

Family 247. APOCYNACEAE

Revision:

Middleton, DJ. 2007. *Apocynaceae (subfamilies Rauvolfioideae and Apocynoideae)*. Flora Malesiana Series 1, 18: 1-452.

Alstonia R Brown

Revision:

Markgraf, F. 1974. *Florae Malesianae Praecursores LIV. Apocynaceae, part III. 9. Alstonia*. Blumea 22: 20-29.

Sidiyasa, K. 1998. Taxonomy, phylogeny and wood anatomy of *Alstonia* (Apocynaceae). Blumea, Supplement 11: 77-xxx.

Alstonia iwahigensis Elmer, LPB 4 (1912) 1447; --Merr., EPFP 3 (1923) 321; --Sidiy., Blumea, Suppl. 11 (1998) 135; --DJ Middleton, Tree Fl. Sabah & Sarawak 5 (2004) 19; Fl. Males. ser. 1, 18 (2007) 44, Fig. 6. --Type: Elmer 13167 (lecto L, designated by Sidiyasa (1998), iso A, BO, G, GH, HBG, MICH, MO, NY, US, Z). Palawan: Palawan prov., Puerto Princesa, Mt Pulgar (=Thumb Peak).

Borneo, Philippines.

PALAWAN (Mt Pulgar; Irawan River Valley), BALABAC. Primary and secondary forests up to 600m.

Alstonia macrophylla Wall. ex G Don, Gen. Syst. 4 (1837) 87; --A DC, Prodr. 8 (1844) 409; --Merr., EPFP 3 (1923) 322; --Markgraf, Blumea 22 (1974) 28; --Sidiy., Blumea, Suppl. 11 (1998) 149; --DJ Middleton, Tree Fl. Sabah & Sarawak 5 (2004) 20; Fl. Males. ser. 1, 18 (2007) 46, Fig. 7. *Alstonia batino Blanco*, Fl. Filip. ed. 2 (1845) 589. --Type: Untraced. Neotype: Merrill Sp. Blancoanae 335 (neo L, designated by Sidiyasa (1998), iso A, BM, BO, F, K, MO, NY, P, W). Luzon: Bulacan prov., Angat.

Alstonia oblongifolia Merr., PJS 10 c (1915) Bot. 65; --Merr., EPFP 3 (1923) 322. --Type: FB 4495 Curran (lecto K, designated by Sidiyasa (1998), iso NY, P, US). Palawan.

Alstonia macrophylla var. *mollis* Merr., EPFP 3 (1923) 322. --Type: FB 17128 Curran (lecto L, designated by Monachina (1949), iso BO). Luzon: Cagayan prov.

Alstonia paucinervia Merr., PJS 5 c (1910) Bot. 224; --Merr., EPFP 3 (1923) 322. --Type: FB 18726 Darling (lecto US, designated by Monachina (1949). Luzon: Camarines prov.

Sri Lanka, Nicobar Isls, Thailand, Cambodia, Vietnam, Biliton, throughout Malesia (except Java, Sulawesi and Nusa Tenggara).

LUZON: Ilocos Norte, Cagayan, Isabela, Rizal, Laguna, Quezon, Batangas, Camarines, MINDORO, PALAWAN (Mt Pulgar =Thumb Peak; Irawan, Impapai Forest; Victoria Mtns; Brookes's Point), ROMBLON, PANAY, GUIMARAS, MINDANAO. In open forests and thickets at low and medium altitudes; common.

Alstonia parvifolia Merr., Govt. Lab. Publ. (Philipp.) 35 (1906) 59; --Merr., EPFP 3 (1923) 322; --Markgraf, Blumea 22 (1974) 27; --Sidiy., Blumea, Suppl. 11 (1998) 160; --DJ Middleton, Fl. Males. Ser. 1, 18 (2007) 49. --Type: FB 2209 Meyer (lecto K, designated by Sidiyasa (1998), iso NY). Luzon: Bataan prov., Mt Mariveles.

LUZON: Aurora (Sierra Madre NNW of Dingalan), Bataan (Mt Mariveles), Rizal (Mt Irid), NEGROS: Negros Oriental (Cuernos Mtns). Secondary growth in logged-over forests; rocky forested slopes and exposed ridges on Mt Mariveles, 800-1000m.

Alstonia scholaris (L.) R Br. in Mém. Wern. Nat. Hist. Soc. 1 (1811) 76; --Merr., Fl. Manila (1912) --DJ Middleton, Tree Fl. Sabah & Sarawak 5 (2004) 22; Fl. Males. ser. 1, 18 (2007) 57, Fig. 11.

Pakistan, Nepal, India, Bhutan, Bangladesh, Sri Lanka, China (Yunnan), Burma, Thailand, Cambodia, Laos, Vietnam, throughout Malesia, Solomon Isls and Australia

372; EPFP 3 (1923) 322

(Queensland).

N LUZON (Cagayan) to PALAWAN and MINDANAO, in most or all islands and provinces. In primary and secondary forests at low and medium altitudes.

Alstonia spectabilis R Br. in Mém. Wern. Nat. Hist. Soc. 1 (1811) 76; --Markgraf, Blumea 22 (1974) 23; --Sidiy., Blumea, Suppl. 11 (1998) 184; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 61, Fig. 13. --Type from Timor.

Alstonia angustifolia Merr., EPFP 3 (1923) 321, as to Elmer 10840, *non* Wall. *ex* A DC, 1844.

Java, Philippines, Sulawesi, Muna I, Java, Kangean Arch., Lesser Sunda Isls (Lombok, Sumbawa, Sumba, Flores, Roti, Timor, Tanimbar), Moluccas (Ambon, Kai), Japen, Aru Isls, New Guinea, New Britain.

LUZON: Sorsogon (Mt Bulusan), MINDANAO: Davao (Mt Apo, Todaya).

Alyxia R Brown

Revision:

Middleton, DJ. 2000. *Revision of Alyxia (Apocynaceae). Part 1. Asia and Malesia*. Blumea 45: 1-146.

Alyxia angustifolia Ridley, J. Fed. Malay States Mus. 6 (1915) 161; --Markgr., Blumea 23 (1977) 385, *pro parte*; --DJ Middleton, Blumea 45 (2000) 29, Map 2; Fl. Males. ser. 1, 18 (2007) 74. --Type from Peninsular Malaysia.

Peninsular Malaysia, Borneo, and the Philippines.

PALAWAN.

Alyxia angustissima Merr. & Quisumb., PJS 82 (1954) 334; --Markgr., Blumea 23 (1977) 410; --DJ Middleton, Blumea 45 (2000) 31, Map. 3; Fl. Males. ser. 1, 18 (2007) 75. --Type: PNH 8018 Celestino (holo A; iso A, K, L*, PNH). Luzon: Ifugao prov., Mt Polis. March 1948.

N LUZON: Ifugao (Mt Polis), DINAGAT (PPI 4559 Gaerlan, Sagcal & Fernando).

Dipterocarp forest on clay on Dinagat, montane forest, c. 1900m on Mt Polis.

Alyxia concatenata (Blanco) Merr., Sp. Blancoanae (1918) 310; EPFP 3 (1923) 327; --Markgr., Blumea 23 (1977) 393; --DJ Middleton, Blumea 45 (2000) 29, f. 2, Map 9; Fl. Males. ser. 1, 18 (2007) 80, Fig. 15. --*Brabejum concatenatum* Blanco, Fl. Filip. ed. 2 (1845) 40. --Type: Not traced. Neotype: Merrill Sp. Blancoanae 159 (L, neo, selected by Middleton (2000); iso A (scrap), BM, BO, GH, K, MO, NY, P, US*, W). Luzon: Rizal prov., Bosoboso.

Gymnopogon moniliferus (S Vidal) Merr., Govt. Lab. Publ. (Philipp.) 29 (1905) 46; --*Alyxia monilifera* S Vidal, Revis. Pl. Vasc. Filip. (1886) 182. --Type: Vidal 461 (lecto K, designated by Middleton (2000); iso K). Luzon: Quezon prov., Mt Banahaw.

Alyxia clusiacea (Baill.) Pichon, Mém. Mus. Natl. Hist. Nat. 27 (1949 [1948]) 166; --Markgr., Blumea 23 (1977) 380, *pro parte*; --*Paralstonia clusiacea* Baill., Bull. Soc. Linn. Paris 1 (1888) 750; --Merr., EPFP 3 (1923) 323; --Type: Barthe s.n. (lecto P, designated by Middleton, 2000; iso P). Philippines. No further locality given,

Alyxia confertiflora Merr., PJS 10 c (1915) Bot. 64; EPFP 3 (1923) 327. --Type: BS 16143 Reillo (lecto, US*, selected by Middleton (2000); iso A, BM). Basilan. Aug.-Sept. 1912.

Alyxia quadrata Elmer *ex* Merr., EPFP 3 (1923) 327, *nom. nud.*; --Elmer, LPB 10 (1939) 3692, not validly published, no Latin descr. --Voucher: Elmer 15827 (A, BISH, BM, BO, C, G, GH, HBG, K, L, MO*, NA*, NY*, P, S, U, UC, US, Z). Luzon: Sorsogon prov., Irosin, Mt Bulusan. April 1916.

Alyxia luzoniensis Markgr., Blumea 23 (1977) 392, *pro parte, auct. non* Merr., 1909.

BABUYAN ISLS (FUGA, check map), LUZON: Ilocos Norte, Abra, Mountain Province, Benguet, Cagayan, Isabela, Aurora, Nueva Ecija, Pampanga, Bataan, Rizal, Laguna, Quezon, Camarines Norte, Camarines Sur, Sorsogon (Mt Bulusan), MINDORO, N PALAWAN, SIBUYAN, MASBATE, PANAY: Antique, NEGROS: Negros Oriental (Cuernos Mtns), CEBU, BOHOL, BILIRAN, LEYTE, N SAMAR, CAMIGUIN, BASILAN,

MINDANAO: Misamis Occidental (Mt Malindang), Lanao del Sur, Bukidnon, Davao (Mt Apo), South Cotabato (Mt Matutum), Agusan del Norte (Butuan; Mt Hilong-hilong), Surigao del Norte. From lowland primary forests and secondary growth, lower montane or mossy forests, altitude 200-2400m, on clay soils.

Alyxia linearis Markgr., *Blumea* 23 (1977) 406; --DJ Middleton, *Blumea* 45 (2000) 66, Map 21; Fl. Males. Ser. 1, 18 (2007) 92; --*Alyxia rosmarinifolia* Merr. & Quisumb., *PJS* 82 (1954) 335, *non* (Baill.) Guillaumin. --Type: PNH 176 Edaño (holo, A; iso A, L*, PNH). Palawan: Puerto Princesa, Bacungan. 23 March 1947.

PALAWAN (Puerto Princesa, Bacungan; Balanjao Range, Rio Tuba. Forests on ultramafics, low altitudes.

Alyxia luzoniensis Merr., *PJS* 4 c (1909) Bot. 313; EPFP 3 (1923) 328; --Markgr., *Blumea* 23 (1977) 392, *pro parte*; --DJ Middleton, *Blumea* 45 (2000) 69, Fig. 7, Map 21; Fl. Males. ser. 1, 18 (2007) 94, Fig. 20. --Type: BS 7007 Ramos (holo PNH, lost). Neotype: BS 5107 Ramos (neo P, designated by Middleton (2000); iso NY). Luzon: Mountain Province, Bontoc.

Brabejum lucidum Blanco, Fl. Filip. ed. 2 (1845) 40; --*Alyxia blancoi* Merr., *PJS* 7 c (1912) Bot. 330; EPFP 3 (1923) 327; --Markgr., *Blumea* 23 (1977) 401, *pro parte*. --Type: not traced. Neotype: BS 11118 Ramos (neo L*, designated by Middleton (2000); isoneo A, BM, K, P, US*). Cebu: hills above Cebu City. March 1912.

Alyxia lanceolata Merr., *PJS* 13 c (1918) Bot. 53; EPFP 3 (1923) 328. --Type: BS 29209 Ramos (lecto A, designated by Middleton (2000); iso BO, K, NY*, P, US*). Luzon: Quezon prov., Siniloan-Infanta Trail.

