Noteworthy Micronesian Plants. 4.

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The fourth paper of this series contains new distributional records and taxonomic notes on species of Cymbopogon, Digitaria, Eustachys, Imperata, Pennisetum, Setaria, Lemma, Ficus, Achyranthes, Adenanthera, Caesalpinia, Desmanthus, Desmodium, Sesbania, Galphimia, Tristellateia, Euphorbia, Lophopyxis, Kolreuteria, Lepisanthes, Cuphea, Pemphis, Eucalyptus, Eugenia, Pouteria, Eustoma, Allamanda, Cuscuta, Bidens, Chromolaena, Epaltes, Erigeron, and Wedelia in Micronesia. Much new collecting is reflected, as well as study of older material.

POACEAE (GRAMINEAE)


Lemon grass has not been reported previously from Yap. It is a rather coarse grass with very aromatic leaves, doubtless escaped from cultivation.

CAROLINE ISLANDS: Yap I., one small patch in savanna N. of airport, Falanruw 3210 (US).


Panicum bicornum Lam., Encycl. 1: 176, 1791.

This has not been recorded, to our knowledge, from Micronesia. However, those specimens referred to Digitaria ciliaris (Retz.) Koel. which have “heteromorphic spikelets”, that is, having the pedicelled spikelets much more strongly hairy than the sessile ones, go to D. bicornis according to Veldkamp’s recent treatment (1973). Although Veldkamp cites no specimens from Micronesia, the following would seem to belong here:

MARIANA ISLANDS: Agrigan I., S. side of island, Fosberg 31606 (US, BISH, POM, NY, L); Pagan I., near saltwater lake, west side of island, Fosberg 31366 (US, BISH, POM); Guguan I., Falanruw 1801 (US); Tinian I., Masalog Ridge, 200 ft., Micronesica 16(2): 201–210. 1980 (December).
Hosaka 2836 (US, BISH, POM); Camp Churo, N. central part of island, 100 m, Fosberg 24813 (US, BISH, POM).

Caroline Islands: Palau Islands: Ngarakabesang I., Takamatsu 1867a (BISH); Ponape I., between Nipit and Retau, Hatusima 10922 (FU); Yap I., Tomil, Hosaka 3297 (US, BISH, POM, NY).

Wake Island: Fosberg 34936 (US); Brankamp in 1936 (BISH); Lyons 10 (BISH).


This West Indian grass has been in Micronesia only a relatively few years. It appeared in Saipan in 1965, in Kwajalein in 1966, and in Guam at least by 1968 (Fosberg and Falanruw 1975). Now it may be reported from Palau, Ponape and Majuro. Since it has usually been found around airports and such installations it is presumed to have been carried around by airplanes, with the fruits adhering to the landing gear or to people’s shoes or clothing.


Imperata cylindrica (L.) Beauv. var. major (Nees) Hubb. in Hubb. & Vaughan, Grasses Maur. 96, 1940.

An erect, deeply rooted grass with bright green, rather harsh, broad straight leaves and erect silvery plume-like spicate panicles.

This grass is fire resistant, and when the above-ground parts are burned or cut off the plant immediately sends up inflorescences followed by new leaves.

This seems new to Guam. A small field of it was seen Aug. 6, 1969. It is hoped that it will not prove to be as noxious a weed here as it is in the western Pacific. It is called Cogon Grass in the Philippines and Lalang in Malaya.

Mariana Islands: Guam: Harmon Air Strip, Barrigada Hill Road, Falanruw 1299 (US).

Pennisetum polystachion (L.) Schultes, Mant. 2: 146, 1824.

On Guam this species has become abundant in large areas of the savanna, according to P. Moore and L. Raulerson (unpublished information). It is about as abundant on more northern limestone parts of the island as in the 1950’s. On Rota it is common locally on roadsides along the shore and up to the airport, but is much less abundant than P. purpureum. On the Sabana, in parts, it forms a solid stand, competing successfully with P. purpureum. On Ponape it is sparingly established here and there in Kolonia, near the airport, in Net, and in Uh; nowhere is it very abundant.

