

Family 174. TILIACEAE

Literature:

Burrett, M. 1926. Notizbl. Berlin Dahlem 9: 592-880.

Kochummen, KM. (repr.1983). *Tiliaceae*. Tree Flora of Malaya 2: 392-412.

Ashton, PS. 1988. *Tiliaceae*. Manual of the Non-Dipterocarp Trees of Sarawak 2: 426-468.

Berrya Roxburgh

Berrya cordifolia (Willd.) Burret, Notizbl. Bot. Gart. Berlin-Dahlem 9 (1926) 606; --Ashton, Man. Non-Dipt. Trees Sarawak 2 (1988) 431.

Berrya (Berria) ammonilla Roxb., Hort. Beng. (1814) 43, *nom. nud.*, Pl. Coromandel 3 (1819) 60, t. 264;

--Merr., EPFP 3 (1923) xxx; --TS Liu & HC Lo in TC Huang (ed.), Fl. Taiwan ed. 2, 3 (1993) 723.

S India, Sri Lanka, Andaman Isls, Myanmar, Indochina, S Taiwan, Peninsular Malaysia, Java, Borneo, Philippines, Sulawesi, Christmas Is. LUZON: La Union, Zambales, Bataan, Bulacan, Batangas. Dry, rather open secondary forests at low altitudes.

Browlowia Roxburgh

Browlowia argentata Kurz, J. As. Soc. Bengal 39 (1870) 67; --Ashton, Man. Non-Dipt. Trees Sarawak 2 (1988) 431.

Browlowia riedelii Hemsl., Bot. Challenger Exped. 1³ (1885) 128; --Merr., EPFP 3 (1923) 22.

Peninsular Malaysia, Borneo, Philippines, Moluccas, New Guinea, Solomon Isls.

MINDANAO: Agusan del Norte (FB 18644 Mallonga). Along brackish tidal streams.

Browlowia tersa (L.) Kosterm., Publ. 1. Council for Sciences, Indonesia (1959) 73; --Ashton, Man. non-Dipt. Trees of Sarawak 2 (1988) 435.

Browlowia lanceolata Benth., J. Linn. Soc. Bot. 5 (1861) Suppl. 57; --Merr., EPFP 3 (1923) 22.

India (Orissa), Bangladesh, Myanmar, Peninsular Malaysia, W Borneo, Philippines, Moluccas (Halmaheira). LUZON: **Tayabas**, SAMAR. Tidal thickets and nipa swamps.

Dubious taxon:

Browlowia suluensis Warb., Perkins Fragm. Fl. Philipp. (1904) 102; --Merr., EPFP 3 (1923) 22.

Based on *Warburg 14927* which, according to Merrill, is suggestive of *Diplodiscus paniculatus* Turcz.

Colona Cavanilles

Colona blancoi (Rolfe) Merr., Govt. Lab. Publ. (Philipp.) 6 (1904) 17; --Columbia blancoi Rolfe, J. Linn. Soc. Bot. 21 (1884) 308; --Merr., EPFP 3 (1923) 28.

LUZON: Rizal. Low altitude thickets and forests.

Colona

Columbia hastata Warb., in Perkins, Fragm. Fl. Philipp. (1904) 105; --Merr., EPFP 3 (1923) 28.

LUZON: Zambales, Bataan. Low altitude primary forests; apparently very rare or local.

Colona lanceolata (Warb.) Burret, Notizbl. Bot. Gart. Berlin-Dahlem 9 (1926) 804; --Columbia lanceolata Warb., in Perkins, Fragm. Fl. Philipp. (1904) 107; --Merr., EPFP 3 (1923) 28.

LUZON: Pangasinan, Zambales. Low altitude thickets along streams.

Colona longipetiolata Merr., Govt. Lab. Publ. (Philipp.) 6 (1904) 16; --Columbia longipetiolata (Merr.) Merr., EPFP 3 (1923) 29.

LUZON: Bataan. Lowland dipterocarp forests.

