiter pedicelliformem valde incrassatus, ovato-fusiformis apice bifidis, lobis brevibus recurvis carnosis albis; *folliculi* maturi ignoti, immaturi lineares curvati obtuse acuminati glabri.

Java, Western part, Preanger Regencies, Tjidadap, S.W. of Tjibeber, alt. 900 m: *Winckel* s.n. (L), type spec., fl. Dec.

Gymnema acuminatum Wall., Tent. Fl. Nep. (1825) 50; Moritzi in Moritzi, Zoll. Syst. Verz. (1845—1846) 57.

I am not convinced that Zollinger nr. 1655, from Java, belongs to this species, which to my knowledge occurs only in India. I have not seen Zollinger's original material which is probably in herb. Geneva.

Gymnema syringaefolia (Decne) Boerl. Handl. Fl. Ned. Ind. 2^2 (1899) 437; Constant in Lecomte, Fl. Gén. Indo-Chine 4 (1912) 86; Merrill, Interpr. Herb. Amboin. (1917) 435, 436; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1295; Backer, Onkruidfl. Java Suiker (1931) 506, 507 — *Marsdenia syringaefolia* Decne in Ann. Sci. Nat. sér. II, 9 (1838) 275; Koorders, Exk. Fl. Java 3 (1912) 103, sub "*M. syringifolia* (Decne) Hook." — *Bidara syringaefolia* (Decne) Decne in DC, Prodr. 8 (1844) 623 — *Gymnema pubiflora* (Miq.) Hook. ex Kds. in Koorders-Schumacher, Syst. Verz. 1, Java (1912) Asclep., nomen nudum; Koorders, Exk. Fl. Java 3 (1912) 89 — *Bidara pubiflora* Miq., Fl. Ind. bat. 21 (1856) 497.

Sarcolobus R. Br. Cf. Greshoff, Schetsen Nutt. Ind. Pl. 1 (1894) 75, t. XX.

Sarcolobus banksii R. et S., Syst. 6 (1819) 58; Koorders, Exk. Fl. Java 3 (1912) 88.

This is the only species known from Java with certainty.

Sarcolobus spanoghei Miq., Fl. Ind. bat. 2 (1856) 502; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1295 and **Sarcolobus narcoticus** Span. ex. Miq. Fl. Ind. bat. 2 (1856) 502 are unknown to me, but they may be identical with *Sarcolobus banksii* R. et S. or constitute varieties of it only.

The occurrence of **Sarcolobus globosus** Wall. (in As. Res. 12 (1816)

568, t. 5; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1295), in Java is up till now very doubtful.

Dregea volubilis (L. f.) Benth. et Hook. f., Fl. Brit. Ind. 4 (1883) 46 — *Asclepias volubilis* L. f., Suppl. (1781) 270 — *Marsdenia volubilis* (L. f.) Cooke, Fl. Bombay 3 (1908) 166 — *Wattakaka volubilis* (L. f.) Stapf in Bot. Mag. (1923) t. 8976; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 127 — *Dregea pubescens* (Miq.) Boerl., Handl. Fl. Ned. Ind. 2^2 (1899) 438; Koorders, Exk. Fl. Java, 3 (1912) 104; non N. E. Brown in Dyer, Fl. Cap. 4^1 (1909) 1029 — *Wattakaka pubescens* Miq., Fl. Ind. bat. 2 (1856) 496 — *Wattakaka viridiflora* (R. Br.) Hassk. in Flora 60 (1887) 99 — *Hoya viridiflora* R. Br. in Trans. Wern. Soc. 1 (1809) 27.

In my opinion *Wattakaka* is not generically different from *Dregea*.

Heterostemma acuminatum Decne in Ann. Sci. Nat. sér. II, 9 (1938) 268; Koorders, Exk. Fl. Java 3 (1912) 105 — *Heterostemma chrysanthum* (Hassk.) Boerl., Handl. Fl. Ned. Ind. 2 (1899) 438; Hochreutiner in Candollea 6 (1934—1936) 482 — *Symphysicarpus chrysanthus* Hassk. in Flora 60 (1857) 182 — *Heterostemma javanicum* Hassk. in Flora 60 (1857) 101.

Telosma accedens (Bl.) Back., comb. nov. — *Pergularia accedens* Bl., Bijdr. (1826) 1056 — *Pergularia apiculata* Warb. in Fedde, Rep. Spec. Nov. 3 (1907) 346 — *Pergularia bifida* Zipp. in Ann. Sci. Nat. sér. II, 9 (1838) 276 — *Pergularia puberula* Miq., Fl. Ind. bat. 2 (1856) 495 — *Marsdenia teysmanni* (Hassk.) Boerl., Handl. Fl. Ned. Ind. 2 (1899) 438 — *Tetragonocarpus teysmanni* Hassk. in Flora 60 (1857) 99.

Telosma cordata (Burm. f.) Merr. in Philipp. Journ. Sci. 19 (1921) 372; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1298.

Boerlage, Hand. Fl. Ned. Ind. (1899) 429 incorrectly stated the corolla in bud to be dextrorse; it is in fact sinistrorse, as Decaisne originally stated.

Cosmostigma racemosum (Roxb.) Wight, Contrib. bot. Ind. (1834) 42; Hook. f., Fl. Br. India 4 (1883) 46.

Hooker recorded this species for Java but up till now it has never been found in a wild state in this island, and it is but rarely cultivated there.

Asterostemma repandum Decne in Ann. Sci. Nat. sér. II, 9 (1838) 271, t. 10.

This extremely rare monotypic genus has been rediscovered by J. D. Dorgelo, W. of Grissee, Eastern Java, in the neighbourhood of the place where Leschenault probably found it for the first time, more than a century ago. This remarkable plant is easily recognizable by its repand-lobed, subhirsute, oblong-lanceolate leaves.

Ceropegia curviflora Hassk. in Flora 60 (1857) 102; Tsiang in Sunyatsenia 4^{1-2} (1940) 290 — *Ceropegia horsfieldiana* Miq., Fl. Ind. bat. 2 (1856) 528; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 90.

Streptocaulon horsfieldii Miq., Fl. Ind. bat. 2 (1856) 470 — *Myriopteron horsfieldii* (Miq.) Hook. f., Fl. Br. India 4 (1883) 11.

The status of this Javan species has been much discussed. Most authors place it in the genus *Myriopteron*, but this is certainly incorrect, for the type specimen, preserved in the Kew Herbarium, possesses wingless fruits. In my opinion it is identical with *Streptocaulon extensum* Wight, Contrib. Bot. India (1834) 65: type specimen Wallich Asclep. nr. 128,

sub *Periploca extensa*. Tsiang in Sunyatsenia 4^{1-2} (June 1939) 97 contrarily agrees with K. Schumann, who referred this species to *Myriopteron* (in Engler u. Prantl, Die Nat. Pfl. fam. 4^2 (1895) 215). It is unknown to me whether these authors examined Wallich's original material. In any case the Javan plant is extremely like old specimens from India, bearing the name *Streptocaulon extensum* Wight. The statement of Tsiang (in l. c. 98) that a representative of *Myriopteron* (*M. extensum*) occurs in Java is probably incorrect; to my knowledge this genus never has been found in the Malay Archipelago.

Marsdenia crocea (Zipp. ex Spanoghe) Hook. f. ex Boerlage, Handl. Fl. Ned. Ind. 2 (1899) 438; Koorders, Exk. Fl. Java 3 (1912) 103 — *Pergularia crocea* Zipp. ex Spanoghe in Linnaea 15 (1841) 323; Hooker f. in Fl. Br. India 4 (1883) 36, in nota..

Boerlage and Koorders erroneously ascribe to Hooker the transference of *Pergularia crocea* to *Marsdenia*. Hooker only pointed out the close alliance of this species with *Marsdenia tenacissima* W. et A., without considering them identical or even congeneric.

Marsdenia stenocentra Bakh. f., nomen novum — *Pergularia villosa* Bl., Bijdr. (1826) 1056. — *Marsdenia villosa* (Bl.) Bl. ex Miq., Fl. Ind. bat. 2 (1856) 493, non Hasskarl (1843).

Marsdenia tinctoria R. Br. in Mem. Wern. Soc. 1 (1809) 30; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1297, 1298; Tsiang in Sunyatsenia 3^{2-3} (May 1936) 195, 196 — *Asclepias tinctoria* Roxb., Hort. Beng. (1814) 20, nomen nudum; idem, Fl. Ind. 2 (1832) 43 — *Marsdenia parviflora* (Bl.) Decne in Ann. Sci. Nat. sér. II, 9 (1838) 276 — *Pergularia parviflora* Bl., Bijdr. (1826) 1056.

This species was previously cultivated in Java. Blume's statement that the plant is a native of West Java is almost certainly incorrect.

Tylophora astmatica W. et A. in Wight, Contrib. Bot. India (1834) 51.

This species is erroneously recorded for Java. To my knowledge it has only been found in India and Ceylon, and it may have been found in Borneo. The Javanese specimens so named belong to *T. dorgelonis* Bakh. f. and *T. laevis* Decne.

Tylophora cissoides Bl., Bijdr. (1826) 106; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1296.

Tylophora exilis Colebr. in Trans. Linn. Soc. 12 (1818) 358, non? Schlechter (1904).

This species somewhat resembles *T. tenuis* Bl., but as a rule it is much more robust. Further it is easily recognizable by the shape of its corona scales. Specimens of *T. tenuis* Bl. with very large leaves have erroneously been considered to belong to *T. exilis* Colebr.

Tylophora indica (Burm. f.) Merr. in Philipp. Journ. Sci. 19 (1921) 373 — *Cynanchum indicum* Burm. f., Fl. Ind. (1768) 70 — *Tylophora astmatica* W. et A., according to Decaisne in DC, Prodr. 8 (1844) 611 — "*Tylophora cacumba* Willd." (? nomen) in ??; Boerlage, Handl. Fl. Ned. Ind. 2 (1899) 438.

I have not succeeded in identifying this species, which I have not seen, with any already known Javan species. I have found no earlier reference to Willdenow's name.

Tylophora laevis Decne in DC, Prodr. 8 (1844) 611 — *Tylophora asthmatica* W. et A. in errore apud Miquel, Fl. Ind. bat. 2 (1856) 489, quoad citatum javanicum; Koorders, Exk. Fl. Java 3 (1912) 91.

Tylophora miquelii Boerl., Handl. Fl. Ned. Ind. 2 (1890) 438 — *Hybanthera villosa* Miq., Fl. Ind. bat. 2 (1856) 490 — *Tylophora villosa* Bl.; Backer, Onkruidfl. Java Suiker (1934) 508.

This species has been found far below 500 m altitude.

Tylophora rupestris Bl., Bijdr. (1826) 1062; Koorders, Exk. Fl. Java 3 (1912) 90.

This species much resembles *T. tenuis* Bl. and *T. exilis* Colebr.; but is certainly specifically distinct. The flowers are unknown, but the very robust large, ovoid-lanceolate, obtuse follicles and few-flowered robust inflorescences are remarkable.

Tylophora tenuis Bl., Bijdr. (1826) 1062; Backer, Onkruidfl. Java Suiker (1931) 507, 508; Tsiang in Sunyatsenia 3^{2-3} (May 1936) 254 — *Tylophora cuspidata* Zipp. ex Decne in Ann. Sci. Nat. sér. II, 9 (1838) 274, t. 10; Koorders, Exk. Fl. Java 3 (1912) 90.

This species is extremely variable, but all forms show the characteristic shape of the corona scales.

Tylophora villosa Bl., Bijdr. (1826) 1061; Backer, Onkruidfl. Java (1931) 508 — *Marsdenia villosa* (Bl.) Hassk. in Hoev. en de Vriese, Tijdschr. 10 (1843) 126, non Bl. ex Miquel, Fl. Ind. bat. 2 (1856) 493 — an? *Tylophora chlorantha* Miq., Fl. Ind. bat. 2 (1856) 486.

This species has not been found below 1000 m altitude. At lower altitudes it is replaced by the closely allied *T. miquelii* Boerl.

Tylophora adnata Bakh. f., spec. nov.

Volubilis; *caulis* densiuscule vel dense pilosellus; *folia* elliptica vel ovata, basi obtusa vel subcordata brevissime obtiusiuscule acuminata, trochomatibus in seriebus duabus positis praedita, supra pilis nonnullis donata vel omnino glabra 4.5—8 cm longa, 2—4.5 cm lata, petiolo piloso 1 cm longo. *Flores* in cymas umbelliformes dispositi, pedunculo pilosello 5—8 mm longo; pedicellus pilosellus 8—13 mm longus; *calycis* laciniae ovato-lanceolatae acutae densiuscule longipilosae 2—3 mm longae; alabastra anguste ovoidea acuta; *corollae* tubus 2.5 mm longus; laciniae in alabastro distincte contortae acutae intus sparse pilosae longiuscule ciliatae; *coronae* lobi ab angulo interno usque ad angulum externum gynostegio circa dimidio longiores, angulo interno apicem antherae haud attingente, angulo externo rotundato; *stigma* globoso-conoideum; *pollinia* globosa magna translatoribus paulum minora, caudiculis aequilonga; *folliculi* ovoideo-lanceolati piloselli circa 7 cm longi, pedicello 1.5 cm longo; *semina* mihi ignota.

Java, Eastern part, near Ngadisari, alt. 2500 m: *Koorders* 37330 β (L), type spec., fl. fr. Oct.; idem, alt. 2200—2500 m: *Koorders* 37324 β, 37325 β, 37329 β (all L), fl. Oct. Celebes, S.W. part, Mt. Bonthain, alt. 1900 m: *Bünnemeyer* 12154 (L), fl. June.

Tylophora dorgelonis Bakh. f., spec. nov.