Mariana Islands: Rota I., Sabana, almost at summit, 465 m, Nov. 1, 1978, Fosberg and Moore 58271 (US, BISH).

On Ponape this species is very well established, generally, in patches along roads and in other open places, but nowhere forming the dense brakes to be seen on Rota and other islands in the Marianas. It has been known from Ponape for many years.


Setaria geniculata (Lam.) Beauv., Ess. Agrost. 51: 158, 1812.
The specimen cited below is probably this species, as it is definitely perennial. It is difficult to distinguish from S. pallide-fusca (Schum.) Staff & Hubb., which is already known from Yap on the basis of Wong 342, determined by Agnes Chase. There is some question whether or not the two are really distinct. Careful collecting with underground parts is needed.


LEMNACEAE

Lemna perpusilla Torrey, Fl. N. Y. 245, 1843.
Lemna cf. minor sensu P. Moore et al., Inv. and Mapping of Wetland Vegetation Guam, Tinian and Saipan, Mariana Is. 55, 1977, non L.

Duckweed may now be reported from Saipan. It is a minute floating aquatic consisting of oval flattened thallus-like stems with one root each, reproducing chiefly by budding, but with minute, seldom seen flowers consisting of a single stamen and pistil in a tiny pit in the upper surface of the “thallus.” Not known previously from the Marianas.

This species has previously been reported from Yap, by T. Tuyama, in 1940, under the name Lemna paucicostata Hegelm. This report was based on a specimen collected by Tuyama at Colonia in 1939, which we have not seen. The plant is probably more common than appears from the paucity of collections, as it is small and inconspicuous.

MARIANA ISLANDS: Saipan, P. Moore 911 (US).

MORACEAE

Ficus benjamina L. Mant. Pl. 129, 1767.
This common ornamental, called Weeping Fig, has apparently not been recorded previously from Micronesia.

GILBERT ISLANDS: Tarawa, Bairiki, Adair 190 (BISH).
**Ficus religiosa** L., Sp. Pl. 1059, 1753.

The Peepul or Bo tree of India and Ceylon, a fig tree with a main trunk, poplar-like leaves with the point drawn out into a long acumen, and pairs of small globose sessile figs, was recently found growing on Tinian. In India and Ceylon the Bo is sacred to Guatama Buddha and is universally planted around Buddhist temples and religious sites.

**MARIANA ISLANDS:** Tinian, central plateau, rare, Aug. 18, 1976, *P. Moore 946* (US).

**AMARANTHACEAE**


*Achyranthes fruticoso* Lam., Encycl. Meth. 1: 545, 1783 [1784].

*Achyranthes frutescens* Gaud., Bot. Voy. Uranie 72, 1830 [1826], nom. nud.

When we recorded *Achyranthes aspera* var. *fruticosa* (Lam.) Boerl. from Guguan (Micronesica 13 ~ 29, 1977) we indicated that it was apparently a new record for Micronesia, assuming that the record of *A. fruticosa* Lam. from the Marianas by Moquin in DC. Prodr. 13(2): 314, 1849, was a misidentification of *A. aspera* L. var. *aspera* or var. *pubescens*. The Moquin record was based on a Gaudichaud collection. A recent opportunity to examine this specimen in the herbarium at Geneva suggests that it may, indeed be var. *fruticosa*, as the leaves are thin, green, nearly glabrous, and the stems are only lightly appressed pilose. The lower stem, which in var. *fruticosa* is somewhat woody, is not present on the specimen. However, the fact that Gaudichaud, himself, mentioned this plant as “*Achyranthes frutescens*” suggests that the plant must have had a woody stem.

Vernacular names: “Kickitoun”, “Chichitoun”, “Tchitchitoun”.

