

terminating at rachillae; peduncle and bracts with reddish brown, +/- deciduous hairs; rachillae 2, 3-4 cm long, densely covered with whitish to golden brown hairs. Flowers solitary, 1-3 mm distant, placed on a 0.75 mm pedicel with a subtending, tooth-like bracteole 0.5 mm high proximally, flowers 4 x 3 mm, broadly ovoid; calyx 1.5 x 2.25 mm, cylindrical, truncate apically, constricted basally, scarcely lobed, hairy; corolla 3.5 mm high, petals connate in basal 2/3, lobes triangular, valvate, acute-acuminate, lobes hairy; stamens and pistil not seen. Fruits immature, 5 mm diam., globose, green.

*Licuala delicata* occurs in wet mountain forest in south peninsular Thailand very near to the Malaysian border. It is similar to *L. kingiana* but the latter differs in its armed petioles, leaf blade with more segments, erect inflorescences, bracts with silky white hairs, longer rachillae, and flowers in groups of 2s and 3s. The epithet is from the Latin *delicatus*, meaning dainty, and refers here to the habit.

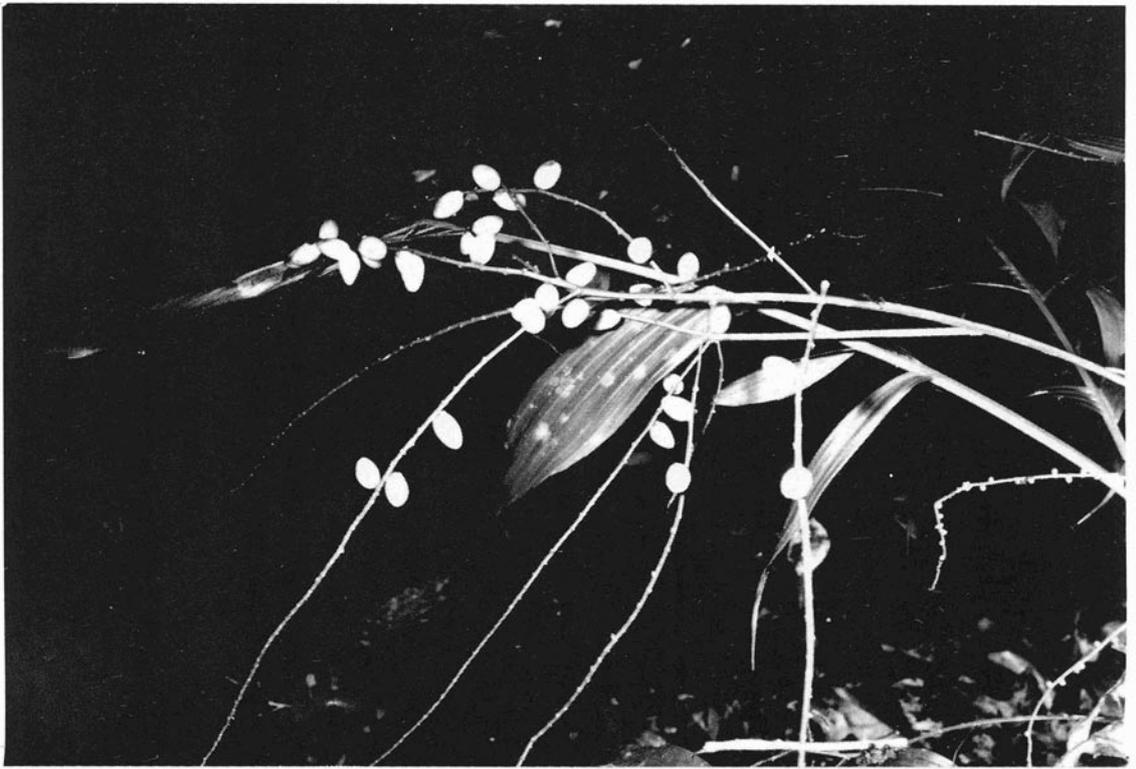
***Licuala hirta* Hodel sp. nov.** Fig. 11-13.

*Licuala cameronensi* L. G. Saw affinis sed inflorescentiis erectis ramosis duobus ordinibus; *L. modestae* Becc. affinis sed rachillis lanatis, bracteolis prominentibus anguste triangularis, calyce cupulato, antheris brevioribus oblongis differt; *L. lanuginosae* Ridl. affinis sed ovario glabris differt. Typus: Thailand, Phangnga, 400 m elev., D.R. Hodel, P. & R. Vatcharakorn 1717 (Holotypus BK).

Solitary or clustered, acaulescent or trunked, to 4 m tall. Stem to 2 m tall, 7 cm diam., brown, obscurely ringed. Leaves 8-14, palmately divided, ascending to spreading; sheaths 15-25 cm long, long-open, margins with coarse, ascending, tannish fibers, ocrea 8 cm long; petiole 1.5-3 m long, margins near base armed with close-set, narrowly triangular, reflexed thorns 5 mm long; blade to 1 x 1 m, 3/4 orbicular, green to nearly bluish green, divided to base into 10-11 segments broadest toward apex, middle largest, 40-70 x 20-40 cm, 10-22 nerved, sometimes with its own subpetiole 5-10 cm long, lateral segments 38-68 x 8-15 cm, 3-5 nerved, 48-60 nerves total per blade, basal ones

