

**An enumeration of the woody plants collected  
in Micronesia, Japanese Mandate  
(in 1929 and 1930)**

By

**Ryôzô Kanehira**

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The Pacific area under Japanese mandate consists of more than 1,400 islands, islets and reefs, stretching from 130°E. to 175°E. and from 0°N. to 22°N.; yet the total area of land is but about 2,149 square kilometers (830 sq. miles). They form the Marianne, Caroline and Marshall groups which lie far to the west of Hawaii, east of the Philippines and Celebes, north of the New Guinea and Bismark island groups, and south of the Bonin and Iwô Islands (which mark the southern extremity of the Japanese Empire). Except for the Marshall group the islands are of volcanic origin covered by coral rocks.

The principal islands, their areas and highest elevations are as follows :

<i>Marianne group</i>			<i>West Caroline group</i>		
Name of island	Area (sq. km.)	Highest elevation (m.)	Name of island	Area (sq. km.)	Highest elevation (m.)
Saipan	185	474	Yap	216	179
Tinian	98	172	Palau	378	206
Rota	125	492	Truk	132	410

<i>East Caroline group</i>			<i>Marshall group</i>		
Name of island	Area (sq. km.)	Highest elevation (m.)	Name of island	Area (sq. km.)	Highest elevation (m.)
Ponape	376	785	Jaluit	8	(atol)
Kusai	116	654			

The first botanical collections made in this region were those of the Malaspina Expedition (Haenke and Nee) in 1792. Little further was done until after the islands came under the control of Germany in 1898. Since the islands came under Japanese mandatory, no comprehensive botanical collections have been made although some field work

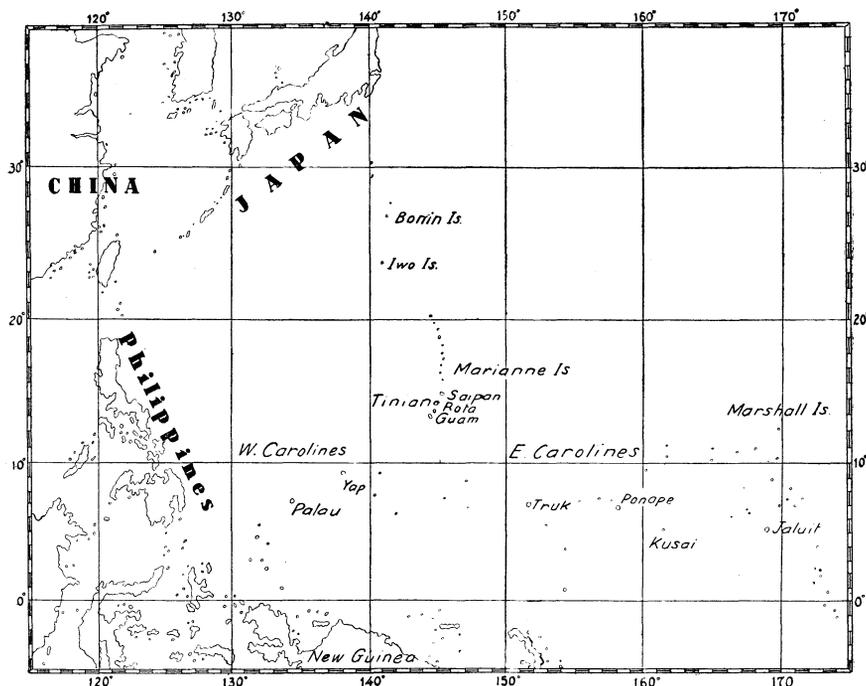
was done by representatives of Educational Department of Japan in 1914-5; this party, however, only made a few days' stop at the principal islands and scarcely penetrated the interior of any of the larger islands.

With the help of His Excellency G. Yokota, the Civil Governor of the Japanese Mandate Territory, I collected plants in Palau and Ponape in the summer of 1929 and in Saipan, Tinian and Yap in the summer of 1930. About 1,263 numbers were secured, including herbaceous as well as the woody plants; the latter are enumerated in this preliminary report. For assistance in the identification of my material and for suggestions regarding my manuscript I am greatly indebted to Director E. D. Merrill, of the New York Botanical Garden.

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Department of Agriculture,  
Kyushu Imperial University, Fukuoka, Japan

Map of Micronesia



### Cycadaceae

**Cycas Rumphii** MIQ. in Bull. Soc. Phys. Nat. Néerl. (1839) 45; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 455.

In primary forests. Palau No. 233 July, 1929; Yap No. 1189, Aug. 1930. *Distrib.* Malaya to Polynesia. *Nat. name:* "fratel" or "frotel" (Yap).

### Pandanaceae

**Pandanus dubius** SPRENG. Syst. III (1826) 897; MERR. in Philip. Jour. Sci. IX (1914) Bot. 48.

A strand plant. Ponape No. 877, Aug. 1929; Saipan No. 900, July 1930. *Distrib.* Java to the Caroline and Marianne Islands southward to the New Hebrides. *Nat. name:* "pafung" (Saipan).

**Pandanus kafu** MARTELLI in Webbia IV (1913) 19, t. 19, f. 1-3; MERR. in Philip. Jour. Sci. IX (1914) Bot. 47.

In forests near the sea. Saipan No. 936, July 1930. *Distrib.* Otherwise known only from Guam. *Nat. name:* "kafu" (Saipan, Guam).

Two other species of *Pandanus* from this region are not yet determined.

### Gramineae

**Bambusa spinosa** ROXB. Hort. Beng. (1814) 25.

In thickets at low altitudes; Palau, Korrer No. 171, July 1929. *Distrib.* Southern China to the Malay Peninsula and Archipelago to the Moluccas.

**Bambusa vulgaris** SCHRAD. ex WENDL. Collect. Pl. II (1808) 26, t. 47.

In thickets at low alt. Kolonia, Ponape No. 861, Truk No. 624, Aug. 1929; Saipan No. 903, Yap No. 1179, July-Aug. 1930. *Distrib.* Pantropic in cultivation.

**Schizostachyum lima** (BLANCO) MERR. in Am. Jour. Bot. III (1916) 62, Enum. Philip. Fl. Pl. I (1922) 98.

*Bambusa lima* BLANCO Fl. Filip (1837) 271.

In thickets at low altitudes. Palau: Korrer Nos. 168, 181, Kamset No. 529, Garamiscan No. 542, July 1929; Yap. No. 1104, Aug. 1930. *Distrib.* Philippines. *Nat. names:* "arirudo" (Palau), "poo" (Yap). A remarkable bamboo having usually long internodes, used for making blowing pipes.

### Palmae

**Nypa fruticans** WURMB in Verh. Bat. Genoots. I (1779) 350; MERR. Enum. Philip. Fl. Pl. I (1922) 170.

- Nipa fruticans* THUNB. in Vet. Akad. Nya Handl. Stockh. III (1824) 132; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 459.  
 Along tidal streams in brackish swamps. Babeldaob, Palau No. 451, July 1929. *Distrib.* India through Malaya to tropical Australia. *Nat. name*: "ain" (Yap). The plant occurs also in Yap, Ponape and Truk.
- Bentinckiopsis carolinensis** BECC. in Webbia V (1921) 113, ENGLER, Bot. Jahrb. LIX (1924) 16.  
*Cyphokentia* (?) *carolinensis* BECC. in ENGLER, op. cit. LII (1915) 4.  
 In primary forests at medium altitudes; Ponape No. 700 (\*A 1755) Aug. 1929. *Distrib.* Endemic. *Nat. name*: "kotopp" (Ponape).
- Ponapea Ledermanniana** BECC. in ENGLER, Bot. Jahrb. LIX (1924) 14.  
 In primary forests at low and medium altitudes. Kolonia, Ponape No. 742 (\*A 1879), Aug. 1929. *Distrib.* Endemic. *Nat. name*: "kattai" (Ponape).
- Coelococcus amicarum** (Wendl.) W. F. WIGHT ex SAFFORD in Contr. U. S. Nat. Herb. IX (1905) 244; MERR. in Philip. Jour. Sci. IX (1914) Bot. 63.  
*Sagus amicarum* WENDL. in Bot. Zeit. XXXVI (1878) 115.  
*Coelococcus carolinensis* DINGL. in Bot. Centralbl. XXXII (1887) 349.  
 In primary forests at low alt. Ponape No. 879, Aug. 1929. It occurs also in Truk, occasionally planted in Ponape. *Distrib.* Endemic. *Nat. names*: "hibun" (Truk), "nioshi" (Ponape).
- Cocos nucifera** LINN. Sp. Pl. (1753) 1188; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 459.  
*Distrib.* Pantropic. *Nat. names*: "nius" (Palau), "niu" (Yap), "nu" (Truk), "ni" (Ponape).
- Areca Catechu** LINN. Sp. Pl. (1753) 1189; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 459.  
*Distrib.* Widely distributed in the Indo-Malayan region, cultivated in Palau, Ponape etc.
- Glubiopsis palauensis** BECC. in ENGLER, Bot. Jahrb. LIX (1924) 11.  
 In primary forest at medium altitudes. Palau No. 114, July 1929. *Distrib.* Endemic.

