

Family 62. FAGACEAE

Revision:

Soepadmo, E. 1972. *Fagaceae*. Flora Malesiana series 1, 6: 265-403.

1. *Castanopsis* (D Don) Spach

Castanopsis evansii Elmer, LPB 5 (1913) 1778; --Soepadmo, Reinwardtia 7 (1968) 391; Fl. Males. ser. 1, 7 (1972) 305.

Borneo (rather common in SE Kalimantan), Banguay, Philippines.

PALAWAN. Lowland forests to 2000m (Borneo), on brown, clayey loam soil.

Castanopsis motleyana King, Ann. Roy. Bot. Gard. Calc. 2 (1889) 96, t. 86; --Soepadmo, Reinwardtia 7 (1968) 396; Fl. Males. ser. 1, 7 (1972) 314.

Borneo (throughout), Nunukan, S Philippines.

MINDANAO. Primary, rarely secondary forests or disturbed hilly country to 500m.

Castanopsis philipensis (Blanco) Vidal, Rev. Pl. Vasc. Filip. (1886) 265; --Merr., EPFP 2 (1923) 25 (as 'philipensis'); --Soepadmo, Reinwardtia 7 (1968) 399; Fl. Males. ser. 1, 7 (1972) 316, Fig. 15a-d; --*Fagus philipensis* Blanco, Fl. Filip. ed. 2 (1845) 503. --Type:

Castanopsis javanica (*non* A DC) Vidal

Castanopsis inermis (*non* Benth. & Hook.) Merr., EPFP 2 (1923) 24, *non* (Lindley) Benth. & Hook. *f ex* Jackson, Index Kewensis 1 (1895) 456.

LUZON, MINDORO, LEYTE, SAMAR, MINDANAO, BASILAN. Forests, 400-1800m.

Castanopsis psilophylla Soepadmo, Reinwardtia 7 (1968) 401; Fl. Males. ser. 1, 7 (1972) 315.

Borneo (Sabah, N Sarawak, E Kalimantan), Banguay, SW Philippines.

PALAWAN (based on Eballo 408). Lowland forest.

Castanopsis cf. sumatrana A DC, J. Bot. 1 (1863) 182; --Soejarto et al. (1995) Checklist Fl. Pl. Palawan

Extra-Philippine distribution? PALAWAN: Puerto Princesa, Irawan River Valley, based on Soejarto et al. 6412 (A, F, PNH).

2. *Lithocarpus* Blume

Lithocarpus apoensis (Elmer) Rehder, J. Arnold Arb. 1 (1919) 123; --Soepadmo, Reinwardtia 8 (1970) 217; Fl. Males. ser. 1, 7 (1972) 354; --*Quercus apoensis* Elmer, LPB 3 (1910) 946; --Merr., EPFP 2 (1923) 25. --Type:

LUZON, CATANDUANES, PANAY, SAMAR, MINDANAO: Davao del Sur (Mt Apo).

Forests, 1000-1700m. Flowering Mar-Dec, fruiting Apr-Sept.

Lithocarpus buddii (Merr.) A Camus, Bull. Soc. Bot. Fr. 92 (1945) 85; --Soepadmo, Reinwardtia 8 (1970) 222; Fl. Males. ser. 1, 7 (1972) 383; --*Quercus robinsonii* Merr., PJS 10 c (1915) Bot. 297; EPFP 2 (1923) 30, *non* Ridley (1914). --Type:

LUZON: Rizal, Laguna (Mt Makiling), Quezon (Infanta), LEYTE, SAMAR. Forests, 200-1000m. Common on Mt Makiling, rare in Samar and Leyte. Flowering Oct-Jun, fruiting Jun-Dec.

Lithocarpus castellarnauianus (Vidal) A Camus, Bull. Soc. Bot. Fr. 92 (1945) 84; --Soepadmo, Reinwardtia 8 (1970) 226; Fl. Males. ser. 1, 7 (1972) 377; --Quercus castellarnauiana Vidal, Rev. Pl. Vasc. Filip. (1886) 264; --Merr., EPFP 2 (1923) 26. --Type:
Quercus merrittii Merr., PJS 3 c (1908) Bot. 325; EPFP 2 (1923) 28. --Type:
Quercus obliquinervia Merr., PJS 4 c (1909) Bot. 250; EPFP 2 (1923) 29. --Type:
Quercus cagayanensis Merr., PJS 13 c (1918) Bot. 6; EPFP 2 (1923) 26. --Type:
LUZON (common): Ilocos Sur, Abra, Benguet (Pauai), Cagayan (Pamplona), Zambales, Bataan, Rizal, Laguna, MINDORO, MARINDUQUE, LEYTE (rare), SAMAR. Forests at (60) 200-2200m. Flowering Aug.-Jul, fruiting Sept-May.