Alyxia laxiflora Merr., *PJS* 13 c (1918) Bot. 54; EPFP 3 (1923) 328; --Markgr., *Blumea* 23 (1977) 408. --Type: BS 28371 Fenix (lecto A, designated by Middleton (2000); iso BM, BO, K, L*, NY*, P, US*). Luzon: Apayao prov., Mt Sulu.

Alyxia stenophylla Merr., *PJS* 17 (1921) 305; EPFP 3 (1923) 329; --Markgr., *Blumea* 23 (1977) 410. --Type: BS 35574 Martelino & Edaño (lecto A, designated by Middleton (2000); iso BO, K, L, NY, P, US*). Panay: Capiz prov., Mt Salibongbong.

Alyxia ecostata Merr. & Quisumb., *PJS* 82 (1954) 335; --Markgr., *Blumea* 23 (1977) 408. --Type: PNH 6421 Sulit (holo A; iso BM, K, L*, PNH, US). Samar: Mt Calbiga, near Wright,

BATANES, LUZON: Ilocos Norte, Apayao, Mountain Province, Cagayan, Zambales, Aurora, Bulacan, Rizal, Quezon, Camarines Sur, PANAY: Capiz (Mt Salibongbong), CEBU, SAMAR (Mt Calbiga). Thickets and forests from low to medium altitudes, most common at 600-700m elevations, ascending to 1600m.

Alyxia muguma DJ Middleton, *Blumea* 45 (2000) 78, Map 23; Fl. Males. ser. 1, 18 (2007) 100. --Type: PNH 72704 Conklin & del Rosario (holo L; iso A*, K, PNH). Luzon: Ifugao prov., Sumigar, near Banawe, altitude 1680m.

LUZON: Ifugao (Sumigar, near Banawe). Only known from the type collection.

Alyxia obovatifolia Merr., *PJS* 17 (1920) 306; EPFP 3 (1923) 328; --DJ Middleton, *Blumea* 47 (2002) 75; Fl. Males. ser. 1, 18 (2007) 102. --Type: BS 34492 Ramos & Pascasio (lecto K, designated by Middleton (2000)). Mindanao: Surigao del Norte prov., rather dry lowland thickets along streams, 25 April 1919.

MINDANAO: Surigao del Norte. Known only from the type collection. Possibly on ultramafics.

Alyxia palawanensis Markgr., *Blumea* 23 (1977) 400; --DJ Middleton, *Blumea* 45 (2000) 86, Map 23; Fl. Males. ser. 1, 18 (2007) 104. --Type: PNH 12397 Sulit (holo, A; iso A, BO, L*, PNH, SING). Palawan: Palawan prov., Victoria Mtns.

Borneo, Philippines, Sulawesi.

PALAWAN (Mt Beaufort; Victoria Mtns). Primary ridge mossy forest with stunted trees, on sandstone or schist at 900-1950m.

Alyxia parvifolia (Merr.) Merr., *PJS* 4 c (1909) Bot. 313; EPFP 3 (1923) 328; --Markgr., *Blumea* 23

(1977) 392; --DJ Middleton, *Blumea* 45 (2000) 89, Map 29; *Fl. Males. ser. 1*, 18 (2007) 106; --
Gymnopogon parvifolius Merr., *Publ. Bur. Govt. Lab. (Philipp.)* 29 (1905) 46. --Type: Elmer 5800
(lecto, US*, lectotype, designated by Middleton (2000); iso BO, G, K, NY*, P, PNH, PR). Luzon:
Benguet prov., Mt Sto. Tomas. March 1904.

LUZON: Mountain Province, Benguet. Mossy forests, on rotting tree stumps or sandy-loamy soil, 1700-2500m. Note: on Middleton's (2000) distribution map, two sites (i.e. Cagayan E coast and Manila) were likewise included. These two sites have elevations close to sea level.

Alyxia reinwardtii Blume, *Catalogus* (1823) 43; --Markgr., *Blumea* 23 (1977) 386; --DJ Middleton, *Blumea* 45 (2000) 100, f. 13, Map 35; *Fl. Males. ser. 1*, 18 (2007) 112, Fig. 25. --Type from Java. *Alyxia lucida* Wall. *in* Roxb., *Fl. Ind.* 2 (1824) 540; --Merr., *EPFP* 3 (1923) 328; --Markgr., *Blumea* 23 (1977) 389. --Type from Singapore.

S China, Burma, Andaman Isls, Thailand, Laos, Cambodia, Vietnam, Sumatra (and adjacent isls), Peninsular Malaysia, Singapore, Java, Borneo, Philippines, Lesser Sunda Isls (Bali).

CULION, PALAWAN (Mt Beaufort; Victoria Mtns), TAWI-TAWI. Dry forests at low altitudes in Culion.

Alyxia sibuyanensis Elmer, *LPB* 4 (1912) 1448; --Merr., *EPFP* 3 (1923) 328; --Markgr., *Blumea* 23 (1977) 381, pro parte; --DJ Middleton, *Blumea* 45 (2000) 115, Map 40; *Fl. Males. ser. 1*, 18 (2007) 119. --Type: Elmer 12137a (lecto L*, designated by Middleton (2000); iso A*, BISH, BM, BO, E, G, GH, HBG, K, NY*, US*, W, WRSL, Z). Sibuyan: Mt Giting-giting. On shrubberies of wooded bank near a seepage gravelly soil of the Pauala River, alt. 1000 ft., April 1910.

Alyxia monticola C Robinson, *PJS* 6 c (1911) Bot. 356; --Merr., *EPFP* 3 (1923) 328. --Type: C Robinson 9359 (untraced, fide Middleton). Luzon: Quezon prov., Mt Binuang.

Alyxia retusa Merr., *PJS* 14 (1919) 448; --Merr., *EPFP* 3 (1923) Bot. 328. --Type: BS 33330 Ramos (lecto, K, designated by Middleton (2000); iso A*, P, US*). Luzon: Ilocos Norte prov., Mt Palimlim, Aug. 1918.

Alyxia glabra Merr., *PJS* 13 c (1918) Bot. 53; *EPFP* 3 (1923) Bot. 327. --Type: BS 29207 Ramos & Edaño (lecto K, designated by Middleton (2000); iso P, US*). Luzon: Quezon prov., Infanta-Siniloan Trail. June 1917.

Alyxia revoluta Merr., *PJS* 13 c (1918) Bot. 52; *EPFP* 3 (1923) Bot. 328. --Type: BS 25515 Yates (lecto US*, designated by Middleton (2000); iso K, P). Luzon: Quezon prov., Mt Cadig, Dec. 1916.

Taiwán (Lanyu), Philippines.

LUZON: Ilocos Norte, Isabela, Nueva Ecija, Aurora, Rizal, Quezon, Camarines Sur, MINDORO, SIBUYAN, PANAY, NEGROS, CEBU, SAMAR, DINAGAT, MINDANAO: Bukidnon, Agusan del Norte. Primary or secondary lowland to montane or gallery forest, or in thickets or mangroves, 0-1735m. On clay, rocky, volcanic or ultrabasic soils.

Amphineurion (A de Candolle) Pichon

Amphineurion marginatum (Roxb.) DJ Middleton, *Taxon* 55 (2006) 502; *Fl. Males. ser. 1*, 18 (2007) 129, Fig. 28; --*Aganosma marginata* (Roxb.) G Don, *Gen. Hist.* 4 (1837) 77; --*Echites marginatus* Roxb., *Fl. Ind.* 2 (1832) 16.

Aganosma acuminata (Roxb.) G Don, *Gen. Syst.* 4 (1837) 77; --Merr., *Fl. Manila* (1912) 374; *EPFP* 3 (1923) 334; --*Echites acuminatus* Roxb., *Fl. Ind.* 2 (1832) 15, non Ruiz & Pav. (1799). --Type: Illustration 2461 of *Echites acuminatus* in the Roxburgh collection in Kew library.

Aganosma velutina A DC, *Prodr.* 8 (1844) 434; --Merr., *EPFP* 3 (1923) 334. --Type: Cuming 1803 (lecto G, designated by Middleton (1996), iso E, G, K, L, MO, NY, P, TCD, UPS, W).

India, Bangladesh, China, Burma, Thailand, Laos, Cambodia, Vietnam, Sumatra, Peninsular Malaysia, Java, Borneo, Philippines, Sulawesi, Lesser Sunda Isls, Moluccas. LUZON: Ilocos Sur, La Union, Mountain Province, Cagayan, Isabela, Nueva Vizcaya, Pangasinan, Zambales, Bataan, Rizal, Cavite, MINDORO, PALAWAN, TICAQ,

NEGROS, MINDANAO. Thickets and secondary forests, chiefly in seasonal areas at low and medium altitudes.

Anodendron A de Candolle

Revision:

Middleton, DJ. 1996. *A revision of Anodendron* A. DC. (*Apocynaceae*). *Blumea* 41: 37-68.

Anodendron affine (Hook. & Arn.) Druce, Rep. Bot. Exch. Club Brit. Isles 1916 (1917) 605; --DJ Middleton, *Blumea* 41 (1996) 40, map 1; --Middleton, Fl. Males, ser. 1, 18 (2007) 134. --Type: untraced; neotype from China.

Anodendron loheri Merr., PJS 7 c (1912) Bot. 332; EPFP 3 (1923) Bot. 333. --Type: Loher 6494 (US, lecto, designated by Middleton (1996); iso K, M). Luzon: Zambales prov., Mt Pinatubo.

Bangladesh, Burma, Thailand, Laos, Vietnam, S China, Hainan, Taiwan, Japan, Philippines.

LUZON: Zambales, Bataan (Lamao River), Bulacan, Rizal, Laguna (Mt Makiling), CATANDUANES, SAMAR. Lowland primary forests.

Anodendron axillare Merr., PJS 7 c (1912) Bot. 331; EPFP 3 (1923) Bot. 333; --DJ Middleton, *Blumea* 41 (1996) 42, Type: FB 13572 Meyer & Foxworthy (lecto US, designated by Middleton (1996); isolecto: L*). Negros: Negros Occidental prov., Faraon. Aug-Sept 1909.

Sumatra, Peninsular Malaysia, Java, Borneo (Sarawak; Sabah; Kalimantan), Philippines.

NEGROS: Negros Occidental (Faraon), MINDANAO: Agusan del Norte (Tungao, drainage of Agusan River, 26 km S of Butuan), Surigao del Norte. Low and medium altitude forests.

Anodendron candolleianum Wight, Icon. 4 (1848) t. 1309; --DJ Middleton, *Blumea* 41 (1996) 47, Map 3; Fl. Males, ser. 1, 18 (2007) 137. --Type from Peninsular Malaysia.

Peninsular Thailand, Peninsular Malaysia, Singapore, Sumatra (Aceh), Java, Borneo (Kalimantan, Sarawak, Sabah) and central E Philippines.

BILIRAN (Mt Suiro, based on PNH 21682 Sulit, A, K, L, LAE, cited by Middleton).

Anodendron oblongifolium Hemsl., Ann. Bot. 5 (1891) 504; --DJ Middleton, *Blumea* 41 (1996) 52, Map 6; Fl. Males, ser. 1, 18 (2007) 139. --Type from Solomon Isls (San Cristobal).

Anodendron paniculatum Merr., EPFP 3 (1923) 333, *pro parte* (under syn. of *A manubriatum*), *non* A DC (1844).

Vanuatu, Solomon Isls, Papua New Guinea, Moluccas (Seram), Borneo (Kalimantan; Sabah), and the Philippines.

LUZON: Rizal (Bosoboso), Laguna (Mt Makiling), MINDANAO: Surigao del Norte, Davao Oriental (Mati).

Anodendron paniculatum A DC, Prodr. 8 (1844) 444; --DJ Middleton, *Blumea* 41 (1996) 54, Fig. 3, Map 7; Fl. Males, ser. 1, 18 (2007) 139, Fig. 30.