Volubilis; *caulis* glaber; *folia* ovata, ovato-oblonga vel lanceolata 1.5—3.5 × longiora quam lata, basi rotundata vel subcordata, apicem versus sensim vel abrupte attenuata acute acuminata vel acutissima glabra vel subtus in costa solum pilosa, in sicco tenuiter coriacea evenulosa, sine (?)

trichomatibus 4—9.5 cm longa, 1.5—4.5 cm lata, petiolo glabro 1—2.5 cm longo. *Flores* in cymas umbelliformes breves apice bifidas vel simplices paucifloras dispositi; *cymae* inflorescentias subglabras 1—3.5 cm longas efformantes; pedicelli glabri vel sparse pilosi 8—18 mm longi; *alabastra* globosa vel late ovoidea apice rotundato-obtusa; *calycis* laciniae anguste ovatae acutae sparse pilosae vel subglabrae 2.5—4 mm longae; *corolla* saturate purpurea, laciniis intus in partibus apicalibus sparse vel dense pilosellis majusculis in sicco 4—5 mm longis; *coronae* lobi alte supra tubi staminei basin inserti, angulo externo late rotundati supra in parte media carina valde elevata instructi, non lateraliter compressa; *pollinia* ovalia 0.12 mm longa, caudiculis et translatoribus circa 1.5 × longiora; *folliculi* ignoti.

Java, Central part, Madioen, Sarangan, islet in lake, alt. 1200 m: *Docters van Leeuwen* 13072 (L), fl. Jan. Eastern part, Pasoerocan Nongkodjadjar, Aroch Lawangan: *Dorgelo* 1385 (L), type spec., fl. Nov. Exact locality unknown, probably in Western part, beach: *Kuhl and van Hasselt* s.n. (L), fl. May.

This species has been named in honour of the late J. D. Dorgelo.

Tylophora pilosissima Bakh. f., spec. nov.

Volubilis; *caulis* dense vestitus pilis appressis brevibus luteis; *folia* ovato-oblonga vel oblonga basi rotundato obtusa brevissime acute acuminata penninervia nervis lateralibus 4—6, subtus venulosa, in utraque pagina praecipue subtus dense breviter pubescentia, sine trichomatibus, 3—5 cm longa, 1.5—3.5 cm lata, petiolo dense piloso 1—1.5 cm longo. *Flores* fasciculati; *fasciculi* in inflorescentias multoties bifurcatas dense pubescentes 3—10 cm longas dispositi; ramuli fractiflexi; pedunculus 1.5—3.5 cm longus; pedicellus sparse pilosellus circa 8 mm longus; *calycis* laciniae ovato-oblongae acutae sparse pilosae 1.5 mm longae; *corolla* viridi-lutea vel pallide lutea 4 mm longa; laciniae obtusae venulosae glabrae; *coronae* lobi parvi, basi tubi staminei inserti, angulo interno antheras circiter attingentes, angulo externo magno rotundato vel ovato, non lateraliter compressi obtusi; *pollinia* globosa minuta 0.06 mm diametientia; *folliculi* ignoti.

Java, Western part, Preanger Regencies, Tjidadap, S.W. of Tjibeber, alt. 1000 m: *Bakhuizen van den Brink* 2874 (L), type spec., fl. March; idem: *Winckel* 1811 β (L), fl. Nov., v.n. areuj kaliworo.

Dischidia R. Br.

This large genus urgently needs a thorough revision. As regards the Javan species it might be useful to mention here some important features for distinguishing groups within this genus. Firstly *Dischidia* can be split into a group with normal, flat leaves and a group with the leaves wholly or partially shaped otherwise: ascidiform, terete or watch-glass-shaped. Then the characters of the corona scales appear to be extremely important, not only for distinguishing complexes of species, but also for specific distinction. Three types of corona scales can be distinguished, viz.:

(1) Scales more or les reniform (i. e. with large, rounded, often slightly excavate top and large, short or long, patent or downwards directed lobes).

(2) Scales either sagittate, with attenuate, acute or truncate-emarginate top or ovate-triangular, with long acuminate top.

(3) Scales with long bibrachiate top and narrow, cylindrical basal part.

For distinguishing species the characters of the pollination appa-

ratus, although of minor importance in comparison with the corona scales, are also useful, especially as a control of the specific identification. The shape and size of the pollinia, the length of the translator and the caudicles, and finally the ratio of their dimensions to each other. In some cases the absence or the presence of hairs on the inner side of the corolla lobes may be of importance, e. g. in the rafflesiana- and imbricata-group.

Dischidia cochleata Bl., Bijdr. (1826) 1060 — *Dischidia imbricata*, apud auct. div., non Steud.

Dischidia imbricata (Bl.) Steud., Nom. ed. 2, 1 (1840) 519; K. Schumann in Engl. u. Prantl, Die Nat. Pfl. Fam. 4 (1897) 289; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1296 — *Conchophyllum imbricatum* Bl., Bijdr. (1826) 1061; Merrill, Interpr. Herb. Amboin. (1917) 434 — *Dischidia collyris* Wall. Cf. Backer in De Trop. Nat. 1 (1912) 78.

Dischidia nummularia R. Br., Prodr. (1810) 461; Merrill, Interpr. Herb. Amboin. (1917) 436, 437; Docters van Leeuwen in De Trop. Nat. 2 (1913) 19, 20, fig. 1—3, 6—8; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1296 — *Dischidia gaudichaudii* Decne in DC, Prodr. 8 (1844) 632.

Dischidia nummularia R. Br. var. **glabra** (Warb.) Bakh. f., comb. nov. — *Dischidia glabra* Warb. in Fedde, Rep. 3 (1907) 344.

Dischidia nummularia R. Br. var. **rhombifolia** (Bl.) Bakh. f., comb. nov. — *Dischidia rhombifolia* Bl., Bijdr. (1826) 1059; Hochreutiner in Candollea 6 (1934—1936) 477 — *Dischidia horsfieldiana* Miq., Fl. Ind. bat. 2 (1856) 510.

Dischidia rafflesiana Wall., Pl. Asiat. rar. 2 (1831) 35, t. 142; W. and J. Docters van Leeuwen—Reynvaan in Ann. Jard. Bot. Buitenzorg 2e sér., 12 (1913), 76; M. A. Clerx in De Trop. Nat. 1 (1912) 113—117; Docters van Leeuwen in De Trop. Nat. 2 (1913) 19—23, fig. 4, 9—12.

Dischidia zollingeri Schltr. in Engl. Bot. Jahrb. 40 (1908) Beibl. 92, p. 11; Koorders, Exk. Fl. Java 3 (1912) 95 and **Dischidia spironema** Turcz. in Bull. Soc. Nat. Moscou 25 (1852) II. 34, are quite unknown to me.

Boerlage, Handl. Fl. Ned. Ind. 2 (1899) 441, erroneously recorded **Dischidia oxyphylla** Miq. in Ann. Mus. Lugd. Bat. 4 (1868—1869) 141 for Java; he accepted it to be identical with *Hoya subquaterna* Miq. See also Koorders, Exk. Fl. Java 3 (1912) 96.

Dischidia punctatoides Bakh. f., spec. nov. — *Dischidia punctata*, apud auct. div., non Blume; Docters van Leeuwen in De Trop. Nat. 18 (1928) 59, 62.

Epiphyticus; *caulis* gracilis primo praecipue circa nodos sparse pilosellus dein plerumque non omnino glaber, in sicco etuberculatus; *folia* plana ovata basi late rotundata vel raro subcordata, apice acuta vel breviter acuminata glabra etuberculata, in sicco manifeste penninervia 1.5—3.5 cm longa, 0.8—2.3 cm lata, subsessilia. *Inflorescentia* pauciflora, pedunculo gracili sparse piloso 5—15 mm longo; pedicellus sparse pilosus circa 3 mm longus; *calycis* laciniae ovatae obtusae sparsissime pilosellae; *corolla* in vivo 7.5 mm longa tubus intus ab insertione coronae usque ad fauces pilis sparsis erecto-patentibus obsitus; laciniae extus sordide purpureae verruculosae, intus glabrae; *coronae* lobi reniformes, basin versus abrupte contracti in stipitem cylindricum; lobi basales loborum coronae subhorizontales late

rotundati brevissime; *pollinia* caudiculis et translatoribus fere duplo longiora 1.3 mm longa; caudicula crassa apicem versus elata et bifida, translatore paulum longiora; *folliculi* lanceolati acutissimi glabri 5—6 cm longi; *semina* coma 2.5 cm longa munita.

Java, Western part, Batavia, Mt. Halang near Buitenzorg, alt. 250 m: *Docters van Leeuwen* 8754 (L), type spec., fl. Nov.; Buitenzorg: *Docters van Leeuwen—Reynvaan* 5520 (L), fl. June; Tjiomas, near Buitenzorg: *Burck and de Monchy* s.n. (L); Mt. Wiroe, S.W. of Leuwiliang, alt. 700 m: *Bakhuizen van den Brink* 7264 (L), fl. Dec.; Mt. Salak: *Blume* s.n. (L), fl. Sept.; Bantam, Mt. Poelocsari: *Kuhl and van Hasselt* s.n. (L), fl. May. Eastern part, Besoeki, Gending Waloeh: *Koorders* 43180 β (L), fl. July.

Dischidia tjidadapensis Bakh. f., spec. nov.

Epiphyticus; *caulis* glaber; *folia* plana oblonga basi obtuso-cuneata apice acute acuminata glabra, in utraque pagina grosse venulosa tenuiuscula 5—6.5 cm longa, 2—2.5 cm lata, petiolo glabro 8 mm longo. *Inflorescentia* pauciflora; pedunculo gracili glabro 1—2.5 cm longo; pedicellus sparse pilosus circa 3 mm longus; *corolla* anguste ovoidea 3.5 mm alta basi ventricosa, intus longe infra lacinias annulo pilorum munita; laciniae intus glabrae; *coronae* lobi reniformes basin versus cylindraceo-attenuati; lobi basales coronae loborum angusti; *pollinia* anguste obovata, caudiculis aequilonga vel paulum breviora 0.3 mm longa; caudiculi translatore manifeste longiores; *folliculi* ignoti.

Java, originated from Western part, Preanger Regencies, Tjidadap, S.W. of Tjibeber, forest, alt. 1000 m, but cultivated in private garden, Buitenzorg: *Bakhuizen van den Brink fil.* 389 (U), type spec., fl. July.

Hoya R. Br. Cf. Hooker f., Fl. Br. India 4 (1883) 52; Schumann in Engl. u. Prantl, Die Nat. Pfl. Fam. 4^2 (1895) 289; Schlechter in Engl., Bot. Jahrb. 50 (1914) 104—138; Tsiang in Sunyatsenia 3^{2-3} (May 1936) 169.

This extremely difficult genus urgently needs a thorough revision; the taxonomic value of the characters proposed for distinction should be verified as much as possible by observations in vivo. In my opinion this genus is very natural. No useful purpose would be served by splitting it into small genera. The existing differences have no generic value. A division of *Hoya* into sections appears, however to be desirable as was already admitted by Hooker f. and K. Schumann.

Hoya coriacea Bl., Bijdr. (1826) 1061; Hooker in Bot. Mag. (1 Juni 1850) t. 4518) — *Hoya fraterna* Bl., Rumphia 4 (1848) 32.

Hoya coronaria Bl., Bijdr. (1826) 1063; Hooker in Bot. Mag. (1 March 1857) t. 4969.

Hoya densifolia Turcz. in Bull. Soc. Nat. Moscou 21 (1848) I. 261; Backer in Ic. bog. (1909) t. 262.

Hoya diversifolia Bl., Bijdr. (1826) 1064 — an? *Hoya crassipes* Turcz. in Bull. Soc. Nat. Moscou 21 (1848) I. 261 — *Hoya esculenta* (Rumph.) Tsiang in Sunyatsenia 3^{2-3} (May 1936) 176 — an? *Hoya zollingeriana* Miq., Fl. Ind. bat. 2 (1856) 518.

Hoya kühlii (Bl.) Kds., Exk. Fl. Java 3 (1912) 103 — *Acanthostemma kühlii* Bl. in Rumphia 4 (1848) 29 — an? *Acanthostemma longifolia* Bl. in Rumphia 4 (1848) 28 — *Hoya longifolia* (Bl.) Miq., Fl. Ind. bat. 2 (1856) 523.

Hoya longifolia (Bl.) Miq. is said to differ by having the corolla lobes glabrous within, but this statement might be incorrect as both species are

further extremely alike. Anyhow I consider the latter species a variety only.

Hoya kuhlii (Bl.) Kds. var. **hasseltii** (Bl.) Bakh. f., comb. nov. — *Acanthostemma hasseltii* Bl. in Rumphia 4 (1848) 29 — *Hoya hasseltii* (Bl.) Miq., Fl. Ind. bat. 2 (1856) 524.

Hoya lacunosa Bl., Bijdr. (1826) 1063; Docters van Leeuwen in De Trop. Nat. 18 (1928) 59, 61, 132; Hochreutiner in Candollea 6 (1934—1936) 477.

This species is extremely variable as to the shape and thickness of the leaves. It will be desirable to study these characters in the field. The colour of the flowers appears to be rather uniform, although Hochreutiner in l. c. 477 mentioned for Java a var. **pallidiflora** Hook. (in Bot. Mag. (1861) t. 5272); this variety is unknown to me.

Hoya lasiantha Korth. ex Bl. in Rumphia 4 (1848) 30; idem in Mus. Lugd. Bat. 14 (15 Apr. 1849) 60, fig. XIV; Beumée in De Trop. Nat. 14 (1925) 91, fig. 1 and 2.

Hoya macrophylla Bl., Bijdr. (1826) 1063 — an? *Hoya browniana* Kds. in Koorders-Schumacher, Syst. Verz. 1, Java (1912) Asclep.; idem, Exk. Fl. Java 3 (1912) 101 — *Hoya clandestina* Bl. in Rumphia 4 (1848) 32.

Hoya multiflora Bl., Cat. (1823) 49, descr.; idem, Bijdr. (1826) 1064 — *Centrostemma multiflorum* (Bl.) Decne in Ann. Sci. Nat. sér. 2, 9 (1838) 272; Chun in Sunyatsenia 1 (1934) 301; Tsiang in Sunyatsenia 3^{2-3} (May 1936) 168 — *Centrostemma laurifolium* Bl., Mus. Bot. Lugd. Bat. 1^3 (Apr. 1849) 46 — *Cyrtoceras laurifolia* (Bl.) Miq., Fl. Ind. bat. 2 (1856) 514 — *Hoya javanica* Boerl., Handl. Fl. Ned. Ind. 2 (1899) 440.

