

## Flora of Singapore precursors, 23: Notes on Ochnaceae in Singapore

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**ABSTRACT.** The native Ochnaceae of Singapore (five species from three genera) are listed with synonymy and typification. An epitype is designated for *Euthemis elegantissima* Wall. to fix the application of the name in the sense of *Brackenridgea hookeri* (Planch.) A.Gray. In addition, 17 lectotypes (including 13 at the second step) and three neotypes (two at the second step) are designated here.

**Keywords.** *Brackenridgea*, *Campylospermum*, *Euthemis*

### Introduction

The Ochnaceae are a family of over 500 species of woody plants found across the tropical and subtropical regions of the globe. The native flora of Singapore includes five species of Ochnaceae from three genera. The regional revision of the family by Kanis (1968) has been followed closely by nearly all taxonomic works on Asia-Pacific Ochnaceae for the last half century. In revising the family for the Flora of Singapore, Kanis has again been the main author referred to and generally deferred to. However, as was commonly the case in the period, Kanis was not entirely critical when it came to the typification of the names of taxa. While he did generally cite types and even referred to lectotypes and neotypes, he was often imprecise when more than one type specimen was available. Therefore, many names still lack fully resolved typification. The purpose of this paper is to review the nomenclature and typification of names in Ochnaceae relevant to the Flora of Singapore.

### Nomenclatural synopsis

**1. *Brackenridgea*** A.Gray, Char. New Gen. Polynesia 5 (1853) [Proc. Amer. Acad. Arts 3: 51 (1857)]. – *Ochna* sect. *Brackenridgea* (A.Gray) Kuntze, Lex. Gen. Phan. 394 (1903). – TYPE: *Brackenridgea hookeri* (Planch.) A.Gray.

*Pleuroridgea* Tiegh., Bull. Mus. Hist. Nat. (Paris) 8: 215 (1902). – TYPE: *Pleuroridgea zanguebarica* (Oliv.) Tiegh. (= *Brackenridgea zanguebarica* Oliv.).

*Campylopora* Tiegh., Bull. Mus. Hist. Nat. (Paris) 8: 547 (1902). – TYPE: *Campylopora australiana* (F.Muell.) Tiegh. (= *Brackenridgea nitida* A.Gray subsp. *australiana* (F.Muell.) Kanis).

*Notochnella* Tiegh., Bull. Mus. Hist. Nat. (Paris) 8: 549 (1902). – *Brackenridgea* sect. *Notochnella* (Tiegh.) Kanis, Blumea 16: 43 (1968). – TYPE: *Notochnella fascicularis* (Blanco) Tiegh. (= *Brackenridgea fascicularis* (Blanco) Fern.-Vill.).

**1.1 *Brackenridgea elegantissima*** (Wall.) Kanis, Blumea 16: 50 (1968). – *Euthemis elegantissima* Wall. in Roxburgh, Fl. Ind. 2: 305 (1824). – TYPE: Singapore, September 1822, *Wallich s.n.* [EIC 2518] (lectotype K-W [K001116334], designated by Kanis, Blumea 16: 51 (1968)). Singapore, Bukit Timah, February 1900, *Ridley 10738* (epitype K [K000657990], designated here; isoepitype SING [SING0054195]).

*Gomphia hookeri* Planch., London J. Bot. 6: 3 (1847). – *Brackenridgea hookeri* (Planch.) A.Gray, Char. New Gen. Polynesia 6 (1853) [Proc. Amer. Acad. Arts 3: 51 (1857)]. – *Ouratea hookeri* (Planch.) Burkill, Bull. Misc. Inform. Kew 1935: 318 (1935). – TYPE: Prince of Wales Island [Penang], *Anon. s.n.* (holotype K [K000501143]).

*Brackenridgea perakensis* Tiegh., Ann. Sci. Nat., Bot. sér. 8, 16: 396 (1902). – TYPE: [Peninsular Malaysia], Perak, Larut, February 1885, *King's Collector 7310* (lectotype P [P01817423], designated by Kanis, Blumea 16: 45 (1968); isoelectotypes BO, CAL, E [E00034479], K [K000657991], SING [SING0054196, SING0054197, SING0054198]).

