

30 cm long, ascending; peduncle 18 cm long; bracts 2, loosely sheathing, 3 partial inflorescences in distal half of inflorescence, each a simple unbranched rachilla and each with its own subtending bract, the bract tubular in basal half, inflated in apical half; rachillae to 8 cm long, 1 mm diam., straight or curved, bracts, inflorescence rachis and rachillae densely covered with deciduous reddish brown felt-like indument. Flowers not seen but scars spirally arranged, solitary or paired. Fruits 10 x 7-8 mm, ovoid-globose, reddish, held on a very short pedicel; fruiting perianth 1.75 mm high, deeply lobed, lobed rounded, broadly flared against base of fruit.

The epithet honors Kampon Tansacha, owner of Nong Nooch Tropical Garden in Thailand, host of the 1998 International Palm Society Biennial Meeting, and sponsor of the field research and book on Thai palms and cycads. *Licuala tansachana* occurs sparingly in hill forest in southern peninsular Thailand. It is closest to *L. triphylla* and *L. pusilla*. The former differs in its leaf blade with a more truncate middle segment, petiole with few or no thorns, and branched partial inflorescences, while the latter differs in its leaf blade with more numerous segments, all more or less the same size. Two newly named species are also similar to *L. tansachana*; *L. ruthiae* differs in its middle leaf segment not conspicuously larger and with the apex truncate or only slightly rounded, and the silvery stellate hairs of the rachis and inflorescence bracts, while *L. kamarudii* differs in the more numerous leaf segments or, if few segments, then without the sharply curved apices, the spiny petiole, the inflorescence bracts with silvery shaggy hair, and the tuberculate fruit.

***Pinanga bowiana* Hodel sp. nov.** Figs. 9 & 10.

Subgeneris *Orthostichanthae* Becc. *P. auriculatae* Becc. affinis sed foliis pinnis paucioribus, vaginis virellis albis; inflorescentiis rachillis pilis appressis albis differt. Typus: Thailand, SE of Narathiwat, 800 m elev., D.R. Hodel & P. & R. Vatcharakorn 1608 (Holotypus BK).

Solitary undergrowth palm to 4 m tall. Stem 2-2.5 cm diam, ringed, internodes 4-8 cm, green

with silver to brown indument, brown prop roots 5-7 mm diam. and 3 cm high at base. Leaves 9, pinnate, spreading; sheath to 25 cm long, tubular, obliquely open apically, forming a crownshaft, greenish with dense cover of closely appressed white hairs and brownish scales, rusty-brown tattered ligules to 7 cm long at apex; petiole to 30 cm long, with same whitish indument as sheath; rachis to 50 cm long, with same indument as sheath and petiole; 5-7 pinnae per side, these to 25 x 7 cm, broadly lanceolate, falcate, conspicuously sigmoid, caudate, 3-6-nerved, opposite to subopposite, narrowed at base to 1 cm wide, rich glossy green above, paler below, indument extending from rachis onto base of pinnae, end pair confluent, to 18 x 6 cm, 6-7-nerved, truncate praemorse, lobes 1.5 cm long, bifid. Inflorescence infraxillary, pendulous against stem, to 15 cm long; peduncle 1.5 cm long, with appressed white hairs; prophyll to 12 cm long, brown and tattered at pistillate anthesis; rachis 1 cm long; rachillae 2-5, to 12 cm long, at pistillate anthesis yellowish with pink blush. Staminate flowers not seen. Pistillate flowers distichously arranged, alternate, 5 mm apart within a row, 2 x 2 mm, broadly ovoid to conical, pink; calyx 1.25 mm high, shallowly lobed, sepals 1.25 x 2.75, imbricate nearly to apex, broadly rounded to truncate, nerved when dry; corolla 1.75 mm high, petals 1.5 x 1.5 mm, clam-shell-shaped, imbricate nearly to apex and there rounded-acute, narrowed at base, minute spine-like projections on apical margins; pistil 2 x 1.25 mm, ovoid, exceeding petals, truncate apically, style lacking, stigma lobes short, blunt. Fruits not seen.

The epithet honors Nataporn "Bow" Pitakpao, associate and partner of Kampon Tansacha. The greenish leaf sheaths densely covered with appressed whitish hairs gives the crownshaft of *Pinanga bowiana* its distinctive greenish white color. *P. bowiana* is closest to *P. auriculata* from Borneo but the latter lacks the distinctive greenish white leaf sheaths and rachillae with appressed white hairs. *P. bowiana* is infrequent in hill forest in southern peninsular Thailand.