Hoya polystachya Bl., Mus. Bot. Lugd. Bat. 2^3 (Apr. 1849) 45, fig. IX — *Hoya latifolia*, apud auct. div., non G. Don.

Hoya puber Bl. (sphalm. *pubera*), Bijdr. (1826) 1065; Backer in De Trop. Nat. 6 (1917) 188—190, fig. 4—6; Docters van Leeuwen in De Trop. Nat. 18 (1928) 138 — an? *Acanthostemma pictum* Bl., Mus. Bot. Lugd. Bat. 14 (15 Apr. 1849) 58, fig. X — *Hoya picta* (Bl.) Miq., Fl. Ind. bat. 2 (1856) 524, non aliorum.

Blume's last mentioned species is a not well known one. The figure given by Blume strikingly resembles *Hoya puber* Bl., but according to the description the flowers are purple-dotted.

Hoya rumphii Bl., Bijdr. (1826) 1065, excl. notis moluccanis; Merrill, Interpr. Herb. Amboin. (1917) 438.

There is much confusion about this insufficiently known but Javan species. The type specimen, from Java, preserved in the Rijksherbarium at Leyden, and Blume's original description agree very well. On the contrary Rumphius's plant, cited by Blume is not identical with the Javan species, as Merrill stated l. c.

Hoya uncinata T. et B. in Tijdschr. Ned. Ind. 25 (1863) 408.

This species is new for Java.

The following two species from Java are insufficiently known, and known to me only from literature:

Hoya cinnamomifolia Hook. in Bot. Mag. (1 Jan. 1848) t. 4347 and **Hoya purpureo-fusca** Hook. in Bot. Mag. (1 June 1850) t. 4520.

The vegetative parts of both species are extremely alike, but the colour of the flowers is totally different; moreover the absence or presence

of hairs on the innerside of the corolla lobes is an additional difference.

I have not been able to identify the following species mentioned for Java:

Hoya laurifoliopsis Hochr. in Candollea 6 (1934—1936) 477—479; **Hoya leembruggiana** Kds. (sphalm. *leembruggeniana*) in Koorders-Schumacher, Syst. Verz. 1, Java (1912) Asclep.; Koorders, Exk. Fl. Java 3 (1912) 100; **Hoya subquaterna** Miq., Fl. Ind. bat. 2 (1856) 525; **Hoya tjampeaensis** Hochr. in Candollea 6 (1934—1936) 479, 480.

Hoya amoena Bakh. f., spec. nov. — *Hoya purpureo-fusca*, apud Koorders, Exk. Fl. Java 3 (1912) 102, non Hook.

Scandens; *caulis* primo sparse pilosellus dein glaber vel subglaber; *folia* oblongo-lanceolata, nonnunquam subrhomboidea vel ovata basi acuta vel cuneata, raro obtusiuscula, acuta vel breviter acute acuminata, in sicco tenuiter sed valide coriacea subtrinervia vel uninervia, nervis lateralibus atque nervulis transversis superioribus vix a nervis basalibus diversis, glabra 8—11 cm longa, 3.5—4.5 cm lata, petiolo gracili glabro 8—15 mm longo. *Inflorescentia* umbelliformis quam maxime 20-flora pedunculo gracili pilosello 2.5—5.5 cm longo sustenta; pedicellus tenuis subglaber 15—18 mm longus; corolla horizontaliter patens 1 cm diametiens; *calycis* laciniae ovato-triangulares obtusiuscule subglabrae 1 mm longae; *corollae* laciniae acutissimae, extus glabrae intus purpureae; *coronae* lobi ovali-triangulares, intima et extrema parte acutiusculi, supra leviter carinati; *pollinia* oblongo-obovata uno latere pellucide-marginata 0.6 mm longa, translatore plus quam duplo longiora; *folliculi* lineares obtusi sparse pilosi 18 cm longi.

Java, Eastern part, Besoeki, Poeger, alt. 10 m: *Koorders* 20341 β (L), type spec., fl. Oct.; idem 20704 β (L), fl. Oct.; idem, alt. 5 m: *idem* 20340 β (L), fl. Oct.

Hoya tenggerensis Bakh. f., spec. nov.

Scandens; *caulis* glaber; *folia* ovato-oblonga basi rotunda apice breviter acuminata glabra 3—5-nervia, in area delimitata, nervis mediis cum 2 basalibus percursa nervis lateralibus pluribus qui crassitudine atque cursu nervis basalibus simillimi sunt, in sicco crasse coriacea supra manifeste subtus minus manifeste grosse venulosa, supra basin costae cella reniformi crassissimo (an? trichomatum podicem) instructa 10—12 cm longa, 5.5—6 cm lata, petiolo crassissimo glabro 1 cm longa. *Pedunculus* glaber 1.5—4 cm longus; pedicellus tenuis glaber 2.5 cm longus; *calyx* basi intus glandulis 5 munitus; laciniis ovatis obtuso-rotundatis extus primo sparse pilosellis, dein glabris 1.5 mm longis; *corolla* 1.8 cm diametiens; laciniae apicibus recurvis acutis, extus glabrae intus densiuscule papilloso-pilosellae; *corona* lobi rhomboideo-elliptici, intima et extrema parte acuti, supra valide carinati; *pollinia* lanceolata marginibus parallelibus, basi abrupte contracta apice suboblique truncata uno latere pellucide marginata 0.9 mm longa, translatoribus circa ter longiora; *folliculi* ignoti.

Java, Eastern part, Pasoeroean, Mt. Pengger (= ? Tengger), forest, alt. 1500 m: *M. Buysman* 301 (U), type spec., fl. Aug.

Hoya tjadasmalangensis Bakh. f., spec. nov.

Scandens; *caulis* glaber sparse verruculatus; *folia* late ovata basi rotunda breviter acutiuscule acuminata glabra 5-nervia, supra grosse verrucosa in sicco crassissime coriacea 19.5 cm longa, 12 cm lata, petiolo crassissimo 3.5 cm longo. *Inflorescentia* subumbelliformis permultiflora, pedunculo

gracili subglabro 2 cm longo; *calycis* laciniae anguste triangulares acutae subglabrae 1 mm longae; *corolla* horizontaliter patens parvula in sicco 6 mm diametiens; laciniae ovatae acuminatae glabrae 3 mm longae; *coronae* lobi ovati, angulo externo late rotundi vel retusi, angulo interno acuti, subtus vix gibbosi; *pollinia* anguste oblonga marginibus fere parallelibus, apice in uno latere obliqua membranaceo-marginata 0.3 mm longa, translatore 4 × longiora; caudicula obsoleta; *folliculi* ignoti.

Java, Western part, Preanger Regencies, Tjadasmalang, near Tjidadap, S.W. of Tjibeber, forest, alt. 1000 m: *Winckel* 448 β (L), type spec., fl. Oct., v.n. kikandel: idem: *Bakhuizen van den Brink* 2481 (L), fl. Apr.

Hoya vitellinoides Bakh. f., spec. nov.

Scandens; *caulis* glaber; *folia* oblonga basi obtusa breviter et acute acuminata in utraque pagina sparsissime brevissime pilosella crasse coriacea penninervia nervis lateralibus 4—6 in utraque pagina conspicuis percursa irregulariter transverse venulosa sine (?) trichomatibus 14—16 cm longa, 7—7.5 cm lata, petiolo crasso 7.5—10 mm longo. *Inflorescentia* mihi ignota; pedicellus tenuis densiuscule pilosellus 2.5 cm longus; *calycis* laciniae anguste triangulares obtusiusculae ciliatae sparsissime puberulae 1 mm longae; *corolla* fere plana (?) lutea in sicco circa 8 mm diametiens; laciniae elliptico-oblongae abrupte acute acuminatae, oculis inarmatis intus fere glabrae, sub lente fortiusculo sparse munitae squamulis rotundis vel pilis stellatis minutis, 3.5 mm longae; *coronae* lobi angusti, ambitu plus minus triangulari-cultriformes, angulo externo sublinguiformes, apice anguste triangulari supra valide carinati, angulo interno e basi lato late triangulari acuto; coronae squamarum pars connata (gynostemium includens) multo quam duplo brevior parte libera anguli externi; *pollinia* oblanceolata apice oblique cuneato, translatore fere duplo longiora; caudicula nulla; *folliculi* ignoti.

Java, Western part, Batavia, Mt. Tjipoetih, near Tjiampea, alt. 800 m: *Bakhuizen van den Brink* 4181 (L), type spec., fl. Sept.

Resembling somewhat *Hoya vitellina* Bl., but differing by the characters of the corona scales and the pollination apparatus.

Heynella Back., genus novum, e tribu *Marsdeniae*, ex affinitate *Stephanotis* Thou.

Suffrutex epiphyticus non volubilis, an? lactiferus; *folia* opposita penninervia trichomatibus praedita petiolata. *Flores* in cymas terminales umbelliformes pedunculatas aggregati; *calyx* profunde 5-partibus, an? intus glandulis ornatus; laciniae alternantes cum saccis protuberantibus haud profundis corollae baseos; *corolla* subhypocrateriformis; tubus lageniformis, supra singulas calycis lacinias plica prominente longitudinali munitus; laciniae 5 in alabastro valvatae dein erecto-patentes, tubo multo breviores; *coronae* squamae staminibus insertae, in parte basali tubi staminei bene evoluti, lateraliter compressi, apice oblique truncati, ad angulum internum continuati in carinam angustam, acumine libero carentes; *antherarum* membrana stigma valde excedens; *pollinia* in antherarum loculis solitaria erecta; stigma latiusculum apice anguste conoideum; *ovaria* glabra; styli liberi; *folliculi* desidirantur.

Heynella lactea Back., spec. nov.

Suffrutex 0.25—0.30 m longae; *caulis* glaber; *folia* ovato-oblonga vel

ovato-lanceolata, basi acuta subattenuata, apicem versus sensim attenuata, acuta vel acuminata, subtus costa valde elevata et nervibus lateralibus patentissimis marginem non attingentibus percursa 6.5—8.5 cm longa, 1.75—3.25 cm lata, petiolo 4—6 mm longo. *Cymae* circa 8-flores, pedunculo glabro 1.25 cm longo; pedicelli glabri circa 3 mm longi; *calyx* corollae basi adpressus late explanatus 2—2.5 mm diametiens; laciniae inter saccos basales tubi corollini abditae ovato-ovales; *corolla* tenuiter carnosa cremicolor extus glabra; tubus 7.5—8 mm longus intus in virgis latis inter plicas, praecipue in parte superiore, densiuscule longipilosus; laciniae ovato-oblongae acutae intus glabrae 2.25—2.75 mm longae; *coronae* lobi crassiusculi 1.5 mm alti, dorso sulco longitudinali percursi, angulo externo rotundati; *antherarum* membranae erectae ovato-oblongae 1.5 mm longae; styli glabri.

Java, Western part, Preanger Regencies, Tjadasmalang, near Tjidadap, S.W. of Tjibeber, forest, alt. 1200 m: *Docters van Leeuwen* 2719 (BZ), type spec., fl. Sept.

This genus is closely allied to *Stephanotis* Thou., differing however by the following characters: inflorescence terminal; calyx lobes alternating with bulges of the corolla base; corolla-tube with 5 prominent folds; corona lobes compressed, without free apex; membrane of the anther-tips far exceeding the stigma; epiphytic, not scandent half-shrub.

The genus is dedicated to the memory of K. Heyne (1877, Amsterdam; †, 1947, Bennekom), from 1906—1927, Head of the Museum for Economic Botany at Buitenzorg; author of the justly renowned Nuttige Planten van Nederlandsch Indië (Useful plants of the Netherland East Indies).

Loganiaceae, fam. CLXX.

Koorders, Fl. v. Tjibodas 3 (1918) 44—49; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2. (1927) 1267—1271; Backer, Onkruidfl. Java Suiker (1931) 484—488.

Cynoctonum mitreola (L.) Britt. var. **lilacinum** (Back. apud Cammerl.) Bakh. f., comb. nov. — *Mitreola paniculata* Wall. ex G. Don var. *lilacina* Back. apud Cammerl. in Bull. Jard. Bot. Buitenzorg sér. III, 5^4 (1923) 299.

Fagraea elliptica Roxb., Fl. Ind. ed. Carey, 2 (1824) 32 — *Fagraea kimangu* Bl., Mus. Bot. Lugd. Bat. 1^{11} (Febr. 1850) 173.

Fagraea javanensis (Bl.) Bakh. f., comb. nov. — *Picrophloeus javanensis* Bl., Bijdr. (1826) 1020; idem, Rumphia 2 (1836) 36, in observ.; idem, Mus. Bot. Lugd. Bat. 1^{11} (Febr. 1850) 173.

Fagraea lanceolata Bl., Bijdr. (1826) 1021 — *Fagraea oxyphylla* Miq., Fl. Ind. bat. 2 (1856) 371.

Fagraea obovata Wall. ex Roxb., Fl. Ind. ed. Carey, 2 (1824) 33 — *Fagraea blumei* G. Don, Gen. Hist. 4 (1838) 69 — *Fagraea blumei* Steud., Nomenclat. ed. 2, 1 (1840) 624.

Fagraea obovata Wall. ex Roxb. var. **brevicalyx** Bakh. f. var. nov. — *Fagraea obovata-javana* Bl.; Koorders-Schumacher, Syst. Verz. 1, Java, Logan. (1912) pro parte — *Fargaea vaginata* King et Gamble; S. Moore in Journ. Bot. 63 (1925) Suppl. 69 — differt a typo notis sequentibus: flores 15—50; calyx 8—12 mm altus, sepalis 4—5 mm longis; petala elliptico-oblonga crassiuscula intus valide longitudinaliter venosa 1.5 cm longa. Ceterum ut typus.