Anodendron manubriatum (Wall.) Merr., PJS 7 c (1912) Bot. 333; EPFP 3 (1923) Bot. 333. --Type from Bangladesh.

Parsonsia bulusanensis Elmer ex Merr., EPFP 3 (1923) 333, nom. Illeg. (in synonymy of *Anodendron manubriatum* (=A *paniculatum*)).

India, Sri Lanka, Bangladesh, Nicobars, Burma, Thailand, Laos, Cambodia, S Vietnam, Sumatra, Peninsular Malaysia, Java, Borneo (Sarawak; Sabah), Philippines, Sulawesi, Lesser Sunda Isls, Moluccas.

LUZON: Laguna (above Pansol), Sorsogon (Mt Bulusan); MINDORO: Mindoro Occidental (Abra de Ilog), Mindoro Oriental (Mansalay, Mt Yagaw); PALAWAN (Taytay;

Quezon, Mono), GUIMARAS, MINDANAO: Zamboanga (Malangas), DINAGAT.

Carruthersia Seemann

Revision:

Middleton, DJ. 1997. *A revision of Carruthersia Seem.* Blumea 42: 489-498

Carruthersia glabra DJ Middleton, Harvard Pap. Bot. 8 (2003) 1; Fl. Males, ser. 1, 18 (2007) 155.

--Type: PNH 6440 Sulit. Samar: Mt Calbiga.

SAMAR: Mt Calbiga. Midmontane forest at 300m altitude.

Carruthersia pilosa (A DC) Fernandez-Villar, Novis. App. (1880) 137; --Merr., EPFP 3 (1923) Bot. 335; --DJ Middleton, Fl. Males, ser. 1, 18 (2007) 155, Fig. 37; --Kopsia pilosa A DC, Prodr. 8 (1844) 352. --Type: Cuming 1783 (lecto G-DC, designated by Middleton (1997); iso BM, CGE, E, FR, K, L, NY, P, W, Z). Philippines. Locality not specified.

Carruthersia macgregorii Merr., PJS 3 c (1908) Bot. 261; EPFP 3 (1923) Bot. 335. --Type: McGregor 285 (lecto K, designated by Middleton (1997); iso K, NY, US). Mindoro: Mindoro Oriental prov., Baco River.

Carruthersia hirsuta Elmer, LPB 2 (1909) 587. --Type: Elmer 8899 (lecto E, designated by Middleton (2007); iso BM, BO, MO, NY, US, W, Z). Luzon: Benguet prov., Baguio.

Carruthersia kindleyi Elmer, LPB 4 (1912) 1452. --Type: Elmer 7833 (lecto K, designated by Middleton (2007); iso A, BO, BP, E, L, MO, NSW, NY, US, W, Z). Luzon: Quezon prov., Lucban.

Philippines, Solomon Isls.

LUZON: Benguet, Zambales, Bataan, Quezon, Laguna, Sorsogon, PALAWAN (Taytay), CEBU. Primary and secondary forests, at low and medium altitudes, ascending to 1500m.

Insufficiently known taxa:

Carruthersia axilliflora Merr., PJS 27 (1925) 51; EPFP 4 (1925) 254. --Type: Loher 12351. Luzon: Rizal prov., Montalban, Oct. 1909.

LUZON: Rizal. Now only known from description; holotype probably destroyed at PNH in 1945; no isotype seen by Middleton.

Catharanthus G Don

Catharanthus roseus (L.) G Don, Gen. Hist. 4 (1836) 95.

Lochnera rosea (L.) Reichb, Conspect. (1828) 134; --Merr., Fl. Manila (1912) 370; EPFP 3 (1923) 323.

Native of Madagascar. Now pantropic in cultivation and naturalized. Thoroughly established in many parts of the Philippines, often very abundant along sandy seashores.

Cerbera Linnaeus

Cerbera manghas L., Sp. Pl. (1753) 208; --Merr., EPFP 3 (1923) 330; --DJ Middleton, Fl. Males, ser. 1, 18 (2007) 160.

Tropical Asia through Malesia to tropical Australia and Polynesia. Common along the seashore throughout the Philippines.

Cerbera odollam Gaertn., Fruct. Sem. Pl. (1791) 193; --Merr., --Merr., Fl. Manila (1912) 369; EPFP 3 (1923) 330; --DJ Middleton, Fl. Males, ser. 1, 18 (2007) 163, Fig. 39.

S India and Sri Lanka to the western Pacific Isls. In Malesia: Sumatra, Peninsular Malaysia, Singapore, Java, Borneo, Philippines, Sulawesi. Mostly riverine at low

altitudes.

Chilocarpus Blume

Chilocarpus denudatus Blume, Bijdr. (1826) 1025; --DJ Middleton, Fl. Males, ser. 1, 18 (2007) 169, Fig. 40. --Type from Java.

Chilocarpus leytenensis Elmer, LPB 4 (1912) 1453; --Merr., EPFP 3 (1923) 321. --Type: Elmer 7359 (lecto A, designated by Leeuwenberg (2002); iso BO, E, G, K, NY). Leyte: Leyte prov., Palo.

S India, Nicobar Isls, Burma (Tenasserim), Thailand, Cambodia, S Vietnam, Sumatra, Peninsular Malaysia, Java, Borneo (Anamba Isls), Philippines, Sulawesi, Moluccas, New Guinea (Papua).

LEYTE, BUCAS GRANDE. Low altitude primary forests.

Chonemorpha G Don

Chonemorpha fragrans (Moon) Alston, Ann. Roy. Bot. Gard. Perad. 11 (1929) 203; --Sleesen, Nova Guinea, new ser. 9 (1958) 344; --DJ Middleton, Fl. Males, ser. 1, 18 (2007) 179; --Echites fragrans Moon, Cat. Pl. Ceylon (1824) 20; --Chonemorpha rheedei Ridl., Agric. Bull. Straits Fed. Malay States 10 (1911) 146. --Type: Rheedee, Hort. Malab. 9 (1689) t. 5, 6.

Chonemorpha elliptica Merr. & Rolfe, PJS 3 c (1908) Bot. 121; --Tabernaemontana elliptica Blanco, Fl. Filip. (1837) 115 (as 'eliptica'), non Thunb. (1784); --Chonemorpha blancoi Merr., Sp. Blancoanae (1918) 312; EPFP 3 (1923) 335. --Type: BS 1065 Ramos (lecto GH, designated by Middleton (2006); iso BO, K, NSW, NY, PNH, SING, US). Luzon: Rizal prov., Bosoboso.

India, Sri Lanka, Nepal, Bhutan, Bangladesh, Burma, S China, Thailand, Cambodia, Laos, Vietnam, Sumatra, Peninsular Malaysia, Java, Borneo (Brunei), Philippines, Sulawesi, Lesser Sunda Isls (including Timor Leste).

LUZON: Rizal, Laguna, Batangas, PALAWAN. Low altitude forests.

Chonemorpha verrucosa (Blume) DJ Middleton, Novon 3 (1993) 455; Fl. Males, ser. 1, 18 (2007) 181, Fig. 41; --Rhynchodia verrucosa (Blume) Woodson, Sunyatsenia 3 (1836) 102; --Tabernaemontana verrucosa Blume, Bijdr. (1826) 1029. --Type from Java.

Rhynchodia rhynchosperma (Wall.) K Schum. in Engl. & Prantl, Nat. Pflanzenfam. 4² (1895) 173; --Merr., EPFP 3 (1923) 333; --Echites rhynchospermus Wall., Pl. Asiat. Rar. 1 (1830) 43, t. 49. --Type from Burma.

Chonemorpha elastica Merr., PJS 4 c (1909) Bot. 81. --Type: FB 12351 Hutchinson (lecto US, designated by Middleton, 2006). Mindanao: Zamboanga del Sur prov., Dumanguilas Bay.

India, Bhutan, China, Burma, Cambodia, Laos, Vietnam, Sumatra, Peninsular Malaysia, Java, Borneo, Philippines.

LUZON: Apayao, Benguet, Cagayan, Cavite, MINDANAO: Zamboanga, Cotabato, Davao. Low and medium altitude forests, ascending to 1500m in Benguet.

Hunteria Roxburgh

Ichnocarpus R Brown

Revision:

Middleton, DJ. 1995. *A taxonomic revision of Ichnocarpus (Apocynaceae)*. Blumea 39: 73-94

Ichnocarpus frutescens (L.) WT Aiton, Hort. Kew ed. 2, 2 (1811) 69; --DJ Middleton, Fl. Males, ser. 1, 18 (2007) 204, Fig. 47; --Apocynum frutescens L., Sp. Pl. (1753) 213. --Type from Sri Lanka.

Ichnocarpus volubilis (Lour.) Merr., PJS 21 (1922) 506; EPFP 3 (1923) 336; --Gardenia volubilis Lour., Fl. Cochinch. (1790) 148. --Type from Vietnam.

Echites caudatus Blanco, Fl. Filip. (1837) 106, non L. (1767); Fl. Filip. ed. 2 (1845) 77. –Type: Not preserved. Merrill (1918) has designated Merrill Species Blancoanae 456 (A, K, L, MO, P) as illustrative specimen.

Ichnocarpus frutescens (L.) WT Aiton var. *ovatifolius* (A DC) Deb., Fl. Tripura State 2 (1983) 18; --
Ichnocarpus ovatifolius A DC, Prodr. 8 (1844) 435; --Merr., Sp. Blancoanae (1918) 313. –
Type: Cuming 1809 (lecto BM, designated by Middleton, 1994; iso G, K, MO, OXF, TCD, W).
Philippines: 'Manila'

Ichnocarpus navesii Rolfe, J. Linn. Soc., Bot. 21 (1884) 313, *nom. nud.*

Carruthersia daronensis Elmer, LPB 4 (1912) 1450. –Type: Elmer 11099 (lecto K, designated by Middleton, 1994; iso BISH, BO, BP, E, L, Z). Mindanao: Davao: Mt Apo, Todaya.

Toxocarpus makilingensis Elmer ex Merr., EPFP 3 (1923) 336, *nom. inval.* (only in synonymy).

Pakistan, India (including Nicobar Isls), Sri Lanka, Nepal, Bangladesh, Burma, S China, Thailand, Laos, Cambodia, Vietnam, Sumatra, Peninsular Malaysia, Java, Borneo, Philippines, Sulawesi, Lesser Sunda Isls, Moluccas, New Guinea. BATANES and N LUZON to CORON, PALAWAN (Irawan, Tatanarom) and MINDANAO, in most islands and provinces. Often common. Low and medium altitude thickets and secondary forests.

Kibatalia G Don

Revision:

Woodson, 1936. Philippine Journal of Science 60: 209-

Rudjiman, 1987. Agric. Univ. Wageningen Pap. 86-5: 36-

Kibatalia arborea (Blume) G. Don, Gen. Hist. 4 (1837) 86; --Woodson, PJS 60 (1936) 226; --
Soejarto et al. (1995). Prelim. Checklist Fl. Pl. Palawan; --Rudjiman, Agric. Univ. Wageningen Pap.
86-5 (1987) 43; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 211, Fig. 48; *Kickxia arborea* (Blume)
Blume, Rumphia 4 (1849) 26 (as 'Kixia'); --*Hasseltia arborea* Blume, Bijdr. (1826) 1046. –Type

from

Java.

Sumatra, Peninsular Malaysia, Java, Borneo, Philippines, Sulawesi.

PALAWAN (Mt Beaufort). Based on SMHI 2170 (A, L). Lowland forests.

Kibatalia blancoi (Rolfe ex Stapf) Merr., PJS 17 (1920) 309; EPFP 3 (1923) 334; Woodson, PJS
60 (1936) 221; --Rudjiman, Agric. Univ. Wageningen Pap. 86-5 (1987) 47; --DJ Middleton, Fl.
Males. Ser. 1, 18 (2007) 211, Fig. 49; --*Kickxia blancoi* Rolfe, J. Linn. Soc. Bot. 21 (1884) 313.
–Type: Illustration in Fernandez-Villar, Novis. App. (1880) pl. 428bis under the incorrect name of
Kickxia arborea (lectotypified by Middleton, 2007).