*Brackenridgea denticulata* Furtado, Gard. Bull. Singapore 19: 183 (1962). – TYPE: Singapore, Bukit Timah, February 1900, *Ridley 10738* (holotype SING [SING0054195]; isotypes BM [BM000798710], K [K000657990], L [L0012445]).

*Notes.* During his visit to Singapore in 1822, Nathaniel Wallich collected material from a juvenile Ochnaceae plant. So impressed was Wallich by its elegant leaf venation, better in his opinion than Roxburgh's favourite, the gaharu tree (*Aquilaria malaccensis* Lam.), he named the plant *Euthemis elegantissima*. Wallich had also collected the two species of the genus *Euthemis* described by William Jack in Singapore, so it is perhaps unsurprising that he put his 'most elegant' plant in the same genus. Kanis (1968) noted that Wallich's only known specimen was actually juvenile material of *Brackenridgea* and made the combination for it in that genus. However, Kanis was not able to determine to which of the two species of *Brackenridgea* native to Singapore (*B. hookeri* and *B. palustris*) the material belonged. In other words, the type was demonstrably ambiguous (Lendemmer, 2020). Therefore, Kanis considered the

name doubtful, though older than both of the names in use. Recently, Govaerts (1996) accepted *Brackenridgea elegantissima* in the sense of *B. hookeri* and this has been followed by at least two publications on the Singapore flora (Wong et al., 2013; Ho et al., 2019). It therefore seems prudent to stabilise the nomenclature of the species by designating an epitype to fix the application of the name *Brackenridgea elegantissima*. A specimen collected by Ridley at Bukit Timah is selected as epitype here. While the only known original material of *Euthemis elegantissima* is the sheet in the East India Company Herbarium (K-W), it cannot be established that Wallich based his description solely on this specimen. I therefore consider Kanis to have effectively designated the specimen as lectotype, rather than taking it as a holotype.

**1.2 *Brackenridgea palustris*** Bartell., *Malpighia* 15: 165 (1901). – TYPE: Borneo, Danau Lamadjan, *Beccari P.B. 3472* (holotype FI [FI007762]; isotypes A [A00898753], K [K000657989], L [L0012450], P [P01817429]).

*Brackenridgea hookeri* (Planch.) A.Gray var. *leucocarpa* Scheff., *Natuurw. Tijdschr. Ned.-Indië* 32: 411 (1873). – TYPE: Banka, Djabus [Djeboes in protologue], *Teijsmann s.n.* (lectotype BO n.v., designated by Kanis, *Blumea* 16: 46 (1968); isolectotype L [L0012449]).

*Gomphia hookeri* Planch. var. *corymbosa* King, *J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist.* 62(4): 233 (1894). – *Brackenridgea corymbosa* (King) Tiegh., *Ann. Sci. Nat., Bot. sér.* 8, 16: 396 (1902). – *Gomphia corymbosa* (King) Ridl., *J. Straits Branch Roy. Asiat. Soc.* 54: 33 (1910). – TYPE: [Peninsular Malaysia], Perak, Gopeng, July 1883, *King's Collector 4673* (lectotype CAL, designated by Kanis, *Blumea* 16: 46 (1968); isolectotypes BM [BM000798711], BO, K [K001129818], L [L0012447], P [P05467121], SING [SING0054186, SING0054187, SING0054188]).

*Brackenridgea serrulata* Bartell., *Malpighia* 15: 163, t. 9 (1901). – TYPE: Borneo, Danao Lamadigian, May 1867, *Beccari P.B. 3469* (holotype FI [FI007764]; isotypes K [K000657988], L [L0012451]).

*Brackenridgea kingii* Tiegh., *Ann. Sci. Nat., Bot. sér.* 8, 16: 395 (1902), as '*Kingi*'. – TYPE: [Peninsular Malaysia], Perak, Larut, July 1884, *King's Collector 6396* (lectotype P [P01817424], designated by Kanis, *Blumea* 16: 46 (1968); isolectotypes BM [BM000798712], K [K000501142], L [L0012446], US [US00169547]).