***Salacca stolonifera* Hodel sp. nov.** Fig. 11.

S. glabresceni Griff. affinis sed habitu



Fig. 8 *Licuala tansachana*, habit, Hodel et al. 1601 (holotype).



Fig. 9 *Pinanga bowiana*, habit, Hodel et al. 1608 (holotype).



Fig. 10 *Pinanga bowiana*, with conspicuous brown ligules at apex of leaf sheath, Hodel et al. 1608 (holotype).



Fig. 11 *Salacca stolonifera*; note long, whip-like, stolon-bearing inflorescences spreading from base of plant, Hodel et al. 1629 (holotype).

stoloniferis; inflorescentiis stoloniferis flagelliformibus, rachillis paucioribus differt. Typus: Thailand, SW of Narathiwat, 600 m elev., D.R. Hodel, P. & R. Vatcharakorn 1629 (Holotypus BK).

Clustering understory palm, spreading by whip-like stoloniferous inflorescences to 4 m long rooting and sprouting at tip, forming loose colonies of plants spaced 2-4 m apart. Stem to 70 cm tall, 5-8 cm diam., short-creeping to erect, internodes 3-5 cm, conspicuous aerial roots. Leaves 6-9, pinnate, ascending, to 3.5 m long; sheath 30-60 cm long, long-open, tubular and bulbous only at base, light green, densely covered with rusty-bronze felt-like indument, slender black spines to 4 cm long in horizontal lines of 3-7 in proximal portion becoming paired or solitary on petiole; petiole to 1.2 m long, with similar indument as sheath; rachis 2-2.5 m long, with similar indument as sheath, solitary or paired spines to 1.5 cm long and spaced 4-6 cm apart on abaxial surface; 17 pinnae per each side of rachis, clustered and fanned in remote sub-opposite groups of 2-3, pinnae to 50 x 5 cm, end pair confluent and broader, lanceolate, falcate, long-acuminate, green adaxially, paler abaxially, especially distal margins with forward-pointing bristles to 2 mm long, prominently 3-nerved, a midrib and 1 sub-marginal primary nerve near each of 2 margins, 3 secondaries between midrib and each sub-marginal primary, 1-2 secondaries between each sub-marginal primary and margin. Staminate plants only seen, inflorescence interfoliar, to 4 m long, whiplike; peduncle 15 cm long; bracts 2-3, to 3 cm long; inflorescences bearing in proximal 45 cm 3 partial inflorescences to 20 cm long and

spaced ca. 15 cm apart, each a nodding simple rachilla with a sub-peduncle to 14 cm long and sheathed by 4 bracts, lowest one to 8 cm long, long-acuminate, loosely sheathing, attached 4 cm up from base of sub-peduncle, 2nd bract to 5 cm long, 3rd to 3 cm long and funnel-shaped with acute tip, 4th to 4 mm long and compressed funnel-shaped, basal unsheathed portion of sub-peduncle with thick clusters of reddish brown hairs and scales to 2 mm wide; rachis or rachilla to 6 cm long, with numerous inflorescence bracteoles, these close-set, less than 1 mm apart, imbricate, spirally arranged, collar-like, reddish, each encircling rachis and forming a bowl 2 x 7 mm. Staminate flowers set within rachilla bracts, in dyads subtended by broad-based slender bracteoles to 0.75 mm high, with clusters of slender transparent hairs 1-2 mm long projecting from margins of bracteole; flowers 5 x 2 mm, long-ovoid; calyx 3 mm high, moderately lobed, sepals connate in basal 3/4, rounded apically, medially thickened and nerved when dry, margins thin and membranous to nearly transparent and composing the connate portion of the sepals; petals 5 mm long, connate in basal 3 mm, valvate and rounded-acute apically, spatulate, strongly nerved when dry; stamens 6, exceeding corolla throat.

The epithet is from the Latin *stoloniferus*, meaning bearing a stolon, and is used here in reference to the stolon-bearing inflorescences, a diagnostic feature of this species. *Salacca stolonifera* is closest to *S. glabrescens*, but the latter differs in its larger size, non-stoloniferous habit, and more highly branched inflorescence with more rachillae. *S. stolonifera* is scarce in hill forest in southern peninsular Thailand.