Kibatalia merrittii (Merr.) Woodson, PJS 60 (1936) 220; --*Kickxia merrittii* Merr., PJS 4 c (1909) Bot. 315. –
Type: FB 11488 Merritt (lecto K, designated by Rudjiman, 1987; iso US). Mindoro:

LUZON: Ilocos Sur, Cagayan, Laguna, Batangas, CATANDUANES, MINDORO,
SIBUYAN, GUIMARAS, NEGROS, LEYTE. In secondary and primary forests at low and
medium altitudes, to altitude 1000m.

Kibatalia elmeri Woodson, PJS 60 (1936) 223; --Rudjiman, Agric. Univ. Wageningen Pap. 86-5
(1987) 53; --Soejarto et al. (1995). Prelim. Checklist Fl. Pl. Palawan; --DJ Middleton, Fl. Males. ser.
1, 18 (2007) 216, Fig. 51; --*Kibatalia fragrans* Elmer, LPB 10 (1939) 3694. –Type: Elmer 15934
(holo MO; iso A, BM, BO, C, F, G, K, L, NY, P, PNH, U, US, W, Z). Luzon: Sorsogon prov., Mt
Bulusan, Irosin.

LUZON: Ilocos Sur, Cagayan, Laguna, Batangas, Sorsogon, MINDORO, PALAWAN
(Taytay), CATANDUANES. In secondary and primary forests, on hillsides and top of
ridges.

Kibatalia gitingensis (Elmer) Woodson, PJS 60 (1936) 216; --Rudjiman, Agric. Univ. Wageningen
Pap. 86-5 (1987) 57; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 216, Fig. 52; --*Vallaris gitingensis*
(Elmer) Merr., PJS 10 c (1915) Bot. 70; EPFP 3 (1923) 339; --*Kickxia gitingensis* Elmer, LPB 4
(1912) 1455. –Type: Elmer 12203 (lecto K, designated by Rudjiman, 1987, iso BM, BO, E, F, G, K,
L, MO, NY, US, W, Z). Sibuyan: Mt Giting-giting.

Vallaris angustifolia Merr., PJS 7 c (1912) Bot. 335. –Type: FB 10507 Curran (lecto K, designated by Rudjiman, 1987). Luzon: Sorsogon prov.

LUZON: Quezon, Laguna, Camarines, Sorsogon, SIBUYAN, LEYTE. Hill forests to altitude 525m.

Kibatalia longifolia Merr., PJS 17 (1921) 307; EPFP 3 (1923) 335 (as *K oblongifolia*); –Rudjiman, Agric. Univ. Wageningen Pap. 86-5 (1987) 64; –DJ Middleton, Fl. Males. ser. 1, 18 (2007) 221, Fig. 54. –Type: De Mesa 118 in FB 27534 (lecto A, designated by Rudjiman, 1987). Mindanao: Davao del Sur prov., Sta Cruz, Balutakay.

MINDANAO: Davao del Sur. Altitude 40m, probably in forest.

Kibatalia macgregori (Elmer) Woodson, PJS 60 (1936) 224; –Rudjiman, Agric. Univ. Wageningen Pap. 86-5 (1987) 67; –DJ Middleton, Fl. Males. ser. 1, 18 (2007) 221, Fig. 55. –Type: Elmer 12373 (lecto K, designated by Rudjiman, 1987, iso A, BM, BO, BP, E, F, G, L, MICH, MO, NY, W, Z). Sibuyan: Magallanes

SIBUYAN. High altitude forests.

Kibatalia maingayi (JD Hook.) Woodson, PJS 60 (1936) 213; –Rudjiman, Agric. Univ. Wageningen Pap. 86-5 (1987) 69; –DJ Middleton, Fl. Males. ser. 1, 18 (2007) 223, Fig. 56. –Type from Peninsular Malaysia.

Kibatalia daronensis (Elmer) Woodson, PJS 60 (1936) 218; –*Vallaris daronensis* (Elmer) Merr., PJS 10 c (1915) Bot. 70; EPFP 3 (1923) 339; –*Holarrhena daronensis* Elmer, LPB 4 (1912) 1455. –Type: Elmer 11912 (lecto K, designated by Rudjiman, 1987, iso A, BISH, BM, BO, BP, E, L, MO, NY, P, US, W). Mindanao: Davao.

Thailand, Sumatra, Peninsular Malaysia, Borneo, Philippines.

MINDANAO: Misamis Occidental, Lanao del Sur (Lake Lanao), Davao (Mt Apo), Agusan. Forests up to 700m.

Kibatalia merrilliana Woodson, PJS 60 (1936) 225; –Rudjiman, Agric. Univ. Wageningen Pap. 86-5 (1987) 74; –DJ Middleton, Fl. Males. ser. 1, 18 (2007) 223, Fig. 57. –Type: Wenzel 330 (holo US; iso A, BM, F, G, GH, L). Leyte: Leyte prov.,

LEYTE, SAMAR. Forests at low altitudes.

Kibatalia puberula Merr., PJS 30 (1926) 423; –Rudjiman, Agric. Univ. Wageningen Pap. 86-5 (1987) 77; –DJ Middleton, Fl. Males. ser. 1, 18 (2007) 227, Fig. 58. –Type: BS 43767 McGregor (lecto UC, designated by Rudjiman, 1987, iso NY). Samar.

SAMAR. Dipterocarp forests or river banks, altitude 100-250m.

Kibatalia stenopetala Merr., PJS 17 (1920) 308; EPFP 3 (1923) 335; –Rudjiman, Agric. Univ. Wageningen Pap. 86-5 (1987) 80; –DJ Middleton, Fl. Males. ser. 1, 18 (2007) 227, Fig. 59. –Type: BS 34691 Ramos & Pascasio (lecto A, designated by Rudjiman, 1987, iso BM, BO, K, L, P, US). Mindanao: Surigao del Norte prov.

Kibatalia luzonensis Woodson, PJS 60 (1936) 218. –Type: BS 75041 Rivera & Duyag (lecto UC, designated by Middleton, 2007). Luzon: Laguna prov., Majayjay

LUZON: Laguna, NE MINDANAO: Surigao del Norte, DINAGAT. Low altitude (c. 100m) along streams, to medium altitude forests to 1000m.

Kopsia Blume

Kopsia arborea Blume, Catalogus Gew. Buitenz. (1823) 13; –DJ Middleton, Fl. Males. ser. 1, 18 (2007) 235, Fig. 62. –Type from Java.

Kopsia longiflora Merr., Govt. Lab. Publ. (Philipp.) 29 (1905) 47; EPFP 3 (1923) 330. –Type: FB 611 Borden (holo PNH, lost; lecto US*, designated by Middleton, 2004; iso BM, BO, F, K, NY, SING*; probable

unnumbered isotype UC). Luzon: Bataan prov., Lamao River.

Kopsia laxinervia Merr., PJS 13 c (1918) Bot. 55; EPFP 3 (1923) 330. –Type: BS 28232 Fenix (lecto A,

designated by Middleton, 2004; iso BO, K, NY, P, US). Luzon: Apayao prov.
India (Andaman and Nicobar Isls), S China, Thailand, Vietnam, Sumatra, Peninsular
Malaysia, Java, Borneo, Philippines, Sulawesi, Lesser Sunda Isls.
LUZON: Ilocos Norte, Apayao, Cagayan, Bataan, Quezon, Camarines, Sorsogon,
PALAWAN (Irawan; Addison Peak), ROMBLON, MINDANAO: Lanao, Bukidnon. In
forests, thickets along streams, at low and medium altitudes.

Kopsia flavida Blume, Rumphia 4 (1849) 28; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 240, Fig. 64.
--Type from New Guinea.

Kopsia grandiflora Merr., PJS 20 (1922) 436; EPFP 3 (1923) 330. --Type: BS 33691 Ramos & Edaño (lecto
US, designated by Middleton, 2004; iso A, K, P, US). Luzon: Camarines Norte prov., Paracale.

Kentochrosia triangularis (Quisumb. & Merr.) Merr. & LM Perry, PJS 76 (1941) 21; --*Kopsia triangularis*
Quisumb. & Merr., PJS 37 (1928) 191. --Type: Wenzel 2648 (holo UC; iso A, BO, BR, G, M, MO,
Z). Mindanao: Surigao del Norte prov.

Philippines, Moluccas, New Guinea, Solomon Isls, Micronesia, Vanuatu.

LUZON: Camarines Norte, MINDANAO: Surigao del Norte. Lowland forests, along
streams, possibly on ultramafics in Surigao del Norte.

Lepiniopsis Valeton

Lepiniopsis ternatensis Valeton, Ann. Jard. Bot. Buitenz. 12 (1895) 252, t. 28; --Merr., EPFP 3
(1923) 321; --Markgr., Blumea 30 (1984) 171; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 262, Fig.
71. --Type from Moluccas (Ternate).

Lepiniopsis philippinensis Elmer, LPB 4 (1912) 1458. --Type: Elmer 12378 (lecto GH, designated by
Middleton, 2006; iso BISH, BO, L, NY, P, US). Sibuyan: Mt Giting-giting.

Philippines, Sulawesi, Moluccas, New Guinea.

LUZON: Camarines, MINDORO, SIBUYAN, PANAY, NEGROS, CEBU, MINDANAO:
Agusan, Surigao. Low and medium altitude forests.

Lochnera Reichenbach =Catharanthus

Melodinus Forster

Melodinus cumingii A DC, Prodr. 8 (1844) 330; --Merr., EPFP 3 (1923) 320; --Markgr., Blumea 19
(1971) 152; --Soejarto et al. (1995) Prelim. Checklist Fl. Pl. Palawan; --DJ Middleton, Fl. Males.
Ser. 1, 18 (2007) 276. --Type: Cuming 1831 (lecto NY, designated by Middleton, 2007, iso BM, C,
K, MO, P). Luzon: 'Manila'

Melodinus cumingii var. *apoensis* (Elmer) Markgr., Blumea 19 (1971) 152; --*Melodinus apoensis* Elmer, LPB
4 (1912) 1459; --Merr., EPFP 3 (1923) 320. --Type: Elmer 10793 (lecto L, designated by
Leeuwenberg, 2003; iso A, BISH, BM, E, G, GH, K, L, MO, NY, P, US, Z). Mindanao: Davao, Mt
Apo, Todaya.

LUZON: Quezon, PALAWAN (Mt Bloomfield), BOHOL, MINDANAO: Davao (Mt Apo).
Low to medium altitude forests, up to 1100m.

Melodinus fusiformis Champ. ex Benth. in Hook. J. Bot. Kew Gard. Misc. 4 (1852) 332;
--Soejarto et al. (1995) Prelim. Checklist Fl. Pl. Palawan; --DJ Middleton, Fl. Males. ser. 1, 18
(2007) 278. --Type from China.

Melodinus lanceolatus Merr., PJS 27 (1925) 52; EPFP 4 (1925) 254; --Markgr., Blumea 19 (1971) 153.
--Type: Loher 15057 (lecto UC, designated by Leeuwenberg, 2003; iso K, M). Luzon: Rizal prov.,
without definite locality.

China, Vietnam, Laos, Philippines.

LUZON: Rizal.

Melodinus orientalis Blume, Bijdr. (1826) 1026; --Markgr., Blumea 19 (1971) 154; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 279. --Type from Java.

Melodinus ellipticifolius (Quisumb. & Merr.) Pichon, Mém. Mus. Hist. Nat. Paris ii, 24 (1948) 128; --Markgr., Blumea 19 (1971) 153; --Willughbeia elliptifolia Quisumb. & Merr., PJS 37 (1928) 194. --Type: Wenzel 2605 (UC*, lecto, designated by Middleton 2007; iso BR, G, GH, K, MO, Z). Mindanao: Surigao del Norte prov., Placer. Forest, c. 150m, May 1927

Melodinus luzoniensis (Merr.) Pichon, Mém. Mus. Hist. Nat. Paris ii, 24 (1948) 129; --Markgr., Blumea 19 (1971) 153; --Willughbeia luzoniensis Merr., PJS 4 c (1909) Bot. 320; EPFP 3 (1923) 320. --Type: FB 12277 Curran (lecto US, designated by Middleton, 2006). Luzon: Camarines Sur prov., Caramoan.