### Flagellariaceae

- Flagellaria indica** LINN. Sp. Pl. (1753) 333; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 459.  
 In forests and thickets. Palau Nos. 257, 440, Ponape No. 715, July-

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\* indicates the number of wood samples collected.

Aug. 1929 ; Saipan No. 899, July 1930. *Distrib.* Tropical Africa and tropical Asia through Malaya to tropical Australia.

### Liliaceae

**Pleomele angustifolia** (ROXB.) N. E. BR. in Kew Bull. (1914) 277.

*Dracaena angustifolia* ROXB. Hort. Beng. (1814) 24.

In thickets and rocky reefs. Palau No. 511, July 1929. *Distrib.* India through Malaya to Australia. *Nat. name*: "arudacckl" (Palau).

### Casuarinaceae

**Casuarina equisetifolia** LINN. Amoen. Acad. IV (1759) 143.

Along the seashore. Angaur, Palau No. 574, July 1929 ; Saipan No. 1013, July 1930. *Distrib.* Tropics of the Old World, pantropic in cultivation.

### Ulmaceae

**Celtis paniculata** PLANCH. in Ann. Sc. Nat. Sér. III, 10 (1848) 305.

In primary forests. Near Korrer, Palau No. 353 (\*A 1766) July 1929 ; Yap. No. 1253 (\*A 1935) Aug. 1930. *Distrib.* Polynesia to Australia. *Nat. name*: "zahle" (Yap).

**Gironniera celtidifolia** GAUDICH. Bot. Freyc. Voy. (1844) t. 85; MERR. in Philip. Jour. Sci. II (1907) Bot. 270.

In primary forests at low and medium altitudes. Babeldaob, Palau No. 260 (\*A 1823) July 1929 ; Ponape No. 797 (\*A 1824) Aug. 1929. *Distrib.* Bismark Archipelago, Solomon Islands, Fiji, Samoa and the Philippines. *Nat. name*: "kelmut".

**Trema amboinensis** (WILLD.) BLUME Mus. Bot. Lugd.-Bat. II (1856) 61, quoad syn., excl. descr.

*Celtis amboinensis* WILLD. Sp. Pl. IV, 2 (1805) 997.

In thickets and secondary forests. Korrer, Palau No. 155, Babeldaob No. 530 (\*A 1913) July 1929 ; Yap. No. 1098, Aug. 1930. *Distrib.* Southern China to the Malay Peninsula, Philippines, southward to New Guinea and northeastern Australia.

**Trema orientalis** BLUME var. **argentea** (PL.) LAUTERB. in ENGLER, Bot. Jahrb. L (1915) 320, f. B.

*Sponia argentea* PLANCH. in Ann. Sc. Nat. (1848) 323.

In thickets and secondary forests. Tinian No. 52, June 1929 ; Saipan No. 925 (\*A 1985) Aug. 1930. *Distrib.* India to Polynesia (the species) ; Bonin and Marianne Islands (the variety). *Nat. name*: "banahl" (Yap).

### Moraceae

**Artocarpus communis** FORST. Char. Gen. (1776) 101.

Ponape No. 726 (\*A 1749) Aug. 1929; Angaur, Palau No. 571, July 1929; Saipan No. 897 (\*A 1928) July 1930. *Distrib.* A native plant, widely cultivated. *Nat. names:* Seedless variety "lemme" (Saipan), "mai" (Ponape), "muzuh" (Palau), "sou" (Yap); seeded variety "mai cheit" (Ponape), "rok-rok" (Saipan).

**Artocarpus integra** (THUNB.) MERR. Interpret. Herb. Amb. (1917) 190, Sp. Blancoanae (1918) 124.

*Radermachia integra* THUNB. in Vet. Akad. Handl. Stockh. (1776) 254.

*Artocarpus integrifolia* LINN. f. Suppl. (1781) 412.

Yap No. 1090, Aug. 1930. *Distrib.* A native of tropical Asia, now widely distributed in cultivation.

**Ficus Senffiana** WARB. in SCHUM.-LAUTERB. Nachtr. Fl. Deutsch. Schutzgeb. Südsee (1905) 247; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 462.

In forests along the seashore. Palau: Korrör No. 157, Babeldaob 310 (\*A 1815) July 1929. *Distrib.* Endemic.

**Ficus carolinensis** WARB. in SCHUM.-LAUTERB. Nachtr. Fl. Deutsch. Schutzgeb. Südsee (1905) 242.

*Ficus Saffordii* MERR. in Philip. Jour. Sci. IX (1914) Bot. 74.

In primary forests. Tinian No. 49, Yap Nos. 69, 70, Ponape Nos. 749 (\*A 1812), 771 July-Aug. 1929; Saipan Nos. 997, 912, June 1930. *Distrib.* Marianne and Caroline Islands.

**Ficus philippinensis** MIQ. HOOK. Lond. Jour. Bot. VII (1848) 435.

In thickets and forests. Kolonia, Ponape Nos. 648, 710 (\*A 1813) Aug. 1929. *Distrib.* Celebes, Moluccas, New Guinea, New Caledonia, and Philippines. *Nat. name:* "neen" (Ponape).

**Ficus ramentacea** ROXB. Fl. Ind. ed. 2, III (1832) 216.

In thickets and secondary forests, an epiphyte climber. Korrör, Palau Nos. 184, 337, Babeldaob Nos. 379, 401, 429, July 1929. *Distrib.* Burma to Southern China through Malaysia to the Palau Islands.

**Ficus retusa** LINN. Mant. I (1767) 129.

In thickets at low altitudes. Korrör, Palau No. 173, Armatin No. 475, Angaur No. 573 (\*A 1814) July 1929; Yap No. 1120, Aug. 1930. *Distrib.* India to Southern China, Formosa through Malaya to Australia and New Caledonia.

**Ficus tinctoria** FORST. f. Prodr. (1786) 76; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 462.

In thickets and secondary forests. Saipan Nos. 1, 15, Tinian No. 65, Palau No. 158, Angaur No. 576, July–Aug. 1929; Saipan Nos. 919, 943, Tinian No. 913, Yap. Nos. 1171, 1201, July–Aug. 1930. *Distrib.* Philippines to Polynesia.

**Malaisia scandens** (LOUR.) PLANCH. in Ann. Sci. Nat. Bot. IV, 3 (1855) 293.

*Caturus scandens* LOUR. Fl. Cochinch. (1790) 613.

In thickets and secondary forests. Saipan Nos. 917, 931 (\*A 1958) July 1930. *Distrib.* China and Formosa to Malaya, Australia, and Polynesia.

### Urticaceae

**Laportea saipanensis** KANEHIRA sp. nov.

Arbor circiter ad 50 cm. diametro, 12 m. alta; foliis ovatis, membranaceis, integris, basi rotundis vel truncatis usque ad 18 cm. longis, penninerviis, nervis utrinque circiter 10; petioliis pubescentibus; inflorescentiis axillaribus usque ad 10 cm. longis, pilis urentibus instructis, floribus ♀ flabellatum dispositis.

A tree up to 50 cm. in diameter, 12 m. high; branchlets terete, glabrous, grayish brown. Leaves dark green when dry, ovate, membranaceous, 14–18 cm. long, 10–13 cm. wide, apex obtuse, base rounded or nearly truncate, upper surface densely white punctulate, and with widely scattered white hairs, lateral nerves 10 on each side of the midrib, curved, anastomosing, reticulations lax, petioles up to 3.5 cm. long, pubescent. Inflorescences axillary, branches spreading, ♀ 10 cm. long, with long white hairs, ♂ 5 cm. long, with short minute pubescence, fruit white, fleshy, flabellately disposed on the ultimate branches, receptacles enlarged in fruit, the achenes inequilateral, compressed, 3 mm. long.

The tree is very common in primary and secondary forests in Saipan.