Lithocarpus caudatifolius (Merr.) Rehder, J. Arnold Arb. 1 (1919) 123; --Soepadmo, Reinwardtia 8 (1970) 226; Fl. Males. ser. 1, 7 (1972) 350; --Quercus caudatifolia Merr., PJS 3 c (1908) Bot. 324; EPFP 2 (1923) 26. --Type:
Quercus minahassae Koord., Syst. Verzeich. 3 (1911) 28; --Merr., EPFP 2 (1923) 28.
Quercus bulusanensis Elmer, LPB 10 (1939) 3736, invalid name, no Latin descr. --Type:
Borneo (Sabah, SE Kalimantan) and the Philippines.
LUZON: Abra (La Paz), Pangasinan, Zambales (Botolan), Bataan (Mt Mariveles, Lamao River), Rizal (Bosoboso), Camarines, Sorsogon (Mt Bulusan), MINDANAO: Davao del Sur (Mt Apo). Low to medium altitude primary and secondary forests, on ridges, along rivers, ascending to 1350m on Mt Apo. Flowering Sept-Jun, fruiting May-Jan.

Lithocarpus celebicus (Miq.) Rehder, J. Arnold Arb. 1 (1919) 123; --Soepadmo, Reinwardtia 8 (1970) 227; Fl. Males. ser. 1, 7 (1972) 374; --Quercus celebica Miq., Ann. Mus. Bot. Lugd.-Bat. 1 (1863-64) 110; --Merr., EPFP 2 (1923) 26. --Type:
Quercus llanosii A DC, Prodr. 16² (1864) 97, excl. syn. Blanco; --Merr., EPFP 2 (1923) 28. --Type:
Quercus lipacon Elmer, LPB 6 (1913) 1983; --Merr., EPFP 2 (1923) 27. --Type:
Quercus mabesae Merr., PJS 13 c (1918) Bot. 7; EPFP 2 (1923) 28. --Type:
Philippines, Sulawesi, Moluccas, New Guinea (incl. Goodenough and Fergusson Is).
LUZON: Cagayan (San Vicente), Bataan (Lamao River), Rizal (Bosoboso; Tanay), Laguna (Mt Makiling), LEYTE, MINDANAO: Davao, Agusan del Norte (Mt Urdaneta). Forests at low and medium altitudes, 20-1200m, but more common in the lowlands below 800m, on clayey soil. Fl. Sept.-May, fruiting Jun-Apr.

Lithocarpus coopertus (Blanco) Rehder, J. Arnold Arb. 1 (1919) 124 (as 'cooperta'); --Soepadmo, Reinwardtia 8 (1970) 231; Fl. Males. ser. 1, 7 (1972) 335, Fig. 22e-f; --Quercus cooperta Blanco, Fl. Filip. ed. 2 (1845) 503; --Merr., EPFP 2 (1923) 26. --Type: Elmer 14012 (isoneo L*, NY*, US*, designated by Soepadmo, 1970). Mindanao: Agusan del Norte prov., Mt Urdaneta, Oct 1912.
Quercus pruinosa Elmer, LPB 3 (1910) 940; --Merr., EPFP 2 (1923) 30, non Blume (1825). --Type:
Quercus reflexa King in JD Hook., Fl. Brit. Ind. 5 (1888) 616; --Merr., EPFP 2 (1923) 30.
Peninsular Malaysia, Borneo (Sarawak, Brunei, Sabah), Philippines.
LUZON: Bulacan (Angat), Quezon (E coast), LEYTE, SAMAR, MINDANAO: Bukidnon, Davao del Sur (Mt Apo, Todaya), Surigao. Forests, from low altitudes to 1200m. Common in Mindanao, rare and scattered in Luzon, Leyte, Samar. Flowering Feb-Oct, fruiting Nov-May.