**MARIANA ISLANDS:** “Iles Mariannes”, *Gaudichaud* (P, G).

**FABACEAE**


This Asiatic tree, with large bipinnate leaves and bright red lens shaped seeds, has apparently not previously been reported from Yap.

**CAROLINE ISLANDS:** Yap: near pond NW of airport, Apr. 26, 1979, *Falanruw 3346* (US).


The Divi-divi, used in tropical America as a source of tannin, may be reported from Micronesia, on the basis of a Kanehira collection, long undetermined. It is from a medium-sized tree, “planted or semi-wild.” It is unarmed, with bipinnate leaves, pinnae 6–8 pairs, without obvious rachis-glands, rachillae tending to be reflexed,
4–5 cm long, leaflets opposite, 17–22 pairs, oblong, 6–10 \times 1.5–2 mm; inflorescence a paniculate raceme of oblong, flat, glabrous twisted pods about 7 \times 1.5–2 cm, thin and black when dry.


This common weedy shrub may now be reported from Yap. It is common on Guam.

CAROLINE ISLANDS: Yap I., along road to Map, Falanruw 3212 (US).

Desmodium tortuosum (Sw.) DC., Prodr. 2: 882, 1825.
A species from the southeastern U.S., long established in Malesia, apparently recently introduced in Tarawa. The leaves are thin, reticulate beneath, the lateral leaflets much smaller than the terminal, the articles of the fruit more or less orbicular, both margins of fruit deeply crenate.

GILBERT ISLANDS: Tarawa: Betio, Adair 230 (US, BISH).

This tall herbaceous species, long known from the Marianas and Palau, has apparently been only recently introduced into Yap, as it has been noticed only in the last several years.


MALPIGHIACEAE

This attractive yellow-flowered ornamental shrub has long been known from Guam under the names Galphimia glauca and Thryallis glauca. Dr. Bruce McBryde (personal comm.) says that Galphimia glauca Cav. is not or scarcely in cultivation, and that the widely planted ornamental species is G. gracilis.

An attractive yellow-flowered vine, known from Guam (cultivated) and Palau (native), but not hitherto recorded from Yap.

CAROLINE ISLANDS: Yap I., Ngof, growing at edge of mangrove swamp, Falanruw 3356 (US).

EUPHORBIACEAE

This species, as distinct from E. cyathophora, may now be definitely reported from Guam. Its leaves are more or less entire, linear-lanceolate, and the involucral leaves are not red at base. The seeds have a transversal groove and a keel at right
angles to it. Some of the previous records for which we have not seen specimens could possibly go here, but the common, widespread, weedy “false-poinsettia” with the partly red involucral leaves is *Euphorbia cyathophora* Murray.


SAPINDACEAE


The Golden Rain Tree was introduced into Guam as *K. bipinnata* Franchet and is reported as that by Paul Souder in his book, *In Guam Gardens*, p. 62, 1974. Dr. F. W. Meyer, who monographed *Koelreuteria* (Jour. Arn. Arb. 57: 129–166, 1976) suggests that it may more likely be *K. elegans*, ssp. *formosana* (Hayata) Meyer, which is probably better maintained as *K. formosana* Hayata according to A. C. Smith (i.e.). Flowering specimens are needed to be certain of this. The tree is spreading by seeds from larger examples in the Souder garden in Agaña Heights.


*Sapindus tetraphylla* Vahl, Symb. 3: 54, 1794.

A tree growing at the Agricultural Station at Kolonia, Ponape seems undoubtedly to belong to this species in the extremely broad sense adopted by Leenhouts, i.c. However, it does not fit very well into any of the 48 “races” listed by him. The densely tomentose strongly angled or ridged twigs, 4-jugate leaves, imbricate tomentose bracts, glabrescent carinate, almost winged, umbonate, almost glabrous fruits, with woody endocarps which are densely hirsute on the inner surfaces of the locules make a combination of characters not well matched by any of the “races.” Since nothing is known of the origin of the Ponape tree, it is hard to be absolutely certain, even of the genus. The fruit seems normally 3-celled and 3-lobed, but one sheet has a 4-merous fruit. The branch, however, is fasciated and this fruit is probably abnormal. The hirsute inner surface of the locules in all fruits seems to be a most unusual feature.


