

Family 153. ANACARDIACEAE

Revision:

Ding Hou. 1978. *Anacardiaceae*. Flora Malesiana series 1, 8: 395-548.

1. *Anacardium* Linnaeus

Anacardium occidentale L., Sp. Pl. (1753) 383; --Merr., Fl. Manila (1912) 299; EPFP 2 (1923) 469; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 421, Fig. 6.

Introduced from Tropical America during the Spanish colonial times. Widely cultivated in the tropics for its nut. Naturalized throughout the seasonal parts of the Philippines in settled areas at low and medium altitudes, often on sandy soils in villages near seacoasts. Cashew.

2. *Buchanania* Sprengel

Buchanania arborescens (Blume) Blume, Ann. Mus. Bot. Lugd.-Bat. 1 (1850) 183; --Merr., Fl. Manila (1912) 300; EPFP 2 (1923) 465; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 415, Fig. 4;

Buchanania platyphylla Merr., PJS 10 c (1915) Bot. 33; EPFP 2 (1923) 467

Buchanania pseudoflorida Perkins, Fragm. Fl. Philipp. (1904) 24; --Merr., EPFP 2 (1923) 467

Tenasserim, Andaman Isls, Thailand, Indochina, Taiwan, across Malesia from Sumatra to New Britain, Solomon Isls and NE Australia. Throughout the Philippines, chiefly in lowland forests, along river banks, near beaches, secondary forests, etc. up to 300m altitudes.

Buchanania insignis Blume, Ann. Mus. Bot. Lugd.-Bat. 1 (1850) 184; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 415;

Buchanania acuminatissima Merr., PJS 10 c (1915) Bot. 34; EPFP 2 (1923) 465

Peninsular Malaysia, Borneo (Kalimantan, Sabah) and the Philippines. LUZON: Laguna, Quezon, Camarines, CATANDUANES, BUCAS GRANDE. Lowland forests generally, up to 400m. Occasionally on limestone.

Buchanania microphylla Engl. in DC, Monog. Phan. 4 (1883) 185; --Merr., EPFP 2 (1923) 466; --Ding Hou, Blumea 24 (1978) 4; Fl. Males. ser. 1, 8 (1978) 413, Fig. 3j.

Hainan and the Philippines. LUZON: Ilocos Norte, Ilocos Sur, Pangasinan, Zambales, Pampanga, Nueva Ecija, PALAWAN, PANAY, GUIMARAS, CEBU. In seasonal parts of the archipelago, on dry slopes, thickets and secondary forests at low altitudes.

Buchanania nitida Engl. in DC, Monog. Phan. 4 (1883) 193; --Merr., EPFP 2 (1923) 466; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 418, Fig. 5a-b;

Buchanania conglomerata Elmer [ex Merr., EPFP 2 (1923) 467, *nom. in syn.*], LPB 10 (1939) 3679, no Latin descr.

Buchanania sorsogonensis Elmer, LPB 10 (1939) 3681, no Latin descr.

Moluccas and the Philippines. LUZON: Rizal, Quezon, Laguna, Camarines, Sorsogon, POLILLO, MINDORO, MASBATE, NEGROS: Negros Oriental, BILIRAN, LEYTE, SAMAR, BASILAN, MINDANAO: Agusan. Primary forests, rarely in second growth forests at low altitudes up to 450m.

3. *Dracontomelon* Blume

Dracontomelon dao (Blanco) Merr. & Rolfe, PJS 3 c (1908) Bot. 108; --Merr., EPFP 2 (1923) 471; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 430; --Merr., EPFP 2 (1923) 472; India, Burma, Thailand, Cambodia, S China, scattered throughout Malesia and the Solomon Isls.

LUZON: Cagayan to Sorsogon, MINDORO, PALAWAN, NEGROS, LEYTE, SAMAR, BASILAN, MINDANAO: Lanao, Cotabato, Agusan, Surigao. Common in primary and secondary forests from near sea-level to 500-1000m. In high rainfall areas, although sometimes with a short dry season.

Dracontomelon edule (Blanco) Skeels, US Dept. Agr. Bur. Pl. Ind. Bull. 261 (1912) 52; --Merr., EPFP 2 (1923) 471; LUZON: Isabela, Bataan, Bulacan, Rizal, Quezon, Laguna, Batangas, Camarines, Sorsogon, TABLAS, CEBU, SAMAR, MINDANAO: Cotabato. Common in lowland primary forests, along riverbanks and on hills.

