approaches *D. acamptostachys*, a rare rattan of kerangas forest in Sarawak; inflorescence details suggest the two species are related (papery nature of bracts, long peduncle and crowded rachillae in the staminate plant). *D. acamptostachys* however has extraordinarily densely crowded staminate flowers borne on straight rather than zig-zag rachillae and the fruit in *D. serpentina* is ovate and about twice the size of the sphaerical fruit of the other species.

17. **Daemonorops banggiensis** *J. Dransf.* palmijuncus robustus caule brevi intra gregem *D. hystricis* ponendus spinis vaginarum foliorum gracilibus densissimis, geniculo haud evoluto, foliolis seriebus 3 supra setis sparsis infra serie unica setarum conspicuarum armatis differt. Typus: Borneo, Sabah, *Dransfield* JD5666 (holotypus K; isotypi KEP, L, SAN, SAR).

Robust clustering short-stemmed rattan with stems decumbent or climbing to 3 m only; stem without sheaths c. 20–25 mm diam., with sheaths 30–40 mm; internodes 8–12 mm. Leaf sheaths usually splitting for considerable lengths opposite the petiole, pale yellowish-green when fresh, drying brownish, very densely armed with dull grey spines of varied length and alignment, scattered or arranged in horizontal or oblique partial whorls, below the petiole to 40 × 3 mm and ± reflexed, by the leaf sheath mouth much longer, to 120 × 4 mm, erect, often ± papery; dark chocolate brown indumentum present on young sheaths, usually quickly falling. Knee hardly developed. Ocrea inconspicuous. Leaf cirrate rather massive to 2·5 m including short cirrus to 40 cm and petiole to c. 40 cm; petiole semi-circular in section, c. 15 × 10 mm, ± channelled near the base, heavily armed near the base with marginal groups of pale grey spines to 60 × 3 mm, held ± at 80° to the petiole, and short erect spines to 10 mm; in distal portion armature shorter and sparser; petiole continuing into rachis, but much more sparsely armed on the abaxial surface only; leaflets c. 60 on each side of the rachis, close and regularly arranged, coriaceous, bright green, concolorous, the most proximal to 30 × 1·7 cm; mid-leaf leaflets to 35 × 2·4 cm, decreasing to 16 × 1·7 cm at the base of the cirrus; leaflets armed with very short marginal teeth, short sparse bristles on three nerves on adaxial surface, and with a conspicuous row of close bristles to 1·5 mm on abaxial surface of main vein; transverse veinlets very crowded, somewhat sinuous, rather obscure. Staminate inflorescence to 70 cm with short basal peduncle to 5 cm; prophyll c. 25 × 4 cm, ± woody-textured, very densely armed with grey-black, pale yellowish based spines to 25 mm, with a few flat erect papery spines to 60 mm at the very tip, and abundant floccose brown indumentum; other primary bracts decreasing in size distally, armed ± as the prophyll, but less densely so; partial inflorescences up to 10, ± 5–10 cm distant on expansion, the longest to c. 10 cm; bracts on first order branches rather thin and papery c. 5 × 1·5 cm; proximal partial inflorescences rather congested with sinuous rachillae; rachillae very slender to 4 mm bearing c. 4 flowers each subtended by two minute bracteoles. Staminate flower c. 2·5 × 1·5 mm; calyx c. 0·4 mm with three short teeth; corolla tubular at very base, with three ovate petals to 2·1 × 1·0 mm; stamens six with short filaments and anther c. 1·1 × 0·2 mm. Pistillate inflorescence as the staminate but shorter, branching in two orders only; rachillae c. 25 × 2 mm, distinctly brown indumentose; rachilla bracts and bracteoles very low, inconspicuous. Sterile staminate flower as the fertile