LOPHOPYXIDACEAE

This small family has been segregated from the Icacinaceae, with which it seems...
to have little in common (Airy-Shaw, in Willis, Dict. Fl. Pl. ed. 7, 668, 1966) and placed near the Rhamnaceae. Sleumer (Blumea 16: 321, 1968) agrees.

**Lophopyxis maingayi** Hook. f., Ic. Pl. 18: t, 1714, 1887.


A woody vine with alternate, crenate, ovate leaves and, usually, with hooked or coiled tendrils, especially in the panicles, fruit winged. The specimen cited below is sterile, but almost certainly of this species, extending its distribution eastward from Palau, where it has been known for some time, to Yap. There it figures in Yapese mythology.

**CAROLINE ISLANDS:** Yap I.: west coast of Rumung, sea level, *Cushing and Giliganganin* 579 (US).

**LYTHRACEAE**


*Cuphea balsamona* C. & S., Linnaea 2: 369, 1827.

An ascending, somewhat distichously branched herb with ovate leaves and crimson-pink petals, this has not previously been reported from Micronesia, though the specimen cited below was collected in 1903. It has not, to our knowledge, been found since in Micronesia. It is common in Hawaii.

**CAROLINE ISLANDS:** Kusaie, s. l. *Hallier* 58 (HBG).

**Pemphis acidula** Forst., Char. Gen. 68, 1775.

This common strand shrub or small tree has apparently not been collected before on Yap Island.

**CAROLINE ISLANDS:** Yap I.: Aringel, along shore, *Falanruw* 3370 (US).

**COMBRETACEAE**


This attractive ornamental, otherwise known in Micronesia from Ponape, Jaluit, and Nauru, may now be reported from Yap. It is a climber with clusters of white flowers that change to red. It is commonly called Rangoon Creeper.

**CAROLINE ISLANDS:** Yap I.: Yinuf village, *Falanruw* 3355 (US).

**MYRTACEAE**


The Ironbark Eucalyptus, or Swamp Mahogany, a tall tree with rough brown bark, coriaceous ovate pointed leaves, and small white flowers, has been commonly planted in other Pacific islands by foresters. This specimen is sterile, but apparently
belongs to this species, and documents its occurrence on Yap. It is not recorded from Micronesia, otherwise.

**CAROLINE ISLANDS:** Yap I.: near airport pond, Apr. 26, 1979, *Falalruw 3349 (US).*


This tree, rather widespread and common in the Carolines, was originally described from Palau. It has broad leaves, long, white stamens, and a large edible fruit. It may be the same as or a variety of *E. javanica* Lam., but we are not certain what plant that name applies to, so for the present we are maintaining Kanehira's species.

**CAROLINE ISLANDS:** Yap I., Ngof, at edge of mangrove swamp, *Falalruw 3360 (US).*

**SAPOTACEAE**


*Lucuma rivicoa* Gaertn. f., Fruct. 3: 130, 1807.

*Lucuma nervosa* A. DC., Prodr. 8: 168, 1844.


The Egg Fruit, native of Central America and northern South America, is growing at the Agriculture Station on Ponape. It has milky sap, large oblong-elliptic glossy leaves and a large fleshy yellow edible fruit, ellipsoidal seeds with large scars. It is not yet known from elsewhere in Micronesia.

**CAROLINE ISLANDS:** Ponape, Kolonia, *Falalruw 3218 (US).*

**GENTIANACEAE**

**Eustoma exaltata** (L.) G. Don, Gen. Syst., 4: 211, 1837.


Erect herb, glaucous, with sessile oblong obtuse leaves, amplexicaulious at base, flowers in a few-flowered loose panicle, branches and pedicels strongly ascending, calyx united at base, lobes ovate, long-acuminate to subulate, to 2 cm long or longer in age; corolla campanulate, to 2 cm or slightly more long, purple; fruit a cylindric capsule to 2 × 1 cm.

