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The Plants of Mount Kinabalu, 5. Dicotyledon Families Magnoliaceae to Winteraceae
by John H. Beaman and Christiane Anderson

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Half-title page: Tarap, *Artocarpus odoratissimus* (Moraceae). Photo: J. H. Beaman

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THE PLANTS *of* MOUNT KINABALU

5. DICOTYLEDON FAMILIES MAGNOLIACEAE TO WINTERACEAE

John H. Beaman and Christiane Anderson

in collaboration with

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2004

RIVER: 1500 m, *RSNB 4871* (K, L), 1500 m, *RSNB 7010* (K, L); PARK HEADQUARTERS/KINASARABAN: 1500 m, *Aban Gibot SAN 56711* (K, L); PENIBUKAN: 1200–1500 m, *Clemens 31233* (BM, K, L), 1200 m, *40504* (BM, K); PERANCANGAN: *Lomudin Tadong 243* (K); PINOSUK PLATEAU: *James & Leopold SAN 74536* (K, L); TAKUTAN: 800 m, *Shea & Aban SAN 77204* (K, L).

b. subsp. **humilis** (Becc.) F. M. Jarrett, J. Arnold Arbor. 41: 126 (1960).

Small to medium-sized tree, sometimes buttressed. Hill forest. Elevation: 900 m.

Material examined. DALLAS/TENOMPOK: 900 m, *Clemens 27571* (BM, K, L); EASTERN SHOULDER: 900 m, *RSNB 138* (K, L); NALUMAD, KINAPASA'AN: *Daim Andau 142* (K).

c. subsp. **indet.**

These records are of saplings. Hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 600–1500 m.

Material examined. KULUNG HILL: 600 m, *Corner SAN 23477* (K); LIWAGU/MESILAU RIVERS: 1500 m, *RSNB 2570* (K); MESILAU RIVER: 1500 m, *RSNB 4989* (K).

162.2.11. Artocarpus aff. **nitidus** Trécul, Ann. Sci. Nat. (Paris), Sér. 3, 8: 119 (1847).

Small to large tree. Hill forest, sometimes on ultramafic substrate. Elevation: 1100 m.

Material examined. KILIMU: *Aban Gibot SAN 60720* (K, L); MT. NUNGKEK: 1100 m, *Corner SAN 23469* (K).

162.2.12. Artocarpus odoratissimus Blanco, Fl. Filip. 671 (1837). Plate 7A, 7B.

Small to medium-sized tree. Lowlands, hill forest. Elevation: 600–900 m.

Material examined. DALLAS: 600–900 m, *Clemens 26228* (BM, K, L); MELANGKAP TOMIS, LABI RIVER: *Lorence Lugas 679* (K); MELANGKAP TOMIS, PAHU: *Lorence Lugas 524* (K); MELANGKAP TOMIS, PENATARAN RIVER: *Lorence Lugas 1105* (K); RANAU: *Corner s.n.* (K); TAKUTAN: *Dius Tadong 400* (K).

162.2.13. Artocarpus peltatus Merr., J. Straits Branch Roy. Asiat. Soc. 85: 166 (1922).

Medium-sized to large tree. Hill forest. Elevation: 900 m.

Material examined. DALLAS: 900 m, *Clemens 26322* (BM, K, L), 900 m, *27444* (BM, K, L).

162.2.14. Artocarpus primackii Kochummen, Gard. Bull. Singapore 50: 199 (1998).

Small to medium-sized tree. Lowlands. Elevation: 500–600 m.

Material examined. PORING/NALUMAD: 500–600 m, *Kokawa & Hotta 5223* (L).

162.2.15. Artocarpus rigidus Blume, Bijdr. 9: 482 (1825). Plate 8A, 8B.

a. subsp. **rigidus**

Medium-sized to large tree, buttressed. Hill forest on ultramafic substrate. Elevation: 800–1000 m.

Material examined. HEMPUEN HILL: 800 m, *Abbe et al. 9945* (K, L), 1000 m, *Meijer SAN 20958* (K, L).

162.2.16. Artocarpus sericicarpus F. M. Jarrett, J. Arnold Arbor. 40: 350 (1960).

Medium-sized to large tree, buttressed. Lowlands. Elevation: 500 m.

Material examined. EASTERN SHOULDER: 500 m, *RSNB 2971* (K).

162.2.17. Artocarpus tamaran Becc., For. Borneo: 626 (1902). Plate 8C, 8D, 8E.

Medium-sized to large tree, buttressed. Hill forest on ultramafic substrate.

Material examined. KULUNG HILL: *Corner SAN 23464* (K, L).

162.2.18. Artocarpus indet.

Material examined. PARK HEADQUARTERS/TENOMPOK: 1500–1700 m, *Kokawa & Hotta 3057* (L).

162.3. FICUS L. 83 sp on Kinabalu

In collaboration with C. C. Berg (BG, L)

Berg, C. C. (2003). Flora Malesiana precursor for the treatment of Moraceae 1: The main subdivision of *Ficus*: The subgenera. Blumea 48: 167–178. Berg, C. C. (2003). Flora Malesiana precursor for the treatment of Moraceae 2: *Ficus* subgenus *Pharmacosycea* section *Oreosycea*. Blumea 48: 289–301. Berg, C. C. (2003). Flora Malesiana precursor for the treatment of Moraceae 3: *Ficus* subgenus *Ficus*. Blumea 48: 529–550. Berg, C. C. (2003). Flora Malesiana precursor for the treatment of Moraceae 4: *Ficus* subgenus *Synoecia*. Blumea 48: 551–571. Berg, C. C. (2003). Flora Malesiana precursor for the treatment of Moraceae 5: *Ficus* subgenus *Sycidium*. Blumea 48: 573–597. Berg, C. C. (2004). Flora Malesiana precursor for the treatment of Moraceae 6: *Ficus* subgenus *Sycomorus*. Blumea 49: 155–200. Corner, E. J. H. (1939). A revision of *Ficus*, subgenus *Synoecia*. Gard. Bull. Straits Settlem. 10: 82–161, Pl. 3–4. Corner, E. J. H. (1960). Taxonomic notes on *Ficus* Linn., Asia and Australasia. I–IV. Gard. Bull. Singapore 17: 368–485. Corner, E. J. H. (1960). Taxonomic notes on *Ficus* Linn., Asia and Australasia.

V–VI. Gard. Bull. Singapore 18: 1–69. Corner, E. J. H. (1962). Taxonomic notes on *Ficus* L., Asia and Australasia. Addendum II. Gard. Bull. Singapore 19: 385–401. Corner, E. J. H. (1965). Check-list of *Ficus* in Asia and Australasia with keys to identification. Gard. Bull. Singapore 21: 1–185.

162.3.1. Ficus annulata Blume, Bijdr. 9: 448 (1825). Subgenus *Urostigma*.

Medium-sized strangler, or occasionally an independendent tree. Lowlands or hill forest, probably mostly on ultramafic substrate.

Material examined. BAMBANGAN RIVER: *Amin et al. SAN 123561* (K); HEMPUEN HILL: *Amin & Suin SAN 123104* (K); MELANGKAP TOMIS, DENGIRANUK: *Lorence Lugas 306* (K); MELANGKAP TOMIS, LIBANG RIVER: *Lorence Lugas 2110* (K); MELANGKAP TOMIS, MANDAHATAN HILL: *Lorence Lugas 1668* (K); TAKUTAN, GIMBUYEN: *Dius Tadong 165* (K).

162.3.2. Ficus aurata Miq., Ann. Mus. Bot. Lugd.-Bat. 3: 291 (1867). Subgenus *Ficus*.

Shrub or small tree to 10 m high. Lowlands, hill forest. Elevation: 600–1400 m.

Material examined. HIMBAAN, LAPAI: *Doinis Soibeh 410* (K); KAUNG: 900 m, *Mujin SAN 26753* (K, L); KIAU NULUH, KINAPASAWON: *Jusimin Duaneh 528* (K); LIWAGU/MESILAU RIVERS: 1300 m, *RSNB 1969* (K, L), 1200 m, *RSNB 2596* (K, L), 1200 m, *RSNB 3002* (K, L); MAMUT: *Amin & Jarius SAN 118210* (K, L); MAMUT ROAD: *Amin & Ismaily SAN 129381* (K); MELANGKAP TOMIS: *Lorence Lugas 2761* (K); MELANGKAP TOMIS, KIPUNGIT RIVER: *Lorence Lugas 666* (K); MENGGIS, MANGGILAN: *Matamin Rumutom 43* (K); MOUNT KINABALU: 600 m, *Corner SAN 23773* (K, L); NALUMAD: *Daim Andau 1137* (K); SAYAP, KENUNUKAN: *Yalin Surunda 14* (K); SERINSIM, LAMBA: *Akungsai Bakia 69* (K); SOSOPODON: 1400 m, *Badak SAN 32303* (K, L), 1100 m, *Sinanggul SAN 38276* (K, L); TAKUTAN, KUMELEPIAN: *Lomudin Tadong 122* (K); TAKUTAN, TAMAS: *Dius Tadong 602* (K), *1008* (K); TANAH MERAH: *Amin & Francis SAN 117364* (K, L).

162.3.3. Ficus aurita Blume, Bijdr. 9: 462 (1825). Subgenus *Sycidium*, Section *Palaeomorphe*.

Shrub or small tree to 7 m high, sometimes epiphytic. Hill forest. Elevation: 800–1200 m.

Material examined. DALLAS: 900–1200 m, *Clemens 26194* (BM, K, L), 900 m, *26611* (BM, K, L), 900 m, *30288* (K, L); LIWAGU/MESILAU RIVERS: 1200 m, *RSNB 2540* (K, L); MAMUT RIVER: 1100 m, *RSNB 1676* (K, L); MINITINDUK GORGE: *Clemens, M. S. 10467* (K); SAYAP: 800–1000 m, *Beaman 9763* (K, L).

162.3.4. Ficus barba-jovis Corner, Gard. Bull. Straits Settlem. 10: 102 (1939). Subgenus *Synoecia*. Type: KAUNG: 500 m, *Carr SFN 27305* (holotype SING n.v.; isotype K!).

Root-climber to 5 m, cauliflorous. Lowlands, lower montane forest. Elevation: 500–1700 m.

Known only from Mount Kinabalu.

Additional material examined. PARK HEADQUARTERS/TENOMPOK: 1500–1700 m, *Kokawa & Hotta 3098* (L); TENOMPOK/DALLAS: 1200 m, *Clemens 26336* (BM, K, L).

162.3.5. Ficus beccarii King, Ann. Roy. Bot. Gard. (Calcutta) 1: 102 (1888). Subgenus *Sycomorus*.

Shrub or small tree, geocarpic with long stolons. Hill forest, lower montane forest. Elevation: 500–2000 m.

Material examined. EASTERN SHOULDER: 1200 m, *RSNB 1528* (K), 500 m, *RSNB 530* (K, L), 1100 m, *RSNB 665* (K, L), 2000 m, *RSNB 709* (K, L); KULUNG HILL: *Corner SAN 23463* (K, L); LIWAGU/MESILAU RIVERS: 1400 m, *RSNB 1975* (K, L), 1200 m, *RSNB 2546* (K, L); MESILAU RIVER: 1400 m, *Meijer & Corner SAN 22438* (K); MT. NUNGKEK: 1100–1200 m, *Clemens 32832* (BM, L).

162.3.6. Ficus benjamina L., Mant. Pl.: 129 (1767). Subgenus *Urostigma*.

Large strangler with few or no aerial roots. Lowlands, sometimes on ultramafic substrate. Elevation: 400 m.

Material examined. MARAK PARAK: *Amin K. & Mansus SAN 118993* (K); MELANGKAP TOMIS, MENURALI: *Lorence Lugas 1156* (K); MELANGKAP TOMIS, PENATARAN RIVER, RATAU: *Lorence Lugas 1732* (K); NALUMAD, KILENGITU: *Daim Andau 527* (K); TAKUTAN: 400 m, *Kuntil SAN 77251* (K, L).

162.3.7. Ficus borneensis Kochummen, Gard. Bull. Singapore 50: 202 (1998). Subgenus Urostigma.

Ficus chewii Kochummen, Gard. Bull. Singapore 50: 203 (1998). Type: LIWAGU/MESILAU RIVERS: 1300 m, *RSNB 1972* (holotype SAN n.v.; isotypes K!, L!).

Strangler. Hill forest. Elevation: 900–1700 m.

Additional material examined. KINASARABAN: 1400 m, *Mikil SAN 38549* (K, L); KUNDASANG: 900 m, *Clemens 29170* (BM, K, L); LUGAS HILL: *Doinis Soibeh 737* (K); MAMUT COPPER MINE: *Aban Gibot SAN 50730* (L); PENIBUKAN: 1200–1500 m, *Clemens 31275* (BM, K, L), 1200 m, *40498* (BM, K, L), 1200 m, *40721* (BM, K, L), 1500 m, *50221* (BM), 1700 m, *50250* (BM), 1500 m, *50340* (BM); PINOSUK: *Amin et al. SAN 123301* (K).

162.3.8. Ficus brunneo-aurata Corner, Gard. Bull. Singapore 17: 436 (1960). Subgenus *Ficus*. Type: MINITINDUK GORGE: *Holttum SFN 26608* (holotype SING n.v.).

Tree to 15 m high. Lowlands, hill forest. Elevation: 400–900 m.

Additional material examined. KAUNG/DALLAS: 400–900 m, *Holttum SFN 25125* (K, L); MAMUT COPPER MINE: *Amin & Francis SAN 117391* (K, L).

162.3.9. Ficus carrii Corner, Gard. Bull. Straits Settlem. 10: 123 (1939). Subgenus *Synoecia*. Type: BUNDU TUHAN: 1400 m, *Carr SFN 27839* (holotype SING n.v.; isotype K!).

