

## *Calamus nielsenii* Dransfield (*Palmae*)

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*Summary.* *Calamus nielsenii*, from the G. Mulu National Park, Sarawak, is described as new.

Not long after my account of the new species of palms of the G. Mulu National Park, Sarawak had gone to press, I received a loan of palm material collected during the Royal Geographical Society's expedition, by I. Nielsen of Aarhus. Amongst this material was one further new species of *Calamus*. In order to be able to complete the checklist of palms of the National Park, I am describing this new species as *C. nielsenii*.

***Calamus nielsenii* Dransfield** sp. nov., palmijuncus gracilis foliis ecirratis ad sectionem *Coleospathum* Furt. pertinens, rachillis gracilibus non-incrassatis et bracteis rachillarum inermibus parvis *C. heteroideo* affinis, sed foliolis aggregatis distinctus; species ceterae graciles Borneenses foliis ecirratis foliolis linearibus aggregatis *C. poensis* et *C. schistoacanthus* inflorescentiis robustioribus rachillis incrassatis diversissimi. Typus: Sarawak, I. Nielsen 761 (holotypus AAU).

Slender rattan with stems to 1 m long; stem without sheaths 4 mm diam, with sheaths 8 mm, internodes to 3 cm only. Leaf sheath dull green, armed rather densely with scattered brown, stiff spines 4–8 mm long, with yellowish bulbous bases, those around base of petiole longer, to 10 mm, mostly only very slightly reflexed; spines and leaf sheath surface densely covered in pale buff-coloured indumentum; knee rather inconspicuous; ocrea well-developed, tubular at first, later splitting to give two tattered auricles to 25 × 8 mm, dark purplish-brown, unarmed; flagellum not seen, possibly developed (inflorescences flagellate). Leaf ecirrinate to 38 cm long; petiole c. 8 cm long, 2.5 mm wide, semi-circular in cross-section armed with scattered reflexed yellowish spines to 2 mm, and abundant reddish-brown indumentum; rachis as petiole but more densely armed proximally and less densely in distal portion. Leaflets long-acuminate, narrowly lanceolate 7 on each side of rachis grouped in twos to threes, c. 1.3 cm distant within group, c. 3 cm between first and second group and c. 6 cm between second and apical group; apical leaflet pair joined briefly (c. 2 cm); most proximal leaflets 15 × 1 cm; mid-leaf leaflets to 18 × 1.4 cm; apical leaflets to 13 × 1 cm; reddish brown hairs scattered over leaflet undersurface, particularly at base; leaf tips armed with short brown bristles. Inflorescence flagellate to c. 95 cm long, only staminate known; partial inflorescences 5 in number, the first borne c. 35 cm above the base; partial inflorescence very slender to 15 cm with up to 4 distant slender rachillae held at right angles or slightly reflexed; most proximal rachilla sometimes branched; subtending bracts smooth or very sparsely armed; rachilla to 3.5 cm long, purplish brown, with a basal non-floriferous bract to 6 mm long, followed by distichous bracts 2 × 0.75 mm, deep purplish brown with scattered

