

NOTES ON THE FLORA OF JAVA, II¹⁾

by

Dr C. A. BACKER

(Heemstede, Holland)

(with the collaboration of A. G. L. Adelbert, Miss Dr G. J. H. Amshoff,
Dr R. C. Bakhuizen van den Brink Jr. and Dr A. D. J. Meeuse.

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Introduction.

In a previous number of this volume (Blumea V, nr. 1, 1942, p. 66—80), one of the junior writers of the present paper published an account of nomenclatorial changes concerning javanese Verbenaceae. This paper was written as a supplement to a larger work by the senior writer, who has for long years devoted most of his activities to the study of the flora of Java, on which it was his privilege to publish some more or less extensive papers, all of them in the Dutch language²⁾. These publications may be considered materials for a Flora of Java. In fact, some of them have the character and even the title of such a flora, though on account of several circumstances none of them could be completed.

Since the senior writer had retired from his official duties, an attempt was made to fill up this gap. For this purpose numerous scattered annotations were sorted and a start was made with the design of a reviewed and complete Flora of Java, again in Dutch. However, it soon became evident that this work was too extensive a task for a single man of my age and I therefore requested the help of the director of the Rijksherbarium at Leiden. Through his kind mediation the collaboration

¹⁾ I in Bull. Jard. bot. Buitenz., Sér. III, Vol. XVI, 1939, 107—110. Next to this the present paper has two other precursors which were published under different titles but which serve entirely the same purpose. They are:

J. Th. Koster, Notes on Malay Compositae — Blumea IV, No. 3, 1941, 482—492.
A. D. J. Meeuse, Notes on Javanese Verbenaceae — Blumea V, No. 1, 1942, 66—80.

²⁾ The more important of these are:

1. Flora van Batavia, I — *Dicotyledones, Dialypetalae*. Batavia, 1907.
2. Schoolflora voor Java, (*Ranunculaceae-Myrtaceae*). Weltevreden, 1911.
3. (with Dr D. F. van Slooten) Geillustreerd Handboek der Javaansche Thee-onkruiden en hunne beteekenis voor de cultuur. Batavia, 1924.
4. Handboek voor de Flora van Java (part of *Pteridophyta, Cycadaceae*, part of *Monocotyledones*). Batavia, 1925—1928.
5. Onkruidflora der Javaansche Suikerrietgronden. Met Atlas. Soerabaja, 1934.
6. (with Dr O. Posthumus) Varenflora voor Java. Buitenzorg, 1939.

was procured of some junior assistants. In the first phase of the work financial support to this end was kindly granted, first by the "Maatschappij ter Bevordering van het Natuurkundig Onderzoek der Nederlandse Koloniën" and afterwards also by the "Korthalsfonds", managed by the Royal Netherlands' Academy of Sciences at Amsterdam and by "Greshoff's Rumphiusfonds". Prof. Dr A. A. Pulle, Utrecht, kindly took an interest in this work and lent his intermediary in procuring the greater part of the necessary funds. In a later stage, however, also the Government could be convinced of the importance of this work and of a rapid rate of its progress and first one, later on two assistants were added to the Staff of the Rijksherbarium with the special instruction to assist me in my work. Recently a third assistant was appointed at the Botanical Museum and Herbarium of the Utrecht University. I take pleasure to avail myself of this opportunity to tender my best thanks to Dr Pulle and to Dr Lam for their kind collaboration, as well as to the Societies and Foundations, whose generous help in the earlier phases of the work appeared to be vital for starting it.

However, as long as the whole MS. was not completed, it seemed unadvisable to start the printing of even those parts which may be considered finally concluded. Moreover, war conditions soon prevented the possibility of a printed publication. And as, during the progress of the war, the possibility of the destruction of the MS., of which no duplicate had been made, grew less and less imaginary, it was decided to issue a stencilled "Nooduitgave" (emergency edition) in a very limited number (30 copies). This was accomplished as the work proceeded; thusfar 10 fascicles have been published since November 1940. It is expected that another 7 or 8 will bring the work to an end.

During the preparation of this emergency edition several new species, varieties, forms or combinations had to be described, for which the "Nooduitgave" was not a suitable shelter. These are therefore published here and they will be continued as the work proceeds. Included are also such new localities as seemed to be of sufficient importance for our knowledge of the distribution of the various species. In each item the page both of the "Nooduitgave" (if the family concerned has already been published) and of the "Schoolflora" of 1911 has been referred to. The former has been quoted as N. Fl. and further by the number of the fascicle, in addition to that of the family and to that of the page, e.g.: N. Fl. III, fam. XXV, 12, means Fascicle (Aflevering) III, family nr. XXV, page 12. The "Schoolflora" has been cited as: Sch.fl.

ANNONACEAE, N. Fl. IIIa, fam. XXV.

(by C. A. Backer)

Uvaria schizocalyx Backer, nov. spec., N. Fl. IIIa, fam. XXV, 7 — *Frutex scandens*. Innovationes dense breviterque ferrugineo-stellato-pubescentes. *Folia* oblonga vel ovato-oblonga, basi rotundata vel subcordata, apice obtuse vel acute breviterque acuminata, 160—220 mm longa, 60—90 mm lata, supra glabra, subtus sparsissime (in nervis paulo densius) erecto-stellato-pubescentia, nervis lateralibus utrinque 15—16 oblique adscen-

dentibus, petiolo dense ferrugineo-pubescente, 5—10 mm longo. *Flores* solitarii, pedicello 10—20 mm longo robusto, dense breviterque ferrugineo-stellato-pubescente, bracteola 5—8 mm supra basin inserta fugax. *Calyx* ante anthesin omnino clausus, deinde irregulariter 2—3-fidus, utroque latere dense breviterque stellato-pubescentia, 8—10 mm longus. *Petala* 6 basi breviter connata carnosa ovata vel obovata obtusa, 20—25 mm longa, utrinque dense breviterque stellato-pubescentia. *Stamina* exteriora sterilia, dorsaliter applanata, oblongo-spathulata, basi angustata, apice plus minusve truncata, c. 7 mm longa, 2—2.5 mm lata, intus costa media conspicua percursa; stamina reliqua fertilia multiserialia, connectivo producto truncato crassiusculo 1.5—1.8 mm longo computato, 6—7 mm longa, antheris lateralibus. *Torus* alte conoideus glaber. *Ovaria* permulta densissime conferta dense breviterque pubescentia, stylo brevi computato 4.5—5 mm longa pluri-ovulata. *Bacca* adhuc ignota.

Java, Kedoe, Sempor (N.N.W. of Gombong), collected in a few specimens in brushwood on a riverbank, alt. 60 m: Brinkman 862 A (13-II-1938): type specimen in Herb. Hort. Bog.

This species differs from *U. purpurea* Bl. and from *U. hirsuta* Jack by the petals connected at the base and the sterile outer stamens and from *U. lamponga* Scheff. by the high cone-shaped receptacle during the flowering-time and the sterile outer stamens.

Anomianthus auritus (Bl.) Backer, nov. comb., N. Fl. IIIa, fam. XXV, 10; Sch.fl. 23 — *Uvaria aurita* Bl., Fl. Jav. Anon. 15 (1829 vel 1830).

Marsypetalum pallidum (Bl.) Backer, nov. comb., N. Fl. IIIa, fam. XXV, 19; Sch.fl. 36 — *Guatteria pallida* Bl., Bijdr. 20 (1825); Fl. Jav. Anon. 97 (1830).

Mitrephora javanica Backer, nov. nom., N. Fl. IIIa, fam. XXV, 22; Sch.fl. 33 — *Mitrephora polypyrena* Auct., non Miq.

Meiogyne montana (Bl.) Backer, nov. comb., N. Fl. IIIa, fam. XXV, 26; Sch.fl. 29 — *Uvaria montana* Bl., Fl. Jav. Anon. 45 (1829 vel 1830) — *Meiogyne stipitata* Koord. & Val. in Meded. 's Lands Plantentuin, LXI, 305 (1903).

Polyaulax Backer, nov. gen., N. Fl. IIIa, fam. XXV, 26 — *Frutices* erecti. *Folia* subcoriacea nitida reticulato-venosa. *Flores* axillares solitarii, pedicello brevissimo squamato, alabastris conoideis. *Sepala* 3, basi vix connata triangularia. *Petala* 6 biserialia libera aestivatione valvata, omnia calycem valde superantia, 3 exteriora primo oblique erecta denique patentia ovata acuta paulo carnosa; 3 interiora erecta ovato-oblonga crassissime carnosa, dimidio basali intus leviter excavata, multis sulcis irregularibus angustis satis profundis peraratis (unde nomen generis). *Torus* convexus inter stamna densissime breviterque erecto-pubescentia. *Stamina* satis numerosa, cuneata, thecis oblique extrorsis, connectivo lato thecarum apices contingente truncato, glabro. *Ovaria* 6—8 libera dense adpresso longiuscule pubescentia, ovulis 6—7 uniserialibus, stigmate globoso vel oblongo glabro caduco. *Folliculi* 1—7 breviter stipitati teretes inter semina haud constricti, semina 4—7 uniserialia dense conferta, valde verticaliter compressa.

Polyaulax is most closely related to the Javanese genus *Ararocarpus* Scheff. (Ann. Jard. bot. Buitenz. II, 10, 1885) which has never been

retraced after Scheffer's time. This differs from *Polyaulax* by the inner petals which are much less carnose and not sulcate inside, as well as by the connate ovaries and fruits. In the shape of its flowers and in general habit *Polyaulax* recalls some species of *Polyalthia*, which is, however, distinguished by 1—2-ovulate ovaries.

Thus far only one species of *Polyaulax* is known. This has been described by Burck as *Mitraphora cylindrocarpa* Burck from S. New Guinea. At the time, only the fruits were known. Now that also flowering specimens have been collected, it is obvious that Burck's plant cannot belong to *Mitraphora* which is distinguished by inner petals which are distinctly unguiculate and whose tips are connected so as to form a cap over the genitalia. As the specimens from New Guinea and from Madoera seem to be conspecific Burck's species had to be renamed:

Polyaulax cylindrocarpa (Burck) Backer, nov. comb., N. Fl. IIIa, fam. XXV, 26 — *Mitraphora cylindrocarpa* Burck, Nova Guinea VIII, 433 (1911). *Frutex* multiramosus 1—3 m altus. *Ramuli* minute pubescentes. *Folia* ovata vel oblonga vel lanceolata, basi cuneata vel rotundata, apice longe anguste acuminate, acuta vel subobtusa, adulta glabra (costa media et partibus adjacentibus subtus sparse adpresso longe ferrugineo-pubescentibus exceptis), 50—100 mm longa, 10—40 mm lata, novella rubra, petiolo 3—5 mm longo. *Flores* subfoetidi, pedicello 2—3 mm longo. *Sepala* 2—3 mm longa. *Petala* juvenilia viridia, provectiore aetate albolutea vel lutea, extus densiuscule adpresso breviter pubescentia, exteriora 10—15 mm longa, 4—7 mm lata, intus parte superiore densissime, parte inferiore minus dense adpresso breviter pubescentia, interiora 10—13 mm longa, 4—5 mm lata, intus parte superiore dense pubescentia, parte inferiore glabra. *Stamina* c. 1.75 mm longa. *Ovaria* subsessilia cylindracea, mucronulata, ferrugineo-tomentella glabrescentia. *Folliculi* 1—6 stipitibus usque ad 10 mm longis suffulti, 18—60 mm longi, 20 mm lati, semina plerumque uniseriata discoidea pro folliculo usque ad 9.

Madoera, Backer 19566, 21148 in Herb. Hort. Bog.

Description partly after living material.

Fissistigma sphaerocarpum (Miq.) Backer, nov. comb., N. Fl. IIIa, fam. XXV, 30 — *Melodorum sphaerocarpum* Miq., Ann. Mus. Bot. Lugd-Bat. II, 38 (1865—1866); Sch.fl. 32.

LAURACEAE, N. Fl. IIIa, fam. XXVII.

(by C. A. Backer)

Neolitsea javanica (Bl.) Backer, nov. comb., N. Fl. IIIa, fam. XXVII, 26 — *Litsea javanica* Bl., Ann. Mus. Bot. Lugd-Bat. I, 348 (1863—1864).

MENISPERMACEAE, N. Fl. IIIb, fam. XXXIV.

(by C. A. Backer)

Pycnarrhena montana Backer, nov. spec., N. Fl. IIIb, fam. XXXIV, 7 — *Frutex* scandens, caule sinistrorum volubili longitudinaliter striato-costato, partibus vetustioribus nigris glabris. *Folia* oblonga vel ovato-oblonga, basi obtusa vel rotundata, apice obtuse acuminata, mucronulata,

marginibus anguste translucentibus paulo incrassatis, in sicco papyracea, 55—120 mm longa, 20—50 mm lata, supra glabra, subtus (costa sparse adpresso breviter pubescente excepta) glabra, costa media utrinque (praecipue subtus) valde prominens, nervi laterales 4—8 arcuatim adscendentibus in sicco subtus prominentes, reticulatione in sicco supra vix, subtus conspicue prominente, petiolo 10—20 mm longo, adpresso breviter pubescente. *Flores* ♀ ignoti; florum ♂ fasciculi in axillis foliorum delapsorum in verrucis positi 10—30-flori, flores perfragrantes, pedicellis simplicibus minute adpresso pubescentibus 5—10 mm longis. *Sepala* interiora 2.5—3 mm diametro. *Petala* 3, apice late rotundata, 1.25—1.5 mm longa, 1.75—2 mm lata. *Stamina* 12. *Fructus* ignoti.

Java, W. Java, on Mt. Telagabodas near Pangentjongan, above 1000 m alt.: *Koord. 26732B*: type specimen in Herb. Hort. Bog. [in Koorders, Syst. Verz. mentioned as *P. cauliniflora* (Miers) Diels]. Flowering specimen collected 21.I.1897.

Relationship with other species can be studied in the monograph of the *Menispermaceae* by Diels in Engl. Pflanzenr., Menisperm., 1910. The two other Javanese species *P. cauliniflora* (Miers) Diels and *P. lucida* (T. & B.) Miq. possess 9 stamens in the male flower.

THYMELAEACEAE, N. Fl. IVa (2), fam. LXXVII.