Dracontomelon mangiferum Blume, Ann. Mus. Bot. Lugd.-Bat. 1 (1850) 231.

Extra-Phil. Distribution? PALAWAN (San Vicente, road Roxas to Port Barton, *Soejarto & Madulid 7203*, F, PNH)

'Dracontomelum' = Dracontomelon

4. Koordersiodendron Engler

Koordersiodendron pinnatum (Blanco) Merr., Philip. Bur. For. Bull. 1 (1903) 33; EPFP 2 (1923) 470; --Ding Hou, Philippines, Sulawesi, Moluccas, New Guinea.

N LUZON (Cagayan) to PALAWAN and MINDANAO. Lowland forests, rarely up to 450m altitude, on dryland or occasionally inundated areas.

5. Mangifera Linnaeus

Revisions:

Mukherji. 1949. Lloydia 12: 77-
Ding Hou. 1978. Blumea 24: 21-

Mangifera altissima Blanco, Fl. Filip (1837) 181; --Merr., EPFP 2 (1923) 467; --Ding Hou, Blumea 24 (1978) 24; Fl. Males. ser. 1, 8 (1978) 430;

Mangifera parvifolia Merr., PJS 20 (1922) 401; EPFP 2 (1923) 469, *non* Boerl. & Koord. (1910). Philippines, Sulawesi, Lesser Sunda Isls (Alor), Moluccas (Tanimbar, Kei, Halmaheira, Seram), New Guinea (scattered in W and N part), S New Britain, Solomon Isls (Guadalcanal).

LUZON: Ilocos Sur, Cagayan, Nueva Ecija, Zambales, Rizal, Laguna, Quezon, Camarines, MINDORO, PALAWAN, SIBUYAN. Chiefly in lowland primary forests whether inland or sometimes coastal, ascending to 400m altitudes. Common.

Mangifera caesia Jack *in* Roxb. Fl. Ind. ed. Wall. 2 (1824) 441; --Merr., EPFP 2 (1923) 468; --Ding Hou, Blumea 24 (1978) 24; Sumatra, Peninsular Malaysia, Java, Borneo and the Philippines. PALAWAN, BASILAN, MINDANAO: Zamboanga, Misamis, Agusan, Surigao. Lowland primary forests, swamp or periodically inundated areas along rivers up to c. 450m altitudes. Also in semicultivated state.

Mangifera indica L., Sp. Pl. (1753) 200; --Merr., Fl. Manila (1912) 300; EPFP 2 (1923) 468; --Ding Hou, Fl. Males. ser. 1, Probably a native of Indo-Burma region and widely cultivated throughout the tropics of both hemispheres. Generally planted as a village tree and cultivated commercially in Peninsular Malaysia, Java and the Philippines. Seemingly indigenous or naturalized in India, Burma, Thailand, Indochina and some islands of West Malesia. Generally cultivated below 500m.

Mangifera longipes Griff., Notul. 4 (1854) 419; --Merr., EPFP 2 (1923) 468; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 428; Sumatra, Peninsular Malaysia, Java, Lesser Sunda Isls, Borneo, and the Philippines. PALAWAN. Lowland forests. Flowering & fruiting from February to November.

Mangifera merrillii Mukherji, Lloydia 12 (1949) 108, Fig. 15a-b & 29. *Mangifera parvifolia* Merr., PJS 20 (1922) 401, *non* Boerl. & Koord.-Schum. Syst. Verz. 2 (1910) 31. LUZON: Zambales. Lowland forest.

Mangifera monandra Merr., Govt. Lab. Publ. (Philipp.) 17 (1904) 28; EPFP 2 (1923) 468; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 432; LUZON: Ilocos Norte, Pangasinan, Zambales, Bataan, Rizal, Laguna, Camarines, TICA0, GUIMARAS, LEYTE, SAMAR. Lowland primary forests.

Mangifera odorata Griff., Notul. 4 (1854) 417; --Merr., EPFP 2 (1923) 468; --Ding Hou, Blumea 24 (1978) 26; Fl. Males. ser. 1, 8 (1978) 437, Fig. 12; Native country not known, possibly of cultivated, ?hybrid origin, sometimes found in lowland forest in Sumatra, Borneo and Java, but possibly from planted or naturalized trees. Chiefly found in cultivation. BALABAC, JOLO, BASILAN, MINDANAO (Zamboanga).