J a v a, Western part, Tjibodas: *Docters van Leeuwen* s.n. (L), typus floris, fl. Oct.; Eastern part, Pantjoer, Idjen: *Koorders* 28595 β (L), typus fructus, fr. Aug.

Occurring throughout Java and apparently much commoner than the typical form.

Fagraea pusilliflora Bakh. f., spec. nov. — *Fagraea elliptica* Roxb.; Koorders-Schumacher, Syst. Verz. 1, Java, Logan (1912) pro parte.

Arbor; *ramuli* glaberrimi; *stipulae* intrapetiolares basi connatae 2 mm altae; *folia* oblonga vel late lanceolata basi acuta, apice attenuata non vel vix acuminata obtusiuscula, glabra crassissime coriacea, in utroque latere costae percursa nervis lateralibus 8—12, horizontalibus-subascendentibus, supra inconspicuis, subtus manifestis et saepius validiusculis, obsolete venosa 10—17 cm longa, 4—6 cm lata, petiolo circa 1.5 cm longo. *Flores* 5-meri, in cymis multifloris glabris; cymae in anthelas terminales 7—11 cm longas digestae; bracteae minutae inferiores anguste triangulares 1 mm longae, sursum decrescentes et tandem ovato-triangulares; *calyx* campanulatus glaber 1.75 mm longus; calycis tubus 1 mm longus, laciniis aequans; laciniae semiorbiculares subfimbriatae; tubus corollinus cylindricus glaber 3—6 mm altus, calyce 2—3-plo longior; *petala* lanceolata obtusa glabra 2 mm longa, intus costa valida et nervis lateralibus 2 tenuioribus percursa; *stamina* 5 in fauce, alte exserta, filamentis glabris maxime 1 cm longis; antherae oblongae; *stylus* filiformis glaber 7—10 mm longus; *cocci* globosi apice styli rudimento coronati, in sicco 3—4 mm diametientes.

S u m a t r a, Palembang, Banjoeasin and Koeboelands, forest, alt. 15 m: *Endert* 77 E, 1 P. 746 (L), type spec., fl. March; idem: *Endert* 77 E. 1 P. 933 (L), fl. Sept., v.n. banda tijoeng; Lematang Ilir, alt. 75 m: *Bosch-proefstation* F. 684 (L), fr. Aug.; without exact locality: *Forbes* 3142 (L).

J a v a, Western part, Batavia, N. of the Tjianten, S. of Leuwiliang, near Buitenzorg, alt. 700 m: *Backer* 25948 (L), fr. Sept.; Mt. Salak, near dessa Bobodjong, alt. 1000 m: *Koorders* 24247 β (L), fr. Sept. ;Preanger Regencies, Sanggrawa, Djampang Koelon, alt. 400 m: *Koorders* 4348 β (L).

Oleaceae, fam. CLXXI.

Koorders, Fl. v. Tjibodas 3 (1918) 40—44; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1264—1267; Backer, Onkruidflora Java Suiker (1931) 479—482.

Jasminum multiflorum (Burm. f.) Andr., Bot. Rep. (1801) t. 496, non Roth (1821) — *Nyctanthes multiflora* Burm. f., Fl. Indica (1768) 5, t. 3, fig. 1 — *Jasminum pubescens* Willd., sensu latissimo.

This species is extremely variable as to the indumentum of the young twigs, leaves, pedicels and calyx, the shape of the leaves and to a certain degree also the dimensions of the calyx-lobes. Intermediate forms are very common; therefore I reduced the following species to forms of *Jasminum multiflorum* (Burm. f.) Andr.

f. **acuminatissimum** (Bl.) Bakh. f., comb. nov. — *Jasminum acuminatissimum* Bl., Mus. Bot. Lugd. Bat. 1[18] (Oct. 1850) 276.

f. **glabriusculum** (Bl.) Bakh. f., comb. nov. — *Jasminum glabriusculum* Bl., Bijdr. (1826) 679.

f. **pubescens** (Willd.) Bakh. f., comb. nov. — *Jasminum pubescens* Willd., Spec. Pl. 1 (1797) 37, sensu stricto.

f. **subelongatum** (Bl.) Bakh. f., comb. nov. — *Jasminum subelongatum* Bl., Mus. Bot. Lugd. Bat. 1^{18} (Oct. 1850) 274 — *Jasminum affine* Bl., Mus. Bot. Lugd. Bat. 1^{18} (Oct. 1850) 274 — *Jasminum mixtinervium* Bl., Mus. Bot. Lugd. Bat. 1^{18} (Oct. 1850) 273 — *Jasminum pedale* Bl., Mus. Bot. Lugd. Bat. 1^{18} (Oct. 1850) 274 — *Jasminum pendulum* Bl., Mus. Bot. Lugd. Bat. 1^{18} (Oct. 1850) 275 — *Jasminum quinquenervium* Bl., Mus. Lugd. Bat. 1^{18} (Oct. 1850) 278 — *Jasminum subpubescens* Bl., Mus. Lugd. Bat. 1^{18} (Oct. 1850) 274 — *Jasminum vulcanicum* Bl., Mus. Bot. Lugd. Bat. 1^{18} (Oct. 1850) 276.

Apocynaceae, fam. CLXXII.

Koorders, Fl. v. Tjibodas 3 (1918) 54—60; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1271—1293; Hochreutiner in Candollea 5 (1931—1934) 176—182; Backer, Onkruidfl. Java Suik. (1930) 493—592; Tsiang in Sunyatsenia 3^{2-3} (May 1936) 121—161; idem in idem 4^{2-3} (June 1939) 54—131; Pichon in Bull. Mus. Paris, 2e sér., 20 (1948) 296—303 (Classification of the *Ecdysanthereae*).

Catharanthus roseus (L.) G. Don, Gen. Syst. (Febr. 1838) 95 — *Lochnera rosea* (L.) Reichb., Consp. (Dec. 1838) 134, nomen nudum — *Lochnera rosea* (L.) Reichb. ex Endl., Gen. Pl. (Aug. 1838) 583; van Welsum in De Trop. Nat. 5 (1916) 52; Backer, Onkruidfl. Java Suiker (1931) 494, 495; (1931) Van Steenis in De Trop. Nat. 23^{2} (1934) 31—33.

Catharanthus roseus (L.) G. Don var. **angustus** Van Steenis ex Bakh. f., var. nov. — *Lochnera rosea* (L.) Reichb. ex Endl. var. *angusta* V. Steenis in De Trop. Nat. 25 (1936) 18, hollandice — differt a typo corollae laciniis albis sese non tangentibus.

Java, Western part, Buitenzorg, spont. in private garden, alt. 250 m: *Van Steenis* s.n. (L), type spec., fl. Jan.

Melodinus Forst. Cf. Pichon in Mém. Mus. Paris nouv. sér. XXIV, 3 (1948) 125—130.

Melodinus orientalis Bl., Bijdr. (1826) 1026; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1271; Tsiang in Sunyatsenia 2^{2-3} (May 1936) 133 — *Melodinus laxiflorus* Bl., Mus. Bot. Lugd. Bat. 1^{10} (Jan. 1850) 155 — *Willughbeia umbrosa* Bl., Mus. Bot. Lugd. Bat. 1^{10} (Jan. 1850) 154.

According to Blume *Melodinus laxiflorus* differs from this species in having a puberulous corolla throat, but I could find no hairs in the type specimen. Even if Blume is right I am not inclined to consider this character sufficient for specific distinction.

Melodinus laevigatus Bl., a closely related species, was wrongly mentioned by Miquel for Java.

Landolphia gummifera (Lamk.) K. Schum. in Bot. Jahrb. 15 (1892) 409 — *Vahea gummifera* Lamk., Illustr. (1797) 292, t. 169; Miquel, Fl. Ind. bat. 2^{1} (1856) 394.

Formerly cultivated in Java for its latex, but since long out of use. In the Leyden Herbarium much old material from Java is present. The vernacular name was apparently "ojod gember".

Willughbeia Roxb. Cf. Pichon in Mém. Mus. Paris nouv. sér. XXIV, 3 (1948) 153.

This genus seems to be extremely rare in Java. The only native species is *W. firma* Bl., in recent time with certainty found only near Rangkasbetoeng (Western part) and possibly also on Mt. Smeroe (Eastern part).

Chilocarpus Bl., Cat. (1823) 22, descr.; idem, Bijdr. (1826) 1025; idem, Mus. Bot. Lugd. Bat. 1^{10} (Jan. 1850) 151—153; Pichon in Mém. Mus. Paris nouv. sér. XXIV, 3 (1948) 163.

Chilocarpus suaveolens Bl., Cat. (1823) 23, descr. — *Chilocarpus compositus* Bl., Mus. Bot. Lugd. Bat. 1^{10} (Jan. 1850) 152 — *Chilocarpus densiflorus* Bl., l. c. (Jan. 1850) 152 — *Chilocarpus globuliferus* Bl., l. c. (Jan. 1850) 152 — *Chilocarpus suaveolens* Bl. var. *borneensis* Hall. f. in Kaoutsch.-lianen (1900) 150, p. p., typo excl. — *Chilocarpus suaveolens* Bl. var. *salaccensis* Hochr. in Candollea 5 (1931—1934) 176.

Chilocarpus denudatus Bl. Bijdr. (1826) 1025 — *Chilocarpus atroviridis* Bl., Mus. Bot. Lugd. Bat. 1^{10} (Jan. 1850) 153.

Urnularia Stapf in Hook. Ic. Pl. 28 (1901) t. 2711; Pichon in Mém. Mus. Paris nouv. sér. XXIV, 3 (1948) 154.

Plumeria L. Cf. Van Steenis in De Trop. Nat. 26^4 (1937) 63—66.

Plumeria acuminata Ait., Hort. Kew. ed. 2, 2 (1811) 70; Van Steenis in l. c. (1937) 63—66, fig. 1—3 — *Plumeria acutifolia* Poir. in Lamk., Encycl. Suppl. 2 (1812) 667.

Dyera Hook. f. Cf. Monachino in Lloydia 9 (1946) 64.

In Java **Dyera costulata** (Miq.) Hook. f. was formerly only cultivated in Java. Fruiting specimens are unknown to me.

Ervatamia Stapf in Dyer, Fl. Trop. Africa 4 (1902) 126; Merrill in Contrib. Arnold Arb. (1934) 139; Pichon in Not. Syst. 13^3 (Jan. 1948) 230—253.

As I have to confine myself almost exclusively to the Java species, it is beyond the scope of this study to disentangle *Tabernaemontana* in the widest sense. Merrill in l. c. considered *Ervatamia* generically not different from *Tabernaemontana*, but Pichon agrees with Stapf. As a rule recent botanists keep those 2 genera apart, referring the Australasiatic species to *Ervatamia* s. l., those of Africa, Madagascar and America to *Tabernaemontana* and other allied genera..

Ervatamia sphaerocarpa (Bl.) Burk. in Kew Bull. (1935) 317 — *Tabernaemontana sphaerocarpa* Bl., Bijdr. (1826) 1028; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1283; Hochreutiner in Candollea 5 (1931—1934) 177; Backer, Onkruidfl. Java Suiker (1931) 496 — *Pagiantha sphaerocarpa* (Bl.) Mgf. in Not. Bot. Gart. Berl. 12 (1936) 546 — *Tabernaemontana fagraeoides* Miq., Fl. Ind. bat. 2^1 (1856) 420 — *Tabernaemontana javanica* Miq., Fl. Ind. bat. 2^1 (1856) 422.

Ervatamia floribunda (Bl.) Pichon in Mém. Mus. Paris, sér. 11, 27 (1948) 220 — *Tabernaemontana floribunda* Bl., Bijdr. (1826) 1026; Backer, Onkruidfl. Java Suiker (1931) 495.

Ervatamia blumeana Mgf. in Not. Bot. Gart. Berlin 12 (1936) 547 — *Tabernaemontana pauciflora* Bl., Bijdr. (1826) 1028, non *Ervatamia pauciflora* Ridley in Journ. As. Soc. Straits Br. 86 (1922) 299.

Ervatamia blumeana Mgf. var. **macropetala** Bakh. f., var. nov. — Differt a typo notis sequentibus: tubus corollinus 23 mm longus; laciniis 17 mm longis; antherae in sicco 3.5 mm longae; stylus 17 mm longus.

Java, Central part, Soebah, forest, alt. 50 m (*Koorders* 27301 β, L, type spec., fl. Apr.).

The type species has respectively the following measurements: 13—17 mm, 7—9 mm, 2—2.5 mm and 13—15 mm.

Ervatamia pubescens (R. Br.) Mgf. var. **glaberrima** Bakh. f. var. nov. — Differt a typo notis sequentibus: ramuli, folia et inflorescentiae glaberrimi; folia mucronulata, non ut in typo breviter acuminata.

Java, Western part, Buitenzorg, cult. in Botanical gardens sub nr. IV E 28, alt. 250 m: *Hallier f.* s.n. (L), type spec., fl. July; Buitenzorg, escaped along the rivulet Tjidepit, alt. 250 m: *Bakhuizen van den Brink* fil. 914 (U), fl. Sept.

Voacanga grandifolia (Miq.) Rolfe var. **glabrifolia** Bakh. f., var. nov. — Differt a typo foliis glabris.

Java, Eastern part, Kediri, Gadoengan (*Koorders* 22725 β, (L), fl. June, v.n. ala antong; Kediri, alt. 60 m: *Lörzing* 796 (L), fl. Febr.; Rogodjampi: *Koorders* 126 β (L), type spec., fl. Febr.; idem: *Koorders* 123 β, 124 β, 28843 β (L), all fl. Aug.; Poeger: *Koorders* 20359 β (L), fl. Oct., v.n. kalonton; idem: *Koorders* 22615 β (L), fl. March, v.n. alakontong; Banjoewangi: *Reinwardt* s.n. (L).

Exact locality unknown: *Teysmann* s.n. (L.).

Rauwolfia L. Cf. Pichon in Bull. Soc. Bot. France 94, 1—2 (1947) 31—39.

For correct determination specimens with well developed flowers and especially ripe fruits are indispensable. A revision of the Malaysian species is urgently needed. Observations on living material are much desired.