Nos. 887 (\*A 1955), 973 (\*A 1956), July 1930. *Distrib.* Endemic. *Nat. name*: “kahtat”.

**Pipturus argenteus** (FORST. f) WEDD. in DC. Prodr. XVI, 1 (1869); MERR. in Philip. Jour. Sci. IX (1914) Bot. 78.

*Urtica argentea* FORST. f. Prodr. (1786) 65.

In primary forests. Saipan Nos. 898 (\*A 1969), 937, 979, July 1930. *Distrib.* Malay Archipelago to Polynesia.

### Olacaceae

**Olax imbricata** ROXB. Hort. Beng. (1814) 5, nom. nud., Fl. Ind. I (1820) 169.

A scandent shrub, in forest near the sea shore. Korrör, Palau No. 76, July 1929. *Distrib.* India to Malaya.

**Ximenia americana** LINN. Sp. Pl. (1753) 1193.

Tinian No. 59, June 1929, No. 1045, 1065 (\*A 1989) July 1930; Angaur No. 596, July 1929. *Distrib.* A pantropic strand plant.

### Amaranthaceae

**Deeringia amaranthoides** (LAM.) MERR. Interpret. Herb. Amb. (1917) 211, Sp. Blancoanae (1918) 136.

*Achyranthes amaranthoides* LAM. Encycl. I (1785) 548.

In primary forests; a liana. Saipan No. 40, June 1929, No. 983, July 1930. *Distrib.* India southward to Polynesia. *Nat. name*: "pehzerak".

### Nyctaginaceae

**Pisonia grandis** R. BR. Prodr. (1810) 422.

*Pisonia Brunoniana* ENDL. Prodr. Fl. Norf. (1833) 43; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 462.

In primary forests at low and medium altitudes. Saipan No. 4, June 1929, No. 968 (\*A 1970) 1930. A very large tree, up to 2.5 m. in diameter, fruits echinate, it occurs also in Tinian. *Distrib.* Moluccas, northeastern Australia, and across Polynesia to the Palmyra Islands. *Nat. name*: "umum".

**Pisonia umbellifera** (FORST.) SEEM. in Bonplandia X (1862) 154.

*Ceodes umbellifera* FORST. Char. Gen. (1776) 71, t. 71.

A fairly large low altitude tree, fruits glabrous. Saipan Nos. 969 (\*A 1971), 970, 985, July 1930; Angaur, Palau No. 578 (\*A 1876) Aug. 1929. *Distrib.* Formosa, Philippines, Java and Malaya to Australia and Polynesia. *Nat. name*: "langasat".

### Menispermaceae

**Pachygone Ledermanni** DIELS in ENGLER, Bot. Jahrb. LVI (1921) 507.

A climber, in forests at low altitudes. Palau, Kamset No. 541; Ponape, Kolonia No. 669, July-Aug. 1929. *Distrib.* Endemic.

### Anonaceae

**Anona glabra** LINN. Sp. Pl. (1753) 537.

Ponape No. 872, Aug. 1929. *Distrib.* Introduced from tropical America.

**Anona muricata** LINN. Sp. Pl. (1753) 536.

Palau, Aimiyon No. 507, July 1929; Ponape, Metaranium No. 782,

Aug. 1929. *Distrib.* Introduced from tropical America. It is the soursop.

**Anona reticulata** LINN. Sp. Pl. (1753) 537; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 462.

Saipan. No. 44, June 1929; Tinian No. 1058, July 1930. *Distrib.* Introduced from tropical America, now pantropic in cultivation.

**Goniothalamus carolinensis** KANEHIRA sp. nov.

Arbor glabra 8 m. alta; foliis ellipticis ad oblongo-elliptis aliquando oblongo-ovatis, usque ad 22 cm. longis, 9 cm. latis, coriaceis, apice obtusis, basi obtusis ad rotundis, nervis utrinque 18-20; floribus axillaribus, solitariis, petalis exterioribus elliptis, usque ad 42 mm. longis, interioribus crassis, 7 mm. longis, intus dense cinereo-pubescentibus, fructibus ellipsoideis 18-23 mm. longis.

A tree, 8 m. high, 40 cm. in diameter, glabrous throughout, the branchlets terete, slender grayish. Leaves elliptic to oblong-elliptic sometimes oblong-ovate, 10-22 cm. long, 5-9 cm. wide, coriaceous, apex obtuse to subobtuse rarely apiculate, the acumen blunt, base obtuse to rounded, lateral nerves about 18-20 on each side of the midrib, anastomosing, the reticulations distinct on the upper surface, petioles 8-12 mm. long. Flowers solitary, axillary, pedicels stout, about 10-12 mm. long. Sepals 3, triangular-ovate, glabrous, obtuse, 8-10 mm. long, 7-9 mm. wide. Outer petals elliptic, acute at both ends, narrowed toward the base, submembranaceous, greenish yellow, slightly pubescent on both surfaces, 38-42 mm. long, 20-22 mm. wide. Inner petals ovate-oblong, 6-7 mm. long, 4-5 mm. wide, thick, pubescent outside, densely gray pubescent inside except the basal part covering the stamens. Stamens many, 2.2 mm. long, somewhat curved, their connectives short, triangular. Carpels about 14, length 5 mm., glabrous. Fruit ellipsoid, 18-23 mm. long, 10-12 mm. in diameter.

In primary forests near the seashore. Palau, Kamset No. 531 (fl.), Gaspan No. 477 (fr.) (\*A 1830), July 1929. *Distrib.* Endemic.

**Canangium odoratum** (LAM.) BAILL. ex KING in Jour. As. Soc. Beng. LXI, 2 (1892) 41, Ann. Bot. Gard. Calcutta IV (1893) 51, t. 62.

*Uvaria odorata* LAM. Encycl. I (1785) 595.

*Cananga odorata* HOOK. f. et TH. Fl. Br. Ind. I (1855) 130.

Ponape, Kolonia No. 870, Aug. 1929. *Distrib.* Indigenous in Burma and Java, planted in most tropical countries.

**Guamia mariannae** (SAFFORD) MERR. in Philip. Jour. Sci. X (1915) Bot. 243.

*Papualthia mariannae* SAFFORD in Jour. Washingt. Acad. Sci. II (1912) 456; DIELS in ENGLER, Bot. Jahrb. LII (1915) 16. f. 2.

*Polyalthia mariannae* MERR. in Philip. Jour. Sci. IX (1914) Bot. 83. Very common in forests from low to medium altitudes, Saipan and Tinian islands. Saipan No. 14, June 1929, No. 883 (\*A 1950); Tinian No. 56, June 1929, Nos. 1050, 1074, July 1930. *Distrib.* Guam. *Nat. name*: "paipai".

### Myristicaceae

**Horsfieldia confertiflora** MERR. in Philip. Jour. Sci. XIII (1918) Bot. 285.

In primary forests at low altitudes. Palau, Garamiscan, No. 564, Aimiriik No. 270 (\*A 1838) July 1929. *Distrib.* Philippines. *Nat. name*: "umklar".

**Myristica hypargyrea** A. GRAY in Bot. U. S. Expl. Exped. (1854) 33. In primary forests, Ponape, Sankakuyama No. 763, Kolonia No. 727 (\*A 1866), Metaranium No. 788, Aug. 1929. *Distrib.* Polynesia. *Nat. name*: "karala" (Ponape).

**Myristica glabra** WARB.?

In primary forests at low altitudes., Palau, Aimiriik No. 270, July 1929. *Nat. name*: "umklar".

### Lauraceae

**Cassytha filiformis** LINN. Sp. Pl. (1753) 35; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 462.

Palau, Korrer No. 371, July 1929; Saipan No. 1043, July 1930. A strand plant. *Distrib.* Pantropic.

**Cinnamomum carolinense** KOIDZ. in Tokyo Bot. Mag. XXX (1916) 401.

In primary forests at low altitudes. Ponape, Kolonia No. 639 (fr.) (\*A 1770) Aug. 1929. *Distrib.* Endemic. *Nat. name*: "mattieu". The bark boiled in water is used for drinking.

### Hernandiaceae

**Hernandia ovigera** LINN. in Stickm. Herb. Amb. (1754) 14.

*Hernandia peltata* MEISN. in DC. Prodr. XV, 1 (1754) 263.

Palau, Marikyoku No. 435 (\*A 1834) July 1929; Saipan No. 888, July 1930. A strand plant. *Distrib.* Ceylon to tropical East Africa, Madagascar, through Malaya to tropical Australia and Polynesia. *Nat. names*: "dokoo" (Palau), "gachal" (Yap), "nônak" (Saipan).

