

55. *Calamus siamensis* Becc. var. *malaianus* Furtado var. nov.
—t. 55.

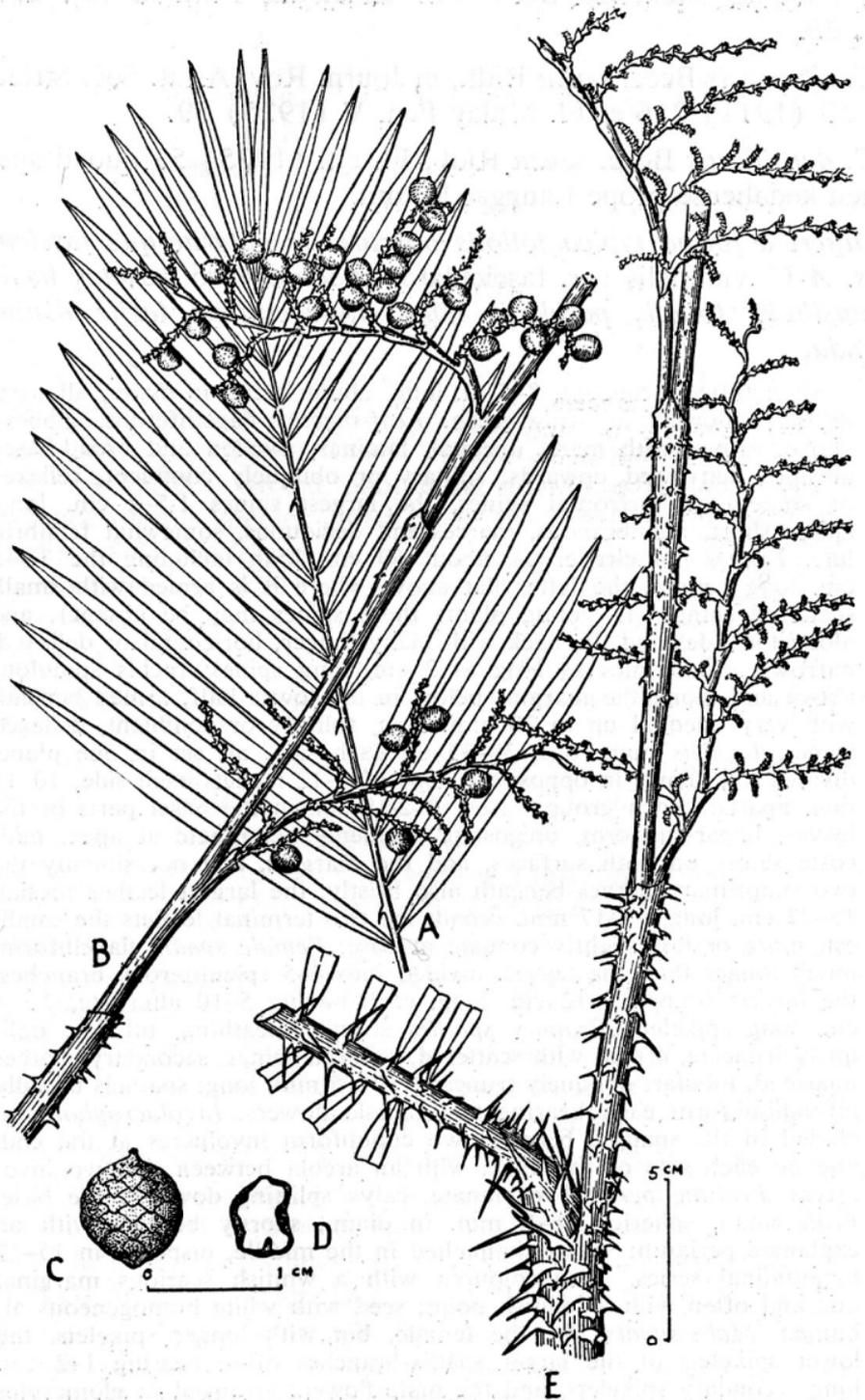
C. siamensis Becc. *sensu* Ridl., in Journ. Roy. Asiat. Soc. Straits Br. 59 (1911) 216 et Fl. Malay Pen. V (1925) 59.

C. densiflorus Becc. *sensu* Ridl., Fl. cit. (1925) 53 quoad specimen kedahense prope Langgar lectum.

Differt a forma typica foliolis obscure irregulariterque fasciculatis. A C. viminalis var. fasciculato, quocum haec varietas facile confusibilis, foliolis parallelis haud divergentibus facile distinguenda.