Large root-climber, cauliflorous. Hill forest, lower montane forest. Elevation: 1200–1500 m.

Additional material examined. LIWAGU/MESILAU RIVERS: 1200–1500 m, *RSNB 2737* (K, L), 1400 m, *RSNB 2738* (K, L), 1200 m, *RSNB 3007* (K, L); MESILAU RIVER: 1500 m, *RSNB 7003* (K, L); TENOMPOK: 1500 m, *Clemens 26901* (K, L), 1500 m, *29352* (BM, K, L).

162.3.10. Ficus cavernicola C. C. Berg, Blumea 48: 555 (2003). Subgenus *Synoecia*. Type: MESILAU CAVE: 1800 m, *RSNB 4766* (holotype L!; isotype K!).

Root-climber, cauliflorous. Lower montane forest. Elevation: 1800 m.
Known only from Mount Kinabalu.

162.3.11. Ficus cereicarpa Corner, Gard. Bull. Singapore 18: 57 (1960). Subgenus *Sycomorus*.

Tree to 9 m high; fig-bearing branchlets at the base of the trunk, ending in the soil. Hill forest, lower montane forest. Elevation: 600–1500 m.

Material examined. DALLAS: 900 m, *Clemens 26070* (BM, K, L); HIMBAAN, KUNDAYON: *Doinis Soibeh 677* (K); KIBAMBANGAN: 1200 m, *Clemens 34003* (BM, L); KIBAMBANGAN LOBANG: 1400 m, *Clemens 32561* (BM, L); PENATARAN RIVER/DENGIRANUK: *Lorence Lugas 1902* (K); PORING HOT SPRINGS/LANGANAN FALLS: 600–1000 m, *Kokawa & Hotta 4906* (L); TAHUBANG RIVER: 1200 m, *Nooteboom & Aban 1562* (L); TENOMPOK: 1500 m, *Clemens 29585* (BM, K, L).

162.3.12. Ficus crassiramea Miq., Ann. Mus. Bot. Lugd.-Bat. 3: 286 (1867). Subgenus *Urostigma*.

a. subsp. **crassiramea**

Large strangler, without aerial roots from the branches. Hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 1200–1500 m.

Material examined. LIWAGU/MESILAU RIVERS: 1200 m, *Corner 2930* (K, L); PENIBUKAN: 1200–1500 m, *Clemens 30544* (BM, K, L).

b. subsp. **stupenda** (Miq.) C. C. Berg, Blumea 49: XX (2004). Subgenus *Urostigma*.

Ficus stupenda Miq., Ann. Mus. Bot. Lugd.-Bat. 3: 286 (1867).

Very large strangler, killing its host. Hill forest. Elevation: 1200 m.

Material examined. EASTERN SHOULDER: 1200 m, *Corner 1722* (K); LIWAGU/MESILAU RIVERS: 1200 m, *Corner 2845* (K); PENIBUKAN: 1200 m, *Clemens 31704* (BM, L); TENOMPOK/DALLAS: 1200 m, *Clemens 27132* (BM, K, L).

162.3.13. Ficus delosyce Corner, Gard. Bull. Singapore 17: 391 (1960). Subgenus *Urostigma*.

Large, spreading strangler, not rooting from the branches. Lowlands.

Material examined. NALUMAD: *Amin et al. SAN 114396* (K).

162.3.14. Ficus deltoidea Jack, Subgenus Ficus.

a. subsp. **deltoidea**

Shrub to *c.* 4 m high. Hill forest. Elevation: 500–1900 m.

Material examined. DALLAS: 900 m, *Clemens 26133* (K, L); EASTERN SHOULDER: 1100 m, *RSNB 589* (K); HEMPUEN HILL: *Mansus & Amin SAN 122203* (K); HIMBAAN, PATOD: *Doinis Soibeh 165* (K); KIAU NULUH: *Jusimin Duaneh 68* (K); KIAU VIEW TRAIL: 1600 m, *Ogata 11274* (L); KINASARABAN: *Koningking SAN 28938* (K, L); KOKOHITAN: 800 m, *Carr SFN 27340* (K); LIWAGU/MESILAU RIVERS: 1400 m, *Corner 2775* (K, L); LUGAS HILL: *Doinis Soibeh 746* (K); MELANGKAP TOMIS, PENATARAN RIVER: *Lorence Lugas 2569* (K); PARK HEADQUARTERS: 1700 m, *Kanis SAN 50111* (K); PENATARAN RIVER: 500 m, *Beaman 8875* (K, L, MSC); PENIBUKAN: 1200–1500 m, *Clemens 30648* (BM, K, L), 1100 m, *40445* (BM, L), 1200 m, *40445A* (BM); PORING: *Meliden Giking 15* (K); PORING HOT SPRINGS: 700–800 m, *Beaman 10910* (K, MSC); SOSOPODON: 1700 m, *Battah SAN 33916* (K, L), 1900 m, *Mikil SAN 28880* (K, L), 1100 m, *SAN 38725* (K, L), 1400 m, *Putan & Tikau SAN 33712* (K, L); TENOMPOK: 1500 m, *Clemens 28131* (BM, L); TENOMPOK/DALLAS: 1200 m, *Clemens 26133* (BM), 1200 m, *27586* (K, L); TINGGENGUKEN: *Lomudin Tadong 413* (K).

162.3.15. Ficus dens-echini Corner, Gard. Bull. Straits Settlem. 10: 130 (1939). Subgenus *Synoecia*. Type: KINATEKI RIVER: 1200 m, *Carr SFN 26807* (holotype SING n.v.).

Large root-climber. Lowlands, hill forest. Elevation: 900–1200 m.
Known only from Mount Kinabalu.

Additional material examined. DALLAS: 900 m, *Clemens 26076* (BM, K, L), 900–1200 m, *26244* (BM, K, L), 900 m, *27199* (K, L); MELANGKAP TOMIS, MINORIT: *Lorence Lugas 806* (K); MELANGKAP TOMIS, PARAMAT RIVER, TELUNGAN: *Lorence Lugas 1474* (K).

162.3.16. Ficus cf. **dens-echini** Corner, Gard. Bull. Straits Settlem. 10: 130 (1939). Subgenus *Synoecia*.

Root-climber. Hill forest. Elevation: 1200 m.

Material examined. LIWAGU/MESILAU RIVERS: 1200 m, *RSNB 2632* (K, L).

162.3.17. Ficus depressa Blume, Bijdr. 9: 450 (1825). Subgenus *Urostigma*.

Strangler with slender free-hanging(?) aerial roots. Lowlands, hill forest. Elevation: 900 m.

Material examined. DALLAS: 900 m, *Clemens 27017* (BM, K, L); MELANGKAP TOMIS, DAPAYA: *Lorence Lugas 1836* (K); MELANGKAP TOMIS, PARAMAT: *Lorence Lugas 2259* (K); MELANGKAP TOMIS, PENATARAN RIVER: *Lorence Lugas 1110* (K).

162.3.18. Ficus detonsa Corner, Gard. Bull. Singapore 18: 18 (1960). Subgenus *Synoecia*. Type: KILEMBUN RIVER: 2300 m, *Clemens 33456* (holotype BM!; isotypes K!, L!).

Woody root-climber. Lower montane forest, upper montane forest, on ultramafic substrate. Elevation: 1200–2900 m.

Additional material examined. KILEMBUN BASIN: 2900 m, *Clemens 33832* (BM, L); LAYANG-LAYANG: *Amin et al. SAN 117258* (K, L); MENTEKI RIDGE: 2400 m, *RSNB 7142* (K, L); MESILAU CAVE: 1800 m, *RSNB 4806* (K); MINODTUHAN LOBANG: 2300 m, *Clemens 33856* (BM); PENIBUKAN: 1200–1500 m, *Clemens 31443* (BM, K, L); POWER STATION/LAYANG-LAYANG: 2100 m, *Ogata 11162* (L).

162.3.19. Ficus disticha Blume, Bijdr. 9: 458 (1825). Subgenus *Synoecia*.

a. subsp. **disticha**

Scandent shrub or root-climber. Hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 1200–2000 m.

Material examined. EASTERN SHOULDER: 1600 m, *Collenette 820* (K); EASTERN SHOULDER, CAMP 2: 2000 m, *RSNB 1063* (K, L); GOLF COURSE SITE: 1700 m, *Beaman 9384* (K, MSC); GURULAU SPUR: 1700 m, *Clemens 50763* (BM, K, L); KIBAMBANGAN RIVER: 1200–1500 m, *Clemens 34377* (BM, L); KILEMBUN BASIN: 1400 m, *Clemens 33972* (BM, L); LIWAGU RIVER TRAIL HEAD: 1800–1900 m, *Beaman 11277* (K, MSC); MAMUT COPPER MINE: *Aban Gibot SAN 50742* (L); MARAI PARAI SPUR: 1500 m, *Clemens 33139* (BM, K, L); MESILAU CAVE: 1800 m, *RSNB 4793* (K, L); MESILAU RIVER: 1500 m, *RSNB 4078* (K, L), 1500 m, *RSNB 4274* (K, L), 1500 m, *RSNB 4281* (K, L); PARK HEADQUARTERS/POWER STATION: 1800 m, *Meijer SAN 37987* (K, L); PENIBUKAN: 1200–1500 m, *Clemens 31490* (BM), 1200–1500 m, *31648* (BM, K, L), 1200 m, *40428* (BM, K, L), 1700 m, *50256* (BM); PINOSUK PLATEAU: 1500–1800 m, *Chow & Leopold SAN 76420* (K, L); SOSOPODON: 1400–1500 m, *Kokawa & Hotta 4536* (L), 1400 m, *Mikil SAN 46779* (K, L); TENOMPOK: *Clemens s.n.* (BM), 1500 m, *26839* (K, L), 1500 m, *26839A* (BM), 1500 m, *29863* (BM, K, L), 1500 m, *30287* (K), 1800 m, *Mujin SAN 33589* (K, L).

162.3.20. Ficus dubia Wall. ex King, Sp. Ficus 1: 46, t. 56 (1887). Subgenus *Urostigma*.

Large strangler without free-hanging aerial roots from the branches. Hill forest, lower montane forest. Elevation: 1200 m.

Material examined. EASTERN SHOULDER: 1200 m, *RSNB 1525* (K, L); MESILAU CAMP: *Poore 705* (L).

162.3.21. Ficus endospermifolia Corner, Gard. Bull. Singapore 17: 434 (1960). Subgenus *Ficus*. Type: PARK HEADQUARTERS: 1600 m, *Wood & Wyatt-Smith SAN A 4492* (holotype SAN n.v.; isotype L!).

Small to medium-sized tree. Hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 800–1800 m.

Additional material examined. BAMBANGAN: *Amin et al. SAN 121007* (K, L); KILEMBUN RIVER: 1800 m, *Clemens 34381* (BM, K, L); KINASARABAN HILL: 1400 m, *Sinclair et al. 8974* (K); KUNDASANG: 1300 m, *Wood & Kapis SAN 15444* (L); LIWAGU/MESILAU RIVERS: 1500 m, *RSNB 1978* (K, L), 1200 m, *RSNB 2655* (K, L), 1300 m, *RSNB 1968* (K, L), 1500 m, *RSNB 1980* (K, L); MAMUT COPPER MINE/BAMBANGAN RIVER: 1600 m, *Beaman 11013* (K, MSC); MESILAU RIVER: 1500 m, *RSNB 7028* (K, L); MOUNT KINABALU: 800 m, *Foster & Puasa 3621* (K); PARK HEADQUARTERS/TENOMPOK: *Kokawa & Hotta 3052* (L); SOSOPODON: 1400 m, *Aban Gibot SAN 62223* (K), 1400 m, *Mikil SAN 38515* (K, L), 1400 m, *Mikil & Tikau SAN 34502* (K, L), 1200 m, *Sadau SAN 49729* (K, L), *Saikeh & Ampon SAN 71823* (K, L); TAHUBANG RIVER: 1000 m, *Nooteboom & Aban 1535* (L); TENOMPOK: 1500 m, *Clemens 28223* (BM, K, L), 1300 m, *Smythies S. 10649* (L).

162.3.22. Ficus eumorpha Corner, Gard. Bull. Singapore 17: 439 (1960). Subgenus *Ficus*. Type: TIBABAR RIVER: *Carr SFN 27566* (holotype SING n.v.).

Shrub or small to medium-sized tree. Lower montane forest on ultramafic substrate. Elevation: 1800 m.

Additional material examined. MARAI PARAI SPUR: 1800 m, *Clemens 32524* (BM, K, L); MESILAU CAVE: 1800 m, *RSNB 4728* (K, L), 1800 m, *RSNB 4772* (K, L); MESILAU RIDGE: *Poore H 256* (K, L).

162.3.23. Ficus fistulosa Reinw. ex Blume, Bijdr. 9: 470 (1825). Subgenus *Sycomorus*.

Shrub or small tree, cauliflorous near the base. Hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 500–1800 m.