Rauwolfia reflexa T. et B. in Nat. Tijdschr. Ned. Ind. 3 (1852) 329; idem in Ned. Kruidk. Arch. 3 (1855) 405 — *Rauwolfia blumeana* Val. ex Kds.—Schum., Syst. Verz. 1, Java, Apoc. (1912), nomen nudum — *Rauwolfia sumatrana*, apud Auct. div., non Jack, quoad specimina javana.

Rauwolfia serpentina (L.) Benth. et Hook., Gen. Pl. 2 (1876) 697; Kurz, For. Fl. Brit. Burma 2 (1877) 171; Backer, Onkruidfl. Java Suiker (1931) 499 — *Ophioxylon serpentinum* L., Spec. Pl. (1753) 1043 — *Ophioxylon majus* Hassk. in Flora 28 (1845) 295 — *Ophioxylon trifoliatum* Gaertn.; Miquel, Fl. Ind. bat. 2[1] (1856) 404 — *Hunteria sundana* Miq., Fl. Ind. bat. 2[1] (1856) 409; Hallier f. in Meded. Rijksherb. Leiden 1 (1910) 26.

I agree with Hallier's identification.

Rauwolfia serpentina (L.) Benth. et Hook. var. **observa** (Miq.) Bakh. f., comb. nov. — *Ophioxylon obversum* Miq., Fl. Ind. bat. 2[1] (1856) 405.

Rauwolfia spectabilis (Miq.) Benth. et Hook., Gen. Pl. 2 (1876) 697; Boerlage, Handl. Fl. Ned. Ind. 2[2] (1893) 393 — *Cyrtosiphonia spectabilis* Miq., Fl. Ind. bat. 2[1] (1856) 402 — *Cyrtosiphonia madurensis* T. et B., Cat. (1866) 125, nomen nudum — *Rauwolfia madurensis* Burck ex Kds.-Schum., Syst. Verz. 1, Java, Apoc. (1912) descr.

Ochrosia Juss. Cf. Pichon in Bull. Mus. Paris, 2e sér., 2 (1947) 205—212.

Ochrosia akkeringae (T. et B.) Miq. in Ann. Mus. Lugd. Bat. 4 (1868—1869) 138, sphalm. "ackeringae" — *Lactaria ackeringae* T. et B. in Tijdschr. Ned. Ind. 21 (1867) 249 — *Ochrosia borbonica* Auct. non Gmel.

Cerbera L. Cf. Corner in M. A. H. A. Magazin 8 (1938) 49; Pichon in Not. Syst. 13, 3 (Jan. 1948) 221—224.

Cerbera manghas L., Spec. Pl. (1753) 208; Corner, Wayside Trees

Malaya (1940) 143; idem in l. c. (1938) 208; Pichon in l. c. (1948) 223, 224 — *Cerbera lactaria* Ham. in DC, Prodr. (1830) 353; Valeton in Ann. Jard. bot. Btzg. 12 (1895) 245; Ridley, Fl. Mal. Penins. 2 (1923) 339.

Usually considered conspecific with *C. odollam* Gaertn. Some authors considered the latter to represent only a variety of this species. However, several recent authors who have studied the living plants agree that this view is incorrect. The two species although resembling each other closely in habit, particularly in dried specimens with not yet fully developed flowers, are well distinct. E. g. in *C. manghas* the corolla throat is red, in *C. odollam* it is yellow. Pichon considered then even to represent two distinct sections.

Parameria laevigata (Juss.) Moldenke in Rev. sudameric. bot. 6 (1940) 76—78 — *Aegiphila laevigata* Juss. in Ann. Mus. Paris 7 (1806) 76 — *Parsonia barbata* Bl., Bijdr. (1826) 1042 — *Parameria barbata* (Bl.) K. Schum. in Engl. und Prantl, Die Nat. Pfl. Fam. 4 (1895) 162 — *Echites densiflora* Bl., Bijdr. (1826) 1040 — *Ecdysanthera barbata* (Bl.) Miq., Fl. Ind. bat. 2^1 (1856) 451 — *Ecdysanthera barbata* (Bl.) Miq. var. *angustior* Miq., Fl. Ind. bat. 2^1 (1856) 451 — *Parameria angustior* (Miq.) Boerl., Handl. Fl. Ned. Ind. 2^2 (1899) 399.

Mr. Pichon informed me (in litt.) that *Aegiphila laevigata* Juss. (type no. 5037) is really identical with *Parameria barbata* (Bl.) K. Schum.

Anodendron tenuiflorum Miq. in Ann. Mus. Lugd. Bat. 4 (1868—1869) 140; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1290, 1291.

According to Heyne records of its occurrence in Java are unreliable; it is said to occur in the eastern part. I know it only with certainty to occur in the western part.

Aganosma velutina D. C., Prodr. 8 (1844) 434 — *Aganosma blumei* D. C., Prodr. 8 (1844) 433; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 38 — *Aganosma euloba* Miq., Fl. Ind. bat. 2^1 (1856) 447.

Beaumontia multiflora T. et B. in Ned. Kruidk. Arch. 3 (1855) 393 — *Beaumontia khasiana* Hook. f., Fl. Br. India 3 (1882) 661.

This species is cultivated in Java under the name of *Beaumontia grandiflora* Wall. However, this is a totally different species, which, to my knowledge, does not occur in Java.

Ichnocarpus frutescens (L.) R. Br. in Mem. Wern. Soc. 1 (1809) 62 — *Ichnocarpus dasycalyx* Miq., Fl. Ind. bat. 2^1 (1856) 449.

Trachelospermum inflatum (Bl.) Pierre ex Pichon in Bull. Mus. Paris 2e sér., 20 (1948) 191 — *Echites inflata* Bl., Bijdr. (1826) 1039.

Ecdysanthera Hook. et Arn.

This continental genus is wrongly recorded for Java.

Nerium indicum Mill.

This is the only species cultivated in Malaysia. Statements that *N. oleander* L. occurs in this region must be considered incorrect. Although it is very difficult to give good differential characters, the Mediterranean *N. oleander* L. is rather easily recognisable by its habit. The delimitation of the species of Nerium is somewhat confused. Perhaps they all belong to one polymorphic species *N. oleander* L.

Urceola, Chavannesia and **Xylinabaria.** Cf. Pichon in Bull. Mus. Paris, 2e sér., 20 (1948) 296 seq.

Pichon reestablished the genus *Chavannesia*, which most authors reduce to *Urceola*. *Chavannesia* has i. a. 4-seriate ovules, *Urceola* 6-seriate ones. Both genera have valvate or quincuncial corolla lobes, while the closely allied genus *Xylinabaria* differs by dextrorse petals. I have not incorporated *Xylinabaria* in the Flora of Java, as at that time too scanty material was at my disposal, but according to Pichon two species occur in Java, viz: *X. bantamensis* Pierre ex Pichon and *X. koordersii* Pierre ex Pichon.

A short time ago Pichon kindly put at my disposal specimens of those 2 species.

Xylinabaria bantamensis Pierre ex Pich.

Java, Western part, Bantam, Mt. Karang, 1200 m: *Koorders* 40124 β (P), type spec., (BZ), dupl. typ., fl. Nov.; Priangan, Tjigenteng, 1400 m: *Koorders* 26315 β (L, BZ, P), fl. Jan.

Koorders, Syst. Verz. 1, Java (1912) Apoc., published these two nrs. sub *X. koordersii* Pierre msc.

Xylinabaria koordersii Pierre ex Pich.

Java, Western part, Priangan, Pelaboean ratoe: *Koorders* 24456 β (P), type spec., (BZ), dupl. typ., fl. Nov.

Urceola brachysepala Benth. et Hook. f., Gen. Pl. 2 (1876) 716; Boerlage in Bull. Inst. Bot. Buit. 5 (1900) 17; Van Romburgh in Teysmannia 11 (1901) 342—344 — *Chavannesia brachysepala* (Hook. f.) Pich. in Bull. Mus. Paris, 2e sér., 20 (1948) 302.

Java, Western part, Batavia, Nirmala, 1100 m: *Backer* 11023 (L), fl. Dec. Central part, Kediri, Mt. Wilis, 1100—1150 m: *Backer* 11560 (L), fl. Febr.

Urceola lucida Benth. et Hook. f., Gen. Pl. 2 (1876) 716 — *Urceola brachysepala* Benth. et Hook. f.; Boerlage in Bull. Inst. Bot. Buitenzorg 5 (1900) 18, pr. p.

Java, Bantam, Mt. Tjibitoeng: *Van Romburgh* 2 (L), fr. Aug.; Moentjang: *Van Romburgh* 3 (L), ster. Batavia, Buitenzorg, along the Tjiliwoeng: *Hasskarl* s.n. (L); Depok, alt. 93 m: *Beumée* 6725 (L) fl. May; idem: *Smith and Rant* 683 (L), fr. Oct.; idem: *Backer* 22125 (L) fl. Apr.; Barengkok, W. of Buitenzorg, alt. 200 m: *Bakhuizen van den Brink* 6436 (L), fl. June; Bodjong Enjot, N.E. of Buitenzorg: *Bakhuizen van den Brink* 6361 (L), fl. June; Pasir Honjè, near Leuwiliang, alt. 250 m: *Bakhuizen van den Brink* 6735 (L), fl. Apr.; idem: *idem* 6783 (L), fl. June. Preanger Regencies, Tjisalak: *coll. unknown* (L), ster.; idem, cult.: *Koorders* 42204 β (L), fl. Apr.. Exact locality unknown: *Blume* s.n. (L).

New for Java. Javanese specimens of this species have been mainly distributed as *Urceola javanica.*

Chonemorpha G. Don, Gen. Syst. 4 (1836) 76; Furtado in Gard. Bull. Str. Settlem. 9 (1935) 115; Chatterjee in Kew Bull. (1947) 47—52.

Chonemorpha fragans (Moon) Alst. in Ann. Roy. Bot. Gard. Peraden. 11 (1929) 203 — *Echites fragans* [Rheede] Moon, Cat. (1821) nomen, sed non nomen nudum (cf. art. 36 of the Rules) — *Chonemorpha macrophylla* (Roxb.) G. Don, Gen. Syst. 4 (1836) 76; Tsiang in Sunyatsenia 3^{2-3} (May 1936) 152, 153 — *Chonemorpha mollis* Miq., Fl. Ind. bat. 2^{1} (1856) 444.

Chonemorpha mollissima Boerl., Handl. Fl. Ned. Ind. 2^{2} (1899) 389, descr. brevis.

Descriptio emendata huc addita: *Ramuli* juniores dense fusco-piloselli, vetustiores subglabrescentes sed nunquam glaberrimi; *folia* late ovalia-oblonga, basi paulum contracta obtuso-rotundata, ex apice rotundato breviter acute acuminata vel acutiuscula, supra in nervis sparse piloselli ceterum glabra, subtus dense molliter puberula, nervis lateralibus in utraque parte costae 8—12, densissime venosa et venulosa, 12—18 cm longa, 8—12 cm lata; petioli crassi breviter dense piloselli 1.5—2 cm longi. *Inflorescentiae* terminales, e cymis 2—3 cm longis 5—10-floris compositae; pedunculi dense fusco-piloselli 5—7 cm longi; bracteae utrinque dense piloselli, ad 1 cm longae; pedicelli dense piloselli 1—1.3 cm longi; *calyx* late pyriformis, basi truncatus, apice distincte contractus, extus densiuscule pilosellus intus glaber et basi squamulis multis ornatus; tubus circa 1.5 cm longus; laciniae late triangulares acutae apice revoluta minutae 2 mm longae; *tubus corollinus* calycem paulum excedens 1 cm longus extus glaber, intus dense barbatus; laciniae oblongae apice suboblique rotundatae 1.5 cm longae; *stamina* paulum supra corollae basin affixa; filamenta glanduloso-pilosella minuta; antherae sagittatae 5.5 mm longae; *fructus* ignoti.

(?) Java, locality unknown: *Reinwardt* s.n. (L), type spec.

This species is closely allied to *C. penangensis* Ridley, differing slightly in minor characters. As I have too scanty material of both species at my disposal I will postpone a decision, but if in future these two species appear to be identical, the oldest name *C. mollissima* Boerl. will have to be used. I am grateful to Dr D. Chatterjee, of Kew, for his suggestion. *C. mollissima* Boerl. has not been taken up in the emergency edition of the flora of Java, as it is not certain that this species occurs in this island.

Micrechites Miq., Fl. Ind. bat. 2^1 (1856) 456; Boerlage, Handl. Fl. Ned. Ind. 2^2 (1899) 380 — *Otopetalum* Miq., Fl. Ind. bat. 2^1 (1856) 400; idem in Versl. en Meded. Kon. Akad. Wet. 6 (1857) 191.

Micrechites micrantha (Miq.) Hall. f. in Kaoutsch.-lianen (1900) 150 — *Otopetalum micranthum* Miq., l.c. (1856) 400; idem in l.c. (1857) 191 — *Micrechites schrieckii* (v. Heurck et M. Arg.) Rolfe in Journ. Bot. 23 (1855) 214 — *Tabernaemontana polyantha* Bl., Bijdr. (1826) 1029, pr. p., typo excl.

I wholly agree with Boerlage that *Otopetalum* must be reduced to *Micrechites* and that what Miquel considered to be baccate fruits are in fact corolla tubes, deformed by insects. As otherwise normal floral and vegetative parts have been used for describing this new genus, I cannot regard Miquel's name contrary to art. 65 of the Rules.

Rhynchodia slootenii (Tsiang) Tsiang comb. nov. — *Trachelospermum slootenii* Tsiang in Sunyatsenia 4 (1939) 29.

Professor Tsiang kindly informed me in litt., that his *Trachelospermum* must be reduced to *Rhynchodia*, which conclusion I reached also independently by comparing the types of *Rh. slootenii* (Tsiang) Tsiang and the closely related second Javan species *Rh. verrucosa* (Bl.) Woods.

Alyxia Banks ex R. Br.