### Capparidaceae

**Capparis cordifolia** LAM. Encycl. I (1785) 609; MERR. in Philip. Jour.

Sci. IX (1914) Bot. 84. Along the sea shore. Tinian No. 1070, July 1930. *Distrib.* Guam.

**Crataeva speciosa** VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 463. Palau, Korrör No. 80 (\*A 1781), Truk No. 603, July–Aug. 1929; Yap. No. 1106, Aug. 1930. *Distrib.* Endemic. Very common in Yap, planted near houses; fruits edible. *Nat. names*: “abeech” (Yap), “kadoppung” (Palau).

### Nepenthaceae

**Nepenthes mirabilis** (LOUR.) MERR. Interpret. Herb. Amb. (1917) 242. *Phylamphora mirabilis* Lour. Fl. Cochinch. (1790) 606.

*Nepenthes phylamphora* WILLD. Sp. Pl. IV, 2 (1805) 874; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 463.

Very common in thickets and fields of the Islands Palau and Yap. *Distrib.* Southern China and Indo-China, through Malaya and the Philippines to New Guinea. *Nat. name*: “finnabolo” or “mari-ekk” (Yap).

### Pittosporaceae

**Pittosporum ponapensis** KANEHIRA sp. nov.

Arbor 6–10 m. alta, 20–30 cm. diametro, glabra; foliis membranaceis, anguste oblongis ad oblongo-ovatis, apice acuminatis, basi angustis vel abrupte acutis, nervis utrinque 7 vel 8, distinctis, subtus ad costam nervosque parce pubescentibus; inflorescentiis axillaribus terminalibusque, sepalis acutis, petalis lanceolatis, ovario villosa; fructibus compressis, globosis, 12–15 mm. longis.

A medium-sized tree, 20–30 cm. in diameter, 6–10 m. high; glabrous throughout; branchlets slender, terete, grayish brown. Leaves membranaceous, narrowly oblong to oblong-ovate, 10–16 cm. long, 4–4.5 cm. wide, upper surface shining, dark brownish when dry, somewhat paler underneath, apex sharply acuminate, base gradually narrowed or abruptly acute, margin obscurely crenulate, lateral nerves 7 or 8 on each side of the midrib, distinct, reticulations rather obsolete, midrib and nerves sparsely pubescent underneath; petioles 2.5–3.0 mm. long. Inflorescences axillary or terminal, 3 cm. long, of 8–to 10-flowered umbels at the ends of the peduncles, pedicels 7–8 mm. long, pubescent, calyx deeply 5-lobed, lobes ovate-oblong, 1.8 mm. long, filaments glabrous, ovary clavate, pilose; capsule depressed-globose, 2-valved, 12–15 mm. long, seeds flattened, shining red, 3 mm. long. In primary forests near Kolonia, Ponape, No. 659 (\*A 1877) Aug. 1929. All parts of the plant strongly odorous when bruised. *Distrib.* Endemic. *Nat. name*: “kamal”.

### Rosaceae

**Parinarium glaberrimum** HASSK. in Tijdschr. Nat. Gesch. X (1843) 147, nom. nud., Cat. Hort. Bogor. (1844) 269, nom. nud., Flora XXVII (1844) 583.

*Parinarium laurinum* A. GRAY Bot. Wilkes U. S. Explor. Exped. (1854) 490, t. 55.

In forests near houses; Palau, Korrer No. 166 (\*A 1872), Marikyoku No. 433, July 1929, Ponape No. 847, Aug. 1929; Yap No. 1213, Aug. 1930. *Distrib.* Java, Borneo and the Philippines. *Nat. names:* "ais" (Ponape, Truk), "gritting" or "agaritin" (Palau, Yap), "yaradé" or "adidi" (Yap). Seeds oily and used for painting canoes and houses.

**Parinarium palauense** KANEHIRA sp. nov.

Arbor circiter 14 m. alta, 60 cm. diametro, partibus junioribus exceptis glabra, foliis coriaceis, obovatis, acuminatis, usque ad 11 cm. longis, 7 mm. latis, nervis primariis utrinque circiter 10, basi subtus 2-glandulosis, nervis reticulisque utrinque minute scaberulis; inflorescentiis axillaribus, racemosis, glabris; fructibus obovoideis, circiter 2 cm. longis.

A tree 60 cm. in diameter, 14 m. high, glabrous except the younger parts. Branchlets terete, dark brown, lenticellate; the very young branches and leaves with a pressed ciliate hairs. Leaves ovate to oblong-ovate, coriaceous, 8-11 cm. long, 3-4.5 cm. wide, dark brownish when dry, prominently acuminate, the base obtuse or nearly rounded, with two small glands near the junction with the petioles, lateral nerves about 10 on each side of the midrib, curved, anastomosing, the nerves and reticulations minutely scaberulous on both surfaces, petioles 5 mm. long. Racemes axillary, nearly glabrous, in fruit up to 7 cm. in length. Fruit obovoid, brownish, 15 mm. in diam., 20 mm. long, pedicels 7 mm. long, glabrous, the persistent sepals pubescent on both surfaces, the tube villous within.

In jungles near mangrove, Armatin, Babeldaob, Palau, No. 469 (\*A 1873) July 1929. *Distrib.* Endemic.

### Connaraceae

**Connarus Gaudichaudii** (DC.) PLANCH. in Linnaea XXIII (1850) 429; SCHELLENB. in ENGLER, Bot. Jahrb. LIX (1924) 17.

*Omphalobium Gaudichaudii* DC. Prodr. II (1825) 85.

In thickets and forests near the sea. Palau, Korrer Nos. 81, 144, 364 (\*A 1778), Aimiyon No. 514 (\*A 1777) July 1929. *Distrib.* Moluccas to New Guinea.

**Leguminosae**

**Abrus precatorius** LINN. Syst. ed. 12 (1767) 472; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 464.

Ponape, Metaranium No. 857, Aug. 1929; Tinian No. 1083, July 1930. *Distrib.* Pantropic.

**Albizzia Lebbeck** (LINN.) BENTH. in HOOK. Lond. Jour. Bot. III (1844) 87.

*Mimosa Lebbeck* LINN. Sp. Pl. (1753) 516.

Saipan No. 1084, Yap No. 1256 (\*A 1926) July–Aug. 1930. *Distrib.* A native of tropical Africa, now widely distributed in cultivation.

**Caesalpinia jayabo** MAZA in Anal. Soc. Esp. Hist. Nat. XIX (1890) 234. In forests at low altitudes. Palau, Aimiriik No. 330, July 1929. *Distrib.* Pantropic.

**Caesalpinia nuga** (LINN.) AIT. Hort. Kew ed. 2, III (1811) 32; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 464.

*Guilandina nuga* LINN. Sp. Pl. ed. 2 (1762) 546.

On coral rocks near the sea. Palau, Korrör No. 360, July 1929; Yap No. 1207, Aug. 1930. *Distrib.* Pantropic.

**Cynometra ramiflora** LINN. Sp. Pl. (1753) 382; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 463.

Very common in forests from low to medium altitudes, Saipan No. 8, June 1929, Nos. 519, 975 July 1930; Palau, Aimiyan No. 510, Marikyoku Nos. 384, 431, (\*A 1784), Aimiriik No. 314 (\*A 1786) July 1929; Ponape No. 662 (\*A 1785) Aug. 1929; Yap No. 1166, Aug. 1930. *Distrib.* Ceylon through Malaya to tropical Australia. *Nat. names*: “guurus” (Saipan), “monable” (Yap), “kumou” (Ponape), “kelenguit” (Palau).

**Dalbergia candenatensis** (DENNST.) PRAIN in Jour. As. Soc. Beng. LXX, 2 (1901) 49.

*Cassia candenatensis* DENNST. Schlüs. Hort. Malabar. (1818) 32.

*Dalbergia torta* GRAH. in WALL. Cat. (1832) No. 5873, nom. nud., VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 464.

A scandent shrub in strand forests. Palau, Korrör No. 194, July 1929; Ponape, Kolonia No. 670, Aug. 1929. *Distrib.* India to Southern China southward to New Guinea and Australia.

**Derris trifoliata** LOUR. Fl. Cochinch. (1790) 433.

*Derris uliginosa* BENTH. in MIQ. Pl. Jungh. (1852) 252; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 464.

A climber in littoral forests. Palau, Korrör Nos. 140, 174, 254, July 1929; Truk No. 602, Ponape Kolonia No. 718, Aug. 1929. *Distrib.* Tropical East Africa through Asia and Malaya to Australia.