Oncocarpus A Gray =Semecarpus

6. *Parishia* Hooker *filius*

Parishia maingayi Hook.f., Fl. Brit. Ind. 2 (1876) 30; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 543, Fig. 68h. *Parishia oblongifolia* Merr., PJS 14 (1919) 413; EPFP 2 (1923) 473. Sumatra, Peninsular Malaysia, Borneo, and the Philippines. SIBUYAN, PANAY. Lowland primary forests including ultramafics and inundated riverbanks. xxxxxx

Parishia malabog Merr., PJS 7 c (1912) Bot. 281; EPFP 2 (1923) 472; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 545. *Spondias romblonensis* Elmer, LPB 10 (1939) 3683, no Latin descr. LUZON: Zambales, Quezon, MINDORO, ROMBLON, TABLAS, TICA0, MASBATE, NEGROS, CEBU, SIBUTU. Forested slopes or coastal rocky cliffs.

Phlebochiton Wallich =Spondias

7. *Pistacia* Linnaeus

Pistacia chinensis Bunge, Enum. Pl. China Bor. (1833) 15; Mém. Acad. Sci. St. Pétersb. 2 (1835) 89; --Merr., EPFP 2 (1923) 472; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 547, Fig. 69e. China, Taiwan, Philippines. LUZON: Benguet. Altitude 1350m.

8. Pleiogynium Engler

Pleio gynium timoriense (DC) Leenh., Blumea 7 (1952) 159; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 474, Fig. 34.
Pleio gynium solandri (Benth.) Engl. in DC, Monog. Phan. 4 (1883) 255; --Merr., EPFP 2 (1923) 472 (as 'solanderi')
Borneo, Philippines, Lesser Sunda Isls, Moluccas, Papua New Guinea, Solomon Isls, Australia (Queensland), Tonga, Cook Is. LUZON: Rizal (one record).

9. Rhus Linnaeus

Rhus taitensis Guill., Ann. Sc. Nat. 2, 7 (1837) 361; --Merr., EPFP 2 (1953) 473; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 547, Fig. 69e. E Java, Philippines, Sulawesi, Lesser Sunda Isls, Moluccas, New Guinea, Solomon Isls, New Britain, Australia (Queensland), Micronesia, Polynesia. LEYTE, MINDANAO: Lanao, Bukidnon, Davao.

10. Semecarpus Linnaeus filius

Semecarpus bunburiensis Gibbs, J. Linn. Soc. Bot. 42 (1914) 67; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 512, Fig. 47.
Semecarpus subsessilifolia Merr., PJS 14 (1919) 411; EPFP 2 (1923) 475
Borneo (Sarawak; Sabah; Kalimantan) and the Philippines. PALAWAN, PANAY. Usually at low and medium altitudes.

Semecarpus cuneiformis Blanco, Fl. Filip. (1837) 220; --Merr., Fl. Manila (1912) 299; EPFP 2 (1923) 473; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 517.
Semecarpus elmeri Perkins, Fragm. Fl. Philipp. (1904) 26; --Merr., EPFP 2 (1923) 473
Semecarpus ferruginea Merr., PJS 14 (1919) 412; --Merr., EPFP 2 (1923) 474
Semecarpus megabotrys Merr., PJS 7 c (1912) Bot. 285; EPFP 2 (1923) 474
Semecarpus merrilliana Perkins, Fragm. Fl. Philipp. (1904) 27; --Merr., EPFP 2 (1923) 474
Semecarpus micrantha Perkins, Fragm. Fl. Philipp. (1904) 27; --Merr., EPFP 2 (1923) 474
Semecarpus obtusifolia Merr., PJS 7 c (1912) Bot. 286; EPFP 2 (1923) 475
Semecarpus philippinensis Engl. in DC, Monog. Phan. 4 (1883) 481; --Merr., EPFP 2 (1923) 475
Semecarpus whitfordii Merr., PJS 7 c (1912) Bot. 288; EPFP 2 (1923) 475
Semecarpus micrantha Perkins, Fragm. Fl. Philipp. (1904) 27; --Merr., EPFP 2 (1923) 474
Semecarpus thyrsoides Elmer, LPB 9 (1934) 3179.
Semecarpus whitfordii Merr., PJS 7 c (1912) Bot. 288; EPFP 2 (1923) 475
Taiwan, the Philippines, Borneo (Sabah), Sulawesi (and adjacent small islands), Lesser Sunda Isls (Sumbawa). LUZON: Ilocos Norte, Ilocos Sur, Abra, Mountain Province, Benguet, La Union, Cagayan, Isabela, Nueva Vizcaya, Pangasinan, Zambales, Bataan, Nueva Ecija, Pampanga, Bulacan, Rizal, Laguna, Quezon, Sorsogon, MINDORO, PALAWAN, BALABAC, ROMBLON, PANAY, GUIMARAS, NEGROS, CEBU, LEYTE, MINDANAO: Zamboanga, Misamis, Davao. In dry thickets, primary and secondary forest in the lowland, sometimes up to 600-700m, occasionally up to c. 1200m.