Stem tufted, scandent, 2–5 m. long, about 2 cm. in diam., all parts drying yellowish or straw-green. *Leaf-sheaths* flagelliferous, gibbous above, armed with many unequal, laminar, swollen and broad-based abruptly narrowed upwards, solitary or obliquely confluent, reflexed or sometimes horizontal spines, the largest spines 1.5–2 cm. long. *Ocrea* short, membranous, marcescent, deciduous, somewhat frimbrillate. *Leaves* non-cirriforous, about 60 cm. long including the 3.5–5 cm. long petiole; the latter flat above where it is armed with small, scattered spines (in young plants these spines may be absent), and along the sides and the back with many longer, horizontal or deflexed, narrower, sometimes as long as 2 cm. long spines; rachis spinulose above and along the margins below in the lower half, armed beneath with very unequal up to 20 mm. long, solitary or confluent, deflexed spines. *Leaflets* numerous, 30–35 on each side, all set in one plane, divided irregularly in opposite groups of 4–12 leaflets each side, 10–15 mm. apart in each group, rarely 2–2.25 cm. in the basal parts of the leaves, linear-ensiform, unicostate, suddenly acuminate at apex, midcosta setose on both surfaces, and the margins, and occasionally the two subprimary nerves beneath also bristly; the largest leaflets mesial, 15–27 cm. long, 15–17 mm. broad; the two terminal leaflets the smallest, more or less slightly connate at base. *Female spadix* flagelliform, much longer than the leaves, divided into 4–5 spiculiferous branches; the largest branch 8–12 cm. long, each having 5–10 alternate, 2.5–4 cm. long spikelets. *Primary spathes* strictly sheathing, tubular, obliquely truncate, armed with scattered, reflexed spines; secondary spathes unarmed, tubular, obliquely truncate, 10–15 mm. long; spathels broadly infundibuliform each bearing two female flowers. *Involucrophore* included in the spathel, bearing two cupuliform involucre at the end, one on each side of the apex, with an areola between the two involucre. *Fruiting perianth* explanate, calyx splitting down to the base. *Fruit* small, spherical, 6–8 mm. in diam.; shortly beaked, with an explanate perianth; scales channelled in the middle, disposed in 15–17 longitudinal series, straw-coloured with a whitish scarios marginal line and often with a reddish point; seed with white homogeneous albumen. *Male spadix* like the female, but with longer spikelets, the lower spikelets of the larger spadix-branches often bearing 1–2 cm. long secondary spikelets, and the male flowers arranged in glomerules of 3–5 at each spathel.

MALAYA: Perlis, Telor Jambu (Ridley 15,359 feminine, holotypus); Tebing Tinggi (Henderson, masculus, 23,028). **Kedah,** Langgar (Burkill et Haniff 13,313-masculus, vern. nom. *Rotan Pahit*); Bukit Pinang in Alor Star (Ridley in II-1910, masculus).



Tab. 55. *Calamus siamensis* var. *malajanus* (A-D: Ridley 15,359—holotypus; E: Henderson 23,028 ♂).

A, Frondis fragmentum apicale. B, Spadicis pars. C, Fructus. D, Semen verticaliter discissum. E, Caudicis pars cum spadice et basi petioli.

C. siamensis was based on a specimen collected by Schomburgh in Siam, the holotype being preserved in the Kew Herbarium; it was again collected in fruit at Bangkok by Wawra, the latter specimen being preserved in the Vienna Herbarium. Beccari, who examined both these specimens, described the species as having equidistant leaflets, not in groups, whereas the Malayan specimens have all leaflets disposed in groups. In each group the leaflets are equidistant and in one plane, not spreading in different directions as in *C. viminalis* var. *fasciculatus* subvar. *pinangianus*.

56. Calamus pandanosmus Furtado sp. nov.—t. 56.

Ab omnibus speciebus hujus subsectionis: vagina frondis striata, aculeis tumescentibus conoideis obtusis vel interdum subito acutis recurvatis solitariis praedita; ocrea obscura; frondibus sessilibus; foliolis inaequidistantibus vel sub-aequidistantibus, anguste linearior-lanceolatis, utrinque inermibus haec species sat distincta.

Caudex scandens gracilis circa 20 m. longus cum vagina 8 mm. in diam., caespitosus. *Vagina* frondis valde striata, brunnescens, flagellifera (flagellum prope vaginae marginem geniculo oppositum, quam frondes duplo vel triplo longius), aculeis 2–3 mm. longis tumescentibus conoideis obtusis vel abrupte pungentibus, recurvatis, solitariis, remotis praedita, infra petiolum gibbosa, infra gibbum in semi-anello horizontali contracta, apice oblique truncata. *Ocrea* vix visibilis. *Frondes* sessiles, brunnescentes, non-cirriferae, 35–40 cm. longae; rachis deciduo furfuracea, dorso aculeis solitariis parvis uniseriatim praedita, foliolis utrinsecus 14–16. *Foliola* inaequidistantia, 1–3.5 cm. inter se remota, linearior-lanceolata, subtrinervia, subopposita vel partim alternantia, (maxima ad medium sita, 15–20 cm. longa, 8–14 mm. lata), utrinque inermia, apice deciduo penicillata, basi et apice racheos utrinsecus 3–4 nonnihil approximata, duo terminalia basi paulo connata vel libera.

Stem tufted, scandent, about 20 m. long, with sheaths 8 mm. in diam. *Leaf-sheaths* strongly striate, dull, pale coffee-brown, flagelliferous, contracted below the base of the petiole-geniculum into a horizontal semi-annular gibbosity, obliquely truncate at the apex, remotely armed with 2–3 mm. long, swollen, slightly recurved, cone-like warts which are blunt or sharp-pointed at the apex. *Leaves* sessile, non-cirriferae, 35–40 cm. long; rachis deciduously furfuraceous, armed dorsally with short, solitary spines. *Leaflets* inequidistant, about 1–3.5 cm. apart, linear-lanceolate, 3-nerved, subopposite or alternate, unarmed except at the bristly apex; the largest mesial, 15–20 cm. long, 8–14 mm. broad; the basal three pairs very close to each other; the two terminal leaflets free or slightly connate at the base.

MALAYA: Kemaman, prope Ulu Kajang in locis paludosis (Corner 30,595, vern. nom: *Rotan Pandan Wangi*).

The collector notes that this species grows in tufts, each stem growing to a length of about 60 ft. or more and that the crushed tissues smell faintly but distinctly of *Pandan Wangi* (a *Pandanus* sp.).