(by C. A. Backer)

Phaleria parvifolia Backer, nov. spec., N. Fl. IVa (2), fam. LXXVII, 2 — *Arbor* ? *Frutex* ? *Ramuli* glabri. *Folia* oblonga, basi cuneata acuta, apice angustata acuta vel obtusiuscula, glabra, 35—45 mm longa, 10—15 mm lata, costa media valida subtus prominens, nervis lateralibus reticulatione que tenuibus, foliorum normalium catervis alternantibus cum catervis foliorum multo minorum. *Capitula* terminalia vel in axillis foliorum superiorum posita breviter pedunculata, basi involucro 4-foliato cincta, involueri folia c. 7.5 mm longa ovalia vel ovali-ovata, dorso in parte basali glabra, in parte apicali densiuscule adpresso pubescentia, intus in costa media, marginum partibus apicalibus, apiceque minute pubescentia. *Flores* in capitula plures, sessiles. *Perianthii* tubus basi apiceque dilatatus 10—12 mm longus utroque latere densiuscule pilosus, pilis albis erectis; fauce inter staminum 4 epitepalium bases totidem squamis brevissimis latis subcrenato-dentatis glabris minuta; lobi oblongi obtusi intus glabri 5—6 mm longi. *Staminum* filamenta 8 prope faucem perianthii inserta distincte biserialia, superiore epitepalia, c. pro 7.5 mm exserta. *Stylus* quam stamina multo longior, c. pro 12.5 mm exsertus, stigmate crasse globoso; discus cupuliformis, ovarii dimidiata partem inferiorem includens, margine paulo irregulariter dentatus. *Ovarium* glabrum 2-loculatum, loculi uniovulati, ovula pendula. *Drupa* ignota.

Java, E. Java, Kali Baroe: A. Rant s. n. (VI-1933): type specimen in Herb. Hort. Bog.

The specimen collected by Dr Rant is the only one known. It was found cultivated on the premises of an hotel. The native country of the species is unknown.

Wikstroemia calva Backer, nov. nom., N. Fl. IVa (2), fam. LXXVII, 4 — *Wikstroemia Junghuhniana* Koord. & Val. (sphalmate), Bijdr. Boonis.

Java XIII, 58 (1914) [nec *Wikstroemia Junghuhnii* Miq., Fl. Ind. Bat. I, I, 879 (1860); N. Fl. IVa (2), fam. LXXVII, 5].

The name given by Koorders and Valeton was a mistake, hence it cannot be accepted. Obviously they intended to identify their plant as *W. Junghuhnii* Miq. Unfortunately their specimen does not belong to this species either, differing from it by a completely glabrous ovary tip (also in young flowers). This is why we choose the specific name of *calva*. For the rest, also the name *W. Junghuhnii* Miq. is not valid, being a synonym of *Wikstroemia androsaemifolia* Decne.

CUCURBITACEAE, N. Fl. IVb, fam. LXXXVIII.

(by A. D. J. Meeuse)

Gymnopetalum cochinchinense (Lour.) Kurz in Journ. As. Soc. Beng. XL, II, 57 (1871); N. Fl. IVb, fam. LXXXVIII, 19 — *Gymnopetalum quinquelobum* Miq., Fl. Ind. Bat. I, I, 681 (1855).

The last-named species is described as possessing distinctly incised leaf margins (cf. the remark under the following species).

Trichosanthes grandiflora Bl., Bijdr. 934 (1826); N. Fl. IVb, fam. LXXXVIII, 23 — *Trichosanthes globosa* Bl., l.c. 936.

The first-named species has entire or shallowly incised leaves but this appears insufficient to make it specifically different from *T. globosa*. Similar cases are represented by *Gymnopetalum cochinchinense* (Lour.) Kurz and *Coccinea cordifolia* (L.) Cogn.

Gymnostemma pedatum Bl., Bijdr. 23 (1825); N. Fl. IVb, fam. LXXXVIII, 26 — *Gymnostemma laxum* (Wall.) Cogn. in DC., Mon. Phan. III, 914 (1881).

The last-named is sometimes but incorrectly kept apart on account of its trifoliolate leaves.

MYRTACEAE, N. Fl. IVb, fam. XCVIII.

(by G. J. H. Amshoff)

By accepting the delimitation of the genus *Syzygium* Gärtn., as given by Merrill and Perry in 1939 (The Myrtaceous Genus *Syzygium* in Borneo, Mem. Ac. Arts and Sci. XVIII, part 3) several new combinations become necessary for the Flora of Java. The delimitation may be not quite satisfactory (if a quite satisfactory delimitation of *Eugenia* L. and allied genera is realisable at all), but it has great practical advantages.

Cleistocalyx operculatus (Roxb.) Merr. et Perry in Journ. Arn. Arb. 18, 337 (1937); N. Fl. IVb, fam. XCVIII, 7 — *Eugenia operculata* Roxb., Fl. Ind. ed. 2, 2, 486 (1832); Koord. & Val., Booms. Java VI, 148 (1900); Sch.fl. 504.

To this species probably also belongs the specimen named *Eu. occlusa* Kurz by Koorders and Valeton Booms. Java VI, 152; Sch.fl. 504.

Among the synonyms cited by Merrill and Perry l. c., *Syzygium angolanum* Miq. has to be dropped. This is, according to the type specimen in Herb. Utr., a species identical with or very nearly allied to *S. javanicum* Miq. sensu Merr. et Perry. *Syzygium costatum* Miq., 1855 (Java) is also, owing to incorrectly named old specimens, often cited among the synonyms

of *Cl. operculatus*. The type specimen is also in the Utrecht Herbarium. At present I can only say that it is nearly allied to *S. racemosum* (Bl.) DC., but it shows the venation of *S. laxiflorum* (Bl.) DC. [*Eugenia laxiflora* (Bl.) Koord. et Val., non Poir.] and it is much more robust.

Eugenia intermedia Koord. et Val., Booms, Java VI, 116 (1900) (non Berg, 1854); Sch.fl. 512.

Insufficiently known, much resembling *S. oblatum* (Roxb.) Cowan.

Eugenia pendula (Bl.) DC., Prodr. III, 284; Koord et Val., Booms. Java VI, 83 (1900); Sch.fl. 501.

This species was apparently collected in Amboina, not in Java.

Syzygium Macromyrtus (Koord. et Val.) Merr. et Perry in Mem. Ac. Arts and Sci. XVIII, 3, 168 (1939) (quoad nomen, non quoad syn. et spec. citata); N. Fl. IVb, fam. XCVIII, 10 — *Macromyrtus javanica* Miq., Fl. Ind. Bat. I, 439 (1855) — *Eugenia Macromyrtus* Koord. et Val., Booms. Java VI, 109 (1900); Sch.fl. 518.

This species is known from Java only; it differs from specimens¹⁾ from Sumatra and Borneo ascribed to it by Merrill and Perry l.c. (who followed determinations made at Buitenzorg) by the 8 minute sepals, the receptacle being very abruptly narrowed into a long and slender pseudostipe (apex of the flower bud subglobose) and the apparently terminal inflorescence. Both species belong to a group (*Macromyrtus* Miq. as a genus), characterized by their clavate flowers and biserrate ovules. Other members of this group in Java are: *S. attenuatum* (Miq.) Merr. et Perry (*Eugenia leptocalyx* Val., nom. nud.), *S. clavatum* (Korth.) Merr. et Perry, *S. teretiflorum* (Koord. et Val.) Amsh. and *S. ruminatum* (Koord. et Val.) Amsh. *S. Macromyrtus* and *S. siphonanthum* are remarkable for the position of the ovary at the middle (not at the apex) of the solid part of the receptacle.

Syzygium teretiflorum (Koord. et Val.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 11 — *Eugenia teretiflora* Koord. et Val., Booms. Java VI, 119 (1900); Sch.fl. 518.

Known to me from the description only.

Syzygium ruminatum (Koord. et Val.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 11 — *Eugenia ruminata* Koord. et Val., Booms. Java VI, 117 (1900); Sch.fl. 513.

Very closely allied to the following species and perhaps not sharply distinct, but with tetragonal branchlets and chartaceous leaves.

Syzygium clavatum (Korth.) Merr. et Perry in Mem. Ac. Arts and Sci. XVIII, 3, 180 (1939); N. Fl. IVb, fam. XCVIII, 11 — *Jambosa clavata* Korth. in Ned. Kruidk. Arch. I, 201 (1847) — *Jambosa melanocarpa* Miq., Fl. Ind. Bat. I, I, 439 (1855).

Java, Karimoendjawa islands: *Karta* 377, distributed as *Eugenia claviflora* Roxb.

Already known from Borneo, Palawan and Sumatra, Lampongs (*Zollinger* s.n., type specimen of *J. melanocarpa* Miq. in Herb. Lugd. Bat.).

¹⁾ These specimens have therefore to be named *S. siphonanthum* (King ex Greves) Amsh., nov. comb. (*Eugenia siphonantha* King ex Greves, Journ. Bot. LXII, Suppl. 38 (1924)).

Syzygium zeylanicum (L.) DC., Prodr. III, 260 (1828); Merr. et Perry in Mem. Ac. Arts and Sci. XVIII, 3, 159 (1939); N. Fl. IVb, fam. XCVIII, 13 — *Myrtus zeylanica* L., Sp. Pl. 472 (1753) — *Eugenia spicata* Lamk., Encycl. III, 472 (1789); Sch.fl. 509 — *Jambosa rostrata* Miq., Fl. Ind. Bat. I, I 436 (1855).

This species, as delimited by Merrill and Perry l.c. ("Flowers pustular or somewhat verrucose"), is apparently not found in Java (*Jambosa rostrata* Miq. was, according to the label on the type duplicate in Herb. Lugd. Bat., collected in Sumatra, not Java). *Eugenia spicata* Lamk., mentioned by Koorders and Valeton, Booms. Java VI, 122 (1900), is apparently identical with *S. antisepticum* (Bl.) Merr. et Perry ("Flowers smooth or minutely pustular, mostly longitudinally wrinkled", Merr. & Perry l.c. 142; syn. *Eugenia cuprea* Koord. et Val.).

Syzygium glomeruliferum Amsh., nov. nom.; N. Fl. IVb, fam. XCVIII, 14 — *Eugenia glomerata* Koord. et Val., Booms. Java VI, 91 (1900) (non Lamk. 1789 nec Spring 1837 nec *Syzygium glomeratum* [Lamk.] DC. 1828; Sch.fl. 503).

Syzygium microcymum (Koord. et Val.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 15 — *Eugenia microcyma* Koord. et Val., Booms. Java VI, 92 (1900); Sch.fl. 505.

Known to me from the description only.

Syzygium decipiens (Koord. et Val.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 16 — *Eugenia decipiens* Koord. et Val., Booms. Java VI, 131 (1900); Sch.fl. 502.

Syzygium myrtifolium (Roxb.) DC., Prodr. III, 261 (1828), nom. nud.; Walp., Rep. 2, 178 (1843); Merr. & Perry, Mem. Ac. Arts and Sci. XVIII, 3, 182 (1939); N. Fl. IVb, fam. XCVIII, 16.

Java, N.E. of Buitenzorg, numerous: *Backer* 31109 (BZ).

New for Java; a narrow-leaved form.

Syzygium acutatum (Miq.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 17 — *Jambosa acutata* Miq., Fl. Ind. Bat. I, I, 432 (1855) — *Eugenia argutata* Koord. et Val. Booms. Java VI, 146 (1900); Sch.fl. 512.

Imperfectly known.

Syzygium pachyrachis Amsh., nov. spec.; N. Fl. IVb, fam. XCVIII, 18 — *Arbor. Ramuli* novelli tetragoni crassi. *Folia* elliptico-oblonga coriacea glabra, 70—130 mm longa, 30—50 mm lata, apice acuminata acumine recurvato, basi acuta vel interdum obtusa, costa supra impressa subtus elevata, nervis lateralibus primariis quam secundarii distincte robustioribus, utrinque praesertim subtus prominulis, venis subtus laxe reticulatis, nervo intramarginali 1—1.5 mm a margine distante, petiolo 10—15 mm longo. *Inflorescentiae* terminales corymbosae ampliae densiflorae, floribus sessilibus in apice ramularum glomeratis, ramulis crassis tetragonis appianatis, leviter suleatis. *Receptaculum* abrupte in pseudostipitem contractum ± 5 mm altum, limbo indistincte lobato. *Corolla* calyprata. *Stamina* numerosa in disco angusto inserta. *Ovarium* 2-loculare, ovulis pro loculo 10, in placenta peltata dispositis. *Drupa* (unica visa) globosa ± 20 mm diametriens; cotyledones ignotae.

Java, Without locality: *Pl. Junghuhnianae ineditae* 252 (flow. and fr.): type specimen in Herb. Lugd. Bat.; Priangan, Tjibodas: *Sapijn* 2204 (flow.) in Herb. Lugd. Bat. and Herb. Utr.; Tjadasmalang near Tjidadap, alt. 1000 m: *Winckel* 1183 (flow. on 20-III-1913) in Herb. Lugd. Bat., distributed as *Eugenia operculata* Roxb.

In the last-cited specimens, the flowers are staminate only, the ovary being rudimentary. The species is nearly allied to the polymorphous *S. racemosum* (Bl.) DC., but apparently sharply distinct by its tetragonous branchlets and corymbose inflorescences.

Syzygium pyrifolium (Bl.) DC., Prodr. III, 260 (1828); N. Fl. IVb, fam. XCVIII, 18 — *Calyptranthes pyrifolia* Bl., Bijdr. 1090 (1826) — *Syzygium truncatum* Miq., Fl. Ind. Bat. I, I, 455 (1855) — *Eugenia javensis* Koord. et Val., Booms. Java VI, 142 (1900) (incl. ? *Syzygium javanicum* Miq.) — *Eugenia salaccensis* Koord. et Val. l.c. 144 (based on *C. pyrifolia* Bl.) — *Eugenia striata* Koord. et Val. l.c. 145; Sch.fl. 511 (based on *S. truncatum* Miq.).

This Javanese form, especially the type specimen of *S. truncatum* Miq., is in better agreement with *S. oblatum* (Roxb.) Cowan than with the species, distinguished for the Malay Peninsula as *E. pyrifolia* (Bl.) Duthie, 1878 (non Desv., 1825). In the last-named species, the flowers are more slender.

The position of *S. javanicum* Miq. is quite doubtful. The type specimen consists of a leaf and a fragment of a young inflorescence only. Merrill and Perry l.c., 188, apparently interpreted the species after a second specimen cited by Miquel in Fl. Ind. Bat. Suppl. I, 312 (1862), but as was already stated by Koorders and Valeton l.c. 142, there are no Javanese specimens quite agreeing with this specimen from Banka. Among the synonyms cited by Merrill and Perry l.c., *S. euneuron* Miq. at any rate has to be dropped; this is quite a distinct species with open venation. Merrill and Perry apparently saw an incorrectly named specimen.

