

Flora of Singapore precursors, 45: Typifications and nomenclatural clarifications in Euphorbiaceae, Phyllanthaceae, Picrodendraceae, Rutaceae and Sapindaceae for the Flora of Singapore

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ABSTRACT. Many names in the Euphorbiaceae, Phyllanthaceae, Picrodendraceae, Rutaceae and Sapindaceae are lecto- or neotypified. In some cases, these typifications have also enabled the resolution of nomenclatural problems (in *Acer laurinum* Hassk., *Baccaurea racemosa* (Reinw.) Müll.Arg., *Dimocarpus lichi* Lour.). The status of *Nymphanthus glaucescens* (Miq.) R.W.Bouman (Phyllanthaceae) is reassessed as cryptogenic in Singapore.

Keywords. Holotype, isotype, lectotype, neotype, type

Introduction

During the preparation of accounts of Euphorbiaceae, Phyllanthaceae, Picrodendraceae, Rutaceae and Sapindaceae for the *Flora of Singapore* by the first two authors, several nomenclatural problems were encountered, along with the realisation that many of the relevant names had not yet been typified. These matters were then addressed by all four authors. Publishing these clarifications in this precursor paper, rather than in the *Flora of Singapore* itself, allows for a more thorough discussion of the issues and ensures the matters have been dealt with for other projects progressing on differing timescales.

Rutaceae and Sapindaceae are families in the order Sapindales. Rutaceae are well-known for the oil glands in their leaves and fruits, often clearly visible with the naked eye as pellucid dots and often also with a strong scent. Sapindaceae are distinguishable from the other families in the order as they have the stamens inside the disc whereas all other families have the stamens outside the disc.

Euphorbiaceae, Phyllanthaceae and Picrodendraceae are families in the order Malphigiales. They were formerly all included in a much wider concept of the Euphorbiaceae but have generally been recognised as separate families since the publication of APG II (2003). These three families have superior ovaries and the fruits are usually capsules that explode and leave only a columella alongside a collection of loose pericarp fragments (half locules or paired parts) and seeds. The Euphorbiaceae have a single ovule per locule, the Picrodendraceae and Phyllanthaceae (now sister families) have two ovules per locule.

The taxa we treat are listed alphabetically by the family, genus and species of the currently accepted name, which is given in bold. Only the current name and synonyms with new nomenclatural acts are given and, therefore, the synonymy for each species may not be exhaustive. Following McNeill (2014), it has become clear that a number of names were incorrectly treated in earlier works as having holotypes (see Turland et al., 2018). Some of these names have already been effectively lectotypified (often accidentally when referred to as a holotype before 2001) and for others we provide further clarification here. If previous lectotypifications were based on lost material, such as from the B and PNH herbaria, which were both destroyed in the Second World War, new lectotypes are selected.

Specimens from the East India Company Herbarium (EIC), frequently referred to as the Wallich Herbarium, are cited here by the collector and collector number (often just *s.n.*) with the EIC number given in square brackets. For example, '*N. Wallich s.n.* [EIC 7829]' rather than '*Wallich 7829*'. Duplicates of specimens from the EIC/Wallich herbarium often have very brief labels and indicate 'Wallich' as the collector even if he were not. Therefore, when it is known that Wallich was not the collector of an EIC specimen discussed here but Wallich is the only name mentioned on some of the duplicates, the notation is in square brackets, for example, ['Wallich' EIC 8576].

The barcodes of the Leiden and Utrecht Herbaria (L and U) have two spaces between the L or U and the number, and the QR codes have a dot after the L or U. If an initial search for a specimen via the Naturalis Bioportal (<https://bioportal.naturalis.nl/>) reveals no results, try adding a double space or a dot after the L or U in the relevant search field.

Euphorbiaceae

Alchornea rugosa (Lour.) Müll.Arg., *Linnaea* 34: 170 (1865). – *Cladodes rugosa* Lour., *Fl. Cochinch.* 2: 574 (1790). – TYPE: [Vietnam], Cochinchine, no date, *J. de Loureiro s.n.* (lectotype BM [BM000835488], designated by Merrill, *Trans. Amer. Philos. Soc.*, new ser., 24: 238 (1935)).

Alchornea pubescens Merr., *Philipp. J. Sci.* 20: 399 (1922). – TYPE: Philippines, Luzon, Cagayan Province, Peñablanca, April 1915, *E. Castillo FB 22724* (lectotype US [US00096229], designated here by van Welzen; isotype K [K000187431]).

Alchornea tiliifolia (Benth.) Müll.Arg., *Linnaea* 34: 168 (1865), as '*tiliaefolia*'. – *Stipellaria tiliifolia* Benth., Hooker's J. Bot. Kew Gard. Misc. 6: 4 (1854), as '*tiliaefolia*'. – TYPE: [Bangladesh], Silhet, no date, *N. Wallich s.n.* [EIC 7829] (lectotype K-W [K001128043], designated here by van Welzen; isolectotypes BR [BR00000013339449], E [E00314372, E00314373], G-DC [G00325430], K [K000187433], K-W [K001128044]).

Aparisthmium sumatranum Rechb.f. & Zoll. in Zollinger, [Verh. Naturk. Ver. Ned. Indië 1: 28 (1856), nom. nud.] *Linnaea* 28: 331 (1856). – TYPE: [Indonesia], Sumatra, Lampong [Lampung], no date, *H. Zollinger 3054* (lectotype P [P00635087], designated here by van Welzen; isolectotypes K [K000252845], L [L0384212], M [M0274875]).

Aleurites moluccanus (L.) Willd., *Sp. Pl.*, ed. 4, 4(1): 590 (1804). – *Jatropha moluccana* L., *Sp. Pl.* 2: 1006 (1753). – *Aleurites moluccanus* (L.) Willd. var. *moluccanus*: Airy Shaw, *Muelleria* 4: 230 (1980). – TYPE: Without locality, no date, *Hb. Linnaeus 1141/5* (lectotype LINN, designated by Stuppy et al., *Blumea* 44: 80 (1999)).

Ricinus dicoccus Roxb., *Fl. Ind.*, ed. 1832, 3: 690 (1832). – TYPE: Without locality, no date, *Roxburgh s.n.* (lectotype BR [BR00000008880321], designated here by van Welzen; isolectotype BR [BR00000008880291]).

Cheilosa montana Blume, *Bijdr. Fl. Ned. Ind.*, pt 12: 614 (1826). – TYPE: [Indonesia], Java, no date, *C.L. Blume 2017* (lectotype L [L0025012], designated by van Welzen et al., *Blumea* 38(1): 163 (1993); isolectotypes BR [BR00000005839438], L [L0025013, L0025014, L0025016], NSW, US [US00433189, US00512601], Z; possible isolectotypes A [A00106967 as *s.n.*], BM [BM000951515 as *s.n.*], F [F0055980F as *s.n.*, F0055981F as *s.n.*], K [K000950644 as *s.n.*], L [L0025015 as *s.n.*], M [M0242008 as *s.n.*], NY [NY00246357 as *s.n.*], P [P00047905 as *s.n.*].

Cheilosa homaliifolia Merr., *Philipp. J. Sci.*, C 8(5): 379 (1913). – TYPE: Philippines, Leyte, Dagami, 22 June 1913, *C.A. Wenzel 147* (lectotype US [US00096585], designated here by van Welzen; isolectotypes A [A00010034], F [F0055979F], G [G00434260], GH [GH00010032]).

Cheilosa homaliifolia Merr. var. *grandifolia* Merr., *Enum. Philipp. Fl. Pl.* 2: 457 (1923). – TYPE: Philippines, Mindanao, Zamboanga District, Malangas, October–November 1919, *M. Ramos & G.E. Edaño BS 37282* (lectotype US [US00096586], designated here by van Welzen; isolectotype K [K000950643]).

Notes. Van Welzen et al. (1993: 163) designated the PNH duplicate of *Wenzel 147* as the lectotype of *Cheilosa homaliifolia* Merr. and the PNH duplicate of *Ramos & Edaño BS 37282* as the lectotype of *Cheilosa homaliifolia* var. *grandifolia* Merr. However,

these specimens are presumed lost due to the destruction of the PNH herbarium in World War II. New lectotypifications with the US duplicates of each collection are designated here.

Croton laevifolius Blume, Bijdr. Fl. Ned. Ind., pt 12: 603 (1826), as '*laevifolium*'. – *Oxydectes laevifolia* (Blume) Kuntze, Revis. Gen. Pl. 2: 612 (1891). – TYPE: [Indonesia], Java, in sylvis montis Burangrang, Provinciae Krawang, no date, *C.L. Blume 1473* (lectotype L [L.2203878], designated by Beyer et al., *Blumea* 68: 16 (2023); isoelectotype L [L.2203879]).

Croton confusus Gage, Rec. Bot. Surv. India 9: 237 (1922), as '*confusum*'. – TYPE: [Malaysia], Malacca [Melaka], Gunung Ledang (Mt Ophir), June 1892, *H.N. Ridley 3170* (lectotype CAL [CAL0000023570], designated here by Esser; isoelectotype SING [SING0047394]).

Notes. The original material of *Croton confusus* included specimens of both *C. griffithii* Hook.f. and *C. laevifolius*. This lectotypification fixes the name to original material now identified as *Croton laevifolius*.

Endospermum diadenum (Miq.) Airy Shaw, Kew Bull. 14: 395 (1960). – *Melanolepis diadena* Miq., Fl. Ned. Ind., Eerste Bijv., fasc. 3: 455 (1861). – *Mallotus diadenus* (Miq.) Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 959 (1866). – *Rottlera diadena* (Miq.) Scheff., Ann. Mus. Bot. Lugd.-Bat. 4: 125 (1869). – TYPE: [Indonesia], Sumatra, Lubu-alang, no date, *J.E. Teijsmann HB 3807* (lectotype L [L0016201], designated here by van Welzen).

Endospermum beccarianum Pax & K.Hoffm. in Engler, Pflanzenr., IV, Fam. 147 IV (Heft 52): 35 (1912). – *Endospermum beccarianum* Pax & K.Hoffm. var. *crassirameum* Pax & K.Hoffm. in Engler, Pflanzenr., IV, Fam. 147 IV (Heft 52): 35 (1912), nom. inval. – TYPE: [Malaysia], Sarawak, 1865–1868, *O. Beccari PB 3137* (lectotype K [K000254472], designated here by van Welzen; isoelectotypes FI [FI008127], G [G00434852], M [M0242009], P [P00717053]).

Endospermum beccarianum Pax & K.Hoffm. var. *tenuirameum* Pax & K.Hoffm. in Engler, Pflanzenr., IV, Fam. 147 IV (Heft 52): 35 (1912). – TYPE: [Malaysia], Sarawak, November 1871, *O. Beccari PB 819* (lectotype K [K00254470], designated here by van Welzen; isoelectotypes A [A00047628], FI [FI008128], M [M0242010], NY [NY00263053], P [P00717054]).

Endospermum chinense Benth. var. *malayanum* Pax & K.Hoffm. in Engler, Pflanzenr., IV, Fam. 147 IV (Heft 52): 36 (1912). – TYPE: [Indonesia], Sumatra, Palembang, 1880, *H.O. Forbes 2779* (lectotype BM [BM000951532], designated here by

van Welzen; isoelectotypes BM [BM000951531], L [L0016199, L0016200, L0016202], P [P00717055, P00717056]).

Notes. Arias Guerrero & van Welzen (2011: 465) cited as holotypes the B duplicate of *Beccari PB 3137* for *Endospermum beccarianum* Pax & K.Hoffm., *Beccari PB 819* for *Endospermum beccarianum* Pax & K.Hoffm. var. *tenuirameum* Pax & K.Hoffm. and *Forbes 2779* for *Endospermum chinense* Benth. var. *malayanum* Pax & K.Hoffm. However, these specimens are not holotypes and are presumed lost due to the destruction of the B herbarium in World War II. New lectotypifications are, therefore, designated here.