Colona macgregorii (Merr.) Burret,

Columbia macgregorii Merr., PJS 7 c (1912) Bot. 297; EPFP 3 (1923) 28. --Type: BS 11492 McGregor

LUZON: Nueva Vizcaya. Medium altitude thickets or forests.

Colona megacarpa (Merr.) Burret, Notizbl. Bot. Gart. Berlin-Dahlem 9 (1926) 800; --Columbia megacarpa Merr., PJS 7 c (1912) Bot. 298; EPFP 3 (1923) 28.

PALAWAN: Low altitude thickets and secondary forests.

Colona

Columbia mindanaensis Warb., in Perkins, Fragm. Fl. Philipp. (1904) 107; --Merr., EPFP 3 (1923) 29.

--Type: Warburg 14440 (B).

MINDANAO: Davao. Thickets or forests, altitude c. 300m. According to Merrill (1923) doubtfully distinct from *C. serratifolia* Cav.

Colona mollis (Warb.) Burret, Notizbl. Bot. Gart. Berlin-Dahlem 9 (1926) 802; --Columbia mollis Warb., in Perkins, Fragm. Fl. Philipp. (1904) 108; --Merr., EPFP 3 (1923) 29. --Type: Warburg 13473.

LUZON: Ilocos Norte, Ilocos Sur, La Union, Pangasinan, Nueva Ecija. Lowland thickets and secondary forests up to c. 350m altitude.

Colona philippinensis (Vidal) Burret, Notizbl. Bot. Gart. Berlin-Dahlem 9 (1926) 813; --Columbia philippinensis (Vidal) Merr., EPFP 3 (1923) 29; --Diplophractum philippinense Vidal, Rev. Pl. Vasc. Filip. (1886) 71. --Type: Vidal 1001. Luzon: Pampanga.

LUZON: Pampanga. According to Merrill (1923) may be identical with *Colona mollis*.

Colona serratifolia Cav., Icon. 4 (1797) 47, t. 370; --Ashton, Man. Non-Dipt. Trees Sarawak 2 (1988) 438; --Columbia serratifolia (Cav.) DC, Prodr. 1 (1824) 512; --Merr., Fl. Manila (1912) 313; EPFP 3 (1923) 29.

Peninsular Malaysia (coastal Johore and Pahang), Borneo (NE Sarawak, Sabah, E Kalimantan southwards to Banjarmasin, Philippines, Sulawesi. BABUYAN ISLS and N LUZON to MINDANAO and PALAWAN. Lowland, highly disturbed or early re-growth forests, along river banks, etc., preferentially in regions with pronounced rainy and dry seasons. Usually common.

Colona subaequalis (Planch. ex Vidal) Burret, Notizbl. Bot. Gart. Berlin-Dahlem 9 (1926) 802; Columbia subaequalis Planch. ex Vidal, Phan. Cuming. Philipp. (1885) 99; ---Merr., EPFP 3 (1923) 30. --Type: Cuming 1507. Mindoro.

MINDORO. Low altitude secondary forests.

Colona velutinosa Kosterm., Reinwardtia 7 (1969) 443. --Type: Manalo FB 7416 (US)

PALAWAN: 1 mile NE of Tanabag, alt. 6 m, very common, fr. Dec.

Dubious taxon:

Colona hirsuta (Warb.) Burret, Notizbl. Bot. Gart. Berlin-Dahlem 9 (1926) 804; --Columbia hirsuta Warb., in Perkins, Fragm. Fl. Philipp. (1904) 106; --Merr., EPFP 3 (1923) 28. --Type: Warburg 14774 (B, cited by Merrill, 1923).

MINDANAO: Davao. The type is a sterile specimen and appears as if the material was from a sapling. The validity of the species is doubtful.

Colona jagori (Warb.) Burret, Notizbl. Bot. Gart. Berlin-Dahlem 9 (1926) 813; --Columbia jagorii Warb., in Perkins, Fragm. Fl. Philipp. (1904) 106; --Merr., EPFP 3 (1923) 28. --Type: Jagor s.n. (B, teste Merrill, 1923, but not seen by him). Luzon: without definite locality.