**Derris elliptica** (ROXB.) BENTH. in Jour. Linn. Soc. Bot. IV (1860) suppl. 111; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 464.

*Galedupa elliptica* BENTH. Hort. Beng. (1814) 53.

Palau, Marikyoku No. 446, July 1929; Ponape No. 675, Aug. 1929; Yap No. 1163, Aug. 1930. *Distrib.* Chittagong through Malaya to New Guinea and the Bismark Archipelago. The plant is sometimes cultivated, the roots are used for poisoning fish. *Nat. names:* " duup " (Palau), " yubu " (Yap), " uup " (Truk).

**Desmodium umbellatum** (LINN.) DC. Prodr. II (1825) 325; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 464.

*Hedysarum umbellatum* LINN. Sp. Pl. (1753) 747.

In forests at low altitudes or in strand jungles. Palau, Korrer Nos. 96, 161, July 1929; Ponape, Kolonia No. 690, Aug. 1929; Saipan No. 1018, July 1930. *Distrib.* Mascarene Islands and tropical Asia through Malaya to northern Australia.

**Desmodium heterocarpum** (LINN.) DC. Prodr. II (1825) 337.

*Hedysarum heterocarpum* LINN. Sp. Pl. (1753) 747.

In thickets, open grasslands, etc. Yap. No. 1172, Aug. 1930. *Distrib.* Tropical Africa and Asia through Malaya to Australia and Polynesia.

**Entada phaseoloides** (LINN.) MERR. in Philip. Jour. Sci. IX (1914) Bot. 86.

*Lens phaseoloides* Linn. in Stieckm. Herb. Amb. (1754) 18.

Palau, Korrer No. 131, July 1929; Ponape No. 750, Aug. 1929; Saipan No. 990 July 1930. *Distrib.* Pantropic. *Nat. names:* " bozok-donkle " (Saipan), " kesegeguh " (Yap).

**Enterolobium saman** (JACQ.) PRAIN ex KING in Jour. As. Soc. Beng. LXVI, 2 (1897) 252.

*Mimosa saman* JACQ. Fragm. (1800-09) 15, t. 9.

From a cultivated tree. Saipan No. 1172, July 1930. *Distrib.* A native of tropical America, now widely distributed in cultivation.

**Erythrina fusca** LOUR. Fl. Cochinch. (1790) 427.

In swampy places near the sea. Ponape No. 746 (\*A 1797) Aug. 1929. *Distrib.* India to Indo-China southward to Malaya and Polynesia.

**Erythrina variegata** LINN. in Stieckm. Herb. Amb. (1754) 10; MERR. Enum. Philip. Fl. pl. II (1923) 309.

*Erythrina indica* LAM. Encycl. II (1785) 391; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 464; MERR. in Philip. Jour. Sci. IX (1914) Bot. 92.

In forests near the sea. Saipan Nos. 907 (\*A 1941), 1079, July 1930.

*Distrib.* India, Philippines to Polynesia. *Nat. names:* "gau-gau" (Saipan), "ral" (Yap).

**Flemingia strobilifera** (LINN.) R. BR. in Ait. Hort. Kew. ed. 2, IV (1812) 350.

*Hedysarum strobiliferum* LINN. Sp. Pl. (1753) 764.

Planted. Yap. No. 1205, Aug. 1930. *Distrib.* India to Malaya. Introduced in Mauritius and the West Indies.

**Inocarpus edulis** FORST. Char. Gen. (1776) 66, t. 33; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 464.

*Bocoa edulis* BAILL. Adansonia (1868-70) 237.

In thickets and forests near houses. Palau, Korrer No. 344 (\*A 1840) July 1929; Yap. No. 1170 Aug. 1930. *Distrib.* Malay Archipelago. *Nat. names:* "maarap" (Ponape), "keam" (Palau), "bui" (Yap). Frequently planted, the seeds are a favorite food among the natives.

**Intsia bijuga** (COLEBR.) O. KUNTZE, Rev. Gen. Pl. (1891) 192.

*Macrolobium bijugum* COLEBR. in Trans. Linn. Soc. XII (1819) 359, t. 17.

*Afzelia bijuga* A. GRAY Bot. Wilkes U. S. Explor. Exped. (1854) 467, t. 51; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 463.

In primary forests at low altitudes. Palau, Korrer No. 363 (\*A 1842), Ponape No. 854 (\*A 1841) July-Aug. 1929; Saipan. No. 905, Yap No. 1198 July-Aug. 1930. *Distrib.* Madagascar, across Malaya to Polynesia. *Nat. names:* "show" (Ponape), "zolt" (Palau and Yap), "ifl" (Saipan).

**Ormosia calavensis** AZOALA ex BLANCO, Fl. Filip. ed. 2 (1845) 230.

In forests near the sea. Palau, a coral island No. 220, Aimiriik No. 259 (\*A 1869), Marikyoku No. 407 (\*A 1868) July 1929. *Distrib.* Philippines to the Moluccas. *Nat. name:* "adapsung-erket" (Palau).

**Mucuna gigantea** (WILLD.) DC. Prodr. II (1825) 405.

*Dolichos giganteus* WILLD. Sp. Pl. III (1803) 1041.

In forests at low altitudes. Palau, Babeldaob No. 395, July 1929. *Distrib.* India, Philippines to Polynesia.

**Delonix regia** (BOJ.) RAF. Tellur. II (1836) 92.

*Poinciana regia* BOJ. in CURTIS'S Bot. Mag. LVI (1829) t. 2884; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 463.

Not collected; Ponape, Saipan, Yap, Palau. *Distrib.* A native of Madagascar, now pantropic in cultivation.

**Leucaena glauca** (LINN.) BENTH. in Hook. Jour. Bot. IV (1842) 416; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 463.

*Mimosa glauca* LINN. Sp. Pl. (1753) 520.

Saipan No. 960, July 1930. *Distrib.* Introduced from tropical America, now pantropic. *Nat. name*: "tagan-tagan" (Saipan).

**Pithecolobium dulce** (ROXB.) BENTH. in HOOK. Lond. Jour. Bot. III (1844) 199; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 463.

*Mimosa dulcis* ROXB. Pl. Coromandel I (1795) 67, t. 99.

Saipan No. 956, July 1930. *Distrib.* Introduced from Mexico, now pantropic. *Nat. name*: "kamachile" (Saipan).

**Pongamia pinnata** (LINN.) MERR. Interpret. Herb. Amb. (1917) 271, Enum. Philip. Fl. Pl. II (1923) 298.

*Cytisus pinnatus* LINN. Sp. Pl. (1753) 741.

*Pongamia glabra* VENT. Jard. Malam. I (1803) 28, t. 28; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 464.

In sea side forests. Palau, Korrer No. 359 (\*A 1880) July 1929; Yap No. 1197 Aug. 1930; Tinian No. 1048 (\*A 1973) July 1930. *Distrib.* Mascarene Islands, tropical Asia, Malaya to Australia. *Nat. name*: "mirak" (Yap).

**Pterocarpus indicus** WILLD. Sp. Pl. III (1800) 904; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 464.

In primary forests at low altitudes. Palau, Babeldaob Nos. 305 (\*A 1885), 504, 540 (\*A 1886) July 1929; Yap No. 1228, Aug. 1930. *Distrib.* India to Malaya. *Nat. name*: "aras" (Palau), "arau" (Yap).

**Serianthes grandiflora** (WALL.) BENTH. in HOOK. Lond. Jour. Bot. III (1844) 255, Trans. Linn. Soc. XXX (1875) 599; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 463.

*Inga grandiflora* WALL. Cat. (1832) No. 5285, nom. nud.

In beach forests. Palau, Korrer No. 176 (\*A 1903) July 1929. *Distrib.* Malay Peninsula to the Philippines and New Guinea. The tree has a large straight trunk and produces excellent timber. *Nat. names*: "ukar" (Palau), "gumor" (Yap).

**Sophora tomentosa** LINN. Sp. Pl. (1753) 373; MERR. in Philip. Jour. Sci. IX (1914) Bot. 89.

In thickets near the sea. Saipan No. 1011, July 1930. *Distrib.* Tropics of both hemispheres.

**Parkia korom** KANEHIRA sp. nov.

Arbor 20 m. alta 100 cm. diametro, ramis ramulisque plus minusve ferrugineo-pubescentibus, foliis circiter 60 cm. longis, pinnis 8-ad 15-jugatis, foliolis 30-ad 40-jugatis, oblongis, coriaceis, usque ad 12 mm. longis, 4-5 mm. latis, sessilibus, basi subtruncatis, apice rotundatis ad leviter inaequaliter retusis; pedunculis usque ad 20 cm. longis; inflorescentiis obovoideis, bracteolis imbricatis, dense ferrugineo-

pubescentibus ; legumine planato ferrugineo-pubescente.

