

Family 186. THEACEAE

Revisions:

Keng, H. 1978. *Theaceae*. Tree Flora of Malaya 3: 275-296.

Kobuski,

1. Adinandra Jack

Revision:

Kobuski, CE. 1947. *Studies in the Theaceae, XV. Philippine Species*. Journal of the Arnold Arboretum 28: 33-46.

Adinandra apoensis Elmer, LPB 8 (1915) 2833, "apoense"; --Merr., EPFP 3 (1923) 72, under A. GH, L*, MO, NA*, NY*, US*). Mindanao: Davao, Mt Apo, Todaya, Aug 1909.

Adinandra merrillii Elmer, LPB 8 (1915) 2834. --Type: Elmer 14088 (A, F, GH*, L*, MO*, NA*, NY, US*). Mindanao: Agusan del Norte prov., Mt Urdaneta, Oct. 1912.

MINDANAO: Agusan del Norte (Mt Urdaneta), Davao (Mt Apo).

leytensis, excluding W

Adinandra elliptica C Robinson, PJS 3 c (1908) Bot. 206; --Merr., EPFP 3 (1923) 72; --Kobuski, J. Arnold Arb. 28 (1947) 36. --Type: RS Williams 1369 (A*, NY, US, isotypes). Luzon: Benguet prov., Sablan, 18 Nov 1904.

Adinandra robinsonii Elmer, LPB 8 (1915) 2836; --Merr., EPFP 3 (1923) 73. --Type: Elmer 11461 (A, F, GH, L*, MO, NA*, NY, US*, iso). Mindanao: Davao, Mt Apo, Todaya, Aug 1909).

LUZON: Benguet (Sablan; Baguio), Nueva Vizcaya, Nueva Ecija (Mt Umingan), Sorsogon, MINDORO: Mindoro Occidental (Mt Calavite), PANAY: Antique, NEGROS: Negros Oriental (Cuernos Mtns), MINDANAO: Misamis, Bukidnon (Mt Lipa), Davao (Mt Apo)

Adinandra leytensis Merr., PJS 9 c (1914) Bot. 377; --Merr., EPFP 3 (1923) 72, excluding Synonymy; --Kobuski, J. Arnold Arb. 28 (1947) 41. --Type: Wenzel 760 (A*, F, MO*, US*). Leyte: Masaganap, near Jaro, in forest, altitude 600m, 27 May 1914.

LEYTE

Adinandra loheri Merr., PJS 9 c (1914) Bot. 318; --Merr., EPFP 3 (1923) 72. --Kobuski, J. Arnold Arb. 28 (1947) 40. --Type: Loher 5604 (K, iso). Luzon: Rizal prov., Mt Oriud, primary forests at medium altitudes, Dec 1905.

Adinandra rostrata Merr., PJS 9 c (1914) 316; --Merr., EPFP 3 (1923) 73. --Type: BS 1567 Ramos (A*, L*, MO, NY, iso). Luzon: Laguna prov., Dahican River, 13 Sept 1912.

LUZON: Rizal (Mt Oriud; Montalban), Laguna (Dahican River)

Adinandra luzonica Merr., Govt. Lab. Publ. (Philip.) 29 (1905) 29; EPFP 3 (1923) 73; --Kobuski, J. Arnold Arb. 28 (1947) 35. --Type: Whitford 446 (F, NY, US*, iso). Luzon: Bataan prov., Mt Mariveles, Lamao River, on exposed wind-swept ridges, altitude 1200m, 21 Jul 1904.

LUZON: Mountain Province (Mt Pukis), Aurora (Mt Dingalan), Zambales, Bataan (Mt Mariveles, Lamao River), NEGROS: Negros Oriental (Cuernos Mtns).

Adinandra macgregorii Merr., PJS 9 c (1914) Bot. 319; --Merr., EPFP 3 (1923) 73; --Kobuski, J. Arnold Arb. 28 (1947) 38. --Type: BS 8425 McGregor (NY, US*, iso). Luzon: Benguet prov., Pauai, in forest, altitude 2100m, Jun 1909.