**MARIANA ISLANDS:** Guam: Cabras Island, 1966, *Evans 1670 (US, BISH, L, BM).*

**APOCYNACEAE**

**Allamanda schottii** Pohl, Pl. Bras. 1: 73, pl. 58, 1827.

This seems to be the proper identity of the shrubby *Allamanda* with narrow yellow flowers with the corolla tube not much exceeding the calyx and the lobes notably shorter than the narrowly funnel-shaped throat. The leaves are only puberulent beneath.

The reduction of this to a variety of *A. cathartica* may be justified if most of the yellow-flowered species of *Allamanda* are so-treated, but the treatment, in Hortus Third 47, 1976, as a cultivar can scarcely be right, as the type was collected apparently in the wild in Brazil. Cultivars, by definition, originate in cultivation. The specimen cited below was planted at the Agriculture Station.


**CONVOLVULACEAE**


A leafless parasitic plant composed of yellow-orange threads, attaching to other plants by haustoria and deriving its nourishment thereby. Its flowers are small, white, five-parted, and the fruits are small thin-walled capsules with a pit between the styles. This is the second record from Micronesia, the other being from Yap (Fosberg and Sachet, 1977).


**ASTERACEAE (COMPOSITAE)**

*Bidens alba* (L.) DC., Prodr. 5: 605, 1836.

This daisy-like, white-flowered weed seems most abundant near the airport and docks, but is also here and there in Kolonia, and was seen in Net and Uh, growing luxuriantly to about 1–1.5 m tall. On Guam it spread with extreme rapidity after it was first seen in 1954. It has a good start already in Ponape.


*Eupatorium odoratum* L., Syst. ed. 10, 1205, 1759.

A relatively recent arrival in Micronesia, first collected on Saipan in 1958, it has spread to all the larger Marianas Islands and smaller Agrigan, and, now, to Ponape. It is described in the Flora of Micronesia: Compositae (Smithsonian Contr. Bot. 46: 25–26, 1980).

On Rota it was said, in 1978, to have been accidentally introduced about three years earlier. By October 1978 it had spread to most of the disturbed parts of the island. In cultivated fields it forms dense stands with stems a meter or more tall. A local agriculturist said it is very seasonal and considered to be a serious pest on farms.


**Epaltes australis** Less., Linnaea 5: 148, 1830.

A small depressed wiry weed, native in southeast Asia and Australia, found in one spot on Cabras Island, Guam in 1966. It has thick, alternate, obovate strongly dentate leaves, and globose heads with broad scarious involucral bracts and greenish yellow florets of two kinds, outer pistillate, inner apparently bisexual but functionally staminate. These specimens resemble those from eastern Asia, which differ somewhat from those from Australia, which is the original locality for the species. The genus is pantropical.

MARIANA ISLANDS: Guam: southern end of Cabras Island, 15 m, *Evans 1673* (US, BISH).

**Erigeron bellioides** DC., Prodr. 5: 288, 1835.

This delicate rosette-forming, stoloniferous herb with small white heads of flowers was introduced into Guam sometime before 1965. It grows as a garden weed and along roadsides. It was found in several places from Tamuning to Agaña Heights during the 1960’s, and near the Glass Breakwater in 1976. In 1978 it was well-established in lawns at Tumon Bay. It is a native of Puerto Rico, Hispaniola, and Cuba, in the West Indies, and has, to the best of our knowledge, not been known previously from anywhere in the Pacific.


*Silphium trilobatum* L., Syst. ed. 10, 1233, 1759.

This prostrate yellow-flowered herb is carried around and planted as an ornamental ground cover. It forms a dense thick mat. It is fast becoming common in gardens in Micronesia.


CAROLINE ISLANDS: On Yap it is well established around houses; it was brought from Guam. No collections are yet available.