Material examined. BUNDU TUHAN: 1400 m, *Carr SFN 27837* (K), *Doinis Soibeh 620* (K); DALLAS: 900 m, *Clemens 27585* (BM, K, L); DALLAS/TENOMPOK: 1200 m, *Clemens 27581* (BM, K, L); EASTERN SHOULDER: 900 m, *RSNB 967* (K, L), 1000 m, *RSNB 1958* (K, L); KIAU NULUH: *Jusimin Duaneh 108* (K); KIAU NULUH, WANTAI: *Jusimin Duaneh 518* (K); KINASARABAN: 1400 m, *Badak SAN 32338* (K, L), 1300 m, *SAN 32346* (K, L); KUNDASANG: 1300 m, *Wood & Kapis SAN 16977* (L); LAKANG, LOLOMOHON: *Daim Andau 474* (K); LIWAGU/MESILAU RIVERS: 1300 m, *RSNB 1970* (K, L), 1500 m, *RSNB 2831* (K, L); LUGAS HILL: 1300 m, *Beaman 8434* (K, MSC), 1300 m, *8476* (K, MSC), 1300 m, *10576* (MSC); MESILAU RIVER: 1400 m, *RSNB 7057* (K); MOUNT KINABALU: 800 m, *Foster & Puasa 3465* (K); MT. TEMBUYUKEN: 1200–1800 m, *Meijer SAN 34616* (K, L); PENATARAN RIVER: 500 m, *Beaman 9311* (MSC); PENIBUKAN: 1200–1500 m, *Clemens 31131* (BM), 1200–1500 m, *31221* (BM, K, L), 1200 m, *32008* (BM, K, L); PINAWANTAI: *Shea & Aban SAN 76980* (K, L); PINOSUK PLATEAU: 1200 m, *RSNB 1633* (K); SAYAP: 900 m, *Latiff 3876* (K); TENOMPOK: 1500–1600 m, *Beaman 9450* (K, MSC), 1500 m, *Clemens s.n.* (BM), 1500 m, *28488* (BM, K,

L), 1700 m, *Kokawa 6288* (L), 1400 m, *Wood & Wyatt-Smith SAN A 4452* (L); TETEMBELEN: *Lomudin Tadong 547* (K); TINEKUK FALLS: 1500 m, *Clemens 40798* (BM, K, L); WEST MESILAU RIVER: 1600 m, *Beaman 7509* (K, MSC); WUSSER FALLS LOBANG: 1400 m, *Clemens 40211* (BM, K, L).

162.3.24. Ficus forstenii Miq., Ann. Mus. Bot. Lugd.-Bat. 3: 214 (1867). Subgenus *Urostigma.*

Large strangler. Lowlands or hill forest.

Material examined. RANAU/PORING ROAD: *Corner SAN 23465* (K, L).

162.3.25. Ficus francisci Winkler, Bot. Jahrb. Syst. 49: 363 (1913). Subgenus *Sycomorus.*

Small tree, cauliflorous at base. Hill forest. Elevation: 1200–1400 m.

Material examined. MAMUT RIVER: 1200 m, *RSNB 1614* (K, L); MESILAU RIVER: 1400 m, *Corner & Meijer SAN 22434* (K).

162.3.26. Ficus fulva Reinw. ex Blume, Bijdr. 9: 478 (1825). Subgenus *Ficus.*

Shrub or small to medium-sized tree. Lowlands, hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 1300–1500 m.

Material examined. BUNDU TUHAN/TENOMPOK: 1400 m, *Sinclair et al. 9000* (K); KAUNG: *Maikin Lantoh SAN 108960* (K, L); KIAU NULUH: *Amin & Francis SAN 116175* (K, L), *Jusimin Duaneh 4* (K); KITUNTUL: *Amin et al. SAN 123592* (K, L); KUNDASANG: 1300 m, *Carson SAN 28008* (K, L); LIWAGU/MESILAU RIVERS: 1500 m, *RSNB 2572* (K, L), 1400 m, *RSNB 2739* (K, L); LOHAN: *Amin & Jarius SAN 121195* (K, L); MAMUT ROAD: *Amin & Peter SAN 129384* (K, L); MELANGKAP TOMIS, BONGKOK: *Lorence Lugas 1395* (K); MELANGKAP TOMIS, DOMBOILIK: *Lorence Lugas 384* (K); MELANGKAP TOMIS, MT. DOA: *Lorence Lugas 589* (K); MELANGKAP TOMIS, SIBA-SIBA: *Lorence Lugas 1114* (K); MENSAHABAN RIVER: *Amin & Francis SAN 117305* (K, L); PORING: *Amin et al. SAN 121488* (K), *SAN 123103* (K, L); PORING, MURUK: *Sani Sambuling 224* (K); PORING, ULU TARA: *Sani Sambuling 452* (K); SAYAP, KENUNUKAN: *Tungking Simbayan 36* (K); SERINSIM, NADA'AN: *Kinsun Bakia 503* (K); TAKUTAN: *Shea & Aban SAN 77193* (K, L); TAKUTAN, KETENEBEN: *Dius Tadong 693* (K).

162.3.27. Ficus glandulifera (Wall. ex Miq.) King, Ann. Roy. Bot. Gard. (Calcutta) 1: 143 (1888). Subgenus *Ficus.*

Small to medium-sized tree. Hill forest, lower montane forest. Elevation: 1200–1400 m.

Material examined. EASTERN SHOULDER: 1200 m, *RSNB 2976* (K, L); KINASARABAN: 1400 m, *Badak SAN 32342* (K, L); KUNDASANG: 1200 m, *Wood & Kapis SAN 16231* (L); MELANGKAP TOMIS, GENSURAI: *Lorence Lugas 112* (K); PENIBUKAN: 1200 m, *Clemens 40396* (BM, K, L); SOSOPODON: 1400 m, *Mikil SAN 34501* (K, L), 1400 m, *SAN 46708* (K, L).

162.3.28. Ficus globosa Blume, Bijdr. 9: 449 (1825). Subgenus *Urostigma.*

Sprawling climber, producing slender free-hanging(?) aerial roots. Lowlands.

Material examined. MELANGKAP TOMIS, LABI: *Lorence Lugas 2315* (K); TAKUTAN, GADAN: *Dius Tadong 108* (K).

162.3.29. Ficus grandiflora Corner, Gard. Bull. Straits Settlem. 10: 133 (1939). Subgenus *Synoecia.* Type: DALLAS: 900 m, *Clemens 30290* (holotype SING n.v.; isotypes K!, L!).

Large root-climber. Hill forest. Elevation: 900–1200 m.

Additional material examined. DALLAS: 900–1200 m, *Clemens 27139* (BM, K, L); KIAU/DALLAS: 900 m, *Clemens 26332* (BM, K, L).

162.3.30. Ficus gul Lauterb. & K. Schum., Fl. Schutzgeb. Suedsee: 278 (1900). Subgenus *Sycidium*, Section *Sycidium.*

Small to medium-sized tree. Lowlands, hill forest, in disturbed situations. Elevation: 500 m.

Material examined. BAMBANGAN: *Amin & Francis SAN 117431* (K); HIMBAAN, GIMAN: *Doinis Soibeh 360* (K); KIAU: *van Welzen 949* (K, L); MENGGIS: *Matamin Rumutom 509* (K); MENSAHABAN RIVER: *Amin & Francis SAN 116013* (K); NALUMAD: 500 m, *Shea & Aban SAN 77267* (K, L); PINOSUK: *Amin et al. SAN 123161* (K); PORING: *Amin et al. SAN 117415* (K, L); SERINSIM/MARAK PARAK: *Amin et al. SAN 118909* (K, L); TAKUTAN, GIMBUYEN: *Dius Tadong 161* (K); TAKUTAN, GUREI: *Lomudin Tadong 272* (K); TAKUTAN, SENSEGEN: *Dius Tadong 251* (K).

162.3.31. Ficus hemsleyana King, Ann. Roy. Bot. Gard. (Calcutta) 1: 112 (1888). Subgenus *Sycidium* Section *Palaeomorphe.*

Ramiflorous to cauliflorous shrub or small tree, often epiphytic. Lowlands, hill forest, sometimes on ultramafic substrate. Elevation: 500–1600 m.

Material examined. DALLAS: 900 m, *Clemens 27620* (BM, K, L); EASTERN SHOULDER: 1200 m, *RSNB 1542* (K, L); HIMBAAN, KINATONGAN: *Doinis Soibeh 287* (K); HIMBAAN, TUNTURUGUNG: *Doinis Soibeh 338* (K); KIAU: *Clemens, M. S. 10165* (K); KUNDASANG: 1200 m, *Wood & Wyatt-Smith SAN A 4417* (L); LIWAGU/MESILAU RIVERS: 1200 m, *RSNB 2513* (K, L); MARAI PARAI/KIAU NULUH: *Berhaman SAN 134856* (L); MELANGKAP KAPPA: 700–1000 m, *Beaman 8785* (K, L, MSC); MELANGKAP TOMIS, DUDAN MINI HIDRO: *Lorence Lugas 74* (K); MELANGKAP TOMIS, MENSOWODOI: *Lorence Lugas 412* (K); MELANGKAP TOMIS, NOHUTU: *Lorence Lugas 2498* (K); MESILAU RIVER: 1400 m, *RSNB 7081* (K, L), 1400–1600 m, *Kokawa & Hotta 4437* (L); MINITINDUK GORGE: 900 m, *Clemens 29943* (BM, K, L); PENATARAN RIVER: 500 m, *Beaman 9318* (K, L, MSC); SAYAP, LIPOSU RIVER: *Yalin Surunda 61* (K); SOSOPODON/LIWAGU RIVER: 1200–1500 m, *Kokawa & Hotta 4641* (L); TAHUBANG RIVER: 1000 m, *Nooteboom & Aban 1536* (L); TAKUTAN, GIMBUWES: *Lomudin Tadong 278* (K).

162.3.32. Ficus heteropleura Blume, Bijdr. 9: 466 (1825). Subgenus *Sycidium* Section *Palaeomorphe*.

Scandent shrub or epiphytic climber. Lowlands, hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 600–1500 m.

Material examined. EASTERN SHOULDER: 800 m, *Mikil SAN 41919* (K, L); HIMBAAN, KINATONGAN: *Doinis Soibeh 825* (K); HIMBAAN, PITAS: *Doinis Soibeh 248* (K); KIAU NULUH: *Jusimin Duaneh 74* (K); KIAU NULUH, WANTAI: *Jusimin Duaneh 421* (K); KUNDASANG: 1300 m, *Brand et al. SAN 25327* (K); LUGAS HILL: 1300 m, *Beaman 8130* (K, MSC); MARAK PARAK: *Pius et al. SAN 118921* (K, L); MELANGKAP TOMIS: *Lorence Lugas 2770* (K); MELANGKAP TOMIS, KAPAZAAN RIVER: *Lorence Lugas 754* (K); MELANGKAP TOMIS, MT. DOA: *Lorence Lugas 990* (K); MESILAU CAMP: *Mikil SAN 38739* (K, L); PENIBUKAN: 1200 m, *Clemens 30561* (BM, K, L), 1200 m, *40839* (BM), 1500 m, *50375* (BM), 1500 m, *50406* (BM, L); PINAWANTAI: 600 m, *Shea & Aban SAN 76918* (K, L); PORING, BAMBANGAN: *Sani Sambuling 604* (K); PORING, RUGADING: *Collector unknown SAN 141732* (L); SOSOPODON: 1400 m, *Hou 238* (K, L), *Mikil SAN 28889* (K, L), 1400 m, *SAN 46712* (K); TAKUTAN: 800 m, *Shea & Aban SAN 77224* (K, L).

162.3.33. Ficus inaequipetiolata Merr., Philipp. J. Sci. 21: 517 (1922). Subgenus *Ficus*.

Ficus paramorpha Corner, Gard. Bull. Singapore 17: 440 (1960). Type: KINATEKI RIVER: 2100 m, *Clemens 31777* (holotype L!; isotypes BM!, K!).

Shrub or small tree. Hill forest, lower montane forest, especially on ultramafic substrate. Elevation: 1000–2100 m.

Additional material examined. LUGAS HILL: 1300 m, *Beaman 8457* (K, L), 1300 m, *10561* (K, L); MARAI PARAI SPUR: 1500 m, *Clemens 32523* (BM); MARAI PARAI?: *Wong et al. SAN 134190* (K, L); PORING/NALUMAD: 1000 m, *Mujin SAN 26720* (K, L).

162.3.34. Ficus laevis Blume, Bijdr. 9: 437 (1825). Subgenus *Synoecia*.

Large climber. Hill forest. Elevation: 1300 m.

Material examined. KUNDASANG: 1300 m, *RSNB 2777* (K).

162.3.35. Ficus lanata Blume, Bijdr. 9: 441 (1825). Subgenus *Synoecia*.

Ficus lanata Blume var. *foveolata* Corner, Gard. Bull. Singapore 18: 16 (1960). Type: PENIBUKAN: 1200–1500 m, *Clemens 31603* (holotype L!; isotypes BM!, K!).

Large climber. Hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 900–1500 m.

Additional material examined. HIMBAAN, SIBA: *Doinis Soibeh 440* (K); KUNDASANG: 900 m, *Clemens 29169* (BM, K, L), 1200 m, *RSNB 3008* (K, L); PENIBUKAN: 1200 m, *Clemens 35110* (BM, L), 1200 m, *40723* (BM, K, L); TENOMPOK: 1500 m, *Clemens 28525* (BM, K, L); TENOMPOK/DALLAS: 1200–1500 m, *Clemens 26337* (BM, K).

162.3.36. Ficus lepicarpa Blume, Bijdr. 9: 459 (1825). Subgenus *Sycomorus*.

Small spreading tree. Hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 700–1500 m.