A large tree up to 20 m. high, the trunk 100 cm. in diameter, the young branchlets, rachis, secondary rachis and peduncles more or less ferruginous-pubescent with short hairs. Leaves up to 60 cm. long, leaflets 30-40 pairs, coriaceous, oblong, 12 mm. long, 4-5 mm. wide, sessile, base rounded-truncate, inequilateral, apex rounded somewhat inequilaterally retuse, the lateral nerves slender, anastomosing, indistinct. Peduncles up to 20 cm. long, the inflorescence obovoid, slightly contracted below the middle, about 3.5 cm. long, 3 cm. in diameter, the bracteoles densely imbricate, spatulate, about 8 mm. long, glabrous, except the upper exposed portion which is densely ferruginous-pubescent, calyx 8-9 mm. long, the tube glabrous, the lobes densely ferruginous-pubescent, petals linear, 7 mm. long, 0.4 mm. wide, stamens 10, glabrous ; pod flat, about 30 cm. long, 4.5 cm. wide, ferruginous-pubescent.

Very conspicuous in the forests because of its large trunk and its large dense crown, the flower heads yellowish, globose. It is called " korom " by the natives and the wood is much esteemed for making canoes. In primary forests near Kolonia, Ponape, No. 673 (\*A 1874) Aug. 1929. *Distrib.* Endemic.

### Oxalidaceae

**Averrhoa carambola** LINN. Sp. Pl. (1753) 428 ; MERR. in Philip. Jour. Sci. IX (1914) Bot. 95.

Yap. No. 1241, Aug. 1930. *Distrib.* A native of tropical America, now cultivated in all tropical countries.

### Rutaceae

**Evodia nitida** LAUTERB. in ENGLER, Bot. Jahrb. LVI (1921) 510.

In forests at low altitudes. Palau, Babeldaob Nos. 501 (\*A 1087), 544, July 1929. *Distrib.* Endemic.

**Evodia hortensis** FORST. Char. Gen. (1776) 14, t. 7,

From a cultivated plant. Ponape, Kolonia No. 660, Aug. 1929. *Distrib.* Polynesia.

**Melicope ponapensis** LAUTERB. in ENGLER, Bot. Jahrb. LVI (1921) 510.

In thickets and primary forests from low to medium altitudes ; a medium sized-tree. Ponape, Kolonia No. 698 (fl.) (\*A 1858). Sankakuyama No. 764 (fr.) Niinoanizan No. 793 (fr.) (\*A 1859) Aug. 1929. *Distrib.* Endemic. *Nat. name* : "painte" (Ponape).

**Citrus aurantium** LINN. Sp. Pl. (1753) 783.

In thickets at medium altitudes. Saipan No. 910, July 1930. *Distrib.* Cultivated in all tropical and subtropical countries.

### Simarubaceae

**Samadera indica** GAERTN. Fruct. II (1791) 352, t. 156; LAUTERB. in ENGLER, Bot. Jahrb. LVI (1921) 511.

In mangrove forests. Palau, Garamiscan No. 558 (\*A 1898) July 1929. *Distrib.* India to Malaya. *Nat. name*: "eskeam".

**Soulamea amara** LAM. Encycl. I (1783) 449; LAUTERB. in ENGLER, Bot. Jahrb. LVI (1921) 344, f. 1.

In beach forests on coral rocks. Palau, a coral island No. 219 \*(A 1906) July 1929. *Distrib.* Polynesia to New Guinea.

### Burseraceae

**Canarium ovatum** ENGL. in DC. Monog. Phan. IV (1883) 110.

Planted. Ponape No. 739, Aug. 1929. *Distrib.* Philippines. This produces the pili nut of the Philippines.

**Canarium commune** LINN. Mant. I (1767) 127.

Probably planted. Ponape No. 848, Aug. 1929. *Distrib.* Malay Archipelago.

**Canarium palauense** LAUTERB. in ENGLER, Bot. Jahrb. LVI (1921) 515.

In primary forests at low altitudes. Palau, Garamiscan No. 549, July 1929. *Distrib.* Endemic.

### Meliaceae

**Aglaia mariannensis** MERR. in Philip. Jour. Sci. IX (1914) Bot. 99.

In thickets and forests from low to medium altitudes. Saipan Nos. 16, 41, July 1929, Nos. 920, 977 (\*A 1925) July 1930; Palau, Babeldaob No. 301, Ponape, Kolonia No. 649 (\*A 1745), Niinoanizan No. 825, July-Aug. 1929. *Distrib.* Guam. *Nat. names*; "marashau" (Ponape), "maffnyo" (Saipan).

**Lansium domesticum** CORREA in Ann. Mus. Hist. Nat. Paris X (1807) 157, t. 10, f. 1.

Planted in the Botanical Garden, Ponape, No. 666, Aug. 1929. *Distrib.* Indo-China, Malay Peninsula and Archipelago; cultivated for its edible fruits.

**Melia Azedarach** LINN. Sp. Pl. (1753) 394; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 465.

In thickets and secondary forests. Ponape, Kolonia Nos. 654, 700, Aug. 1929; Yap No. 916, Aug. 1930. *Distrib.* India to tropical

Africa, Southern China and Formosa through Malaya to tropical Australia.

**Xylocarpus granatum** KOENIG in Naturf. XX (1784) 244.

A mangrove tree. Palau, Aimiriik No. 318 (\*A 1920) July 1929. *Distrib.* India and Ceylon through Malaya to New Caledonia. *Nat. names*: “murudokobon” (Palau), “brok” (Ponape), “pulbun” (Truk), “yamgl” (Yap).

**Vavaea pauciflora** VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 465.

In primary forests near the sea shore. Yap No. 1231 (\*A 1987) Aug. 1930. *Distrib.* Endemic. *Nat. name*: “mesei” (Yap). Wood is used for incense.

### Euphorbiaceae

**Acalypha hispida** BURM. f. Fl. Ind. (1768) 303, t. 61, f. 1.

Planted. Yap. No. 1215 Aug. 1930. *Distrib.* Probably a native of southern Malaya, now cultivated in tropical countries.

**Aleurites moluccana** (LINN.) WILLD. Sp. Pl. IV (1805) 590.

*Jatropha moluccana* LINN. Sp. Pl. (1753) 1006.

In thickets near houses. Ponape, Metaranium No. 846 (\*A 1745) Aug. 1929. *Distrib.* Tropical Asia to Polynesia, now planted in most tropical countries; the candlenut.

**Claoxylon longifolium** (BL.) MIQ.; PAX & HOFFM. in ENGLER, Pflanzenr. LXIII (1914) 156.

Rather abundant in low and medium alt. A medium-sized tree, latex poisonous. Ponape, Kolonia No. 647 (\*A 1771), Sankakuyama No. 761, Aug. 1929. *Distrib.* Malaya. *Nat. name*: “koy” (Ponape).

**Claoxylon mariannum** MUELL.-ARG. in DC. Prodr. XV, 2 (1866) 783; MERR. in Philip. Jour. Sci. IX (1914) Bot. 100.

In primary forests at medium altitudes. Saipan No. 7, June 1929, Nos. 896 (\*A 1936), 921, July 1930. *Distrib.* Guam. *Nat. name*: “kattleknau” (Saipan).

**Cleistanthus carolinensis** JABL. in ENGLER, Pflanzenr. Euph-Bridel. (1915) 46.

A small shrub, in beach forests. Palau Aimiriik No. 313 (\*A 1772), Korrer No. 357 (\*A 1773) July 1929. *Distrib.* Endemic.

**Cleistanthus angularis** KANEHIRA sp. nov.

Frutex 2 m. altus glaber; foliis ovato-oblongis ad ovato-elliptis, usque ad 10 cm. longis, subcoriaceis. in siccitate supra nitidis, utrinque pallidis, apice tenuiter acuminatis basi abrupte rotundatis vel obtusis

nervis utrinque circiter 6, obscuris; floribus axillaribus, ut videtur solitaribus, sessilibus, fructibus, subglobosis nitidis, crustaceis, 3-sulcatis, valvis angulatis.