LUZON: Mountain Province (Mt Data), Benguet (Pauai; Mt Pulag).

Adinandra maquilingensis Merr., PJS 9 c (1914) Bot. 317; --Merr., EPFP 3 (1923) 73; --Kobuski, J. Arnold Arb. 28 (1947) 39. --Type: BS 13650 Ramos (F, US*, iso). Luzon: Laguna prov., Mt Makiling, Sept 1911.

LUZON: Quezon (Umiray), Laguna (Mt Makiling).

Adinandra nigro-punctata Merr., PJS 9 c (1914) Bot. 320; --Merr., EPFP 3 (1923) 73. --Kobuski, J. Arnold Arb. 28 (1947) 42. --Type: BS 15355 Ramos (US*, isotype). Leyte: Dagami, in forests, 13 Aug 1912.

LEYTE.

According to Kobuski (1947), very closely allied and perhaps conspecific with *A. apoensis* Elmer from Mindanao.

Possible ined. materials at PNH

Adinandra canicosae Merr. --name not in IPNI.

2. *Camellia* Linnaeus

Camellia lanceolata Seem., Trans. Linn. Soc. 22 (1859) 345.

Thea lanceolata (Blume) Pierre, Fl. Forest. Coch. 2 (1887) t. 119; --Merr., EPFP 3 (1923) 69.

Thailand to Sumatra, Java, Borneo, Philippines, Sulawesi.

LUZON: Cagayan to Sorsogon, POLILLO, MINDORO, PANAY, NEGROS, MINDANAO: Zamboanga, Lanao. Primary forests, 700-2000m; often very common.

Camellia microphylla (Merr.) Chien, Contrib. Biol. Lab. Sci. Soc. China, Bot. Ser., 12 (1939) 100.

Thea lanceolata var. *microphylla* Merr., EPFP 3 (1923) 69.

LUZON: Nueva Ecija. Primary forests, c. 500m.

Camellia megacarpa (Elmer) Cohen-Stuart, Meded. Proefst. Thee, 11 (1916) 68; --*Thea*

megacarpa Elmer, LPE

Camellia mollis (Merr.) HT Chang & SX Ren, Acta Sci. Nat. Univ. Sunyatseni 30 (1991) 69; --

Thea lanceolata var. *mollis* Merr., EPFP 3 (1923) 69.

LUZON: Cagayan, Bulacan, Rizal, Quezon, MINDORO. Medium altitude primary forests.

Camellia stenophylla (Merr.) Kobuski, Brittonia 4 (1941) 115; --*Thea lanceolata* var. *stenophylla*

Merr., EPFP 3 (1923) 70.

LUZON: Ilocos Norte. Primary forests, c. 450m.

Non-naturalized:

Camellia sinensis (L.) Kuntze, Act. Hort. Petrop. 10 (1887) 195.

Thea sinensis L., Sp. Pl. (1753) 515; --Merr., EPFP 3 (1923) 70.

3. *Cleyera* Thunberg

Revision:

Kobuski, CE. 1937. J. Arnold Arb. 18: 118; 22 (1941) 395.

Cleyera japonica Thunb. *emend.* Sieb. & Zucc., Fl. Jap. i. 153. t. 81

var. *montana* (Merr.) Kobuski, J. Arnold Arb. 28 (1947) 44; --*Adinandra montana* Merr., PJS 5 c (1910) Bot. 363; EPFP 3 (1923) 73. --Type: FB 4558 Mearns & Hutchinson (MO, NY, US*, iso). Mindanao: Misamis Occidental prov., Mt Malindang, May 1906.