Columbia Persoon =Colona

Corchorus Linnaeus

Corchorus aestuans L., Syst. ed. 10 (1774) 1079; --TS Liu & HC Lo in TC Huang (ed.), Fl. Taiwan ed. 2, 3 (1993) 724, pl. 368.

Corchorus acutangulus Lam., Encycl. 2 (1786) 104; --Merr., Fl. Manila (1912) 315; EPFP 3 (1923) 23. Pantropic, but probably a native of tropical Asia. Certainly an introduced weed in the Philippines. Throughout the archipelago in open waste places at low and medium altitudes.

Corchorus capsularis L., Sp. Pl. (1753) 529; --Merr., Fl. Manila (1912) 315; EPFP 3 (1923) 23.

Cultivated or naturalized throughout the tropics. In the Philippines apparently not planted. In clearings, on rice paddy banks, and in open, low, usually wet places in and near settlements throughout the archipelago. Jute.

Corchorus fascicularis Lam., Encycl. 2 (1786) 104; --Merr., EPFP 3 (1923) 23.

Tropical Africa, India, Myanmar, and tropical Australia, but not recorded from Peninsular Malaysia. LUZON: Bulacan, Pampanga. Open fallow lands, swamp margins, etc. at low altitudes.

Corchorus olitorius L., Sp. Pl. (1753) 529; --Merr., Fl. Manila (1912) 315; EPFP 3 (1923) 23.

Pantropic but a native of the Old World (said to be a native of India). Throughout the Philippines in and near settlements, on rice paddy banks, fallow paddies, etc. Occasionally cultivated as a vegetable.

Diplodiscus Turczaninow

Diplodiscus paniculatus Turcz., Bull. Soc. Nat. Mosc. 31¹ (1858) 235; --Merr., EPFP 3 (1923) 22.

LUZON: Cagayan to Sorsogon, MINDORO, MASBATE, TICAO, PANAY, CEBU, LEYTE, SAMAR, MINDANAO, DINAGAT. Common in primary forests at low and medium altitudes.

Grewia Linnaeus

Grewia asiatica L., Mant. 1 (1767) 122; --Merr., EPFP 3 (1923) 25.

India to Thailand to Indochina and the Philippines. LUZON: Ilocos Sur, Cagayan. Dry slopes at low altitudes.

Grewia bilamellata Gagnep., Not. Syst. 1 (1909) 118; --Merr., EPFP 3 (1923) 25.

Indochina, Philippines. LUZON: Ilocos Norte, Abra, Ilocos Sur. Low altitude thickets.

Grewia eriocarpa Juss., Ann. Mus. Hist. Nat. Paris 4 (1804) 93; --Merr., EPFP 3 (1923) 25.
Indochina, Java, Philippines, Sulawesi. LUZON: Ilocos Norte, Abra, Ilocos Sur, La Union, Benguet, Cagayan, Isabela, Nueva Vizcaya, Pangasinan, Zambales, Rizal, Quezon, MINDORO, SEMIRARA, BUSUANGA, NEGROS, CEBU, MINDANAO: Zamboanga. Low and medium altitude dry thickets, often common.

Grewia inflexa Merr., PJS 11 c (1916) Bot. 194; EPFP 3 (1923) 25.
SAMAR. Low altitude forests along streams.

Grewia multiflora Juss., Ann. Mus. Hist. Nat. Paris 4 (1804) 89, t. 47, f. 1; --Merr., Fl. Manila (1912) 313; EPFP 3 (1923) 26.
Peninsular Malaysia to New Guinea. LUZON: Cagayan to Quezon, MINDORO, PALAWAN, GUIMARAS, CAMIGUIN, MINDANAO. Common in thickets and secondary forests.