Lithocarpus glutinosus (Blume) Soepadmo, Reinwardtia 8 (1970) 243; Fl. Males. ser. 1, 7 (1972) 354; --Quercus glutinosa Blume, Ann. Mus. Bot. Lugd.-Bat. 1 (1850) 304. --Type:
Quercus zschokkei Elmer, LPB 3 (1910) 944; --Merr., EPFP 2 (1923) 31. --Type:
Quercus copelandii Elmer, LPB 6 (1913) 1984; --Merr., EPFP 2 (1923) 27. --Type:
Philippines, Sulawesi.
MINDANAO: Zamboanga, Davao del Sur (Mt Apo). Forests, 75-900m.

Lithocarpus gracilis (Korth.) Soepadmo, Reinwardtia 8 (1970) 243; Fl. Males. ser. 1, 7 (1972) 362; --Quercus gracilis Korth., Fl. Ind. Bat. Suppl. (1860-61) 350; --Elmer, LPB 3 (1910) 939; --Merr., EPFP 2

(1923) 27. --Type:

S Sumatra (and Simalur Is), Peninsular Malaysia, Singapore, Borneo (incl. Nunukan and Laut Is).

MINDANAO: Davao del Sur (Mt Apo, *Elmer 11299 & 11789*). Forest, c. 600m.

Lithocarpus jordanae (Laguna) Rehder, J. Arnold Arb. 1 (1919) 127; --Soepadmo, Reinwardtia 8 (1970) 250; Fl. Males. ser. 1, 7 1972) 382; --*Quercus jordanae* Laguna, Apuntes Sobre Nuev. Roble Filip. (1875) 7, plate; --Merr., EPFP 2 (1923) 27. --Type:

LUZON: Abra, Mountain Province (Mt Data), Benguet (Pauai; Mt Pulog; Mt Sto Tomas; Baguio), Nueva Vizcaya. Mossy forests on the higher mountains, 1200-2400m. Rather common. Flowering Jan, Jul, fruiting Aug-Apr.

Lithocarpus luzoniensis (Merr.) Rehder, J. Arnold Arb. 1 (1919) 133; --Soepadmo, Reinwardtia 8 (1970) 256; Fl. Males. ser. 1, 7 1972) 381; --*Quercus luzoniensis* Merr., PJS 3 c (1908) Bot. 323; EPFP 2 (1923) 28. --Type:

LUZON: Mountain Province (Mt Data), Benguet (Mt Pulag, Pauai, Mt Nangaoto, Mt Sto Tomas), Zambales (Mt Tapulao =High Peak). Mossy forests, 1500-2700m. Rather common in the Cordillera Highlands of N Luzon. Flowering Jan-Jun, Fruiting Jul-Mar.

Lithocarpus mindanaensis (Elmer) Rehder, Arn. Arb. 1 (1919) 128; --Soepadmo, Reinwardtia 8 (1970) 261; Fl. Males. ser. 1, 7 1972) 355; --*Quercus mindanaensis* Elmer, LPB 3 (1910) 942; --Merr., EPFP 2 (1923) 28. --Type:

Quercus dasystachya 'lasystachya' Elmer, LPB 3 (1910) 938; --Merr., EPFP 2 (1923) 27, *non* Miq. (1863-64).

LEYTE, MINDANAO: Zamboanga del Sur (Port Banga), Misamis, Lanao del Norte (Maria Cristina Falls), Lanao del Sur (Camp Keithley), Davao, Surigao del Norte (Placer). Common in Mindanao, scattered in Leyte. Low to medium altitude forests, 20-1000m, more commonly encountered below 600m. Flowering Oct-Mar, fruiting May-Sept.

Lithocarpus nieuwenhuisii (Seem.) A Camus, Bull. Soc. Bot. Fr. 92 (1945) 255; --Soepadmo, Reinwardtia 8 (1970) 262; Fl. Males. ser. 1, 7 1972) 379; --*Quercus nieuwenhuisii* Seem., Bull. Dép. Agr. Ind. Néerl. 1 (1906) 6. --Type:

Quercus clementis Merr., PJS 3 c (1908) Bot. 321; EPFP 2 (1923) 26. --Type:

Borneo (Sarawak, Kalimantan, Brunei, Sabah), Nunukan Is, Philippines.