Endospermum quadriloculare Pax & K.Hoffm. in Engler, Pflanzenr., IV, Fam. 147 IV (Heft 52): 36, fig. 10 (1912). – TYPE: [Indonesia], Sumatra, Palembang, 1880, *H.O. Forbes 2751* (lectotype L [L0016208], first step designated by Arias Guerrero & van Welzen, Edinburgh J. Bot. 68: 476 (2011), second step designated here by van Welzen; isoelectotypes BM [BM000951535], GH [GH00106142], K [K000254477], L [L0016205, L0016206, L0016207], P [P00717057]).

Euphorbia ophthalmica Pers., Syn. Pl. 2: 13 (1807 [‘1806’]). – *Chamaesyce ophthalmica* (Pers.) Burch, Ann. Missouri. Bot. Gard. 53: 98 (1966). – *Euphorbia hirta* L. var. *ophthalmica* (Pers.) Allem & Irgang, Fl. Ilustr. Rio Grande do Sul 11: 63 (1975). – TYPE: [Brazil], Rio de Janeiro, no date, *P. Commerson 238* (holotype P [P00678898, ex Herb. Jussieu]; isotype P [P00716314]).

Euphorbia pilulifera L. var. *procumbens* Boiss. in de Candolle, Prodr. 15(2), fasc. 1: 21 (1862). – *Euphorbia hirta* L. var. *procumbens* (Boiss.) N.E.Br. in Oliver & auct. suc. (eds), Fl. Trop. Africa 6(1): 497 (1911). – TYPE: [Brazil], Rio de Janeiro, no date, *P. Commerson 238* (lectotype P [P00678898, ex Herb. Jussieu], designated here by Esser; isoelectotype P [P00716314]).

Notes. *Euphorbia pilulifera* var. *procumbens* was described as a new variety, citing *Euphorbia ophthalmica* as a synonym among several other syntypes, also including one (‘*Jaeger*’ [presumably *Jagor*] s.n.) from Singapore. The lectotypification here makes the variety a homotypic synonym of *Euphorbia ophthalmica*.

Hancea penangensis (Müll.Arg.) S.E.C.Sierra et al., Blumea 52: 364 (2007). – *Mallotus penangensis* Müll.Arg., Linnaea 34: 186 (1865). – TYPE: [Malaysia], Penang, no date, *G. Porter s.n.* [‘Wallich’ EIC 8576] (lectotype G [G00441844], designated here by van Welzen; isoelectotypes A [A00103633], G-DC [G00325887], K [K001044685], K-W [K001125889], P [P00635122]).

Mallotus echinatus Elmer, Leaflet. Philipp. Bot. 3: 925 (1910). – TYPE: Philippines, Sibuyan Island, Capiz Province, Magallanes (Mt Giting-Giting), April 1910, A.D.E. Elmer 12253 (lectotype A [A00057565], designated here by Middleton & van Welzen; isolectotypes BISH [BISH1001652], E [E00021130], F [F0056872F], GH [GH00048397], HBG [HBG515979], K [K001067334], L [L0435920], NY [NY00069895], US [US00096201]).

Mallotus sarawakensis Pax & K.Hoffm. in Engler, Pflanzenr., IV, Fam. 147 VII (Heft 63): 201 (1914). – TYPE: [Malaysia], Borneo, Sarawak, Baram District, March 1895, C. Hose 184 (lectotype BM [BM000951481], designated here by Middleton & van Welzen; isolectotypes E [E00021152, E00021157], K [K001067320, K001067321], L [L0435737]).

Mallotus leptophyllus Pax & K.Hoffm. in Engler, Pflanzenr., IV, Fam. 147 VII (Heft 63): 203 (1914). – TYPE: [Malaysia], Borneo, Sarawak, Baram District, January 1895, C. Hose 26 (lectotype L [L0435736], designated here by van Welzen; isolectotypes BM [BM000951483], K [K001067322]).

Mallotus papuanus (J.J.Sm.) Pax & K.Hoffm. var. *intermedius* Pax & K.Hoffm. in Engler, Pflanzenr., IV, Fam. 147 XIV (Heft 68): 19 (1919). – TYPE: [Papua New Guinea], Etappenberg, no date, C.L. Ledermann 9539 (lectotype L [L0435937], designated here by van Welzen; isolectotype K [K001067342]).

Notes. Slik & van Welzen (2001) and Sierra et al. (2007) gave the type of what is now *Hancea penangensis* (Müll.Arg.) S.E.C.Sierra et al. as ‘Wallich 8576 (holo G; iso A, K, P)’. In the protologue of the basionym, Müller Argoviensis (1865) cited the original material as ‘Wall. n. 8576! in variis hb’. This is a George Porter rather than Wallich collection in the East India Company Herbarium (Wallich, 1847), the specimens of which were widely distributed as acknowledged by Müller Argoviensis (1865). In addition there are two duplicates in G. Therefore, there is no holotype and the name is consequently lectotypified here.

Slik & van Welzen (2001: 24–25) cited as holotypes the PNH duplicate of Elmer 12253 for *Mallotus echinatus* Elmer, the B duplicate of Hose 184 for *Mallotus sarawakensis* Pax & K.Hoffm., the B duplicate of Hose 26 for *Mallotus leptophyllus* Pax & K.Hoffm., and the B duplicate of Ledermann 9539 for *Mallotus papuanus* (J.J.Sm.) Pax & K.Hoffm. var. *intermedius* Pax & K.Hoffm. However, these specimens are not holotypes and are also presumed lost due to the destructions of the B and PNH herbaria in World War II. New lectotypifications are designated here.

Macaranga conifera (Rchb.f. & Zoll.) Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 1005 (1866). – *Mappa conifera* Rchb.f. & Zoll., Linnaea 29: 466 (1857). – TYPE: [Indonesia], Sumatra, ‘prope Dermo Enim, Palembang’, 1857, J.E. Teijsmann s.n. (lost?); [Indonesia], Sumatra, Palembang District, Tjaban Forest Reserve near Muara

Enim, February 1957, *A.J.G.H. Kostermans 12037* (neotype L [L0080635], designated here by van Welzen).

Pachystemon populifolius Miq., Fl. Ned. Ind., Eerste Bijv., fasc. 3: 462 (1861). – TYPE: [Indonesia], Sumatra, Province Palembang, prope Tubuan, Oganoeloe, no date, *J.E. Teijsmann HB 3762* (lectotype U [U0001982], designated here by van Welzen; isoelectotypes K [K001079692, K001079693 – as *Teijsmann s.n.*], U [U0001981]).

Macaranga lowii King ex Hook.f., Fl. Brit. India 5, fasc. 14: 453 (1887). – TYPE: [Malaysia], Perak, Larut, December 1882, *G. King's Collector 3664* (lectotype CAL [CAL0000014034], designated here by Esser; isoelectotypes CAL [CAL0000014035, CAL0000014036], G [G00441820], K [K003492544]).

Mallotus auriculatus Merr., Philipp. J. Sci., C 7(6): 396 (1913 ['1912']). – *Macaranga auriculata* (Merr.) Airy Shaw, Kew Bull. 19: 325 (1965). – TYPE: Philippines, Negros, Himugaan River, 1907, *H.D. Everett FB 7271* (lectotype US [US00096196], designated here by van Welzen).

Macaranga poilanei Gagnep., Bull. Soc. Bot. France 69: 703 (1923). – TYPE: [Vietnam], Annam, Province de Than-hoa, à Phong-y, 15 July 1920, *E. Poilane 1634* (lectotype P [P00635191], designated here by van Welzen; isoelectotypes A [A00048182], K [K001079701]).

Macaranga puncticulata Gage, Rec. Bot. Surv. India 9: 246 (1922). – TYPE: [Malaysia], Johore, Tempayan River, 1908, *H.N. Ridley 13259* (lectotype SING [SING0050479], designated here by van Welzen; isoelectotype K [K001079663]).

Macaranga trichocarpa (Zoll.) Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 1003 (1866). – *Mappa trichocarpa* Zoll., Linnaea 28: 307 (1856). – TYPE: [Indonesia], Sumatra, near Lampong, no date, *collector unknown (Zollinger?) 3045* (lectotype L [L.2232654, also as *HB 4185*], designated here by van Welzen).

Mappa zollingeriana Miq., Fl. Ned. Ind., Eerste Bijv., fasc. 3: 457 (1861). – TYPE: [Indonesia], Sumatra, Banka [Bangka], Menkrang woeroeng, no date, *collector unknown (Teijsmann?) HB 3400* (lectotype U [U0001988], designated here by van Welzen; possible isoelectotype G-DC [G00318280 as *Teijsmann s.n.*]).

Mallotus macrostachyus (Miq.) Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 963 (1866). – *Rottlera macrostachya* Miq., Fl. Ned. Ind., Eerste Bijv., fasc. 3: 454 (1861). – TYPE: [Indonesia], Sumatra, no date, *J.E. Teijsmann HB 3245* (lectotype U [U0001990], designated by Sierra & van Welzen, Blumea 50: 254 (2005)).

Mallotus insignis Müll.Arg., Linnaea 34: 193 (1865). – TYPE: Singapore, 1859, *R.H. Schomburgk* 52 (holotype B, presumed lost; lectotype K [K001044671], designated here by van Welzen).

Notes. Unusually for the time, in the protologue of *Mallotus insignis* (Müller Argoviensis, 1865) a holotype in B is indicated. This specimen was presumed destroyed in World War II and a lectotype with the only other known surviving specimen is designated.

Paracroton pendulus (Hassk.) Miq., Fl. Ned. Ind. 1(2), fasc. 3: 382 (1859), as ‘*pendulum*’. – *Croton pendulus* Hassk., Pl. Jav. Rar. 266 (1848). – *Ostodes pendula* (Hassk.) A.Meeuse in Backer, Bekn. Fl. Java 4c, fam. 112: 109 (1943). – *Fahrenheitia pendula* (Hassk.) Airy Shaw, Kew Bull. 20: 410 (1966) – TYPE: [Indonesia], Java, 1835–1863, *F.W. Junghuhn* 113 (neotype L [L.2255820], designated here by Esser).

Notes. The type specimen cited in the protologue, from ‘Java, Bantam’, very probably a collection by Hasskarl, could not be traced in L or HAL. Therefore a neotype is designated here.

Pimelodendron griffithianum (Müll.Arg.) Benth. ex Hook.f., Fl. Brit. India 5, fasc. 15: 468 (1888), as ‘*Pimeleodendron griffithianus*’. – *Stomatocalyx griffithianus* Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 1142 (1866). – TYPE: [Malaysia], Malacca [Melaka], no date, *W. Griffith s.n.* (lectotype K [K000950702], designated by Djarwaningsih, Blumea 49: 415 (2004)).

Pimelodendron borneense Warb., Bot. Jahrb. Syst. 18: 199 (1894), as ‘*Pimeleodendron*’. – TYPE: [Malaysia], Sarawak, 1865–1868, *O. Beccari* PB 293 (lectotype K [K000950729], designated here by Middleton & van Welzen; isolectotypes A [A00048683], BO, G [G00441999], M [M0241948], NY [NY00273175], S [S07-17125]).

Notes. Djarwaningsih (2004: 416) cited the B duplicate of *Beccari* PB 293 as the holotype of *Pimelodendron borneense* Warb. However, this specimen is not a holotype and is also presumed lost due to the destruction of the B herbarium in World War II. A lectotype is designated here.