Semecarpus densiflorus (Merr.) Steen., PJS 91 (1962) 508; --Ding Hou, Fl. Males. ser. 1, 8

(1978) 516

Oncocarpus densiflora Merr., PJS 11 c (1916) Bot. 191; EPFP 2 (1923) 476
Scattered in Thailand, Cambodia, Laos and Vietnam; Peninsular Malaysia, the Philippines. LUZON: Isabela, Sorsogon, SAMAR. Lowland forests, open woods, near the shore, sometimes on limestone.

Semecarpus forstenii Blume, Mus. Bot. 1 (1850) 188; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 509.
Solomon Isls, Bismarck Arch., New Guinea, Moluccas, Sulawesi, Borneo, Philippines. MINDANAO

Semecarpus glauciphyllus Elmer, LPB 4 (1912) 1501; --Merr., EPFP 2 (1923) 474; --Ding Hou, Blumea 24 (1978) 35; Fl. Males. ser. 1, 8 (1978) 518
Semecarpus oblongifolius Quisumb., PJS 76 (1944) 43, *non* Thwaites (1859).
BABUYAN ISLS, LUZON: Cagayan, Zambales, Quezon, Laguna, SIBUYAN, SAMAR, MINDANAO: Davao, Agusan. In forests, sometimes along rivers, up to c. 200m.

Semecarpus longifolius Blume, Mus. Bot. 1 (1850) 188; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 507.

Semecarpus euphlebica Merr., PJS 7 c (1912) Bot. 283; EPFP 2 (1923) 473
Semecarpus lanceolata Merr., PJS 7 c (1912) Bot. 284; EPFP 2 (1923) 474
Semecarpus gigantifolia Vidal, Sinopsis (1883) 22, t. 36, Fig. A; --Merr., EPFP 2 (1923) 474
Taiwan (E part), Lanyu, the Philippines, Sulawesi, E Java, Timor, Moluccas (Sula Isls, Halmaheira, Buru). LUZON: Mountain Province, Benguet, Cagayan, Isabela, Bataan, Bulacan, Rizal, Laguna, Quezon, Camarines, MINDORO (Mindoro Oriental), MINDANAO (Zamboanga peninsula). Lowland forests, sometimes up to 300m

Semecarpus macrophyllus Merr., Bull. For. Bur. Philipp. 1 (1903) 33; --Ding Hou, Blumea 24 (1978) 36; Fl. Males. ser. 1, 8 (1978) 516. --Type:
Oncocarpus macrophylla (Merr.) C Robinson, PJS 6 c (1911) Bot. 340; EPFP 2 (1923) 475.
Semecarpus surigaensis Merr., PJS 17 (1921) 272; EPFP 2 (1923) 475.
SAMAR, MINDANAO: Agusan, Surigao. Forests on dryland, along streams at low altitudes.

Semecarpus paucinervius Merr., PJS 7 c (1912) Bot. 286; EPFP 2 (1923) 475; --Ding Hou, Blumea 24 (1978) 36; Fl. Males. ser. 1, 8 (1978) 516. --Type:
Semecarpus obtusata Elmer, LPB 5 (1913) 1752; --Merr., EPFP 2 (1923) 475.
Borneo (Sabah) and the Philippines. PALAWAN: Mt Pulgar and Mt Victoria. Lowland primary forests, along streambank, 100-225m. Fl. Feb., Fr. May.

Semecarpus stenophyllus Merr., PJS 30 (1926) 407; --Ding Hou, Blumea 24 (1978) 37; Fl. Males. ser. 1, 8 (1978) 507
LUZON: Isabela, SAMAR. Riverbank thickets, altitude 150m.