BASILAN, MINDANAO: Lanao del Sur (Camp Keithley). Forests at low and medium altitudes. Rare. Flowering and fruiting throughout the year.

Lithocarpus ovalis (Blanco) Rehder, J. Arnold Arb. 1 (1919) 129; --Soepadmo, Reinwardtia 8 (1970) 264; Fl. Males. ser. 1, 7 1972) 361; --*Quercus ovalis* Blanco, Fl. Filip. ed. 2 (1845) 502; --Merr., EPFP 2 (1923) 29. --Type:

LUZON: Cagayan, Zambales, Pampanga (Mt Abu), Bulacan (Angat), Rizal (Bosoboso), Batangas (Mt Malarayat), Camarines. Low altitude forests. Fl. Nov.-Apr, fruiting Jun-Aug.

Lithocarpus philippinensis (A DC) Rehder, J. Arnold Arb. 1 (1919) 129; --Soepadmo, Reinwardtia 8 (1970) 267; Fl. Males. ser. 1, 7 1972) 353; --*Quercus philippinensis* A DC, Prodr. 16² (1864) 97; --Merr., EPFP 2 (1923) 29. --Type:

Quercus wenzelii Merr., PJS 10 c (1915) Bot. 267; EPFP 2 (1923) 31. --Type:

Quercus rizalensis Merr., PJS 13 c (1918) Bot. 272; EPFP 2 (1923) 30. --Type:

LUZON: Nueva Vizcaya, Zambales (Mt Tapulao), Rizal (Mt Lumutan), Laguna, Quezon (Mt Binuang; Mt Banahaw), Batangas (Mt Malarayat), Camarines, LEYTE (Buena Vista near Jaro), SAMAR, MINDANAO. Forests on the higher mountains, c. 500 to 2000m. Flowering Dec.-July, fruiting Oct.-Nov.

Lithocarpus rotundatus (Blume) A Camus, *Riviera Scient.* 18 (1932) 41 (as 'rotundata'); --
Soepadmo, *Reinwardtia* 8 (1970) 275; *Fl. Males. ser.* 1, 7 (1972) 331; --*Quercus rotundata* Blume,
Verh. Bat. Gen. K. & W. 9 (1823) 219. --Type:
Quercus curranii Merr., *PJS* 3 c (1908) Bot. 329; EPFP 2 (1923) 27. --Type:
W Java, Borneo (Sabah) and the Philippines.
LUZON: Laguna (Mt Banahaw). Forests, 800-900m on Mt Banahaw. Flowering Jul-Oct,
fruiting Oct-Feb.

Lithocarpus solerianus (Vidal) Rehder, *J. Arnold Arb.* 1 (1919) 131; --Soepadmo, *Reinwardtia* 8
(1970) 279; *Fl. Males. ser.* 1, 7 (1972) 355; --*Quercus soleriana* Vidal, *Rev. Pl. Vasc. Filip.* (1886)
261; --Merr., EPFP 2 (1923) 30. --Type:
Quercus bicolorata Elmer, *LPB* 6 (1913) 1985; --Merr., EPFP 2 (1923) 26. --Type:
LUZON: Benguet (Twin Peaks), Bulacan (Angat), Bataan (Mt Mariveles), Rizal
(Bosoboso), Laguna (Mabitac), Batangas, Quezon (Unisan), MINDORO: Mindoro
Oriental (Mt Malasimbo, Mt Halcon, Mt Inauan), MINDANAO: Davao del Sur (Mt Apo:
Todaya), Agusan del Norte (Mt Urdaneta). Forests at 700-1200m. Flowering Aug-May,
fruiting Apr-Oct.

Lithocarpus submonticolus (Elmer) Rehder, *J. Arnold Arb.* 1 (1919) 131; --Soepadmo,
Reinwardtia 8 (1970) 280; *Fl. Males. ser.* 1, 7 (1972) 377; --*Quercus submonticola* Elmer, *LPB* 3
(1910) 943; --Merr., EPFP 2 (1923) 31. --Type:
Quercus monticola Elmer, *LPB* 3 (1910) 942; --Merr., EPFP 2 (1923) 29, *non* King (1889), *nec* Petz. &
Kirchn.
LUZON (common), MINDORO (rare), MINDANAO: Davao del Sur (Mt Apo), Agusan del
Norte (Mt Urdaneta). Forests, 1000-1700m. Flowering Sept-May, fruiting Jun-Dec.