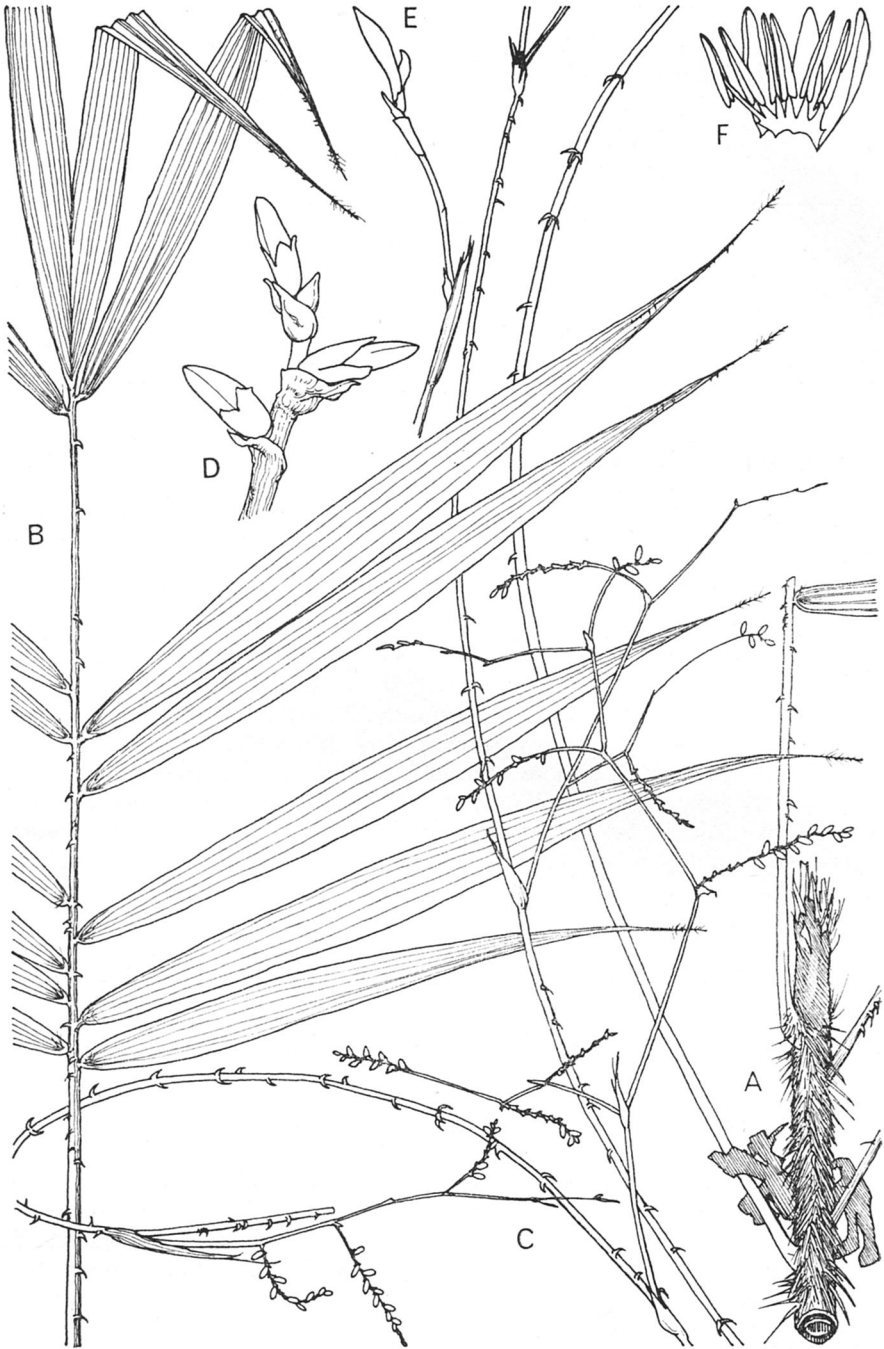


FIG. 1. *Calamus nielsenii*. **A** stem with sheaths, ocreae and bases of leaf and inflorescence  $\times \frac{1}{3}$ ; **B** leaf with part of petiole  $\times \frac{1}{3}$ ; **C** staminate inflorescence  $\times \frac{1}{3}$ ; **D** tip of rachilla with three staminate flowers  $\times 3$ ; **E** extreme tip of inflorescence  $\times 3$ ; **F** staminate flower opened out  $\times 3$ . All drawn from *I. Nielsen* 761 by Mary Millar Watt.

reddish brown hairs; involucre c. 1 mm diam. forming a low collar c. 0.2 mm high. Staminate flower narrowly fusiform, c. 3 mm long. Calyx deep purplish brown tubular in proximal 0.5 mm, with 3 triangular somewhat striate lobes  $0.8 \times 0.8$  mm. Corolla with 3 narrow triangular lobes to  $2.5 \times 0.5$  mm. Stamens 6; filaments shortly epipetalous to 1 mm; anthers median  $0.75 \times 0.1$  mm. Pistillode minute. Other parts unknown. (Fig. 1).

BORNEO. Sarawak: 4th Division, G. Mulu National Park, Bt. Berar, summit ridge, sclerophyllous ridge vegetation on limestone,  $\pm 275$  m, 19 March 1978, *I. Nielsen* 761 (holotype AAU).

This very slender rattan is known only from the type; furthermore no pistillate material is known. Despite this, it is a very distinctive species being one of the very few Bornean species of the genus with an ecirrate leaf with narrow leaflets in which the leaflets are not regularly arranged but fascicled. The other species, *C. poensis* Becc. and *C. schistoacanthus* Bl. have much longer and more robust inflorescences with thickened rachillae conspicuously differentiated from their subtending axes, whereas in *C. nielsenii* the rachillae are very slender and scarcely differentiated. *C. nielsenii* appears to be close to Javanese *C. heteroideus* Bl. The highly developed ocrea is distinctive.