*Brackenridgea rubescens* Tiegh., *Ann. Sci. Nat., Bot. sér.* 8, 16: 396 (1902). – TYPE: Singapore, Changi, [1890], *Ridley 2072* [leg. J.S. Goodenough] (lectotype P [P01817425], designated by Kanis, *Blumea* 16: 46 (1968); isolectotypes CAL, K [K001129819], L [L0012448], SING [SING0054237]).

**2. *Campylosporum*** Tiegh. in Morot, J. Bot. 16: 35 (1902). – *Ochna* sect. *Campylosporum* (Tiegh.) Kuntze, Lex. Gen. Phan. 394 (1903). – TYPE: non desig.

*Notes.* The circumscription and nomenclature of the genera of Ochnaceae subtribe Ourateinae (sensu Kanis 1968: 15) continue to cause problems. Taxonomic treatments have varied between a single genus: *Ouratea* Aubl. (Gilg, 1925; Robson, 1963), to the 34 genera recognised by Van Tieghem (1907). There is general agreement now that *Ouratea* is an entirely New World genus (Farron, 1968; Amaral & Bittrich, 2014; Schneider et al., 2014). The bulk of the Old World species were recognised in *Gomphia* Schreb. by Kanis (1968). *Gomphia* is actually a synonym of *Ouratea*, so *Campylosporum* Tiegh. was considered the correct generic name for the Old World species (Bittrich & Amaral, 1994). Recently, Greuter & Rankin Rodríguez (2014) analysed the typification of *Gomphia* once more and corrected the lectotype yet again, but this did not change the position of the generic name as a synonym of *Ouratea*. They pointed out that there is a generic name, *Philomeda* Thouars, older than *Campylosporum*, which under the rules of priority should be taken up for the African and Asian species. There is also the overlooked *Valkera* Stokes, which is not an orthographic variant but a deliberate renaming of *Walkera* Schreb. About 55 species from Africa, Madagascar and Asia are currently recognised in *Campylosporum*. In order to avoid further name changes, a proposal to conserve *Campylosporum* against *Philomeda* (for which no valid names at species rank have ever been made) and other earlier generic names might be made. However, there is growing evidence that *Campylosporum* is polyphyletic, with the West and Central African species representing a different genus to the East African, Madagascan and Asian species (Schneider et al., 2021; Shah et al., in press). Given the current state of flux, here I continue with the use of *Campylosporum* as the correct generic name for the present.

**2.1 *Campylosporum serratum*** (Gaertn.) Bittrich & M.C.E.Amaral, Taxon 43: 92 (1994). – *Meesia serrata* Gaertn., Fruct. Sem. Pl. 1: 344, t. 70, fig. 6 (1788). – *Walkera serrata* (Gaertn.) Willd., Sp. Pl., ed. 4, 1: 1145 (1798). – *Valkera serrata* (Gaertn.) Stokes, Bot. Mat. Med. 1: 447 (1812). – *Ouratea serrata* (Gaertn.) N.Robson, Taxon 11: 50 (1962). – *Gomphia serrata* (Gaertn.) Kanis, Taxon 16: 422 (1967). – TYPE: Ceylon, *Koenig s.n.* (lectotype L [L0144816] ex Carpologica Herb. Lugd. Bat., no. 1009, designated by Kanis, Blumea 16: 53 (1968)).

*Gomphia angustifolia* Vahl, Symb. Bot. 2: 49 (1791). – *Ouratea angustifolia* (Vahl) Baill. ex Laness., Pl. Util. Col. Franc. 607 (1886). – *Ochna angustifolia* (Vahl) Kuntze, Revis. Gen. Pl. 1: 106 (1891). – *Campylosporum angustifolium* (Vahl) Tiegh. in Morot, J. Bot. 16: 197 (1902). – TYPE: Zeilon [Sri Lanka], *Koenig s.n.* (holotype C [C10016040]; isotype P [P01817448]).

*Ochna zeylanica* Lam., Encycl. 4: 512 (1797). – *Gomphia zeylanica* (Lam.) DC., Ann. Mus. Natl. Hist. Nat. 17: 415 (1811). – *Campylosporum zeylanicum* (Lam.)

Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 77 (1903). – *Ouratea zeylanica* (Lam.) Alston, Ann. Roy. Bot. Gard. (Peradeniya) 11: 209 (1929). – TYPE: [Published illustration] ‘JABOTAPITA Cinnamomi folio, floribus spicatis. Nobis’ in Burman, Thes. Zeylan. t. 56 (1736) (lectotype designated here).

*Gomphia malabarica* DC., Ann. Mus. Natl. Hist. Nat. 17: 416 (1811). – *Campylospermum malabaricum* (DC.) Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 77 (1903). – TYPE: [Published illustration] ‘Poea-tsjetti’ in Rheede, Hort. Malab. 5: t. 52 (1685) (lectotype designated here).

*Gomphia sumatrana* Jack, Malayan Misc. 1(5): 29 (1820). – *Ochna sumatrana* (Jack) Kuntze, Revis. Gen. Pl. 1: 106 (1891). – *Ouratea sumatrana* (Jack) Gilg in Engler & Prantl, Nat. Pflanzenfam. 3(6): 142 (1893). – *Campylospermum sumatranum* (Jack) Tiegh. in Morot, J. Bot. 16: 197 (1902). – TYPE: Sumatra, *Marsden s.n.* (neotype K [K000657995], designated here).

*Ochna crocea* Griff., Not. Pl. Asiat. 4: 463 (1854). – *Ouratea crocea* (Griff.) Burkill, Bull. Misc. Inform. Kew 1935: 318 (1935). – TYPE: Mergui, ad littoram maria Ins. Madamacca Pator: 1835, fructifer tant (not traced).

*Ouratea borneensis* Bartell., Malpighia 15: 156, t. 6 (1901). – *Campylospermum borneense* (Bartell.) Tiegh. in Morot, J. Bot. 16: 197 (1902). – TYPE: Borneo, Sarawak, Marop, March 1867, *Beccari P.B. 3138* [cited as 318] (lectotype FI [FI007759], designated by Kanis, Blumea 16: 54 (1968); isolectotypes G [G00383852], K [K000657993], M [M-0213018], P [P01817460]).

*Ouratea neriifolia* Bartell., Malpighia 15: 158, t. 7 (1901), as ‘*neerifolia*’. – *Campylospermum neriifolium* (Bartell.) Tiegh., Ann. Sci. Nat., Bot. sér. 8, 16: 304 (1902). – TYPE: Borneo, Sarawak, Tg. Datu, April 1867, *Beccari P.B. 3547* (holotype FI [FI007761]).

*Ouratea beccariana* Bartell., Malpighia 15: 159, t. 9 (1901). – *Campylospermum beccarianum* (Bartell.) Tiegh., Ann. Sci. Nat., Bot. sér. 8, 16: 301 (1902). – TYPE: Borneo, Sarawak, Bintulu, September 1867, *Beccari P.B. 4025* (holotype FI [FI007758]; isotype K [K000657992]).

*Cercinia thorelii* Tiegh. in Morot, J. Bot. 16: 198 (1902), as ‘*Thoreli*’. – *Ouratea thorelii* (Tiegh.) Lecomte, Fl. Indo-Chine 1: 704 (1911). – TYPE: Cochinchina, between Saigon and Bien-hoa, 1862–1866, *Thorel 643* (lectotype P [P01817437], first step designated by Kanis, Blumea 16: 54 (1968), second step designated here; isolectotypes C, CAL, E, G [G00383822, G00383829, G00383849], P [P01817438]).

*Campylocercum striatum* Tiegh., Ann. Sci. Nat., Bot. sér. 8, 16: 304 (1902). – *Ouratea striata* (Tiegh.) Lecomte, Fl. Indo-Chine 1: 703 (1911), nom. illeg. non (Tiegh.) Urb.

(1908). – *Gomphia striata* (Tiegh.) C.F.Weï, Fl. Reipubl. Popularis Sin. 49(2): 306 (1984). – *Campylospermum striatum* (Tiegh.) M.C.E.Amaral, Fl. China 12: 362 (2007). – TYPE: [Vietnam], Annam, Tourane, January 1837, *Gaudichaud 291* (lectotype P [P01817419], first step designated by Kanis, Blumea 16: 54 (1968), second step designated here; isolectotypes P [P01817420, P01817421]).

*Campylocercum zollingeri* Tiegh., Ann. Sci. Nat., Bot. sér. 8, 16: 305 (1902). – TYPE: [Sumatra, Lampongs, between Tarabangie and Henyala, 20–21 September 1845], *Zollinger 3075* (lectotype P [P01817461], first step designated by Kanis, Blumea 16: 54 (1968), second step designated here; isolectotypes BM, BO, G [G00340886, G00340887, G00340893], L [L.2391256], P [P01817462, P01817463]).

*Cercinia brevis* Tiegh., Ann. Sci. Nat., Bot. sér. 8, 16: 310 (1902). – TYPE: Laos, Bassin de Sé-Moun, Mt S. Treng, December 1875, *Harmand 131* (lectotype P [P01817413], first step designated by Kanis, Blumea 16: 54 (1968), second step designated here; isolectotypes BM, BR [BR000000521996], E, G [G00383805], K, P [P01817414, P01817415]).

*Campylocercum hohenackeri* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 86 (1903). – TYPE: India, Canara, Mangalore, 1849, *Hohenacker 89* (lectotype P [P01817447], first step designated by Kanis, Blumea 16: 55 (1968), second step designated here; isolectotypes P [P01817441, P01817443, P01817445]).

*Campylocercum metzii* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 86 (1903), as ‘*Metzi*’. – TYPE: India, 1858, *Metz 2225* (lectotype P [P01817450], first step designated by Kanis, Blumea 16: 55 (1968), second step designated here; isolectotypes G [G00340892], P [P01817451]).

*Campylocercum paucifolium* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 86 (1903). – TYPE: India, Canara, Mangalore, 1849, *Hohenacker 89* (lectotype P [P01817440], first step designated by Kanis, Blumea 16: 55 (1968), second step designated here; isolectotypes P [P01817442, P01817444]).

*Campylospermum abbreviatum* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 80 (1903). – TYPE: Peninsular Malaysia, Perak, Larut, September 1884, *King’s Collector 6598* (lectotype P [P01817464], designated by Kanis, Blumea 16: 55 (1968); isolectotype US [US00169552]).

*Campylospermum cumingii* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 80 (1903). – TYPE: Philippines, Luzon, Manila, *Cuming 1520* (lectotype P [P01817457], first step designated by Kanis, Blumea 16: 55 (1968), second step designated here; isolectotypes G [G00340882, G00340883, G00340888], M [M-0213075], MEL [MEL2422054], P [P01817458]).

*Campylospermum kingii* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 79 (1903), as 'Kingi'. – TYPE: Peninsular Malaysia, Perak, Larut, September 1882, *King's Collector* 3370 (lectotype P [P01817465], designated by Kanis, Blumea 16: 55 (1968); isolectotypes G [G00340889], K [K001129821], L [L.2391399], US [US00169550]).

*Campylospermum leschenaultii* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 76 (1903), as 'Leschenaulti'. – TYPE: Ceylon, *Leschenault s.n.* (holotype P [P01817453]).

*Campylospermum nodosum* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 77 (1903). – TYPE: Ceylon, 1854, *Thwaites C.P. 2412* (holotype P (not traced)).

*Campylospermum perakense* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 80 (1903). – *Gomphia oblongifolia* Ridl., Bull. Misc. Inform. Kew 1925: 281 (1925), nom. illeg. superfl. – TYPE: Peninsular Malaysia, Perak, Gopeng, Kinta, July 1883, *King's Collector* 4545 (lectotype P [P01817466], first step designated by Kanis, Blumea 16: 55 (1968), second step designated here; isolectotypes G, K [K001129808], L [L.2391398], P [P01817467]).

*Campylospermum plicatum* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 78 (1903). – TYPE: Détroit de Malacca, Ile de Singapoor, Voyage de l'Astrobale et de la Zélée, 1838–1840, *Hombron s.n.* (lectotype P [P01817468], first step designated by Kanis, Blumea 16: 55 (1968), second step designated here; isolectotypes A, P [P01817469, P01817470]).