Ptychopixys caput-medusae (Hook.f.) Ridl., Fl. Malay Penins. 3: 295 (1924). – *Mallotus caput-medusae* Hook.f., Fl. Brit. India 5, fasc. 14: 443 (1887). – TYPE: [Malaysia], Malacca [Melaka], 16 July 1867, *A.C. Maingay* 2581 [Kew distribution no. 1443] (lectotype K [K000254514], first step designated by Stoops & van Welzen, Nordic J. Bot. 31: 101 (2013), second step designated here by van Welzen; isolectotype K [K000254513]).

Suregada glomerulata (Blume) Baill., Étude Euphorb. 396 (1858). – *Erythrocarpus glomerulatus* Blume, Bijdr. Fl. Ned. Ind., pt 12: 605 (1826). – *Gelonium glomerulatum* (Blume) Hassk., Cat. Hort. Bogor. 237 (1844). – TYPE: [Indonesia], Java, Nusa Kambangan, no date, *C.L. Blume s.n.* (lectotype L [L0139269], designated here by Esser).

Erythrocarpus spicatus Blume, Bijdr. Fl. Ned. Ind., pt 12: 605 (1826). – *Suregada spicata* (Blume) Baill., Étude Euphorb. 396 (1858). – *Gelonium spicatum* (Blume) Hassk., Cat. Hort. Bogor. 237 (1844). – TYPE: [Indonesia], Java ('nomen Panawar beas'), no date, *C.L. Blume 2146* (lectotype L [L0139640], designated here by Esser; possible isolectotypes A [A00105999], K [K000253674], L [L0139639], UC [UC918489]).

Gelonium obtusum Miq., Fl. Ned. Ind., Eerste Bijv., fasc. 2 & 3: 181, 452 (1861). – TYPE: [Indonesia], Sumatra austr., Kabagusan, no date, *J.E. Teijsmann HB 4533* (lectotype U [U036245], designated here by Esser).

Gelonium microcarpum Pax & K.Hoffm. in Engler, Pflanzenr., IV, Fam. 147 IV (Heft 52): 19 (1912). – *Suregada microcarpa* (Pax & K.Hoffm.) Croizat, Bull. Jard. Bot. Buitenzorg, sér. 3, 17: 216 (1942). – TYPE: [Indonesia], Java, Preanger, 7 May 1893, *S.H. Koorders 12539β* (lectotype K [K000253672], designated here by Esser; isolectotypes L [L0139265], P [P05479675], SING [SING0393461]).

Gelonium rubrum Ridl., Bull. Misc. Inform. Kew 1926: 81 (1926). – *Suregada rubra* (Ridl.) Croizat, Bull. Jard. Bot. Buitenzorg, sér. 3, 17: 217 (1942). – TYPE: [Indonesia], Sumatra, Mentawi Islands, Siberut, 14 September 1924, *C. Boden Kloss 14091* (lectotype K [K000253665], designated here by Esser; isolectotypes K [K000253664], SING [SING0241798, SING0241799]).

Gelonium borneense Pax & K.Hoffm., Mitt. Inst. Allg. Bot. Hamburg 7: 230 (1931). – *Suregada borneensis* (Pax & K.Hoffm.) Croizat, Bull. Jard. Bot. Buitenzorg, sér. 3, 17: 217 (1942). – TYPE: [Indonesia], West Borneo [Kalimantan], Bukit Mulu, 5 January 1925, *Hans Winkler 1180* (lectotype HBG [HBG528700], designated here by Esser; isolectotypes HBG [HBG516128, HBG516129, HBG527395]).

Notes. For the name *Gelonium microcarpum* Pax & K.Hoffm., the lectotype chosen has copious fruits and is therefore the most suitable specimen from among the syntypes.

For the name *Gelonium borneense* Pax & K.Hoffm., there are several type sheets in Hamburg (HBG). The lectotype chosen here is the duplicate with the original handwritten label and an original annotation label by F. Pax attached (there is another duplicate annotated by K. Hoffmann [HBG527395], now an isolectotype).

Triadica cochinchinensis Lour., Fl. Cochinch. 2: 610 (1790). – *Stillingia cochinchinensis* (Lour.) Baill., Recueil Observ. Bot. 1: 351 (1861). – *Excoecaria loureiroana* Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 1217 (1866) [non *Excoecaria cochinchinensis* Lour., Fl. Cochinch. 2: 612 (1790)]. – *Sapium cochinchinense* (Lour.) Gagnep. in Lecomte, Fl. Indo-Chine 5: 395, 401 (1926), nom. illeg. hom., non *Sapium cochinchinense* (Lour.) Kuntze (1898). – *Shirakia cochinchinensis* (Lour.) Hurus., J. Fac. Sci. Univ. Tokyo, Sect. 3, Bot. 6: 318 (1954). – TYPE: [Vietnam], Cochinchina, no date, *J. de Loureiro s.n.* (lectotype BM [BM000030144], first step designated by Merrill, Trans. Amer. Philos. Soc., new ser., 24: 241 (1935), second step designated here by Esser; isoelectotype BM [BM000030145]).

Phyllanthaceae

Actephila excelsa (Dalzell) Müll.Arg., Linnaea 32: 78 (1863). – *Anomospermum excelsum* Dalzell, Hooker's J. Bot. Kew Gard. Misc. 3: 228 (1851). – *Actephila excelsa* (Dalzell) Müll.Arg. var. *genuinum* Pax & K. Hoffm. in Engler, Pflanzenr., IV, Fam. 147 XV (Heft 81): 192 (1922), nom. inval. – TYPE: India, Syhadrensi?, no date, *N.A. Dalzell s.n.* (lectotype K [K000186757], designated by Chakrabarty & Balakrishnan, Indo-Burmese Phyllanthaceae 367 (2018); isoelectotypes K [K000186758, K000186759]).

Pimeleodendron dispersum Elmer, Leaf. Philipp. Bot. 1: 308 (1908), as '*dispersa*'. – TYPE: Philippines, Leyte, Palo, January 1906, *A.D.E. Elmer 7245* (lectotype L [L0242729], designated here by van Welzen; isoelectotypes A [A00299862], K [K000186996, K000186997]).

Actephila gitingensis Elmer, Leaf. Philipp. Bot. 3: 903 (1910). – TYPE: Philippines, Sibuyan Island, Cadiz Province, Magallanes, Mt Giting-Giting, April 1910, *A.D.E. Elmer 12141* (lectotype A [A00299333], designated here by van Welzen; isoelectotypes E [E00504784], G [G00383754], GH [GH00299332], HBG [HBG516630], K [K000186998], L [L.2182496], MO [MO251984], US [US00109184]).

Actephila magnifolia Elmer, Leaf. Philipp. Bot. 3: 903 (1910). – TYPE: Philippines, Sibuyan Island, Cadiz Province, Magallanes, Mt Giting-Giting, April 1910, *A.D.E. Elmer 12303* (lectotype L [L.2182796], designated here by van Welzen; isoelectotypes A [A00299334], E [E00504783], G [G00383753], HBG [HBG516629], K [K000186988], MO [MO251983], US [US00109185]).

Antidesma bunius (L.) Spreng., Syst. Veg. (ed. 16) 1: 826 (1824 ['1825']). – *Stilago bunius* L., Mant. Pl. 1: 122 (1767). – *Antidesma stilago* Poir., Encycl., Suppl. 1, fasc. 2: 403 (1811), nom. illeg. superfl. – *Antidesma bunius* (L.) Spreng. var. *genuinum* Müll. Arg. in de Candolle, Prodr. 15(2), fasc. 2: 262 (1866), nom. inval. – TYPE: [Published illustration] '*Bunius sativus*' in Rumphius, Herb. Amboin. 3: t. 131 (1743), lectotype designated by Airy Shaw, Kew Bull. 35: 693 (1980).

Antidesma buni (L.) Spreng. var. *wallichii* Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 263 (1866). – TYPE: [Bangladesh], Sillet, 1832, *F.W. de Silva & W. Gomez s.n.* [‘Wallich’ EIC 7282B] (lectotype G-DC [G00324418], first step designated by Hoffmann, *Antidesma Malesia Thailand* 74 (2006), second step designated here by van Welzen; isolectotype G-DC [G00324427]).

Aporosa benthamiana Hook.f., Hooker’s Icon. Pl. 16, fasc. 4: pl. 1583 (1887). – TYPE: [Malaysia], Malacca [Melaka], 10 March 1867, *A.C. Maingay 2381* [Kew distribution no. 1416] (lectotype K [K001056324], designated by Schot, *Blumea Suppl.* 17: 276 (2004); isolectotype L [L0041507]).

Aporosa grandifolia Merr., Pl. Elmer. Born. 143 (1929). – TYPE: [Malaysia], Sabah, Tawau, October 1922–March 1923, *A.D.E. Elmer 20944* (lectotype L [L0041581, L0041582 – a single specimen over two sheets], designated here by van Welzen; isolectotypes A [A00045710], BISH [BISH1001484], BM [BM000611751], BO n.v., BR [BR0000006994075], CAS [CAS0026935], G [G00434086], HBG [HBG516591], K [K001056357], M [M0233618], MICH [MICH1107953], NY [NY00246229], P [P00610401], PH [PH00003558], S [S07-14719], U [U0111870], UC [UC290363]).

Aporosa falcifera Hook.f., Fl. Brit. India 5, fasc. 14: 352 (1887). – TYPE: [Malaysia], Perak, September 1884, *King’s Collector 6574* (lectotype BM [BM000611725], designated here by van Welzen; isolectotypes BO n.v., K [K001056321, K001056322], P [P00610427], US [US00901868]).

Aporosa hosei Merr., Philipp. J. Sci., C 11(2): 63 (1916). – TYPE: [Malaysia], Sarawak, March 1895, *C. Hose 92* (lectotype K [K001056359], designated here by van Welzen; isolectotypes L [L0041573], P [P00610397]).

Aporosa acuminatissima Merr., Pl. Elmer. Born. 142 (1929) p.p., type only, nom. illeg. hom., non *Aporosa acuminatissima* Merr. (1920). – *Aporosa merrilliana* Govaerts & Radcl.-Sm., Kew Bull. 51: 175 (1996). – TYPE: [Malaysia], Sabah, Tawau, October 1922–March 1923, *A.D.E. Elmer 21048* (lectotype L [L0041571, L0041572 – a single specimen over two sheets], designated here by van Welzen; isolectotypes A [A00045704], B [B_10_0241094], BISH [BISH1001481], BM [BM000951330], BO n.v., BR [BR0000006993764], CAS [CAS0026933], K [K001056358], GH [GH00045703], M [M0233626], MICH [MICH1107955], NY [NY00246221, NY00246222], P [P00610396], PH [PH00003553], U [U0226325], UC [UC290409]).

Aporosa lucida (Miq.) Airy Shaw, Kew Bull., Addit. Ser. 4: 38 (1975). – *Tetractinostigma lucidum* Miq., Fl. Ned. Ind., Eerste Bijv., fasc. 3: 471 (1861). – TYPE: [Indonesia], Sumatra, no date, *J.E. Teijsmann HB 455* (lectotype U [U0001858], designated here by van Welzen; isolectotype K [K001056356 as *Teijsmann s.n.*]).

Aporosa subcaudata Merr., Philipp. J. Sci., C 11(2): 64 (1916). – TYPE: [Malaysia], Sarawak, Baram, April 1895, *C. Hose* 204 (lectotype A [A00045718], designated here by van Welzen; isoelectotypes BM [BM000951333], K [K001056350], L [L0041550]).

Aporosa bracteosa Pax & K.Hoffm. in Engler, Pflanzenr., IV, Fam. 147 XV (Heft 81): 95 (1922). – TYPE: [Indonesia], Sumatra, Nepal Litjin, 1880, *H.O. Forbes* 3132 (lectotype BM [BM000951335], first step designated by Schot, Blumea Suppl. 17: 351 (2004), second step designated here by van Welzen; isoelectotypes A [A00045705, A00045706], BM [BM000951336], GH [GH00045707], L [L0041576, L0041577, L0041578, L0059996], P [P00610388]).