smaller, lateral and apical segments truncately praemorse and only slightly lobed apically, basal segments obliquely praemorse. Inflorescences 2-4, interfoliar, 40-50 cm long, erect, with 5-7 branched partial inflorescences to 13 cm long; peduncle 18 cm long, flattened, 6 mm wide; prophyll not seen, bracts subtending and concealing basal portions of each partial inflorescence 1.5-15 cm long, tubular basally, inflated and flared apically, obliquely open on one side, becoming tattered and shredded apically, densely covered with reddish brown hairs; partial inflorescences with up to 6 rachillae, these to 11 cm long, ascending to spreading, rachis and peduncle with dense, scurfy, reddish brown tomentum, rachillae with dense, shaggy, whitish to reddish brown hairs 1-1.5 mm long obscuring bracteoles and base of flowers. Flowers in moderate to close-set pairs apically, more laxly spaced basally, rarely solitary, placed on a pedicel 0.5 mm high, subtended proximally by conspicuous, narrowly triangular to tooth-like bracteole 1.25-2.25 mm high with same indument as rachillae. Flowers 3.75 x 2.25-2.5 mm, ovoid, yellow; calyx 2.75 x 2 mm, cupular, irregularly lobed, sepals connate in basal 2/3, acute to rounded apically, densely covered with long, shaggy, whitish to reddish brown hairs; corolla 3.25 mm high, exserted 0.75 mm above calyx, petals connate in basal 2/3 and adnate to staminal ring, valvate apically, ovate, acute, apical lobes densely clothed in short, whitish hairs apically; stamens 6, 2.5-2.75 mm high, filaments 0.4 mm, bases connate in a conspicuous ring, anthers 0.4 mm, dorsifixed near middle; pistil 2.25 mm high, ovary 0.75 x 1 mm, narrowed apically, truncate basally and set on a stalk 0.5 mm high, style 1 mm long, filiform. Fruits 1 x 1 cm, globose, reddish.

*Licuala hirta* is widespread but relatively uncommon in wet hill forest on the west side of middle peninsular Thailand from 200-600 m elevation. It is easily distinguished by its short, erect, inflorescences branched to two orders, the conspicuous bracteoles, and the thick, dense, shaggy hairs concealing the rachillae and bases of the flowers. The epithet is from the Latin *hirtus*, meaning shaggy, and refers here to the shaggy, woolly hairs covering the rachillae.



**Fig. 8** *Iguanura tenuis*, inflorescence, *Hodel et al. 1727* (holotype).



**Fig. 9** *Licuala delicata*, habit, Betong, *Hodel et al. 1740* (holotype).



Fig. 10 *Licuala delicata*, inflorescence, Hodel et al. 1740 (holotype).



Fig. 11 *Licuala hirta*, habit, between Takuapa and Phanom, Hodel et al. 1726.



Fig. 12 *Licuala hirta*, inflorescences, Hodel et al. 1717 (holotype).

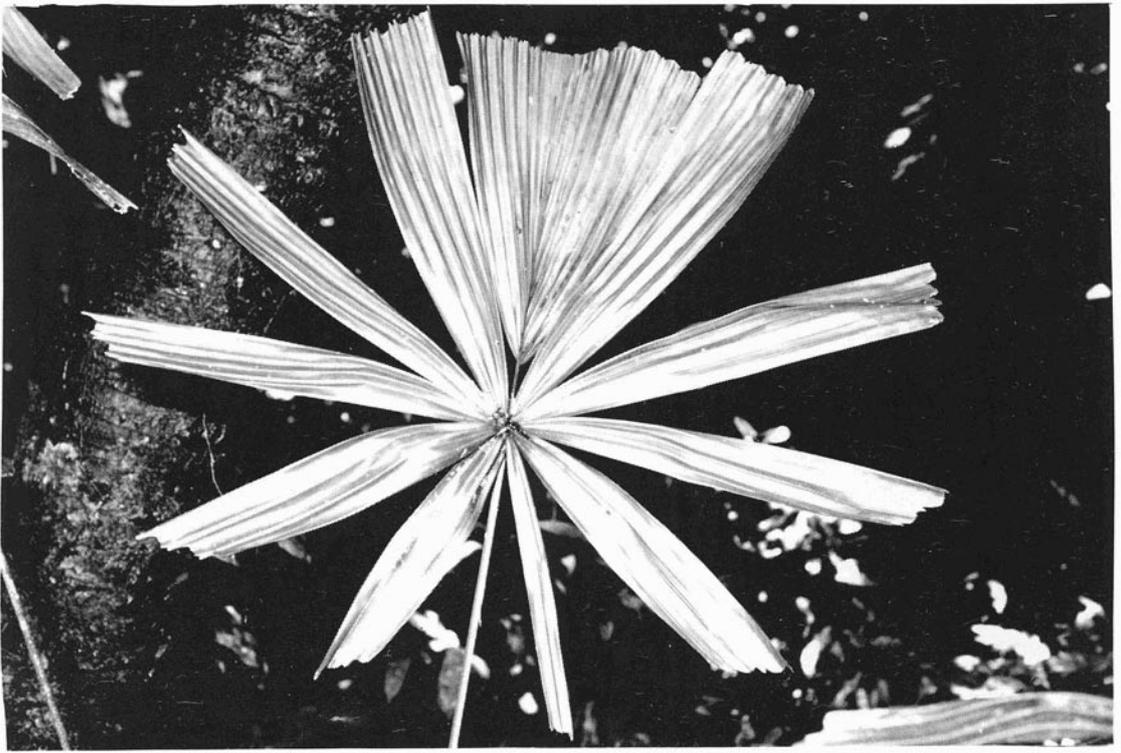


Fig. 13 *Licuala hirta*, leaf blade (note middle segment with subpetiole), Hodel et al. 1717 (holotype).



Fig. 14 *Licuala stenophylla*, habit, Satun, Hodel et al. 1660 (holotype).