Material examined. BAMBANGAN RIVER: *Amin & Jarius SAN 116583* (L); KIAU NULUH: *Jusimin Duaneh 70* (K); KIAU NULUH, HAYA-HAYA RIVER: *Jusimin Duaneh 201* (K); KINATEKI RIVER: 1500 m, *Clemens 32934* (BM); LANGANAN FALLS: 1200 m, *Beaman 10992* (K); MAMUT RIVER: 1200 m, *RSNB 1613* (K, L); MELANGKAP TOMIS, LAKANG: *Lorence Lugas 1776* (K); MELANGKAP TOMIS, LIBANG: *Lorence Lugas 1240* (K); MELANGKAP TOMIS, PENATARAN RIVER: *Lorence Lugas 38* (K), *42* (K); MENGGIS, NORUYOU: *Matamin Rumutom 188* (K); MENSAHABAN RIVER: *Amin et al. SAN 116012* (K); MINITINDUK GORGE: 900–1200 m, *Clemens 29666* (BM, K, L); PENATARAN BASIN, WUSSER RIVER: 900–1200 m, *Clemens 34206* (BM, L); PENIBUKAN: 1200–1500 m, *Clemens 30662* (BM, K, L); PORING HOT SPRINGS/KIPUNGIT FALLS: *Ogata 11336* (L); SAYAP: 700 m, *Beaman 9460* (K, MSC); SAYAP, WARIU RIVER: *Yalin Surunda 59* (K); SERINSIM: *Akungsai Bakia 607* (K); SERINSIM, WANAN: *Kinsun Bakia 458* (K); SOSOPODON/LIWAGU RIVER: 1200–1500 m, *Kokawa & Hotta 4702* (L), 1200–1500 m, *4705* (L); TAHUBANG RIVER: 900 m, *Nooteboom & Aban 1504* (L); TAKUTAN, TUNGEU: *Lomudin Tadong 109* (K); TENOMPOK: 1500 m, *Clemens 28449* (BM, K, L); WUSSER RIVER: 900 m, *Clemens 34203* (BM, L).

162.3.37. Ficus leptocalama Corner, Gard. Bull. Singapore 17: 483 (1960). Subgenus *Sycidium* Section *Palaeomorphe*. Type: MINITINDUK RIVER: 1000 m, *Carr SFN 26829* (holotype SING n.v.).

Small tree, sometimes geocarpic. Lowlands, hill forest, lower montane forest. Elevation: 800–1500 m.

Additional material examined. EASTERN SHOULDER: 1100–1200 m, *RSNB 1530* (K, L), 1200 m, *RSNB 1536* (K, L); MENGGIS, TOU TONG: *Matamin Rumutom 255* (K); NALUMAD, NALUMAD RIVER: *Daim Andau 870* (K); PAKA: *Julius K. SAN 124866* (K, L); SAYAP: 800–1000 m, *Beaman 9775* (K, L); TENOMPOK: 1500 m, *Clemens 25254* (L), 1500 m, *26986* (BM, K, L).

162.3.38. Ficus leptogramma Corner, Gard. Bull. Singapore 17: 473 (1960). Subgenus *Sycidium* Section *Sycidium*. Type: KAUNG: 500 m, *Carr SFN 27328* (holotype SING n.v.).

Small tree with spreading branches and drooping twigs. Lowlands, hill forest. Elevation: 400–1200 m.

Additional material examined. LIWAGU/MESILAU RIVERS: 1200 m, *RSNB 2534* (K, L), 1200 m, *RSNB 2852* (K, L), 1200 m, *RSNB 2856* (K, L); MELANGKAP TOMIS, KINATEKI: *Lorence Lugas 466* (K); MELANGKAP TOMIS, KOPORINGAN: *Lorence Lugas 2555* (K); TARAWAS: 400 m, *Shea & Aban SAN 76728* (K).

162.3.39. Ficus macilenta King, Ann. Roy. Bot. Gard. (Calcutta) 1: 156, t. 196 (1888). Subgenus *Ficus*.

Ficus gibbsiae Ridl., J. Linn. Soc., Bot. 42: 137 (1914). Type: GURULAU SPUR: 1500 m, *Gibbs 4008* (syntype BM!; isosyntype K!); KIAU: 900 m, *Gibbs 3972* (syntype BM!).

Ficus macilenta King var. *gibbsiae* (Ridl.) Corner, Gard. Bull. Singapore 17: 439 (1960).

Ficus macilenta King var. *ilicifolia* Corner, Gard. Bull. Singapore 17: 439 (1960). Type: TENOMPOK/RANAU: *Carr SFN 26952* (holotype SING n.v.).

Shrub or treelet. Hill forest, lower montane forest. Elevation: 900–2100 m.

Additional material examined. BAMBANGAN RIVER: 1500 m, *RSNB 4446* (K, L), 1500 m, *RSNB 4647* (K); BUNGOL: 900 m, *Clemens 51477* (BM, K); DALLAS: 900 m, *Clemens 26938* (BM, K, L), 900 m, *30291* (K); DALLAS/KAUNG: 900 m, *Clemens 51746* (BM, K); GURULAU SPUR: 1500–2100 m, *Clemens 50712* (BM, K, L), 1400–1500 m, *Kanis & Kuripin SAN 53964* (K, L); KIAU NULUH: *Jusimin Duaneh 87* (K); KIAU NULUH, BOBOD: *Jusimin Duaneh 501* (K); KIAU NULUH, KOGIITAN: *Jusimin Duaneh 559* (K); KIAU NULUH, WANTAI: *Jusimin Duaneh 388* (K); LIWAGU/MESILAU RIVERS: 1200 m, *RSNB 2648* (K, L); MESILAU CAVE TRAIL: 1900 m, *Mikil SAN 38482* (K, L); MESILAU RIVER: 1500 m, *RSNB 4186* (K, L); MOUNT KINABALU: 2100 m, *Wong et al. WKM 93-3* (L); NABALU: *Amin & Jarius SAN 116104* (K); PARK HEADQUARTERS: *Amin & Thomas SAN 117325* (K); TAHUBANG RIVER: 900 m, *Nooteboom & Aban 1521* (K, L).

162.3.40. Ficus megaleia Corner, Gard. Bull. Singapore 18: 57 (1960). Subgenus *Sycomorus*.

Ficus megaleia Corner var. *multinervia* Corner, Gard. Bull. Singapore 19: 400 (1962). Type: EASTERN SHOULDER: 1000 m, *RSNB 970* (holotype K!; isotype L!).

Ficus megaleia Corner var. *subuncinata* Corner, Gard. Bull. Singapore 19: 400 (1962). Type: EASTERN SHOULDER: 1500 m, *RSNB 1576* (holotype K!; isotype L!).

Small tree, cauliflorous and/or geocarpic on stolons. Hill forest, lower montane forest. Elevation: 900–1500 m.

Additional material examined. DALLAS: 900 m, *Clemens s.n.* (BM); PENIBUKAN: 1200–1500 m, *Clemens s.n.* (BM), 1200–1500 m, *30621* (BM, K, L).

162.3.41. Ficus melinocarpa Blume, Bijdr. 9: 460 (1825). Subgenus *Sycidium* Section *Sycidium*.

Shrub or small tree. Lowlands in secondary situations. Elevation: 500 m.

Material examined. MENGGIS: *Matamin Rumutom 85* (K); NARAWANG: *Amin & Jarius SAN 119845* (K, L), *Amin et al. SAN 105646* (K, L); PINAWANTAI: 500 m, *Shea & Aban SAN 76964* (K, L).

162.3.42. Ficus microcarpa L. f., Sp. Pl. Suppl.: 442 (1781). Subgenus *Urostigma*.

Large strangler with many slender aerial roots from the branches. Lowlands.

Material examined. NALUMAD/TAKUTAN: *Daim Andau 149* (K).

162.3.43. Ficus midotis Corner, Gard. Bull. Singapore 17: 482 (1960). Subgenus *Sycidium* Section *Palaeomorphe*. Type: MOUNT KINABALU: *Carr SFN 26324* (holotype SING n.v.).

Shrub, tree or climber, often hemi-epiphytic. Hill forest, lower montane forest, possibly rarely in upper montane forest, sometimes on ultramafic substrate. Elevation: 800–2700 m.

Additional material examined. BAMBANGAN RIVER: 1500 m, *RSNB 4641* (K); HEMPUEN HILL: *Amin & Pius SAN 106681* (K, L); HIMBAAN, SIBA: *Doinis Soibeh 449* (K); KIAU NULUH: *Jusimin Duaneh 64* (K); KIAU NULUH, TINEKUK: *Jusimin Duaneh 377* (K); KIBAMBANGAN LOBANG: 1400 m, *Clemens 32617* (BM, L), 1200 m, *33997* (BM); KILEMBUN BASIN: 1400 m, *Clemens 33924* (BM, L); KULUNG HILL: 800 m, *Beaman 7779* (K, MSC), 800 m, *7805* (K, MSC); LANGANAN FALLS: *Sani Sambuling 739* (K); LUGAS HILL: 1300 m, *Beaman 8110* (K, L, MSC), 1300 m, *8477* (MSC), 1300 m, *10580* (K, L, MSC); MELANGKAP TOMIS: 900–1000 m, *Beaman 8398* (K, L, MSC), 900–1000 m, *8994* (A); MELANGKAP TOMIS, DANDON: *Lorence Lugas 1428* (K); MELANGKAP TOMIS, KAPADAS RIVER: *Lorence Lugas 734* (K), *737* (K); MELANGKAP TOMIS, PENATARAN RIVER, SUMINOMBOL: *Lorence Lugas 1800* (K); MESILAU CAMP: 1500 m, *RSNB 6028* (K, L); MESILAU RIVER: 1500 m, *RSNB 4131* (K), 1500 m, *RSNB 7009* (K), 1500 m, *RSNB 7032* (K), 1400 m, *RSNB 7066* (K); MOUNT KINABALU: 1500 m, *Taipin SAN 47952* (K, L); NALUMAD: *Sigin et al. SAN 112254* (K, L); NALUMAD, TEMPIASAHON: *Daim Andau 514* (K); PARK HEADQUARTERS: 1500 m, *Clemens 27685* (BM, K, L); PENATARAN RIVER: 2700 m, *Clemens 33643* (BM); PENIBUKAN: 1200–1500 m, *Clemens s.n.* (BM, BM, K, L), 1200 m, *30624* (BM), 1200–1500 m, *30657* (BM, L), 1200–1500 m, *31350* (BM, L), 1200–1500 m, *31539* (BM, L), 1200–1500 m, *31551* (BM, K, L), 1200 m, *32013* (BM), 1200 m, *32222* (BM), 1200 m, *40392* (BM, K); PINOSUK PLATEAU: 1700 m, *RSNB 1812* (K, L); PORING/NALUMAD: *Ogata 11351* (L); TENOMPOK: 1100–1400 m, *Clemens s.n.* (BM), 1500 m, *28667* (BM, K, L), 1500 m, *30294* (K); TENOMPOK/KUNDASANG: 1500 m, *Clemens 29650 bis* (BM, K, L); TINEKUK FALLS: 1800 m, *Clemens 40624* (BM); WEST MESILAU RIVER: 1600–1700 m, *Beaman 8640* (K, L, MSC).

162.3.44. Ficus montana Burm. f., Fl. Indica: 226 (1768). Subgenus *Sycidium* Section *Sycidium*.

Shrub, often creeping. Lowlands, especially on ultramafic substrate.

Material examined. BAMBANGAN: *Amin et al. SAN 117896* (K); MARAK PARAK, GURION: *Jibrin Sibil 135* (K); MENGGIS: *Matamin Rumutom 86* (K); MENGGIS, KIKULAT: *Matamin Rumutom 74* (K); SERINSIM: *Kinsun Bakia 411* (K); SERINSIM, MENGGIS RIVER: *Kinsun Bakia 43* (K).

162.3.45. Ficus nervosa Heyne ex Roth

a. subsp. **pubinervis** (Blume) C. C. Berg, Blumea 48: 298 (2003). Subgenus *Pharmacosycea*.

Medium-sized to large tree, buttressed. Lower montane forest.

Material examined. KIAU NULUH, BUBUKON: *Jusimin Duaneh 362* (K); MELANGKAP TOMIS, MINORIT: *Lorence Lugas 1246* (K); MESILAU RIVER: *Tikau SAN 28950* (K, L).

162.3.46. Ficus nota (Blanco) Merr., Philipp. Gov. Lab. Bur. Bull. 17: 10 (1904). Subgen. *Sycomorus*.

Small tree. Lowlands in secondary situations. Elevation: 900 m.

Material examined. KIPUNGIT RIVER: 900 m, *RSNB 660* (K); PANGAPUYAN BARU; GURION: *Jibrin Sibil 141* (K); SERINSIM: *Jibrin Sibil 276* (K).

162.3.47. Ficus obscura Blume, Bijdr. 9: 474 (1825). Subgenus *Sycidium* Section *Palaeomorphe*.

Ficus obscura Blume var. *lanata* Kochummen, Gard. Bull. Singapore 50: 215 (1998).

Shrub or treelet, often hemi-epiphytic. The shrubs of this group have clasping roots. Lowlands, hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 500–1500 m.

Material examined. BAMBANGAN: *Amin et al. SAN 117883* (K); HIMBAAN, SIBA: *Doinis Soibeh 222* (K); KIAU NULUH, SUMBILING: *Jusimin Duaneh 323* (K); LIWAGU/MESILAU RIVERS: 900 m, *RSNB 2620* (K, L); MELANGKAP TOMIS, MOGUNG: *Lorence Lugas 204* (K); MELANGKAP TOMIS, PENATARAN RIVER, GEGEBON: *Lorence Lugas 128* (K); MELANGKAP TOMIS, PENATARAN RIVER: *Lorence Lugas 1095* (K); NALUMAD, GONIPIS: *Daim Andau 397* (K); NALUMAD, LUANG OTON: *Daim Andau 772* (K); PORING: *Amin et al. SAN 121496* (K), 500 m, *RSNB 698* (K, L); PORING, DOYIP: *Sani Sambuling 713* (K); SERINSIM: *Akungsai Bakia 552* (K); SERINSIM, TAHUBANG: *Kinsun Bakia 331* (K); TAKUTAN: *Shea & Aban SAN 77208* (K, L); TAKUTAN, GULIAN: *Dius Tadong 112* (K); TANAH MERAH: *Amin & Francis SAN 117367* (K); TENOMPOK: 1500 m, *Clemens 28262* (BM, K, L).