A monœcious shrub, about 10 cm. in diameter, 2 m. high, branchlets glabrous, terete, grayish. Leaves ovate-oblong to ovate-elliptic, 6-10 cm. long, 3-4 cm. wide, subcoriaceous, shining, rather pale and of about the same colour on both surfaces when dry, the base abruptly rounded or obtuse, the apex slenderly acuminate, secondary nerves about 6 on each side of the midrib, very obscure; petioles 6 mm. long. Flowers axillary, apparently solitary and sessile. Capsule ovoid or subglobose, shining, crustaceous, longitudinally 3-sulcate, 8-10 mm. long, valves angular.

Closely allied to *Cleistanthus carolinensis* JABL. which has more larger leaves and is shining chestnut brown underneath. In primary forests along the seashore, Babeldaob, Palau, No. 534 (\*A 1774) July 1929. *Distrib.* Endemic.

**Jatropha Curcus** Linn. Sp. Pl. (1753) 1006.

Planted. Saipan No. 904, July 1930. *Distrib.* A native of tropical America, now in all tropical countries. It is "physic nut". *Nat. name*: "tuba-tuba" (Saipan).

**Croton heterocarpus** MUELL.-ARG. in DC. Prodr. XV, 2 (1866) 621.

In thickets near the sea shore. Palau, Korrör No. 189 (\*A 1782) July 1929. *Distrib.* Malay Peninsula, Philippines, Sumatra and Borneo.

**Excoecaria Agallocha** LINN. Syst. ed. 10 (1759) 1288; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 466.

In beach forests or in mangrove swamps. Palau, Korrör Nos. 131, 363, 365 (\*A 1808) July 1929. *Distrib.* India to Polynesia. *Nat. names*: "bat" (Yap), "ayas" (Palau).

**Glochidion marianum** MUELL.-ARG. in Linnaea XXXII (1863) 65; MERR. in Philip. Jour. Sci. IX (1914) Bot. 102.

In forests at 600-700 m. alt. Ponape, Niinoanizan No. 840, Aug. 1929. *Distrib.* Guam.

**Glochidion ramiflorum** FORST. Char. Gen. (1776) 114, t. 57.

In thickets and forests. Palau, a coral island No. 241, Aimiyon No. 500 (\*A 1825) July 1929; Truk No. 611, Aug. 1929. *Distrib.* Polynesia.

(I have two other species of *Glochidion* from Ponape and Palau, as yet undetermined.)

**Homalanthus populneus** (GEISEL.) PAX. in ENGLER & PRANTL Nat. Pflanzenf. III, 5 (1890) 96.

*Stillignia populnea* GEISEL. Croton Monog. (1807) 80.

In forests at low altitudes near the sea. Ponape No. 748 (\*A 1837) Aug. 1929. *Distrib.* Malay Peninsula, Sumatra, Java, Borneo, Celebes, Philippines, Amboina and New Guinea. *Nat. name*: "keishia" (Ponape).

**Macaranga carolinensis** VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 466.

In forests from low to medium altitudes. Palau, Korrer Nos. 88, 188, Aimiriik No. 266, July 1929; Ponape, Kolonia Nos. 632 (\*A 1852), 708, Aug. 1929; Yap Nos. 1096, 1097, Aug. 1930. *Distrib.* Endemic.

**Melanoplepis multiglandulosa** (REINW.) REICHB. f. et ZOLL. in Linnaea XXVIII (1856) 324.

*Croton multiglandulosus* REINW. ex BLUME Cat. Gew. Buitenz. (1823) 105.

In forests at low altitudes. Saipan No. 19, June 1929, No. 886 (\*A 1959) July 1930; Tinian No. 1061, Aug. 1930. *Distrib.* Indo-China to Formosa, Sumatra, Java, Borneo, and the Philippines to New Guinea. *Nat. name*: "alum" (Saipan).

**Ormocarpum glabrum** TEIJSM. et BINN. in Tijdschr. Nederl. Indie XXVII (1864) 56.

Probably introduced; planted as a hedge plant. Yap No. 1258, Aug. 1930. *Distrib.* Celebes.

**Phyllanthus marianus** MUELL.-ARG. in Linnaea XXXII (1863) 17; MERR. in Philip. Jour. Sci. IX (1914) Bot. 103.

In thickets at low altitudes. Saipan No. 34, June 1929, No. 1036, July 1930; Palau, Korrer No. 195, July 1929. *Distrib.* Otherwise known only from Guam.

**Sapium indicum** WILLD. Sp. Pl. IV (1805) 572.

In forests near the sea. Palau, Babeldaob No. 385 (\*A 1899) July 1929. A large tree, 80 cm. in diameter, 15 m. in height. *Distrib.* Ceylon, India through Malay to New Guinea.

#### Anacardiaceae

**Buchanania Engleriana** VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 466; LAUTERB. op. cit. LVI (1921) 517.

In primary forests. Yap Nos. 1114 (\*A 1930), 1180, 1237 (\*A 1931) July 1930. *Distrib.* Endemic.

**Buchanania palawensis** LAUTERB. in ENGLER, Bot. Jahrb. LVI (1921) 517.

In beach forests on coral rocks. Palau, Korrer No. 355 (\*A 1760), Marikyoku No. 432 (\*A 1761) July 1929. *Distrib.* Endemic.

**Campospermum brevipetiolata** VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 466; LAUTERB. op. cit. LVI (1921) 518.

Very common in forests from low to medium altitudes. A very large tree with a straight trunk. Palau, Armatin No. 471, Aimirrik No. 258 (\*A 1764), Korrör No. 142, July 1929; Ponape, Kolonia No. 635 (\*A 1763); Yap No. 1111, Aug. 1930. *Distrib.* Endemic. *Nat. names*: "tohn" (Ponape), "ramalo" or "ramulo" (Yap), "keralm" (Palau).

**Mangifera indica** LINN. Sp. Pl. (1753) 200.

From a cultivated plant. Ponape No. 873, Aug. 1929. *Distrib.* Indo-Malayan region in general cultivation, planted in all islands. *Nat. names*: "maracao" (Truk), "kenget" (Ponape).

**Rhus taitensis** GUILL. in Ann. Sci. Nat. II, 7 (1837) 361; MERR. Enum. Philip. Fl. Pl. II (1923) 473.

*Rhus simarubifolia* A. GRAY, Bot. Wilkes U. S. Explor. Exped. (1854) 367, t. 44; ENGLER in DC. Monog. Phan. IV (1883) 450; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 467; LAUTERB. op. cit. LVI (1921) 519.

In thickets and forests at low altitudes, very common. Palau, Korrör No. 130 (\*A 1896) July 1929; Yap No. 1134, Aug. 1930. *Distrib.* Philippines to Polynesia. *Nat. names*: "acaues" (Palau), "garahdé" (Yap).

**Semecarpus venenosa** VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 467; LAUTERB. op. cit. LVI (1921) 521, f. 1.

In primary forests at low altitudes. Palau, Babeldaob Nos. 309 (\*A 1902), 428, July 1929; Yap No. 1175, Aug. 1930. A medium-sized tree, sap poisonous. *Distrib.* Endemic.

**Spondias pinnata** (LINN. f.) KURZ in Pegu Report. (1875) A 44; MERR. Interpret. Herb. Amb. (1917) 332, Sp. Blancoanae (1918) 233.

*Magnifera pinnata* LINN. f. Suppl. (1781) 56.

In thickets near houses. Palau, Babeldaob No. 378, July 1929; Ponape, Kolonia, at the Botanical Garden No. 664, Aug. 1929. Frequently planted for its edible fruits. *Distrib.* India to the Philippines and the Moluccas. *Nat. name*: "tetimmur".

#### Aquifoliaceae

**Ilex Mertensii** MAX. var. **Volkensiana** LOES. in ENGLER, Bot. Jahrb. LVI (1921) 523.

In primary forests at 600-700 m. alt. Ponape, Niinoanizan No. 802 (\*A 1839) Aug. 1929. *Distrib.* Endemic.

### Celastraceae

**Gymnosporia Thompsonii** MERR. in Philip. Jour. Sci. IX (1914) Bot. 105, LOESENER in ENGLER, Bot. Jahrb. LXIII (1930) 272.

*Celastrus marianensis* KOIDZ. in Tokyo Bot. Mag. XXX (1916) 400.  
In damp primary forests at low altitudes. Saipan Nos. 930 (\*A 1951), 948, 987, 1004, (all fruit), Tinian No. 1046 (fl.) July 1930. *Distrib.* Guam. *Nat. name*: "lulufut" (Saipan).

