

This species appears to be very near to *L. ferruginooides*, a Sumatran species described to have simple partial inflorescences but known also to bear sometimes two spikelets to each spadix branch. *L. ferruginooides* is however a very tall species having much larger leaves and flowers, a zigzag axis to the spadices, the spikelets arising a little below the apex of the leaves.

The only peninsular species having simple partial inflorescences to simulate *L. kemamanensis* is *L. Kunstleri*, but the latter is readily distinguished from the former by the very long pedicels of its flowers, turbinate calyx, and glabrous ovary.

8. *Licuala Kiahii* Furtado sp. nov. Fig. 4.

Palma humilis acaulescens. *Petiolus* 60–70 cm. longus, praesertim ad basin versus rubescens, prope basin tantum spinis reduncis, remotis, 1–2 mm. longis armatus. *Segmenta foliorum* 5, rarissime 6–7, inaequalia; medianum 10–14 costatum, 20–25 cm. longum, apice 8–10 cm. latum, superficialiter obtuseque dentatum, cuneatissimum, sessile; altera 3–5 costata, mediano minora, oblique erosso-truncata, arcuato cuneata. *Spadix* petiolo duplo vel triplo brevior, basi cum pedunculo circa 20 cm. longo fusco-furfuraceo, spathis 3–4 tubulosis induto, suffultus, apice in inflorescentias partiales 2–3, simplices vel bifurcatas, furfuraceas, 3–4.5 cm. longas divisus. *Flores* in glomerulis 1–3, remotis, alterne vel spiraliter dispositi, sessiles, pulvino inconspicuo. *Calyx* furfuraceus, pubescens, in lobos acuminatos profunde partitus. *Corolla* calyce parum longior, pubescens, in lobos altos, acuminatos divisa. *Annulus* staminalis in sex filaments abrupte subulata divisus. *Ovarium* glabrum; carpellis plerumque 1–2 vel saepius omnia evolutis. *Fructus* elongato-clavatus, saepe parum curvatus, circa 22–23 mm. longus, 3.5–4.5 mm. in diametro; semine conforme, osseo; fossa integumentali embryo dorsali supra basin objecta, apicem versus mox ascende cylindracea.

MALAY PENINSULA: Johore, in collibus apud ripas Sungai Kayu (Kiah, 32137, Holotypus); in monte Gunong Pulai (Haniff, s.n., 27 Dec. 1925).

This species is very peculiar in the genus in that it has very long fruits borne on a compound spadix. The only other species known to produce such long fruits is *L. mattanensis* Becc. from Borneo, which however is characterised by many-lobed leaves, a simple, unbranched spadix having almost pedicellate flowers, and the integumental process in the seed situated on the same side as the embryo (not opposite the embryo as is the case with *L.*