162.3.48. Ficus oleifolia King, Ann. Roy. Bot. Gard. (Calcutta) 1: 160 (1888). Subgenus *Ficus*.

a. subsp. **oleifolia**

Ficus oleifolia King var. *memecylifolia* Corner, Gard. Bull. Singapore 17: 425 (1960). Type: TENOMPOK: 1500 m, *Clemens 27939* (holotype BM!; isotype L!).

Shrub or small tree, often climbing or epiphytic. Hill forest, lower montane forest, often on ultramafic substrate. Elevation: 1000–2300 m.

Additional material examined. BAMBANGAN RIVER: *Amin et al. SAN 114361* (K, L); EAST MESILAU/MENTAKI RIVERS: 1700 m, *Beaman 9366* (A); KIAU VIEW TRAIL: *Amin et al. SAN 117274* (L), 1700 m, *Ogata 11287* (L); KIBAMBANGAN: 1400 m, *Clemens 34010* (BM, K, L); KUNDASANG: 1200 m, *RSNB 1405* (K), 1400 m, *RSNB 1462* (K, L); LIWAGU/MESILAU RIVERS: 1400 m, *RSNB 2773* (K); LUGAS HILL: 1300 m, *Beaman 8481* (K, L, MSC); MAMUT COPPER MINE: 1600–1700 m, *Beaman 9944* (K, L, MSC), 1600–1700 m, *9965* (K, L, MSC); MAMUT RIVER: 1200 m, *RSNB 1611* (K, L); MARAI PARAI/KIAU: 1200 m, *Berhaman SAN 134861* (L); MESILAU: *Amin et al. SAN 123535* (K, L); MESILAU CAMP: 1500 m, *RSNB 6001* (K, L); MESILAU RIVER: 1500 m, *RSNB 4043* (K, L), 1500 m, *RSNB 4263* (K, L), 1500 m, *RSNB 4876* (K, L); MESILAU RIVER/BAMBANGAN RIVER: 1600–1700 m, *Kokawa & Hotta 4282* (L); MESILAU TRAIL: 1600 m, *Hou 291* (K, L), *Madani SAN 76497* (K, L); MT. TEMBUYUKEN: 1900 m, *Aban Gibot SAN 55436* (K, L); PARK HEADQUARTERS: *Amin et al. SAN 117327* (L), 1500–1700 m, *Kanis SAN 50145* (K), 1700 m, *Kanis & Sinanggul SAN 51497* (K), *Meijer SAN 22108* (K), 1600 m, *Wood & Wyatt-Smith SAN A 4461* (L); PENIBUKAN: 1200–1500 m, *Clemens 31276* (K, L), 1200 m, *40741* (K, L); PIG HILL: 2000–2300 m, *Beaman 9858* (A); PINOSUK PLATEAU: 1500–1800 m, *Chow & Leopold SAN 76423* (K, L); SOSOPODON: 1400 m, *Aban Gibot SAN 62226* (K), 1500 m, *Battah SAN 33914* (K, L), 1400–1500 m, *Kokawa & Hotta 5180* (L), 1300 m, *Meijer SAN 42800* (K), *Mikil SAN 28885* (K, L), 1500 m, *Sadau SAN 42817* (K); TAHUBANG RIVER: 1200 m, *Clemens 30570* (BM, K, L), 1000 m, *Nooteboom & Aban 1542* (K, L); TENOMPOK: 1500–1600 m, *Beaman 9452* (A), 1500 m, *Clemens s.n.* (BM), 1500 m, *26708* (BM, K, L), 1500 m, *27939A* (K), 1500 m, *28758* (BM, K, L), 1800 m, *Mujin SAN 33590* (K, L); TENOMPOK RIDGE: 1400–1500 m, *Beaman 8207* (MSC); WEST MESILAU RIVER: 1600 m, *Beaman 7520* (K, L, MSC).

b. subsp. **intermedia** (Corner) C. C. Berg, Blumea 48: 541 (2003). Subgenus *Ficus*. Plate 9A.

Ficus kinabaluensis Stapf, Trans. Linn. Soc. London, Bot. 4: 226 (1894). Type: MOUNT KINABALU: 2400 m, *Haviland 1216* (holotype K!).
Ficus deltoidea Jack var. *intermedia* Corner, Gard. Bull. Singapore 17: 423 (1960).

Shrub to 4 m high. Hill forest, lower montane forest, upper montane forest, especially on ultramafic substrate. Elevation: 500–3200 m. The highest occurring species of *Ficus* on Mount Kinabalu.

Additional material examined. DACHANG: 3000 m, *Clemens 29257* (BM, K); EAST MESILAU/MENTAKI RIVERS: 1700 m, *Beaman 8748* (K, L, MSC), 1700–2000 m, *9581* (MSC), 1700–2000 m, *9616* (K, MSC); EASTERN SHOULDER: 2400 m, *Corner 715* (K), 3200 m, *871A* (K, L), 3200 m, *871B* (K, L); GURULAU SPUR: 1500–2100 m, *Clemens s.n.* (BM, BM), 2400–2700 m, *50635* (BM, L), *51082* (BM, K); HEMPUEN HILL: 800–1200 m, *Beaman 7691* (K, L, MSC); KEMBURONGOH: 2400 m, *Clemens s.n.* (BM), 2400 m, *29916* (BM, K), 1400 m, *Meijer SAN 29106* (K), 2400 m, *Sinanggul SAN 38316* (K, L); KILEMBUN BASIN: 2300 m, *Clemens 33830* (BM, L); KINATEKI RIVER: 1800 m, *Clemens 33193* (L); LIWAGU RIVER TRAIL: 1800–1900 m, *Beaman 11283* (K, MSC), 1800–1900 m, *11284* (K); MAMUT COPPER MINE: 1400–1500 m, *Beaman 10327* (K, L, MSC); MARAI PARAI: 1500 m, *Clemens s.n.* (BM), 2400 m, *31665* (BM, L), 1500 m, *32940* (BM), 1500 m, *33193* (BM); MELANGKAP TOMIS, BINONDIRAAN RIDGE: *Lorence Lugas 1986* (K), *2202* (K); MELANGKAP TOMIS, DENGIRANUK: *Lorence Lugas 352* (K), *1924* (K); MELANGKAP TOMIS, DUDAN: *Lorence Lugas 1275* (K); MELANGKAP TOMIS, KUMINILONG: *Lorence Lugas 78* (K); MELANGKAP TOMIS, MT. DOA: *Lorence Lugas 989* (K); MESILAU: *Amin et al. SAN 123338* (K, L), *SAN 123383* (K, L), *SAN 123385* (K), *SAN 123469* (K, L), *SAN 123531* (K, L), 2700 m, *RSNB 5996* (K); MESILAU CAMP: *Poore H 175* (K); MESILAU RIVER: 1500 m, *RSNB 4189* (K), 1500 m, *RSNB 4287* (K); MOUNT KINABALU: 2700 m, *Haviland 1215* (K); PAKA-PAKA CAVE/KEMBURONGOH: 2700 m, *Clemens 28932* (BM, K); PARK HEADQUARTERS: 1500 m, *Beaman 11412* (K), 1500 m, *11918* (K, MSC); PENATARAN BASIN: 2400–2700 m, *Clemens 33625* (L); PENATARAN RIVER: 500 m, *Beaman 8862* (MSC); PENIBUKAN: *Clemens s.n.* (BM, BM, BM, L), 1200–1500 m, *30766* (BM), 1500 m, *30988* (BM), 1200–1500 m, *31503* (BM), 1500 m, *40696* (BM), 1500–1800 m, *40696A* (BM); TAHUBANG RIVER: 2100 m, *Clemens 32936* (L); TAHUBANG RIVER HEAD: 2100 m, *Clemens 32937* (BM); TAHUBANG RIVER/PENIGGUPAN: 1400 m, *Wong WKM 2383* (L);

TENOMPOK: 1500 m, *Carr SFN 28007* (K), *Clemens s.n.* (BM, BM), 1500 m, *28787* (BM, K), 1500 m, *30292* (K, L), 1500 m, *30294* (K), 1500 m, *30296* (K); TINGGENGUKEN: *Lomudin Tadong 405* (K).

c. var. **myrsinoides** Corner, Gard. Bull. Singapore 17: 425 (1960). Subgenus *Ficus*.

Shrub or small tree to 15 m high, often epiphytic. Hill forest, lower montane forest, upper montane forest, often on ultramafic substrate. Elevation: 1200–2700 m.

Material examined. BAMBANGAN RIVER: 1500 m, *RSNB 4555* (K, L); EASTERN SHOULDER: 2300 m, *RSNB 178* (K, L), 2300 m, *RSNB 712* (K, L), 2300 m, *Corner 711* (K, L); EASTERN SHOULDER, CAMP 3: 2700 m, *RSNB 1095* (K, L); KEMBURONGOH: 2000 m, *Carr SFN 27546* (BM), 2400 m, *Clemens 29915* (BM, K, L), 2100 m, *Meijer SAN 29127* (K, L), 2400 m, *Sinanggul SAN 38335* (K, L), 2100 m, *Sinclair et al. 9058* (K, L); KILEMBUN RIVER HEAD: 1800 m, *Clemens 32490* (BM, K, L); KINATEKI RIVER: 2100 m, *Clemens 31863* (BM, K, L); LUMU-LUMU: 2100 m, *Clemens 29930* (BM, K, L), 1800 m, *Wood & Wyatt-Smith SAN A 4228* (L); MESILAU CAVE: 1900–2200 m, *Beaman 9557* (K, L, MSC); MT. NUNGKEK: 1700 m, *Clemens 32671* (BM, K, L); NEMBIREK RIDGE: 1400 m, *Clemens 40087* (BM, L); PENIBUKAN: 1200–1500 m, *Clemens 31410* (BM, K, L); POWER STATION/KEMBURONGOH: 1800–2200 m, *Hotta 3761* (L); POWER STATION/LAYANG-LAYANG: 2100 m, *Ogata 11130* (L); SUMMIT TRAIL: 1500–1800 m, *Jacobs 5708* (K, L); TAHUBANG RIVER HEAD: 2100 m, *Clemens 32936* (BM); TENOMPOK/TOMIS: 1700 m, *Clemens 29529* (BM, K, L); TINEKUK FALLS: 1700 m, *Clemens 40968* (BM, K, L).

162.3.49. Ficus parietalis Blume, Bijdr. 9: 462 (1825). Subgenus *Sycidium* Section *Palaeomorphe*.

Large twining climber with hanging stems. Lowlands, hill forest, sometimes on ultramafic substrate.

Material examined. HEMPUEN HILL: *Madani SAN 89497* (L); HIMBAAN, LAPAI: *Doinis Soibeh 398* (K); KAUNG: *Mansus & Maikin SAN 108965* (K, L).

162.3.50. Ficus pellucido-punctata Griff., Not. Pl. Asiat. 4: 394 (1854). Subgenus *Urostigma*.

Large strangler without free-hanging aerial roots. Hill forest on ultramafic substrate. Elevation: 1100 m.

Material examined. MELANGKAP TOMIS, LAKANG: *Lorence Lugas 1619* (K); PENIBUKAN: 1100 m, *Clemens 40597* (BM, K).

162.3.51. Ficus pendens Corner, Gard. Bull. Singapore 18: 15 (1960). Subgenus *Synoecia*.

Slender climber with long hanging branches. Hill forest. Elevation: 900 m.

Material examined. DALLAS: 900 m, *Clemens 26837* (BM, K, L), 900 m, *27498* (BM, K, L).

162.3.52. Ficus pisifera Wall. ex Voigt, Hort. Suburb. Calcutt.: 285 (1845). Subgenus *Sycidium* Section *Palaeomorphe*.

Shrub or treelet, mostly epiphytic, appearing like a strangler. Lowlands, hill forest, possibly lower montane forest, sometimes on ultramafic substrate. Elevation: 500–1500 m.

Material examined. DALLAS: 900 m, *Clemens 26074* (BM, K, L); KAUNG/LOBANG-LOBANG: 800 m, *Mujin SAN 18831* (K, L); LOHAN RIVER: 700–900 m, *Beaman 9218* (K, L); MELANGKAP TOMIS: 500–900 m, *Beaman 8705* (K, L); MELANGKAP TOMIS, DINDIAN: *Lorence Lugas 1784* (K); MELANGKAP TOMIS, DOMBOILIK: *Lorence Lugas 2564* (K); MELANGKAP TOMIS, HATTOB RIDGE: *Lorence Lugas 2034* (K); MELANGKAP TOMIS, MENURALI: *Lorence Lugas 1592* (K); MENGGIS, MINDASUT: *Matamin Rumutom 390* (K); MT. TEMBUYUKEN: *Aban Gibot SAN 55404* (L); NALUMAD: *Amin et al. SAN 115903* (K, L); NALUMAD, MOGOM: *Daim Andau 123* (K); PORING: 500 m, *RSNB 1524* (K, L); SERINSIM, DEKUTEN: *Kinsun Bakia 322* (K); SERINSIM, KENDINGAN: *Kinsun Bakia 220* (K); SERINSIM, TAHUBANG: *Kinsun Bakia 77* (K); TAKUTAN, GULIAN: *Dius Tadong 178* (K); TAKUTAN, MEITAP: *Lomudin Tadong 327* (K); TENOMPOK: 1500 m, *Clemens 28298* (BM, K, L).

162.3.53. Ficus pisocarpa Blume, Bijdr. 9: 454 (1825). Subgenus *Urostigma*.

Small to fairly large strangler. Hill forest, sometimes on ultramafic substrate. Elevation: 1200 m.