Baccaurea macrophylla (Müll.Arg.) Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 460 (1866). – *Pierardia macrophylla* Müll.Arg., Flora 47: 516 (1864). – TYPE: [Malaysia], Prince of Wales Island [Penang], no date, *collector unknown s.n.* (holotype K [K001056446]).

Baccaurea beccariana Pax & K.Hoffm. in Engler, Pflanzenr., IV, Fam. 147 XV (Heft 81): 62 (1922). – TYPE: [Malaysia], Borneo, [Sarawak], 1865–1868, *O. Beccari* PB 3249 (lectotype K [K001056512], designated here by van Welzen; isoelectotype G [G00434189 – a single specimen over three sheets with a single barcode]).

Baccaurea pyriformis Gage, Rec. Bot. Surv. India 9: 233 (1922). – TYPE: [Malaysia], Malacca [Melaka], Ayer Panas, June 1894, *J.S. Goodenough* 1992 (lectotype CAL [CAL0000023161], designated by Chakrabarty & Gangopadhyay, J. Econ. Taxon. Bot. 18: 426 (1994)).

Baccaurea pubera (Miq.) Müll.Arg. var. *tomentella* Miq., Fl. Ned. Ind., Eerste Bijv., fasc. 3: 442 (1861). – TYPE: [Indonesia], Sumatra, Palembang, Muara-Duwa, no date, *J.E. Teijsmann* HB 3563 (lectotype U [U0102386], designated here by van Welzen).

Baccaurea racemosa (Reinw.) Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 461 (1866). – *Coccomelia racemosa* Reinw. [in Blume, Cat. Gew. Buitenzorg 110 (1823), nom. nud.] in Hornschuch, Syll. Pl. Nov. 2, fasc. 1: 6 (1825). – *Pierardia racemosa* (Reinw.) Blume, Bijdr. Fl. Ned. Ind., pt 12: 579 (1826), as ‘*Pierandia*’. – TYPE: [Indonesia], Java, no date, *Herbarium Reinwardtianum s.n.* (lectotype L [L0059160], designated by Haegens, Blumea, Suppl. 12: 169 (2000)).

Notes. The interpretation of the name *Baccaurea racemosa* has proved difficult. The first publication by Blume (1823) only mentions the name *Coccomelia racemosa*, refers to R (= Reinwardt) and presents a vernacular name (*Menting*), but a description is lacking, making the name not validly published. The name *Coccomelia racemosa* was validly

published by Reinwardt (1825), but Reinwardt did not refer to the vernacular name *Menting* but rather to a drawing in Marsden (1811: t. 7), a plant which Marsden called *Kamiling*. It is likely an error was made due to a resemblance in fruits, as the Marsden plate is of *Aleurites moluccanus* and this species does not fit Reinwardt's description. Typical for *Aleurites* are the dense stellate hairs and a pair of glands on the petiole, not mentioned by Reinwardt, while Reinwardt mentions pulp around the seeds, which is absent in *Aleurites* but present in *Baccaurea* species. Although Reinwardt (1825) does not mention the vernacular name *Menting*, the *Herbarium Reinwardtianum* specimen thus labelled along with the name *Coccomelia racemosa* can nevertheless be taken as original material along with the Marsden plate. The specimen was designated as the lectotype by Haegens (2000).

Breynia vitis-idaea (Burm.f.) C.E.C.Fisch., Bull. Misc. Inform. Kew 1932: 65 (1932). – *Rhamnus vitis-idaea* Burm.f., Fl. Ind. 61 (1768). – *Phyllanthus rhamnoides* Retz., Observ. Bot. 5: 30 (1788), nom. illeg. superfl. – *Breynia rhamnoides* Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 440 (1866), nom. illeg. superfl. – *Breynia rhamnoides* Müll.Arg. var. *genuina* Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 440 (1866), nom. inval. – *Phyllanthus vitis-idaea* (Burm.f.) Chakrab. & N.P.Balakr., Bangladesh J. Pl. Taxon. 19: 712 (2009). – TYPE: [Published illustration] Breyne, Exot. Pl. Cent. 8, t. 4 (1678), lectotype designated by Radcliffe-Smith in Nasir & Ali, Fl. Pakistan 172: 14 (1986).

Breynia keithii Ridl., J. Straits Branch Roy. Asiat. Soc. 59: 174 (1911). – TYPE: [Malaysia], Kedah, Alor Sta, February 1910, *H.N. Ridley 14888* (lectotype K [K001056933], designated here by Esser; islectotype SING [SING0050064]).

Breynia microcalyx Ridl., J. Fed. Malay States Mus. 10: 114 (1920). – TYPE: [Thailand], Peninsular, Krabi, Koh Phi Phi Don, no date, *C.B. Kloss 6547* (lectotype SING [SING0050065], designated here by Esser; islectotypes K [K001081062], SING [SING0050066]).

Bridelia griffithii Hook.f., Fl. Brit. India 5, fasc. 14: 272 (1887). – TYPE: [Malaysia], Malacca [Melaka], 1863–1864, *W. Griffith s.n.* [Kew distribution no. 4883] (lectotype K [K001081474], designated by Dressler, Blumea 41: 308 (1996); islectotypes CAL [CAL0000022455], GH [GH00045884], P [P00122889], U [U0001870]).

Bridelia cinnamomea Hook.f., Fl. Brit. India 5, fasc. 14: 273 (1887). – *Bridelia griffithii* Hook.f. var. *cinnamomea* (Hook.f.) Gehrm., Bot. Jahrb. Syst. 41(4), Beibl. 95: 38 (1908). – TYPE: [Malaysia], Perak, Kinta, January 1885, *G. King's Collector 7101* (lectotype K [K001081475], designated by Gage, J. Asiat. Soc. Bengal 75(5): 491 (1936); islectotypes CAL [CAL0000022457], SING [SING0050067]).

Notes. This species has been accepted under the name *Bridelia cinnamomea* in numerous publications, including the *Flora of Singapore* checklist (Lindsay et al., 2022) and the *Singapore Red Data Book* (Middleton et al., 2024). The names *Bridelia griffithii* and *B. cinnamomea* were published at the same time and have equal priority. The first author to recognise them as synonyms was Gehrmann (1908) and, as he chose *Bridelia griffithii* to be the accepted name, this must be followed (Art. 11.5, Turland et al., 2018).

Cleistanthus hirsutulus Hook.f., Fl. Brit. India 5, fasc. 14: 278 (1887). – TYPE: [Malaysia], Perak, April 1885, *G. King's Collector 7453* (lectotype K [K001081530], designated here by Esser; islectotype P [P00626657]).

Cleistanthus penangensis Jabl. in Engler, Pflanzenr., IV, Fam. 147 VIII (Heft 65): 21 (1915). – TYPE: [Malaysia], Penang, no date, *C. Curtis 1481* (lectotype K [K001081534], designated here by Esser).

Cleistanthus macrophyllus Hook.f., Fl. Brit. India 5, fasc. 14: 278 (1887). – TYPE: [Malaysia], Perak, no date, *B. Scortechini 1759* (lectotype K [K001081509], designated here by Esser; islectotypes CAL [CAL0000022516], E [E00314351]).

Cleistanthus malaccensis Hook.f., Fl. Brit. India 5, fasc. 14: 277 (1887). – TYPE: [Malaysia], Malacca [Melaka], 3 March 1865, *A.C. Maingay 1877* [Kew distribution no. 1373] (lectotype CAL [CAL0000022515], designated here by Esser; islectotypes K [K001081516], L [L0028706]).

Cleistanthus myrianthus (Hassk.) Kurz, Prelim. Rep. Forest Pegu, App. A, cx (1875). – *Nanopetalum myrianthum* Hassk., Verslagen Meded. Afd. Natuurk. Kon. Akad. Wetensch. 4(3): 141 (1855). – *Kaluhaburunghos myrianthus* (Hassk.) Kuntze, Revis. Gen. Pl. 2: 607 (1891). – TYPE: [Indonesia], Java, Bantam, S. Coast, no date, *J.K. Hasskarl s.n.* (lectotype BO n.v., designated by Airy Shaw, Kew Bull. 35: 611 (1980), but not traced by Dressler, Blumea 44: 129 (1999); see Notes).

Cleistanthus pseudocanescens Elmer, Leaflet Philipp. Bot. 3: 910 (1910). – TYPE: Philippines, Sibuyan Island, Province Capiz, Magallanes (Mt Giting-Giting), March 1910, *A.D.E. Elmer 12140* (lectotype NY [NY00029585], designated here by Esser; islectotypes A [A00062016], BISH [BISH1001517], CAS [CAS0033014], DS, E [E00314340], F [F0055994F], G [G00434300], GH [GH00062017], HBG [HBG516501], K [K001081567], L [L0028713], MICH [MICH1107975], MO [MO-260030], NY [NY00029585], P [P00122759], RSL, U [U1473120], US [US00109466]).

Cleistanthus castus S.Moore, J. Bot. 63, Suppl.: 93 (1925). – TYPE: [Indonesia], Sumatra, hills S. of Goenoeng Trang, Lampongs, 1881–1882, *H.O. Forbes 1622* (lectotype BM [BM000799407], designated here by Esser; isoelectotypes BM [BM000799417], BR [BR0000009559479], GH [GH00045987], L [L0028708, L0616838], MA [MA747536], SING [SING0049831]).

Notes. *Nanopetalum myrianthum* Hassk. was based on two syntypes, a Hasskarl collection from Java and a Teijsmann collection from Bali. The lectotype from Java could not be traced by the present authors. Dressler (1999) cited additional duplicates from K, L and U as isotypes, but these are duplicates of the remaining syntype (*Teijsmann s.n.*) from Bali and hence not isoelectotypes.

Cleistanthus sumatranus (Miq.) Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 504 (1866). – *Leiopyxis sumatrana* Miq., Fl. Ned. Ind., Eerste Bijv., fasc. 3: 446 (1861). – TYPE: [Indonesia], S. Sumatra, Province Lampong [Lampung], in monte Gunung Batin, prope Tega-nennin, no date, *J.E. Teijsmann HB 4219* (lectotype U [U0001877], designated here by Esser).

Cleistanthus heterophyllus Hook.f., Fl. Brit. India 5, fasc. 14: 276 (1887). – TYPE: [Malaysia], Malacca [Melaka], 22 March 1865, *A.C. Maingay 1912* [Kew distribution no. 1372] (lectotype K [K001081550], designated here by Esser; isoelectotypes CAL [CAL0000022485], K [K001081549], L [L0028791]).

Paracleisthus subgracilis Gagnep., Bull. Soc. Bot. France 70: 500 (1923). – TYPE: Cambodia, Pnom-penh [Phnom Penh], no date, *Magnen, Gourgand & Châtillon s.n.* (lectotype P [P00626671], designated here by Esser).

Notes. There are unnumbered *Teijsmann* specimens in G-DC, GH and K which may be duplicates of *Teijsmann HB 4219*. However, there is a remaining syntype of the name, *Teijsmann HB 4267* (U), of which they could also be duplicates so their status cannot be ascertained with certainty.

Emblica pectinata (Hook.f.) Ridl., Fl. Malay Penins. 3: 217 (1924). – *Phyllanthus pectinatus* Hook.f., Fl. Brit. India 5, fasc. 14: 290 (1887). – *Diasperus pectinatus* (Hook.f.) Kuntze, Revis. Gen. Pl. 2: 601 (1891). – TYPE: [Malaysia], Malacca [Melaka], June 1865, *A.C. Maingay 1809* [Kew distribution no. 1352] (lectotype K [K001056742], designated here by Esser).