LUZON: Ilocos Norte (Mt Palimlim), Benguet (Pauai; Mt Baudan; Mt Pulag), Cagayan (Mt Dos Cuernos; Mt Tabuan), Quirino (Mt Alzapan), Nueva Ecija (Mt Umingan), Rizal

(Montalban; Mt Lumutan), Laguna (Mt Cristóbal; Mt Banahaw), **Tayabas** (Mt Camatis), Camarines, MINDANAO: Misamis Occidental (Mt Malindang), Bukidnon (Mt Lipa; Mt Candon; vicinity of Tanculan), Davao (Mt Calelan; Mt Apo, Todaya).

4. *Eurya* Thunberg

Eurya amplexicaulis Moore, J. Bot. 37 (1899) 168; --Merr., EPFP 3 (1923) 74.
MINDORO, NEGROS. Mossy forests on ridges, altitude 1500-2400m.

Eurya buxifolia Merr., PJS 5 c (1910) Bot. 362; --Merr., EPFP 3 (1923) 74.
Taiwan, N Philippines.
LUZON: Mountain Province, Benguet. Mossy forests, altitude 1500-2500m.

Eurya coriacea Merr., PJS 5 c (1910) Bot. 361; --Merr., EPFP 3 (1923) 74; --Kobuski, Ann. Miss. Bot. Gard. 25 (1938) 340. --Type: FB 18052 Curran, Merritt & Zschokke.
Eurya pachyphylla Merr., PJS 13 c (1918) Bot. 309; --Merr., EPFP 3 (1923) 74. --Type: BS 26579 Ramos & Edaño.
Eurya pachyrhachis Merr., PJS 13 c (1918) Bot. 310; --Merr., EPFP 3 (1923) 75. --Type: BS 26579 Ramos & Edaño.
LUZON: Mountain Province, Benguet, Aurora, Zambales, Laguna, Camarines. Ridge mossy forests, altitude 1000-2700m.

Eurya flava Merr. ex Melchior, in Engl. & Prantl, Pflanzenfam. ed. 2, 21 (1925) 148.
BATAN; LUZON; PALAWAN, LEYTE, MINDANAO.

Eurya gnaphalocarpa Hayata, Icon. Pl. Formos. 8 (1919) 7, Fig. 5; --Kobuski, Ann. Miss. Bot. Gard. 25 (1938) 332.
Taiwan and Philippines.
SABTANG; LUZON.

Eurya japonica Thunb., Fl. Jap. (1784) 101, t. 25.
ssp. nitida (Korth.) T. Yamazaki, J. Jap. Bot. 70 (1995) 271; --*Eurya nitida* Korth. In Temminck, Verh. Nat. Gesch. Bot. 3 (1840) 115, t. 17.
India to Japan through Malaya to Polynesia. (refer to Kobuski's revision for distrib updates.
BATANES, LUZON: Ilocos Norte to Sorsogon, MINDORO, NEGROS, MINDANAO: Davao. Mossy forests, exposed ridges and ravines, altitude 1000-2000m.

***Eurya obovata* (Blume)** Korth., Verh. Nat. Gesch. Bot. 3 (1840) 118.

Eurya trichocarpa Korth. in Temminck, Verh. Nat. Gesch. Bot. 3 (1840) 114
Eurya acuminata *auctt. non* DC. Mém. Soc. Phys. Hist. Nat. Genève 1 (1821) 26; --Merr., EPFP 3 (1923) 74.
Extra-Philippine distribution:
LUZON: Abra, Mountain Province, Benguet, Zambales, Pampanga, Bataan, Rizal, Laguna, Quezon, MINDORO, LEYTE, MINDANAO: Bukidnon, Davao. Montane forests especially on ridges, chiefly 1000-1500m.

5. *Gordonia* Ellis

Revision:

Keng, H. 1984. *Flora Malesiana precursors LVIII, part 2. The genus Gordonia (Theaceae) in Malesia*. Gardens' Bulletin Singapore 37: 1-47.