Grewia palawanensis Merr., PJS 7 c (1912) Bot. 300; EPFP 3 (1923) 26.
PALAWAN. Low altitude thickets and secondary forests.

Grewia retusifolia Pierre, Fl. Forest. Cochin. 2 (1889) t. 168; --Merr., EPFP 3 (1923) 26.
Indochina, Java, Philippines, Australia. LUZON: Rizal, MINDANAO: Cotabato. Open grasslands at low altitudes. Rare.

Grewia rizalensis Merr., PJS 7 c (1912) Bot. 303; EPFP 3 (1923) 27.
LUZON: Rizal, Cavite. Low and medium altitude thickets and forests.

Grewia rolfei Merr., PJS 7 c (1912) Bot. 302; EPFP 3 (1923) 27.
LUZON: Cagayan, Pampanga, Bulacan, Bataan, Laguna, Quezon, MINDANAO: Bukidnon. Low altitude thickets.

Grewia serrata Blanco, Fl. Filip. (1837) 444; --Merr., EPFP 3 (1923) 27.
LUZON: Bataan, Rizal. Low altitude thickets or secondary forests. Rare or local.

Grewia setacea Merr., PJS 7 c (1912) Bot. 89. --Type:
LUZON: Mountain Province, Benguet, Nueva Ecija. Thickets and forests, altitude 1300-2000m.

Grewia umbellata Roxb., Hort. Beng. (1814) 42, *nom. nud.*; Fl. Ind. ed. 2, 2 (1832) 591; --Burret, Notizbl. Bot. Gart. Mus. Berlin-Dahlem 9 (1926) 701.
Grewia acuminata Juss., Ann. Mus. Hist. Nat. Paris 4 (1804) 91; --Merr., EPFP 3 (1923) 24.
India, Sumatra, Peninsular Malaysia, Java, Borneo, Philippines, Sulawesi, Moluccas. LUZON: Ilocos Norte, La Union, Pangasinan, Tarlac, Bataan, Rizal, Laguna, MINDORO, BUSUANGA, PALAWAN, BALABAC, ROMBLON, NEGROS, SIKUIJOR, CEBU, SULU ARCHIPELAGO, BASILAN, MINDANAO. Low and medium altitude thickets, often abundant.

Microcos Burman ex Linnaeus (~*Grewia*)

Microcos philippinensis (Perkins) Burret, Notizbl. Bot. Gart. Berlin-Dahlem 9 (1926) 731, 734, 781; --*Grewia philippinensis* Perkins, Frag. Fl. Philipp. (1904) 103; --Merr., EPFP 3 (1923) 26.
LUZON: Ilocos Norte, Ilocos Sur, Cagayan, Pangasinan, Nueva Ecija, Batangas,

Camarines. Low altitude forests.

Microcos stylocarpa (Warb.) Burret, Notizbl. Bot. Gart. Berlin-Dahlem 9 (1926) 735, 780; --Ashton, Man. Non-Dipt. Trees Sarawak 2 (1988) 447; --Grewia stylocarpa Warb., in Perkins Frag. Fl. Philipp. (1904) 104; --Merr., EPFP 3 (1923) 27.

Microcos pyriformis (Elmer) Burret, Notizbl. Bot. Gart. Berlin-Dahlem 9 (1926) 735, 772; --Grewia pyriformis Elmer, LPB 8 (1915) 2841; --Merr., EPFP 3 (1923) 26.

Borneo (Sarawak, Sabah, E Kalimantan), Philippines. LUZON (Cagayan to Sorsogon), MINDORO, PALAWAN, TABLAS, SIBUYAN, TICAQ, MASBATE, PANAY, NEGROS, BILIRAN, LEYTE, SAMAR, BASILAN, MINDANAO. Low and medium altitude mixed dipterocarp forests and thickets.

Pentace Hasskarl

Pentace subintegra (Merr.) Burret, Notizbl. Bot. Gart. Berlin-Dahlem 9 (1926) 620, 814; --Columbia subintegra Merr., PJS 10 c (1915) Bot. 323; EPFP 3 (1923) 30. --Type: FB 21861 Villamil. Mindanao: Zamboanga.