Melodinus globosus (Elmer) Pichon, Mém. Mus. Hist. Nat. Paris ii, 24 (1948) 129; --Chilocarpus globosus Elmer, LPB 4 (1912) 1454. --Type: Elmer 12229 (lecto L, designated by Leeuwenberg, 2003; iso BM, BO, E, G, MO, NY, US, Z). Sibuyan: Mt Giting-giting.

Willughbeia pauciflora Merr., PJS 8 c (1913) Bot. 387; EPFP 3 (1923) 320. --Type: Wenzel 100 (lecto BM, designated by Leeuwenberg, 2003; iso G, MO, US). Leyte: Thailand, Sumatra, Peninsular Malaysia, Singapore, Java, Borneo, Philippines, Sulawesi, Lesser Sunda Isls (Bali).

LUZON: Cagayan, Camarines Sur, Sorsogon, CATANDUANES, SIBUYAN, PANAY, LEYTE, MINDANAO: Surigao del Norte. Forests at low and medium altitudes.

Melodinus philippinensis A DC, Prodr. 8 (1844) 330; --Merr., EPFP 3 (1923) 320; --Markgr., Blumea 19 (1971) 152; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 281. --Type: Cuming 1574 (lecto E, designated by Middleton, 2007; iso A, BM, C, G, G-DC, K, L, M, MO, NY, P). Mindoro. MINDORO. Probably from forests at low altitudes. Only known from the type collection.

Micrechites Miquel

Micrechites serpyllifolius (Blume) Kosterm., Reinwardtia 5 (1960) 246; --Ichnocarpus serpyllifolius (Blume) PI Forst., Austral. Syst. Bot. 5 (1992) 539; --DJ Middleton, Blumea 39 (1994) 85; Fl. Males. ser. 1, 18 (2007) 287; --Ficus serpyllifolia Blume, Bijdr. 1 (1825) 443. --Type from Java.

Micrechites schrieckii (van Heurck & Muell.-Arg.) Rolfe, J. Bot. 23 (1885) 214; --Merr., EPFP 3 (1923) 332; --Ecdysanthera schrieckii van Heurck & Muell.-Arg. In van Heurck, Observ. Bot. (1871) 191. --Type: Cuming 910 (holo AWH; iso A, BM, CGE, E, G, K, L, M, MEL, MO, P, W). Luzon.

Trachelospermum philippinense Elmer, LPB 2 (1908) 488. --Type: Elmer 9135 (lecto K, designated by Middleton, 1994; iso A, BO, E, G, MO, NY, W, Z). Luzon: Quezon prov., Lucban.

Thailand, Sumatra, Peninsular Malaysia, Singapore, Java, Borneo, Philippines, Sulawesi.

LUZON: Laguna, Quezon, Camarines, Sorsogon, NEGROS, LEYTE, CAMIGUIN, BASILAN, MINDANAO: Zamboanga, Davao. Forests at low and medium altitudes.

Neisosperma Rafinisque = Ochrosia

Ochrosia Jussieu

Revision:

Markgraf, 1979. Blumea 25: 233-
Hendrian. 2004. Blumea 49: 104-

Ochrosia ackeringae (Teysm. & Binn.) Miq., Ann. Mus. Lugd.-Bat. 4 (1869) 138, t. 5-b; --Markgr., Blumea 25 (1979) 238; --Hendrian, Blumea 49 (2004) 117; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 292; --Lactaria ackeringae Teysm. & Binn., Tijdschr. Ned.-Indië 29 (1867) 249. --Type from

Sumatra, Bangka.

Ochrosia littoralis Merr., PJS 4 c (1909) Bot. 315; EPFP 3 (1923) 330. --Type: FB 7754 Curran & Merritt (holo PNH, lost). Luzon: Batangas prov., Malabigo.

Sumatra, Java, Borneo (Sabah), Philippines, Sulawesi, Moluccas, Papua New Guinea, Solomon Isls, Australia.

BABUYAN ISLS (DALUPIRI), LUZON: Ilocos Norte, Cagayan, Pangasinan, Batangas, PALAWAN (Victoria Mtns), SAMAR, MINDANAO: Cotabato, SIBUTU. Lowland thickets and forests, often along the seashore, also on limestone.

Ochrosia apoensis Elmer, LPB 4 (1912) 1461; --Merr., EPFP 3 (1923) 329; --Hendrian, Blumea 49 (2004) 109; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 294. --Type: Elmer 10478 (lecto L, designated by Hendrian, 2004; iso A, NY). Mindanao: Davao, Mt Apo, Todaya.

Neisosperma acuminata (Trimen ex Valetton) Fosb. & Sachet var. *apoense* (Elmer) Markgr., Blumea 25 (1979) 244.

LUZON: Sorsogon, MINDANAO: Davao (Mt Apo). Dense primary forest, altitude 800-1200m.

Ochrosia glomerata (Blume) Valetton, Ann. Jard. Bot. Buitenz. 13, 2 (1895) 233; --Hendrian, Blumea 49 (2004) 112; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 297; --*Neisosperma glomerata* (Blume) Fosb. & Sachet, Addisonia sér. 2, 17 (1977) 29; --Markgr., Blumea 25 (1979) 246; --*Pseudochrosia glomerata* Blume, Mus. Bot. 1 (1850) 158. --Type from Papua New Guinea.

Bonin Isls, Borneo (Sabah), Philippines, Sulawesi, Moluccas and New Guinea.

LUZON: Ilocos Norte, Ilocos Sur, Cagayan, Isabela, Bataan, Rizal, Laguna, Quezon, Batangas, Camarines Norte, MINDORO, PALAWAN, MASBATE, SIBUYAN, NEGROS, SAMAR, MINDANAO: Surigao. In forests at low and medium altitudes, often common.

Ochrosia oppositifolia (Lam.) K. Schum. in Engl. & Prantl, Nat. Pflanzenfam. 4² (1895) 156; --Merr., EPFP 3 (1923) 330; --Hendrian, Blumea 49 (2004) 113; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 299, Fig. 74; --*Neisosperma oppositifolium* (Lam.) Fosb. & Sachet, Adansonia sér. 2, 12 (1972) 629; --Markgr., Blumea 25 (1979) 243; --*Cerbera oppositifolia* Lam., Encycl. 1 (1783) 62. --Type: Rumphius, Herb. Amboin. 2 (1741) 255, t. 84.

Paralstonia platyphylla Merr. ex EE Schneid., Bull. Bur. Forest. Philipp. Isls 14 (1916) 204, nom. nud.

Seychelles, Sri Lanka, Andaman Isls, Thailand, Sumatra, Peninsular Malaysia, Singapore, Java, Borneo, Philippines, Sulawesi, Moluccas, New Guinea, throughout the Pacific.

BASILAN, MINDANAO: Zamboanga. Forests along the seashore.

Parameria Bentham & JDHooker

Revision:

Middleton, DJ. 1996. *A revision of Aganonerion Pierre ex Spire, Parameria Benth. & Hook. f. and Urceola Roxb. (Apocynaceae)*. Blumea 41: 69-122.

Parameria laevigata (Juss.) Moldenke, Rev. Sudamer. Bot. 6 (1940) 176; --DJ Middleton, Blumea 41 (1996) 76, Fig. 2, map 2; Fl. Males. ser. 1, 18 (2007) 305, Fig. 75; --*Aegiphila laevigata* Juss., Ann. Mus. Hist. Nat. Paris 7 (1806) 76. --Type: de Jussieu Herbarium, Catalogue number 5037 (holo P), locality not known.

Parameria barbata (Blume) K Schum. In Engl. & Prantl, Nat. Pflanzenfam. 4, 2 (1895) 162; --Merr., EPFP 3 (1923) 331; --*Parsonsia barbata* Blume, Bijdr. (1826) 1042. --Type from Java.

Echites torosus Llanos, Fragm. Pl. Philipp. (1851) 59, non Jacq. (1760). --Neotype: Merrill Species Blancoanae 140 (neo US, designated by Middleton, 1996; iso A, BM, BO, K, L, MO, P, W). Luzon: Rizal prov., Antipolo.

Parameria glandulifera (Wall. ex G. Don) Benth. ex Kurz var. *philippinensis* (Radlk.) Stapf, Trans. Linn. Soc. London, Bot. 4 (1894) 207; --*Parameria philippinensis* Radlk., Sitzungsber. Math.-Phys. Cl. Königl. Bayer Akad. Wiss. München 14 (1884) 518. --Type: Cuming 1126 (lecto M, designated by Middleton, 1996; iso AWH, BM, C, CGE, E, FR, G, K, L, MEL, MO, NY, P, UPS, W). Luzon: Further

locality not given.

Parameria vulneraria Radlk., Sitzungsber. Math.-Phys. Cl. Königl. Bayer Akad. Wiss. München 14 (1884) 519. --Type: Rothdauscher 1025 (lecto M, designated by Middleton, 1996). Cebu. This now consisting of nothing more than branchlets; --Epitype: Rothdauscher 1029 (lecto M, designated by Middleton, 1996). Cebu.

Andaman Isls., Burma, China, Thailand, Laos, Vietnam, Cambodia, Sumatra, Peninsular Malaysia, Singapore, Java, Borneo (Kalimantan, Sarawak, Sabah), Philippines, Sulawesi, W Lesser Sunda Isls.

LUZON: Zambales, Bataan, Rizal, Batangas, Mindoro: Mindoro Mindoro Oriental (Bulalacao), CULION, PALAWAN (Irawan River Valley; Mt Beaufort; Iwahig; Trident Mines), PANAY: Iloilo, NEGROS: Negros Occidental, CEBU. In primary and secondary forests and thickets in the more seasonal parts of the archipelago, generally at low altitudes.

Parsonsia R Brown

Revision:

Middleton, DJ. 1997. *A revision of Parsonsia R.Br. in Malesia*. Blumea 42: 191-248.

Parsonsia alboflavescens (Dennst.) Mabb., Taxon 26 (1977) 532; --DJ Middleton, Blumea 42 (1997) 196; Fl. Males. ser. 1, 18 (2007) 313, Fig. 77; --*Periploca alboflavescens* Dennst., Schlüssel Hortus Malab. (1818) 12, 23, 35. --Type: Illustration in Rheede, Hort. Malab. 9 (1689) t. 9.

Parsonsia confusa Merr., PJS 1 (1906) suppl. 118; EPFP 3 (1923) 338; --*Echites spiralis* Blanco, Fl. Filip. (1837) 110. --Type: untraced. Neotype: Merrill Species Blancoanae 1014 (neo A, designated by Middleton 1997; iso BM, BO, GH, K, L, MO, NY, P, US, W). Luzon: Bataan prov., Lamao.

Parsonsia cumingiana A DC, Prodr. 8 (1844) 402; --Merr., Fl. Manila (1912) 374; EPFP 3 (1923) 45. --Type: Cuming 1490 (lecto G-DC, designated by Middleton, 1997; iso K, P, W). Luzon: Manila.

Parsonsia oblancifolia Merr., PJS 7 c (1912) Bot. 335; EPFP 3 (1923) 339. --Type: BS 4723 Ramos (lecto K, designated by Middleton, 1997). Luzon: Zambales prov., Candelaria.

Parsonsia magnifolia Elmer, LPB 8 (1919) 3071. --Type: Elmer 17867 (lecto NY, designated by Middleton, 1997). Luzon: Laguna prov., Mt Makiling.

Parsonsia oblongifolia Merr., PJS 27 (1925) 50; EPFP 4 (1925) 254. --Type: Loher 13477 (holo PNH, lost; lecto M, designated by Middleton, 1997). Luzon: Rizal prov., Montalban, (Mt) Paningtingan, March 1915.

