

subgenus in *Ptychosperma*) in having homogeneous endosperm. They differ from both types in having larger fruit (2.2-4.4 cm. long) and at least in *P. Hosinoi* and *P. Ledermanniana* in having an ovate apically trifid pistillode. The three Micronesian species have been illustrated in Kanehira in *Journal of Japanese Botany*, xii, and may be distinguished as follows:

1. Stamens 110-112: fruit fusiform, 3.6-4.4 cm. long: panicle glabrous. *P. Ledermanniana*
1. Stamens 50-60: fruit ovoid, 2.2-3.2 cm. long: panicle sparsely to densely dark-brown lepidote at least on peduncle and lower branches.
 2. Rachillæ strongly flexuous: fruit 3.2 cm. long: pinnæ oblanceolate, the median to 16 (-23) cm. wide. *P. Hosinoi*
 2. Rachillæ only slightly flexuous: fruit 2.2 cm. long: pinnæ oblong-lanceolate, the median 5.5-7 cm. wide. *P. palauensis*

† *Ptychosperma Hosinoi*, (Kanehira) comb. nov.

Ponapea Hosinoi, Kanehira, in *Journ. Dept. Agr. Kyushu Imp. Univ.* iv, 432 (1935) and in *Journ. Jap. Bot.* xii, 731 (1936); Burret, in *Notizbl. Bot. Gart. Berlin*, xv, 91 (1940); Glassman, in *Bull. Bernice P. Bishop Mus.* 209, 111 (1952).

The name *Ponapea Hosinoi* was validly published in 1935, though the description was very scanty.

Tree up to 15 or more m. tall, trunk to 20 cm. thick: leaves 3 m. long, rachis lepidote with brown peltate lepidiæ and larger still but minute dark brown pointed scales; pinnæ more or less equidistant up to 7-9 cm. apart, apical 18 cm. long, 3 cm. wide, oblanceolate, irregularly truncate, median lanceolate, to 80 [110 acc. Kanehira] cm. long, to 16 [23 acc. Kanehira] cm. wide, apex very obliquely and irregularly truncate, median nerves very prominent, 4 secondary nerves including marginal ones, the latter with a sharp thin keel forming actual margin, minor nerves of at least 5 orders irregularly developed and spaced, dark brown scales on both surfaces near base, those on upper surface very numerous and extremely variable in shape and size, up to 2 mm. long, mostly on nerves, especially midnerve, diminishing distally in size and number, those on lower surface less numerous, irregularly linear-lanceolate, attached at the often narrowed base, up to 15 [rarely 20] mm. long: inflorescence 60 cm. or usually more long, bracts missing from available material, scars 2.5 cm. and 6.5 cm. above base on only specimen available, panicle diffusely branched three times, main axis with at least 15, usually probably more branches, densely covered with minute narrow dark brown scales, appearing dark brown tomentose, peduncle 9 mm. wide (or more) somewhat compressed, ultimate rachillæ very conspicuously flexuous or zigzag, node to node, tapering to about 1 mm., internodes 2 to 10 mm. long, mostly 4-5 mm., flowers in triads and with pairs of staminate on distal half or more of rachilla, this part tending to break off in fruit: staminate flowers 7 mm. long, with sepals 1.5-2 mm. long, petals 6 mm. long, 3.5-4 mm. wide; stamens about 50, filaments varying in length to 3 mm., anthers 2-2.5 mm. long, narrowly oblong, not strongly curved at dehiscence, pistillode subglobose, 1 mm. high, pistillate flowers only 3.5 mm. long when staminate are in anthesis, at or just after anthesis 7 mm. long, sepals 4 mm. long, petals 5 mm. long,

ovoid conical style exerted about 3 mm.: fruit red when ripe, ovoid, slightly oblique 3.2 cm. long, 1.7-1.9 cm. broad, fruiting calyx 2.5-3 mm. fruiting corolla 5 mm. long, indurate, forming a shallow cupule.

Caroline Islands. Ponape: s.l. January 1915 *G. Koidzumi* (TI, 3 sheets); s.l. January 20, 1937, *R. Kanehira* 3934 (FU); Mt. Tolenuip, 400 ft., July 14, 1949, *S. F. Glassman* 2529 (US, 2 sheets); Kamal, Nat, 50 m., September 1935, *Hosino* (*Kanehira's*) 3703 (FU, type, 2 sheets); Parkiel, Kolonia, 500-1000 ft., August 1925, *Kanehira* 742 (FU); Mt. Sankaku, Kolonia, 100 m., July 15, 1939, *S. Hatusima* 10,788 (FU); Nampil, August 25, 1933, *T. Hosokawa* 6034 (A, 2 sheets, US); Coloma-Palkier kan Nanpomaru, August 23, 1940, *T. Hosokawa* 9543 (A, 2 sheets). [Tolailuka, 7 March 1936, *Takamatsu* 835, fide Burret.]

Endemic to Ponape, growing in rain forests at low to moderate altitudes up to 350 m., on volcanic soils.

† *Ptychosperma Ledermanniana*, (Becc.) comb. nov. Fig. 137.



137. *PTYCHOSPERMA LEDERMANNIANA*. a, fruit $\times 1$; b, fruit in cross-section $\times 1$.

Ponapea Ledermanniana, Becc. in Engler Bot. Jahrb. lix, 14 (1924); Kanehira, in Bot. Mag. Tokyo, xlv, 274 (1931), in Journ. Dept. Agr. Kyushu Imp. Univ. iv, 284 (1935), in Journ. Jap. Bot. xii, 731 (1936); Glassman, in Bull. Bernice P. Bishop Mus. 209, 111 (1952).

Ponapea kusaiensis, Burret, in Notizbl. Bot. Gart. Berlin, xv, 92 (1940).

Slender tree, up to 10-12 m. tall, trunk about 10 cm. in diameter, outer woody cylinder hard: leaves 2-3 m. long; sheath grayish lepidote becoming brownish, strongly striate when dry, about 50 cm. long, sinus *l*-shaped, thin-margined; rachis closely light-brown lepidote when young, uncticulate when older; pinnæ more or less equidistant, opposite to subopposite, up to at least 9 cm. apart, obliquely truncate, median at least 8 cm. long, 5.8 cm. wide, apical ones to 45 cm. long, 3.9 cm. wide, strongly bilobed, petiole 27 cm. long, concave above, pinnæ 4 cm. lower on one side than other, median and marginal nerves prominent, 2 secondaries on