MINDANAO: Zamboanga. Low altitude primary forests.

Triumfetta Linnaeus

Triumfetta annua L., Mant. 1 (1767) 73; --Merr., EPFP 3 (1923) 30.

Tropical Africa to India to Malaya and the Philippines. LUZON: Mountain Province, Benguet, PALAWAN, PANAY, MINDANAO: Davao. Ravines and open slopes at low altitude, ascending to 1500m in Benguet.

Triumfetta benguetensis Sprague, Kew Bull. (1915) 345; --Merr., EPFP 3 (1923) 31. --Type: RS Williams 1303.

LUZON: Mountain Province, Benguet. Thickets, altitude c. 1200m.

Triumfetta pilosa Roth, Nov. Pl. Sp. (1821) 233; --Merr., EPFP 3 (1923) 31.

India across Malesia from Peninsular Malaysia to New Guinea. LUZON: Kalinga, Abra, Mountain Province, Ifugao, Benguet, MINDANAO: Lanao, Bukidnon, Davao. Thickets and open slopes up to 1200m altitude.

Triumfetta procumbens G Forst., Prodr. (1786) 35; --Merr., EPFP 3 (1923) 31.

Indian Ocean islands (Seychelles, Diego Garcia, Keeling Isls) through Malesia to W Polynesia northward to the Marianas. COMIRAN (in Sulu Sea), *Merrill Phil. Pl. 410*. On sandy seashores.

Triumfetta repens (Blume) Merr. & Rolfe, PJS 3 c (1908) Bot. 111; --Merr., EPFP 3 (1923) 31.

Madagascar, Keeling Isls, Indochina to Java, Borneo, Philippines and eastward to the small islands off the coast of Queensland. LUZON: Cagayan, Pangasinan, Camarines, MINDORO. Sandy seashores.

Triumfetta rhomboidea Jacq., Enum. Pl. Carib. (1762) 22.

Triumfetta bartramia L., Syst. Ed. 10 (1759) 1044; --Merr., EPFP 3 (1923) 30.

Pantropic weed, certainly introduced in the Philippines. Common in open waste places in all islands and provinces at low and medium altitudes.

Triumfetta semitriloba Jacq., Enum. Pl. Carib. (1760) 22; --Merr., Fl. Manila (1912) 314; EPFP 3 (1923) 31.

Pantropic. Widely distributed in the Philippines. Low and medium altitude dry thickets.

Triumfetta tomentosa Bojer, Ann. Sci. Nat. II, 20 (1843) 103; --Merr., EPFP 3 (1923) 31.

E Africa to India, S China, Indochina, Java, Philippines. LUZON: Mountain Province. On slopes, altitude 1250m. Very similar to *T. pilosa* Roth but with straight spines.

Trichospermum Blume

Trichospermum discolor Elmer, LPB 5 (1913) 1641; --Merr., EPFP 3 (1923) 24. --Type: Elmer 11903.

LUZON: Cagayan, MINDANAO: Lanao, Davao. Low altitude forests in Cagayan, altitude 700-900m in Mindanao.

Trichospermum eriopodum (Turcz.) Merr., PJS 11 c (1916) Bot. 17; --Merr., EPFP 3 (1923) 24.

LUZON: Sorsogon, LEYTE, SAMAR, MINDANAO: Zamboanga, SIARGAO. Low and médium altitude secondary forests.

Trichospermum involucreatum (Merr.) Elmer, LPB 5 (1913) 1641; --Merr., EPFP 3 (1923) 24.

MINDORO, SIBUYAN, NEGROS. Forested ridges, altitude 900-1400m.

Trichospermum lanigerum (Blanco) Merr., Sp. Blancoanae (1918) 250; --Merr., EPFP 3 (1923) 24.

LUZON: Rizal, MINDORO. Forests at low altitudes.