Parsonsia aterinervia [Elmer ex Merr., EPFP 3 (1923) 338, in obs.] Elmer ex Merr., LPB 10 (1939) 3695. --Type: Elmer 15707 (untraced). Luzon: Sorsogon prov., Mt Bulusan, Irosin.

S China, Taiwan, India and Sri Lanka and eastward to Indochina, throughout Malesia, Solomon Isls, N Australia.

BATANES AND BABUYANES, LUZON: Ilocos Norte, Cagayan, Isabela, Nueva Ecija, Zambales, Bataan, Rizal, Quezon, Sorsogon, CATANDUANES, MINDORO, SIBUYAN, PANAY, DINAGAT, BUCAS GRANDE. Low and medium altitude thickets and secondary forests, also near the seashore.

Parsonsia curvisepala K Schum., Bot. Jahrb. Syst. 9 (1888) 215; --DJ Middleton, Blumea 42 (1997) 207; Fl. Males. ser. 1, 18 (2007) 321. --Type from Papua New Guinea.

Parsonsia apoensis (Elmer) Merr., PJS 9 c (1914) Bot. 384; EPFP 3 (1923) 338; --*Aganosma apoensis* Elmer, LPB 4 (1912) 1445. --Type: Elmer 10540 (lecto K, designated by Middleton, 1997; iso A, BISH, BM, BO, E, G, GH, L, MO, NY, P, U, US, W, WRSL, Z). Mindanao: Davao, Mt Apo, Todaya.

Parsonsia urdanetensis Elmer ex Merr. (EPFP 3 (1923) 338, nom. nud.), LPB 10 (1939) 3696, invalid name (no Latin descr.). --Voucher: Elmer 13836 (A, BM, BO, GH, K, MO, NA, NY, US, W). Mindanao: Agusan del Norte prov., Mt Urdaneta

Peninsular Malaysia, Philippines, Sulawesi, New Guinea.

CATANDUANES, LEYTE, MINDANAO: Davao, Agusan del Norte. Low and medium altitude forests.

Parsonsia philippinensis Merr., PJS 17 (1920) 310; EPFP 3 (1923) 339; --DJ Middleton, Blumea

42 (1997) 223; Fl. Males. ser. 1, 18 (2007) 331. –Type: BS 34585 Ramos & Pascasio (lecto K, designated by Middleton, 1997; iso P, US). Mindanao: Surigao del Norte prov.
Thailand, Peninsular Malaysia, Java, Borneo, S Philippines.
MINDANAO: Surigao. Thickets or forests along streams at low altitudes.

Rauvolfia Linnaeus

Revision:

Markgraf, 1984. *Blumea* 30: 157-167

Hendrian & DJ Middleton. 1999. *Revision of Rauvolfia (Apocynaceae) in Malesia*. *Blumea* 44: 449-470.

Rauvolfia amsoniifolia A DC, Prodr. 8 (1844) 338; --Merr., EPFP 3 (1923) 329; --Markgr., *Blumea* 30 (1984) 162; --Hendrian & DJ Middleton, *Blumea* 44 (1999) 451; Fl. Males. ser. 1, 18 (2007) 348. –Type: Cuming 1249 (lecto G, designated by Markgraf, 1984; iso BM, FR, G-DC, K, L, P). Luzon: Cagayan prov.

Philippines, S Sulawesi, E Nusa Tenggara, Timor, Tanimbar, Kei.

LUZON: Ilocos Norte, Cagayan, Isabela, Pangasinan, Nueva Ecija, Batangas, Camarines, Albay, POLILLO; LUBANG, MINDORO: Mindoro Occidental (Urilan), Mindoro Oriental (Mansalay), MARINDUQUE (Sta. Cruz), MASBATE, MINDANAO: Bukidnon. Open areas, scrub, thickets, secondary forests, sometimes also along edge of coconut plantations, 0-500 (-750)m.

Rauvolfia sumatrana Jack, Mal. Misc. 1, 5 (1820) 22; --Markgr., *Blumea* 30 (1984) 167; --Hendrian & DJ Middleton, *Blumea* 44 (1999) 462; Fl. Males. ser. 1, 18 (2007) 356. –Type: Untraced. Neotype from W Sumatra.

Rauvolfia samarensis Merr., PJS 4 c (1909) Bot. 316; EPFP 3 (1923) 329; --Markgr., *Blumea* 30 (1984) 165. –Type: Merrill 5233 (lecto L, designated by Hendrian & Middleton, 1999; iso BO, P, US). Samar:

Rauvolfia palawanensis Elmer, LPB 4 (1912) 1462. –Type: Elmer 12591 (lecto BM, designated by Hendrian & Middleton, 1999; iso A, BISH, G, GH, L, NY, P, U, US). Palawan:

Burma, Thailand, Sumatra, Peninsular Malaysia, Borneo (Sarawak, Sabah, Kalimantan), Philippines, Sulawesi, Java, Nusa Tenggara, Moluccas.

LUZON: Sorsogon (Mt Bulusan), PALAWAN (Roxas, Ibangle; Mt Beaufort; Addison Peak); PANAY: Capiz (Mt Jamindan), BILIRAN (Mt Suiro), LEYTE (Cabalian), SAMAR (Laoang; Mt Sohoton), MINDANAO: Agusan del Norte (Mt Urdaneta); SAMAL. Usually in relatively open areas, scrub, secondary forests, coastal forests, etc. although also recorded from primary lowland (dipterocarp, limestone) and montane forests. Mostly from 0-100m, recorded to as high as 1600m in certain parts of Malesia.

Rauvolfia verticillata (Lour.) Baill., Bull. Mens. Soc. Linn. Paris 1 (1888) 768; --Markgr., *Blumea* 30 (1984) 160; --Hendrian & DJ Middleton, *Blumea* 44 (1999) 464; Fl. Males. ser. 1, 18 (2007) 358; --

Dissolena verticillata L.
Rauvolfia membranacea Merr., PJS 14 (1919) 449; EPFP 3 (1923) 329. –Type: BS 33214 Ramos (holo PNH, lost; lecto K, designated by Hendrian & Middleton, 1999; iso A, BM, BO, L, P). Luzon: Ilocos Norte prov.

Rauvolfia loheri Merr., PJS 27 (1925) 50; EPFP 4 (1925) 254. –Type: Loher 12500 (holo PNH, lost; lecto K, designated by Hendrian & Middleton, 1999; iso M, UC). Luzon: Rizal prov., Montalban. June 1909.

India, Sri Lanka, Burma, Thailand, Laos, Cambodia, Vietnam, S China, Taiwan, Sumatra, Peninsular Malaysia, Borneo (Kalimantan, Sabah), the Philippines, Sulawesi, Java, Bali, Nusa Tenggara.

LUZON: Ilocos Norte (Mt Nagapatan), Benguet (Agno River), Bataan (Mt Mariveles), Rizal. In open areas, lowland and montane rainforests.

Rauwolfia Plumier =Rauvolfia

Rhynchodia Bentham =Chonemorpha

Strophanthus de Candolle

Strophanthus caudatus (L.) Kurz, Forest Fl. Burma 2 (1877) 192; J. As. Soc. Beng. 46, 2 (1877) 257; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 362, Fig. 91; --Echites caudatus L., Mant. Pl. 1 (1767) 52. --Type from Java.

Strophanthus cumingii A DC, Prodr. 8 (1844) 418; Merr., Fl. Manila (1912) 374; EPFP 3 (1923) 336. --Type: Cuming 1218 (lecto G, designated by Beentje, 1982; iso L, NY, P). Luzon: Manila.

Strophanthus dichotomus DC var. *luzoniensis* D Vidal, Sinopsis Gen. Pl. Leños. Filip. (1883) 1181, t. 67. --Type: Illustration t. 67 in D Vidal, Sinopsis Gen. Pl. Leños. Filip. (1883).

Strophanthus erectus Merr., PJS 3 c (1908) Bot. 261. --Type: Merrill 695 (lecto NY, designated by Beentje, 1982; iso K, US). Palawan: Puerto Princesa.

Strophanthus letei Merr., PJS 29 (1926) 484. --Type: Lete 263 (lecto K, designated by Beentje, 1982). Luzon: La Union prov., San Fernando.

Burma, Thailand, Laos, Cambodia, Vietnam, Sumatra, Peninsular Malaysia, Singapore, Java, Borneo, Philippines, Sulawesi, New Guinea (Papua).

LUZON: Ilocos Norte, Abra, La Union, Cagayan, Bataan, Rizal, Cavite, Laguna, Batangas, Sorsogon, PALAWAN, NEGROS, LEYTE, MINDANAO: Davao. Thickets and forests at low and medium altitudes.

Tabernaemontana Linnaeus

Revision:

Leeuwenberg, AJM. 1991. A revision of *Tabernaemontana* 1: The Old World species. Royal Botanic Gardens, Kew, 211 pp.

Tabernaemontana cordata Merr., PJS 7 c (1912) Bot. 337; --Merr., EPFP 3 (1923) 324; --Leeuwenberg, Rev. *Tabernaemontana* 1 (1991) 136; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 375. --Type: Weber 1125 (lecto G, designated by Leeuwenberg, 1991; isolecto A, E, F, K, NSW). Mindanao: Agusan del Norte, Cabadbaran, in clearings alt. c. 15m, April 1911.

Ervatamia cordata (Merr.) Markgr., Notizbl. Bot. Gart. Berlin-Dahlem 12 (1935) 548.

MINDANAO: Agusan, Surigao. Low altitude thickets, old clearings, etc.

Tabernaemontana macrocarpa Jack, Malay. Misc. 2, 7 (1822) 80; --Leeuwenberg, Rev. *Tabernaemontana* 1 (1991) 165; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 379, Fig. 97. --Type from Sumatra.

Pagiantha macrocarpa (Jack) Markgr., Notizbl. Bot. Gart. Berlin-Dahlem 12 (1935) 546; --*Ervatamia macrocarpa* (Jack) Merr., J. Arnold Arb. 33 (1952) 246.

Pagiantha megacarpa (Merr.) Markgr., Notizbl. Bot. Gart. Berlin-Dahlem 12 (1935) 546; --*Tabernaemontana megacarpa* Merr., PJS 4 c (1909) Bot. 318; --Merr., EPFP 3 (1923) 324. --Type: RS Williams 2179 (lecto NY, designated by Leeuwenberg, 1991; isolecto GH, K, US*). Mindanao: Zamboanga, Sax River.

Tabernaemontana plumeriifolia (Elmer) Merr., EPFP 3 (1923) 326; --*Ervatamia plumeriifolia* (Elmer) Pichon, Mém. Mus. Natl. Hist. Nat. 27 (1949 [1948] 220; --*Pagiantha plumeriifolia* (Elmer) Markgr., Mitt. Bot. Staatsamml. München 1 (1950) 29; --*Voacanga plumeriifolia* Elmer, LPB 1 (1908) 333. --Type: Elmer 7502 (lecto G, designated by Leeuwenberg, 1991; iso A, BO, E, K, L*, Z). Luzon: Quezon prov., Lucban.

S Thailand, Sumatra, Peninsular Malaysia, Borneo, Philippines.

LUZON: Quezon, Laguna, Camarines, Sorsogon, POLILLO, PALAWAN (Quezon, Lipuun), BASILAN, MINDANAO: Zamboanga, Misamis, Lanao. Low and medium altitude primary and secondary forests.

Tabernaemontana pandacaqui Poir. in Lam., *Encycl.* 7 (1806) 529; --Merr., *Fl. Manila* (1912) 371; EPFP 3 (1923) 325; --Leeuwenberg, *Rev. Tabernaemontana* 1 (1991) 169; --DJ Middleton, *Fl. Males. Ser. 1*, 18 (2007) 380. --Type: Sonnerat s.n. (lecto P-LA, designated by Leeuwenberg, 1988; iso P). Luzon: near Manila.