**Gymnosporia palauca** LOES. in ENGLER, Bot. Jahrb. LXIII (1930) 272.

In forests on coral rocks. Palau, Korrer No. 95 (fr.) July 1929. This species differs from the preceding by having thicker and rounded leaves. *Distrib.* Endemic.

### Hippocrateaceae

**Salacia Naumannii** ENGL. Bot. Jahrb. VII (1886) 464; LOES. in K. SCHUM. et K. LAUTERB. Nachtr. Fl. Deutsch. Schutzgeb. Südsee (1905) 304, ENGLER, op. cit. LXIII (1930) 276.

In forests at low altitudes or thickets near houses. Palau, Korrer Nos. 75, 338 (\*A 1836), Marikyoku No. 396, Aimiyon No. 509. July 1929; Yap Nos. 1119 (\*A 1977), 1239 (\*A 1978). *Distrib.* Endemic. *Nat. name*: "detimmur" (Palau). The species apparently very closely allied to *Salacia prinoides* DC. LOESENER reports *Salacicatea Kraemeri* from Korrer and *Hippocratea macarantha* var. *palauca* from Babeldaob, Palau which I have not seen.

### Icacinaceae

**Lophopyxis pentaptera** (K. SCHUM.) ENGL. in SITZ. Preuss. Akad. Wiss. XVIII (1893) 265.

*Combretopsis pentaptera* K. SCHUM. in K. SCHUM. et HOLLR. Fl. Kais. Wilhelmsl. (1889) 69.

In forests at low altitudes. Palau, Korrer No. 124 (sterile), Aimiyon No. 486 (fr.) July 1929. *Distrib.* New Guinea. *Nat. name*: "koh-tep" (Palau).

**Urandra ammui** KANEHIRA nom. nov.

*Urandra elliptica* SCHELLENB. in ENGLER, Bot. Jahrb. LIX (1924) 17, non MERR. in Philip. Jour. Sci. V (1910) Bot. 195.

In mangrove swamps. Palau, Kamset No. 538 (\*A 1915) July 1929. *Distrib.* Endemic. *Nat. name*: "ammui" (Palau).

### Sapindaceae

**Allophylus ternatus** (FORST.) RADLK. in ENGLER & PRANTL, Pflanz.

zenf. III, 5 (1895) 313.

*Aporetica ternata* FORST. Char. Gen. (1776) 132.

In thickets along the seashore. Palau, Korrer No. 567, Ponape No. 634, July-Aug. 1929. *Distrib.* Borneo, Philippines, tropical Australia.

**Allophylus timorensis** (DC.) BLUME Rumphia III (1847) 130; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 467.

*Schmidelia timorensis* DC. Prodr. I (1824) 611.

In thickets and forests near the sea. Palau, a coral island No. 215 (\*A 1746), Angaur No. 597 (\*A 1747) July 1929; Saipan No. 906, July 1930. *Distrib.* Formosa to the Nicobar Islands, Malay Peninsula and Archipelago, Samoa and New Caledonia.

**Dodonaea viscosa** (LINN.) JACQ., Enum. Pl. Carib. (1760) 19; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 467.

*Ptelea viscosa* LINN. Sp. Pl. (1753) 118.

In thickets and open grasslands. Palau, Marikyoku No. 421, July 1929; Saipan No. 1024 (\*A 1938) July 1930. *Distrib.* Pantropic. *Nat. name*: "mashikirangl" (Palau).

### Rhamnaceae

**Alphitonia philippinensis** BRAID in Kew Bull. (1925) 183.

*Alphitonia excelsa* (non REIS.) LAUTERB. in ENGLER, Bot. Jahrb. LVI (1921) 525.

In thickets and forests at low altitudes. Palau, Marikyoku No. 405 (\*A 1748) July 1929; Yap No. 1234 (\*A 1927) Aug. 1930. *Distrib.* Philippines, Borneo, Indo-China and Hainan. *Nat. name*: "kara-biob" (Palau).

**Colubrina asiatica** (LINN.) BRONGN. in Ann. Sci. Nat. I, 10 (1827) 369; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 467.

*Ceanothus asisticus* LINN. Sp. Pl. (1753) 196.

A scandent shrub along the sea shore. Tinian No. 48, June 1929; Palau, a coral island No. 238, July 1929; Ponape No. 860, Aug. 1929. *Distrib.* Tropical Africa and India to Formosa, through Malaya to Australia and Polynesia.

### Vitaceae

**Columella trifolia** (LINN.) MERR. in Philip. Jour. Sci. XI (1916) Bot. 134.

*Vitis trifolia* LINN. Sp. Pl. (1753) 293.

*Cissus trifolia* K. SCHUM. Fl. Kaiser Wilhelmsl. (1889) 71; VOLKENS in ENGLER, Bot. Jahrb. XXXI (1902) 468; LAUTERB. in ENGLER,

op. cit. LXIII (1930) 277.

In thickets and margins of forests. Palau, Korrer No. 87, July 1929 ; Yap No. 1102, Aug. 1930. *Distrib.* India to Southern China through Malaya to the Moluccas.

**Leea Brunoniana** C. B. CLARKE in Jour. Bot. XIX (1881) 166; LAUTERB. in ENGLER, Bot. Jahrb. LXIII (1930) 277.

*Leea sambucina* (non WILLD.) VOLKENS in ENGLER, op. cit. XXXI (1902) 468.

In thickets and forests at low altitudes. Palau, Korrer Nos. 172 (\*A 1844), 173, July ; Yap No. 1094, Aug. 1930. *Distrib.* Northern Australia, Timor, Malaysia to Solomon Islands. *Nat. name* : " sugal " (Palau). The species is very near *L. indica* if not the same.

#### Elaeocarpaceae

**Elaeocarpus carolinensis** KOIDZ. in Tokyo Bot. Mag. XXX (1916) 403.

*Elaeocarpus joga* (non MERR.) SCHLECHT. in ENGLER, Bot. Jahrb. LVI (1921) 563.

Very common in forests at low altitudes. Ponape, Kolonia No. 650 (\*A 1794) Aug. 1929. *Distrib.* Endemic. *Nat. name* : " settak ". A very large tree, 100 cm. in diameter, 16 m. in height, wood used for making canoes.

**Elaeocarpus Kerstingiana** SCHLECHT. in ENGLER, Bot. Jahrb. LVI (1921) 563.

In primary forests at 300 m. alt. Ponape, Niinoanizan, No. 801 (\*A1795) Aug. 1929. *Distrib.* Endemic. A medium-sized tree, 25 cm. in diameter, 8 m. high.

**Elaeocarpus Kusanoi** KOIDZ. in Tokyo Bot. Mag. XXXI (1917) 232.

*Elaeocarpus Gibbonii* SCHLECHT. in ENGLER, Bot. Jahrb. LVI (1921) 564.

In primary forests from low to medium altitudes. Ponape, Kolonia No. 740 (\*A 1796), Sankakuyama No. 745, Aug. 1929. *Distrib.* Endemic. *Nat. name* : " marratte " (Ponape).

There is one more species of this genus from Ponape undetermined.

#### Tiliaceae

**Columbia scabra** (SM.) KANEHIRA comb. nov.

*Microcos scabra* SM. in REES Cycl. XXIII (1819) No. 3.

*Colona scabra* BURRET in Notizb. Bot. Gart. Berl. IX (1926) 800.

In forests along the sea shore. Palau, Armatin No. 476 (\*A 1775) July

1929. *Distrib.* Celebes, Amboina, Arue Islands. *Nat. name* :  
“ uab ” (Palau). A medium-sized tree, 80 cm. in diameter with  
spreading branches, bark fibrous.

**Grewia mariannensis** MERR. in Philip. Jour. Sci. IX (1914) Bot. 109.  
In secondary forests at low altitudes. Saipan Nos. 20, 22, June 1929,  
No. 972 (\*A 1949) July 1930. *Distrib.* Guam. *Nat. name* :  
“ angeelo ” (Saipan). A medium-sized tree.

**Trichospermum Ledermannii** BURRET in Notizb. Bot. Gart. Berl. IX  
(1926) 850.

In secondary forests at low altitudes. Palau, Marikyoku, No. 410,  
Aimiriik No. 272 (\*A 1914), a coral island No. 234, July 1929.  
*Distrib.* Endemic.

**Triumfetta procumbens** FORST. f. Prodr. (1786) 35; HEMSLE. in Jour.  
Bot. XXVIII (1890) 1, t. 293, f. 2.

On sandy seashores. Palau, Angaur No. 572 July 1929. *Distrib.*  
Sechelles through Malaya to the Philippines and Polynesia.

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