

The species being a tufted plant is able to maintain itself despite the fact that it is often cut for commercial purposes. No doubt there are other *Calami* which furnish walking-sticks, but those of *C. Scipionum* are undoubtedly the best and commonest having the longest internode. The plant is widely exploited in Sumatra and it is not unreasonable to suppose that its distribution is effected in some measure through the planting in the jungles by men.

There is a good deal of variation in this species regarding the disposition of spines and leaflets, and it is possible that a great many of these variations are dependent on the age of the clump as well as the individual stem. A young specimen collected by Moorhouse on 24-XII-1903, as *Rotan Machap* apparently belongs here.

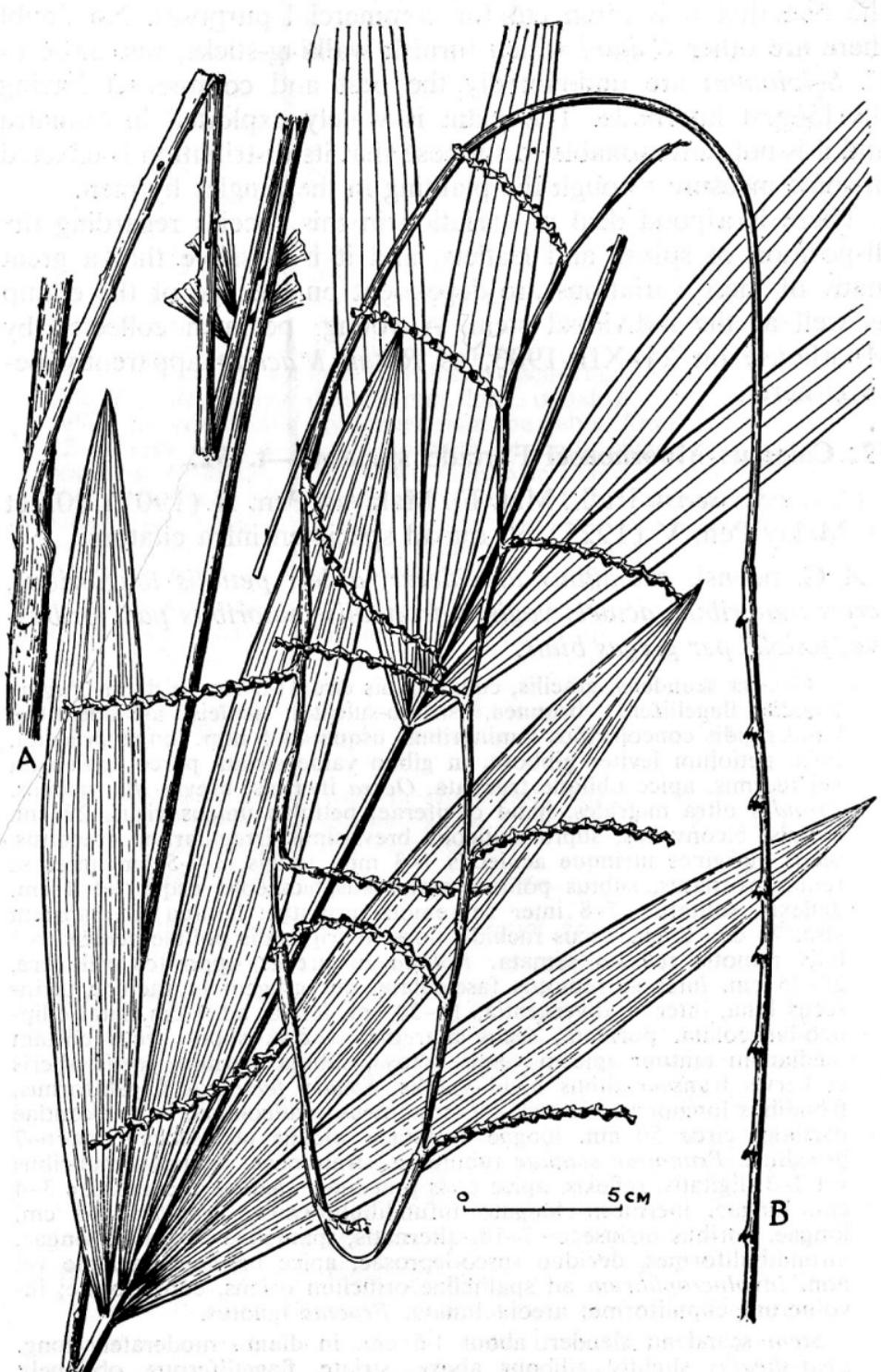
52. *Calamus Moorhousei* Furtado sp. nov.—t. 52.

C. caesius sensu Ridl., Mat. Fl. Malayan Pen. II (1907) 205 et Fl. Malay Pen. V (1925) 60 quoad specimen infra citatum.

A C. poensi, cui affinis ut videtur, differt petiolis longioribus, ocreis minoribus, aculeis vaginae frondalis minoribus paucioribusque, foliolis per greges binis.