Material examined. KIAU NULUH, TOBOBON: *Jusimin Duaneh 244* (K); MARAI PARAI: 1200 m, *Clemens 32500* (BM, K, L).

162.3.54. Ficus punctata Thunb., Sp. Ficus: 9 (1786). Subgenus *Synoecia*.

Large root-climber, cauliflorous. Hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 900–1600 m.

Material examined. DALLAS: 900–1200 m, *Clemens 26140* (BM, K); EASTERN SHOULDER: 1100 m, *RSNB 669* (K); KINASARABAN: 1300 m, *Mujin SAN 26773* (K, L); LANGANAN FALLS: 1200 m, *Beaman 10987* (K); MAMUT COPPER MINE/BAMBANGAN RIVER: 1600 m, *Beaman 11014* (K, MSC); MESILAU RIVER: 1500 m, *RSNB 4317* (K, L), 1500 m, *Clemens 51589* (BM); MT. NUNGKEK: 900 m, *Clemens 32797* (BM); PENIBUKAN: 1200–1500 m, *Clemens 31336* (BM, K, L), 1200–1500 m, *31569* (BM, K, L), 1200–1500 m, *31575* (BM, K, L), 1200 m, *31707* (BM, L); SOSOPODON: 1300 m, *Meijer SAN 42478* (K, L), 1400 m, *Mikil SAN 38540* (K, L), *Tikau SAN 28915* (K, L); TENOMPOK: 1500 m, *Carr SFN 27761* (K), 1500 m, *Clemens 29315* (BM, K, L), 1500 m, *29505* (BM, K); TINEKUK RIVER HEAD: 1200 m, *Clemens 40793* (BM, K, L).

162.3.55. Ficus racemosa L., Sp. Pl. 2: 1060 (1753). Subgenus *Sycomorus*.

Medium-sized to large tree, buttressed. Lowlands, hill forest. Elevation: 400–500 m.

Material examined. KAUNG: 400 m, *Carr SFN 27322* (K); MEKEDEU RIVER: 500 m, *Shea & Aban SAN 77122* (K, L); PINOSUK: *Amin et al. SAN 123481* (K); SERINSIM: *Jibrin Sibil 41* (K); SERINSIM, TISAN BAWANG: *Jibrin Sibil 267* (K).

162.3.56. Ficus recurva Blume, Bijdr. 9: 457 (1825). Subgenus *Synoecia*.

a. var. **recurva**

Ficus recurva Blume var. *lasiocarpa* Corner, Gard. Bull. Singapore 18: 14 (1960). Type: MOUNT KINABALU: *Carr SFN 26681* (holotype SING n.v.).

Woody climber or epiphyte. Lowlands, hill forest, lower montane forest. Elevation: 1200–1500 m.

Additional material examined. KAUNG: *Amin & Francis SAN 121549* (K, L); LIWAGU/MESILAU RIVERS: 1200 m, *RSNB 2544* (K, L); TENOMPOK: 1500 m, *Clemens 30271* (K, L).

b. var. **elegantior** Corner, Gard. Bull. Singapore 18: 14 (1960). Subgenus *Synoecia*.

Small tree or climber. Lowlands or hill forest, on ultramafic substrate.

Material examined. BAMBANGAN: *Amin et al. SAN 121038* (K); MELANGKAP TOMIS, DENGIRANUK: *Lorence Lugas 897* (K); MELANGKAP TOMIS, PENATARAN RIVER: *Lorence Lugas 493* (K); MELANGKAP TOMIS, SINOPUKAN: *Lorence Lugas 2142* (K).

c. var. **pedicellata** Corner, Gard. Bull. Singapore 18: 15 (1960). Subgenus *Synoecia*.

Ficus uncinulata Corner, Gard. Bull. Singapore 18: 15 (1960).

Climber or epiphytic shrub. Hill forest on ultramafic substrate. Elevation: 1200–1500 m.

Material examined. PENIBUKAN: 1200–1500 m, *Clemens 31220* (K, L), 1200–1500 m, *31230* (BM), 1200–1500 m, *31574* (BM), 1200 m, *32071* (BM), 1200 m, *32157* (BM, K, L).

d. var. **ribesioides** (Wall. ex Miq.) King, Ann. Roy. Bot. Gard. (Calcutta) 1: 132 (1888). Subgenus *Synoecia*.

Root-climber. Lower montane forest. Elevation: 1500 m.

Material examined. BAMBANGAN RIVER: 1500 m, *RSNB 4525* (K, L).

e. var. **urnigera** (Miq.) King, Ann. Roy. Bot. Gard. (Calcutta) 1: 132 (1888). Subgenus *Synoecia*.

Woody climber. Hill forest, lower montane forest, upper montane forest, especially on ultramafic substrate. Elevation: 1100–2400 m.

Material examined. EASTERN SHOULDER: 1100 m, *RSNB 87* (K, L); MESILAU CAVE: 1900–2200 m, *Beaman 9553* (K, L), 1800 m, *RSNB 4719* (K, L); MESILAU RIVER: 2400 m, *Clemens 51631* (BM, K, L); PENIBUKAN: 1200–1500 m, *Clemens s.n.* (BM), 1200–1500 m, *30838* (BM), 1200–1500 m, *30924* (BM, L), 1400 m, *40547* (BM, L), 1200 m, *40742* (BM, K), 1400 m, *50302* (L), 1400 m, *50308* (BM, K, L); TENOMPOK: 1500 m, *Clemens s.n.* (BM), 1500 m, *27765* (BM, K, K, L), *27765A* (L), 1500 m, *27804* (K, L), 1500 m, *28076* (BM, K, L), 1500 m, *28881* (BM, K, L), 1500 m, *29344* (BM), 1500 m, *29719* (K, L); TINEKUK FALLS: 1800 m, *Clemens 40891* (BM, K), 1800 m, *40892* (BM).

162.3.57. Ficus rubrocuspidata Corner, Gard. Bull. Singapore 17: 483 (1960). Subgenus *Sycidium* Section *Palaeomorphe*. Type: KAUNG: 400 m, *Carr SFN 27323* (holotype SING n.v.).

Shrub or treelet with long drooping branches, sometimes epiphytic. Lowlands, hill forest, infrequently lower montane forest, sometimes on ultramafic substrate. Elevation: 400–1500 m.

Additional material examined. HIMBAAN, NOTOKI: *Doinis Soibeh 557* (K); KIAU NULUH, TINEKUK: *Jusimin Duaneh 370* (K); MARAK PARAK: *Mansus et al. SAN 119005* (K); MELANGKAP TOMIS, GEGEBON: *Lorence Lugas 130* (K); MELANGKAP TOMIS, MT. DOA: *Lorence Lugas 1442* (K); NALUMAD, KEREMUEK: *Daim Andau 492* (K), *688* (K); NALUMAD, MINONUL: *Daim Andau 375* (K); PENIBUKAN: 1200–1500 m, *Clemens 30572* (BM, K, L), 1200–1500 m, *30729* (BM, K, L), 1200 m, *30824* (BM, K, L), 1200–1500 m, *31351* (BM, K, L), 1100 m, *31892* (BM, K, L), 1200 m, *40365* (BM, K, L), 1200 m, *40965A* (BM); PORING: *Amin & Good SAN 118863* (K); PORING, BAMBANGAN: *Sani Sambuling 645* (K); SAYAP: 900 m, *Latiff 3895* (K); SAYAP, KEMENTIS: *Yalin Surunda 90* (K); TAHUBANG RIVER: 900 m, *Nooteboom & Aban 1506* (K, L), 900 m, *Wong WKM 2361* (L); TENOMPOK/DALLAS: 1200–1500 m, *Clemens 26254* (BM, K).

162.3.58. Ficus sagittata Vahl, Symb. Bot. 1: 83 (1790). Subgenus *Synoecia*.

Large climber. Hill forest. Elevation: 900–1000 m.

Material examined. DALLAS: 900 m, *Clemens 26230* (BM, K, L), 900 m, *26399* (BM, K, L); MOUNT KINABALU: 1000 m, *Termiji SAN 75505* (L).

162.3.59. Ficus satterthwaitei Elmer, Leafl. Philipp. Bot. 1: 199 (1906). Subgenus *Sycomorus*.

Ficus moderata Corner, Gard. Bull. Singapore 19: 396 (1962). Type: KUNDASANG: 1200 m, *RSNB 2592* (holotype K!; isotype L!).

Small cauliflorous tree. Lowlands, hill forest. Elevation: 1200 m.

Additional material examined. KIAU NULUH, BOBOD: *Jusimin Duaneh 505* (K); KIAU NULUH, KOGIITAN: *Jusimin Duaneh 220* (K); KUNDASANG: 1200 m, *RSNB 2594* (K, L); MELANGKAP TOMIS: *Lorence Lugas 2947* (K); MELANGKAP TOMIS, MENSOWODDOI: *Lorence Lugas 436* (K); MELANGKAP TOMIS, SARAYO-RAYO: *Lorence Lugas 439* (K); SERINSIM, TULU RIVER: *Kinsun Bakia 69* (K); TAKUTAN, PINAAMAD: *Lomudin Tadong 208* (K).

162.3.60. Ficus schwarzii Koord., Meded. Lands Plantentuin 19: 607, 644 (1898). Subgenus *Sycomorus*.

Small to medium-sized tree, cauliflorous. Hill forest. Elevation: 900–1200 m.

Material examined. DALLAS: 900 m, *Clemens 26353* (BM), 900 m, *26363* (K), 900 m, *27251* (BM, K, L); EASTERN SHOULDER: 900 m, *RSNB 659* (K, L); KUNDASANG: 1200 m, *Wood & Wyatt-Smith SAN A 4418* (L); MINITINDUK GORGE: 900–1200 m, *Clemens 29604* (BM, K, L); PENIBUKAN: 1200 m, *Clemens 32203* (BM, K, L); SOSOPODON: 1200 m, *Taipin SAN 47948* (K); TENOMPOK: *Clemens s.n.* (BM).

162.3.61. Ficus septica Burm. f., Fl. Indica: 226 (1768). Subgenus *Sycomorus*.

Small to medium-sized tree. Lowlands, hill forest, sometimes on ultramafic substrate. Elevation: 400–1400 m.

Material examined. BAMBANGAN: *Amin et al. SAN 117772* (K); HEMPUEN HILL: *Amin & Francis SAN 117430* (K); HIMBAAN: *Doinis Soibeh 12* (K); KIAS: *Jibrin Sibil 299* (K); KIAU NULUH: *Amin & Jarius SAN 116173* (K), *Jusimin Duaneh 6* (K); KUNDASANG: 900 m, *Clemens 29043* (BM, K, L), 1200 m, *Wood & Kapis SAN 16221* (L); LIWAGU/MESILAU RIVERS: 1400 m, *RSNB 2569* (K, L); MARAK PARAK: *Amin K. et al. SAN 118965* (K); MARAK PARAK, BAMBAYANGAN: *Akungsai Bakia 38* (K); MARAK PARAK, GENSEREB: *Kinsun Bakia 190* (K); MELANGKAP TOMIS: *Lorence Lugas 753* (K), *1464* (K); MELANGKAP TOMIS, DUMUYU: *Lorence Lugas 162* (K); MELANGKAP TOMIS, PENATARAN RIVER: *Lorence Lugas 1093* (K); MOUNT KINABALU: 400 m, *Foster & Puasa 3574* (K); NALUMAD, MOGOM: *Daim Andau 3* (K); PORING: *Meliden Giking 11* (K), *Sani Sambuling 7* (K); PORING HOT SPRINGS: 600 m, *Beaman 10999* (K, MSC); PORING, DOYIP: *Sani Sambuling 123* (K), *488* (K); PORING, RUGADING: *Sani Sambuling 730* (K); SAYAP, LEMBEN: *Tungking Simbayan 15* (K); SAYAP, MALAPI: *Tungking Simbayan 16* (K); SERINSIM: *Jibrin Sibil 4* (K), *198* (K); SERINSIM, KILEU: *Jibrin Sibil 269* (K); SERINSIM, LABOT: *Jibrin Sibil 138* (K); SERINSIM, MENGGIS: *Kinsun Bakia 41* (K); TAKUTAN, NAAMPAD: *Dius Tadong 599* (K); TAKUTAN, SENSEGEN: *Dius Tadong 230* (K), *248* (K); TAKUTAN, TAMAS: *Lomudin Tadong 82* (K).

162.3.62. Ficus setiflora Stapf, Trans. Linn. Soc. London, Bot. 4: 226 (1894). Subgenus *Ficus*.

Ficus setiflora Stapf var. *adelpha* Corner, Gard. Bull. Singapore 17: 440 (1960). Type: TENOMPOK: *Carr SFN 27876* (holotype SING n.v.).

Shrub, treelet or small tree, sometimes epiphytic. Hill forest, lower montane forest, upper montane forest, sometimes on ultramafic substrate. Elevation: 1100–2700 m.