Gordonia luzonica Vidal, Rev. Pl. Vasc. Filip. (1886) 57; --Merr., EPFP 3 (1923) 70; --Keng, Gard. Bull. Sing. 37 (1984) 21. --Type:
 Gordonia benguetica Burkill, PJS 15 (1919) 478; --Merr., EPFP 3 (1923) 70. --Type: FB 5083 Curran (SING*, iso). Luzon: Benguet prov., Baguio, Aug 1906.
 Gordonia fragrans Merr., PJS 1 (1906) Suppl. 95. --Type:
 Gordonia subclavata Burkill, PJS 15 (1919) 478; --Merr., EPFP 3 (1923) 71.
 Gordonia sablayana Melch. in Engl., Pflanzenreich ed. 2, 21 (1925) 137, in obs. --Type: FB 9757 Merritt (K*). Mindoro. Feb-Apr 1908.
 Gordonia welbornii Elmer, LPB 2 (1908) 500. --Type: Elmer 9584 (L*, NY*, US*, iso). Negros: Negros Oriental prov., Cuernos Mtns, in forest, altitude 4250ft [=1295m], Mar 1908.
 Philippines, New Guinea. (fide Merr., 1923)
 LUZON: Benguet, Zambales, Bataan, Laguna, Sorsogon, PANAY, NEGROS,
 MINDANAO: Lanao, Bukidnon, Surigao. Primary forests, stream depressions and exposed ridges, altitude 600-1300m.

Gordonia polisana Burkill, PJS 15 (1919) 478; --Merr., EPFP 3 (1923) 71. --Type: FB 18384 Alvarez (US*). Luzon: Ifugao prov., Mt Polis, Jan 1909.
 LUZON: Benguet, Ifugao. Mossy forests, altitude 1200-1600m.

Gordonia sp., Burkill, PJS 15 (1919) 478; --Merr., EPFP 3 (1923) 71. Based on FB 9757 Merritt.
 MINDORO. Exposed forested ridges, altitude c. 1000m.

Pyrenaria Blume =Tutcheria

6. Schima Reinwardt ex Blume

Revision:

Bloembergen, S. 1952. *A critical study in the complex-polymorphous genus Schima* (Theaceae). Reinwardtia 2: 133-183, fig. A-J.

Schima wallichii (DC) Korth.,

ssp. pulgarensis (Elmer) Bloemb., Reinwardtia 2 (1952) xxx.

Schima pulgarensis Elmer, LPB 5 (1913) 1843; --Merr., EPFP 3 (1923) 71. --Type: Elmer 13191
 Schima noronhae Merr. & Rolfe, PJS 3 c (1908) Bot. 113, non Reinw.

7. Ternstroemia Mutis ex Linnaeus filius

Revision:

Kobuski, CE. 1961. *Studies in the Theaceae, XXXII. A Review of the Genus Ternstroemia in the Philippine Islands*. Journal of Arnold Arboretum 42: 263-433.

Ternstroemia gitingensis Elmer, LPB 4 (1912) 1480; --Merr., EPFP 3 (1923) 71; --Kobuski, J. Arnold Arb. 42 (1961) 265.
 giting, Magallanes (=Magdiwang), densely wooded ravine near a creek, altitude c. 500m, May 1910.

LUZON: Isabel (Palanan Bay), Aurora (Baler), Quezon (Mt Binuang), PALAWAN (Mt Pulgar =Thumb Peak), SIBUYAN (Mt Giting-giting), PANAY: Aklan (Libacao).

Ternstroemia philippinensis Merr., PJS 11 c (1916) Bot. 196; EPFP 3 (1923) 72; --Kobuski, J. Arnold Arb. 42 (1961) 265. --Type: BS 20477 Ramos (US*, iso). Luzon: Laguna prov., San Antonio, Feb 1913.

var. philippinensis

LUZON: Ilocos Norte (Mt Palimlim), Zambales (Mt Marayep), Rizal (Montalban; Mt Lumutan), Laguna (San Antonio), Quezon (Tagkawayan, Mapatong), Camarines Sur (Mt

Bagacay), MINDORO: Mindoro Occidental (Paluan), Mindoro Oriental (Pinamalayan), SIBUYAN (Mt Giting-giting), SAMAR: (Mt Capotean, Catubig River, 100m).

var. megacarpa (Merr.) Kobuski, J. Arnold Arb. 42 (1961) 267; --Ternstroemia megacarpa Merr., Lanao del Sur prov., Camp Keithley, Sept-Oct 1907.

