

The Ponapean name is "Kotop" according to Glassman. During the war the Japanese made extensive use of the cabbages of this palm for food, felling considerable acreages above Nanipil.

The plant differs from both *C. carolinensis* and *C. Savoryana* in its much larger strongly compressed fruits.

† *Clinostigma Savoryana*, (Rehd. & Wils.) comb. nov. Fig. 136B.

Cyphokentia Savoryana, Rehd. & Wils. in Journ. Arnold Arb. i, 115, t. II, fig. 1 (1919).

Bentinckiopsis Savoryana, (Rehd. & Wils.) Becc. in Webbia, v, 113 (1921) (sphalm *Bentnickiopsis*), in Atti Soc. Tosc. Sci. Nat. Pisa Mem. xlv, 171-172 (1934), in Nuov. Giorn. Bot. Ital. n.s. xlii, 32 (1935); Martelli, in Nuov. Giorn. Bot. Ital. n.s. xli, 712 (1934); Burret, in Notizbl. Bot. Gart. Berlin, xii, 593 (1935).

Exorrhiza Savoryana, (Rehd. & Wils.) Burret, in Fedde Repert. xxiv, 296 (1928).

Cyphokentia boninensis, Warb. ex Burret, in Fedde Repert. xxiv, 296 (1928), in syn.

Tree up to 16 m. tall, trunk annulate, smooth, about 15 cm. diameter: leaves about 12, 1-3 m. long, erect to spreading and slightly arching, with 50-60 pendulous pinnæ on each side, sheath up to at least 70 cm. long, lepidote with reddish caducous scales, petiole concave above, convex below, 45-60 cm. long, lepidote, pinnæ linear-lanceolate, 35-55 cm. long, 2.5-3 cm. wide, 1-3 cm. apart: inflorescence with outer bract attached 2.8 cm. or more above base, 33.5 (to 70) cm. long, 6 (to 20) cm. wide, with prominent light brown scales closely disposed along the edge of the marginal wing, inner bract attached 5 mm. or more above attachment of outer, whole panicle at least 35-45 cm. long in flower elongating to as much as 45-100 cm., rachillæ about 30-33 cm. long, elongating in fruit, flowers disposed in triads in the lower two-thirds to four-fifths of the rachilla, pairs of staminate distally, tips attenuate or filiform, very flexuous, triads and pairs irregularly spirally arranged, 2-5 mm. apart: staminate flowers unequal in length, ovoid, quite asymmetric, sharply pointed, 4-4.5 mm. long, sepals triangular-ovate, unequal, obtusish to bluntly acute, carinate, 2-2.6 mm. long, petals valvate, ovate to narrowly oblong-ovate, acutish, 3.2-4 (or 5) mm. long, 1.2-1.6 mm. wide, striate when dry, lineate when boiled up, filaments 1.2-1.4 mm. long, anthers oblong 1.2-1.4 (-2) mm. long, pistillode 1.2 mm. high, ovoid-conic; pistillate flowers ovoid, about 4 mm. long, sepals 2.8-3 mm. long, orbicular-ovate, obtusely apiculate, petals orbicular-ovate, obtusely apiculate, 3-3.4 (-4) mm. long, pistil 3 mm. long: fruit elongate-globose, scarcely compressed, black and with a slight bloom (when fresh?), 12 mm. long, 9.5 mm. wide, 8 mm. thick, rounded at apex, somewhat pointed at base, externally rugulose and dorsally slightly ribbed when dry, stylar tubercle well above middle, a low ridge both below and above it, fibers in mesocarp flexuous and branched above, principal ones straight below; seed globose-ovoid, very slightly

compressed, 6 mm. high, 5.2-5.5 mm. wide, 4.8-5 mm. thick, vascular strands in seed-coat only very slightly anastomosing.

Bonin Islands: s.l., *C. Wright* in 1853-56 (US). Mukojima, April 28, 1917, *Wilson 8334* (A, type, US, isotype, BH photo and fragment); Yasi-zawa, December 5, 1935, *Tuyama* (TI). Anijima, August 7, 1930, *Yamamoto* (TI). Otojima, August 5, 1930, *Yamamoto* (TI); Ototojima, July 6, 1920, *Nakai* (TI). Chichi-jima (Titizima), 1936 and 1937, *M. Okabe* (TI); April 4, *Tuyama* (TI, 2 sheets); June 30, 1920, *Nakai* (TI); cult. at Kiyose, March 2, 1937, *Tuyama* (TI, 2 sheets); Tahedabokujo, June 25, 1932, *Tuyama* (TI, 4 sheets); *Wilson 8212* (A). "Mukoojima, Hahajima," June 29, 1932, [*Tuyama*] (TI). Hahajima, July 16, 1920 *Nakai* (TI, 2 sheets).

Endemic to the Bonin Islands, said by Rehder and Wilson to be found on all the larger islands; during the war it was all but exterminated on Chichi-jima by Japanese soldiers who used it for cabbages. In 1946 only a single very young tree was seen. The local inhabitants said no large ones were on the island but they might still be seen in Anijima. Wilson indicates on his labels "a very superior Cabbage Palm." It is mentioned by Kaempfer (Hist. Jap. i, 60, 1729) as "the Arrack tree," by Beechey (Voy. Pac. Ber. Str. 515, 1831) as *Areca oleracea*, by Kittlitz (Twenty-four views Veg. Pac. 48, 1861), as "the slender growing Areca," and by Hattori (Journ. Coll. Sci. Imp. Univ. Tokyo, xxiii (10), 22, 44, pl. II, 1908) as "*Ptychosperma elegans* Bl." The captions of plates II and IV are reversed in Hattori's work. Plate II is an excellent view of this palm growing in its native habitat.

PTYCHOSPERMA, Labill. in Mem. Classe Sci. Math. Phys. Inst. France, Paris, ix, 252 (1809).

Ponapea, Becc. in Engler Bot. Jahrb. lix, 13-14 (1924), in Atti Soc. Tosc. Sci. Nat. Pisa Mem. xlv, 148-149 (1934); Kanehira, in Journ. Jap. Bot. xii, 729 (1936).

Slender, single-stemmed or caespitose, unarmed, monoecious palms with pinnate leaves, the pinnæ reduplicate in veneration with prominent central and marginal nerves, apices obliquely truncate and conspicuously erose, sheaths closed, lepidote: inflorescence a two to four times branched panicle borne below the leaves, in bud enclosed in 2 caducous spathe-like bracts, the outer flattened, strongly wing-margined, pointed, tending to split down both sides, splitting and falling away, leaving a scar almost at base of peduncle; inner longer than outer, compressed clavate, strongly and abruptly acuminate into a flat linear beak, splitting along inner face, falling, leaving a scar a short distance above the scar of the outer bract; panicle alternately loosely ramified, nodes somewhat thickened, bearing flowers in triads of 1 pistillate and 2 staminate, the distal few on a rachilla often reduced to pairs of staminate, pistillate maturing later than staminate,