Syzygium racemosum (Bl.) DC., Prodr. III, 261 (1828); Merr. & Perry, Mem. Ac. Arts and Sci. XVIII, 3, 189 (1939); N. Fl. IVb, fam. XCVIII, 19 — *Eugenia jambolooides* Koord. et Val., Booms. Java VI, 136 (1900); Sch.fl. 512 (non quoad syn: *Eugenia javensis* Koord. et Val. et *E. salaccensis* Koord. et Val., cf. preceding species) — *Syzygium Zippelianum* Miq., Fl. Ind. Bat. I, I, 449 (1855) — *Eugenia Zippeliana* (Miq.) Koord. et Val. l.c. 142.

A very polymorphic and puzzling species, all attempts for the classification of these forms having thus far been unsuccessful. For the Flora of Java, I have provisionally restricted *S. racemosum* to those forms with relatively small flowers and the receptacle abruptly narrowed into the pseudostipe. In the type specimen of *S. Zippelianum*, the leaves are more reticulate and the bracts more developed than in *S. racemosum*. The type specimen of *S. racemosum* (Bl.) DC. is not quite characteristic for the species as commonly interpreted and has moreover very young inflorescences only.

The much rarer form with larger flowers and ± obconic receptacle I have provisionally named *Syzygium pyrifolium* (Bl.) DC.

Syzygium Winckelii Amsh., nov. spec.; N. Fl. IVb, fam. XCVIII, 20 — *Arbor. Ramuli novelli teretes grisei. Folia oblonga coriacea glabra, apice acuminata, basi acuta vel obtusa, 150—170 mm longa, 30—60 mm lata, glandulis inconspicuis, costa supra impressa subtus elevata, nervis lateralibus utroque latere 10—16 subtus valde prominentibus arcuatim conjunctibus, nervo intramarginali ± 3 mm a margine remoto, petiolo ± 10 mm longo canaliculato nigrescente. Inflorescentiae valde abbreviatae axillares et latera-*

les, rhachide \pm 5 mm longa. *Alabastra sessilia* pyriformia \pm 9 mm longa, apice \pm 5 mm lata. *Receptaculum obconicum* \pm 7 mm longum. *Sepala* in alabastro valde imbricata rotundata mox decidua, 2 exteriora \pm 2 mm longa, 2 interiora \pm 4 mm longa. *Petala libera*. *Antherae* ovatae. *Ovarium* bilobulare, stylo usque ad 8 mm longo. Ovulis in utroque loculo \pm 10, pendentibus. *Fructus* ignotus.

Java, Priangan, Tjadasmalang near Tjidadap, alt.: 1000 m: *Winckel* 1177 β (flow. on 1-XI-1923): type specimen in Herb. Lugd. Bat., duplicate in Herb. Utr.

This specimen was distributed as *Eugenia opaca* Koord. et Val. (non Berg!) [= *Syzygium splendens* (Bl.) Merr. et Perry]. As a matter of fact the flowers much resemble those of *S. splendens*, but in the latter the inflorescences are paniculate; the venation also is slightly different.

Syzygium confertum (Korth.) Merr. et Perry in Mem. Ac. Arts and Sci. XVIII, 3, 177 (1939); N. Fl. IVb, fam. XCVIII, 20 — *Jambosa conferta* Korth. in Ned. Kruidk. Arch. I, 202 (1847) — *Eugenia densepunctata* Koord. et Val., Booms. Java VI, 97 (1900); Sch.fl. 507 — *Eugenia Calvinii* Elm., Leaflets Philipp. Bot. 4, 1419 (1912) (fide Merrill and Perry, l.c.).

Java, Bantam, Tjimirara, Oedjong Koelon, alt.: \pm 100 m: *Koorders* 5730 β (fl. in VII): duplicate of type of *E. densepunctata* Koord. et Val. in Herb. Lugd. Bat.; Central Java, Karanganjar, alt.: \pm 200 m: *For. Exp. Sta. Ja.* 2525 (fr. in XII).

Already known from Borneo, Palawan and Sumatra, Palembang (For. Exp. Sta. bb. F. 412). *E. densepunctata* Koord. et Val. was still kept distinct by Merrill and Perry l.c., on account of the pellucid-punctate leaves and the slightly larger flowers. The older leaves, however, are not pellucid-punctate and the flowers are smaller than in *E. Calvinii* Elm. Like in the fruiting specimens from Borneo, the fruit, as is the receptacle, is distinctly stipitate. By this character, fruiting specimens can be distinguished from the nearly allied, imperfectly known *S. splendens* (Bl.) Merr. et Perry (*Eugenia opaca* Koord. et Val. 1900 [non Berg 1857]; Sch.fl. 506).

Syzygium ampliflorum (Koord. et Val.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 21 — *Eugenia ampliflora* Koord. et Val., Booms. Java VI, 107 (1900); Sch.fl. 510 — *Clavimyrtus firma* Bl., Mus. Bot. Lugd. Bat. I, 116 (1849) — *Jambosa firma* (Bl.) Miq., Fl. Ind. Bat. I, I, 439 (1855) (non Blume 1849) — *Eugenia firma* (Bl.) Koord. et Val., Booms. Java VI, 163 (1900) (sub speciebus dubiis) (non DC. 1828 nec *Syzygium firmum* Thw., 1864).

The type specimen of *C. firma* Bl. could not be traced, but a specimen in the Rijksherbarium, quite corresponding to Blume's description, has been named *Jambosa firma* Miq. The form of the staminal disc does not seem to me as sharply distinct from that of *S. lineatum* (DC.) Merr. et Perry [*Eugenia lineata* (DC.) Duthie, 1878 (non DC., 1828); Sch.fl. 510], as suggested by Koorders and Valeton.

Syzygium lineatum (DC.) Merr. et Perry in Journ. Arn. Arb. 19, 109 (1938) and in Mem. Ac. Arts and Sci. XVIII, 3, 172 (1939); N. Fl. IVb, fam. XCVIII, 22 — *Eugenia lineata* (DC.) Duthie in Hook.f., Fl. Brit. Ind. 2, 487 (1878); Koord. et Val., Booms. Java VI, 114 (1900); Sch.fl. 510 — ? *Myrtus cerasiformis* Bl., Bijdr. 1087 (1826) — *Jambosa cerasiformis* (Bl.) Hassk., Cat. Hort. Bog. Alt. 262 (1844); Miq., Fl. Ind. Bat. I, I, 433 (1855) — *Syzygium cerasiformis* (Bl.) Merr. et Perry, l.c. 187 (quoad nomen).

It does not seem advisable to follow Merrill and Perry's interpretation of *Myrtus cerasiformis* Bl., the less so as they write: "We regret that we are not able to throw much light on it". It is doubtful whether the presumed isotype in the New York Herbarium is really the isotype. In the Rijksherbarium there is a specimen of *S. lineatum* named *Myrtus cerasiformis* Bl., but Blume's original label (or the original specimen) has got lost. Koorders and Valeton believed that *Myrtus cerasiformis* Bl. was a synonym of *S. lineatum*, and, also judging from Blume's description, this seems the best disposition of it.

Syzygium Suringarianum (Koord. et Val.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 22 — *Eugenia Suringariana* Koord. et Val., Booms. Java VI, 86 (1900); Sch.fl. 521.

Syzygium gracile (Korth.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 22 — *Jambosa gracilis* Korth. in Ned. Kruidk. Arch. I, 202 (1847) — *Myrtus glabrata* Bl., Bijdr. 1088 (1826) (non Sw., 1788) — *Clavimyrtus virens* Bl., Mus. Bot. Lugd. Bat. I, 114 (1849) — *Clavimyrtus marginata* Bl. l.c. — *Jambosa marginata* (Bl.) Miq., Fl. Ind. Bat. I, I, 428 (1855) — *Eugenia Blumeana* O. K., Rev. Pl. I, 239 (1891) — *Jambosa virens* (Bl.) Miq. l.c. — *Engenia virens* (Bl.) Koord. et Val., Booms. Java VI, 113 (1900) — *Eugenia Clavimyrtus* Koord. et Val. l.c.; Sch.fl. 521.

Syzygium pycnanthum Merr. et Perry in Mem. Ac. Arts and Sci. XVIII, 3, 168 (1939), sensu lat.; N. Fl. IVb, fam. XCVIII, 24 — *Eugenia densiflora* (Bl.) Duthie in Hook.f., Fl. Brit. Ind. 2, 473 (1878); Koord. et Val., Booms. Java VI, 57 (1900); Sch.fl. 519 — *Eugenia axillaris* Koord. et Val., Booms. Java VI, 60 (1900) (non Willd. 1790) — *Jambosa pseudodensiflora* Hochr. in Candolleo II, 425 (1925).

Through the kindness of Prof. Hochreutiner, I could examine a photograph, a flower and a leaf of the type of *J. pseudodensiflora*. *Syzygium pycnanthum* Merr. et Perry s.l. is indeed very variable in the size of the flowers; yet the small-flowered Java specimens are apparently not referable to *S. Foxworthianum* (Ridley) Merr. et Perry, as the size of the flowers is not in correlation with the form of the leaf.

Syzygium umbilicatum (Koord. et Val.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 24 — *Eugenia umbilicata* Koord. et Val., Booms. Java VI, 63 (1900); Sch.fl. 520.

Syzygium discophorum (Koord. et Val.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 25 — *Eugenia discophora* Koord. et Val., Booms. Java VI, 61 (1900); Sch.fl. 521.

Syzygium littorale (Bl.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 26 — *Jambosa littoralis* Bl., Mus. Lugd. Bat. I, 102 (1849); Hallier f. in Med. 's Rijksherbar. 12, 28 (1912) — *Eugenia subglaucia* Koord. et Val., Booms. Java VI, 68 (1900); Sch.fl. 516.

Syzygium Vrieseanum (Miq.) Amsh., nov. comb.; N. Fl. IVb, fam. 27 — *Jambosa Vriesiana* Miq., Fl. Ind. Bat. I, I, 424 (1855) — *Eugenia Vriesiana* (Miq.) Koord. et Val., Booms. Java VI, 75 (1900); Sch.fl. 522.

This species was known to Koorders and Valeton from sterile material only, but among the type collection in the Rijksherbarium there is a well-preserved flowering specimen. It is evidently nearly allied to *Eu. polypetala* Wight, Icon. II, t. 610 (1840—'43), but the inflorescence is very

shortly peduncled and there are four petals. The species is known from the type collection only.

Syzygium Zollingerianum (Miq.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 27 — *Jambosa Zollingeriana* Miq., Fl. Ind. Bat. I, I, 424 (1855) — *Eugenia Zollingeriana* (Miq.) Koord. et Val., Booms. Java VI, 75 (1900); Sch.fl. 522.

The var. *abbreviata* Koord. et Val. l.c. is not known to me.

Syzygium inopinatum Amsh., nov. spec.; N. Fl. IVb, fam. XCVIII, 28 — *Frutex arborescens* vel *arbor parva*, 3—7 m alta. *Ramuli* novelli teretes vel internodiis ultimis supra 4—6-goni brunnei. *Folia* opposita vel ternata oblonga vel oblongo-lanceolata, apice acuta vel acuminate, basi acuta vel interdum rotundata, coriacea, supra punctata, 60—200 mm longa, 20—70 mm lata, costa supra impressa subtus elevata, nervis lateribus utroque 8—12 supra subimpressis, subtus prominentibus, arcuato-confluentibus, venulis subtus reticulatis subinconspicuis, petiolo nigrescente 3—5 mm longo. *Inflorescentiae* terminales et axillares interdum laterales, semper pauciflorae, floribus terminalibus ternatis, caeteris saepe singulis, rhachide acute tetragona 10—20 mm longa. *Alabastera* pyriformia usque ad 25 mm longa, apice 10 mm lata. *Receptaculum* in pseudostipitem brevem crassum contractum. *Sepala* inaequalia late rotundata viridia, exteriora 4—5 mm, interioria 6—7 mm longa. *Petala* 4 alba glandulosa 6—8 mm longa. *Stamina* numerosa alba 17.5—20 mm longa, antheris oblongis. *Ovarium* 2-loculare; ovulis numerosis in placenta peltata prominente dispositis, stylo 25—30 mm longo. *Fructus* maturus ignotus.

J a v a, Res. Batavia, Tjijtjadas, alt.: ± 100 m: *Van Steenis* 5408 (flow. on 18-VI-1933): type specimen in Herb. Hort. Bog., also distributed by Buitenzorg to B, K, L, SING. and to E. D. Merrill; Buitenzorg: *Boerlage* s.n. (flow. on 29-XII-1888) in Herb. Lugd. Bat.; Buitenzorg, Tegal Sapi: *E. C. Bakhuizen van den Brink* f. 3128 (immature fr. on 3-I-1924) in Herb. Utr.

Allied to *S. sexangulatum* (Miq.) Amsh., but differing by its ternate flowers and by the form of the receptacle (the pseudostipe is wanting in *S. sexangulatum*).

Syzygium sexangulatum (Miq.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 28 — *Jambosa sexangulata* Miq., Fl. Ind. Bat. I, I, 423 (1855) — *Eugenia sexangulata* (Miq.) Koord. et Val., Booms. Java VI, 79 (1900); Sch.fl. 514.

Syzygium aemulum (Bl.) Amsh., nov. comb.; N. Fl. IVb, fam. XCVIII, 28 — *Jambosa aemula* Bl., Mus. Bot. Lugd. Bat. I, 99 (1849) — *Eugenia aemula* (Bl.) Koord. et Val., Booms. Java VI, 76 (1900) (non Diels, 1907); Sch.fl. 522.

Imperfectly known species, nearly allied to *S. sexangulatum* (Miq.) Amsh., but with terete branchlets and smaller flowers.

Several *Syzygium*-species described from Java are still imperfectly known. Of *S. subcapitellatum* Miq., *Jambosa Horsfieldii* Miq. (no type specimen extant) and *J. polyneura* Miq. the type specimen is very fragmentary or quite absent; these species can best be neglected altogether. *Eugenia bantamensis* Koord. et Val. also could not be inserted in the Flora van Java, as its inflorescence is unknown.

Tristania Bakhuizeni Backer, nov. spec.¹⁾; N. Fl. IVb, fam. XCVIII, 33 — *Arbor* 20—50 m alta, trunco recto cylindrico, cortice griseo, longis pannulis secedente, ligno duro rubro. *Ramuli* acute angulati, minute adpresso pubescentes. *Folia* remota brevipetiolata vel subsessilia, novella rubida minute adpresso pubescentia, adulta glabrescentia coriacea, valde variabilia, in arboribus juvenilibus 120—350 mm longa, 25—55 mm lata, lanceolata vel lanceolato-ovata, basi longe angustata satis profunde sagittata vel subcordata interdum amplexicaulia lobis basalibus 2.5—17.5 mm longis, apice subabrupte obtuse acuminata vel obtusa, in arboribus vetustioribus 60—130 mm longa, 15—35 mm lata, basi subcordata vel rotundata vel acuta, apice obtuse acuminata; nervi secundarii paulo prominentes permulti, paralleli inter se 3.5—5 mm distantes oblique adscendententes, uniti nervo intramarginali conspicuo a margine revoluto c. 1 mm distante; petioli usque ad 7.5 mm longi. *Inflorescentiae* cymosae pedunculatae, pedunculi 25—40 mm longi breviter pubescentes ramificationibus brevibus apice nonnullos flores confertos gerentes. *Calycis* tubus obconoideus c. 3 mm altus perminutus pubescens, lobi late triangulares acuti 1.3—2 mm longi fimbriati, post anthesin stellatim patentes. *Petala* brevissime unguiculata, laminis rotundis c. 2 mm diametentibus. *Stamina* fasciculata c. 3 mm longa, pro fasc. c. 10 inaequalia. *Ovarium* apice liberum convexum minute pubescens, stylo c. 4 mm longo basi pubescente. *Fructus* seminaque adhuc ignoti.