PJS 13 c (1918) Bot. 3

MINDANAO: Lanao del Sur (Camp Keithley), Bukidnon (Tangculan and vicinity).

Ternstroemia toquian (Blanco) Fern.-Villar, Novis. App. (1880) 19; --Merr., EPFP 3 (1923) 71; --Kobuski, J. Arnold Arb. 42 (1961) 270; --Llanosia toquian Blanco, Fl. Filip. Ed. 2 (1845) 319. --Candidate for neotypification: Merrill Sp. Blancoanae 720, leg. M Ramos (US*). Luzon: Pampanga prov., Mt Arayat, alt. 180m, 24 Feb 1915.

LUZON: Ilocos Norte (Bangui), Ilocos Sur, Benguet, Cagayan (Abulog; Mt Babatning), Nueva Ecija (Caraballo Mtns), Pangasinan (San Isidro), Zambales (Mt Tapulao =High Peak), Pampanga (Mt Arayat), Bataan (Mt Mariveles, Lamao River), Bulacan (Angat), Rizal (Mt Lumutan; Paningtingan; Tanay), Laguna (Mt Camatis; Mt Banahaw), Camarines Sur (Kamugong River; Sarapan), MINDORO: Mindoro Occidental (Paluan), PALAWAN (Puerto Princesa), SIBUYAN (Mt Giting-giting), PANAY: Iloilo (Miag-ao, Bugani), MINDANAO: Agusan del Norte (Mt Urdaneta)..

Swampy places..Upper Lamao, 1000m; mtns above 700m; 800m, rocky soil of forested ridge; red clay on steep forested ridge, 400m;

Ternstroemia urdanetensis (Elmer) Kobuski, J. Arnold Arb. 28 (1947) 46; *ibid.*, 42 (1961) 268; --Adinandra urdanetensis Elmer, LPB 8 (1915) 2837 "urdanetense"; --Merr., EPFP 3 (1923) 73. --Type: Elmer 14078 (A, F, GH, L*, MO, US*, iso). Mindanao: Agusan del Norte prov., Mt Urdaneta, Oct 1912.

Ternstroemia epiphytica Elmer ex Merr., EPFP 3 (1923) 73, in *syn.*

Ternstroemia gymnanthera Merr., EPFP 3 (1923) 71, *non* (Wight & Arn.) Sprague, 1823.

Ternstroemia japonica Dyer in Hook.f., Fl. Brit. India 1 (1874) 280; Merr., PJS 10 c (1915) Bot. 324, *non* Thunb.

Adinandra coriacea Elmer, LPB 1 (1908) 322. --Type: Elmer 7438 (NY*, iso). Luzon: Quezon prov., Lucban, in forests at 900m, May 1906.

LUZON: Cagayan, Zambales, Batangas, Quezon (Lucban), Sorsogon (Mt Bulusan), MINDORO, PALAWAN (Aborlan, Malasgao River), CAMIGUIN, MINDANAO: Agusan del Norte (Mt Urdaneta; Mt Hilong-hilong), Davao Oriental (Mt Kampalili). Mossy forests, altitude 900-2000m.

Ined names:

Ternstroemia parvifolia Merr. ined., *non* Hu --Type: BS 26530 Ramos & Edaño (NY, poss. Type). Luzon: Aurora prov., Mt Dingalan, Aug-Sept 1916.

Tutcheria Dunn

Tutcheria merrilliana HT Chang & SX Ren, Act. Sci. Nat. Univ. Sunyatseni 30(1) (1991) 70.

Pyrenaria mindanaensis Merr., PJS 20 (1922) 407; EPFP 3 (1923) 71. --Type:

MINDANAO: Lanao, Bukidnon. Damp forests, altitude c. 1200m.