New or Noteworthy Trees from Micronesia VII

By

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With 5 Text-Figures

The specimens on which the following descriptions are based were collected by me on my fifth and earlier expeditions to Micronesia; one species was collected by Mr. S. Nisida of the Experiment Station, Korrör, Palau.

Photo. 1. *Cyathea lunulata* (FORST.) COPEL.

(84) ***Cyathea* affinis*** (FORSTER) SW. Schrad. Journ. 1800-2 (1801) 94; CARR. in Seem. Fl. Vit. (1873) 333.

Polypodium affine FORST. Prodr. (1786) 83.

No. 677 Ponape Kolonia, Aug. 9 1929; No. 810 Ponape, Niinoanizan Aug. 14 1929; No. 1493 Ponape Parkiel July 13 1931; No. 1345 Kusai July 1 1931. In forests of Ponape and Kusai. *Distrib.* Polynesia.

(85) ***Cyathea lunulata*** (FORSTER) COPEL. Bishop Museum Bull. 59 (1929) 37.

Polypodium lunulatum FORSTER Prodr. (1786) 83.

Alsophila lunulata R. BR. BAKER Synopsis, 41.

* I am indebted to Dr. E. B. COPELAND for the identification of *Cyathea* from the Marianne and Caroline Islands. In his letter dated October 25th, 1933, he writes regarding *Cyathea* from the Caroline Islands: "It is understood that I have never seen FORSTER's type, and regard *Cyathea* identifications as less than positive until they are checked against type material, directly or indirectly. These are the same species known

No. 138 Palau, Korrör July 4 1929; No. 263 Palau, a non-inhabited coral island, near Korrör July 1929. In forests at low altitudes. *Distrib.* Southwest Polynesia and Melanesia.

(86) ***Cyathea aramaganensis*** KANEHIRA nov. sp.

Arbor, 5–10 m alta, trunco saepe ramoso, basi usque ad 2 m diametro, cicatricibus frondorum oblongis vel rotundato-rhomboideis. Frons in apicem truncarum conferti, bipinnata, ambitu ovato-oblonga, circiter 180–220 cm longa, 9 cm lata, stipes 60–100 cm longi, furfurascenti et brevi-spinulescenti, pinnae in medianis 30–45 cm longae. 20 cm latae, rachis dorso glabrescens ventre densissime castaneo-villosa, pinnulae lanceolatae, longe caudato-acuminatae, 9–10 cm longae, profunde pinnatisectae, lobis integris, falcatis, 5–6 mm longis, 2 mm latis, margine sicco revoluti, nervis lateralibus simplicibus vel bifurcatis, supra indistinctis, indisium membranaceum, sporangium tetrapeziforme.

Photo. 2. *Cyathea aramaganensis* KANEHIRA

No. 2173 R. KANEHIRA Aramagan Island, July 5th, 1933. The tree scattered in the mountain slopes at about 300–500 m altitudes. The very tall forked trunks are very remarkable. The tree is not known elsewhere than Aramagan, an island situated in the north of Saipan.*

(87) ***Exorrhiza carolinensis*** (BECC.) BURRET Fedde Repert. 24 (1926) 296.

to me by these names from Fiji, but FORSTER never collected in Fiji. In the case of *Cyathea affinis*, CARRUTHERS identified the Fiji plant by comparison with the type, which ought to establish its identity. And yet, a distinctly different species is given this name in Tahiti where FORSTER did collect."

* After completing my manuscript I am informed by Mr. H. HOSOKAWA, who recently explored the Marianne Islands, that the tree is also found in the forests of Saligan, a small island linking the Marianne Islands.

Bentickiopsis carolinensis BECC. in *Webbia* 5, 1 (1921) 113, ENGL. Bot. Jahrb. 59 (1924) 16; KANEHIRA in Bot. Mag. Tokyo 45 (1931) 274, Fl. Micr. (1933) 73.

Cyphonokentia (?) *carolinensis* BECC. in ENGL. l. c. 52 (1915) 4.

The type from Truk. *Nat. name*: "kiriya" (Truk). *Distrib.* Endemic.

(88) ***Exorrhiza ponapensis*** (BECC.) BURRET l. c. 294.

Fig. 3. *Pithecellobium palauense* KANEHIRA
 (A) A branch. $\times 2/5$ (B) A portion of flower head. $\times 5$ (C) A flower. $\times 6$
 (D) A pistil. $\times 8$ (E) A pod. $\times 2/5$

Bentinckiopsis ponapensis BECC. in Webbia **5**, 1 (1921) 113; KANEHIRA Micr. 72, f. 9.

No. 770 Ponape Sakakuyama Aug. 12 1929, No. 1675 Ponape, Naanaraut July 25, 1931. *Distrib.* Endemic. *Nat. name*: "kotop" (Ponape).