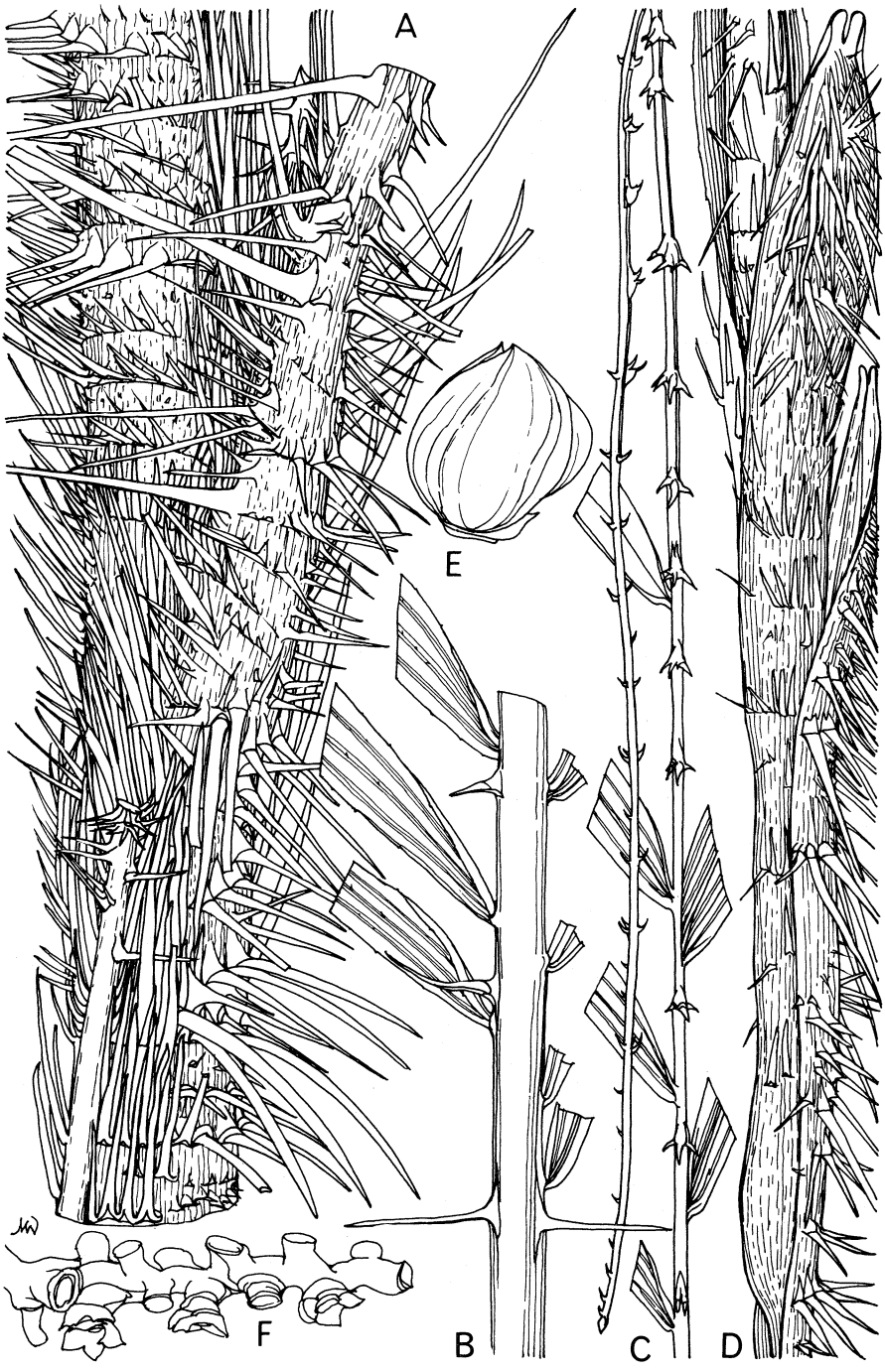

FIG. 11. *Daemonorops banggiensis*. **A** leaf sheath × $\frac{2}{3}$; **B** mid-portion of leaf × $\frac{2}{3}$; **C** leaf tip × $\frac{2}{3}$; **D** staminate inflorescence × $\frac{2}{3}$; **E** staminate flower × 12; **F** pistillate rachilla × 2. **A–E** from *Dransfield* JD5666, **F** from *Dransfield* JD5667. Drawn by Mary Millar Watt.

but with empty anthers; pistillate flower to 3·5 × 2 mm; calyx very low, c. 0·3 mm with three shallow lobes; corolla split almost to the base giving three triangular petals to 2·5 × 1·5 mm. Staminodes flattened, tooth-like; ovary c. 1·5 mm diam., covered in vertical rows of scales and tipped with three fleshy stigmas. Mature fruit not available. Fig. 11.

SABAH. Pulau Banggi, near Kerakit, lowland forest on reef limestone, 100 m, *Dransfield et al.* JD5666 (holotype K; isotypes KEP, L, SAN, SAR) & JD5667 (K, KEP, L, SAN, SAR).

This species belongs to the complex group of taxa related to *D. hystrix* (Griff.) Mart. Although it is imperfectly known, it is vegetatively quite unlike any other Sabah species in the complex, in its large size, leaf sheath armature, inflorescence bract armature, and leaflet armature. It seems closest to *D. curranii* Becc. of Palawan, and Banggi Island being close to Palawan might be thought to be rich in Philippine elements; however the type of *D. curranii* (imperfect though it is) is quite different in leaflet texture and coloration. It is unfortunate that we have such a small amount of material from Palawan. *D. banggiensis* may prove to be more widespread.

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