Additional material examined. BAMBANGAN CREEK (KILEMBUN BASIN): 1400 m, *Clemens 40123* (BM, L); EASTERN SHOULDER: 2400 m, *RSNB 190* (K, L); HIMBAAN, NOTOKI: *Doinis Soibeh 154* (K); KEMBURONGOH: 2100 m, *Mikil SAN 46525* (K); KIAU NULUH, DUDAN KIULAN: *Jusimin Duaneh 299* (K); KIAU VIEW TRAIL: *Aban Gibot SAN 74112* (K, L); KIBAMBANGAN LOBANG: 1100 m, *Clemens 34453* (BM, L); KILEMBUN RIVER HEAD: 2700 m, *Clemens 33905* (BM, L); KINASARABAN HILL: 1400 m, *Sinclair et al. 8975* (K, L); KUNDASANG: 1200 m, *Wood & Kapis SAN 16395* (L); LAYANG-LAYANG: 2400 m, *Sinanggul SAN 38348* (K, L); LIWAGU RIVER TRAIL: 1600 m, *Kokawa 6199* (L); LIWAGU RIVER VALLEY: 1700–1800 m, *Beaman 11313* (K, MSC); LIWAGU/MESILAU RIVERS: 1400 m, *RSNB 2772* (K, L); MESILAU RIVER: 1500 m, *RSNB 4289* (K), 1500 m, *RSNB 4872* (K, L), 1500 m, *RSNB 4905* (K, L), 1800 m, *RSNB 7133* (K); MESILAU TRAIL: *Madani 76498* (K, L); MOUNT KINABALU: 1500–1800 m, *Meijer SAN 23497* (K, L); MT. NUNGKEK: 1700 m, *Clemens 32684* (BM, L), 1200–1700 m, *32719* (BM, L);

PAKA-PAKA CAVE/LOW'S PEAK: *Clemens, M. S. 10643* (K); PARK HEADQUARTERS: *Ampon & Saikeh SAN 71832* (K, L), 1500 m, *Clemens 28433* (BM, K, L), 1500 m, *30295* (K, L), 1500–1600 m, *Kokawa & Hotta 2824* (L); PARK HEADQUARTERS/POWER STATION: *Aban Gibot SAN 79572* (K, L), *Amin et al. SAN 117310* (K), 1700–1900 m, *Kokawa & Hotta 3239* (L); PINOSUK PLATEAU: 1700 m, *RSNB 1813* (K, L); POWER STATION/KEMBURONGOH: 1800–2100 m, *Beaman 11951* (K, MSC); POWER STATION/LAYANG-LAYANG: 2300 m, *Ogata 11132* (L); SOSOPODON: 1400 m, *Mikil SAN 38539* (K, L), 1300 m, *Sinanggul SAN 38266* (K, L); TENOMPOK: 1500–1600 m, *Beaman 9436* (K, MSC), 1500 m, *Clemens 28402* (BM, K, L), 1500 m, *29353* (BM, K, L); TENOMPOK RIDGE: 1700 m, *Kokawa 6287* (L); TENOMPOK/TOMIS: 1700 m, *Clemens 29482* (BM, K, L).

162.3.63. Ficus sinuata Thunb., Sp. Ficus: 12 (1786). Subgenus *Sycidium* Section *Palaeomorphe*.

Scrambling shrub or small tree, often epiphytic. Hill forest. Elevation: 900–1200 m.

Material examined. DALLAS: 900 m, *Clemens 27449* (BM, K, L); EASTERN SHOULDER: 1000 m, *RSNB 17* (K, L); EASTERN SHOULDER, CAMP 1: 1200 m, *RSNB 1208* (K); HIMBAAN, NOTOKI: *Doinis Soibeh 829* (K); KIAU NULUH, KOGITAN: *Jusimin Duaneh 208* (K); LOHAN: *Amin & Francis SAN 129228* (K, L); MELANGKAP TOMIS, LOKOS: *Lorence Lugas 1263* (K); MT. NUNGKEK: 900–1200 m, *Clemens 32825* (BM, L); NALUMAD: *Daim Andau 1019* (K); TAHUBANG RIVER: 1100 m, *Kanis SAN 51476* (K, L).

162.3.64. Ficus spathulifolia Corner, Gard. Bull. Singapore 17: 391 (1960). Subgenus *Urostigma*.

Medium-sized strangler. Habitat unknown.

Material examined. MELANGKAP TOMIS: *Lorence Lugas 2776* (K).

162.3.65. Ficus stolonifera King, Ann. Roy. Bot. Gard. (Calcutta) 1: 104 (1888). Subgenus *Sycomorus*.

Small to medium-sized tree, cauliflorous and geocarpic, with long stolons. Lowlands, hill forest. Elevation: 500–1200 m.

Material examined. EASTERN SHOULDER: 500 m, *RSNB 531* (K, L), 600 m, *RSNB 1523* (K, L); LIWAGU/MESILAU RIVERS: 1200 m, *RSNB 3003* (K, L).

162.3.66. Ficus cf. **stolonifera** King, Ann. Roy. Bot. Gard. (Calcutta) 1: 104 (1888). Subgenus *Sycomorus*.

Medium-sized tree, probably geocarpic. Lower montane forest. Elevation: 1500 m.

The specimen lacks leaves and therefore cannot be precisely determined.

Material examined. TENOMPOK: 1500 m, *Clemens 29778* (BM, K, L).

162.3.67. Ficus subsidens Corner, Gard. Bull. Singapore 17: 454 (1960). Subgenus *Sycidium* Section *Sycidium*. Type: KINATEKI RIVER: *Carr SFN 26443* (holotype SING n.v.).

Scandent shrub or creeper. Lower montane forest on landslides and rocks along streams, probably on ultramafic substrate. Elevation: 1200–1500 m. Known only from Mount Kinabalu.

Additional material examined. BAMBANGAN RIVER: 1500 m, *RSNB 4417* (K); MT. NUNGKEK/MARAI PARAI: 1200 m, *Clemens 32402* (BM).

162.3.68. Ficus subterranea Corner, Gard. Bull. Singapore 18: 61 (1960). Subgenus *Sycomorus*.

Shrub or small tree, geocarpic with slender stolons. Hill forest, lower montane forest, in openings and secondary situations. Elevation: 1000–1500 m.

Material examined. EASTERN SHOULDER: 1000 m, *RSNB 973* (K, L); LIWAGU/MESILAU RIVERS: 1500 m, *RSNB 1979* (K, L), 1400 m, *RSNB 1987* (K, L).

162.3.69. Ficus subulata Blume, Bijdr. 9: 461 (1825). Subgenus *Sycidium* Section *Palaeomorphe*.

Scandent shrub or small tree, often epiphytic. Lowlands, hill forest, lower montane forest. Elevation: 500–1700 m.

Material examined. BUNDU TUHAN: 1200 m, *Clemens 28044* (BM, K, L); EASTERN SHOULDER: 1100 m, *RSNB 671* (K, L); MELANGKAP TOMIS, KAWANG-KAWANG: *Lorence Lugas 2439* (K); MINITINDUK GORGE: *Clemens, M. S. 10470* (BM, K); PARK HEADQUARTERS: 1700 m, *Wood & Kapis SAN 16196* (L); PORING HOT SPRINGS: 500 m, *Singh & Brand SAN 24756* (K, L); TAKUTAN: 600 m, *Shea & Aban SAN 77213* (K, L); TENOMPOK: *Amin & Suin SAN 123402* (K), 1500 m, *Clemens s.n.* (BM), 1500 m, *28827* (BM, K, L).

162.3.70. Ficus sumatrana Miq., Ann. Mus. Bot. Lugd.-Bat. 3: 287 (1867). Subgenus *Urostigma*.

Ficus palaquiifolia Corner, Gard. Bull. Singapore 17: 399 (1960). Type: MOUNT KINABALU: 1200 m, *Carr SFN 27413* (holotype SING n.v.).

Large strangler, often epiphytic or on rocks; branches without free-hanging aerial roots. Lowlands, hill forest, lower montane forest. Elevation: 900–1700 m.

Additional material examined. BAMBANGAN: *Amin & Francis SAN 123140* (K), *Amin et al. SAN 121035* (K); DALLAS: 900 m, *Clemens 26827* (BM, K); KUNDASANG: 1400 m, *Corner & Meijer SAN 22418* (K); MAMUT/BAMBANGAN RIVER: 1400–1700 m, *Kokawa & Hotta 5482* (L); MESILAU CAMP: 1500 m, *RSNB 6033* (K); MESILAU RIVER: 1400 m, *RSNB 7044* (K, L); RANAU/MAMUT COPPER MINE: *Amin et al. SAN 123325* (K); TAKUTAN, TAMAS: *Dius Tadong 423* (K); TENOMPOK: 1500 m, *Beaman 10525* (K, MSC), 1500 m, *Clemens 26828* (K, L), 1500 m, *27804* (BM), 1500 m, *29344* (K, L); TENOMPOK/DALLAS: 1200 m, *Clemens 26825* (BM).

162.3.71. Ficus sundaica Blume, Bijdr. 9: 450 (1825). Subgenus *Urostigma*.

Ficus sundaica Blume var. *beccariana* (King) Corner, Gard. Bull. Singapore 17: 389 (1960).

Large strangler; branches without free-hanging aerial roots. Lowlands, hill forest, possibly on ultramafic substrate. Elevation: 500–600 m.

Material examined. MELANGKAP TOMIS, DOLUNGAN LIBANG: *Lorence Lugas 169* (K); MELANGKAP TOMIS, KIMONGGILAN: *Lorence Lugas 2220* (K); MELANGKAP TOMIS, MONDORINGIN: *Lorence Lugas 2566* (K); MELANGKAP TOMIS, PENATARAN RIVER: *Lorence Lugas 509* (K); MELANGKAP TOMIS, PISOH: *Lorence Lugas 2042* (K); MELANGKAP TOMIS, WAIG INATAI: *Lorence Lugas 1466* (K); MOUNT KINABALU: *Aban Gibot SAN 60698* (K), 600 m, *Corner SAN 23492* (L); RANAU: 500 m, *Wood & Wyatt-Smith SAN A 4426* (L).

162.3.72. Ficus tarennifolia Corner, Gard. Bull. Singapore 18: 62 (1960). Subgenus *Sycomorus*. Type: MOUNT KINABALU: *Carr SFN 27510* (holotype SING n.v.). Plate 9B.

Ficus scortechinii King var. *lanceata* Corner, Gard. Bull. Singapore 19: 401 (1962). Type: TENOMPOK: 1500 m, *RSNB 2815* (holotype K!; isotype L!).

Shrub or small tree, cauliflorous and geocarpic. Lowlands, hill forest, lower montane forest, upper montane forest, sometimes on ultramafic substrate. Elevation: 500–3000 m. Known only from Mount Kinabalu.

Additional material examined. BAMBANGAN LOBANG (KILEMBUN BASIN): 1400 m, *Clemens 30182* (BM, L); BAMBANGAN RIVER: 1500 m, *RSNB 4526* (K), 1500 m, *RSNB 4590* (K), 1500 m, *RSNB 4635* (K, L), 1600 m, *RSNB 4940* (K, L); BIDAU-BIDAU FALLS: 1500 m, *Clemens 34086* (BM, L), 1500 m, *34094* (BM, K, L); KIBAMBANGAN LOBANG: 1100 m, *Clemens 34457* (BM); KILEMBUN BASIN: 2700 m, *Clemens 33831* (BM, K, L); LIWAGU/MESILAU RIVERS: 1200–1500 m, *RSNB 1986* (K, L); MARAI PARAI: 2400–3000 m, *Clemens 33113* (BM, K, L); MARAI PARAI SPUR: 1500 m, *Clemens 32468* (BM, K, L); MARAK PARAK: *Mansus & Jarius SAN 119005* (K); MESILAU CAMP: *Poore H 26* (K); MESILAU RIVER: 1500 m, *RSNB 4232* (K, L), 1500 m, *RSNB 4260* (K, L), 1500 m, *RSNB 4316* (K, L); MINODTUHAN SPUR: 2400 m, *Clemens 33709* (BM, K, L); NALUMAD: *Daim Andau 1112* (K); NEMBIREK RIDGE: 1200 m, *Clemens 40048* (BM); PARK HEADQUARTERS/POWER STATION: 1600–1800 m, *Kokawa 6160* (L); PENIBUKAN: 1200–1500 m, *Clemens 30511* (BM, K, L), 1200–1500 m, *30745* (BM, L), 1200–1500 m, *30870* (BM, K, L), 1200 m, *32149* (BM); TAKUTAN: 500 m, *Shea & Aban SAN 77194* (K); TAKUTAN, TAMAS: *Lomudin Tadong 102* (K); TENOMPOK: 1500 m, *Clemens s.n.* (BM), 1500 m, *28290* (BM, K, L), 1500 m, *29415* (BM, K, L).

162.3.73. Ficus tinctoria G. Forst.

a. subsp. **gibbosa** (Blume) Corner, Gard. Bull. Singapore 17: 476 (1960). Subgenus *Sycidium* Section *Palaeomorphe*.

Large strangler. Lowlands, hill forest, sometimes on ultramafic substrate. Elevation: 600 m.

Material examined. HIMBAAN, KINATONGAN: *Doinis Soibeh 290* (K); LOHAN RIVER: *Amin & Jarius SAN 121454* (K); MELANGKAP TOMIS, KAPADAS: *Lorence Lugas 2224* (K); MELANGKAP TOMIS, PENATARAN RIVER: *Lorence Lugas 1363* (K); PORING HOT SPRINGS: 600 m, *Beaman 11006* (K, MSC); SERINSIM, TELUNGUNG: *Kinsun Bakia 219* (K).

162.3.74. Ficus treubii King, Ann. Roy. Bot. Gard. (Calcutta) 1: 105 (1888). Subgenus *Sycomorus*.

Small tree, cauliflorous and/or geocarpic with long stolons. Hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 1400–2000 m.