(89) **Pithecellobium palauense** KANEHIRA nov. sp. (Fig. 3)

Arbor parva glabra, ramis ramulisque teretibus, sicco fusco-brunneis, prominente lenticillatis, foliis bipinnatis, petiolis cum rachis 6–2 cm longis, pinnis 2 jugatis, foliolis 2- vel 3-jugatis, elliptico-ovatis vel oblongo-ovatis, chartaceis vel submembranaceis, sicco olivaceo-brunneis, subtus concoloribus, usque ad 11 cm longis, 5 cm latis, apice plerumque abrupte obtuseque acuminatis, interdum caudato-acuminatis, basi paullo inaequilateraliter obtusis, nervis primariis 5, curvatis, ad marginem arcuato-anastomosantibus, reticulis laxis, petiolulo circiter 3 mm longo, inflorescentiis axillaribus vel suprapositis, pedunculis, solitariis vel 2- vel 3-fasciculatis, gracilis 3–5 cm longis, floribus sessilibus, capitato-dispositis, calycibus turbinatis, 2 mm longis, glabris, lobis 5, late ovatis, acutis, corolla 5 mm longis, lobis 5, acuminatis, 2 mm longis, longitudinaliter crebre venulatis, revolutis, staminibus numerosis, circiter 30, longiscule exertatis, filiformis, circiter 10 mm longis, basi in tubum connatis, tubo 4 mm longo, antheris parvis, ovario substipitato, 3 mm longo, glabro, stylis filiformis, 15 mm longis, stigmate parvo capitato. Leguminibus planis, basi brevi-stipitatis, irregulariter sinuosis, 9 cm longis, utrique dehiscentibus, sicco extus brunneis, intus rubris, seminibus compressis, 6 mm diam.

No. 3353 S. NISIDA Palau, Korrör, Aug. 1933. In forest of a non-inhabited coral island. The present plant is recognizable by its bipinnate leaves, the pinnae being 2- or 3-jugate, shortly acuminate leaves with blunt acumen and minute flowers, and falcate and sinuate pods. A genus new to the flora of Micronesia.

(90) **Drypetes rotensis** KANEHIRA nov. sp. (Fig. 4)

Drypetes sp. KANEHIRA Fl. Micronesica (1933) 174.

Frutex glaber, 3–4 m altus, ramis ramulisque teretibus, gracilibus, cinerescentibus, foliis petiolatis, ovatis vel oblongo-ovatis, 6–9 cm longis, 4–5 cm latis, apice obtuse vel abrupte acuminatis, basi paullo inaequilateralibus vel in foliis parvis subaequilateralibus, crasse coriaceis, sicco cinereo-olivaceis, subtus subconcoloribus, margine obscure crenulato vel subintegro, nervis primariis 5 vel 6, prope ad marginem anastomosantibus, nervis nervulisque irregulariter reticulatis, petiolo 8–10 mm longo, infructescentiis axillaribus vel in ramis defoliatis, fasciculatis vel depauperato-racemosis, pedicellis gracilibus, 6–7 mm longis, glabris, drupis oblongis,

Fig. 4. *Drypetes rotensis* KANEHIRA

(A) A branchlet with fruits $\times 1/2$ (B) A fructescence $\times 2$
 (C) A fruits in cross section $\times 5$.

3.5–4 mm longis, extus dense velutinus, calycis persistentibus, lobis oblongis vel late lanceolatis 2–2.5 mm longis, margine brevissime ciliato, seminibus 4-locularis.

Rota island, Marianne Islands R. KANEHIRA No. 1791 July 9, 1932. In dense primary forests at low altitudes. A species distinguished by its leaves being olivaceo-cinereous when dry and its small fruits which are subtended by the rather long persistent calyx-lobes.

(91) ***Cyathodes mariannensis* KANEHIRA nov. sp.** (Fig. 5)

Frutex circiter 50–70 cm altus, ramis ramulisque numerosis, rugulosis, ramulis puberulis, cicatricibus ferentibus, foliis brevipetiolatis, numerosis, confertis, rigidis, anguste lanceolatis, 7–10 mm longis, 2–2.5 mm latis, supra nitidis, sicco olivaceis, subtus glaucis, longitudinaliter striatis, petiolo 0.5 mm longo. Floribus axillaribus ad apicem ramulorum, solitariis, pedicellatis, bracteis bracteolisque plerumque 10, basin calycis amplexantibus, ovatis, apice obtusis, 0.6–1 mm longis, concavis, sepalis 5, ovatis, concavis, obtusis, circiter 1.5 mm longis, striatis, margine brevissime ciliato, corollae tubo calycibus subaequantibus, calcarato, 5-lobato, lobis ovatis, acutis, leviter patentibus, intus glabris, staminibus 5, fauci corollae affixis, filamentis

Fig. 5. *Cyathodes mariannensis* KANEHIRA

(A) A branchlet $\times 1$ (B) A leaf $\times 5$ (C) A branchlet with flowers and fruits, magnified (D) A flower $\times 7$ (E) A sepal (magn.) (F) Corolla expanded (magn.) (G) A stamen (magn.) (H) A pistil $\times 10$ (I) An ovary in cross section (J) A fruit $\times 4$ (K) A fruit in cross section $\times 6$.

brevibus filiformibus, antheris versatilibus, 0.5 mm longis, parce pilosis, disci squamis liberis retusis, ovario subgloboso, glabro, 1 mm diametro,

8-loculare, loculis 1-ovulatis, stigmatibus parvis, drupis globosis, 5 mm latis, seminibus solitariis, osseis.

Aramagan Island, Marianne Islands, R. KANEHIRA No. 2182! July 6th, 1933.

In mossy thickets and in open places near the old crater, ascending to an altitude of about 700 m. This genus extends from Australia, New Zealand to Hawaii but no representative is recorded from the Philippines; it is new to Micronesia. The solitary flowers and the corolla lobes being glabrous inside apparently indicate the genus *Cyathodes*.