Notes. *Emblica pectinata* is similar to *E. officinalis* Gaertn. and has been united with it by numerous previous authors. Ng (2000), however, discussed and illustrated the small but consistent differences and the two species are, therefore, now recognised as distinct. *Emblica officinalis* is distributed from India to China and Peninsular Malaysia

but has not been collected in Singapore. The published records of *Emblica officinalis* for Singapore (Lindsay et al., 2022, and references for *Phyllanthus emblica* L. therein; Middleton et al., 2024) are misapplications for *E. pectinata*.

Glochidion borneense (Müll.Arg.) Boerl., Handl. Fl. Ned. Ind. 3: 276 (1900). – *Phyllanthus borneensis* Müll.Arg., Flora 48: 377 (1865). – *Diasperus borneensis* (Müll.Arg.) Kuntze, Revis. Gen. Pl. 2: 598 (1891). – TYPE: [Indonesia], Borneo, Poeloe [Pulau] Lampei, no date, *P.W. Korthals s.n.* (holotype L [L.2059101]; isotype G [G00324997]).

Glochidion trilobum Ridl., Bull. Misc. Inform. Kew 1923: 364 (1923). – TYPE: Singapore, Singapore Botanic Gardens, April 1897, *H.N. Ridley 8440* (lectotype K [K001081172], designated here by van Welzen; isoelectotype SING [SING0051869]).

Glochidion littorale Blume, Bijdr. Fl. Ned. Ind., pt 12: 585 (1826). – TYPE: [Indonesia, Java], Krawang Province, near Pamanukan, no date, *C.L. Blume 1536* (lectotype L [L.2235132], designated here by van Welzen).

Glochidion lutescens Blume, Bijdr. Fl. Ned. Ind., pt 12: 585 (1826). – TYPE: [Indonesia, Java], Nangnong on Mt Salak, no date, *C.L. Blume s.n.* (lectotype L [L.2223394], designated here by van Welzen).

Glochidion obscurum (Roxb. ex Willd.) Blume, Bijdr. Fl. Ned. Ind., pt 12: 585 (1826). – *Phyllanthus obscurus* Roxb. ex Willd., Sp. Pl., ed. 4, 4(1): 581 (1805). – TYPE: India, no date, *W. Roxburgh s.n.* (lectotype B-W [B-W17971-020], designated by Chakrabarty, Ann. Pl. Sci. 8: 362 (2019)).

Glochidion glaucum Blume, Bijdr. Fl. Ned. Ind., pt 12: 587 (1826). – TYPE: [Indonesia], Java, Parang, no date, *C.L. Blume 1372* (lectotype L [L.2218687], designated here by van Welzen).

Phyllanthus teysmannii Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 1270 (1866). – TYPE: [Indonesia], Java, no date, *J.E. Teijsmann s.n.* (lectotype G-DC [G00325031], designated here by van Welzen; isoelectotypes G [G00325033, G00325035]).

Glochidion obscurum (Roxb. ex Willd.) Blume var. *macrocalyx* J.J.Sm., Meded. Dept. Landb. Ned.-Indië 10: 130 (1910) [Bijdr. Boomsoort. Java 12: 130 (1910)]. – TYPE: [Indonesia], Java, Semarang, kedung djati [jati forest = teak forest], 31 October 1892, *H. Koorders 13753β* (lectotype L [L.2218943], designated here by van Welzen).

Note. As of 1 August 2024, *Phyllanthus teysmannii* Müll.Arg. is incorrectly considered to be a synonym of *Glochidion zeylanicum* (Gaertn.) A.Juss. var. *arborescens* (Blume) Chakrab. & M.Gangop. in Plants of the World Online (<https://powo.science.kew.org/>).

Glochidion rubrum Blume, Bijdr. Fl. Ned. Ind., pt 12: 586 (1826). – TYPE: [Indonesia], Java, no date, *C.L. Blume 2091* (lectotype L [L.2228099], designated here by van Welzen).

Glochidion sericeum (Blume) Zoll. & Moritzi, Natuur- Geneesk. Arch. Ned.-Indië 2: 585 (1845). – *Glochidionopsis sericea* Blume, Bijdr. Fl. Ned. Ind., pt 12: 588 (1826). – TYPE: [Indonesia], Java, no date, *collector unknown* (Blume?) *s.n.* (lectotype L [L0032207], designated here by van Welzen).

Glochidion zeylanicum (Gaertn.) A.Juss., Euphorb. Gen. 107 (1824). – *Bradleya zeylanica* Gaertn., Fruct. Sem. Pl. 2, fasc. 1: 128, t. 109 (1790). – *Diasperus zeylanicus* (Gaertn.) Kuntze, Revis. Gen. Pl. 2: 601 (1891). – *Phyllanthus zeylanicus* (Gaertn.) Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 281 (1866), nom. illeg. hom., non *Phyllanthus zeylanicus* Müll.Arg. (1863). – TYPE: [Published illustration] Gaertner, Fruct. Sem. Pl. 2, fasc. 1: t. 109 (1790), lectotype designated by Chakrabarty & Gangopadhyay, J. Econ. Taxon. Bot. 19: 226 (1995).

Glochidion hongkongense Müll.Arg., Linnaea 32: 60 (1863). – TYPE: [China], Hong Kong, no date, *H.F. Hance 544* (lectotype K [K001081077], designated here by van Welzen).

Glochidion zeylanicum (Gaertn.) A.Juss. var. *malayanum* J.J.Sm., Meded. Dept. Landb. Ned.-Indië 10: 118 (1910) [Bijdr. Boomsoort. Java 12: 118 (1910)]. – TYPE: [Indonesia], Java, Semarang Province, Karangasem, 25 March 1892, *S.H. Koorders 2345β* (lectotype L [L.2228519], designated here by van Welzen; isoelectotypes K [K001081243], L [L.2228518]).

Glochidion zeylanicum (Gaertn.) A.Juss. var. *arborescens* (Blume) Chakrab. & M.Gangop., J. Econ. Taxon. Bot. 19: 228 (1995). – *Glochidion arborescens* Blume, Bijdr. Fl. Ned. Ind., pt 12: 584 (1826). – TYPE: [Indonesia, Java], Province Buitenzorg [Jawa Barat], Tjantor, no date, *C.L. Blume 2016* (lectotype L [L.2227543], designated here by van Welzen; isoelectotypes L [L.2227545, L.2227548]).

Nymphanthus glaucescens (Miq.) R.W.Bouman, Phytotaxa 540: 22 (2022). – *Reidia glaucescens* Miq., Fl. Ned. Ind. 1(2), fasc. 3: 374 (1859). – *Phyllanthus zollingeri* Müll.Arg., Linnaea 32: 47 (1863) [non *Phyllanthus glaucescens* Kunth, Nov. Gen. Sp. 2: 115 (1817)]. – *Phyllanthus pallidifolius* Müll.Arg. in de Candolle, Prodr. 15(2), fasc. 2: 424 (1866), nom. illeg. superfl. – TYPE: [Indonesia] Java, May 1858, *H. Zollinger 2701* (lectotype L [L0016457], designated here by Esser).

Phyllanthus zollingeri Müll.Arg. var. *microphyllus* Müll.Arg., Linnaea 32: 47 (1863). – TYPE: [Indonesia] Sumbawa, 1846, *H. Zollinger 2701* (lectotype G-DC [G00316728], designated here by Esser; islectotype A [A00062365]).

Phyllanthus pulcher Wall. [Numer. List 7908 (1847), nom. nud.] ex Müll.Arg., Linnaea 32: 49 (1863). – TYPE: [Malaysia], Penang, *N. Wallich s.n.* [EIC 7908] (lectotype G-DC [G00316739], designated here by Esser; islectotype G [G00434929], K [K001056657]).

Phyllanthus pulcher Wall. ex Müll.Arg. var. *pallidus* Müll.Arg., Linnaea 32: 49 (1863). – TYPE: Without locality, no date, *J.E. Teijsmann s.n.* (lectotype G-DC [G00316738], designated here by Esser).

Notes. This name was omitted by Chong et al. (2009), Lindsay et al. (2022) and Middleton et al. (2024) on the grounds that it was previously considered to only be known in cultivation in Singapore. However, the species is native in the region and Ridley (1900), under the name *Phyllanthus pulcher*, noted that it was ‘possibly wild, but usually seen around cultivated ground’. The labels on the few Singapore collections (Geylang, 20 Dec. 1930, *Z. Teruya 1312* (SING [SING0036088]); Pulau Tekong, 29 Aug. 1996, *H.T.W. Tan et al. T 4025* (SING [SING0343044]); without locality, no date, *Z. Teruya 1557* (SING [SING0036088])) are ambiguous as to the growth conditions of the plants but the lack of a specific statement saying they were from cultivation would seem to imply they were collected in the wild. We therefore reassess the status of this species for Singapore from cultivated only to cryptogenic.

The lectotypes of both *Reidia glaucescens* Miq. and *Phyllanthus zollingeri* Müll.Arg. var. *microphyllus* Müll.Arg. have the collector and collector number as *Zollinger 2701*. However, note that Zollinger’s numbering system does not imply the specimens are duplicates if they have the same number. This is obvious here as they were collected on different islands.

The lectotype of *Phyllanthus pulcher* var. *pallidus* does not give any locality data on the sheet. According to the protologue, the variety was cited as being from ‘Java, introduced from Singapore’. It is not obvious from where this information was taken, possibly from the second syntype (*Zollinger 1263Z*) that could not be traced.

Picrodendraceae

Austrobuxus nitidus Miq., Fl. Ned. Ind., Eerste Bijv., fasc. 3: 445 (1861). – TYPE: [Indonesia], West Coast Sumatra, prope Siboga, no date, *J.E. Teijsmann HB 769* (lectotype U [U0001968], designated here by van Welzen; isoelectotypes L [L0016071], U [U0001969]).

Choriophyllum montanum Ridl., J. Linn. Soc., Bot. 38: 322 (1908). – TYPE: [Malaysia], Pahang, Gunong Tahan, 3 June 1905, *L. Wray & H.C. Robinson 5424* (lectotype SING [SING0050089], designated here by van Welzen; isoelectotype K [K000254090]).

Notes. The type collection of *Choriophyllum montanum* Ridl. was incorrectly reported in the protologue under the number 5434.

Rutaceae

Clausena Burm.f., Fl. Ind. 87, 243 (index), t. 29, fig. 2 (1768), as ‘*Claucena*’ on p. 87. – TYPE: *Clausena excavata* Burm.f.

Gallesioa M.Roem., Fam. Nat. Syn. Monogr. 1: 33, 45 (1846). – TYPE: *Gallesioa graveolens* (Wight & Arn.) M.Roem., lectotype designated here by Esser (= *Clausena excavata* Burm.f.).

Notes. *Gallesioa* was based on two species, *G. graveolens* (Wight & Arn.) M.Roem. and *G. pentaphylla* (DC.) M.Roem. The genus name has never been used since. The lectotype designated here refers to the more widespread species.

Clausena excavata Burm.f., Fl. Ind. 87, 243 (index), t. 29, fig. 2 (1768), as ‘*Claucena*’ on p. 87. – *Murraya burmanni* Spreng., Syst. Veg. (ed. 16) 2: 315 (1825), nom. illeg. superfl. – TYPE: [Indonesia], Java, no date, *N.L. Burman 29 in Herb. van Royen* (lectotype L, designated by Tanaka, Meded. Rijks-Herb. 69: 6 (1931)).

Amyris punctata Roxb. [Hort. Bengal. 28 (1814), nom. nud.] Trans. Linn. Soc. London 15: 366, t. 5, fig. 3 (1827). – *Clausena punctata* (Roxb.) Wight & Arn. ex Steud., Nomencl. Bot., ed. 2, 1: 378 (1840). – TYPE: Introduced from Chittagong, cultivated at the Calcutta Botanical Garden, no date, *W. Roxburgh s.n.* (lectotype BM [BM01013996], designated here by Esser; possible isoelectotypes BM [BM01013997], BR [BR0000008699862], B-W [B-W07294-010] E [E00301344], G, K [K000717909], K-W [K001125732, labelled as EIC 8511A], LINN [LINN-HS672-12]).