J a v a, Buitenzorg, above Nangela, S.W. of Leuwiliang, alt.: 750 m: *Bakhuizen van den Brink* 7752 (flow. on 27-XII-1930): type specimen in Herb. Hort. Bog. (flow. in liq.); duplicate in Herb. Lugd. Bat. (without flowers), distributed as *T. Maingayi* Duthie; probably from same locality: *Bakh. v. d. Br.* 7753 in Herb. Hort. Bog. (flow. in liq.), distributed as *T. spec.*

The present species is thus far only known from the forest on the northwestern foothills of Mt Salak at an altitude of 500—900 m, where it is locally abundant.

It is closely related to *T. obovata* Benn. from Sumatra, Bangka, Biliton and Borneo, a species showing quite similar juvenile forms. However, *T. obovata* preferably grows in brackish and peaty swamps as well as in the adjacent very barren and often periodically inundated sandy grounds below 200 m alt. Apart from the considerable difference in habitat, it seems to be advisable, for the time being, to keep the two species separate, not only on account of the difference in the length of the style — a fairly trifling character — but also of the fact that the fruits and seeds of *T. Bakhuizeni* are thus far unknown.

According to a communication by Van Steenis, to whom we owe the draft of the above description, it is presumed that the present species, in spite of some minor differences, might also be identical with *Tristania acutiauris* (Boerl. et Koord.) Beum. (= *Campsoneura acutiauris* Boerl. et Koord.) from Sumatra, of which only one sterile specimen (the type specimen) is known.

¹⁾ Received from Dr Van Steenis, Buitenzorg, under the name of *Tristania sagittata*.

TILIACEAE, N. Fl. IVb, fam. CV (exc. *Elaeocarpus*).

(by A. G. L. Adelbert)

Grewia Microcos L., Syst. ed. XII, 602 (1767); N. Fl. IVb, fam. CV, 19; Sch.fl. 149 — *Grewia paniculata* Roxb., Hort. Beng. [93], (1814); Fl. Ind. II, 591 (1824); Sch.fl. 150.

Although I could not examine the type specimens of these two species, I venture the proposal of combining them, since they seem to be connected by numerous intermediate forms, particularly as concerns the indumentum. Many specimens quoted by Burret (Notizbl. Bot. Gart. Berl. IX, 773 s.s. 1926) could be studied by me and I found that the points of discrimination given in literature often fail to allow an identification of a given specimen.

Grewia retusifolia Kurz in Journ. As. Soc. Beng. XLI, II, 294 (1872); Burret in Notizbl. Bot. Gart. Berl. IX, 716 (1926); N. Fl. IVb, fam. CV, 19.

Java, Res. Soerabaja, Soerabaja, alt.: 10 m: *Dorgelo 206* (flow. on 15-IV-1922) and *1606* (flow. on 7-III-1923); hill behind Koepang, alt.: 25 m: *Dorgelo 367* (flow. on 13-V-1922) and *401* (fr. on 13-V-1922).

A species new for Java. I am not quite certain of the correctness of the name. On identifying it with the key given by Burret the species appears to belong to the group comprising *G. helicterifolia* Wall., *G. polygama* Roxb. and *G. retusifolia* Kurz. On account of insufficient material, the absence of type specimens and insufficient original descriptions it was not possible to state the name with certainty. Neither could Burret attain a decisive conclusion. It is not altogether impossible that our specimens belong to a new species. The name *retusifolia* was provisionally chosen, since, according to Burret, also Merrill seems to have been able to examine material under this name from Java. However, our specimens do not agree in all respects with the original description by Kurz (cf. Burret l.c.).

Grewia acuminata Juss. in Ann. Mus. Par. IV, 91 (1804); N. Fl. IVb, fam. CV, 20; Sch.fl. 151 — *Grewia scabrida* Wall., Cat. nr. 1113 (1828) — *Grewia odorata* Bl., Cat. Btz. 79 (1823).

The identity of these three species has already been mentioned in the Kew Index. As to *G. odorata*, Burret hesitates whether or not to include it. I found the type specimen of *G. odorata* Bl. to agree in all respects with specimens identified as *G. acuminata*. Of the last-named species and *G. scabrida* Wall. the type specimens were not available to me but the study of the specimens, cited by Burret, the literature and the other specimens extant convinced me of the correctness of the identification, since the smooth and glabrous leaves of *acuminata* are connected by many intermediate forms with the coarse and hairy leaves of *scabrida*.

Grewia laevigata Vahl, Symb. Bot. I, 34 (1790); N. Fl. IVb, fam. CV, 21; Sch.fl. 150 — *Grewia guazumifolia* Juss. in Ann. Mus. Par. IV, 89, t. 48, f. 3 (1804) — *Grewia multiflora* Juss., l.c. t. 47 — *Grewia oblongifolia* Bl., Bijdr. 114 (1825) — *Grewia glabra* Bl., l.c. 115.

The remarks made under *Grewia Microcos* L. are also applicable to these species, some of which are kept separate by Burret (Notizbl. Bot. Gart. Berl. IX, 592—880, 1926) whereas he considered *G. guazumifolia* Juss. and *G. oblongifolia* Bl. conspecific. He distinguishes *G. glabra* Bl.

on account of the indumentum of the leaves. I examined the type specimens of both *G. oblongifolia* and *glabra* and arrived at the conclusion that this character does not procure a sufficient base for a specific discrimination, since the indumentum is very variable in all respects.

The differences between the former three and *G. multiflora* Juss. are supposed to include the relative length of petiole and peduncle, but Burret himself makes such restrictions for the various species as to render these differences fictitious. According to my own investigations, the indumentum does not provide us with sufficient distinguishing characters either. However, it must be stated that the type specimen of *G. multiflora* Juss. could not be examined by me.

The most important difference is that which Burret makes between the former four species and *G. laevigata* Vahl. Most authors have considered this group of four and *laevigata* identical but, according to Burret, this is not correct. He places them in two different groups: *laevigata* in the *Oppositiflorae*, the other four in the *Didymae*, discriminating these groups as follows (l.c. 634):

Androgynophorum supra nodum atque infra staminum insertionem fere semper productum, duplex, parte inferiore glabra atque superiore saepe quam illa longiore ± pilosa. Petalorum unguis supra laminae basin squamoso-protractus, lamina conspicue infra illius apicem inserta. *Oppositiflorae.*

Androgynophorum simplex, supra nodum haud productum. Petalorum lamina ex apice unguis exiens *Didymae.*

The results of my own investigation are 1. that the androgynophore and the petals of the type specimens of *G. glabra* Bl. and of *G. oblongifolia* Bl. exactly correspond to the description given by Burret for the *Oppositiflorae*; 2. that, although I did not examine the type specimen of *G. laevigata* Vahl, I could consult one of the numbers of *G. bracteata* Roth cited by Burret; this species also belongs to the *Oppositiflorae* and its gynandrophore perfectly agrees with that of *G. glabra* and *oblongifolia*; 3. that in the Javanese species the gynandrophore can always be considered consisting of two parts, though the hairy upper part may be very short. These considerations led me to consider all the species mentioned above as forms of *G. laevigata* Vahl.

Grewia eriocarpa Juss. in Ann. Mus. Par. IV, 93 (1804); N. Fl. IVb, fam. CV, 20; Sch.fl. 151 — *Grewia celtidifolia* Juss., l.c.; Sch.fl. 151 — *Grewia Koordersiana* Burret in Notizbl. Bot. Gart. Berl. IX, 662 (1926) — *Grewia excelsa* Koord. et Val. (nec Vahl), Bijdr. Booms. Java V, 411 (1894); Koord., Exkurs. Fl. Java II, 575 (1912); Koord. et Val., Atl. Baumart. Java II (1914) f. 395 (excl. auct. cit. atque synon.).

The distinction of these four species was based upon the indumentum, especially of the leaves. On account of a series of transition-forms their specific distinction had to be dropped. As to the nomenclature the following remarks may be made:

Koorders identified his specimen — later on called *Koordersiana* Burret — with *G. excelsa* Vahl and many other authors likewise applied this name to specimens which, by still other investigators, were attributed to *G. eriocarpa*, *celtidifolia* or *Koordersiana*. Burret keeps *excelsa* Vahl and *Koordersiana* apart and it is therefore the more surprising that in his paper no discussion of the former species is found beside the remark that

its proper name should be *G. arborea* (Forsk.) Lamk. Even under *G. Koordersiana* it is not mentioned by which characters this species differs from *G. excelsa* Vahl. As I could not consult the type specimen of the last-named species and the literature concerned does not lead towards any conclusion I am unable to decide whether *G. excelsa* Vahl, although mentioned to occur in Asia, is identical with any of the species quoted. Provisionally, the Java specimens have therefore been kept apart under the name of *G. eriocarpa* Juss.

GONYSTYLACEAE, N. Fl. IVb, fam. CVI.

(by A. D. J. Meeuse)

Gonystylus bancanus (Miq.) Baill., Hist. Pl. VI, 123 (1877); N. Fl. IVb, fam. CVI, 1 — *Aquilaria bancana* Miq., Fl. Ind. Bat. Suppl. 355 (1860) — *Gonystylus Miquelianus* T. et B. in Bot. Zeit. XX, 265 (1862).

STERCULIACEAE, N. Fl. IVb, fam. CVII.

(by A. G. L. Adelbert)

Melhania javanica Adelb., nov. spec.; N. Fl. IVb, fam. CVII, 5 — *Suffrutex* erectus, saepe ramosissimus, 0.5—1.5 m altus. *Caulis* brunneus vel badius teres glaber, ramulis densis dilute luteo-viridibus minute stellato-pubescentibus-tomentosis. *Folia* alterna simplicia subcordata ovata vel ovato-oblonga, basi rotundata vel subcordata, apicem versus sensim angustata vel subacuminata acuta, crenato-denticulatis, supra basin quinque nerviam utrinque praedita nervis lateralibus 4—6 subtus prominentibus supra vix sulcatis, marginem versus haud conjunctis, in denticulos terminantibus, supra modice. subtus dense pubescentia, 25—75 mm longa, 12.5—55 mm lata (basi); stipulae filiformes caducae 5—7.5 mm longae, cum petiolis subteretibus 10—27.5 mm longis dense pubescentes. *Inflorescentiae* conferte racemosae, pedunculatae, axillares, 2—5-florae, dense pubescentes, pedunculo 5—40 mm longo. *Flores* pentameri, bracteolis calycis basi adpressis 3 lanceolatis supra medium latioribus acutis vel acute acuminatis, utrinque pubescentibus, pedicellis teretibus, 2.5—10 mm longis. *Sepala* libera lanceolata longe acute acuminata, extus pubescentia, intus praeter apicem glabra, 10—12.5 mm longa. *Petala* in toro plano longe persistentia verum-tamen ante fructuum maturitatem decidua, late obovata laete lutea, glabra 5—10 mm longa. *Tubus* stamineus brevis membranaceus, stamina 5, staminodia 5 taeniiformia vel spathulata, 5—7.5 mm longa, filamentis c. 5 mm longis, antheris longe sagittatis. *Ovarium* sessile 5-loculare dense pubescens, loculis pauci-ovulatis, stylo 5-fido, stigmatibus introrsis. *Capsula* loculicide 5-valvata pubescens globosa vel ovoidea calyce brevior 5—10 mm longa, loculis pauci-seminatis, seminibus c. 2.5 mm longis.

Java, E. Java, Besoeki, Asem Bagoes, about 20 m alt.: Backer 8145 (flow. and fr. on 27-V-1913): type specimen in Herb. Lugd. Bat. (distributed as *Melhania incana* Heyne).

In his "Onkruidflora", p. 448, this species was quoted by Backer as *Melhania incana* Heyne (in Wall. Cat. nr. 1200). It differs, however, from that species mainly in the leaves which in *M. incana* are narrowly ovate-

oblong or ovate-lanceolate, tapering gradually from the rounded base to the broadly rounded apex, almost entire, and 8—12 mm broad at base (cf. Hooker, Fl. Brit. Ind. I, 372, 1875 and Bentham, Fl. Austral. I, 234, 1863).

Melhania javanica is locally abundant in grassy wilds and thickets on sandy soil, at an altitude of 5—20 m in the driest part of the very north-eastern part of Java.

Sterculia rubiginosa Vent., Jard. Malm. sub t. 91 (1804); N. Fl. IVb, fam. CVII, 21 — *Sterculia Staphiana* K. Schum. in Engl. Jahrb. XXIV, Beibl. LVIII, 19 (1897).

Sterculia cordata Bl., Bijdr. 83 (1825); N. Fl. IVb, fam. CVII, 21 — *Sterculia javanica* R. Br. in Benn., Pl. Jav. Rar. 230 (1844); Sch.fl. 138.

Sterculia coccinea Jack (non Roxb.) in Malay Misc. I, I, 20 (1820); N. Fl. IVb, fam. CVII, 22 — *Sterculia laevis* Wall., Cat. nr. 1138 (1828); Wall. apud Jack in Hook., Bot. Misc. III, 287 (1830); Sch.fl. 137 — *Clompanus coccinea* (Jack) O.K., Rev. Gen. Pl. I, 77 (1891).

Sterculia Treubii Hochr. in Bull. Inst. Buitenz. XIX, 20 (1904); Pl. Bogor. Exsicc. 4 (1904); N. Fl. IVb, fam. CVII, 23; Sch.fl. 137 — *Sterculia nesogenes* Hochr. in Candollea II, 430 (1925).

Sterculia Hamiltonii (O.K.) Adelb., comb. nov.; N. Fl. IVb, fam. CVII, 23 — *Clompanus Hamiltonii* O.K., Rev. Gen. Pl. I, 77 (1891) — *Sterculia coccinea* Roxb. (non Jack), Hort. Beng. 50 (1814); Fl. Ind. III, 151 (1832); Sch.fl. 137 — *Sterculia lanceolata* Ham. (non Cav.) in Wall., Cat. nr. 1122 (1828).