Caudex scandens, gracilis, cum vaginis circa 1.5 cm. in diam. Vagina frondis flagellifera, brunnea, striato-sulcata, aculeis ascendentibus haud rigidis concoloribus laminaribus, usque ad 5 mm. longis praedita, infra petiolum leviter gibbosa, in gibbo valde striata parce aculeolata vel inermis, apice oblique truncata. Ocrea inermis, brevis, vix visibilis. Frondes ultra metrales, haud cirriferae; petiolus unicus visus, 29 cm. longus, biconvexus, supra aculeolis brevissimis irregulariter praeditus, secus margines utrinque aculeolis 1–3 mm. longis, 3–4.5 cm. inter se remotis ornatus, subtus politus, gramineus, aculeolis usque ad 4 cm. deflexis, solitariis, 7–8 inter se remotis armatus; lamina sine apicem visa, 75 cm. longa, secus rachidis dorsum trigonalis politae aculeis 1–3 fidis remotis reflexis armata. Foliola in greges oppositos vel fere, 20–25 cm. inter se remotos fasciculata, per gregem in rachide utrinsecus bina, inter se divergentia, 18–20 cm. longa, ad 4 cm. lata, elliptico-lanceolata, correcta, secus margines setosa, supra secus costam medianam tantum apicem versus setosa, subtus inermia, costis alteris et nervis transversalibus haud validis. Spadix feminineus flagelliformis, frondibus longior ut videtur, axi stramineus, aculeolatus; inflorescentiae partiales circa 50 cm. longae remotae, spiculis utrinsecus circa 6–7 praeditae. Primariae spathae tubulosae, stramineae, aculeis simplicibus vel 1–3 digitatis, reflexis, apice atris praeditae; spathae secundariae 3–4 cm. longae, inermes, elongato infundibuliformes, Spiculae 4–8 cm. longae, floribus utrinsecus 7–10, alternatis; spathellae 3–4 mm. longae, infundibuliformes, deciduo fusco-leprosae, apice breviter ligulatae vel non. Involucrophorum ad spathellae orificio oriens, cupuliforme; involucrum cupuliforme; areola lunata. Fructus ignotus.

Stem scandent, slender, about 1.5 cm. in diam., moderately long. *Leaf-sheaths* slightly gibbous above, striate, flagelliferous, obliquely truncate, armed with scattered solitary, up to 5 mm. long, ascendent, non-rigid spines. *Leaves* apparently not cirriferous, about 1 m. or more long; petiole, only one seen, 29 cm. long, biconvex, polished beneath, where it is armed along the middle and in the margins with a few remote, solitary short spines; rachis armed beneath with weak claws



Tab. 52. *Calamus Moorhousei* (Moorhouse s.n.—holotypus).

A, Caudicis fragmentum cum folio. B, Spadix incompletus.

This figure illustrates the holotype specimen of *Calamus Moorhousei*. Part A shows a fragment of the stem (caudex) with its characteristic arrangement of long, narrow leaves. Part B shows a single, curved spadix, which is an inflorescence structure unique to palms. The drawing provides a clear scientific representation of the plant's key features for identification.

which are simple in the lower half and digitate in the upper. Leaflets fascicled, 18–20 cm. long, about 4 cm. broad, elliptic lanceolate, setose on the median nerve above and on the margins, naked beneath; fascicles of 2 divergent leaflets, opposite, 20–25 cm. apart. *Female spadix* very long, flagelliform, with about 50 cm. long, pendulous branches, bearing 4–8 cm. long spikelets; all parts straw coloured in the dry state. *Primary spathes* tubular, long, clawed; secondary spathes tubular, 3–4 cm. long, unarmed, straw-coloured; spathels 3–4 mm. long, fusco-leprous, unarmed.

MALAYA: Negri Sembilan, Kuala Pilah (Moorhouse in 1905).

The specimen does not appear to be from a fully developed plant and the weak spines on the leaf-sheaths and the slightly developed gibbosity seem to confirm this.

C. Moorhousei has been confused by Ridley with *C. caesius*, from which it is readily distinguished by its slender, less aculeate stems, longer petioles, flagelliferous leaf-sheaths, fewer leaflets (which are moreover arranged in opposite pairs), ecirriferous (apparently) leaves, long flagelliform spadices and narrower primary and secondary spathes. *C. caesius* is a species of the section *Phyllanthectus*.

53. *Calamus viminalis* Willd. var. *fasciculatus* (Roxb.) Becc. sub-var. *pinangianus* Becc. in Ann. Roy. Bot. Gard. Calc. XI (1908) 207.

C. viminalis var. *fasciculatus* (Roxb.) Becc. in Hook. f., Fl. Brit. Ind. VI (1892) 444 et in Rec. Bot. Surv. Ind. II (1902) 203 quoad specimen penangense.

C. viminalis var. *pinangianus* (Becc.) Becc. in Ann. cit. Appendix (1913) 21 (sphalmate?).

Stem tufted, scandent, 10–15 m. long, 2–3 cm. in diam., all parts acquire on drying a straw colour. Leaf-sheaths flagelliferous, gibbous above, armed with flat, broad-based, horizontal or slightly deflexed spines. Leaves non-cirriferous, about 1 m. or more long; petiole short, 9–20 cm. long, armed at the sides, and sometimes in the middle beneath and above, with long spines; rachis armed on the lower surface along the margins and the middle with 1·4 cm. long, simple or geminate or ternate spines, the marginal spines lacking on the terminal parts of the leaves, and occasionally armed on the upper surface with long, solitary spines at the basal end of the rachis. Leaflets many, pointing in many directions, arranged in distant, alternate or opposite fascicles of 2–4 each; the largest leaflets about 30 cm. long, 2·5–2·8 cm. broad, spinulous on the nerves on both surfaces and along the margins. *Female spadix* about 2 m. long, flagelliform, divided into 5–6 cm. partial inflorescences, each bearing 3–6 spikelets on each side; spikelets 6–12 cm. long. *Primary spathes* long, tubular, aculeate or clawed; secondary spathes 1·5–2 cm. long, tubular, unarmed, apiculate. *Fruit* sphaeric, 8–9 mm. in diam.; scales straw-coloured with brown tips, arranged in 18–20 (?) series; seed with equable albumen. *Male spadix* like the female, but with longer branches and spikelets, and with flowers at each spathel being arranged in glomerules.

MALAYA: Penang (Wallich 8,611).