*Campylospermum retinerve* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 75 (1903). – TYPE: India, 'Gurunda Karpara', *Hb Vaillant s.n.* (holotype P [P00660016]).

*Campylospermum rheedei* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 78 (1903), as 'Rheedi'. – TYPE: [Published illustration] 'Tsjocatti', Rheede, Hort. Malab. 5: t. 48 (1685) (lectotype designated here).

*Campylospermum strictum* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 79 (1903). – TYPE: Peninsular Malaysia, Malacca, Batu Tiga, 1892, *Derry* 987 (lectotype P [P01817471], designated by Kanis, Blumea 16: 55 (1968); isolectotypes CAL, SING [SING0117113]).

*Campylospermum thwaitesii* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 77 (1903). – TYPE: Ceylon, 1854, *Thwaites C.P. 2412* (lectotype P [P01817454], first step designated by Kanis, Blumea 16: 55 (1968), second step designated here; isolectotype P [P01817455]).

*Campylospermum vahlianum* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 76 (1903). – TYPE: India, *Breyn s.n.* (holotype P [P01817452]).

*Campylospermum walkeri* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 76 (1903), as ‘*Walkerii*’. – TYPE: Ceylon, 1837, *Walker 54* (holotype P [P01817457]).

*Campylospermum wallichianum* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 76 (1903). – TYPE: [Locality unknown], *Wallich s.n.* [EIC 2803] (lectotype P [P01817471], designated by Kanis, Blumea 16: 55 (1968); possible isolectotypes A, BM, E, G [G00383863, G00383868], K, K-W [K001117120, K001117121]).

*Cercinia doumeri* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 87 (1903). – TYPE: India, 1821, *Doumer s.n.* (holotype P [P01817449]).

*Cercinia wightii* Tiegh., Bull. Mus. Hist. Nat. (Paris) 9: 87 (1903), as ‘*Wightii*’. – TYPE: Ceylon, March 1836, *Wight s.n.* [Peninsula Indiae Orientalis No. 396] (holotype P [P01817456]).

*Cercinia annamensis* Tiegh., Ann. Sci. Nat., Bot. sér. 9, 5: 163, 184 (1907). – TYPE: Annam, Hué, 1877, *Harmand s.n.* [*Hb Pierre 7027*] (holotype P [P01817422]).

*Cercinia elongata* Tiegh., Ann. Sci. Nat., Bot. sér. 9, 5: 163, 184 (1907). – TYPE: Cochinchina, 1876–1877, *Harmand 144* [*Hb Pierre 7026*] (holotype P [P01817439]).

*Gomphia microphylla* Ridl., Fl. Malay Penins. 1: 365, fig. 38 (1922). – *Ouratea microphylla* (Ridl.) Craib, Fl. Siam. 1: 245 (1926). – TYPE: Peninsular Malaysia, Langkawi, Pulau Dayang Bunting, 7 December 1916, *Robinson 6197* (lectotype K [K000658000], designated by Kanis, Blumea 16: 56 (1968); isolectotype K [K000658000]).

*Ouratea arcta* Craib, Bull. Misc. Inform. Kew 1926: 341 (1926). – TYPE: Thailand, Kaw Chang, Klawng Mayum, 3 April 1923, *Kerr 6849* (lectotype K [K000657998], designated by Kanis, Blumea 16: 56 (1968); isolectotypes BM [BM000798578, BM000798579], SING [SING0294228], TCD [TCD0013539]).

*Ouratea megacarpa* Ridl., Bull. Misc. Inform. Kew 1930: 76 (1930). – TYPE: Borneo, Sarawak, Mt Matang, January 1915, *Ridley s.n.* (holotype K [K000657994]).

*Ouratea sumatrana* (Jack) Gilg var. *nervosa* Craib, Fl. Siam. 1: 245 (1926). – TYPE: Thailand, Phuket, Kopah, 8 December 1917, *Mhd Haniff & Mhd Nur SFN 2074* (lectotype K [K001129809], designated by Kanis, Blumea 16: 56 (1968); isolectotypes BM, BO, BRI, SING [SING0054190]).