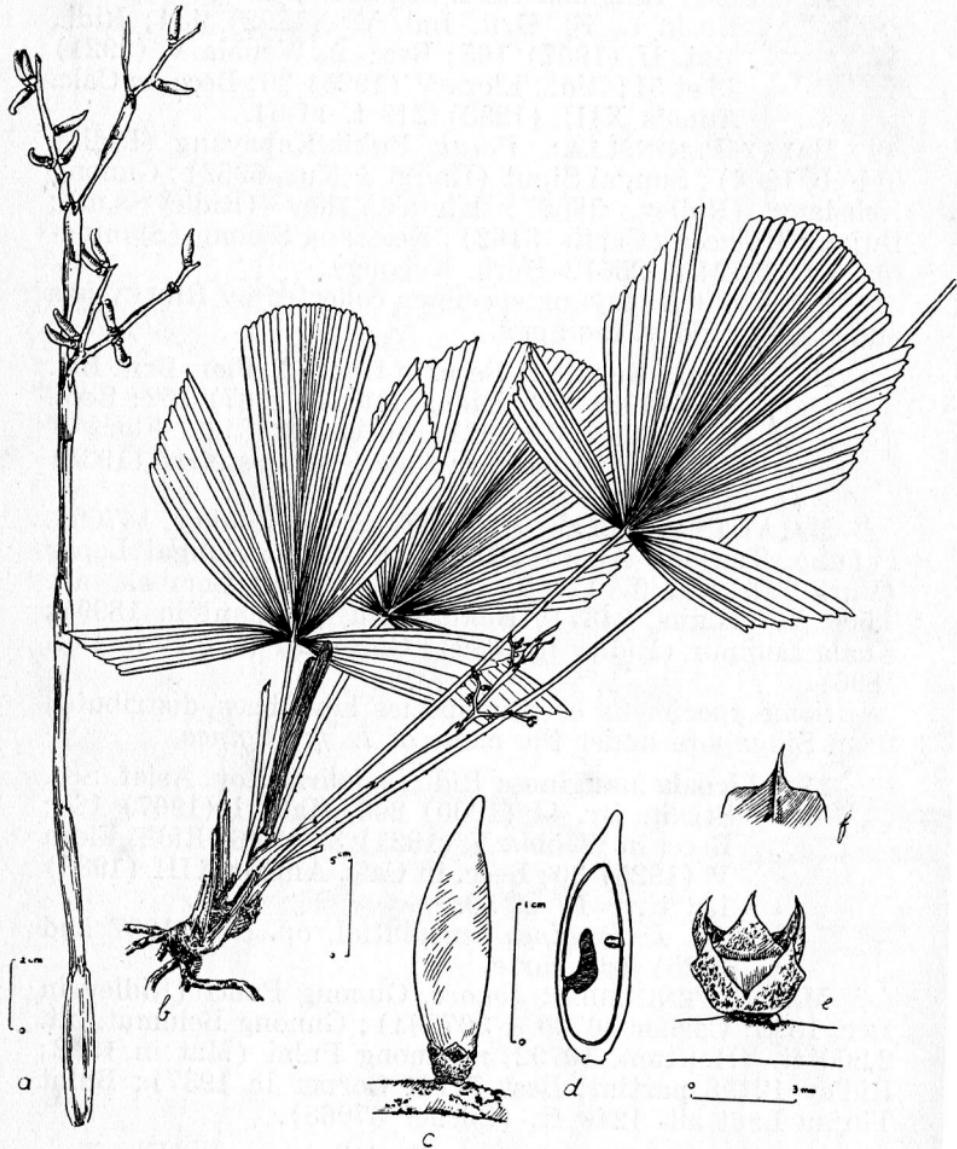


Fig. 4. *Licuala Kiahii* (Holotypus: KIAH 32127).

a. Spadix. b. Planta cum spadice fructifero. c. Fructus.
d. Fructus verticaliter discessus. e. Perianthium fructiferum. f. Filamentum staminale.

Kiahii). Otherwise *L. Kiahii* has many characters similar to those of *L. mattanensis*, even in the habit of developing frequently more than one fertile carpel in each ovary.

9. **Licuala Kingiana** Becc. in Malesia III (1889) 193; Hook. f., Fl. Brit. Ind. VI (1892) 434; Ridl., Mat. II (1907) 165; Becc. in Webbia V (1921) 38 et 51; Ridl., Flora V (1925) 30; Becc. in Calc. Annals XIII (1933) 213 t. 11-II.

MALAY PENINSULA: *Perak*, Bukit Kapayang (Ridley in Feb. 1904); *Sungai Siput* (Haniff & Nur, 6962); *Gunong Keledang* (Ridley, 9804); *Kinta Valley* (Ridley s.n.); *Bujong Malacca* (Curtis, 3162); *Keledang Saiong* (Symington, Cf. 25724 & 25612-Herb. Kepong).

The *Bukit Kapayang* specimen collected by RIDLEY has one spadix bifid at the apex.

10. **Licuala Kunstleri** Becc. in Hook. f., Flor. Brit. Ind. VI (1892) 433; Ridl., Mat. II (1907) 162; Becc. in Webbia V (1921) 30 et 44; Ridl., Flora V (1925) 27; Becc. in Calc. Annals XIII (1933) 167 t. 94.

MALAY PENINSULA: *Perak*, Temango (Ridley, 14709). *Pahang*, Tanjong Antan (Ridley in 1891); *Sungai Lepar* (Burkill & Haniff, 17460). *Selangor*, Ulu Gombak, alt. 1,500 ft. (Hume, 9437); *Bukit Kutu* (Casdani in 1899); *Kuala Lumpur* (Ridley in 1889); *Gua Batu* (Ridley in Dec. 1896).

Some specimens of this species have been distributed from Singapore under the name of *L. ferruginea*.

11. **Licuala lanuginosa** Ridl. in Journ. Roy. Asiat. Soc. Straits Br. 44 (1905) 203, Mat. II (1907) 165; Becc. in Webbia V (1921) 33 et 46; Ridl., Flora V (1925) 30; Becc. in Calc. Annals XIII (1933) 181 tt. 9-IV et 50.

L. longipes sensu Ridl. op. cit. (1907 and 1925) pro parte.

MALAY PENINSULA: *Johore*, Gunong Panti (Ridley in Dec. 1892; Corner 30739 & 30739A); *Gunong Belumut*, alt. 2,200 ft. (Holttum, 10792); *Gunong Pulai* (Mat in 1892; Ridley 12198 partim; Best 7711; Corner in 1937); *Bukit Tinjau Laut* alt. 1240 ft. (Corner 37068).

12. **Licuala longicalycata** Furtado sp. nov. Fig. 5.

L. baculariae affinis ut videtur, sed planta robustiore, foliorum segmentis latioribus, inflorescentiae ramulis partialis pluribus, floribus majoribus, calyce floris longe piloso, sed fructus interdum laevi, corolla minute pubescente haec species sat distincta. Inter species malayanas L. glabra producit formas aspectu calycale similes L. longicalycatæ,