Pagiantha pandacaqui (Poir.) Markgr., *Notizbl. Bot. Gart. Berlin-Dahlem* 12 (1935) 546; --*Ervatamia pandacaqui* (Elmer) Pichon

Tabernaemontana biflora Elmer, *LPB* 4 (1912) 1463; --Merr., EPFP 3 (1923) 323; --*Ervatamia biflora* (Elmer) Pichon, *Mém. Mus. Natl. Hist. Nat.* 27 (1949 [1948] 220. --Type: Elmer 10657 (lecto G, designated by Leeuwenberg, 1988; iso A, BISH, BM, BO, E, HBG, K, L, MO, NY, US, W, Z). Mindanao: Davao, Mt Apo, Todaya.

Tabernaemontana brachybotrys Merr., *PJS* 29 (1926) 483; --*Ervatamia brachybotrys* (Elmer) Pichon, *Mém. Mus. Natl. Hist. Nat.* 27 (1949 [1948] 220. --Type: BS 43257 Ramos (lecto K, designated by Leeuwenberg, 1988; iso A, BO, G, P, UC, US). Bohol.

Tabernaemontana caudata Merr., *PJS* 4 c (1909) Bot. 316; --Merr., EPFP 3 (1923) 324; --*Ervatamia merrilliana* Markgr., *Notizbl. Bot. Gart. Berlin-Dahlem* 12 (1935) 548. --Type: FB 14025 (lecto US, designated by Leeuwenberg, 1988; iso NSW). Luzon: Ilocos Norte prov., Mt Bulangao.

Tabernaemontana congestiflora Elmer, *LPB* 4 (1912) 1464. --Type: Elmer 12564 (lecto F, designated by Leeuwenberg, 1988; iso A, BO, E, G, K, L, NY, P, US, W, Z). Sibuyan: Mt Giting-giting, Magallanes (=Magdiwang).

Tabernaemontana cumingiana A DC, *Prodr.* 8 (1844) 373; --*Ervatamia cumingiana* (A DC) Markgr., *Notizbl. Bot. Gart. Berlin-Dahlem* 12 (1935) 547. --Type: Cuming 604 (lecto G-DC, designated by Leeuwenberg, 1988; iso A, BM, CGE, E, K, L, M, MO, NY, P, W). Luzon: Laguna prov., Calawang (=Calauan).

Tabernaemontana ecarinata Merr., *PJS* 14 (1919) 450; --Merr., EPFP 3 (1923) 324. --Type BS 33022 Ramos (lecto K, designated by Leeuwenberg, 1988; iso P, US). Luzon: Ilocos Norte prov., between Bangui and Claveria.

Tabernaemontana hexagona Merr., *PJS* 10 (1915) Bot. 66; --Merr., EPFP 3 (1923) 324; --*Ervatamia hexagona* (Merr.) Pichon, *Mém. Mus. Natl. Hist. Nat.* 27 (1949 [1948] 220. --Type: BS 21241 Escritor (lecto K, designated by Leeuwenberg, 1988; iso US). Panay: Capiz prov.

Tabernaemontana laurifolia Blanco, *Fl. Filip.* (1837) 114, non L. (1753). --Neotype: Merrill Species Blancoanae 266 (neo L, designated by Leeuwenberg, 1988; iso A, BM, BO, F, K, MO, NSW, NY, P,

W). Luzon: Bulacan prov., Angat.

Tabernaemontana linearifolia Merr., *PJS* 4 c (1909) Bot. 317; --Merr., EPFP 3 (1923) 324; --*Ervatamia linearifolia* (Merr.) Markgr., *Notizbl. Bot. Gart. Berlin-Dahlem* 12 (1935) 548. --Type: FB 10945 Curran (lecto K, designated by Leeuwenberg, 1988; iso US). Luzon: Benguet prov., Mankayan.

Tabernaemontana mindanaensis Merr., *PJS* 10 c (1915) Bot. 67; --Merr., EPFP 3 (1923) 324. --Type: BS 14930 Tarrosa & Almagro (holo PNH, lost). Mindanao: Sultan Kudarat prov., Kraan. Neotype: BS 11653 Robinson (neo E, designated by Leeuwenberg, 1988; iso BO, F). Mindanao: North Cotabato prov., Reina Regente.

Ervatamia mindorensis (Merr.) Markgr., *Notizbl. Bot. Gart. Berlin-Dahlem* 12 (1935) 548; --*Tabernaemontana mindorensis* Merr., *PJS* 20 (1922) 434; --Merr., EPFP 3 (1923) 325. --Type: BS 39577 (lecto NY, designated by Leeuwenberg, 1988; iso A, BO, K). Mindoro: Mindoro Occidental prov., Paluan.

Tabernaemontana mucronata Merr., *PJS* 4 c (1909) Bot. 318; --Merr., EPFP 3 (1923) 325; --*Ervatamia mucronata* (Merr.) Markgr., *Notizbl. Bot. Gart. Berlin-Dahlem* 12 (1935) 548. --Type: FB 304 Gammill (lecto NY, designated by Leeuwenberg, 1988; iso BM, K, US). Guimaras: Guimaras prov., Nagaba.

Pagiantha oligantha (Merr.) Markgr., *Notizbl. Bot. Gart. Berlin-Dahlem* 12 (1935) 546; --*Ervatamia oligantha* (Merr.) Pichon, *Mém. Mus. Natl. Hist. Nat.* 27 (1949 [1948] 220. --*Tabernaemontana oligantha* Merr., *PJS* 10 c (1915) Bot. 68; --Merr., EPFP 3 (1923) 325. --Type: Merrill Philipp. Pl. 1621 (leg. Ramos) (lecto L, designated by Leeuwenberg, 1988; iso BM, BO, G, GH, MO, NSW,

NY,

P, PNH, SING, US, WAG). Samar: Cauayan Valley.

Tabernaemontana polygama Blanco, *Fl. Filip. ed. 2* (1845) 82; --Merr., EPFP 3 (1923) 326; ---*Ervatamia polygama* (Blanco) Markgr., *Notizbl. Bot. Gart. Berlin-Dahlem* 12 (1935) 548. --Type: Untraced. Neotype: Merrill Species Blancoanae 243 (neo K, designated by Leeuwenberg, 1988; iso A, BM, BO, GH, L, MO, NY, P, W, WAG). Luzon: Rizal prov., near Mandaloyon (=Mandaluyong).

Tabernaemontana puberula Merr., *PJS* 4 c (1909) Bot. 319; --Merr., *Fl. Manila* (1912) 371. --Type: Merrill 2746 (lecto US, designated by Leeuwenberg, 1988; iso BM). Luzon: Rizal prov.

Tabernaemontana semperflorens Perr., *Mém. Soc. Linn. Paris* 3 (1824) 147. --Type: Perrottet s.n. (lecto G, designated by Leeuwenberg, 1991; iso L). Mindanao: Zamboanga.

Pagiantha subglobosa (Merr.) Markgr., *Notizbl. Bot. Gart. Berlin-Dahlem* 12 (1935) 547; --*Ervatamia*

subglobosa (Merr.) Pichon, Mém. Mus. Natl. Hist. Nat. 27 (1949 [1948] 220; --Tabernaemontana subglobosa Merr., PJS 7 c (1912) Bot. 242; Fl. Manila (1912) 371; EPFP 3 (1923) 326. --Type: Merrill 2511 (lecto NY, designated by Leeuwenberg, 1988; iso GH, MO, SING, US). Luzon: Bataan prov., Mt Mariveles, Lamao River.

S China, Taiwan, Thailand, Java, Borneo (Sabah), Philippines, Sulawesi, Java, Lesser Sunda Isls, Moluccas, New Guinea, N and E parts of Australia, Micronesia. In the Philippines common in most islands and provinces.

BATANES, BABUYAN ISLS, LUZON: Ilocos Norte, Ilocos Sur, Mountain Province, Benguet, Cagayan, Zambales, Bataan, Rizal, Laguna, Batangas, Quezon, Camarines, Sorsogon), POLILLO, ALABAT, MINDORO, PALAWAN, SIBUYAN, MASBATE, PANAY, GUIMARAS, NEGROS, BILIRAN, LEYTE, SAMAR, JOLO, BASILAN, MINDANAO: Zamboanga, Sultan Kudarat, North Cotabato, Davao, Surigao. Low and medium altitude primary and secondary forests, thickets, ascending to 1700m.

Tabernaemontana rostrata Wall., Bot. Reg. 15 (1829) sub t. 1273; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 388. --Type from Burma.

Andaman and Nicobar Isls, Burma, Thailand, Vietnam, Sumatra, Peninsular Malaysia, Borneo, Philippines.

Tabernaemontana ternifolia DJ Middleton, Harvard Pap. Bot. 9 (2005) 387; Fl. Males. ser. 1, 18 (2007) 389. --Type: SMHI 215 Ridsdale (L, holo; iso: PNH). Palawan: Palawan prov., Puerto Princesa, Mt Beaufort, PALAWAN. Stunted montane rainforest and open disturbed areas, altitude 815-1500m.

Cultivated:

Tabernaemontana divaricata (L.) R Br. ex Roemer & Schultes, Syst. 4 (1819) 427; --Merr., Fl. Manila (1912) 371; EPFP 3 (1923) 324; --Leeuwenberg, Rev. Tabernaemontana 1 (1991) 153; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 378; --Nerium divaricatum L., Sp. Pl. (1753) 209. --Type from a cultivated plant from Sri Lanka.

Ervatamia divaricata (L.) Burkill, Rec. Bot. Surv. India 10 (1925) 320.

Native of tropical Asia, now pantropic in cultivation.

Trachelospermum Lemaire

Trachelospermum vanoverberghii Merr., PJS 7 c (1912) Bot. 96; EPFP 3 (1923) Bot. 333; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 394. --Type: Vanoverbergh 1230 (lecto P, designated by Middleton, 2006). Luzon: Mountain Province

LUZON: Mountain Province, Benguet, Pampanga, Rizal. Thickets and forested ravines, 800-1600m.

Urceola Roxburgh

Revision:

Middleton, DJ. 1996. *A revision of Aganonerion Pierre ex Spire, Parameria Benth. & Hook.f. and Urceola Roxb. (Apocynaceae)*. Blumea 41: 69-122.

Urceola brachysepala Hook.f., Fl. Brit. India 3 (1882) 659; --DJ Middleton, Blumea 41 (1996) 84, Map 4; Fl. Males. ser. 1, 18 (2007) 396. --Type from Peninsular Malaysia.

Carruthersia imberbis Elmer, LPB 2 (1909) 588; --Merr., EPFP 3 (1923) 332. --Type: Elmer 9239 (lecto K, designated by Middleton, 1996; iso BM, BO, E, L*, MO*, NSW, NY*, US* Z). Luzon: Quezon prov., Lucban. May 1907.

Chavannesia philippinensis (Elmer) Pichon, Bull. Mus. Nat. Hist. Paris sér. 2, 20 (1948) 302; --*Urceola philippinensis* Merr., PJS 10 c (1915) Bot. 69; --Merr., EPFP 3 (1923) 332. --Type: Clemens 1098 (lecto M, designated by Middleton, 1996; iso BO, GH). Mindanao: Lanao del Sur prov., Camp Keithley.

Sumatra, Peninsular Malaysia, Singapore, W Java, Borneo (Kalimantan, Sarawak, Brunei, Sabah), Philippines.

LUZON: Rizal (Montalban), Laguna, Quezon (Lucban), Camarines Norte (Mt Cadig), Sorsogon (Mt Bulusan), Mindoro: Mindoro Mindoro Oriental (Pinamalayan); PALAWAN (Pagdanan Range, 10 km E of San Vicente; Roxas, Ibangley; Mt Bloomfield), LEYTE, SAMAR: Northern Samar (Catarman, Mt Cansayao), MINDANAO: Lanao del Sur (Camp Keithley), Agusan del Norte (Butuan), Surigao del Sur (Hinatuan), BUCAS GRANDE. In a wide variety of habitats from cliffs to primary forest or swamp forest to 1000m.