*Notes.* Kanis (1968) recognised a single species for what he called *Gomphia* in Asia. His *Gomphia serrata* occurs from India and Sri Lanka to the Philippines and includes numerous synonyms, mostly species described by Van Tieghem. Perusal of herbarium material shows substantial variation in form within the species. Recently,

Amaral (Zhang & Amaral, 2007) reinstated one of the synonyms as *Campylospermum striatum*, a species from Hainan and Vietnam. For the present, I prefer to maintain the broad view espoused by Kanis, but note that a thorough revision of the complex is needed.

**3. *Euthemis*** Jack, Malayan Misc. 1(5): 15 (1820). – TYPE: *Euthemis leucocarpa* Jack (lectotype designated by Pfeiffer, Nomencl. Bot. 1(2): 1316 (1873)).

**3.1 *Euthemis leucocarpa*** Jack, Malayan Misc. 1(5): 16 (1820). – TYPE: Singapore, 1822, *Wallich s.n.* [EIC 2516 p.p.] (neotype K-W [K001116327], first step designated by Kanis, Blumea 16: 63, 65 (1968), second step designated here; isoneotypes K [K000657983], K-W [K001116329]).

*Euthemis robusta* Hook.f., Trans. Linn. Soc. London 23: 163 (1860). – TYPE: Borneo, 1853, *Lobb s.n.* (lectotype K [K000657982], first step designated by Kanis, Blumea 16: 63 (1968), second step designated here; isolectotypes K [K000657981], P [P01817430]).

*Euthemis leucocarpa* Jack var. *latifolia* Miq., Fl. Ned. Ind., Eerste Bijv. 3: 533 (1861). – TYPE: Banka, Plangas, *Teijsmann H.B.* 3375 (lectotype L [L0012455], first step designated by Kanis, Blumea 16: 63 (1968), second step designated here; isolectotypes BO, L [L0012454], P [P01817431], U).

*Notes.* Kanis (1968: 65) wrote ‘The Kew specimen that is marked as the type of this species, is certainly a duplicate from the collection Wallich 2516 p.p. made at Singapore in 1822. I accept this collection as neotype of *E. leucocarpa* Jack’. The Wallich Catalogue number 2516 includes two gatherings, one made by Wallich in Singapore in 1822, and another from Penang in 1823, probably by George Porter. These are mounted rather haphazardly across five sheets in K-W with various original labels but no indication of which material belongs to which collection except on a couple of smaller sheets Wallich has written the Singapore collection details directly on the sheet. As Kanis was clearly referring to more than one specimen, a second-step typification is proposed here to restrict the choice of neotype to the better of the small sheets. The specimen [K000657983] in a type cover in the K general herbarium mentioned by Kanis is dated October 1823 on Wallich’s label, possibly indicating some confusion with the Penang gathering.

**3.2 *Euthemis minor*** Jack, Malayan Misc. 1(5): 18 (1820). – TYPE: Singapore, 1822, *Wallich s.n.* [EIC 2517] (neotype K-W [K001116332], first step designated by Kanis, Blumea 16: 65 (1968), second step designated here; isoneotype K-W [K001116333]).

*Euthemis obtusifolia* Hook.f., Trans. Linn. Soc. London 23: 163 (1860). – TYPE: Borneo, 1853, *Lobb s.n.*, (holotype K [K000657979]).

*Euthemis engleri* Gilg in Engler & Prantl, Nat. Pflanzenfam. 3(6): 152, 153, fig. 78 (1893). – TYPE: [Published illustration] Gilg in Engler & Prantl, Nat. Pflanzenfam. 3(6): 152, fig. 78 (1893) (lectotype designated here).

*Euthemis ciliata* H.Pearson, Bull. Misc. Inform. Kew 1906: 3 (1906). – TYPE: Sumatra, Siak, Penassa, November 1897, *Ridley 9000* (holotype K [K000657980, K001129816 – i.e. two sheets comprising a single specimen]; isotypes P, SING [SING0054193]).

*Euthemis hackenbergii* Diels, Bot. Jahrb. Syst. 60: 310 (1926). – TYPE: S. Borneo, Sampit, 11 June 1923, *Hackenberg 10* (B, destroyed).

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