Lithocarpus sulitii Soepadmo, *Reinwardtia* 8 (1970) 280; *Fl. Males. ser.* 1, 7 (1972) 359. --Type:
PNH 17646 Sulit & Conklin (L*, iso), Mindoro: Mindoro Oriental prov., Mansalay, Mt Yagaw,
E slope, alt. 617m, 1 Jun 1953.
Quercus bennettii (*non* Miq.) Merr., EPFP 2 (1923) 25, *quoad* FB 759, 781, Whitford 365, Williams 705, BS
32958.
LUZON: Zambales (Masinloc), Bataan (Mt Mariveles, Lamao River), Rizal (Antipolo),
Laguna (Mt Makiling), MINDORO: Mindoro Oriental (Mt Yagaw). Low to medium altitude
forests in regions with pronounced dry season, up to 700m. Common in Luzon, rare in
Mindoro. Flowering Sept.-Jan., fruiting Feb.-Jun.

Lithocarpus sundaicus (Blume) Rehder, *J. Arnold Arb.* 1 (1919) 131; --Soepadmo, *Reinwardtia* 8
(1970) 282; *Fl. Males. ser.* 1, 7 (1972) 358; --*Quercus sundaica* Blume, *Verh. Bat. Genoots.* 9
(1825) 216; --Merr., EPFP 2 (1923) 31. --Type:
Peninsular Thailand, Sumatra, Peninsular Malaysia, Singapore, Java, Borneo and the
Philippines.
MINDANAO: Bukidnon, Davao del Sur (Mt Apo). Primary forests, up to 1900m,
commonly found between 500-1500m.

Lithocarpus vidalii (Fern.-Villar) Rehder, *J. Arnold Arb.* 1 (1919) 134; --Soepadmo, *Reinwardtia* 8
(1970) 285; *Fl. Males. ser.* 1, 7 (1972) 358; --*Quercus vidalii* Fern.-Villar, *Novis. App.* (1880) 209; --
Merr., EPFP 2 (1923) 31. --Type:
LUZON, PALAWAN, MINDANAO. Forests, 1100-1800m. Flowering Feb-May, fruiting
Jun-Nov.

Lithocarpus woodii (Hance) A Camus, *Riviera Scient.* 18 (1932) 42; --Soepadmo, *Reinwardtia* 8
(1970) 287; *Fl. Males. ser.* 1, 7 (1972) 358; --*Quercus woodii* Hance, *J. Bot.* 12 (1874) 240; --Merr.,
EPFP 2 (1923) 31. --Type:
LUZON: Mountain Province, Benguet (Baguio), SAMAR, MINDANAO. Forests, 1200-

2300m, must be below 900m in Samar. Flowering Aug-Jun, fruiting Apr-Nov.

Of doubtful occurrence in the Philippines:

Lithocarpus oreophilus Soepadmo. Philippine records *vide* Elmer, LPB 3 (1910) 942, are not confirmed. Elmer had specimens of *L. submonticolus*.

Lithocarpus aff. meijeri Soepadmo, Reinwardtia 8 (1970) 260; --Soejarto et al. (1995) Checklist Fl. Pl. Palawan

Borneo (Sarawak, Brunei, Sabah), PALAWAN: San Vicente, Pagdanan Timber Concession, Soejarto & Madulid 6366 (PNH, F).

3. **Quercus** Linnaeus

Quercus merrillii Seem., Fedde Repert. 5 (1908) 21; --Merr., EPFP 2 (1923) 28; --Soepadmo, Gard. Bull. Sing. 22 (1968) 3
Borneo (Sarawak, Sabah), Nunukan Is, Philippines. PALAWAN: Mt Pulgar (=Thumb Peak). Mossy thickets at summit, c. 1300m.

Non-naturalized:

Castanea mollissima Blume, Ann. Mus. Bot. Lugd.-Bat. 1 (1850) 286; --Merr., EPFP 2 (1923) 24.