Semecarpus trachyphyllus Perkins, Fragm. Fl. Philipp. (1904) 29; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 508. --Type:
Oncocarpus trachyphylla (Perkins) Merr., EPFP 2 (1923) 476.
Semecarpus macrothyrsa Perkins, Fragm. Fl. Philipp. (1904) 26; --Merr., EPFP 2 (1923) 474.
LUZON: Ilocos Norte, Pangasinan, Cagayan, Isabela, Aurora, Bataan, Rizal, Quezon, SAMAR, MINDANAO: Davao, Agusan. Primary lowland forests.

Doubtful species:

Semecarpus obovatus (Elmer) Steen., PJS 91 (1962) 508; --Ding Hou, Blumea 24 (1978) 37; Fl. Males. ser. 1, 8 (1978) 518
Oncocarpus obovatus (Elmer) Merr., PJS 14 (1919) 413; EPFP 2 (1923) 476.

“Described from a specimen with one immature fruit from Mt Banahao, Lucban, Tayabas Prov., Luzon (Elmer 7931), later supplemented with a male flowered collection from the type locality (Quisumbing 1346. It cannot be properly placed from the descriptions and no material has been traced”. --Ding Hou, Fl. Males. ser. 1, 8 (1978) 518.

12. *Spondias* Linnaeus

Spondias malayana Kosterm., Quart. J. Taiwan Mus. 34 (1981) 108; --Soejarto et al. (1995) Prelim. Checklist Fl. Pl. Palawan.

Extra-Phil distrib.? PALAWAN: MALAPAKAN IS. (*SMHI* 825, L, PNH)

Spondias negrosensis Kosterm., Spondiadeae (Anac.) Asia & Pacific (1991) 28. --Type: Merrill 639. LUZON: Rizal pro

Spondias philippinensis (Elmer) Airy Shaw & Forman, Kew Bull. 21 (1967) 15, Fig. 2; 13 & 14; --Ding Hou, Blumea 24 (1978) 38; Fl. Males. ser. 1, 8 (1978) 485, Fig. 38.

Phlebochiton philippinense (Elmer) Merr., EPFP 2 (1923) 472

Solenocarpus philippinensis (Elmer) Kosterm., New & Crit. Malays. Pl. 3 (1955) 1

Spondias pinnata (L.f.) Kurz, Prelim. Report. For. & Veg. Pegu (1875) App. A xiv & B 42; --Merr., EPFP 2 (1923) 470; --Indo-Malesia, especially in Java and the Philippines, but difficult to ascertain where it is precisely native because of its wide cultivation and tendency to naturalize. LUZON: Cagayan, Bataan, Laguna, Quezon, Sorsogon, CATANDUANES, MINDORO, CULION, PANAY, MINDANAO: Zamboanga, Cotabato, Davao, Agusan. Besides in the cultivated state, found in both primary and secondary forests, clearings, and in dry areas, sometimes on limestone, typically in the lowlands.

Non native taxa:

Spondias cytherea Sonn., Voy. Ind. Or. & Chine 3 (1782) 242, t. 123; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 481, Fig. 39d-f.

Indo-Malesia. Cultivated in the Philippines and other tropical countries. Lowlands.

Spondias mombin L., Sp. Pl. (1753) 371; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 484.

Native of the Neotropics. Widely cultivated in Malesia.

Spondias purpurea L., Sp. Pl. ed. 2 (1762) 613; --Merr., Fl. Manila (1912) 301; EPFP 2 (1923) 471.

Native of the Neotropics. Now cultivated throughout the tropics.

13. *Swintonia* Griffith

Swintonia acuta Engl., Bot. Jahrb. 1 (1880) 44; --Ding Hou, Fl. Males. ser. 1, 8 (1978) 444, Fig. 13f-k.

Swintonia acuminata Merr., PJS 10 c (1915) Bot. 35; EPFP 2 (1923) 469

Swintonia luzoniensis Merr. & Rolfe, PJS 3 c (1908) Bot. 109; --Merr., EPFP 2 (1923) 470

Borneo (Sarawak, Sabah, Kalimantan, Nunukan Is) and the Philippines. CAMIGUIN DE BABUYANES, LUZON: Isabel, Aurora, Camarines, PALAWAN, PANAY. Primary lowland forests, along riverbanks, on coral limestone, ultrabasic rocks.

Swintonia foxworthyi Elmer, LPB 5 (1913) 1752; --Merr., EPFP 2 (1923) 469; --Ding Hou, Fl. Males. ser. 1, 8 (1978) Sumatra, Borneo, Philippines. PALAWAN: Mt Pulgar and other sites in Palawan.