It is commonly assumed that in Java one species of this genus occurs, known either as *Alyxia stellata* (Forst.) R. et S. or as *Gynopogon reinwardti* (Bl.) Kds. But a closer study revealed that at least 4 species can be distinguished, viz: *A. reinwardti, lucida, cinerea* and *winckeli*; the latter

two species being new. The true *Alyxia stellata* (Forst.) R. et S. is a Pacific species, probably not occurring in Western Malaysia.

Alyxia reinwardti Bl. var. **latifolia** (Bl.) Bakh. f., comb. nov. — *Alyxia stellata* (Forst. f.) R. et S. var. *latifolia* Bl., Bijdr. (1826) 1031.

Alyxia cinerea Bakh. f., spec. nov.

Scandens; *ramuli* praecipue juniores et paginae superiores foliorum juvenilium sparse griseo-piloselli; ramuli ipsi subquadrangulares, in sicco pallidi; *folia* 3-verticillata, lanceolata basi cuneata, in petiolos attenuata, apice obtuse acuminata, coriacea, supra, costa depressa pilosella excepta, glabra, nervis lateralibus inconspicuis, subtus in costa elevata pilosella ceterum glabra, nervis lateralibus multis immersis 6.5—9 cm longa, 2—2.5 cm lata, folia apicem caulis versus decrescentia; petioli sparse piloselli 5—8 mm longi. *Flores* axillares 3—7 aggregati in pedunculo longiuscule et sparse piloso 1—3 mm longo; *bracteae* (?) 2, lanceolatae extus pilosae circa 1 mm longae; *calycis laciniae* anguste ovato-triangulares obtusiusculae ciliatae ceterum subglabrae vel sparse pilosellae 1.5 mm longae; *tubus corollinus* anguste cylindricus apice leviter ventricosus glaber 6 mm longae; *antherae* oblongae basi subcordatae acutiusculae 1.5 mm longae; *ovarium*, apice glabro excepto, pilosum; *stylus* filiformis glaber 4.5 mm longus; *bacca* oblonga basi obtusa vel acutiuscula abrupte stipiti-formiter attenuata, apice rotundata styli rudimento coronata, primo sparse pilosa demum subglaber 12—16 mm longa, pedicello 2 mm longo.

Java, Western part, Mt. Pangerango: *van Hasselt* s.n. (L), fr. July. Locality unknown: *Blume* s.n. (L), type spec.; *van Hasselt* s.n. (L), fl. Apr.

Alyxia winckeli Bakh. f., spec. nov.

Scandens; *ramuli* acute vel obtuse sed manifeste quadrangulares glabra vulgo verrucosa; *folia* 4-verticillata obovata vel ovato-oblonga, basi cuneata in petiolos attenuata, ex apice late obtuso-rotundato brevissime obtuso-acuminata, crassissima utrinque glabra, nervis lateralibus multis valde inconspicuis percursa, costa in pagina inferiori valde elevata, 7—10 cm longa, 4—5 cm lata, petiolo anguste alato crasso glabro 1 cm longo. *Paniculae* axillares apice glomeruliforme contractae circa 10-flores, pedunculo quadrangulari sparse pilosello vel subglabro 4—6 mm longo; *bracteae* 4-verticillatae lineares extus sparse pilosellae 2—3 mm longae; *flores* mihi in alabastro solum visi, ex schedula adjecta in maturitate alba, ut alabastra fragrantes; *calycis laciniae* oblongae obtusiusculae ciliatae extus densiuscule pilosellae 2.5 mm longae; *tubus corollinus* anguste infundibuliformis extus glaber intus in parte ventricoso solum pilosellus; *stamina* in media parte ventricosa affixa; antherae oblongae basi subcordatae, apice attenuatae acutae; *stylus* filiformis glaber 5.5 mm longus; *fructus* ignoti.

Java, Western part, Preanger Regencies, Mt. Limoes, S. of Tjibeber, forest, climbing up a Schima-tree, alt. 1000 m: *W. F. Winckel* 685 (L), type spec., fl. Oct., v.n. palasari; Tjidadap, forest, alt. 1000 m: *Bakhuizen van den Brink* 3963 (L), fl. May.

I have named this species in honour of the late Mr. W. F. Winckel.

Kopsia fruticosa (Ker.) D. C., Prodr. 8 (1844) 352 — *Cerbera fruticosa* Ker. in Bot. Reg. (1819) t. 391.

This species seems rather variable, although to my knowledge, no closer attention has been paid to its variability. *Kopsia fruticosa*, a common garden plant in Java, differs from the wild Sumatran forms in having

the corolla tube somewhat shorter (3—3.75 cm long in dried material). *Kopsia vincaeflora* Bl., Bijdr. (1826) 1030, is closely allied to this species; it is stated to have been found wild on Mt. Salak (in Western part). This statement is unreliable for *Kopsia fruticosa* and its allies have never yet been found in a wild state in Java. The corolla tube of *Kopsia vincaeflora* is distinctly longer, in dried material 4—4.5 cm long. The flowers are, with the exception of the red throat, white, contrarely to *K. fruticosa* which has pink or wholly white flowers.

Kopsia pruniformis Reichb. f. et Zoll. ex Bakh. f., spec. nov. — *Kopsia pruniformis* Reichb. f. et Zoll. in Teysmann et Binnendijk, Cat. (1866) 125, nomen nudum — *Kopsia flavida*, apud auct. div., non Blume, quoad specimina javana.

Arbor usque ad 9 m altus; *ramuli* glabri; *folia* oblongo-lanceolata, basi acuta apice sensim attenuata, acuminata acumine rotundato, glabra coriacea, nervis lateralibus multis tenuibus marginem vix attingentibus, anastomosantibus, 13—21 cm longa, 5—8 cm lata, petiolo lato glabro 5—7.5 mm longo. *Flores* in cymas densas glabras 1—3 cm longas, 5-meri, pedunculo usque ad 1.5 cm longo; *bracteae* minutae longiuscule ciliatae; pedicelli 2 mm longi; *calycis laciniae* ovatae, acutiusculae vel obtusiusculae ciliatae ceterum glabrae 1.5—2 mm longae; *corolla* hypocrateriformis, ex Hasskarl inodora alba; tubus corollinus sub apice ventricosus extus glaber, intus a medio usque ad fauces sparse pilosae 2.5—3 cm longus; fauces incrassatae pilosae luteae, laciniae oblongae obtusae ciliatae intus pilis minutis dense obsitae; *filamenta* brevissima glabra; antherae ovato-oblongae acutae 2 mm longae; discus e squamulis 2 linearibus efformatus, ovario 1.5—2 × longior; *ovarium* glabrum; *stylus* glaber 2 cm longus; *drupa* oblonga basi apiceque obtusa glabra extus venulis elevatis notata, 2.5 cm longa.

Java, Eastern part, Rogodjampi: *Zollinger* 3832 (L), type spec.; Djember: *Koorders* 119β and 29975β (L), fl. March; Tangkil, alt. 200—300 m: *Koorders* 23441β (L), fl. June; Poeger: *Koorders* 119β and 121β (L), fl. March.

Bali, Branbang, alt. 52 m: *Sarip* 14 (L), fr. July.

This species has been confused by Hasskarl [Retzia I (1855) 44] with *Kopsia flavida* Bl. from New Guinea, which differs by its glabrous corolla lobes and by having the disc lobes as long as the ovary. According to Markgraf in Engl. Bot. Jahrb. 61 (1927) 196. Blume's species does not belong to *Kopsia*, but is possibly identical with *Kentrochrosia monocarpa* Lauterb. et K. Schum.

Parsonsia R. Br.

The Javanese species are insufficiently known and there is apparently much confusion. At least 4 species occur in Java, but owing to scanty material and confused data in litterature, I am not quite sure that the specific epithets are right.

Parsonsia spiralis Wall. ex G. Don, Gen. Syst. 4 (1837) 80.

Since Blume the plant has never been recollected in Java. Its occurrence in Java needs confirmation. According to Pichon, in litt., *P. spiralis* should bear the name of *P. laevigata* (Moon) Alston (in Ann. Roy. Bot. Gard. Peradenyia 11 (1929) 203).

Parsonsia korthalsiana (Miq.) Boerl., Handl. Fl. Ned. Ind. 2^2 (1899) 397 — *Helygme korthalsiana* Miq., Fl. Ind. bat. 2^1 (1856) 429; Hallier f.

in Meded. Rijksherb. Leiden (1911) 27 — *Helygia javanica* Bl., Bijdr. (1826) 1043, non *Parsonsia javanica* Bl., Bijdr. (1826) 1041 — *Parsonsia spiralis*, apud auct. div., non G. Don, quoad specimina javana.

Java, Western part, Mt. Salak: *Blume* s.n. (L). Central part, Ngarengan, alt. 50 m: *Koorders* 37237β (L), fr. May, v.n. ojod wolar waliran; idem: *idem* 32114β (L), ster.

Sumatra, exact locality unknown: *Korthals* s.n. (U), type spec. of *Helygme korthalsiana* Miq., dupl. in L.

Much old Javan material is present in the Leyden Herbarium.

With some doubt I refer a sterile specimen from Central Java to this species.

Parsonsia oblonga Wall. ex G. Don, Gen. Syst. 4 (1837) 80.

Java, Western part, Tjiomas near Buitenzorg: *Boerlage* s.n. (L), fl. Oct.

New for Java.

Grisseea Bakh. f., genus novum, e Echitoideae-Parsonsieae.

Scandens; *folia* opposita penninervia; *cymae* axillares in inflorescentias umbelliformes vel paniculiformes aggregatae; *flores* 5-meri parvi; *calyx* anguste campanulatus, basi glandulis parvis multis munitus, alte 5-fidus; laciniae ovato-oblongae; *corolla* late campanulata; tubus in parte medio leviter ventricosus; fauces acervis pilorum penicilliformibus oppositipetalis, os tubi corollini praecludentibus munitae; petala in alabastro anguste dextrorsum obtegentia; *stamina* 5, paulum supra basin tubi corollini affixa; filamenta parum contorta, brevissime pilosella; antherae sagittatae fauces paulum excedentes, cum stigmate cohaerentes; loculi basi appendicibus sterilibus muniti; *discus* e lobis 5 efformatus; *ovarium* glabrum perfecte vel imperfecte 2-loculatum, ~-ovulatum; stylus filiformis glaber; *stigma* fusiforme basi membrana annulari parva instructum; *fructus* ignoti.

Grisseea apiculata Bakh. f., spec. nov.

Ramuli dense piloselli; *folia* ovalia vel late oblonga basi rotundata vel obtuso, ex apice late rotundato brevissime apiculata herbacea supra glabra subtus in nervis pilosella ceterum glabra, nervis lateralibus 6—8, 7.5—13 cm longa, 5—8 cm lata, petiolo appresse pilosello 1.5—3 cm longo. *Inflorescentiae* pilis brevibus patentibus obsitae, breviter ramosae rami 2—5 × furcati, pedunculo 3—4.5 cm longo; pedicelli piloselli 1.5—2 mm longi; calycis laciniae acutiusculae apice recurvae extus breviter et densiuscule pilosae, margine translucidae, intus apice pilosellae basin versus demum glabrae; *calycis glandulae* triangulares; *corolla* 4.5 mm longa, extus densiuscule pilis brevibus obsita, ad medium fissa; tubus corollinus intus supra medium dense pilis longiusculis deflexis munitus, 2.5 mm longus; lobi ovati acuti 2 mm longi; *filamenta* 0.5—0.8 mm longa; antherae 2 mm longae; disci squamuli ovati vel ovato-triangulares emarginati vel bidentati 1 mm longi; *stylus* 1.5 mm longus.

Java, Eastern part, Grissee, below 100 m alt., brushwood on calcareous soil: *Dorgelo* 2022 (BZ), type spec., fl. Aug.

The generic name has been derived from Grissee, a village N. of Soerabaja in East Java. *Grisseea* is related with *Parsonsia*, differing, however, in the following characters; corolla throat below each petal with a tuft of dense long hairs, which preclude the entrance to the tube; stamens inserted somewhat above the base of the corolla tube, filaments

slightly twisted. In *Parsonsia* contrariwise the throat bears no appendages, the filaments are inserted half way up the corolla tube and the filaments are strongly twisted.

Alstonia R. Br. in Mem. Wern. Soc. 1 (1809) 75, nomen conservandum; Pichon in Bull. Mus. Paris sér. II, 19, nr. 3 (1947) 294—301.

According to Mr. Pichon *Alstonia angustiloba* Miq. represents the type of a distinct genus, *Paladelphia* Pichon in l. c. (1947) 299, characterized by its remarkable anthers, pollen and ovary.

Blaberopus DC., Prodr. 8 (1844) 410; Pichon in Bull. Mus. Paris sér. II, 19, nr 3 (1947) 300, 301.

Blaberopus sericeus (Bl.) D C, l. c. (1844) 411 — *Alstonia sericea* Bl., Bijdr. (1826) 1038.

This remarkable species, a true *Blaberopus* and certainly not an *Alstonia*, is said to occur in Western Java on Mt. Salak. Since Blume recorded the plant for Java it has not been recollected in the island. It is doubtful whether Blume's statement is correct. The nearest affinity of *Blaberopus sericeus* is with *Bl. neriifolius* (D. Don) D C, differing by broader leaves, but the conspicuous habit is nearly the same.

Wrightia calycina A. D C., Prodr. 8 (1844) 405; Backer, Onkruidfl. Java Suiker (1931) 501, 502; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 52, 53.

Wrightia javanica A. D C, Prodr. 8 (1844) 405; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1292; Backer, Onkruidfl. Java Suiker (1931) 500, 501; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 50—52, t. 12.

Wrightia pubescens R. Br. in Mem. Wern. Soc. 1 (1809) 73; Heyne, De Nutt. Pl. Ned. Ind. ed. 2, 2 (1927) 1292; Backer, Onkruidfl. Java Suiker (1931) 501; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 49, t. 15.

Wrightia religiosa (T. et B.) Benth. et Hook., Gen. Pl. 2 (1876) 713; Tsiang in Sunyatsenia 4^{1-2} (June 1939) 42, 43 — *Echites religiosa* T. et B. in Tijdschr. Ned. Ind. 27 (1864) 34.

Physetobasis Hassk. in Flora (1857, non 1847) 104.

Monotypic: **Ph. macrocarpa** Hassk. in l. c. 104 [*Holarrhena macrocarpa* (Hassk.) Villar in Blanco, Fl. Filipp. 4 (non 3), Nov. App. (1880) 130].

This genus has been a source of confusion. Posterior to Hasskarl the type specimen (which may be preserved in the Buitenzorg Herbarium) has not been re-examined not even by Bentham and Hooker. The latter even did not succeed in having the original description. This failure was due to the incorrect citation of the year of publication.

Roupellia grata Benth. — *Strophantus gratus* (Benth.) Baill. Cf. H. J. Toxopeus in Meded. Alg. Proefst. Landb. 74 (1948) 1—22; F. de Wit in Landbouw 13 (1948) 98—105.

Orobanchaceae, fam. CXCIII.

Backer, Onkruidfl. Java Suiker (1931) 631—632.

Aeginetia mirabilis (Bl.) Bakh. in De Trop. Nat. 10 (1921) 172, fig. 3, 6, 10; Bakhuizen van den Brink in Bull. Jard. Bot. Buitenzorg sér. III, 131 (Dec. 1939) 84, fig. 2 — *Aeginetia mirabilis* (Bl.) Livera in Ann. Roy. Bot. Gard. Perad. 10^2 (1927) 150, 155 — *Centronia mirabilis* Bl., Bijdr. (1826) 776, 777.

Gesneriaceae, nom-conserv., fam. CXCV.

Koorders, Fl. v. Tjibodas 3 (1918) 108—125; Hochreutiner in Candollea 2 (1924—1926) 210—223.

Didymocarpus asperifolia (Bl.) Bakh. f., comb. nov. — *Agalmyla asperifolia* (Bl.) Miq., Fl. Ind. bat. 2 (1856) 733 — *Busea ? asperifolia* (Bl.) Miq., Fl. Ind. bat. 2 (1856) 733 — *Dichrotrichum asperifolium* (Bl.) Benth. et Hook. f. ex Clarke in D C, Monogr. Phaner. 5 (1883—1887) 54 — *Tetradema asperifolium* (Bl.) Schltr. in Notiz bl. Bot. Gart. Berlin 7 (1920) 361 — *Tromsdorffia speciosa* Bl., Bijdr. (1826) 763 — *Chirita blumei* Clarke in D C, Monogr. Phaner. 5 (1883—1887) 122 — *Begonia oligophylla* Miq., Fl. Ind. bat. 1[1] (1855) 692, quod est stadium juvenile — *Didymocarpus barbata* Jack. in errore apud Beumée in De Trop. Nat. 14 (1925) 92, 93, fig. 3.

Didymocarpus zollingeri (Clarke) O. K. var. **cyathiflora** Bakh. f., var. nov. — *Chirita coerulea* R. Br. in Benn., Pl. Jav. rar. (1838—1852) 117 and in Ann. Sci. Nat. sér. II, 13 (1840) 162 — *Didymocarpus coerulea* (R. Br.) Kds., Exk. Fl. Java 3 (1912) 189, non *Didymocarpus coerulea* Ridley in Journ. Linn. Soc. 3211 (1896) 513 — *Didymocarpus cyathiflora* Reichb. f. et Zoll. in Teysmann et Binnendijk, Cat. (1866) 156, nomen nudum.

Didymocarpus zollingeri (Clarke) O. K., Rev. Gen. (1891) 477 — *Didymocarpus zollingeri* (Clarke) Kds., Exk. Fl. Java 3 (1912) 190 — *Chirita zollingeri* Clarke in D C, Monogr. Phaner. 5 (1883—1887) 125.

Didymocarpus horsfieldii (R. Br.) O. K. ex Kds., Exk. Fl. Java 3 (1912) 190 — *Chirita horsfieldii* R. Br. in Benn., Pl. Jav. rar. (1838—1852) 117 — *Didymocarpus barbata*, apud auct. div., non Jack. in Trans. Linn. Soc. 14 (1823) 38.

Didissandra Clarke in D C, Monogr. Phaner. 5 (1883—1887) 65, antedated by the monotypic genus *Ellobum* Bl., Bijdr. (1826) 746, has been proposed for enlistment in the nomina conservanda by Dr C. G. G. J. van Steenis in Flora Malesiana Bull. 3 (Apr. 1948) 72, 73.

Didissandra montana (Bl.) Bakh. f. in Fl. Mal. Bull. (1948) 73 — *Ellobum montanum* Bl., Bijdr. (1826) 747 — *Vandellia ellobum* (Bl.) Benth. in D C, Prodr. 10 (1846) 417; Miquel, Fl. Ind. bat. 1[4] (1857) 694 — *Lobelia ellobum* (Bl.) Kds., Exk. Fl. Java (1912) 179; *Didymocarpus reptans*, in errore apud Beumée in De Trop. Nat. 8 (1919) 62, fig. 9, non Jack.

Rhynchothecum (sphalm. *Rhynchotechum*) **eximium** (Clarke) Schltr. in Engl. Bot. Jahrb. 58 (1923) 303 — *Isanthera eximia* Clarke in D C, Monogr. Phaner. 5 (1883—1887) 193.

I wholly agree with Schlechter, that Clarke's species belongs to *Rhynchothecum*. The type specimen is reserved in the Utrecht Herbarium, a duplicate is present at Leyden.

Stauranthera coerulea (Bl.) Merr., Enum. Philipp. Pl. 3 (1923) 455 — *Miquelia coerulea* Bl. in Bull. Sc. Phys. et Nat. Néerl. 1 (1838) 94 — *Stauranthera ecalcarata* R. Br. in Benn., Pl. Jav. rar. (1838—1852) 121 — *Miquelia azurea* Bl. in Rumphia 4 (1848) 34.

Monophyllaea horsfieldii R. Br. in Benn., Pl. Jav. rar. (1838—1852)

183 — *Monophyllaea pygmaea* Clarke in D C, Monogr. Phaner. 5 (1883—1887) 183.

Epithema horsfieldii (R. Br.) R. Br. ex D C, Prodr. 9 (1845) 279 — *Aikinia horsfieldii* R. Br. in Wall., Pl. As. rar. 3 (1832) 66 — *Epithema difforme* Span. in Linnaea 15 (1841) 331 — *Argostemma ? begoniaceum* Miq., Fl. Ind. bat. 2 (1856) 348.

De Candolle and later the Kew Index erroneously ascribed the combination *E. horsfieldii* to "R. Brown in Wall.".

Loxonia hirsuta Jack in Trans. Linn. Soc. 14 (1823) 40 — *Loxonia acuminata* R. Br. in Benn., Pl. Jav. rar. (1838—1852) 105, t. 25. *Loxonia discolor* Jack in l. c. (1823) 40 probably belongs to this species, which is rather variable as to the indumentum and the colour of the young leaves, which vary from green to purple. The flowers on the contrary show no important differences.

Aeschynanthus Jack in Trans. Linn. Soc. 14 (1823) 42, nom. cons.; pro synonymis specierum sequentium vide etiam sub *Trichosporum* D. Don [in Edinb. Phil. Journ. 7 (1882) 84, nom. rejic.].

Aeschynanthus albidus (Bl.) Steud., Nom. ed. 2, I (1840) 32; D C. Prodr. 9 (1845) 262; Docters van Leeuwen in De Trop. Nat. 18 (1928) 62, 131 — *Bignonia albida* Bl., Cat. (1823) 82, descr. — *Aeschynanthus purpurascens* Hassk., Cat. Bog. 2 (1844) 154.

Aeschynanthus angustifolia (Bl.) Steud., Nom. ed. 2, 1 (1840) 32 — Docters van Leeuwen in De Trop. Nat. 18 (1928) 60, 62, 132 — *Bignonia angustifolia* Bl., Cat. (1823) 82, descr.

Aeschynanthus horsfieldii R. Br. in Benn., Pl. Jav. rar. (1838—1852) 116; De Candolle, Prodr. 9 (1845) 262, in eo opere R. Brown citatus — *Aeschynanthus rubiginosa* T. et B. in Nat. Tijdschr. Ned. Ind. 25. sér. V, 5 (1863) 413.

Aeschynanthus horsfieldii R. Br. var. **geminata** (Z. et M.) Bakh. f., comb. nov. — *Aeschynanthus geminata* Z. et M. in Nat. en Geneesk. Arch. Neerl. Ind. 2 (1845) 574.

Aeschynanthus radicans Jack in Trans. Linn. Soc. 14 (1823) 43.

I reduce the following to this extremely variable species: *Aeschynanthus boschianus* De Vriese in Tijdschr. Nat. Gesch. 2 (1835) 341; idem in Ann. Soc. Agr. et Bot. Gand. 1 (1845) 403 — *Aeschynanthus intermedius* T. et B. in Nat. Tijdschr. Ned. Ind. 25 ser. V, 5 (1863) 414 — *Aeschynanthus javanica* Rollins in Hook. Bot. Mag. (March 1850) t. 4503 — *Aeschynanthus lamponga* Miq., Fl. Ind. bat. (1862) Suppl. Sumatra, 563 — *Aeschynanthus miniata* Lindley in Bot. Reg. N. S., 19 (1896) t. 61, nomen confusum — *Aeschynanthus neesii* Z. et M., Verz. Ind. Arch. (1854) 56 — *Aeschynanthus pulchra* G. Don, Gen. Syst. 4 (1838) 656 — *Aeschynanthus teysmanniana* Miq. in Bot. Zeit. (1848) 509 — *Aeschynanthus zollingeri* Clarke in D C, Monogr. Phaner. 5 (1883—1887) 44.

Aeschynanthus volubilis Jack in Trans. Linn. Soc. 14 (1823) 42, t. 2, fig. 3 — *Aeschynanthus obovata* Clarke var. ? *pallida* Clarke in D C, Monogr. Phaner. 5 (1883—1887) 48.

Cyrtandra aurea Jack in Trans. Linn. Soc. 14 (1823) 29 — an? *Cyrtandra cordifolia* de Vriese, Pl. Ind. bat. Reinw. (1856—1857), non Gaudichaud (1826).

Cyrtandra calyptribracteata Bakh. f., spec. nov. — *Cyrtandra cuneata*, auct. div., non Blume, Bijdr. (1826) 773.

Frutex vel *arbuscula* 2—5 m altus; *ramuli* subquadrangulares, non sulcati, in partibus apicalibus ultimus densiuscule breviter fusco-pilosi, deorsum glabri; *folia* ejusdem paris subaequalia oblonga-lanceolata vel elliptica vel obovata, basi acuta vulgo aequilateralia, apice breviter acute acuminata leviter laxe dentata, supra praecipue in costa sparse pilosella, subtus in nervis dense pilosella, inter nervos non vel vix pilosella, in utroque parte costae nervis lateralibus 9—11 percursa, inconspicue laxe venosa, 11—30 cm longa, 4—10 cm lata; petioli graciles dense piloselli 1—5 cm longi; *bracteae* ovatae calyptriformes inflorescentias juveniles includentes, longe acute acuminatae, postea fissae, extus sparse pilosellae, intus dense et longe pilosae, 1—1.8 cm longae; *flores* in axillis foliorum persistentium, in umbellas paucifloras dispositi; pedunculi piloselli 1—3 cm longi; pedicelli dense pilosi 0.5—1 cm longi; *calyx* campanulatus extus densiuscule appresse pilosellus 6—10 mm longus; laciniae late ovato-triangulares acuminatae 2—4 mm longae; *corolla* primo extus pilosella, postea glabriuscula, sordide rubra rosea vel alba circa 1.5 cm longa, laciniis brevibus; *staminà* circa in medio tubo corollae affixa; filamenta glabra 3 mm longa; antherae 1.5 mm longae; staminodia (?) 3, antheris valde reductis, circa 1 mm longae; discus annularis glaber 2 mm altus; *ovarium* glabrum; stylus apice glanduloso-pilosus longe persistens, stigmate bilobo; *bacca* oblonga vel obovoidea glabra 1 cm longa.

Java, Western part, Preanger Regencies, Tjigenteng, forest, alt. 1400—1600 m: *Koorders* 26344 β (L), fl. fr. Jan.; Central part, Mt. Telemojo: *Koorders* 29674 β (L), fr. Febr.; idem, alt. 1400 m: *Koorders* 35819 β (L), fl. May; idem, alt. 1200 m: *Koorders* 39227 β (L), fr. Apr.; Koekoesan, near Mt. Lawoe, alt. 1500—1700 m: *J. Elbert* 124 (L), ster.; Sarangan, near Mt. Lawoe, forest, alt. 1000 m: *J. D. Dorgelo* s.n. (L), fr. Aug.; idem: *n.n.* s.n.. (L), type spec., fl. fr. Oct., sub H. L. B. 945. 316—64; Mt. Lawoe, S.E. slope: *J. Elbert* 123 (L), fr. Nov.; Sigogor: *Koorders* 29243 β (L), fr. Aug.; Soerakarta, Tawang mangoe, alt. 1300 m: *R. Brinkman* 809 (L), fl. fr. July; Eastern part, Ranoe Daroengan, S. slope of Mt. Smeroe, forest, alt. 1600 m: *Backer* 36433 (L), fr. June; Tosari: *J. D. Kobus* s.n. (L); Tjoeramanis: *Koorders* 21001 β (L), fr. Sept.; Kletak, forest, alt. 1600 m: *J. P. Mousset* 661 (L), fr. June; path Smeroehoeve to Sendoera, alt. 1500 m: *van Steenis* 7316 (L), fr. June; Kali bendo, alt. 800 m: *Koorders* 43228 β (L), fr. July. Locality unknown: *Waitz* s.n. (L); *Junghuhn* s.n. (L).

Cyrtandra elbertii Bakh. f., spec. nov.

An ? *frutex*; *ramuli* teretiusculi subsulcati, in partibus apicalibus ultimis dense pilosi, deorsum glaberrimi; innovationes dense et longe aureo-pilosi; *folia* ejusdem paris aequalia obovata basi (?) vulgo aequilaterali acuta, ex apice lato breviuscule acute acuminata coriacea integra supra glabra, subtus in nervis dense appresse pilosae, inter nervos sparsissime piloselli, in utroque parte costae, nervis lateralibus 8—10 percursa, evenia 11—13 cm longa, 4.5—6 cm lata; petioli glabri 8—12 mm longi; *flores* in axillis foliorum persistentium in cymas sessiles digesti; bracteae mihi ignotae probabiliter mox deciduae ac parvae; pedicelli tenues glabri circa 1 cm longi; *calyx* campanulatus glaber 7—8 mm longus; laciniae late ovato-triangulares acuminatae 4—5 mm longae; *corolla* ignota; discus annularis glaber; *bacca* oblonga glabra 16 mm longa (styli basi 4 mm longo computato).

Java, Central part, Kockoesan near Mt. Lawoe, forest, alt. 1500—1700 m: *J. Elbert* 126 (L), type spec., fl. Nov.

Cyrtandra grandis Bl. var. **ampla** (Clarke) Bakh. f., comb. nov. — *Cyrtandra ampla* Clarke in D C, Monogr. Phaner. 5 (1883—1887) 259.

Cyrtandra grandis Bl. var. **rubra** (de Vriese) Bakh. f., comb. nov. — *Cyrtandra rubra* De Vriese, Pl. Ind. bat. Reinw. (1856—1857) 16.

Cyrtandra nemorosa Bl., Bijdr. (1826) 771 — *Cyrtandra reticosa* Clarke in D C, Monogr. Phaner. 5 (1883—1887) 212.

Cyrtandra nemorosa Bl. var. **heterophylla** (De Vriese) Bakh. f., comb. nov. — *Cyrtandra heterophylla* De Vriese, Pl. Ind. bat. Reinw. (1856—1857) 15.

Cyrtandra pendula Bl.

The length of the peduncles is very variable. Three classes of dimensions can be distinguished, between which no transitions have been found, viz:

var. *genuina* Hochr. in Candollea 5 (1931—1934) 221.
Peduncle 10—28 cm long.
var. *blumeana* Clarke in D C, Monogr. Phaner. 5 (1883—1887) 242.
Peduncle 3.5—7 cm long.
var. *subsessilis* Bakh. f.
Peduncle only 0.5 cm long.

Cyrtandra pendula Bl. var. **subsessilis** Bakh. f. var. nov.

Differt a typo pedunculo circa 5 mm longo et statura graciliore.

Java, without locality: *Blume* 1717 (L), type spec., sub nomine *Rhynchocarpus pallidus* Bl.

Clarke identified this plant with *Cyrtandra humilis* Bl., but nothing supports this view, neither the description, nor the locality, nor the name in the schedula, although with regard to the latter the word "humilis" was written by Blume probably posteriorely above the word "pallidus".

Cyrtandra picta Bl., Bijdr. (1826) 769; Hochreutiner in Candollea 5 (1931—1934) 221 — *Cyrtandra longepetiolata* De Vriese, Pl. Ind. bat. Reinw. (1856—1857) 12.

Cyrtandra picta Bl. var. **repens** (de Vriese) Bakh. f., comb. nov. — *Cyrtandra repens* De Vriese, Pl. Ind. bat. Reinw. (1856—1857) 14 — an? *Cyrtandra humilis* Bl., Bijdr. (1826) 769.

I could not trace Blume's type specimen in the Leyden herbarium. Blume's nr. 210, vide Clarke in l. c. (1883—1887) 245, is not the type.

Cyrtandra populifolia Miq., Fl. Ind. bat. 2 (1857) 741 — an? *Cyrtandra arborescens* Bl., Bijdr. (1826) 773, non De Vriese (1856—1857).

Blume's type specimen could not be traced by me in the Leyden herbarium.

Cyrtandra reinwardtii (Clarke) Bakh. f. comb. nov. — *Cyrtandra populifolia* Miq. var. *reinwardtii* Clarke in D C, Monogr. Phaner. 5 (1883—1887) 262 — *Cyrtandra glabra* Jack in errore apud Blume, Bijdr. (1826) 768.

Cyrtandra rostrata Bl. var. **sericea** Bakh. f., var. nov.

Differt a typo characteribus sequentibus: innovationes, inflorescentiae, calyces, paginae inferiores foliorum et petioli appresse fulvo-pilosi; folia

obliqua late lanceolata crasse coriacea 15—28 cm longa, 5—10 cm lata; petioli 1—3 cm longi.

Pedunculi apicem versus leviter sed distincte elati crassi 7—12 mm longi; bracteae oblongo-lanceolatae 13—20 mm longae, 4—5 mm latae; pedicelli 4—8 mm longi; calyx dense et longe sericeus 6—11 mm altus; laciniae 3—6 mm longae; corolla alba 8—10 mm longa; stylus circa 2 mm longus; bacca circa 13 mm long.

Java, Western part, Batavia, Mt. Salak, alt. 800 m: *Koorders* 24231 β (L), fl. Sept., v.n. kihamperoe bogor; Preanger Regencies, Tjadasmalang, S.W. of Tjibeber, alt. 1000 m: *W. F. Winckel* 1455 β (L), type spec., fl. fr. Aug., v.n. kibasah; idem, alt. 900 m: *Backer* 22899 (L), ster.; G. Beser, S.W. of Tjibeber, alt. 1000 m: *J. J. Smith* 741 (L), fl. fr. June; Tjampaka, S.W. of Tjibeber, alt. 1000 m: *J. J. Smith* 811 (L), fl. June; Tjikao: *Korthals* s.n. (L); Bantam, Artja: *Kuhl and van Hasselt* s.n. (L). Locality unknown: *Junghuhn* s.n. (L); *Reinwardt* s.n. (L).

Cyrtandra rufa Bakh. f., nom. nov. — *Whitia carnosa* Bl., Bijdr. (1826) 775, excl. syn., non *Cyrtandra carnosa* Jack, in Trans. Linn. Soc. 14 (1823) 50.

Java, Western part, Batavia, Mt. Mocnara: *Reinwardt* s.n. (L), type spec. and lectotype of *Whitia carnosa* Bl., sub H. L. B. 903. 307—466, 467; Mt. Pangerango: *Kuhl and van Hasselt* s.n. (L).

Borneo, without exact locality: *Korthals* s.n. (L).

I could not trace Blume's original specimen, from Mt. Seriboe in the Leyden Herbarium, but in my opinion Blume's description and the Javanese specimen doubtless cover each other. *Cyrtandra carnosa* Jack differs e.g. by its unilateral disc.

Commelinaceae, fam. CCXI.

Koorders, Fl. v. Tjibodas 1 (1918) 38—42; Hochreutiner in Candollea 2 (1924—1926) 319—324; Ochse, Indische groenten (1931) 108—118; Backer, Handboek Flora Java 3 (1924) 18—39; idem, Onkruidfl. Java Suiker (1928) 178—185.

Aneilema blumei (Hassk.) Bakh. f., comb. nov. — *Dichaespermum blumei* Hassk., Comm. (1870) 41 — *Aneilema hamiltonianum* Wall. ex Clarke in DC, Monogr. Phaner. 3 (1881) 213; Backer, Onkruidfl. Java Suiker (1928) 183 — *Aneilema hamiltonianum* Wall. ex Kunth, Enum. 4 (1843) 74, nomen nudum.

Aneilema giganteum (Vahl) R. Br., Prodr. (1810) 271; van Steenis in De Trop. Nat. (1936), Jubil. Uitg., 112, 120, hollandice — *Commelina gigantea* Vahl, Enum. 2 (1806) 177.

Aneilefa herbaceum (Roxb.) Wall. ex Kunth, Enum. 4 (1843) 66 — *Aneilema herbaceum* Wall. ex Clarke in DC, Monogr. Phaner. 3 (1881) 204 — *Commelina herbacea* Roxb., Fl. Ind. ed. Wall., 1 (1820) 175.

Aneilema monadelphum (Bl.) Kunth, Enum. 4 (1843) 64, sub *Anilema*; Hochreutiner in Candollea 2 (1924—1926) 322 — *Aneilema monddelphum* R. Br. ex Kunth, in errore in Index kewensis — *Commelina monadelpha* Bl., Enum. (1827) 4.

Aneilema nudiflorum R. Br., Prodr. (1810) 271; Backer, Onkruidfl. Java Suiker (1934) 182 — *Commelina minuta* Bl., Cat. (1823) 34, descr.

Aneilema ovatum (Hassk.) Wall. ex Clarke in DC, Monogr. Phaner. 3 (1881) 218 — *Aneilema ovatum* Wall. ex Kunth, Enum. 4 (1843) 73,

nomen nudum — *Dictyospermum ovatum* Hassk., Commel. (1870) 24 — *Dictyospermum wightii* Hassk., Comm. (1870) 19.

Aneilema scaberrimum (Bl.) Kunth, Enum. 4 (1843) 69 — *Commelina scaberrima* Bl., Enum. (1827) 4 — *Aneilema protensum* Wall. ex Clarke in DC, Monogr. Phaner. 3 (1881) 219.

Aneilema spiratum (L.) R. Br. ex Clarke in DC, Monogr. Phaner. 3 (1881) 207; Hochreutiner in Candollea 2 (1924—1926) 321; Backer, Onkruidfl. Java Suiker (1928) 182 — *Commelina spirata* L., Mant. 2 (1771) 176.

Commelina benghalensis L., Spec. Pl. 1 (1753) 41; Hochreutiner in Candollea 2 (1924—1926) 319; Backer, Onkruidfl. Java Suiker (1928) 179.

Commelina nudiflora L., Spec. Pl. 1 (1753) 41; Hochreutiner in Candollea 2 (1924—1926); Backer, Onkruidfl. Java Suiker (1928) 180 — *Commelina oligotricha* Miq., Fl. Ind. bat. 3 (1855) 532; Clarke in DC, Monogr. Phaner. 3 (1881) 191.

Commelina paludosa Bl., Enum. (1827) 2 — *Commelina obliqua* Buch. — Ham. ex D. Don, Prodr. Fl. Nep. (1825) 45, non Vahl, Enum. 2 (1806) 173; Hochreutiner in Candollea 2 (1924—1926) 320.

Commelina subfruticosa Bl., Cat. (1823) 35, descr. — *Commelina suffruticosa* Bl., Enum. (1827) 3.

Cyanotis axillaris (L.) D. Don, Prodr. Fl. Nep. (1825) 46; R. et S., Syst. Veg. 7^2 (1830) 1154; Backer, Onkruidfl. Java Suiker (1928) 185 — *Commelina axillaris* L., Spec. Pl. 1 (1753) 62; Burman f., Fl. Ind. (1768) 17.

Cyanotis ciliata (Bl.) Bakh. f. comb. nov. — *Tradescantia ciliata* Bl., Cat. (1823) 61, descr. — *Tradescantia capitata* Bl., Enum. (1827) 6 — *Cyanotis capitata* (Bl.) Clarke in DC, Monogr. Phaner. 3 (1881) 243; Hochreutiner in Candollea 2 (1924—1926) 323.

Cyanotis cristata (L.) D. Don, Prodr. Fl. Nep. (1825) 46; R. et S., Syst. Veg. 7^2 (1830) 1150; Hochreutiner in Candollea 2 (1924—1926) 324; Backer, Onkruidfl. Java Suiker (1928) 185 — *Commelina cristata* L., Spec. Pl. 1 (1753) 62 — *Cyanotis vaga* (Bl.) R. et S., Syst. Veg. 7^2 (1830) 1153; Miquel, Fl. Ind. bat. 3 (1855) 545.

Cyanotis moluccana (Roxb.) Merr. in Philipp. Journ. Sci. 2 (1907) 266; Koorders, Exk. Fl. Java 1 (1912) 282 — *Commelina moluccana* Roxb., Fl. Ind. 1 (1820) 172 — *Cyanotis uniflora* Hassk., Commel. (1870) 104.

Pollia secundiflora (Bl.) Bakh. f., comb. nov. — *Commelina secundiflora* Bl., Enum. (1827) 5 — *Pollia elegans* Hassk. in Pl. Jungh. (1851—1855) 149 — *Aclisia sorzogonensis* E. Mey in Presl., Reliq. Haenk. 1 (1830) 138, t. 24 — *Pollia sorzogonensis* (E. Mey) Endl., Gen. (1836—1840) 1029; Steudel, Nom. ed. 2, 2 (1841) 368.

Pollia thyrsiflora (Bl.) Endl., Gen. (1836—1840) 1029; Hasskarl in Pl. Jungh. (1851—1855) 150 — *Tradescantia thyrsiflora* Bl., Enum. (1827) 6.

Flagellariaceae, fam. CCXII.

Hanguana malayana (Jack) Merr. var. **anthelmintica** (Bl. ex R. et S.) Bakh. f., comb. nov. — *Susum anthelminticum* Bl. ex R. et S., Syst. Veg. 7 (1830) 1493 — *Susum malayanum* (Jack) Planch. ex Hook. f. var. *aquatica* Back., Handb. Fl. Java 3 (1924) 3.

Smilacaceae, fam. CCXXIV.

Heterosmilax micrantha (Bl.) Bakh. f., comb. nov. — *Smilax micrantha* Bl., Enum. (1827) 18; Backer, Handb. Fl. Java 3 (1924) 80 — *Heterosmilax japonica* Kunth var. *javanica* DC, in Monogr. Phaner. 1 (1878) 43, based on Zollinger nr. 857.

Smilax micrantha Bl. up till now an insufficiently known species, appeared to belong to *Heterosmilax* Kunth. De Candolle who could not trace the type specimen in the Leyden Herbarium, stated in l. c. (1878) 43 "specimen floriferum javanicum, Blumei, in herb. Lugd. Bat. non inveni". However, the type specimen of *Smilax micrantha* Bl. does exist in the Leyden Herbarium, under H. L. B. 907.2 — 14.

Index.

* = new taxon; ** = nov. comb. and nom. nov.; synonyms in italics.