Material examined. BIDAU-BIDAU FALLS: 1500 m, *Clemens 34099* (BM, L), 1500 m, *34102* (BM, K, L); HIMBAAN, SIBA: *Doinis Soibeh 441* (K); KIBAMBANGAN LOBANG: 1400 m, *Clemens 33664* (BM, K, L); MELANGKAP TOMIS: *Lorence Lugas 2919* (K); MELANGKAP TOMIS, LANGOB: *Lorence Lugas 962* (K); MESILAU CAMP: 1500 m, *RSNB 6015* (K, L), 1500 m, *RSNB 4007* (K, L); MESILAU CAVE TRAIL: 1600–2000 m, *Kokawa & Hotta 3993* (L); NALUMAD, KEREMUAK: *Daim Andau 484* (K); PENATARAN BASIN: 1500 m, *Clemens 34102* (L); PINOSUK PLATEAU: 1700 m, *RSNB 1891* (K, L); TAKUTAN, LINGANGAA RIVER: *Lomudin Tadong 226* (K); TENOMPOK: 1500 m, *Clemens 29329* (K, L); TINEKUK FALLS: 1700 m, *Clemens 40970* (BM, K, L); WEST MESILAU RIVER: 1600 m, *Beaman 7525* (K, MSC), 1600–1700 m, *8634* (K, MSC).

162.3.75. Ficus trichocarpa Blume, Bijdr. 9: 448 (1825). Subgenus *Synoecia*.

Large root-climber. Hill forest on ultramafic substrate.

Material examined. KULUNG HILL: *Kuripin SAN 44750* (K, L).

162.3.76. Ficus tulipifera Corner, Gard. Bull. Straits Settlem. 10: 150 (1939). Subgenus *Synoecia*. Type: TENOMPOK: 1500 m, *Carr SFN 27763* (holotype SING n.v.; isotype K!).

Root-climber, cauliflorous. Lower montane forest. Elevation: 1500 m. Known only from Mount Kinabalu.

162.3.77. Ficus uncinata (King) Becc., For. Borneo: 527 (1902). Subgenus *Sycomorus*. Plate 9C.

Ficus uncinata (King) Becc. var. *pilosior* Corner, Gard. Bull. Singapore 18: 59 (1960).

Ficus uncinata (King) Becc. var. *subbeccarii* Corner, Gard. Bull. Singapore 19: 401 (1962). Type: MAMUT RIVER: 1200 m, *RSNB 1619* (holotype K!; isotype L!).

Small to medium-sized tree; figs geocarpic on long stolons. Hill forest, lower montane forest. Elevation: 900–1800 m.

Additional material examined. DALLAS: 900–1500 m, *Clemens 26637* (BM, K, L); EASTERN SHOULDER: 1100 m, *RSNB 666* (K, L); KILEMBUN BASIN: 1400 m, *Clemens 33968* (BM, L), 1400 m, *34387* (BM, L); KINATEKI RIVER: 1700 m, *Clemens 32803* (BM, K, L); LIWAGU/MESILAU RIVERS: 1300 m, *RSNB 1977* (K, L), 1400 m, *RSNB 1988* (K, L), 1200 m, *RSNB 2541* (K, L), 1500 m, *RSNB 2566* (K), 1200 m, *RSNB 2694* (K, L), 1200 m, *RSNB 3005* (K, L); MAMUT RIVER: 1200 m, *RSNB 1608* (K, L); MESILAU BASIN: 1500 m, *Clemens s.n.* (BM); MESILAU RIVER: 1400–1600 m, *Kokawa & Hotta 4447* (L); PARK HEADQUARTERS: *Amin & Thomas SAN 117326* (K); PARK HEADQUARTERS/TENOMPOK: 1500–1700 m, *Kokawa & Hotta 3066* (L); PENATARAN BASIN: 1200 m, *Clemens 34231* (BM, K, L); TENOMPOK: *Amin & Francis SAN 123413* (K), 1500 m, *Clemens s.n.* (BM), 1700 m, *28476* (BM, L), 1600 m, *29092* (BM, K, L), 1500 m, *30286* (K, L), 1500 m, *30290* (K); TINEKUK FALLS: 1800 m, *Clemens 5003a* (BM, K).

162.3.78. Ficus uniglandulosa Wall. ex Miq., London J. Bot. 7: 431 (1848). Subgenus *Sycidium* Section *Palaeomorphe*.

Shrub, climber or small tree, often epiphytic. Lowlands, hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 400–2300 m.

Material examined. BAMBANGAN: *Amin & Jarius SAN 117785* (K); BAMBANGAN RIVER: 1600 m, *RSNB 1837* (K, L); BUNDU TUHAN, GONDOHON, SIMBULEN: *Doinis Soibeh 351* (K); DALLAS: 900 m, *Clemens 26790* (BM, K, L); GOLF COURSE SITE: 1700 m, *Beaman 8502* (K, L, MSC); GURULAU SPUR: 1500 m, *Clemens 50518* (BM, L), 1500 m, *50618* (K, L); HEMPUEN HILL: *Amin & Jarius 114269* (L); KEMBURONGOH: 2300 m, *Mikil SAN 56523* (K); KIAU: 1400 m, *Pereira JTP 22* (L); KULUNG HILL: *Amin et al. SAN 118880* (K); KUNDASANG: 1500 m, *Clemens 29763* (BM, K, L); LIWAGU/MESILAU RIVERS: 1400 m, *RSNB 2574* (K, L); LOHAN RIVER: 800–1000 m, *Beaman 10002* (K, MSC); LUMU-LUMU: 2100 m, *Clemens 29939* (BM, K, L); MAMUT COPPER MINE: *Amin et al. SAN 121054* (K, L); MARAI PARAI: *Gibbs 4074* (BM); MEKEDEU RIVER: 400–500 m, *Beaman 9657* (K, L, MSC); MESILAU: *Amin et al. SAN 123534* (K, L), *SAN 123542* (K); MESILAU CAMP: *Mikil SAN 38740* (K, L); MESILAU RIVER: 1500 m, *RSNB 4122* (K, L), 1500 m, *RSNB 4162* (K, L), 1500 m, *RSNB 4228* (K, L), 1500 m, *RSNB 4846* (K, L), 1500 m, *RSNB 7100* (K, L), 1500 m, *RSNB 1375* (K, L); MESILAU TRAIL: 1400 m, *Hou 297* (K, L), 1400–1600 m, *Kokawa & Hotta 3967* (L); NALUMAD: *Daim Andau 1166* (K); NALUMAD, METUNG-LETUNG: *Daim Andau 956* (K); PARK HEADQUARTERS: 1500 m, *Clemens 28458* (BM, K, L); PARK HEADQUARTERS/POWER STATION: *Amin & Thomas SAN 117294* (K); PENIBUKAN: 1200–1500 m, *Clemens s.n.* (BM), 1200 m, *30617* (BM, K, L), 1200–1500 m, *30835* (BM, K, L), 1200–1500 m, *30837* (BM), 1200–1500 m, *31096* (L), 1200–1500 m, *31098* (BM), 1200–1500 m, *31268* (BM), 1200 m, *32070* (BM, K, L), 1500 m, *40666* (BM), 1500 m, *40695* (BM); PINOSUK: *Amin et al. SAN 123163* (K); PINOSUK PLATEAU: 1400–1500 m, *Beaman 9193* (K, L); PORING: *Lajangah SAN 44721* (K, L); SESEDIKEN RIVER: 1500 m, *Clemens 33077* (BM, K, L); TAHUBANG FALLS: 1500 m, *Clemens 40316* (BM, K, L); TENOMPOK: 1500 m, *Clemens 28058* (BM), 1500 m, *28347* (BM), 1200–1500 m, *28593* (BM), 1500 m, *28611* (BM, K, L), 1500 m, *28708* (BM, K, L), 1500 m, *29409* (BM, K, L), 1500 m, *29589* (BM, K, L); TINEKUK FALLS: 2100 m, *Clemens 50022* (BM, K, L); WEST MESILAU RIVER: 1600 m, *Beaman 7522* (K, L, MSC), 1600–1700 m, *8646* (K, L, MSC), 1600–1700 m, *8693* (K, L, MSC), 1600 m, *9000* (K, L, MSC); WUSSER FALLS LOBANG: 1400 m, *Clemens 40217* (BM, K, L); WUSSER RIVER: 1200 m, *Clemens 34037* (BM, L).

162.3.79. Ficus variegata Blume, Bijdr. 9: 459 (1825). Subgenus *Sycomorus*.

Medium-sized to large tree, buttressed; cauliflorous or ramiflorous on short twigs. Lowlands, hill forest. Elevation: 300 m.

Material examined. KIAU NULUH, BUBUKON: *Jusimin Duaneh 428* (K); MELANGKAP TOMIS, MANDAHATAN: *Lorence Lugas 363* (K); RANAU: 300 m, *Collector unknown SAN 74030* (L); SERINSIM, LAMBA RIVER: *Kinsun Bakia 64* (K); SERINSIM, RATU: *Akungsai Bakia 63* (K).

162.3.80. Ficus vasculosa Wall. ex Miq., London J. Bot. 7: 454 (1848). Subgenus *Pharmacosycea.*

Medium-sized to large tree, buttressed. Hill forest. Elevation: 1100–1200 m.

Material examined. PENIBUKAN: 1200 m, *Clemens 32042* (BM, K, L); SOSOPODON: 1100 m, *Sinanggul SAN 42525* (K, L).

162.3.81. Ficus villosa Blume, Catalogus: 37 (1823). Subgenus *Synoecia.*

Small to large root-climber. Hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 900–1500 m.

Material examined. DALLAS: 900 m, *Clemens 26600* (BM, K, L); HIMBAAN, NOTOKI: *Doinis Soibeh 204* (K); LIWAGU/MESILAU RIVERS: 1200 m, *RSNB 2692* (K, L); PARK HEADQUARTERS: 1500 m, *Clemens s.n.* (BM); PENIBUKAN: 1200–1500 m, *Clemens s.n.* (BM), 1200 m, *40413* (BM), 1200 m, *40745* (BM, K, L, L); TENOMPOK: 1500 m, *Clemens 28426* (K, L).

162.3.82. Ficus virescens Corner, Gard. Bull. Singapore 19: 398 (1962). Subgenus *Sycomorus*. Type: EASTERN SHOULDER: 1000 m, *RSNB 965* (holotype K!; isotype L!).

Small tree, cauliflorous. Hill forest. Elevation: 1000–1200 m. Known only from Mount Kinabalu.

Additional material examined. LIWAGU/MESILAU RIVERS: 1200 m, *RSNB 2543* (K, L).

162.3.83. Ficus indet.

Material examined. HIMBAAN, PEMUNSAAN NOTOKI: *Doinis Soibeh 705* (K).

162.4. MACLURA Nutt.

Berg, C. C. (1986). The delimitation and subdivision of the genus *Maclura* (Moraceae). Proc. Kon. Ned. Akad. Wetensch., Ser. C, 89: 241–247. Corner, E. J. H. (1962). The classification of Moraceae. Gard. Bull. Singapore 19: 187–252 [*Maclura* on pp. 235–240].

162.4.1. Maclura amboinensis Blume, Mus. Bot. Lugd.-Bat. 2: 84 (1856).

Large climber. Hill forest. Elevation: 1400 m.

Material examined. LIWAGU/MESILAU RIVERS: 1400 m, *RSNB 2759* (K, L).

162.4.2. Maclura cf. **amboinensis** Blume, Mus. Bot. Lugd.-Bat. 2: 84 (1856).

Shrub or treelet. Lower montane mossy forest. Elevation: 2000 m.

Material examined. MESILAU CAVE: 2000 m, *Beaman 11148* (K, MSC).

162.4.3. Maclura cochinchinensis (Lour.) Corner, Gard. Bull. Singapore 19: 239 (1962).

Thorny scrambling shrub or woody liana. Lowlands, hill forest. Elevation: 900 m.

Material examined. DALLAS: 900 m, *Clemens 26402* (K); MELANGKAP TOMIS, KOPORINGAN: *Lorence Lugas 2554* (K); TAKUTAN, GULIAN: *Lomudin Tadong 304* (K).

162.5. PRAINEA King ex Hook. f.

Jarrett, F. M. (1959). Studies in *Artocarpus* and allied genera, II. A revision of *Prainea*. J. Arnold Arbor. 40: 30–37.

162.5.1. Prainea limpato (Miq.) Beumée ex Heyne, Nutt. Pl. Ned. Ind. ed. 2: 1: 579 (1927). Plate 9D.

Small to large tree, buttressed. Lowlands.

Material examined. MELANGKAP TOMIS: *Lorence Lugas 2942* (K); NALUMAD, MININGKAKAI: *Daim Andau 746* (K); TERINTIDON RIVER: *Aban Gibot SAN 99535* (K, L).

162.6. STREBLUS Lour.

Berg, C. C. (1988). The genera *Trophis* and *Streblus* (Moraceae) remodelled. Proc. Kon. Ned. Akad. Wetensch., Ser. C, 91: 345–362. Corner, E. J. H. (1962). The classification of Moraceae. Gard. Bull. Singapore 19: 187–252 [*Streblus* on pp. 215–229].

162.6.1. Streblus glaber (Merr.) Corner, Gard. Bull. Singapore 19: 221 (1962).

a. var. **glaber**

Shrub to small or large tree. Hill forest, lower montane forest, sometimes on ultramafic substrate. Elevation: 700–2400 m.

Material examined. BAMBANGAN RIVER: 1500 m, *RSNB 4455* (K), 1500 m, *RSNB 4611* (K), 1500 m, *RSNB 4625* (K, L), 1600 m, *RSNB 4961* (K, L); EAST MESILAU/MENTAKI RIVERS: 1700 m, *Beaman 9367* (MSC); KABUN GOLUK TRAIL: 1500 m, *Sinanggul SAN 47999* (K, L); KINASARABAN: 1200 m, *Taipin SAN 42513* (K, L); KUNDASANG: 1400 m, *RSNB 1384* (K, L), 1500 m, *Lajangah SAN 44399* (K, L); LIWAGU RIVER: 1500 m, *Mujin SAN 33856* (K, L); LIWAGU/MESILAU RIVERS: 1200 m, *RSNB 2730* (K, L), 1200 m, *RSNB 2728* (K, L); LOHAN: