

Family 9. PANDANACEAE

Literature:

Warburg, O. 1900. *Pandanaceae*, in Engler, Pflanzenreich Heft 3: 1-97.

1. Freycinetia Gaudichaud

Literature:

Stone, BC. 1968. *Materials for a monograph of Freycinetia Gaud. IV. Subdivision of the genus, with fifteen new sections*. Blumea 16: 361-372.

Stone, BC. 1969. *Materials for a monograph of Freycinetia Gaud. X. Chronological list of all binomials*. Taxon 18: 672-680.

Stone, BC. 1970. *Materials for a monograph of Freycinetia Gaud. (Pandanaceae) V. Singapore, Malaya and Thailand*. Gardens' Bulletin Singapore 25: 189-207.

Stone, BC. 1970. *Materials for a monograph of Freycinetia Gaud. (Pandanaceae) VI. Species of Borneo*. Gardens' Bulletin Singapore 25: 209-233.

Freycinetia angustifolia Blume, Rumphia 1 (1835) 149, t. 43; --Stone, Gard. Bull. Sing. 25 (1970) 197; 214. --Type from Java.

Freycinetia baganot Martelli, *ined.* Based on Elmer 12426 (L, E). Sibuyan: Mt Giting-giting.

Sumatra, Peninsular Malaysia, Singapore, Borneo (Sarawak, Kalimantan), Java and the Philippines.

SIBUYAN (Mt Giting-giting, 2 collections).

Freycinetia apayaensis Merr., PJS 13 c (1918) Bot. 269; EPFP 1 (1922) 9. --Type: BS 28034 E Fénix (NY*, US*, iso). Luzon: Apayao prov., Ngagan, in forests, 9 May 1917.

LUZON: Ilocos Norte, Apayao. Low altitude forests along streams.

Freycinetia apoensis Martelli, in Elmer, LPB 3 (1911) 1111; --Merr., EPFP 1 (1922) 9. --Type: Elmer 10781.

MINDANAO: Davao del Sur (Mt Apo). Forests along streams, altitude c. 1200m.

Freycinetia atocensis Martelli, Webbia 3 (1910) 28, 309; --Merr., EPFP 1 (1922) 9. --Type: Loher 1570 (not seen).

LUZON: Benguet. Probably in forests, altitude at or above 1000m.

Freycinetia batanensis Martelli, Webbia 3 (1910) 29, 309; --Merr., EPFP 1 (1922) 9. --Type: BS 3806 Fenix (not seen).

BATANES, LUZON: Ilocos Norte. Forests, altitude c. 1000m.

Freycinetia cultella Stone, Webbia 23 (1969) 600; --Freycinetia urdanetensis Elmer, LPB 10 (1934) 3808, not validly published, no Latin description. --Type: Elmer 13766 (MO*, NY*, U*, US*, iso).

Mindanao: Agusan del Norte prov., Cabadbaran, Mt Urdaneta, Oct 1912.

MINDANAO: Agusan del Norte.

Freycinetia cumingiana Gaudich., Bot. Voy. Bonite (1839-46), t. 37, Fig. 12-14, t. 60, without description; --Martelli, Webbia 3 (1910) 19, 310; --Merr., EPFP 1 (1922) 10.

Freycinetia luzonensis C Presl Epim. (1851) 238 (incl. var. hetero phylla Presl); --Vidal Phan. Cuming. Philip. (1885) 154, Rev. Pl. Vasc. Filip. (1886) 280; --Warb. in Engl. Pflanzenreich 3 (1900) 35, Fig. 10, D-E; --Merr., PJS 3 c (1908) Bot. 311; --C Robinson, op. cit. 6 c (1911) Bot. 193. --Type: Cuming 1455 (B*). Luzon: Camarines Sur prov., Mt Isarog.

Freycinetia luteocarpa Elmer, LPB 10 (1934) 3604, not validly published, no Latin description. --Syntypes: Elmer 15930 (NY*), 16016 (MO*, NY*). Luzon: Sorsogon prov., Irosin, Mt Bulusan, May 1915;

Elmer 15394 (L*, NY*), initially distributed as *F. membranifolia* Elmer, *ined.*, same locality, Dec 1915.

LUZON: Cagayan, Camarines Sur, Sorsogon. Low and medium altitude forests.

Freycinetia curranii Merr., PJS 3 c (1908) Bot. 312; --Martelli, Webbia 3 (1910) 14, 310; --Merr., EPFP 1 (1922) 10. --Type: FB 11359 Curran (not seen). Luzon: Camarines Sur prov., Mt Isarog, in forest c. 1000m.

LUZON: Camarines Sur, Sorsogon, CATANDUANES, PANAY, CAMIGUIN. Low and medium altitude primary forests.

Freycinetia ensifolia Merr., Govt. Lab. Publ. (Philipp.) 17 (1904) 5; --Martelli, Webbia 3 (1910) 32, 310; --Merr., EPFP 1 (1922) 10. --Type: Merrill 3242 (NY*, US*, iso). Luzon: Bataan prov., Mt Mariveles, Lamao River, Oct 1903.

LUZON: Mountain Province, Benguet, Bataan (Mt Mariveles), Pampanga, MINDORO, NEGROS. Mossy forests, 1200-1600m.

Freycinetia ferox Warb., *in Engl. Pflanzenreich* 3 (1900) 33; --Martelli, Webbia 3 (1910) 13, 310; --Merr., EPFP 1 (1922) 10, excl. synonym *F. lucbanensis* Elmer. --Type: Warburg sn (B*, holo). Luzon: probably Tayabas (=Quezon) prov., fide Merrill, 1908.

Freycinetia maxima Merr., PJS 3 c (1908) Bot. 310; --Martelli, Webbia 3 (1910) 13, 312; --Merr., EPFP 1 (1922) 11. --Type: FB 10754 Curran (US*, syntype). Luzon: Quezon prov., Malicboy, 22 Jul 1908.

LUZON: Laguna, Quezon, Camarines, Albay, Sorsogon, SAMAR. Low and medium altitude primary forests to 500m altitude.

Freycinetia formosana Hemsl., Kew Bull. (1896) 166; -- Kuo, CS & TW Hsu in TC Huang, ed. Fl. Taiwán, 2nd ed. (2000) 698, Pl. 300, Photo 76.

Freycinetia banahaensis Elmer, LPB 1 (1907) 215; --Martelli, Webbia 3 (1910) 29, 309; --Merr., EPFP 1 (1922) 9.

Freycinetia peripiezocarpa Martelli, Webbia 3 (1910) 314; --Merr., EPFP 1 (1922) 12. --Syntype: FB 10858 Curran (US*). Luzon: Benguet prov., Dec 1908.

Freycinetia scabripes Warb., *in Engl., Pflanzenreich* 3 (1900) 41; --Martelli, Webbia 3 (1910) 27, 314; --Merr., EPFP 1 (1922) 13. --Type: Warburg sn. (B, not seen, cited by Merrill 1908).

Freycinetia dilatata Merr. ex Elmer, LPB 1 (1907) 214; PJS 3 c (1908) Bot. 313; --Martelli, Webbia 3 (1910) 310. --Type: Elmer 9008 (NY*, US*). Luzon: Quezon prov., Lucban, May 1907.

Freycinetia subflagellata Elmer, LPB 8 (1919) 3098; --Merr., EPFP 1 (1922) 14. --Type: Elmer 17967 (MO*, iso). Luzon: Laguna prov., Los Baños, Mt Makiling, vicinity of coffee plantation, Jun-Jul 1917.

Freycinetia irosinensis Elmer, LPB 10 (1939) 3602, not validly published, no Latin description. --Type: Elmer 16430 (MO*, NA*, iso). Luzon: Sorsogon prov., Irosin, Mt Bulusan, in light woods at 750ft elevation, Jun 1916.

Ryukyu Isls, Taiwan, Lanyu, Lutao, Philippines.

LUZON: Mountain Province, Ifugao, Benguet, Cagayan, Aurora (Mt Mingan), Bataan, Rizal, Laguna, Quezon, Sorsogon, NEGROS. Primary forests as well as ridge thickets and forest, low and medium altitude forests, ascending to 2000m.

Freycinetia gitingiana Martelli, in Elmer, LPB 3 (1911) 1112; --Merr., EPFP 1 (1922) 11; --Stone, Gard. Bull. Sing. 25 (1970) 226, Fig. 5. --Type: Elmer 12197 (US*, iso). Sibuyan: Mt Giting-giting, Apr 1910.

Freycinetia discoidea Martelli in Elmer, LPB 3 (1911) 1113; --Merr., EPFP 1 (1922) 10; --Stone, Gard. Bull. Sing. 25 (1970) 226, Fig. 5. --Type: Elmer 12197 (US*, iso). Sibuyan: Mt Giting-giting, Apr 1910.

Borneo (Sabah, Mt Kinabalu) and the Philippines.

SIBUYAN. In forests, altitude 300-500m.

Freycinetia insipida Martelli, in Elmer, LPB 3 (1911) 1114; --Merr., EPFP 1 (1922) 11. --Type: Elmer 12426 (not seen). Sibuyan: Magallanes (=Magdiwang), Mt Giting-giting, loose climber over cliffs and upon medium-sized trees extending over or partly into the Paulala River at 500-600m.

SIBUYAN. Forests along streams, 500-600m.

Freycinetia jagorii Warb. in Engl. Pflanzenreich 3 (1900) 39; --Martelli, Webbia 3 (1910) 25, 311; --Merr., EPFP 1 (1922) 11. --Type: Jagor 954 (B, not seen). Samar.
LUZON: Sorsogon, BILIRAN, LEYTE, SAMAR, MINDANAO: Zamboanga, Lanao del Sur (Camp Keithley), Agusan. Low and medium altitude forests.

Freycinetia lagenicarpa Warb. in K Schum. & Laut., Nachtr. Fl. Deutsch. Sudsee (1905) 52.

var. bulusanensis (Merr.) Stone, ined.

Freycinetia bulusanensis Merr., PJS 13 c (1918) Bot. 268; EPFP 1 (1922) 10. --Type: BS 23686 Ramos (NY*, US*, iso). Luzon
LUZON: Sorsogon (Mt Bulusan), PANAY. Apparently in the mossy forests, altitude at or above 900m.

Freycinetia leptophylla Martelli, Webbia 3 (1910) 20, 312; --Merr., EPFP 1 (1922) 11. --Type: Loher 5450 not seen).

LUZON: Rizal, Laguna. Medium altitude forests.

Freycinetia lucbanensis Elmer, LPB 1 (1907) 212. --Type: Elmer 8230 (NY*, US*, iso). Luzon: Quezon prov., Lucban, May 1907.

LUZON: Quezon (Lucban). Primary forests, c. 500m.

Freycinetia megacarpa Merr., PJS 3 c (1908) Bot. 314; --Martelli, Webbia 3 (1910) 31, 312; -- Merr., EPFP 1 (1922) 11. --Type: Elmer 9010 (MO*, NY*, US*, iso). Luzon: Quezon prov., Lucban, scandent on shrubby along creeks at 600m, May 1907.
MINDANAO: Lanao del Sur, Agusan del Norte. Forests, altitude c. 650m.

Freycinetia merrillii Elmer, LPB 1 (1907) 216; --Martelli, Webbia 3 (1910) 31, 313; --Merr., EPFP 1 (1922) 11. --Type: Elmer 9010 (MO*, NY*, US*, iso). Luzon: Quezon prov., Lucban, scandent on shrubby along creeks at 600m, May 1907.

LUZON: Cagayan, Quezon. Forests along streams, altitude c. 600m.

Freycinetia monocephala Elmer, LPB 1 (1906) 78; --Martelli, Webbia 3 (1910) 31, 313; --Merr., EPFP 1 (1922) 11. --Type: Elmer 12257 (B*, BISH*, L*, US*, iso). Sibuyan: Magallanes (=Magdiwang), Mt Giting-giting, in good soil of forests on ridges or along streams at 300-600m, Apr 1910.
LUZON: Rizal, Laguna, Quezon. Forests, altitude c. 700m.

damp and deeply shaded ravines of the forest, altitude 900m, May 1906.

Freycinetia montalbanica Martelli, Webbia 3 (1910) 18, 313; --C Robinson, PJS 6 c (1911) Bot. 193; --Merr., EPFP 1 (1922) 12. --Type: Loher *sn.* (not seen). Luzon: Rizal prov., Montalban.

LUZON: Rizal. Probably in forests at médium altitudes. Robinson (1911) also cites seemingly identical materials from Nueva Ecija, Camarines and POLILLO.

Freycinetia multiflora Merr., PJS 2 c (1907) Bot. 259; --Martelli, Webbia 3 (1910) 17, 313; --Merr., EPFP 1 (1922) 12.

Freycinetia robinsonii Merr., PJS 3 c (1908) Bot. 311; --Martelli, Webbia 3 (1910) 17, 314; --Merr., EPFP 1 (1922) 13; --Stone, Gard. Bull. Sing. 25 (1970) 228. --Type: FB 3037 Borden.

Freycinetia robinsonii var. *latifolia* Martelli, Webbia 3 (1910) 18, 314; --Merr., EPFP 1 (1922) 13.

LUZON: Ilocos Norte, Benguet, Bataan, Pampanga, Rizal, Laguna, MINDORO, NEGROS, LEYTE, MINDANAO. Low and médium altitude primary forests up to 900m.

Freycinetia negrosensis Merr., PJS 3 c (1908) Bot. 313; EPFP 1 (1922) 12; --Martelli, Webbia 3 (1910) 28, 313. --Type: Whitford 1541 (US*, iso). Negros: Negros Occidental prov., Mt Silay, in forests on exposed ridges, altitude c. 1200m, May 1906.

Freycinetia superba Martelli, LPB 3 (1911) 1115; --Merr., EPFP 1 (1922) 14. --Type: Elmer 12257 (B*, BISH*, L*, US*, iso). Sibuyan: Magallanes (=Magdiwang), Mt Giting-giting, in good soil of forests on ridges or along streams at 300-600m, Apr 1910.

Freycinetia pandanicarpa Elmer, LPB 10 (1938) 3607, not validly published, no Latin description. --Type: Elmer 13683 (MO*, NA*, NY, 2 sheets*, iso). Luzon: Sorsogon prov., Irosin, Mt Bulusan, wooded areas and upon steep ravines, altitude 2500ft, Aug 1916.

LUZON: Laguna, Sorsogon, SIBUYAN (Mt Giting-giting), NEGROS, LEYTE,

MINDANAO: Agusan del Norte (Mt Hilong-hilong). Forests, altitude 300-1200m.

Freycinetia oblongifolia Merr., PJS 3 c (1908) Bot. 310; EPFP 1 (1922) 12; --Martelli, Webbia 3 (1910) 16, 313. --Syntypes: Bolster 342 (MO*), 249 (not seen). Mindanao: Surigao del Norte prov., Surigao, May and Feb 1906, respectively, in forests, altitude 100-130m.

PANAY, MINDANAO: Surigao del Norte. Lowland primary forests.

Freycinetia palawanensis Merr. ex Elmer, LPB 1 (1907) 216; --Martelli, Webbia 3 (1910) 23, 313; --Merr., EPFP 1 (1922) 12. --Type: BS 706 Foxworthy (NY*, iso). Palawan: Victoria Peak, altitude 900m, Mar 1906.

var. palawanensis

LUZON: Quezon (Lucban, Mt Banahaw), Sorsogon, PALAWAN, SIBUYAN, PANAY, MINDANAO: Lanao del Sur, Agusan del Norte. Primary forests, altitude 600-1000m.

var. andersoniana Stone, Gard. Bull. Sing. 25 (1970) 222. --Type from Sarawak.

Borneo (Sarawak) and the Philippines. MINDANAO: Bukidnon (Mt Kitanglad, *PNH 10082 Sulit*)

Freycinetia philippinensis Hemsl., Kew Bull. (1896) 165; --Martelli, Webbia 3 (1910) 25, 314; --Merr., PJS 3 c (1908) Bot. 313; EPFP 1 (1922) 12. --Syntypes: Cuming 1898 (K, cited by Merrill, 1908). Philippines, no definite locality; Gregory 117 (not seen). Luzon: Quezon prov., Aug 1904. *Freycinetia acutifolia* Merr., PJS 13 c (1918) Bot. 267; EPFP 1 (1922) 9. --Type BS 30319 Ramos (US*, iso). Catanduanes: back of Calobong, in forests along small streams at low altitudes, 10 Dec 1917. *Freycinetia angulata* C Robinson ex Martelli, Webbia 3 (1910) 16, 309; --Merr., EPFP 1 (1922) 9. --Type: BS 6221 Robinson (US*, iso?). Batan Island (off Albay prov.), 22-23 Aug 1908.

LUZON: Cagayan, Quezon, Camarines, BATAN (off Albay prov., SE Luzon), CATANDUANES, PANAY: Antique, BILIRAN, SAMAR, MINDANAO: Bukidnon. Low and medium altitude primary forests.

Freycinetia platyphylla Merr., PJS 13 c (1918) Bot. 267; EPFP 1 (1922) 12. --Type: BS 24349 Ramos (not seen). Samar: Catubig River at Pinpisakan, forest near the river, 21 Mar 1916.

SAMAR. Low altitude forests along streams.

Freycinetia polystachya Martelli, Webbia 3 (1910) 14, 314; --Merr., EPFP 1 (1922) 13. --Type: LUZON: Ilocos Norte, Rizal, Quezon. Medium altitude forests.

Freycinetia rigida Elmer, LPB 1 (1908) 362; --Martelli, Webbia 3 (1910) 26, 314; --Merr., EPFP 1 (1922) 13. --Type: Elmer *Freycinetia botuliformis* Merr., PJS 13 c (1918) Bot. 268; EPFP 1 (1922) 10. --Type: BS 23363 Ramos (A*, US*, iso). Luzon: Sorsogon prov., Mt Lalao, in damp forests, Sept 1915.

Freycinetia robusta Elmer, LPB 8 (1919) 3097; --Merr., EPFP 1 (1922) 13. --Type: Elmer 18026 (MO*, US*, iso). Luzon: Laguna prov., Los Baños, Mt Makiling, creek bottom of the so-called crater, Jun-Jul 1917.

Freycinetia cuernosensis Martelli, Webbia 3 (1910) 26, 310; --Merr., EPFP 1 (1922) 10. --Type: Elmer 9677 (US*, iso). Negros: Negros Oriental prov., Mar 1906.

Freycinetia hemsleyi Elmer, LPB 1 (1907) 214, non Warb. --Type: Elmer 7847 (NY*, US*, iso). Luzon: Quezon prov., Lucban, foothill woods at 800m, May 1907.

LUZON: Laguna, Quezon, Sorsogon, NEGROS: Negros Oriental (Cuernos Mtns). Medium altitude primary forests to c. 800m.

Freycinetia rostrata Merr., PJS 1 suppl. (1906) 3; --Martelli, Webbia 3 (1910) 34, 314; --Merr., EPFP 1 (1922) 177. --Type: Clemens 475 (not seen). Mindanao: Lanao del Sur prov., Camp Keithley, Apr 1906.

NEGROS, SAMAR, MINDANAO: Lanao del Sur, SIARGAO. Low and medium altitude forests.

Freycinetia sphaerocephala Gaudich., Bot. Voy. Bonite (1843), t. 52; Warb. in Engl. Pflanzenreich 3 (1900) 35; Merr., PJS 3 c (1908) Bot. 314; --Martelli, Webbia 3 (1910) 33, 315; --Merr., EPFP 1 (1922) 13. --Type: possibly Cuming 839 (*vide* Merr. 1908). Luzon: Albay prov. Freycinetia globosa Merr., PJS 2c (1907) Bot. 260; Elmer, LPB 1 (1907) 217. --Type: Merrill 5791 (NY*, US*, iso). Mindoro: Mindoro Oriental prov., Mt Halcon, in forest, altitude 1150m, Nov 1906. Freycinetia surigaoensis Elmer, LPB 10 (1939) 3774, not validly published, no Latin description. --Type: Elmer 13725 (MO*, NY, 2 sheets*). Mindanao: Agusan del Norte prov., Cabadbaran, Mt Urdaneta, Sept 1912. LUZON: Ilocos Norte, Apayao, Laguna, Camarines, Albay, Sorsogon, MINDORO: Mindoro Oriental (Mt Halcon), MINDANAO: Agusan del Norte (Mt Urdaneta). In forests at low and medium altitudes, ascending to 1150 m.

Freycinetia sumatrana Hemsl., Kew Bull. (1896) 167; --Stone, Gard. Bull. Sing. 25 (1970) 201, Fig. 3a-b; 217. --Type from Sumatra. Freycinetia auriculata Merr., PJS 3 c (1908) Bot. 312; --Martelli, Webbia 3 (1910) 15, 309; --Merr., EPFP 1 (1922) 9. --Type: BS 876 Foxworthy (NY*, US*, iso). Palawan: near Puerto Princesa, May 1906. Andaman Isls, Thailand, Sumatra, Peninsular Malaysia, Singapore, Borneo (Sarawak) and the Philippines. PALAWAN, BASILAN (Isabela, Univ. of the Philippines Land Grant). Lowland to medium altitude forests.

Freycinetia vidalii Hemsl., Kew Bull. (1896) 166; Warb. in Engl. Pflanzenreich 3 (1900) 36; Merr., PJS 3 c (1908) Bot. 312; --Martelli, Webbia 3 (1910) 15, 312; --Merr., EPFP 1 (1922) 11. --Type: Loher 5469 (L*, iso). Luzon: Rizal prov., Montalban, Jun 1905. Freycinetia confusa Elmer, LPB 1 (1907) 213. --Type: Elmer 9007 (MO*, NY*, iso). Luzon: Quezon prov., Lucban, in woods at 650m, May 1907. LUZON: Apayao, Cagayan, Mountain Province, Nueva Vizcaya (Bayombong), Rizal, Quezon. Primary forests at low and medium altitude, ascending to c.1200m.

Freycinetia warburgii Elmer, LPB 1 (1907) 218; --Martelli, Webbia 3 (1910) 34, 315; --Merr., EPFP 1 (1922) 14. --Type: Elmer 8229 (L*, NY*, US*, iso). Luzon: Quezon prov., Lucban, swampy wooded area, altitude 500m, May 1909. Freycinetia sorsogonensis Elmer, LPB 10 (1939) 3608, not validly published, no Latin description. --Type: Elmer 15833 (MO*, NY*). Luzon: Sorsogon prov., Irosin, Mt Bulusan, humid forest at 1000ft elevation, Apr 1916. LUZON: Laguna, Quezon, Sorsogon. Medium altitude forests.

Freycinetia williamsii Merr., PJS 3 c (1908) 315, 394; --Martelli, Webbia 3 (1910) 32, 315; --Merr., EPFP 1 (1922) 14. --Type: RS Williams 1013 (not seen). Batan: Sto Domingo de Basco (=Basco), Jun 1907. BATANES, LUZON: Mountain Province, Ifugao, Benguet, Pangasinan, Rizal, Laguna, Quezon, PANAY. Forests, extending into the mossy forest, altitude 500-1600m.

2. Pandanus Parkinson

Literature:

St. John, H. 1969. *Revision of the genus Pandanus Stickman, Part 34. Four species from the Philippines*. Pacific Science 23: 355-366

Pandanus apoensis Martelli, in Elmer, LPB 3 (1911) 1129; --Merr., EPFP 1 (1922) 15. --Type: Elmer 11313 (A*, BISH 2sheets*, L*, MO* NY*, US*). Mindanao: Davao del Sur prov., Mt Apo, Todaya, damp fertile humus-covered soil of dense woods at 4000ft S of the Sibulan River, Aug 1909. Pandanus apiculatus Merr., PJS 17 (1920) 240; --Merr., EPFP 1 (1922) 15. --Type: BS 34572 Ramos & Pascasio (US*, iso). Mindanao: Surigao del Norte, on ridges, altitude c. 690m at the iron deposit on

the NE coast, 25 Apr 1919.

MINDANAO: Davao (Mt Apo), Surigao del Norte. Ridges on iron deposits (presumably also on ultramafics which abound in Surigao del Norte), to lower montane forest on Mt Apo, altitude 650-1200m.

Pandanus barai Martelli, in Elmer, LPB 3 (1911) 1126; --Webbia 4 (1913) 7, t. 38, Fig. 10-13; --Merr., EPFP 1 (1922) 15. --Type: Elmer 10924 (BISH, 2 sheets*, L*, NY*, US*, iso). Mindanao: Davao del Sur prov., Mt Apo, Todaya, very moist humus-covered soil at 3500ft on the N flank of the Baruring River, Jun 1909.

Pandanus calceiformis Martelli, in Elmer, LPB 3 (1911) 1127; --Webbia 4 (1913) 9, t. 35, Fig. 3-6; --Merr., EPFP 1 (1922) 16. --Type: Elmer 11654 (L*, MO*, US*, iso). Mindanao: Davao del Sur prov., Mt Apo, Todaya, dry soil of a wooded ridge near the Mainit Creek at 1350m, Sept 1909.

Pandanus lateralis Martelli, PJS 3 c (1908) 68; --Webbia 4 (1913) 20, t. 27, Fig. 31-33; --Merr., EPFP 1 (1922) 18. --Type: Copeland 442 (BISH*, NY*, US*, iso). Mindanao: Davao, Mar 1904.

MINDANAO: Bukidnon, Davao del Sur (Mt Apo). Low to medium altitude forests, ascending to 1350m.

Pandanus basilocularis Martelli, Bull. Soc. Bot. Ital. (1904) 299.

Pandanus decipiens Martelli, Webbia 4 (1913) 12; --l.c. 4 (1914) 402, t. 37, Fig. 7-9; --Merr., EPFP 1 (1922) 16. --Type: Elmer 12593 (B*, GH*, L*, MO*, NY*, U*, US*, iso). Palawan: Brookes Point, Addison Peak (=Mt Maruyog), swampy black soil of woods at 25ft altitude, Mar 1911.

Borneo, Philippines.

PALAWAN. Low altitude forests and thickets, often behind mangroves.

Pandanus biliranensis Merr., PJS 13 c (1918) Bot. 266; EPFP 1 (1922) 15. --Type: BS 18895 McGregor (A*, BISH*, US*, iso). Biliran: in forest, altitude c. 300m, 20 Jun 1914.

BILIRAN. Forests, altitude c. 300m.

Pandanus botryooides Martelli, PJS 3 c (1908) Bot. 66; --Webbia 4 (1913) 8, t. 4, Fig. 14-16; --Merr., EPFP 1 (1922) 15. --Type: Merrill 5442 (BISH*, NY*, US*, iso). Mindanao: Davao Oriental prov., Cateel (formerly under streams, Oct 1906.

POLILLO, MINDANAO: Lanao del Sur (Lake Lanao), Agusan del Norte, Davao Oriental. Forests along tidal streams, also along lake shore at altitude 650m at Lanao del Sur.

Merrill (1922) has reservations on the distinction of this species with *P. radicans* Blanco.

Pandanus brevispathus Martelli, PJS 3 c (1908) Bot. 69; --Webbia 4 (1913) 8, t. 26, Fig. 3-5; --Merr., EPFP 1 (1922) 15. --Type: Copeland 442 (BISH*, NY*, US*, iso). Mindanao: Davao, thickets in coastal Barringtonia formation, Mar 1904.

Pandanus polycephalus Merr., Govt. Lab. Publ. (Philip.) 17 (1904) 8, non Lam.

MINDANAO: Davao. Coastal thickets.

Pandanus brevistipes Martelli, Webbia 4 (1913) 8; loc.cit. 4 (1914) 421, t. 38, Fig. 4-9; --Merr., EPFP 1 (1922) 15. --Type: FB 7719 Curran & Merritt (not seen). On ridges in forests, altitude c. 800 m.

LUZON: Batangas.

Pandanus calamianensis Merr., PJS 26 (1925) 448; EPFP 4 (1925) 247. --Type: BS 41178 Ramos (A*, B*, BISH*, US*, iso). Busuanga: In forests along small streams at low altitudes, 23 Sept 1922.

BUSUANGA. Lowland forests along small streams.

Pandanus camarinensis Merr., PJS 14 (1919) 367; EPFP 1 (1922) 16. --Type: BS 33635 (A*, US*, iso). Luzon: Camarines Norte prov., Paracale, in damp forests at low altitudes, 21 Dec 1918. The leaves mounted on the isotype sheet at US belongs to *P. luzonensis* Merr.

LUZON: Camarines Norte (Paracale). Lowland forests. Possibly not distinct from *P. esculentus* Martelli.

Pandanus cheilostigma Stone, Bot. Jahrb. Syst. 94 (1974) 535. --Type: PNH 12081 Edaña (A*, iso). Leyte: Leyte prov., Ormoc, Mt Janagdan, summit, altitude 1190m, 7 Apr 1950.
LEYTE.

Pandanus clementis Merr., PJS 1 suppl.(1906) 178, t.1.; --Martelli, Webbia 4 (1913) 10, t. 27, Fig. 6-10; --Merr., EPFP 1 (1922) 16. --Type: Clemens 436 (not seen). Mindanao: Lanao del Sur prov., Lake Lanao, Camp Keithley, altitude c. 800m, Mar 1906.
LUZON: Bataan (Mt Mariveles, Merrill Sp. Blancoanae 890 (US*)), PANAY, MINDANAO: Lanao del Sur. Forests, altitude 100-800m.

Pandanus copelandii Merr., Govt. Lab. Publ. (Philipp.) 17 (1904) 7; --Martelli, Webbia 4 (1913) 11, t. 31, Fig. 5-7; --Merr., EPFP 1 (1922) 16; --St John, Pacific Sc. 23 (1969) 355, Fig. 295-296. --Type: Copeland 140 (PNH, holo, lost; lecto in FI). Negros: Gimagon River, in forests, altitude c. 100m, 5 Jan 1904.

var. copelandii

LUZON: Apayao (Mt Magnas), Benguet (Sablan), Cagayan, Kinagumar (*BS 15268 Rosenbluth*), Nueva Vizcaya (Dupax), Pangasinan (Mt San Isidro Labrador), Rizal (Mt Lumutan), Laguna, Quezon (Lucban), Camarines Norte (Paracale), Sorsogon (Irosin, Mt Bulusan), BATAN (off Albay), POLILLO, CATANDUANES, MINDORO: Mindoro Oriental (Mt Yagaw; Naujan), PALAWAN (Puerto Princesa), PANAY: Capiz (Hamanay), LEYTE (Palo), SAMAR: Eastern Samar (Borongan), BUCAS GRANDE, MINDANAO: Lanao del Sur (Camp Keithley), Tanculan, Davao (Mt Apo), Agusan del Norte (Butuan, San Mateo, Tungao); Surigao del Norte, Davao Oriental (Mati).

var. panchoi BC Stone, Fed. Mus. J. 23 (1978) 25.

Pandanus cubicus St. John, Pacific Sc. 23 (1969) 360, Fig. 297. --Type: BS 44786 Ramos & Edaña (K, holo; iso in A*, UC, US). Luzon: Zambales prov., Mt Marayep, Dec 1924.
LUZON: Zambales. Known only from the type collection.

Pandanus dinagatensis Merr., PJS 17 (1920) 240; --Merr., EPFP 1 (1922) 17. --Type: BS 35183 Ramos & Pascasio (A*, US*, iso). Dinagat: forests along streams at low altitudes, 12 May 1919.
DINAGAT. Lowland forests along streams.

Pandanus dubius Spreng., Syst. 3 (1826) 897; --Martelli, Webbia 4 (1913) 12; --Merr., EPFP 1 (1922) 17. --Type:
Java, Borneo, Philippines, Sulawesi, Moluccas, New Guinea, Vanuatu, Carolines, Marianas.
MINDANAO: Davao (Malalag). Coastal thickets or forests.

Pandanus esculentus Martelli, Webbia 4 (1913) 13, --l.c. 4 (1914) 403, t.25, Fig. 1-3; --Merr., EPFP 1 (1922) 17. --Type: FB 17813 Curran (US*, iso). Luzon: Cagayan prov., Jan 1912.
Pandanus paracalensis Merr., PJS 26 (1925) 450; EPFP 4 (1925) 247. --Type: BS 33687 Ramos & Edaña (A*, BISH*, US*, iso). Luzon: Camarines Norte prov., Paracale, in forests along small streams at low altitude, 30 Nov 1918.
LUZON: Ilocos Norte, Apayao, Benguet, Cagayan, Bulacan, Camarines Norte. Low and medium altitude forests, ascending to 1000m.

Pandanus exaltatus Blanco, Fl. Filip. (1837) 778; --ed. 2 (1845) 536; --ed. 3, 3 (1879) 183; --Warb. in Engl. Pflanzenreich 3 (1900) 84; --Martelli, PJS 3 c (1908) Bot. 64; Webbia 4 (1913) 13, t. 10, Fig. 1-3, 9-11; --Merr., Sp. Blancoanae (1918) 54; EPFP 1 (1922) 17. --Type: Not extant. Neotype: *Pandanus ahernianus* forma *ahernianus* Martelli, PJS 3 c (1908) 64; --Webbia 4 (1913) 13, t. 10, Fig. 4-8,

12-15; --Merr., EPFP 1 (1922) 17. --Syntypes: Dec Philip. Forest Fl. 296 leg. Ahern's Collector (A*, US*). Luzon: Rizal prov., Bosoboso, upper hill forests, Feb 1905; --Bolster 89 (not seen). Luzon: Pampanga prov., Mt Arayat, base of the mountain along streams, May 1905.

Pandanus arayatensis Merr., Govt. Lab. Publ. (Philip.) 17 (1904) 7, t. 3; PJS 1 (1906) Suppl. 25; --Martelli in Webbia 4¹ (1913) 6. --Type: Merrill 3832 (NY*, US*, iso). Luzon: Pampanga prov., Mt Arayat, in forest only at and near the summit at 878m, May 1904.

Pandanus banahaensis Elmer LPB 1 (1906) 79; --Martelli in Webbia 4¹ (1913) 7, as '*banahaoensis*'. --Type: Elmer 7378 (L*, iso). Luzon: Quezon prov., Mt Banahaw, Mar 1906.

Pandanus vidalii Martelli in PJS 3 c (1908) Bot. 65; Webbia 4¹ (1913) 36, t. 8, Fig. 11-13. --Type: Whitford 1325 (not seen). Luzon: Bataan prov., Limay Peak, above 850m altitude, at the head of Lamao River.

Pandanus caudatus Merr., Govt. Lab. Publ. (Philipp.) 29 (1905) 6; --Martelli, Webbia 4(1913) 9, t. 4, Fig. 1-3; --Merr., EPFP 1 (1922) 16. --Type: Elmer 6143 (B*, NY*, US*, iso). Luzon: Benguet prov., Sablan, Apr 1904.

LUZON: Apayao, Benguet, Cagayan, Nueva Vizcaya, Pampanga, Bataan, Rizal, Quezon, CATANDUANES. Medium altitude forests or thickets, ascending to 1000m.

Pandanus glauciferus St. John, Pacific Sc. 25 (1961) 327; --*Pandanus glauciphyllus* C Robinson, Bull. Torr. Bot. Club 35 (1908) 64, 74, *non* P. '*glaucophyllus*' Ridley; --Martelli, Webbia 4 (1913) 15, t. 27, Fig. 14-16; --Merr., EPFP 1 (1922) 18. --Type: RS Williams 2423 (NY*, holo; iso A*, NY 2 sheets*, US*). Mindanao: Zamboanga, Sax River, 28 Feb 1905.

Pandanus ramosii Merr., PJS 17 (1920) 242; EPFP 1 (1922) 20, **synon. nov.** --Type: BS 35136 Ramos (US*, iso). Bucas Grande, low altitude dry forest, 10 Jun 1919.

NEGROS, ROMBLON, MINDANAO: Zamboanga, DINAGAT, SIARGAO, BUCAS GRANDE. Lowland forests.

Pandanus gracilis Blanco, Fl. Filip. (1837) 778; ed. 2 (1845) 536; ed. 3, 3 (1879) 182, t. 446; --Martelli, Webbia 4 (1913) 16, t. 25, Fig. 16-24, 25-26; --Merr., EPFP 1 (1922) 18. --Type: Not extant. Merrill Sp. Blancoanae 896 (US*) may perhaps be designated as neotype. Luzon: Bataan prov., Mar 1915. Merrill Sp. Blancoanae 890 (US*), labeled as an 'illustrative specimen' for *P. gracilis* represents another taxon. BC Stone annotated it as *P. clementis* Merr.

LUZON: Nueva Vizcaya, Zambales, Bataan, Rizal, Laguna, Quezon, Camarines. Medium altitude primary forests, ascending to 1000m.

Pandanus hemisphaericus St. John, Pacific Sci. 23 (1969) 364, Fig. 299. --Type: Merrill 1312 (G, holo; iso in FI, L*, NY*, MO*). Palawan: Taytay, May 1913.

PALAWAN (Taytay; Mt Pulgar), NEGROS: Negros Oriental (Cuernos Mtns).

Pandanus hermesii Stone, Kalikasan 5 (1976) 25. --Type: PNH 108953 Gutierrez, Yen & Reynoso (BISH*, iso). Mindanao: South Cotabato prov., Tasaday, primary forest on ridge, altitude 3000ft, Aug 1972.

MINDANAO: South Cotabato.

Pandanus julifer Martelli, Webbia 4 (1913) 18, --*ibid.* (1914) 428, t. 43, Fig. 10-12; --Merr., EPFP 1 (1922) 18, as '*juliferus*'. --Type: BS 14670 Ramos (US*, iso). Camiguin: Camiguin prov., Mar-Apr 1912.

CAMIGUIN. Probably in forest, altitude c. 1000m. Apparently very near *P. polyglossus* Martelli.

Pandanus kaida Kurz, J. As. Soc. Beng. 38 (1869) ii, 148. --Type from Thailand.

Pandanus busuangaensis Merr., PJS 26 (1925) 449; EPFP 4 (1925) 247. --Type: BS 41224 Ramos (A*, B*, BISH*, US*, iso). Busuanga: near the seashore, 20 Sept 1922.

Extra-Philippine distribution?

BUSUANGA. Along the seashore.

Pandanus linnæi Gaudich., Bot. Voy. Bonite (1846-49), t. 22 Fig. 1-8.

forma philippinensis Martelli, Webbia 4 (1913) 21, t.6, Fig. 1-2; --Merr., EPFP 1 (1922) 18. --Type:

Merrill 4140 (not seen). Semerara (=Semirara). Open grasslands along borders of thickets but near the sea, Jul 1905.

BUSUANGA, SEMIRARA. Low altitude thickets. The species in Sulawesi, Kai and Aru Isls.

Pandanus loherianus Martelli, Webbia 4 (1913) 22; --*l.c.* (1914) 423, *t.* 27, *Fig.* 17-21; --Merr., EPFP 1 (1922) 18. --Type:

LUZON: Rizal, Laguna. Low or medium altitude forests along streams.

Pandanus luzonensis Merr., Govt. Lab. Publ. (Philipp.) 17 (1904) 6; EPFP 1 (1922) 18; --Martelli, Webbia 4 (1913) 22, *t.* 15, *Fig.* 5-9. --Type: Merrill 3317 (US*, iso). Luzon: Bataan prov., Lamao River, Oct 1903.

LUZON: Pangasinan, Zambales, Bataan, Bulacan, Rizal, Laguna. Lowland secondary forests.

Pandanus martellii Elmer, LPB 1 (1908) 272; --Martelli, Webbia 4 (1913) 23, *t.* 11, *Fig.* 4-7; --Merr., EPFP 1 (1922) 19. --Type: Elmer 9082 (L*, iso). Luzon: Quezon prov., Lucban, in forest, altitude c. May 1907.

LUZON: Quezon. Medium altitude forests.

Pandanus merrillii Warb. in Perkins Frag. Fl. Philipp. (1904) 50; --Martelli, PJS 3 c (1908) Bot. 71; Webbia 4 (1913) 23, *t.* 32, *Fig.* 35-37; --Merr., EPFP 1 (1922) 19. --Type: Merrill 840 (B*, holo; iso; NY*, US). Palawan: Palawan prov., San Antonio Bay, on dry slopes, altitude 1500ft, Feb 1903.

PALAWAN. Primary forests, sea level to 500m.

Pandanus mindanaensis Martelli, in Elmer, LPB 3 (1911) 1121; --Webbia 4 (1913) 24, *t.* 36, *Fig.* 4-7. [*as mindanaoensis*]; --Merr., EPFP 1 (1922) 19. --Type: Elmer 10823 (BISH 2 sheets*, L*, MO*, NY*, US*, iso). Mindanao: Davao, Mt Apo, Todaya, dense humid forests at 4000ft S of Baruring River, Jun 1909.

Pandanus acladus Merr., PJS 13 c (1918) Bot. 265; --Merr., EPFP 1 (1922) 15. --Type: BS 30462 Ramos (US*, iso). Catanduanes: Catanduanes prov., in damp forests, 10 Dec 1917.

CATANDUANES, MINDANAO: Bukidnon, Davao. Lowland forests along streams, lower montane forest, altitude 150-1200m.

Pandanus multibracteatus Merr., PJS 17 (1920) 241; EPFP 1 (1922) 19. --Type: BS 34571 (A*, US*, iso). Mindanao: Surigao del Norte prov., iron deposit on the NE coast on the Hegapit River, altitude c. 680m, 25 Apr 1919.

MINDANAO: Surigao del Norte.

Pandanus nobilis Quisumb. & Merr., PJS 37 (1928) 134, pl. 1. --Type: BS 45568 Ramos & Edaño (NY*, iso). Luzon: Aurora prov., Casiguran, along streams in damp forest at low altitude, 5 May 1925.

LUZON: Isabela (San Mariano), Aurora (Casiguran). Lowland forests along stream, ascending to 400m. Allied to *P. exaltatus* Blanco, differing in its larger drupes and much larger syncarps.

Pandanus occultus Merr., PJS 13 c (1918) Bot. 265; EPFP 1 (1922) 19. --Type: Merrill 9361 (BISH*, L*, NY*, US*, iso). Palawan: Taytay, periodically swampy during the rainy season, slightly above sea level, 7 May 1913.

PALAWAN (Taytay). Primary lowland swamp forests.

Pandanus odoratissimus L.f., Suppl. (1781) 424; --Vidal, Sinopsis Atlas (1883) 42, *t.* 95, *Fig.* A. *Pandanus sabotan* Blanco, Fl. Filip. (1837) 779; --ed. 2 (1845) 537; --ed. 3, 3 (1879) 184; --Martelli, Webbia 4 (1913) 30; --Merr., EPFP 1 (1922) 20. --Type:

Pandanus tectorius Soland. in Parkins. J. Voy. HMS Endeav. (1773) 46; --Martelli, Webbia 4 (1913) 33; --

Merr., Fl. Manila (1912) 66; EPFP 1 (1922) 21.
 Pandanus tectorius var. spiralis (Blanco) Martelli, PJS 3 c (1908) Bot. 62; --Webbia 4, 1 (1913) 34, t. 9, Fig. 1-7; t. 12, Fig. 8; --Pandanus spiralis Blanco, Fl. Filip. (1837) 777; ed. 2 (1845) 535; ed. 3, 3 (1879) 181; --Merr., Govt. Lab. Publ. (Philipp.) 27 (1905) 89, non R Br. --Type: FB 92 Barnes (not seen). Luzon: Bataan prov., Lamao, on sandy beach, Nov 1903.
 Pandanus malatensis Blanco Fl. Filip. (1837) 777, ed. 2 (1845) 535, ed. 3, 3 (1879) 181; Warb. in Engl. Pflanzenreich 3 (1900) 84; --Merr., Govt. Lab. Publ. (Philipp.), 27 (1905) 89; --? Martelli, PJS 3 c (1908) Bot. 70, Webbia 41 (1913) 22, t. 26, Fig. 22. --Type:
 Pandanus spiralis Blanco Fl. Filip. (1837) 777, ed. 2 (1845) 535, ed. 3, 3 (1879) 181; Merr., Govt. Lab. Publ. (Philipp.) 27 (1905) 89, non R Br. --Type: Non extant; possible neotype:
 Pandanus blancoi Kunth Enum. 3 (1841) 583.
 Pandanus tectorius Soland. var. surigaensis Martelli in PJS 3 c (1908) Bot. 64, Webbia 4¹ (1913) 34, t. 8, Fig. 9-7 as 'surin gaensis' --Type:
 Pandanus tectorius Soland. var. sinensis Warb. in Engl. Pflanzen reich 3 (1900) 48; Martelli, PJS 3 c (1908) Bot. 62, Webbia 4¹ (1913) 34, t.9, Fig. i-10.
 Pandanus tectorius Soland. var. spiralis Martelli in PJS 3 c (1908) Bot. 62, Webbia 4¹ (1913) 34, t. 9, Fig. 1-7, t. 12, Fig. 8. --Type:
 Pandanus tectorius Soland. var. douglasii Martelli forma philippinensis, Martelli in PJS 3 c (1908) Bot. 63, Webbia 4¹ (1913) 33, t. 8, Fig. 8-10. --Type:
 Pandanus vidalii Martelli in PJS 3 c (1908) Bot. 65; Webbia 4¹ (1913) 36, *pro parte, quoad syn.* Vidal.
 Pandanus coronatus Martelli in PJS 3 c (1908) Bot. 65 (incl. forma minor); Webbia 4¹ (1913) 11, t. 4, Fig. 8-19.

Indomalesian region to tropical Australia and Polynesia.

Along the seashore throughout the Philippines, abundant and forming characteristic thickets back of the beach.

Pandanus pallidus, Merr., Govt. Lab. Publ. (Philipp.) 29 (1905) 5; --Merr., EPFP 1 (1922) 19; --Martelli, Webbia 4 (1913) 26, t. 27, Fig. 28-30. --Type: Elmer 5840 (B*, BISH*, NY* US*, iso). Luzon: Benguet prov., Baguio, Mar 1904.

LUZON: Benguet, Nueva Ecija. Forested stream depressions up to 1500m.

Pandanus paloensis Elmer, LPB 1 (1906) 75; --Martelli, Webbia 4 (1913) 26, t. 27, Fig. 22-27; --Merr., EPFP 1 (1922) 19. --Type:

LUZON: Apayao, Cagayan, Camarines, Sorsogon, LEYTE, MINDANAO. Lowland forests.

Pandanus panayensis Merr. PJS 14 (1919) 366; EPFP 1 (1922) 20. --Type: BS 30796 Ramos & Edaño (A*, BISH*, US*). Panay: Aklan prov., Mt Magosolon (indicated in the label as Mt Macosolon; Aklan is formerly a part of the province of Capiz), on forested slopes, 22 Apr 1918.

PANAY: Aklan. Low or medium altitude forest.

Pandanus patelliformis Merr., PJS 29 (1926) 476. --Type: BS 43151 Ramos (PNH, holo, possibly lost?, UC* (on two sheets) possible lecto; iso in A*). Bohol: Kalingohan, on rocky forested slopes, altitude c. 600m, Aug 1923.

BOHOL. Medium altitude forest, possibly on limestone.

Pandanus philippinensis Merr., PJS 13 c (1918) Bot. 264; EPFP 1 (1922) 20. --Type: BS 11289 RC McGregor (BISH*, US*). Luzon: Nueva Vizcaya prov., Campote, on forested hillsides, Mar 1912.

LUZON: Kalinga, Nueva Vizcaya. Medium altitudes on forested slopes.

Pandanus polycephalus Lam., Encyc. 1 (1783) 372.

Pandanus mapola Martelli in Elmer, LPB 3 (1911) 1124; --Webbia 4 (1913) 22, t. 41, Fig. 14-17; --Merr., EPFP 1 (1922) 19. --Type: Elmer 12139a (BISH*, L*, MO*, NY*, iso). Sibuyan: Magallanes (=Magdiwang), compact fertile soil near Nipa swamp at 100ft altitude.

SIBUYAN. Lowland thickets and forests.

Pandanus polyglossus Martelli, in Elmer, LPB 3 (1911) 1130; --Webbia 4 (1913) 28, t. 39, Fig. 16-18; --Merr., EPFP 1 Mindanao: Davao del Sur prov., Mt Apo, Todaya, moist humus-covered soil upon a steep forested ravine at 4500ft of Mt Calelan, Aug 1909.

MINDANAO: Davao del Sur (Mt Apo). Primary forest, altitude c. 1350m.

Pandanus radicans Blanco, Fl. Filip. (1837) 780; ed. 2 (1845) 537; ed. 3, 3 (1879) 184; --Martelli, Webbia 4 (1913) 29, t. 6, Fig. 8-10; --Merr., EPFP 1 (1922) 20. --Type:

Pandanus urdanetensis Elmer, LPB 10 (1939) 3775, not validly published, no Latin description. --Type: Elmer 13816 (L*, MO*, NY*, U*, US*, iso). Mindanao: Agusan del Norte prov., Cabadbaran, Mt Urdeneta (=Hilong-hilong), Oct 1912.

LUZON: Sorsogon, LEYTE, MINDANAO: Agusan del Norte (Mt Hilong-hilong). Medium altitude forests.

Pandanus reclinatus Martelli, Webbia 4 (1913) 29; --*ibid.* (1914) 432, t. 27, Fig. 3, 4; --Merr., EPFP 1 (1922) 20. --Type: Elmer 12731 (Fl, holo; iso in BISH*, L*, MO*, U*, US*). Palawan: Palawan prov., Puerto Princesa, Mt Pulgar (=Thumb Peak), Mar 1911.

Pandanus depauperatus Merr., PJS 26 (1925) 448; EPFP 4 (1925) 247. --Type: BS 41230 Ramos (A*, B*, US*, iso). Busuanga: Concepcion, along small streams in bamboo thickets at low altitude, Sept 1922.

BUSUANGA, PALAWAN. Lowland forests and bamboo thickets.

Pandanus retusus St John, Pacific Sc. 23 (1969) 362, Fig. 298. --Type: Weber 1568 (G, holo; iso: Fl, P). Luzon: Cagayan prov., Abulug River, Jan 1912.

LUZON: Cagayan (Abulug River). Known only from the type collection.

Pandanus sibuyanensis Martelli in Elmer, LPB 3 (1911) 1120; --Webbia 4 (1913) 31, t. 34, Fig.

1. as '*sibuyanensis*'; --Merr., EPFP 1 (1922) 20. --Type: Elmer 12146 (MO*, NY*, US*, iso).

Sibuyan: Magallanes (=Magdiwang), fertile swampy flat of woods near the Pauala River at 1000ft, forming groves.

SIBUYAN. Forests, altitude c. 350m.

Pandanus simplex Merr., Govt. Lab. Publ. (Philip.) 29 (1905) 6; --Martelli, Webbia 4 (1913) 31, t. 14, Fig. 11-14; --Merr., EPFP 1 (1922) 20. --Type: Whitford 782 (not seen). Luzon: Quezon prov., Infanta, Tinuan (=Tignoan) River, on hilltops altitude 150m, Sept 1904.

Pandanus utilissimus Elmer, LPB 1 (1906) 80; Martelli, PJS 3 c (1908) Bot. 67; --Webbia 4¹ (1913) 36, t. 14, Fig. 9-5; --C Robinson, PJS 6 c (1911) Bot. 193. --Type: Elmer 7379 (A*, L*, iso). Luzon: Quezon prov., Mt Banahaw de Lucban, May 1906.

LUZON: Ifugao, Laguna, Quezon, Sorsogon, CATANDUANES. Low and medium altitude forests, also planted. A species remarkable for its enormous syncarps.

Pandanus subcaulis Merr., PJS 13 c (1918) Bot. 263; EPFP 1 (1922) 21. --Type: BS 30489 Ramos (US*, iso). Catanduanes: on forested slopes along Sto Domingo River, 5 Dec 1917.

CATANDUANES. Low and medium altitude forests.

Pandanus tenuipedunculatus Merr., PJS 17 (1920) 243; --Merr., EPFP 1 (1922) 22. --Type: BS 34739 Ramos & Pascasio (US*, iso). Mindanao: Surigao del Norte prov., in open forests at low altitudes, 20 Jun 1919.

MINDANAO: Surigao del Norte, SIARGAO. Lowland open forests. Very similar to *P. brevispathus* Martelli

Pandanus umbonatus Quisumb. & Merr., PJS 37 (1928) 134. --Type: BS 46967 Ramos & Edaño (A*, holo; iso in NY*, US*). Luzon: Isabela prov., San Mariano, damp forests, altitude 600m, 22 Feb 1926.

LUZON: Isabela (San Mariano; Mt Moises). Medium altitude (600-800m) forests, abundant along streams.

BS 46998 Ramos & Edaño (A*) collected in the same area at the type locality, was annotated by KL Huynh in 1975 as holotype of *P. lateralistigma* (apparently an unpublished name).

Pandanus zamboangensis Martelli, *Webbia* 4 (1913) 37; --*loc.cit.* (1914) 426, t. 42, Fig. 7-10; -- Merr., EPFP 1 (1922) 2
Overton, 22 Nov 1911.

MINDANAO: Zamboanga, Lanao del Norte, Bukidnon. Lowland thickets and secondary forests.

Possible ined. new species at PNH (Names not found in IPNI)

Pandanus dracunculus Stone, ined. --Voucher:

Pandanus excavatus St. John, ined. --Voucher: PNH 10596 Mendoza & Convocar (L*, holo).
Mindanao: Surigao del Norte prov., Mt Kabatuan.

Pandanus irigaensis Merr., ined. --Voucher:

Pandanus isabelensis Quisumb. & Merr., *ined.* --Voucher: BS 47848 Ramos & Edaño (NY*).
Luzon: Isabela prov., Mt Moises, Mar 1926.

Pandanus plurirostratus St. John, ined. -- Voucher: Jacobs 7886 (L*). Luzon: Aurora prov., Sierra Madre Mtns, WSW of Baler, primary forest formerly logged-over, km 170/171, altitude 600-700m, 15°40'N, 121°18'E, 22 Mar 1968.

Pandanus pyricus St. John, ined. --Voucher: PNH 12082 Edaño (L*). Leyte: Leyte prov., Ormoc, Mt Janagdan, summit, altitude 1190m, 7 Apr 1950.

Subgenus *Pandanus*, Section *Elmeria*.

Pandanus trialveatus Stone, ined. --Voucher: PNH 36511 DR Mendoza (BISH* 2 sheets). Luzon: Quezon prov., Tagkawayan, Siguivan, under coconut trees at bank of creek, 20 Jul 1957.

Subgenus *Pandanus*, Section *Elmeria*.

Insufficiently known:

Pandanus cumingianus Martelli, *PJS* 3 c (1908) Bot. 70; --*Webbia* 4 (1913) 11, t. 25, Fig. 13-15; --Merr., EPFP 1 (1922) 16. --Type: Cuming sn. (BM, photo of type with syncarp only, cited by Merrill, 1922). Negros. Further locality not specified.

NEGROS.

Saranga Hemsley

Saranga philippinensis Merr., *Govt. Lab. Publ. (Philipp.)* 29 (1905) 5; --Merr., EPFP 1 (1922) 22.
--Type:

LUZON: Quezon, Camarines Norte, Albay, Sorsogon, SIBUYAN, SAMAR, DINAGAT,
MINDANAO: Bukidnon, Surigao del Sur. Chiefly in secondary forests, 0-750m.