Sterculia monosperma Vent., Jard. Malm. (1804) t. 91; N. Fl. IVb, fam. CVII, 23 — *Sterculia nobilis* R. Br. (non Sm.) in Benn., Pl. Jav. Rar. 231 (1844).

Sterculia longituba Adelb., nov. spec.; N. Fl. IVb, fam. CVII, 25 — *Arbor?* Innovationes glabrae fuscae, cortice valde rugoso, multis lenticellis ovalibus albis, cicatricibusque foliorum delapsorum praeditae. *Folia* ad ramulorum apices conferta alterna simplicia glabra integra coriacea 90—300 mm longa, 35—130 mm lata, obovato-oblonga, basi angustata subacuta, obtusa, rotundata vel subcordata, apice brevissime acuminata, nervis lateralibus utrinque 9—12, utroque latere prominentibus arcuatim conjunctis, stipulis caducis, petiolo glabro basi apiceque incrassato laevi 7.5—40 mm longo. *Inflorescentiae* andromonoicae paniculatae pedunculatae pendentes satis ramosae multiflorae, glabrae vel subglabrae, ex axillis foliorum vel eorum cicatricibus ortae, 15—30 cm longae, bracteolis lanceolato-linearibus acutis parce pubescentibus 5—6 mm longis caducis. Pedicelli leviter pubescentes articulari gracillimi 6—17 mm longi. *Calyx* extus rubro-viridis glaber, tubo subanguste campanulato, basi saepe abrupte contracto, intus rubidus, pilis glanduliferis sacchariferis vestitus, sepala e basi lata linearis-subulata marginibus revolutis tubo subaequilonga erecto-patentia, basi rubro-viridia, apices versus flavo-virescentia; 7—10 mm longa, intus pilis stellatis parvis cum pilis longis setaceis intermixtis instructa. *Corolla* deest. ♂: gynandrophorus 2 mm longus parce pubescens, apice 10—11 antheris sessilibus fasciculatis praeditus, thecis 2 parallelis pistilli rudimenta includentibus. Herm.: gynandrophorus 0.7 mm altus, apice sub ovariorum basibus 10—11 antheras irregulariter verticillatas sessiles gerens, ceterum ut in ♂. *Ovaria* et stylis 5 connexi dense stellato-pubescentes, stylis clavatis recurvatis. *Folliculi* 1—5 liberi basi an-

gustata sessiles oblongi, rostello curvato coronati velutini laete rubri, intus longe albo-pubescentes, c. 90 mm longi; *semina* in fructu unico dissecto 7.

J a v a: *Cultivated* in the *Buitenzorg Botanical Garden* under nr. IV. I. 169; said to originate from Java (exact locality unknown); type specimen in Herb. Lugd. Bat.

EUPHORBIACEAE, N. Fl. IVc, fam. CXII.

(by A. G. L. Adelbert and A. D. J. Meeuse)

Antidesma montanum Bl., Bijdr. 1124 (1826); N. Fl. IVc, fam. CXII, 36 — **Antidesma Teysmannianum** Pax et K. Hoffm. in Engl. Pflanzenr., Euphorb.-Phyllanthoid.-Phyllanth. 144 (1922).

Glochidion glomerulatum (Miq.) Boerl., Handl. Fl. Ned. Indië III, 276 (1900); N. Fl. IVc, fam. CXII, 45 — **Glochidion palustre** Koord. in Bull. Jard. Bot. Buitenz., Sér. III, I, 145 (1919).

Phyllanthus trichosporus Adelb., nov. spec., N. Fl. IVc, fam. CXII, 59 — **Fruticulus erectus**, ± 1 m altus. Caulis aequaliter ramosus ramulique valde rubro-suffusi apice angulato-complanati glabri. *Folia* in caule primum rudimentaria anguste triangulari-linearia acuta 0.5—1 mm longa; stipulis appertinentibus elongate triangularibus acutis vel acute acuminatis 2—2.5 mm longis; folia ramulorum lateralium alternatim bifaria oblique ovato-ovalia, obovato-ovalia vel obovato-oblonga, basi ± acuta, apice acuta vel plerumque brevissime acute acuminata mucronata glabra integerrima herbacea, costa subtus sub prominente, nervis lateralibus utrinque 5—9 satis longe a margine arcuatim anastomosantibus; folia (subtus praesertim) satis distincte venulosa 10—25 mm longa, 5—9 mm lata; petiolis 1—1.25 mm longis. *Flores* ♂ in axillis inferioribus subracemulosis; racemulis subsessili bus 1—4-floris; pedicellis filiformibus summo apice incrassatis glabris 2—3 mm longis; *tepala* 4 late ovalia, apice rotundata vel obtusissima tenuiter membranacea integerrima glabra, ± 2 mm longa et lata; glandulae disci connatae in angulum crassum suberenulatum, basin gynandrophori cingentem; gynandrophorus conicus truncatus in medio apice pistillodium columnare tenue antheras paulo superans gerens, ad marginem antheris 2 oppositis sessilibus horizontalibus praeditus; antherae bilocularis loculis inferne divergentibus decussatis. *Flores* ♀ solitarii in axillis superioribus, pedicellis suberassiusculi filiformibus sub anthesi 2—3 mm longis, postea accrescentibus, sub fructu maturo ± 5 mm; *tepala* 6, infra discum producta et inter se connata in conum inversum pedicelli apicem cingentem 1.5—2 mm longum, supra conum ovali-suboblonga acuta membranacea integerrima intus prope basin subcarinata, sub anthesi 3—3.5 mm longa, ± 2 mm lata, postea valde accrescentia sub fructu maturo 6—6.5 mm longa, ± 3 mm lata; discus annularis vel subcupularis 6-lobus margine undulatus; *ovarium* depresso globosum sulcis longitudinalibus 3 subprofundis et 3 cum eis alternantibus subinconspicuis percursum, laeve glabrum; *ovula* collateralia; *stylis* 3 basi brevissime connatis late divergentibus denique horizontaliter patentes ± 1 mm longis, ± usque ad medium partitis in ramos 2 filiformes obtusos apice incurvos recurvosve; *capsula* depresso globosa leviter triloba apice impressa glabra laevis ± 3 mm alta, 4—4.5 mm lata, trilocularis; *pericarpio* ab endocarpio solubili; endocarpium in cocca 3 bivalvia bisperma dissiliens, *columna centrali* persistente; *semina* dorso convexo lateribus

planis, ± 2 mm longa, pilosa; pilis in sicco arcte adpressa, madefactis patentissimis, tenuissimis pallidis usque ad 0.5 mm longis.

Celebes, S.E. Celebes, Boembia, Liano, on dry grounds, in brushwood on weathered phyllites, alt. 25—250 m: *J. Elbert 3010* (flow. and fr. on 12-IX-1909): type specimen in Herb. Lugd. Bat.

Java, Soerakarta, Goenoeng Kidoel between Djepitoe and Kalak, on dry grounds along wayside, alt. 200 m: *C. A. Backer 2774* (fr. on 12-IV-1912).

This plant, which by its pilose seeds differs from all other species of the genus known to me, belongs to the section *Eriococcus* (Hassk.) M. A. It resembles *P. Rheedii* Wight which differs, however, by the linear disk-lobes in the ♀ flower and by the glabrous seeds.

Sauropus spectabilis Miq., Fl. Ind. Bat. Suppl. 446 (1860); N. Fl. IVc, fam. CXII, 63 — *Sauropus Wichurae* M. A. ex Pax et K. Hoffm. in Engl. Pflanzenr., Euphorb.-Phyllanthoid.-Phyllanth. 220 (1922).

Ostodes pendula (Hassk.) A. Meeuse, nov. comb.; N. Fl. IVc, fam. CXII, 109 — *Croton pendulum* Hassk., Pl. Jav. Rar. 266 (1848) — *Paracroton pendulum* (Hassk.) Miq., Fl. Ind. Bat. I, II, 382 (1859) — *Ostodes macrophylla* (M. A.) Bth. et Hook.f., Gen. III, 299 (1883), (sub *Trigonostemon macrophylla* M. A.).

CAESALPINIACEAE, N. Fl. Va, fam. CXVIII.

(by C. A. Backer)

Maniltoa brownneoides Harms, Notizbl. Bot. Gart. Berlin, III, 190 (1902); N. Fl. Va, fam. CXVIII, 7 — *Maniltoa gemmipara* Scheff. ex Backer, Sch.fl. 424.

This species has been cultivated for many years in the Botanic Gardens at Buitenzorg under the name of *M. gemmipara* Scheff. It has been imported as an ornamental tree in Javanese gardens and the name was published without a valid description in the Schoolflora (1911). The species had, however, already been validly described by Harms in 1902 as *M. brownneoides*.

It is quite unbelievable that this plant, as is mentioned on the label of the type specimen, should have been collected by Forbes in S.E. Java. In the Herb. Lugd. Bat. many plants are preserved which bear the same indication on their labels. The origin of this mistake is as yet unknown. Forbes has probably never visited S.E. Java as may be inferred from the map in his "A Naturalist's Wanderings".

Sindora javanica (Koord. et Val.) Backer, nov. comb., N. Fl. Va, fam. CXVIII, 8 — *Sindora sumatrana* Miq., var. *javanica* Koord. et Val., Bijdr. Booms. Java, II, 45 (1845); Sch.fl. 423.

The type of *Sindora sumatrana* Miq. differs by glabrous leaves, orbicular to broadly ovate, much smaller (30—50 mm long, 30—35 mm broad) and indehiscent pods with 2—3 mm long spines, much smaller funicles (3—4 mm broad, much narrower than the seed) and smaller, more oblong and thicker seeds (10—13 mm long, 8—9 mm broad).

The statement by Koord. & Val. (Bijdr. Booms. Java, II, 46) that the pods and seeds of *S. javanica* are similar to those of *S. sumatrana* has its source in the fact that pods of *S. sumatrana*, bought on a Javanese market, occur in the material of *S. javanica* in Herb. Koorders. These

pods are regularly kept for sale on the pasars (markets) in Java and from this the authors incorrectly inferred that they were hailing from Java. In fact, the *Sindora*-pods, occurring in the Javanese medicine trade, are imported from Palembang (Sumatra).

Bauhinia leptopus Perk., forma *javanica* Backer, nov. form., N. Fl. Va, fam. CXVIII, 20 — *Frutex scandens*. *Folia* ovato vel ovato-oblonga, 60—125 mm longa, 40—80 mm lata, basi subcordata vel truncata, apice breviter acuminata leviter emarginata vel subintegra, glabra, supra nitida intense viridia, subtus novella minute adpresso fusco-pubescentia glabrescentia. *Inflorescentiae* saepe in ramulis pumilis positae dense brunneo-pubescentes, magnam paniculam foliosam efformantes. *Flores* perfragrantes, pedicellis 15—40 mm longis. *Calyx* dense breviterque brunneo-pubescentis, tubo 7—13 mm alto, limbo 6—8 mm longo 3—4-valvato. *Petala* primo luteo-alba, deinde rubra, fusco-pubescentia, ungue 4—5 mm longo, lamina 11—21 mm longa et lata, petalo postico minore. *Stamina* 3, staminodia 7—10, plerumque 8. *Stigma* latum. *Legumen* (nondum maturum) 80—120 mm longum, 30—45 mm latum; semina 4 vel pauciora.

Java, W. Java, Tjitjeroeg (nowadays Djampang Koelon), S.W. corner of the Preanger, alt. 300—750, m: Backer 17253 (18-XI-1914): type specimen; Lengkong, Preanger: Backer 17016, 17043 (13 and 14-XI-1914).

Differs from the type (Philippines) by the much shorter pedicels (in type 70—80 mm), from the closely related *B. Kockiana* Korth. from Sumatra and Borneo by the much shorter calyxtube (in *B. Kockiana* 16—30 mm) and by the leaves which, in *B. Kockiana* are cuneate to obtuse or rounded at base.

Cassia javanica L., var. *acutifolia* Van Steen., nov. var., N. Fl. Va, fam. CXVIII, 29 — *Foliola* 14—20, eis *C. nodosae* Buch.-Ham: similia, oblonga vel acutiuscula, supra valde nitida, subtus opaca, 40—70 mm longa, 22.5—32.5 mm lata. *Pedicelli* 35—45 mm longi. *Flores* ut in typo, semper ante fructificationem decidui.

Java, W. Java, Krawang, Michiel-Arnolds-Estate, near Lemah Abang, in forest skirt, about 25 m alt.: nr. ?

In the above-mentioned locality three specimens were collected which differ from the genuine *C. javanica* L. However, a further examination is required to state whether the newly described variety possibly represents a hybrid between the last-named species and *C. nodosa* Buch.-Ham.

Mezoneurum sumatranum Wight et Arn., Prod. 283 (1834); N. Fl. Va, fam. CXVIII, 48 — *Mezoneurum Koordersii* Backer ex Koord.-Schum., Syst. Verz. I, Fam. 128, 36 (1911); Sch.fl. 396 — *Mezoneurum sulfureum* Miq., Fl. Ind. Bat. I, I, 105 (1860); Sch.fl. 397.

The type specimen of the last-named synonym (Herb. Utr.), consisting of several detached leaves and two detached flowers, has been incorrectly described as possessing 14 pairs of leaflets. The correct number is 4—7 pairs.

MIMOSACEAE, N. Fl. Va, fam. CXIX.

(by C. A. Backer)

Albizia sumatrana Van Steenis, nov. spec., N. Fl. Va, fam. CXIX, 12 — *Arbor* inermis celeriter crescens 20—25 m alta. *Rami* glabri griseo-

brunnei, multis lenticellis pallidis c. 5-fariis, lineis plus minusve tortuosis, muniti, petiolorum cicatricibus satis magnis transversis in 3 carinas (laterales crassiores) decurrentibus, axilla 2 cicatricibus superpositis, basali gemmae haud excretae, apicali inflorescentiae delapsae praedita. Ramulorum apices cum petiolis rhachidibusque dense minuteque ferrugineo-pubescentes. *Folia* novella aureo-brunnea. Petoli 20—40 mm longi cum rhachide supra sulcati, subtus cum rhachidis parte basali conspicue 3-costati, rhachidis parte apicali tereti, petiolo 50—170 mm longo, apice glandula scutelliformi circulari 2 mm diametriente rubro-marginata (intus 1 mm diam. viridi) munito. Pinnae oppositae utrinque 8—13, supra articulationem 2 mm longam sessiles, 2 pinnarum apicalium articulationes plerumque binis stipellis saepe caducis uno latere breviter subulatis, uno praeterea glandulosis munitae. Pinnarum rhachides 45—75 mm longae, supra intense, subtus pallide virides, teretes minute albo-pubescentes. Foliola pro pinna utrinque 15—25 opposita, supra viridia minutissime pubescentia, subtus glauca, costa media a margine antico 0.75—1 mm distante, praecipue basi dense pubescentia, apice obtusa vel rotundata mucronulata, basi antice angustata, postice dilatata, inter venas subtus sparse minute pubescentia. *Inflorescentiae* paniculatae foliatae rotundiusculae subtruncatae c. 150 mm longae e capitulis compositae. Capitula ± 6 in axillis foliorum posita 15—20-flora, capitulorum flore medio majore, pedunculis 20—40 mm longis, pedicellis 1—3 mm longis, calycibus corollisque luteo-viridibus dense minute aureo-brunneo-pubescentibus. *Calyx* tubulosus apice paulo dilatatus 2.5—3.3 mm altus margine 5-dentatus, dentibus acute triangularibus c. 0.5 mm longis erectis vel paulo conniventibus. *Corolla* c. 6 mm longae tubus 2—3 mm e calyce exsertus tubulosus, apice paulo dilatatus, lobis quam tubus brevioribus acute triangulari-oblongis c. 15 mm longis, apice brevissime albo-penitillatis. *Stamina* 19—25 alba, 10—11 m e corolla exserta, erecta vel paulo divergentia, tubus stamineus in corollae tubo inclusus, antheris minimis sulfureis 0.2 mm longis, 0.25 mm latis, connectivo minutissime mucronulato, thecae bis longae quam latae. *Ovarium* gynophoro 1 mm longo suffultum, viride, 2 mm longum, suturis nonnullis pilis adpressis ferrugineis praeditis, stylo c. 14 mm longo albo, stigmate punctiformi. *Legumen* basi in carpophorum 6—8 mm longum angustatum, apice truncatum mucrone 1—2 mm longo stylari coronatum, 8—10 cm longum 15 mm latum, flavum, tenue obscure ferrugineum, cum indumento ferrugineo, 17—23-spermum, suturis incrassatis; semina nondum vidi.

J a v a, Buitenzorg, Tea Experiment Station, alt.: ± 250 m: *Prillwitz* s.n. (flow. on 9-VI-1933): type specimen in Herb. Lugd. Bat., duplicate in Herb. Hort. Bog.

This species was originally discovered during the process of deforestation on behalf of the Plantation "Boekit Gompang" in Sumatra's West Coast, alt. about 1150 m. From there it was in 1927, through the Tea Experiment Station at Buitenzorg, distributed throughout Java as a shadowing and a green manuring tree (cf. Prillwitz, *Albizia sumatrana* als schaduwboom in theetuinen, Archief Theekult. N. I. no. 3, 1931, 129—134, 4 figs; and Encycl. N. I. VI, Suppl. II, 1932, 864). The description was kindly put at our disposal by Dr C. G. G. J. van Steenis of the Buitenzorg Herbarium.

In young specimens the crown is hanging over, in adult ones it is erect.

PAPILIONACEAE, N. Fl. Va et b, fam. CXX.

(by C. A. Backer)

Sophora Wightii Baker in Hook. f., Fl. Brit. Ind. II, 250 (1879); N. Fl. Va, fam. CXX, 26 — *Millettia Koordersii* Backer ex Koord.-Schum., Syst. Verz. I, Fam. 128, 43 (1911); Sch.fl. 326.

Crotalaria triquetra Dalz., var. *tetragona* (Miq.) Backer, nov. var., Sch.fl. 311; N. Fl. Va, fam. CXX, 35 — *Crotalaria tetragona* Miq., Fl. Ind. Bat. I, I, 335 (1855) non Roxb.

Millettia rufa Backer, nov. spec., N. Fl. Vb, fam. CXX, 62 — *Frutex scandens*. *Rami* dense brunneo-pubescentes. *Stipulae* oblique ovato-falcatae acutae, longe pilosae, c. 7.5 mm longae. *Folii* rhachis dense brunneo-pubescentes, petiolo 70—110 mm longo computato 140—200 mm longa, estipellata; foliola 7—9 subcoriacea, petiolulis 7.5—12.5 mm longis, oblongo-lanceolata vel obovato-lanceolata, basi acuta vel obtusa vel rotundata, apice acuminata, supra (nervis longe pilosis exceptis) glabra, subtus dense longiuscule obliquo-erecte pubescencia, 60—120 mm longa, 25—32.5 mm lata, costa media utrinque prominens, nervi laterales utrinque c. 8 oblique adscendentibus, prope margines curvati, margines haud attingentes. *Inflorescentiae* paniculatae solitariae erectae axillares 200—300 mm longae remotae, rhachide densissime erecte longiuscule brunneo-pilosa, bracteis mox eaducis ovato-oblongis acutis fornicatis, dorso dense longiuscule fusco-pilosus, 4.5—5 mm longis; inflorescentiae partiales in rhachidis verrucis fasciculatae, inferiores c. 8-florae, superiores pauciflorae, pedicelli dense fusco-pubescentes, c. 1.5 mm longi, bracteolis fugaces, calyci adpressis, oblongis obtusis fornicatis c. 2.5 mm longis, extus dense fusco-pubescentibus. *Calyx* late cupuliformis, extus densissime longe brunneo-pubescentes, intus glaber, c. 4 mm altus, dente inferiore triangulari, c. 0.2 mm longo; ceteris dentibus fere nullis. *Corolla* lilacina; vexillum (cum ungue 2—2.5 mm longo) c. 12 mm longum, 8—9 mm latum, lamina late ovalis, basi exauriculata in unguem cuneatim angustata, 2 tuberculis parvis carinatis in unguem decurrentibus ornata, apice late rotundato-truncata, extus secus margines dense adpresso-fusco-pubescentes; alae carinaque subaequilongae, alae, ungue 4—4.5 mm longo computato c. 12 mm longae, lamina oblongo-linearis, apice rotundata vel obtusa leviter sursum curvata, basi margine superiore truncata vel breviter auriculata; carinae laminae falcatae obtusissimae, margine superiore profunde introrsum plicata, apice margine inferiore densiuscule breviter pubescente. *Stamen* vexillare liberum, ceteris filamentis connatis, tubo stamineo postice fisso; antherae ovoideae satis parvae, in staminibus brevioribus c. in medio, in longioribus paulo supra basin affixae. *Ovarium* sessile lineare densissime fusco-pubescentes, ovulis (in 2 floribus dissecatis) 6, stylo basi anguste conoideo dense fusco-pubescente, alioquin glabro, sursum curvato. *Legumen* adhuc ignotum.

J a v a, C. Java, S. Kediri, bay of Popoh, near coast: Dorgelo 1770 (9 to 11-V-1923): type specimen in Herb. Lugd. Bat.

Sarcodum scandens Lour., Fl. Cochinch. 462 (1790); N. Fl. Vb, fam. CXX, 63 — *Cianthus Binnendijkianus* Kurz in Journ. As. Soc. Beng. XL, 51 (1871).

Sesbania sericea (Willd.) Link, Enum. Hort. Berol. II, 244 (1822);

et ex Desv. in Mém. Soc. Linn. Par. IV, 300 (1826); N. Fl. Vb, fam. CXX, 66 — *Sesbania polypylla* Miq., Fl. Ind. Bat. I, I, 288 (1855).

Sesbania javanica Miq., Fl. Ind. Bat. I, I, 288 (1855); N. Fl. Vb, fam. CXX, 66 — *Sesbania grandiflora* Miq. (non Pers.), Fl. Ind. Bat. I, I, 288 (1855) — *Sesbania Roxburghii* Merr. in Philipp. Journ. Sci. IV, 269 (1909) — *Sesbania paludosa* Prain in Journ. As. Soc. Beng. LXVI, 82 (1897); Sch.fl. 330.

Smithia ciliata Royle, Illustr. Bot. Himal. 201 t. 35, f. 2 (1839); N. Fl. Vb, fam. CXX, 71 — *Smithia coerulescens* Zoll. et Mor. in Nat. en Geneesk. Arch. Neerl. Ind. III, 76 (1846); Sch.fl. 334.

Uraria candida Backer, nov. spec. — *Suffrutex* erectus, parce ramosus haud longe vivens; radice paleari longa. *Caulis* superne densissime vestiti pilis patentibus brevibus uncinatis (saepe additis pilis patentibus rectis longioribus brevioribusve), tarde glabrescentes; stipulae erectae, e basi lata acute acuminatae, 3—6 mm longae caducae. *Folia* pinnatum 3- vel 5-foliolata, inferiora saepe unifoliolata; rhachis (petiolo 20—120 mm longo computato) 25—180 mm longa, pilis patentibus brevibus uncinatis dense vestita; stipellae anguste linearisubulatae 2—4 mm longae; petioluli 2—4 mm pilis patentibus uncinatis rectisque dense vestiti; foliola late ovata, ovata vel ovato-oblonga, basi subcordata, late rotundata vel obtusissima, apice obtusa acutave, mucronata herbacea tenuiscula, supra glabra, infra glauca, reticulata, pilis patentibus brevissimis longioribusque (pro parte uncinatis) densiuscule vestita, in nervis majoribus et secus margines saepe pilis longis subappressis munita; foliolum terminale vel unicum 3—15 cm longum, 12.5—100 mm latum; lateralia 12.5—120 mm longa, 5—55 mm lata. *Racemi* terminales, solitarii, interdum praeterea prope apices caulis ramorumque solitarii in axillis foliorum evolutorum suppressorumve (hoc in casu 2—5 valde approximati), paniculam haud efformantes, sessiles subsessilesve, erecti, 80—200 mm longi. *Inflorescentiae* rhachis densissime vestita pilis patentibus uncinatis brevibus, praeterea munita pilis multis rectis tenuibus longioribus brevioribusve. *Bracteae* infimae longe persistentes, vacuae late ovatae acute acuminatae, 10—12 mm longae, 5—6 mm latae, superiores angustiores gradatim breviores, flores binos suffulcantes, deciduae; supremae 6—8 mm longae, 2 mm latae; bracteae omnes longe ciliatae, in dorso pilis adpressis longis munitae; flores supremi saepe abortivi. *Pedicelli* ante florum expansionem oblique patentes postea subhorizontaliter divergentes, prope apicem incurvati (ex eo uncinati), teretes, ima basi pilis longis patentibus muniti, ceteroquin tota longitudine pilis uncinatis brevibus patentibus dense vestiti, 6—8 mm longi. *Calyx* albus, pilis patentibus minutis dense vestitus; segmenta praeterea (praecipue secus marginem) dense vestita pilis patentibus tenuibus rectis, ± 1.5 mm longis; tubus 1.75—2 mm longus; segmenta e basi breviter triangulari subulata; 2 superiora 2—2.5 mm longa, pro dimidia fere parte connata, reliqua 3.5—4.5 mm longa. *Corolla* candida; vexillum breviter unguiculatum obovatum levissimè emarginatum supra basin maculis duabus parvis virido-flavis parum conspicuis notatum, 8.5—11 mm longum; alae breviter unguiculatae oblongo falcatae obtusa; carina alas subaequans; unguiculi 3.5—4 mm longi; laminae oblique obovato-semicirculares obtusissimae. *Stamina* 10 c. 7 mm longa glabra, uno libero novem filamentis connatis; antherae ignotae. *Ovarium* longe pilosum; stylus

longus in dimidia parte superiore conspicue incrassatus glaber; pars inferior longe pilosa. *Legumen* breviter stipitatum, e calyce longe exsertum, nigro-brunneum vel brunneum, dense hirtellum; articulis 3—5, plicato-retrofractis, elliptico-ovalibus, 4—5 mm longis, 3.25—3.5 mm latis.

K a n g e a n Archipelago, Isl. of Bangko, in grassy wilds and thickets: Backer 29188 (29-IV-1919): type specimen; Isl. of Sæboes, grassy wilds: Backer 29136 (28-IV-1919); Isl. of Paliat, teakforest: Backer 29408 (2-V-1919) and 29589 (6-V-1919), all in Herb. Hort. Bog.

Endemic

Derris caudata Backer, nov. spec., N. Fl. Vb, fam. CXX, 104 — *Frutex* volubilis, 2—4 m longus. *Rami* cortice laete brunneo tecti, lenticellis permultis rotundis pallide brunneis verruciformibus muniti. *Foliorum* rhachis, petiolo 60—100 mm longo computato, 120—220 mm longa, petiolulorum insertionibus exceptis glabra, estipellata; petioluli 5—8 mm longi; foliola 7 vel 9 oblonga vel ovato-oblonga, basi rotundata, apice obtuse caudato-acuminata, glabra, 75—150 mm longa, 35—80 mm lata, nervi laterales utrinque 6—10 arcuatim adscendentibus tenues tamen conspicui. *Inflorescentiae* paniculatae, saepe in foliorum axillis delapsorum subinnovationibus solitariae sed plerumque 2—9 confertae, brevipedunculatae, cum pedunculo 70—150 mm longae, glabrae; inflorescentiae partiales triflorae pedunculo 7—9 mm longo, ex axilla bracteae ovato-triangularis fornicatae 1.25—1.5 mm longae persistentis orto stipitato, pedicelli 9—10 mm longi ex axillis bractearum similius sed minorum orti, prope apicem articulati et bibracteolati; bracteolis per anthesin persistentibus late ovatis, apice obtuso vel rotundato fimbriatis, 1.25—1.5 mm longis. *Calyx* rubidus, 3—4 mm altus late campanulatus, extus glaber, intus (marginie dense adpresso minute pubescente excepto) glaber, dentibus superioribus minimis vel nullis, medianis latis obtusissimis, inferiore triangulare 1—1.5 mm longo. *Corollae* vexillum glabrum recurvum, unguiculus c. 2 mm longus, lamina ovata apice late rotundata emarginata, basi interdum minute biauriculata, haud tuberculata, rubro-purpurea basi viridis, c. 12 mm longa, 9 mm lata; alae carinaque aequilongae, unguiculus c. 5 mm longa computatis, 12—13 mm longi; alarum laminae basi satis firme carinae laminae basi adhaerentes, anguste oblongo-falcatae, apice rotundatae, basi margine superiore truncatae vel breviter obtuseque auriculatae; carina quam alae paulo latior, lamina oblongo-falcata, apice et basi margine superiore rotundata, secus marginem superiorem profunde introrsum plicata. *Stamen* vexillare supra basin liberam ceteris staminibus unitum. *Ovarium* breviter stipitatum lineare densissime adpresso pubescens; ovula 3 remota; stylus supra basin crassam pilosam glaber et sursum curvatus. *Legumen* adhuc ignotum.

J a v a, W. Java, Bantam, Menès, on riverbank, alt. 125 m: Backer 7061 (13-III-1913): type specimen in Herb. Hort. Bog.

Related to *Derris elliptica* Bth., *D. montana* Bth. and *D. danauensis* Backer (cf. note under next species).

Derris danauensis Backer, nov. spec., N. Fl. Vb, fam. CXX, 105 — *Frutex* scandens. *Rami* obscure brunnea, multis lenticellis oblongis verruciformibus pallidioribus praediti. *Folii* rhachis petiolo 60—120 mm longo computato 150—240 mm longa, sparse adpresso pubescens vel subglabra, petioluli 6—7 mm longi, foliola 9—11 oblonga, ovato-oblonga vel obovato-oblonga, basi rotundata vel subcordata obtusissima, apice obtuse acuminata,

solide coriacea, 70—160 mm longa, 30—60 mm lata; supra glabra, subtus sparse adpresso pubescentia, costa media utroque latere praecipue subtus prominens, nervi laterales utrinque 10—15 erecto-adscendentibus, subtus prominentes. *Inflorescentiae* paniculam efformantes simplices vel basi 1—3 ramos longiusculos emittentes, 50—150 mm longae, in ramis efoliosis in verrucis vel apice ramulorum brevium efoliosorum positae, rhachide densiuscula adpresso vel erete brunneo-pilosae, inflorescentiae partiales triflorae patentes, pedunculi densiuscule plus minusve erete longiuscule pilosi 4—12 mm longi, bracteis mox deciduis ovato-triangularibus 1.5—2 mm longis, pedicelli minute pubescentes 3—5 mm longi, bracteis eis pedunculorum similibus sed paulo minoribus, 1—1.5 mm longis, apice 2 bracteolis per anthesin persistentibus late ovato-rotundis pubescentibus 0.25—1.25 mm longis praediti. *Calyx* ante anthesin campanulatus, per anthesin cupuliformis, extus multis pilis longis adpressis brunneis ornatus, intus prope marginem densissime adpresso brunneo-pubescentis, ceterum glaber, 4—4.5 mm altus, dentibus superioribus fere nullis, lateralibus brevissime triangularibus, inferiore obtusissimo c. 0.75 mm longo. *Corollae* vexilli unguis 2.5—3 mm longus, lamina obovata, basi 2 auriculis perspicuis reflexis ornata, intus tuberculis et carinis carens, apice emarginata, dorso apicem versus pilis satis multis adpressis longis fuscis munita, 15—16 mm longa, c. 12 mm lata; alae carinaque plus minusve aequilongae, c. 17.5 mm longae, unguiculis c. 7.5 mm longis, lamina oblonga, apice obtusa, basi oblique truncata; carinae unguis c. 7.5 mm longus, lamina falcata, basi apiceque rotundata. *Stamen* vexillare supra basin liberam, satis firme aliis filamentis adhaerens. *Ovarium* dense adpresso pubescentis, c. 7.5 mm longum, 3-ovulatum, stylo supra basin incrassatam pilosam sensim sursum curvato et pro maxima parte glabro, 7.5—10 mm longo. *Legumen* adhuc ignotum.

Java, W. Java, Rawah Danau, on hoema's (fields), alt. ± 120 m: Van Steenis 10539 (11-VIII-1937): type specimen in Herb. Hort. Bog.

Related to *Derris elliptica* Bth., *D. montana* Bth. and *D. caudata* Backer. The four species may be distinguished as follows:

1. Calyx glabrous, or pubescent on outside along upper margin only. Petals glabrous outside. Bracts on main inflorescent axis persistent; all axes and pedicels glabrous. Leaflets 7—9, glabrous or with a few scattered hairs beneath. 2
Calyx on the whole outer surface more or less densely appressedly brown pubescent. Petals (especially the vexillum) at least at the tips appressedly brown pubescent outside. Bracts on main inflorescent axis caducous; all axes and pedicels more or less densely pubescent. Leaflets in most leaves 9—13, minutely appressedly pubescent beneath 3
2. Inside of vexillum above the claw provided with two auricles or crests, pale pinkish purple to almost white, with a green spot at the base. Racemes 1—5 together. Calyx green with a red hue, 5—6 mm high, along upper margin sparsely short-pubescent outside. Ovules 4—5. Leaflets moderately long acuminate *Derris montana* Bth.
Inside of vexillum above the claw without auricles or crests, pinkish purple with a green base. Racemes 1—9 together. Calyx dark purple, 3—4 mm high, glabrous outside. Ovules 3. Leaflets distinctly caudate . *Derris caudata* Backer
3. Lamina of vexillum almost entirely densely pubescent outside, ovate to broadly oval, 18—24 mm in diam. Ovules 4—5. Style hairy up to high above the base. Calyx 6—8 mm high *Derris elliptica* Bth.
Lamina of vexillum almost only at the top pubescent outside (much less densely than in the preceding species), obovate, 15—16 mm long, ± 12 mm broad. Ovules 3. Style hairy at the base only. Calyx 4—5 mm high *Derris danauensis* Backer

Mucuna Forbesii (Piper) Backer, nov. comb., N. Fl. Vb, fam. CXX, 128 — *Stizolobium Forbesii* Piper in Proc. Biol. Soc. Wash. XXX, 61 (1917) — *Mucuna diabolica* Backer ex K. Heyne, Nutt. Pl. Ned.-Ind. ed. 2, II, 824 (1927).

Mastersia Bakeri (Koord.) Backer, nov. comb., ex K. Heyne, Nutt. Pl. Ned.-Ind. ed. 2, II, 828 (1927); N. Fl. Vb, fam. CXX, 132 — *Mucuna Bakeri* Koord. in Med. 's Lands Plantentuin, XIX, 439, 460 (1898).

URTICACEAE, N. Fl. Part ?, fam. CXXX.

(by G. J. H. Amshoff)

Laportea terminalis Wight, Icon. t. 1972 (1853) — *Urtica evitata* Wall., Cat. n. 4588, nom. nud. — *Laportea evitata* Wedd. in DC., Prodr. 16, 1, 79 (1869); Smith in Koord. & Val., Booms. Java XII, 676 (1910); Koord., Exk. Fl. Java II, 127 (1912).

For the first time recorded from Java by Smith (1910) l.c., but apparently not rare and already collected by Blume [*L. decumana* (Roxb.) Wedd.].

Fleurya aestuans (L.) Gaud., Bot. Voy. Uranie, 497 (1826); Wedd. in Arch. Mus. Par. IX, 112 (1856) and in DC., Prodr. 16, 1, 74 (1869); Miq., Fl. Ind. Bat. I, II, 228 (1859); Koord., Exk. Fl. Java II, 128 (1912) — *Urtica cymosa* Hassk., Pl. Jav. Rar. 200 (1848) — *Fleurya cymosa* (Hassk.) Wedd. in Arch. Mus. Par. IX, 113 (1856) and in DC., Prodr. 16, 1, 73 (1869); Miq., Fl. Ind. Bat. I, II, 228 (1859); Koord., Exk. Fl. Java II, 128 (1912).

Weddell, who did not know Hasskarl's species, remarks: "A. Fl. aestuante praesertim stigmate elongato differre videtur". Hasskarl's description (the type specimen itself was not available) is very clear and detailed, and he writes: "stigma crassum longum" while describing the flower (not the fruit, as is done by Weddell) and, regarding the dimensions of the flower, this is quite true, though the stigma is relatively very small in the enlarged fruit.

Fleurya ruderalis Gaud. is commonly recorded for Java, but has never been collected there, according to a letter from Dr C. A. Backer. The mistake can be traced down to Weddell in Arch. Mus. Par. IX, 11 (1856), where a specimen collected by Zollinger in Celebes is cited as: "In insula Java, Celebes, Zollinger 1797".

Pilea Wightii Wedd. in Ann. Sci. Nat. IV, 1, 186 (1854) and in DC. Prodr. 16, 1, 125 (1869); Hook., Fl. Brit. Ind. V, 554 (1888); Koord. Exk. Fl. Java II, 132 (1912).

According to Hooker l.c., also in Java, but this statement cannot be confirmed. Described from B r. India, also known from Sumatra, Atjeh (*Van Steenis 6557*) and S. Celebes, Bonthain Peak (*Bünnemeyer 11577, 11836, 11915*, all distributed as *Fleurya ruderalis* Gaud.).

Pilea subpuber Miq. (sphalmate subpubera) in Zoll., Syst. Verz. 105 (1854) and in Fl. Ind. Bat. I, II, 236 (1859) — *Achudemia javanica* Bl. in Mus. Lugd. Bat. 2, 57, t. 20 (1856); Wedd. in DC., Prodr. 16, 1, 163 (1869); Koord., Exk. Fl. Java II, 133 (1912) — *Pilea leucophlaea* Bl. in Mus. Lugd. Bat. 2, 53 (1856); Koord., Exk. Fl. Java II, 132 (1912).

It would be inconsistent to maintain the genus *Achudemia* Bl. while at the same time accepting the reduction of the allied genus *Pellionia* Gaud. to *Elatostema* Forst. (cf. Schröter and Winkler, Monographie der Gattung *Elatostema* s.l. in Fedde, Rep. Beih. 88, 1935—36). Weddell l.c. remarks about *Achudemia*: "Genus a *Pilea* distinctum floribus polygamis et perigonio fem. sicut masc. 5-partito nec tripartito". As to the first character, this is an exception, seen and figured by Blume only; as a rule, the flowers and inflorescences are unisexual. As to the second character, several *Pilea* species have since been described with a 4- or 5-merous female perianth (cf. Gagnepain in Lecomte, Fl. Indo China V, 2, 141, 1929) and Handel-Mazzetti, Symb. Sin. VII, 141, 1929). The second species described under *Achudemia*, *A. japonica* Max., has accordingly been transferred to *Pilea* by Handel-Mazzetti l.c. In the allied genus *Elatostema* Forst. s.l., the number of female perianth segments is not constant, even in the subgenera *Pellionia* and *Euelatostema* Schröter.

Pilea leucophlaea Bl. has been described after a ♂ specimen of *P. subpuber* Miq.

Boehmeria pilosiuscula (Bl.) Hassk., Cat. Hort. Bog. 79 (1844); Smith in Koord. & Val., Booms. Java XII, 703 (1910) — *Boehmeria humilis* Miq., Pl. Jungh. 33 (1851).

This disposition of *B. humilis* Miq. was already suggested by Smith l.c., who was, however, not able to examine the type specimen himself.

Boehmeria glomerulifera Miq. in Zoll., Syst. Verz. 101 (1854) and in Fl. Ind. Bat. I, II, 250 (1859) — *Boehmeria depauperata* Wedd. in Ann. Sci. Nat. IV, 202 (1854) — *Boehmeria malabarica* Wedd., var. *depauperata* (Wedd.) in Ann. Sci. Nat. Arch. Mus. Par. IX, 355 (1856) and in DC., Prodr. 16, 1, 203 (1869).

Miquel held quite modern views about the validity of Wallich's catalogue names. It is not clear whether *B. malabarica* Wedd., 1856 (based on *Urtica malabarica* Wall., Cat. n. 4610, 1831 nom. nud.) is indeed specifically distinct from *B. glomerulifera* Miq., 1854. The latter viewpoint is apparently taken by Gagnepain in Lecomte, Fl. Indo Chine V, 2, 840 (1929). Gagnepain distinguishes, next to *B. malabarica* Wedd., a species named *B. Delavayi* Gagnep., the latter, according to Gagnepain, also occurring in Java.

Boehmeria erythropoda Miq. in Zoll., Syst. Verz. 101 (1854) and in Fl. Ind. Bat. I, I, 255 (1859); J. J. Smith in Koord. & Val., Booms. Java XII, 718 (1910) — *Boehmeria caudata* (Burm. f.) J. J. Smith (non Sw.!), var. *pendula* J. J. Smith in Koord. & Val., Booms. Java XII, 708 (1910) (e descript.).

J a v a, without locality: *De Vriese* s.n. (this specimen shows more complete material than the type specimen of *B. erythropoda*).

Nearly allied to the Brit. Indian *B. platyphylla*, var. *macrostachya* (Wight) Wedd. (*Splitgerbera macrostachya* Wight, 1853; cited by Weddell in DC., Prodr. 16, 1, 211, 1869, also for Java), but the leaves are obtuse, not cordate at base. It is, however, possible that intermediate specimens may be found.

In view of their quite constant and conspicuous distinguishing characters, it seems, in expectation of a new monograph, most practical to treat the Javanese varieties of *B. platyphylla* Don s.l. as distinct species.

Boehmeria ourantha Miq., Pl. Jungh. 33 (1851) — *Boehmeria caudata* (Burm.f.) J. J. Smith (non Sw.!), var. *ourantha* (Miq.) J. J. Smith in Koord. & Val., Booms. Java XII, 713 (1910).

To this species belongs also *Pulle* 3141 in Herb. Utr., cited by Koorders, Exk. Fl. Java II, 144 (1912) as *B. platyphylla* Don, var. *tomentosa* Wedd. [*B. tomentosa* Wedd. (1854)]. Yet, Koorders' determination may be correct; the distribution of *B. platyphylla* var. *tomentosa* is, according to Weddell in DC., Prodr. 16, 1, 212 (1869): Madagascar, Brit. India, Java.

Gonostegia triandra (Bl.) Miq. in Ann. Mus. Lugd. Bat. IV, 302 (1869).

An abundantly fruiting, slender species with creeping, radicating stems, small leaves and 3—4-merous male flowers. Generally confused with *G. hirta* (Bl.) Miq., sometimes also with the quite distinct *Pouzolzia zeylanica* (L.) Benn., but recognized by Hallier f. in the Rijksherbarium. Possibly identical with *Pouzolzia parvifolia* Wight, 1853 (Ceylon) and *Gonostegia reptans* Rob., 1911 (Philippines). In Java apparently at lower altitudes than *G. hirta*.

J a v a, Around Buitenzorg in moist grass fields: *Blume s.n.*: type specimen in Herb. Lugd. Bat.; G. Perbakti, alt. 700 m: *Bahkuizen van den Brink* f. 1710 in Herb. Utr.; Tjiboerjal, alt. 325 m: *Bakh. v. d. Br.* f. 2091 in Herb. Utr.; Preanger: *Koorders* 34689 β; Tjidadap, S. of Tjibēbēr, alt. ± 1300 m: *Bakh. v. d. Br.* 2422; Tjiareuj: *Bakh. v. d. Br.* 3028.

The genus *Gonostegia* Turez. is often reduced to *Pouzolzia* Gaud., but as it is a well-defined group and *Pouzolzia* is not, I prefer to keep *Gonostegia* distinct.

In expectation of the decision of the monographer (a monograph of the genus may be supposed to be in preparation at Breslau), it seems best to use the best known name *Leukosyke* Mor. (1845—46), instead of the older name *Missiessya* Gaud. (1844).

CELASTRACEAE, N. Fl. Part ?, fam. CXXXIII.

(by G. J. H. Amshoff)

Celastrus stylosa Wall. ex Roxb., Fl. Ind. ed. Carey II, 401 (1824).

J a v a, Tjadas Malang near Tjidadap (S. of Tjibēbēr): *Bakhuisen v. d. Brink* 598 (fr. in VI-1917); Tjibēbēr: *Bakh. v. d. Br.* 2534 (flow. in VII-1917); Tjadas Malang near Tjidadap, alt. 100 m: *Backer* 22483 (12-VI-1907).

New for Java, already known from Himalaya and C. China.

HIPPOCRATEACEAE, N. Fl. Part ?, fam. CXXXIV.

(by G. J. H. Amshoff)

Hippocratea macrantha Korth., Verh. Nat. Gesch. Bot. 187, pl. 39 (1839—42); Rolfe in Kew Bulletin, 47 (1918); Ridley, Fl. Malay Peninsula I, 455 (1922); Loesener in Engl. & Prantl., Nat. Pflanzenfam. ed. 2, 20b, 213 (1942) — *Hippocratea Hasseltiana* Miq., Ann. Mus. Lugd. Bat. IV, 154 (1869); Sch.fl. 236.

J a v a, S.E. Kediri, Damas bay: *Backer* 11916 (e descript.).

The type specimen of *H. Hasseltiana* Miq. (W. Java, bank Panimbang riv.: *V. Hasselt* s.n.) is practically without flowers, but attached to it is

an accurate, if schematic, drawing by Van Hasselt, on which the characteristic indumentum of petals and disc is indicated.

Hippocratea obtusifolia Roxb., Fl. Ind. 170 (1820), sensu lat.; Koord. in Koord.-Schum., Syst. Verz. Fam. 159, 1 (1912); Loesener in Engl. & Prantl, Nat. Pflanzenfam. ed. 2, 20b, 213 (1942) — *Salacia javanensis* Bl., Bijdr. 219 (1825); Miq., Ann. Mus. Lugd. Bat. IV, 151 (1869); Sch.fl. 238.

J a v a, Priangan, Palaboeanratoe: *Koorders* 34600 ♂; without locality: *Reinwardt* s.n.

As was already remarked by Miquel l.c., Blume's original label has got lost.

Salacia latifolia Wall., Cat. n. 4222 (1831), nom. nud.; Lawson in Hook., Fl. Brit. Ind. I, 629 (1875); King in Journ. As. Soc. Beng. 65, 366 (1896); Ridley, Fl. Malay Peninsula I, 459 (1922) and in Kew Bulletin 237 (1938) — *Salacia platyphylla* Kurz in Journ. As. Soc. Beng. (1875) teste King l.c. — *Salacia prinoides* (Willd.) DC. sensu Bl., Bijdr. 221 (1825); Korth., Verh. Nat. Gesch. Bot. 184 (1839—42); Miq., Ann. Mus. Lugd. Bat. IV, 184 (1869) (quoad specimina javanica et sumatrana) non (Willd.) DC. (1824); Sch.fl. 237 — *Salacia Naumannii* Engl., Bot. Jahrb. VII, 464 (1886); Loesener in Lauterb. & Schum., Fl. Deutsch. Schutzgeb., Nachtr. 305 (1905), in Engl. Bot. Jahrb. 63, 276 (1930) and in Engl.-Prantl, Nat. Pflanzenfam. ed. 2, 20b, 228 (1942) — *Salacia littoralis* Backer, Fl. Batavia I, 305 (1907) — *Salacia ovalis* Korth. sensu Backer, Sch.fl. 237; Koord., Exk. Fl. Java II, 527 (1912) non Korth. (1839—42).

The first to draw attention to the occurrence of *S. latifolia* outside the Malay Peninsula, i. a. in places in Java, was Ridley, 1938, l.c.; he writes: "This species is really quite distinct from *S. prinoides* DC.", but he continues: "Intermediate specimens I have found in the Malay Peninsula". These intermediates render a clear understanding of both species very difficult. Our Java specimens f. i., on account of their narrow, relatively small, distinctly serrate, short-petioled leaves, narrow filaments and small, 1-seeded fruits, generally identified as *S. prinoides*, show on the other hand the calyx of *S. latifolia*. This Javanese form was described by Miquel l.c. as *S. euonymiflorus* Miq. (a synonym to *S. prinoides* DC.) and is in Java much rarer than the true *S. latifolia*.

A detailed description of *S. latifolia* is given by King l.c.; a few characters however are still worthy of attention:

The fruit of *S. latifolia* is described as mostly 2-seeded (King l.c.: "seeds semiconvex"), Blume l.c. (as *S. prinoides* DC.), Backer l.c. (as *S. littoralis* Backer and *S. ovalis* Korth.), Loesener, 1930, l.c. (as *S. Naumannii* Engl.).

The fruit of *S. prinoides* is smaller and 1-seeded.

The calyx of *S. latifolia* is but shallowly lobed and quite glabrous; the calyx lobes of *S. prinoides* are shortly triangular-ovate and ciliate. According to this character, the Philippine form belongs to *S. prinoides* (Willd.) DC.

In the Javanese specimens of *S. latifolia* the filaments are much dilated towards the base, nearly triangular, in non-Javanese specimens the filaments are usually less dilated, though mostly more so than in *S. prinoides*.

The difference in size of the flowers of *S. prinoides* and *latifolia*, as

given by King l.c. and by Ridley l.c., is greatly exaggerated. Consequently, the position of the form distinguished by King and Ridley as *S. prinoides* DC. var. *macrophylla* (Bl.) King is doubtful. The true *S. macrophylla* Bl., 1825, at any rate, is a species more commonly known as *S. flavescentia* Kurz, 1872. The synonymy of *S. macrophylla* Bl. is treated by Backer, 1907, l.c. (as *S. macrocarpa* Korth.) and 1911, l.c., repeated by Koorders l.c. and independently from them mentioned by Loesener in Fedde, Rep. XLIX, 230 (1940).

For Java, *S. latifolia* Wall. has been confused with *S. ovalis* Korth., owing to the fact, that a few specimens, collected but not determined by Korthals, had been incorporated in the Leiden herbarium as *S. ovalis* Korth.

Salacia kalahiensis Korth., Verh. Nat. Gesch. Bot. 183, pl. 38 (1839—42) — *Salacia cerasiformis* Teysm. et Binnend., Cat. Hort. Bog. 219 (1866); nom. nud.

Java, Preanger Palaboeanratoe: Koorders 34502 ♂ (distributed as *S. prinoides* DC.).

Cultivated in the Botanic Gardens of Buitenzorg as *S. cerasiformis* Teysm. et Binnend. A neglected species, allied to *S. prinoides* (Willd.) DC., but distinguished by its smaller flowers (petals \pm 2 mm long) and much less incrassate disc which is distinctly narrowed upwards.

Salacia ovalis Korth., Verh. Nat. Gesch. Bot. 182 (1839—42), non aliorum (see under *S. latifolia* Wall.).

Java, Tjikao, near Poerwakarta: Korthals s.n.: type specimen in Herb. Lugd. Bat.; Semarang, Kedoengdjati: Koorders 25423 ♂; Besoeki, Tjoeramanis: Koorders 28743 ♂, identified as *S. prinoides* DC. by Koorders, as *Salacia* spec. by Backer.

Characterized by its small flowers (petals 1.5—2 mm long), the flattened disc and the dark brown colour of the dried leaf. Also known from Sumatra, Asahan (Yates 1955), Celebes (Rachmat 803) and Soela islands, Taliaboe (Atjé 94 and 236). The first specimen mentioned has been distributed as *S. prinoides* DC.

RHAMNACEAE, N. Fl. Part I, fam. CXLII.

(by R. C. Bakhuizen v. d. Brink Jr.)

Ventilago madraspatana Gaertn., Fruct. I, 233, tab. 49, f. 2 (1788); Sch.fl. 240.

The original spelling *madraspatana* has to be maintained instead of *maderaspata*.

Ventilago borneensis Ridley in Kew. Bull. 493 (1931).

New for Java.

Maesopsis Eminii Engl. in Engl. & Prantl, Nat. Pfl. Fam. III, 5, 399 (1896) and in Notizbl. Bot. Gart. Berl. IV, 239—242 (1906) and Veg. d. Erde, Afrika IX, 308, f. 146 (1921).

The description of the genus *Maesopsis* Engl. is based on flowering material of the type species *M. Eminii* and on a fruitbearing specimen of *M. Stuhlmannii* Engl. The last-mentioned species is said to have the fruits surrounded by a free receptacle ("freie Achsenbecher") and to be provided with a lateral style. The Java plant, known as *M. Eminii*, does not show these characters, moreover it does not surpass a height of 5 m, while according to Engler, *M. Eminii* is a large tree with a height of about 30 m.

The Java specimens, however, correspond very well with the figures of a leaf-bearing, flowering twig of *M. Eminii*, pictured in Notizbl. (1906) and in Veg. d. Erde, Afrika (1921), so that we have, in this case, undoubtedly to consider this plant a species of *Maesopsis*. Remains the question, in how far the free receptacle and the lateral style must be considered to have been correctly observed. While describing the genus *Maesopsis*, Engler did not yet know the fruit of *M. Eminii*. Judging from the figure of the fruits of *M. Eminii* in Veg. d. Erde, Afrika, the plant possesses a terminal style, and the fruit is not surrounded by a free receptacle, which is in accordance with the Java specimens. In Veg. d. Erde, a picture in natural size of a leaf-bearing, flowering twig is given by Engler. The measurements from that figure are in accordance with those of the Java specimens, though they are slightly smaller, but the dimensions of the leaves given by Engler in the text do not agree with those from the picture. Yet I do not hesitate to identify the Java plant as *M. Eminii*. The description of the genus *Maesopsis* needs a revision, as it may have been based on mixed data. However, as the type specimens are not at my disposal, I will refrain from an attempt to make an improved generic description.

Rhamnus nipalensis Wall. ex Laws. in Hook. f., Fl. Brit. Ind. 640 (1875).

The original spelling *nipalensis* has to be maintained instead of *nepalensis*.

Colubrina longipes Backer, nov. spec. — *Frutex* erectus ramis floriferis subdependentibus 1.5—2.5 m altus. *Ramuli* teretes tenuiusculi apice flexuosi pilis crispulis brunneis mollibus dense vestiti tarde glabrescentes. *Stipulae* haud conspicuae adpressae, e basi lata abrupte contractae in acumen triangulare subulatumve, ± 0.75 mm longae. *Petioli* 5—12.5 mm longi dense molliterque pilosi pilis brunneis; *folia* e basi obtussissima rotundata truncata vel leviter cordata ovata, apice longe acuminata acuta crasse breviterque mucronata, marginibus leviter crenato-serrata, herbacea opaca, pinninervia basi trinervia, nervis basalibus folii basin haud marginibus, supra nervos basales utrinque nervis lateralibus 2—4 adscendentibus marginem haud attingentibus percursa, folia novella in tota facie superiore densiuscule vestita pilis longiusculis subadpressis, sensim glabrescentia subtus indumento denso sublanato-tomentoso brunneo persistente vestita, 35—60 mm longa, 20—35 mm lata. *Cymae* (pedunculo 1—3 mm longo, petioli basi brevissime adnato computato) 5—10 mm longae pilis patentibus ± crispulis longiusculis mollibus brunneis dense vestitae, constantes e floribus ♂ breviter pedicellatis numerosis, saepe sed haud semper additis floribus 1—2 Herm. longius pedicellatis. ♂: Pedicelli pilis ± crispulis brunneis densiuscule vestiti 2.25—4 mm longi. *Calyx* extus pilis longiusculis brunneis dense vel subdense vestitus, a tubi basi usque ad laciniarum apicem 2.25—2.5 mm longus, pro dimidia parte vel paulo profundius 5-fidus; tubus latus, subcupularis; laciniae ovato-triangulares, acutiusculae intus glabrae. *Petala* brevissime (0.1—0.125 mm) tenuissime unguiculata culiculata lateraliter compressa dorso valde convexa apice rotundata viridia glabra, 1—1.1 mm longa. *Filamenta* 0.75—1 mm longa; antherae convexe ovales 0.25—0.3 mm longae. *Discus* planus vel levissime cupularis ad staminum insertionem leviter exsculptus pallide viridis flavusve, glaberrimus. *Pistillodium* cras-

sum, levissime 3-lobum, 0.2—0.3 mm longum. Herm.: Pedicelli pilis crispulis dense vestiti sub flore 7—9 mm, sub fructu 15—18 mm longi, graciles apice incrassati. *Calyx*, basi distincte obconico excepta, ut in ♂. *Corolla* stamina discusque ut in ♂ sed discus subcassior. *Styli* 3 fere a basi liberi filiformes 1—1.3 mm longi; stigmatibus leviter incrassatis. *Drupa* late oboviedo-globosa, ± 7.5 mm diametriens; putamen pericarpio tenuissimo delapso nigrum dissepimentis tenuibus; coccis denique ad angulum internum dehiscentibus; semina late obovoidea a dorso valde compressa apice late rotundata dorso late convexa in facie interiore leviter carinata nitida castanea 4—5 mm longa.

Java, E. Java, between Bantoer and Srigontjo, in brushwood, alt. 250 m: Backer 3869 (flow. and fr. on 10-VI-1912 ♂ and Herm.): type specimen in Herb. Lugd. Bat.; Backer 4004 (15-VI-1912); Rembang, Forestry district Banjoe Oerip, teak forest on marly ground, some specimens in a flat river valley, alt. 75 m: Beumée 987 (fr. in VIII-1917).

The specific name alludes to the long-stalked fruits.

Gouania Jacq., Sel. Stirp. Amer. 263 (1763).

Gouania L., Sp. Pl. ed. II, 1663 (1763) is incorrect, as Linné cites Jacquin as the author of this genus. The original spelling by Jacquin is *Goüania*, named in honour of Goüan or ?Gouan, professor at Mont-Pellier. As I cannot find out which name is the correct one, I retained the current spelling. Kuntze, Revisio Generum Plantarum I, 117, follows the spelling of Jacquin.

Gouania Mauritiana Lamk., Encycl. III, 5 (1789) — *Gouania javanica* Miq., Fl. Ind. Bat. I, I, 649 (1855); Sch.fl. 244.

Incorrectly Miquel ascribed to *G. Mauritiana* Lamk. glabrous leaves; consequently he considered the form with ferruginous leaves a separate species, *G. javanica* Miq.

VERBENACEAE, N. Fl. Part ?, fam. CC.

(by A. D. J. Meeuse)

For this family we refer to the paper by A. D. J. Meeuse in Blumea V, 1, 66 (15-VI-1942).

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