Urceola laevis (Elmer) Merr., PJS 10 c (1915) Bot. 69; EPFP 3 (1923) 332; --DJ Middleton, Blumea 41 (1996) 91, f. 4, map 7; Fl. Males. ser. 1, 18 (2007) 401, Fig. 101; --Carruthersia laevis Elmer, LPB 4 (1912) 1449. --Type: Elmer 12837 (lecto Z, designated by Middleton, 1996; isolecto BISH*, BM, BO, BP, E, L*, MICH, MO*, NA*, NSW, NY*, P). Palawan: Palawan prov., Puerto Princesa, Mt Pulgar (=Thumb Peak).

Borneo (Sabah), Philippines, Sulawesi.

PALAWAN (Mt Bloomfield; Mt Pulgar, Irawan River valley; Mt Victoria, Trident Mine). Forests to 1500m.

Voacanga Thouars

Voacanga foetida (Blume) Rolfe, J. Bot. London 21 (1883) 202; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 413, Fig. 105; --Orchippeda foetida Blume, Bijdr. (1826) 1027. --Type from Java. Sumatra, Java, Borneo, Philippines.

Voacanga globosa (Blanco) Merr., PJS 4 c (1909) Bot. 319; --Merr., EPFP 3 (1923) 326; . --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 413, Fig. 106; --Tabernaemontana globosa Blanco, Fl. Filip. (1837) 116; Fl. Filip. ed. 2 (1845) 83. --Type: Untraced. Neotype: Merrill Species Blancoanae 462 (neo W, designated by Leeuwenberg, 1985; isoneo BM, BO, F, K, L*, MO, NY*, P, US*). Luzon: Laguna prov., Los Baños.

Voacanga cumingiana Rolfe, J. Linn. Soc. Bot. 21 (1884) 313. --Type: Cuming 1806 (lecto K, designated by Leeuwenberg, 1985; isolecto BM, W). Negros.

Voacanga dolichocalyx Quisumb. & Merr., PJS 37 (1928) 192. --Type: BS 45264 Ramos & Edaño (lecto NY, designated by Leeuwenberg, 1985; isolecto K, US*). Luzon: Aurora prov., Casiguran.

Voacanga latifolia Quisumb. & Merr., PJS 37 (1928) 193. --Type: BS 47070 Ramos & Edaño (lecto A, designated by Leeuwenberg, 1985; isolecto NY*, UC). Luzon: Isabela prov., San Mariano.

LUZON (widespread especially along the E half), POLILLO, MINDORO, MASBATE, PANAY, NEGROS, CEBU, BILIRAN, LEYTE, SAMAR, DINAGAT and MINDANAO.

Common in secondary and primary forests, to altitude 300m.

Voacanga grandifolia (Miq.) Rolfe, J. Linn. Soc. Bot. 21 (1883) 202; --DJ Middleton, Fl. Males. ser. 1, 18 (2007) 415, Fig. 107; --Pootia grandifolia Miq., Verslagen Meded. Afd. Natuurk. Kon. Akad. Wetensch. 6 (1857) 193. --Type from Java.

Java, Philippines, Sulawesi, Lesser Sunda Isls, Moluccas, Australia (Queensland). MINDANAO.

Voacanga megacarpa Merr., PJS 7 c (1912) 336; EPFP 3 (1923) 327; --DJ Middleton, Fl. Males. Ser. 1, 18 (2007) 420, Fig. 109. --Type: BS 12343 Foxworthy (untraced). Neotype: Whitford 829 (neo US, designated by Leeuwenberg, 1985; isoneo P). Luzon: Quezon prov.,

LUZON: Quezon (Tununi River; Binagonan), Camarines, Sorsogon. Low altitude secondary forests, along streams.

Willughbeia Roxburgh

Revision:

Middleton, DJ. 1993. *A taxonomic revision of Willughbeia Roxb. (Apocynaceae)*. Blumea 38:1-24

Willughbeia anomala Markgr., Blumea 20 (1972) 415; --DJ Middleton, Blumea 38 (1993) 7; Fl. Males. Ser. 1, 18 (2007) 424. --Type from Brunei

Borneo, Philippines.
MINDANAO.

Willughbeia sarawacensis (Pierre) K Schum. in Engl. & Prantl, Nat. Pflanzenfam. Nachtr. 2 (1900) 53; --Markgr., Blumea 20 (1972) 413; --DJ Middleton, Blumea 38 (1993) 17; Fl. Males. Ser. 1, 18 (2007) 434; --Ancylocladus sarawhaensis Pierre, Bull. Mens. Soc. Linn. Paris sér. 2, 1 (1898) 96. --Type from Sarawak.

Borneo, Philippines.
PALAWAN.

Wrightia R Brown

Revision:

Ngan, PT. 1965. *A revision of the genus Wrightia (Apocynaceae)*. Annals of the Missouri Botanical Garden 52: 114-175.

Wrightia candollei S Vidal, Phan. Cuming, Philipp. (1885) 186 (as 'cadollei'); --Merr., EPFP 3 (1923) 337; --DJ Middleton, Harvard Pap. Bot. 10 (2005) 162; Fl. Males. ser. 1, 18 (2007) 437; --Wrightia pubescens R Br. subsp. candollei (S Vidal) Ngan, Ann. Missouri Bot. Gard. 52 (1965) 153. --Type: Cuming 1453 (lecto P, designated by Middleton, 2005; isolecto BM, CGE, K). Luzon: 'Manila'.

LUZON: Benguet, Pangasinan, Zambales, Nueva Ecija, Rizal, Laguna, MINDORO, PALAWAN (Taytay; Irawan River Valley), LANGEN. Mixed evergreen or deciduous low altitude forests and secondary growth.

Wrightia aff. dubia (Sims) Sprengel, Syst. Veg. 1 (1825) 638; --Soejarto et al. (1995) Prelim. Checklist Fl. Pl. Palawan.

Thailand, Cambodia, Laos, Vietnam, Peninsular Malaysia, Singapore, ?Philippines. PALAWAN (Tacdua Zigzag; Bacungan, hills above Nagtabon beach; Narra, Calatigas, Purok Dumpsite; Balanjao Range, Rio Tuba)

Wrightia hanleyi Elmer, LPB 4 (1912) 1465; --Merr., EPFP 3 (1923) 337; --Ngan, Ann. Missouri Bot. Gard. 52 (1965) 168; --DJ Middleton, Harvard Pap. Bot. 10 (2005) 166; Fl. Males. ser. 1, 18 (2007) 440. --Type: Elmer 12873 (lecto GH, designated by Middleton, 2005; isolecto A, BISH, BO, E, F, K, L, MO*, NSW, NY*, US*, Z). Palawan: Mt Pulgar (=Thumb Peak), March 1911.

PALAWAN (Taytay, Mt Bloomfield; Irawan River Valley; Narra, Bato-bato, km 107; Quezon, Lipuun; Brooke's Point). Clearings, thickets and open forests, low altitudes.

Wrightia laevis Hook.f., Fl. Brit. India 3 (1882) 654; --Ngan, Ann. Missouri Bot. Gard. 52 (1965) 136; --DJ Middleton, Harvard Pap. Bot. 10 (2005) 168; Fl. Males. ser. 1, 18 (2007) 440. --Type from Peninsular Malaysia.

Wrightia sorsogonensis Elmer, LPB 10 (1939) 3698, invalid name; no Latin description. Based on: Elmer 15595 (A, BM, BO, C, GH, K, L, MO, NSW, NY, P, PNH, S, Z). Luzon: Sorsogon prov., Mt Bulusan, Irosin.

S China, Hainan, Thailand, Indochina, Sumatra, Peninsular Malaysia, Singapore, Philippines, New Guinea, Australia (Queensland).

Wrightia palawanensis DJ Middleton, Harvard Pap. Bot. 10 (2005) 172; Fl. Males. ser. 1, 18 (2007) 442. --Type: SM head on the lower slopes of Mt Beaufort.

PALAWAN. Riverine and mixed forests and from ultramafic soils, altitude 100-200m.

Wrightia pubescens R Br., Prodr. (1810) 467; --Ngan, Ann. Missouri Bot. Gard. 52 (1965) 150; --DJ Middleton, Harvard Pap. Bot. 10 (2005) 172; Fl. Males. ser. 1, 18 (2007) 443. --Type from Northern Territories, Australia.

Wrightia calycina A DC, Prodr. 8 (1844) 406; --Merr., EPFP 3 (1923) 337. --Type from Timor.

Philippines, E Java, Lesser Sunda Isls, Moluccas, New Guinea, Australia (Northern Territories).

PALAWAN, MASBATE, PANAY, GUIMARAS, NEGROS, CEBU, BILIRAN, LEYTE, MINDANAO: Lanao, Davao. Low altitude thickets and forests.

ssp. laniti (Blanco) Ngan, Ann. Missouri Bot. Gard. 52 (1965) 153; --DJ Middleton, Harvard Pap. Bot. 10 (2005) 176; Fl. Males. ser. 1, 18 (2007) 444, Fig. 113; --*Wrightia laniti* (Blanco) Merr., Govt. Lab. Publ. (Philipp.) 27 (1905) 59; Fl. Manila (1912) 373; EPFP 3 (1923) 337; --*Anasser laniti* Blanco, Fl. Filip. (1837) 112. --Type: Untraced. Neotype: PNH 22879 Sulit (neo A, designated by Middleton, 2005; iso L). Luzon: Laguna prov., Makiling National Park.

Wrightia ovata A DC, Prodr. 8 (1844) 405. --Type: Cuming 1279 (lecto G, designated by Middleton, 2005; isolecto P). Luzon: "Manila".

S China, Thailand, Cambodia, Laos, Vietnam, Sumatra, Peninsular Malaysia, W Java, Philippines, Sulawesi.

LUZON: Cagayan to Laguna, MINDORO, CULION, PALAWAN, NEGROS, MINDANAO: Zamboanga. Common in thickets and secondary forests at low altitudes.

Wrightia religiosa (Teijsm. & Binn.) Benth. ex Kurz, J. Asiat. Soc. Bengal 46, 2 (1877) 258; --Ngan, Ann. Missouri Bot. Gard. 52 (1965) 159; --DJ Middleton, Harvard Pap. Bot. 10 (2005) 179; Fl. Males. ser. 1, 18 (2007) 446; --*Echites religiosus* Teijsm. & Binn., Tijdschr. Ned.-Indië 27 (1864) 34. Type: Untraced; Neotype from Thailand.

Thailand, Cambodia, possibly Peninsular Malaysia. Natural distribution is obscure owing to wide cultivation. Widely cultivated in many parts of Malesia

Cultivated:

Cultivated:

Adenia Roemer & Schultes

Adenium obesum (Forssk.) Roem. & Schult., Syst. Veg., ed. 15 bis [Roemer & Schultes] 4 (1819) 411.

Allamanda Linnaeus

Allamanda cathartica L., Mant. 2 (1771) 214; --Merr., Fl. Manila (1912) 372; EPFP 3 (1923) 320.

Allamanda hendersonii Bull. ex Domb., Fl. Mag. 5 (1866) t. 263; --Merr., Fl. Manila (1912) 372; EPFP 3 (1923) 320.

Allamanda schottii Pohl, Pl. Bras. I (xxxx) 73. t. 58.

Catharanthus

Catharanthus roseus (L.) G Don, Gen. Hist. 4 (1836) 95.

Carissa

Carissa carandas L., Mant. 52.

Nerium Linnaeus

Nerium oleander L., Sp. Pl. (1753) 209.

Nerium indicum Mill., Gard. Dict. ed. 8 (1768) No. 2; --Merr., Fl. Manila (1912) 372; EPFP 3 (1923) 336.

Plumiera Linnaeus

Plumiera obtusa L., Sp. Pl. (1753) 210.

Plumiera rubra L., Sp. Pl. (1753) 209.

Plumiera acuminata Aiton, Hort. Kew. ed. 2, 2 (1811) 70; --Merr., Fl. Manila (1912) 321; EPFP 3 (1923) 321.

Thevetia Linnaeus

Thevetia peruviana (Pers.) Merr., PJS 9 c (1914) Bot. 130; EPFP 3 (1923) 331.

Thevetia nereifolia Juss. ex Steudel, Nomencl. ed. 2, 2 (1841) 680; --Merr., Fl. Manila (1912) 370.