Glycosmis chlorosperma (Blume) Spreng., Syst. Veg. (ed. 16) 4(2): 162 (1827). – *Cookia chlorosperma* Blume, Bijdr. Fl. Ned. Ind., pt 3: 135 (1825). – TYPE: [Indonesia], Java, Burangrang, no date, *C.L. Blume s.n.* (lectotype L [L0017846], designated here by Esser; islectotypes L [L0017844, L0017845, L0017847, L0017848]).

Glycosmis malayana Ridl., J. Straits Branch Roy. Asiat. Soc. 75: 12 (1917). – TYPE: Singapore, Chan Chu Kang, 1892, *H.N. Ridley 3912* (lectotype K [K000717931], designated here by Esser; islectotype SING [SING042850]).

Note. The lectotype of *Glycosmis chlorosperma* (Blume) Spreng. chosen here is the only one among several type sheets in Leiden (L) that has both flowers and fruits. Some of these sheets (but not the lectotype) are numbered as 971.

For *Glycosmis malayana* Ridl., Stone (1985: 2) cited a type (*Ridley 1851*, Singapore) that was not mentioned in the protologue and which is not original material. Therefore, a lectotype from amongst the syntypes cited by Ridley is chosen here.

Glycosmis lanceolata (Blume) D.Dietr., Syn. Pl. 2: 1409 (1840). – *Sclerostylis lanceolata* Blume, Bijdr. Fl. Ned. Ind., pt 3: 134 (1825). – *Glycosmis simplicifolia* Spreng., Syst. Veg. (ed. 16) 4(2): 162 (1827), nom. illeg. superfl. – *Helie lanceolata* (Blume) M.Roem., Fam. Nat. Syn. Monogr. 1: 43 (1846). – *Glycosmis lanceolata* (Blume) Teijsm. & Binn. ex Kurz, J. Bot. 14: 35 (1876), isonym – TYPE: [Indonesia], Java, Batavia, no date, *C.L. Blume 1167* (lectotype L [L0017879], designated here by Esser; islectotype L [L0017880]).

Glycosmis puberula Lindl. [in Wallich, Numer. List 6375 (1832), nom. nud.] ex Oliv., J. Proc. Linn. Soc., Bot. 5(Suppl. 2): 39 (1861). – TYPE: [Malaysia], Penang, 1822, *N. Wallich s.n.* [EIC 6375A] (lectotype K [K000382444], first step designated by Stone, Proc. Acad. Nat. Sci. Philadelphia 137: 17 (1985), second step designated here by Esser; islectotypes BM [BM000798411], BR [BR0000005640188], C [C10018440], E [E00201773, E00201774], G [G00096265, G00096266], K [K000382445, K000382446], K-W [K000382474], M [M0275020, M0275021], P [P02441038, P05184891]).

Notes. Stone (1985: 17) cited ‘*Wallich 6375*’, Penang (K) as type, therefore effectively lectotypifying the collection with the catalogue number 6375 in the East India Company Herbarium (EIC). As three duplicates were found in K (plus one in K-W), the lectotypification is narrowed to one of these in a second step here.

Luvunga crassifolia Tanaka, Meded. Rijks-Herb. 69: 8 (1931). – TYPE: [Malaysia], Malacca [Melaka], 10 October 1865, *A.C. Maingay 1519* [Kew distribution no. 285] (lectotype K [K00149238], designated here by Esser; islectotypes CAL [CAL0000006599], K [K00149239]).

Merope angulata (Willd.) Swingle, J. Wash. Acad. Sci. 5: 423, fig. 1, 2 (1915). – *Citrus angulata* Willd., Sp. Pl., ed. 4, 3(2): 1426 (1802). – *Limonia angulata* (Willd.) Wight & Arn. ex Voigt, Hort. Suburb. Calcutt. 139 (1845). – *Gonocitrus angulatus* (Willd.) Kurz, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 42(2): 228, pl. 18 (1874 [‘1873’]). – *Paramignya angulata* (Willd.) Kurz, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 44(3): 135 (1876 [‘1875’]). – *Atalantia angulata* (Willd.) Engl. in Engler & Prantl, Nat. Pflanzenfam., ed. 2, 19a: 328 (1931). – TYPE: [Published illustration] Rumphius, Herb. Amboin. 2: t. 32 (1741).

Sclerostylis spinosa Blume, Bijdr. Fl. Ned. Ind., pt 3: 134 (1825). – *Limonia spinosa* (Blume) Spreng., Syst. Veg. (ed. 16) 4(2): 162 (1827). – *Glycosmis spinosa* (Blume) D.Dietr., Syn. Pl. 2: 1409 (1840). – *Merope spinosa* (Blume) M.Roem., Fam. Nat. Syn. Monogr. 1: 44 (1846). – *Atalantia spinosa* (Blume) Hook. ex Koord., Exkurs.-Fl. Java 2: 427 (1912). – TYPE: [Indonesia], Java, Nusa Kambangan, no date, *C.L. Blume 1621* (lectotype L [L0017950], designated here by Esser; isoelectotypes L [L0017951], US [US01108449]).

Paramignya scandens (Griff.) Craib, Fl. Siam. 1(2): 235 (1926). – *Citrus scandens* Griff., J. Trav. 86 (1847); Griffith, Not. Pl. Asiat. 4: 495 (1854); Griffith, Icon. Pl. Asiat.: t. 587, fig. 1 (1854). – *Paramignya citrifolia* Oliv., J. Proc. Linn. Soc., Bot. 5(Suppl. 2): 42 (1861), nom. illeg. superfl. – *Paramignya griffithii* Hook.f., Fl. Brit. India 1, fasc. 3: 510 (1875), nom. illeg. superfl. – *Atalantia griffithii* Guillaumin, Notul. Syst. (Paris) 1: 183 (1910), nom. illeg. superfl. – *Atalantia scandens* (Griff.) Engl. in Engler & Prantl, Nat. Pflanzenfam., ed. 2, 19a: 328 (1931). – TYPE: [Myanmar], ‘Serpentine Mines versus Burman’, 3 April 1837, *W. Griffith s.n.* [Kew distribution no. 519] (lectotype K [K000736064], designated here by Esser; isoelectotypes C [C10018467], GH [GH00993755], K [K000736062], L [L0940257], M [M0094998], S [S08-9911]).

Paramignya rectispinosa Craib, Bull. Misc. Inform. Kew 1916: 261 (1916). – TYPE: [Thailand], Doi Suthep, 28 March 1911, *A.F.G. Kerr 1718* (lectotype K [K000380392], designated here by Esser; isoelectotypes BM [BM000798418], TCD [TCD0013405]).

Paramignya scandens (Griff.) Craib var. ***ridleyi*** (Burkill) Swingle, J. Wash. Acad. Sci. 28: 533 (1938). – *Paramignya ridleyi* Burkill, Gard. Bull. Straits Settlement. 5(7&8): 214 (1931 [‘1930’]). – TYPE: Singapore, no date, *R.W. Hullett 388* (lectotype SING [SING0025355], first step designated by Swingle (1943: 258), second step designated here by Esser).

Notes. Swingle (1943: 258) cited the collection *Hullett 388* as type, therefore effectively lectotypifying the collection, but he did not mention a herbarium. It is lectotypified here in a second step.

Tetractomia tetrandra (Roxb.) Merr., J. Straits Branch Roy. Asiat. Soc. 76: 87 (1917). – *Melicope tetrandra* Roxb. [Hort. Bengal. 88 (1814), nom. nud.] Fl. Ind., ed. 2, 2: 257 (1832). – *Tetractomia roxburghii* Hook.f., Fl. Brit. India 1, fasc. 3: 491 (1875), nom. illeg. superfl. – *Melicope roxburghii* Engl. in Engler & Prantl, Nat. Pflanzenfam. 3(4): 122 (1896), nom. illeg. superfl. – TYPE: [Unpublished illustration at K] W. Roxburgh Icones 1411, lectotype designated by Hartley, J. Arnold Arbor. 60: 130 (1979).

Tetractomia philippinensis Elmer, Leaflet. Philipp. Bot. 7: 2813 (1915). – *Melicope philippinensis* (Elmer) Engl., Nat. Pflanzenfam., ed. 2, 19a: 233 (1931). – TYPE: Philippines, Mindanao, Agusan Province, Cabadbaran, Mt Urdaneta, September 1912, *A.D.E. Elmer 13751* (lectotype CAS [CAS0005486], designated here by Esser; isoelectotypes A [A00044212], G [G00087135], GH [GH00105554], HBG [HBG521459], K [K000717528], L [L0017979], MICH [MICH1111219], MO [MO251498], NY [NY00067172]).

Zanthoxylum myriacanthum Wall. [Numer. List 1214 (1829), nom. nud.] ex Hook.f., Fl. Brit. India 1, fasc. 3: 496 (1875). – *Fagara myriacantha* (Wall. ex Hook.f.) Engl. in Engler & Prantl, Nat. Pflanzenfam. 3(4): 118 (1896). – TYPE: [Malaysia], Penang, 1829, *G. Porter s.n.* [EIC 1214] (lectotype K-W [K001112430], designated here by Esser; isoelectotypes BM [BM000798137, BM000798138], K [K000717762]).

Zanthoxylum nitidum (Roxb.) DC., Prodr. 1: 727 (1824). – *Fagara nitida* Roxb. [Hort. Bengal. 11 (1814), nom. nud.] Fl. Ind. 1: 439 (1820). – TYPE: [Unpublished illustration at K] W. Roxburgh Icones 2430, lectotype designated by Hartley, J. Arnold Arbor. 47: 180 (1966).

Zanthoxylum hamiltonianum Wall. ex Hook.f. var. *tomentosum* Hook.f., Fl. Brit. India 1, fasc. 3: 494 (1875). – TYPE: India, Assam, no date, *F. Jenkins s.n.* (lectotype K [K004662475], designated here by Esser; isoelectotype K [K004662474]; possible isoelectotype BR [BR0000005787296]).

Notes. As already mentioned by Sealy (1956: 339) and Hartley (1966: 184), there is another Roxburgh illustration at K also numbered 2430, representing *Elaeagnus arborea* Roxb. Hartley's lectotype is nevertheless unambiguous.

Sapindaceae

Acer laurinum Hassk., Tijdschr. Natuurl. Gesch. Physiol. 10: 138 (1843). – *Acer javanicum* Jungh., [Tijdschr. Natuurl. Gesch. Physiol. 8: 391 (1841), nom. nud.] Monatsber. Verh. Ges. Erdk. Berlin 3: 96 (1842), nom. illeg. hom., non *Acer javanicum* Burm.f. (1768). – *Acer niveum* Blume, Jaarb. Kon. Ned. Maatsch. Aanm. Tuinb. 1844:

84 (1844), nom. illeg. superfl. – TYPE: [Indonesia], West Java, Megamendong, no date, *F.W. Junghuhn s.n.* (lectotype L [L0014688], designated by Noorsiha in Soepadmo et al. (eds), *Tree Fl. Sabah & Sarawak* 1: 3 (1995); isoelectotype BO; possible isoelectotype L [L.2300600]).

Laurus caesia Reinw. ex Blume [Catalogus 66 (1823), nom. nud.] Bijdr. Fl. Ned. Ind., pt 11: 553 (1826). – TYPE: [Indonesia], Java, no date, *Herbarium C.G.C. Reinwardt s.n.* (lectotype L [L0014686], designated here by van Welzen; isoelectotypes L [L0014687], LE [LE00014920]).

Notes. When Hasskarl (1843) introduced the name *Acer laurinum*, he referred only to *Acer javanicum* Jungh. and did not provide a description. Although *Acer javanicum* Jungh. is a later homonym of *Acer javanicum* Burm.f. (Burmah, 1768) and was published with a description in German by Junghuhn (1842), the name *Acer laurinum* is nevertheless validly published by reference back to Junghuhn (1842) (Turland et al., 2018, Art. 38.1). Junghuhn's earlier use of the name *Acer javanicum* (Junghuhn, 1841) does not include a description and cannot be treated as the basis of Hasskarl's replacement name as has sometimes been done in the past. *Acer javanicum* Burm.f. may be the same species as *Acer laurinum* Hassk., in which case *Acer javanicum* Burm.f. would have priority, but they have hitherto been treated as separate species and there remains problems in the satisfactory interpretation of *Acer javanicum* Burm.f. We continue to treat them as separate species pending resolution of these issues in Java.

A Junghuhn specimen in L [L.2300600], which is also annotated in Hasskarl's hand but does not mention Megamendong, may be an isoelectotype.

Allophylus cobbe (L.) Forsyth f., Bot. Nomencl. 226 (1794). – *Rhus cobbe* L., Sp. Pl. 1: 267 (1753). – TYPE: [Sri Lanka], no date, *Herb. P. Hermann vol. 2, fol. 46* ('*Kobbae*') (lectotype BM [BM000621663], first step designated by Leenhouts in Adema et al. (eds), *Fl. Males.*, ser. 1, 11: 460 (1994), second step designated here by Middleton & van Welzen; isoelectotypes BM [BM000621664, BM000621665]).

Schmidelia fulvinervis Blume, Bijdr. Fl. Ned. Ind., pt. 5: 231 (1825). – TYPE: [Indonesia], Java, prope Buitenzorg [Bogor], no date, *C.L. Blume 1850* (lectotype L [L0013236], designated here by van Welzen).

Ornithophe villosa Roxb., Fl. Ind., ed. 2, 2: 265 (1832). – *Allophylus villosus* (Roxb.) Blume, Rumphia 3: 132 (1847). – TYPE: [Bangladesh], Chittagong, no date, *W. Roxburgh s.n.* (lectotype BM [BM000838109], designated here by van Welzen).

Notes. Although Raeuschel (1797: 108) was previously considered to be the author of *Allophylus cobbe*, Forsyth Jr. (1794) made the combination three years earlier. Raeuschel's later re-publication of the name is to be considered an isonym.

Dimocarpus lichi Lour., Fl. Cochinch. 1: 233 (1790). – TYPE: [Vietnam], no date, *J. de Loureiro s.n.* (lectotype BM [BM00884085] (inflorescences only), designated here by van Welzen following the suggestion by Leenhouts, Blumea 19: 115 (1971); see Notes).

Sapindus cinereus Turcz., Bull. Soc. Imp. Naturalistes Moscou 31: 402 (1858) [non *Sapindus cinereus* A.Cunn. ex A.Gray (1854), pro syn., nom. inval.]. – *Euphoria cinerea* (Turcz.) Radlk., Sitzungsber. Math.-Phys. Cl. Königl. Bayer. Akad. Wiss. München 8: 299 (1878). – *Dimocarpus longan* Lour. subsp. *malesianus* Leenh., Blumea 19: 126 (1971). – *Dimocarpus longan* Lour. var. *malesianus* Leenh., Blumea 19: 126 (1971). – *Dimocarpus cinereus* (Turcz.) Boonsuk & Chantar., Novon 25: 134 (13 April 2017). – *Dimocarpus malesianus* (Leenh.) Lithanat. & Chaowasku in Lithanatudom et al., Sci. Rep. 7(6716): 6 (27 July 2017), nom. illeg. superfl. – TYPE: Philippines, Luzon, Province of S. Ilocos, 1841, *H. Cuming 1131* (lectotype KW [KW001000700, KW001000701 – a single specimen over two sheets], designated by Leenhouts, Blumea 19: 122, 123 (1971); isolectotypes BM [BM000884082], C [C10018598], FI [FI006786], GH [GH00063065], GOET [GOET010835], K [K000701851], L [L0013425, L0013426]).

Notes. Boonsuk & Chantaranothai (2017) divided *Dimocarpus longan* Lour. in the sense of Leenhouts (1971: 122) into three species, *D. longan*, *D. cinereus* (Radlk.) Boonsuk & Chantar. and *D. scandens* (Winit & Kerr) Boonsuk & Chantar., whereby *D. cinereus* equals *D. longan* var. *malesianus* Leenh. sensu Leenhouts. Three months later, another Thai team, Lithanatudom et al. (2017), presented a phylogeny in which *Dimocarpus longan* appears to be polyphyletic and *D. longan* var. *malesianus* (sensu Leenhouts) is clearly a different species, which they named *D. malesianus* (Leenh.) Lithanat. & Chaowasku. As *Dimocarpus malesianus* is based on the same type as the older name *D. cinereus*, it is superfluous. However, there are even older epithets at the rank of species. The oldest epithet is by de Loureiro (1790), *Dimocarpus lichi* Lour. A problem with the latter name is in its typification. Leenhouts (1971: 115, note 4) indicated that de Loureiro's specimens of *Dimocarpus lichi* in BM are all primarily specimens of *Litchi chinensis* Sonn. even though de Loureiro's description describes flowers that are definitely not of a *Litchi*. This is reflected in inflorescences on one of the two sheets in BM which are of *Dimocarpus lichi* and are selected here as the lectotype of the genus and species.

Lepisanthes fruticosa (Roxb.) Leenh., Blumea 17: 76 (1969). – *Sapindus fruticosus* Roxb., [Hort. Bengal. 29 (1814), nom. nud.] Fl. Ind., ed. 2, 2: 283 (1832). – *Otophora fruticosa* (Roxb.) Blume, Rumphia 3: 142 (1849). – *Otolepis fruticosa* (Roxb.) Kuntze, Revis. Gen. Pl. 1: 144 (1891). – *Capura fruticosa* (Roxb.) S.Vidal in Ceron, Cat. Pl. Herb. Manila 54 (1892). – TYPE: Cult. Hort. Bot. Calcutta, introduced from the Moluccas (after Leenhouts, Blumea 17: 76 (1969)), no date, *W. Roxburgh s.n.*

(lectotype BM [BM000838013], designated here by van Welzen; isoelectotypes BR [BR0000005415274, BR0000005415564], E [E00301462]).

Otolepis nigrescens Turcz., Bull. Soc. Imp. Naturalistes Moscou 21: 573 (1848). – *Otophora nigrescens* (Turcz.) Fern.-Vill., Nov. App. 52 (1880). – *Capura nigrescens* (Turcz.) S.Vidal, Sin. Gen. Pl. Leños. Filip., Atlas 21, t. 34 fig. E (1883). – TYPE: Philippines, Luzon, no date, *H. Cuming* 1922 (lectotype KW [KW001000685], designated here by van Welzen; isoelectotype M [M0224826]).

Otophora erythrocalyx Hiern in Hooker, Fl. Brit. India 1, fasc. 3: 680 (1875). – TYPE: [Malaysia], Malacca [Melaka], 29 January 1868, *A.C. Maingay* 1443 [Kew distribution no. 447] (lectotype K [K000701983], designated by Leenhouts, Blumea 17: 76 (1969), second step designated here by van Welzen; isoelectotypes K [K000701984], M [M0224827]).

Otophora resecta Radlk., Rec. Bot. Surv. India 3: 346 (1907). – TYPE: Malaysia, Pulau Penang, Penara Bukit, December 1895, *H.N. Ridley* 6948 (lectotype SING [SING0188336], designated here by van Welzen; isoelectotype M [M0224818]).

Otophora cauliflora Merr., Philipp. J. Sci., C 13: 24 (1918). – TYPE: Philippines, Luzon, Tayabas Province, Mt Binuang, 1 May 1917, *M. Ramos & G.E. Edaño* BS 28561 (lectotype US [US00095276], designated here by Middleton & van Welzen; isoelectotype M [M0224830]).

Otophora grandifoliola Quisumb. & Merr., Philipp. J. Sci. 37: 163 (1928). – TYPE: Philippines, Mindanao, Davao Province, Mati, 13 April 1927, *M. Ramos & G.E. Edaño* BS 49051 (lectotype L [L0014355], designated here by Middleton & van Welzen; isoelectotypes K [K000701906], NY [NY00337943], UC [UC329925]).

Otophora anomala Radlk. in Engler, Pflanzenr., IV, Fam. 165 (Heft 98C): 766 (1932). – TYPE: [Malaysia], N. Borneo [Sabah], Kibayo to Keung, 29 October 1915, *M.S. Clemens* 9880 (lectotype A [A00050862], designated here by Middleton & van Welzen).

Notes. The protologue of *Otophora cauliflora* Merr. cited the type as *Ramos & Edaño* BS 28516 but this was clearly a typographical error for BS 28561, the extant specimens of which are labelled '*Otophora cauliflora* Merr., n. sp.' in Merrill's hand.

Leenhouts (1969) cited specimens as holotypes from the herbarium where the author worked. Quite often these cited specimens were from PNH, which were lost when the herbarium burned down during World War II. As these names did not actually have holotypes and the duplicates of the cited collections must be treated as syntypes, Leenhout's citation of holotypes for some of these names must be treated as effective lectotypifications. However, as the material of PNH is lost, other duplicates are designated here as lectotypes.

Lepisanthes rubiginosa (Roxb.) Leenh., Blumea 17: 82 (1969). – *Sapindus rubiginosus* Roxb., Pl. Coromandel 1, fasc. 3: 44, pl. 62 (1796), as ‘*rubiginosa*’. – *Moulinsia rubiginosa* (Roxb.) D.Don, Gen. Hist. 1: 667 (1831). – *Erioglossum rubiginosum* (Roxb.) Blume, Rumphia 3: 118 (1847). – *Pancovia rubiginosa* (Roxb.) Baill. ex F.Muell., Fragm. 9: 100 (1875). – TYPE [Published illustration] Roxburgh, Pl. Coromandel 1, fasc. 3: pl. 62 (1796), designated by Leenhouts, Blumea 17: 82 (1969).

Sapindus edulis Blanco, Fl. Filip., ed. 2, 201 (1845), nom. illeg. hom., non *Sapindus edulis* Aiton (1789). – TYPE: Philippines, Luzon, Batangas Province, no date, *E.D. Merrill Species Blancoanae* 1042 (neotype L [L0014368], designated here by van Welzen; isoneotypes BO, US [US00689421]).

Lepisanthes hirta Ridl., J. Fed. Malay States Mus. 10: 132 (1920). – TYPE: [Malaysia], Kelantan, Charming Woods, January 1914, *H.N. Ridley FMS 13161* (lectotype SING [SING0046102], first step designated by Leenhouts, Blumea 17: 82 (1969), second step designated here by van Welzen; isolectotype SING [SING0046103]).

Notes. Leenhouts (1969: 82) designated two ‘neosyntypes’, a concept not recognised in the ICN (Turland et al., 2018), for *Sapindus edulis* Blanco. Instead, it is newly neotypified here.

Lepisanthes senegalensis (Juss. ex Poir.) Leenh., Blumea 17: 85 (1969). – *Sapindus senegalensis* Juss. ex Poir., Encycl. 6, fasc. 2: 666 (1805). – TYPE: Senegal, no date, *M. Adanson & E.F. Geoffroy f. s.n.* (holotype P-JU [Herb. Jussieu 11386]).

Aphania montana Blume, Bijdr. Fl. Ned. Ind., pt 5: 236 (1825). – TYPE: [Indonesia], W. Java, Mt Parang, no date, *collector unknown (Blume?) s.n.* (lectotype L [L0014378], designated here by van Welzen).

Euphoria verticillata Lindl., Bot. Reg. 13: t. 1059 (1827). – *Scytalia verticillata* (Lindl.) Roxb., Fl. Ind., ed. 2, 2: 273 (1832). – TYPE: [India], cult. Hort. Bot. Calcutta, no date, *W. Roxburgh s.n.* (lectotype BR [BR0000005415946], first step designated by Leenhouts, Blumea 17: 85 (1969), second step designated here by van Welzen; isolectotypes BR [BR0000005415298, BR0000005415618], E [E00301461]).

Ornitrophe thyrsoides Schumach. & Thonn., Beskr. Guin. Pl. 185 (1827). – TYPE: [Ghana], Guinea, ‘Quitta’ [Kwitta/Keta], no date, *P. Thonning* 342 (lectotype C [C10004243], first step designated by Leenhouts, Blumea 17: 85 (1969), second step designated here by van Welzen; isolectotypes C [C10004241, C10004242]).

Sapindus attenuatus Wall. [Numer. List 8037 (1847), nom. nud.] ex Hiern in Hooker, Fl. Brit. India 1, fasc. 3: 684 (1875), nom. illeg. superfl. – TYPE: [Bangladesh],

Sylhet, 1836, *N. Wallich s.n.* [EIC 8037] (lectotype K [K000739024], first step designated by Leenhouts, *Blumea* 17: 86 (1969), second step designated here by van Welzen; isoelectotypes BM, BR [BR0000013204471], E [E00301458, E00301459], FI [FI006773], G [G00007798, G00007799], NY [NY00338019]).

Aphania loheri Radlk., Philipp. J. Sci., C 8(6): 452 (1914 ['1913']). – TYPE: Philippines, Luzon, Rizal Province, Montalban, July 1905, *A. Loher 5874* (lectotype M [M0224770], first step designated by Leenhouts, *Blumea* 17: 86 (1969), second step designated here by van Welzen; isoelectotypes K [K000701921], L [L0014380], M [M0224771, M0224772]).

Aphania fascicularis Radlk., Repert. Spec. Nov. Regni Veg. 18: 334 (1922). – TYPE: [Indonesia], Moluccas, Batjan, no date, *O. Warburg 18168* (lectotype M [M0224773], designated here by Middleton & van Welzen).

Aphania masakapu Melch., Notizbl. Bot. Gart. Berlin-Dahlem 10: 277 (1928). – TYPE: [Papua New Guinea], Bismarck Archipelago, New Ireland, Lamakot, June 1924, *G. Peekel 941* (lectotype B [B_10_0296040], designated here by van Welzen; isoelectotypes B [B_10_0296041], BRI [BRI-AQ0196643]).

Aphania silvatica A.Chev. [Explor. Bot. Afrique Occ. Franç. 1: 152 (1920), nom. nud.] ex Hutch. & Dalziel, Fl. W. Trop. Africa 1: 502 (1928). – TYPE: Ivory Coast, Cavally Basin, 24–28 August 1907, *A.J.B. Chevalier 20064* (lectotype P [P00355359], designated here by van Welzen; isoelectotypes K [K000426190 as *collector unknown 20064*], P [P00355358]).

Mischocarpus pentapetalus (Roxb.) Radlk., Actes Congr. Int. Bot., Amsterdam 1877: 113 (1879 ['1877']). – *Schleichera pentapetala* Roxb., Fl. Ind., ed. 2, 2: 275 (1832). – *Cupania pentaphylla* Wight, Icon. Pl. Ind. Orient. 2(1): t. 402 (1840), nom. illeg. superfl. – *Cupania roxburghii* Wight, Icon. Pl. Ind. Orient. 2(1): 8 (1840), nom. illeg. superfl. – *Cupania pentapetala* (Roxb.) Wight & Arn. ex Hiern in Hooker, Fl. Brit. India 1, fasc. 3: 678 (1875). – *Pedicellia pentapetala* (Roxb.) Pierre, Fl. Forest. Cochinch., fasc. 21: text with pl. 324A (1897 ['1895']). – TYPE: India, 1811, *W. Roxburgh s.n.* (lectotype BM [BM000884193], designated by van der Ham, *Blumea* 23(2): 271 (1977), cited as '*M.R. Smith (3041?)*, 1811').

Mischocarpus salicifolius Radlk. in Perkins (ed.), Fragm. Fl. Philipp. 1: 64 (1904). – TYPE: Philippines, Luzon, Rizal Province, Bosoboso, Morong, April 1903, *E.D. Merrill 1842* (lectotype B, designated by van der Ham, *Blumea* 23(2): 272 (1977), lost; lectotype US [US00094209], designated here by van Welzen).

Notes. Van der Ham (1977) refers to *M.R. Smith (3041?)* in BM as the type of *Schleichera pentapetala* Roxb. The Roxburgh sheet does show the year and the unclear number

(likely to be 3041), but the name Smith is not present on the sheet. Only Roxburgh is mentioned (seemingly also on the back of the sheet).

The name *Cupania pentaphylla* may have been an error for *Cupania pentapetala*, in which case Wight would have made the combination before Hiern. As this does not affect the correct name for the species and as the later work has generally been taken as the place of publication, we have maintained the status quo above.

Nephelium costatum Hiern in Hooker, Fl. Brit. India 1, fasc. 3: 688 (1875). – TYPE: [Malaysia], Malacca [Melaka], 24 March 1868, *A.C. Maingay 3283* [Kew distribution no. 440] (lectotype K [K000701842], first step designated by Leenhouts, Blumea 31(2): 384 (1986), second step designated here by van Welzen; isolectotypes K [K000701841], L [L0037665], M [M0224993]).

Nephelium cuspidatum Blume, Rumphia 3: 110 (1847). – TYPE: [Indonesia], Borneo, no date, *P.W. Korthals s.n.* (lectotype L [L0014463], first step designated by Leenhouts, Blumea 31(2): 385 (1986), second step designated here by van Welzen; isolectotypes L [L0014463, L0014465, L0014466]; possible isolectotypes BR [BR0000005417698], K [K000701770, K000701771], P [P02297373], S [S11-25442], U [U0006527]).

Nephelium maingayi Hiern in Hooker, Fl. Brit. India 1, fasc. 3: 688 (1875) (fruiting material only). – TYPE: [Malaysia], Malacca [Melaka], 14 March 1867, *A.C. Maingay 1524A* [Kew distribution no. 443] (lectotype K [K000701735], designated here by van Welzen).

Nephelium ramboutan-ake (Labill.) Leenh., Blumea 31(2): 415 (1986). – *Litchi ramboutan-ake* Labill. in de Candolle, Bull. Sci. Soc. Philom. Paris 2(45): 161 (1801), as ‘*Litsea*’. – *Euphoria ramboutan-ake* (Labill.) Labill., Mém. Inst. Sci. Divers Savans, Sci. Math. 1: 474, pl. 2 (1806). – TYPE: Locality unknown, no date, collector unknown s.n. (holotype P-JU [Herb. Jussieu 11382]).

Nephelium mutabile Blume, Rumphia 3: 104 (1847). – TYPE: [Indonesia], Java, no date, *C.L. Blume s.n.* (lectotype L [L0014488], first step designated by Leenhouts, Blumea 31(2): 415 (1986), second step designated here by van Welzen; isolectotypes L [L0014487, L0014489, L0014490, L0014491, L0014492, L004495, L0014997, L0014499, L0014500, L0014501, L0014502]).

Pometia pinnata J.R.Forst. & G.Forst., Char. Gen. Pl., ed. 2, 110, t. 55 (1776). – *Euphoria pometia* (J.R.Forst. & G.Forst.) Poir., Dict. Sci. Nat., ed. 2, 27: 59 (1823),

nom. illeg. superfl. – *Aporetica pinnata* (J.R.Forst. & G.Forst.) DC., Prodr. 1: 610 (1824). – *Nephelium pinnatum* (J.R.Forst. & G.Forst.) Cambess., Mém. Mus. Hist. Nat. 18: 30 (1829). – *Dabanus pinnatus* (J.R.Forst. & G.Forst.) Kuntze, Revis. Gen. Pl. 1: 143 (1891). – TYPE: New Hebrides [Vanuatu], Namoka, no date, *J.G.A. Forster s.n.* (lectotype BM [BM000884095], designated by Jacobs, Reinwardtia 6: 120 (1962); isolectotypes FR [FR0031068], GOET [GOET012763]).

Irina tomentosa Blume var. *cuspidata* Blume, Rumphia 3: 116 (1847). – TYPE: [Indonesia], Timor, no date, *J.B. Spanoghe s.n.* (lectotype L [L0014532], first step designated by Jacobs, Reinwardtia 6: 128 (1962), second step designated here by van Welzen; isolectotypes L [L0014533, L0014534, L0014535, L0014536, L0014537]).

Irina alnifolia Blume, Rumphia 3: 117 (1847). – TYPE: [Indonesia], Sumatra, no date, *P.W. Korthals s.n.* (lectotype L [L0014530], first step designated by Jacobs, Reinwardtia 6: 128 (1962), second step designated here by van Welzen; isolectotypes K [K000701815], L [L0014531]).

Pometia gracilis King, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 65(3): 441 (1896). – TYPE: [Malaysia], Perak, Larut, November 1882, *G. King's Collector 3607* (lectotype K [K000701806], designated here by van Welzen; isolectotype L [L0014529]).

Pometia annamica Gagnep., Notul. Syst. (Paris) 13: 66 (1947). – TYPE: [Vietnam], Annam, Liên Chiên, près Tourane, 18 August 1923, *E. Poilane 7632* (lectotype P [P02297393], first step designated by Jacobs, Reinwardtia 6: 128 (1962), second step designated here by van Welzen; isolectotypes P [P02297391, P02297392]).

Xerospermum noronhianum (Blume) Blume, Rumphia 3: 100 (1847). – *Euphoria noronhiana* Blume, Bijdr. Fl. Ned. Ind., pt 5: 234 (1825). – *Nephelium noronhianum* (Blume) Cambess., Mém. Mus. Hist. Nat. 18: 30 (1829). – TYPE: [Indonesia], Java, no date, *C.L. Blume s.n.* (lectotype L [L0014666], designated by Leenhouts, Blumea 28(2): 395 (1983); isolectotype L [L0014667]).

Xerospermum microcarpum Pierre, Fl. Forest. Cochinch., fasc. 20: pl. 320B (1895), as '*Xerospermum thorelii*' in the 'Explication des figures'. – TYPE: [Vietnam], Phu Quoc Island, August 1877, *L. Pierre 2067* (lectotype P [P02297331], designated here by van Welzen).

Xerospermum wallichii King, J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 65(3): 432 (1896). – TYPE: [Malaysia], Perak, near Ulu Kerling, March 1886, *G. King's Collector 8725* (lectotype K [K000701796], designated here by van Welzen; isolectotype BM [BM000884107]).

Xerospermum cylindrocarpum Radlk., Rec. Bot. Surv. India 3: 348 (1907). – TYPE: [Indonesia], Sumatra, Palembang, Tandjong Ning, 1880 (printed) or 1881 (written), *H.O. Forbes 2715* (lectotype L [L0014663], designated here by van Welzen; isolectotypes BM [BM000884104], CANB [CANB291439], GH [GH00051014], L [L0014662, L0014664, L0014665], P [P02297347], SING [SING0045647]).

Xerospermum tonkinense Radlk., Notul. Syst. (Paris) 1: 303 (1910). – TYPE: [Vietnam], Tonkin, Vallée de Lankok, Mt Bavi, 25 July 1888, *B. Balansa 3419* (lectotype G [G00006123], first step designated by Leenhouts, *Blumea* 28(2): 395 (1983), second step designated here by van Welzen; isolectotypes G [G00006124], K [K000701825]).

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