

FI), *Dransfield et al.* JD 4736, 4926, 4927 (all K, SAR); Serian District, Sabal Tapang F.R., *Dransfield et al.* JD 4666 (K, SAR).

**HABITAT.** On G. Matang, found in the summit ridge-top forest at about 800 m in facies with slightly more available moisture than the sharply drained forest dominated by *Eugeissona insignis* Becc.; it grows with an abundance of palms including *Calamus zonatus* Becc., *C. divaricatus* Becc. and *C. pygmaeus* Becc., *Pinanga salicifolia* Bl. and *Iguanura palmuncula* Becc. var. *palmuncula*. At Sabal Tapang it was found at about 100 m altitude in forest transitional between mixed Dipterocarp forest and 'kerangas'. Nothing is known of its habitat in Malaya. This species appears to be genuinely very local.

**2. *Pogonotium divaricatum*** *Dransfield* sp. nov. a *P. ursino* hic palmijuncus singularis facile distinguibilis habitu majore, folio foliola rigida dissita divaricata 40–50 tantum (vice gracilia infirma congesta 90–100) ferenti, foliolis sparsim setosis (vice dense ciliato-setosis), et fructu majore laete magenteo (vice obscure castaneo), squamis tumidis convexis seriebus verticalibus 21–22 (vice 16–17). Type: Borneo, *Dransfield* JD 5327 (holotypus K; isotypi BH, L, SAR).

Solitary or clustering rattan with stems climbing to 5 m. Stem without leaf sheaths 7–20 mm diam., with sheaths 17–40 mm; internodes to 10 cm. Leaf sheath bearing a rather inconspicuous knee and densely covered in long, sometimes papery, black or straw-coloured fine brittle spines to 2 cm long, usually less, usually arranged in horizontal combs with confluent bases; reddish brown indumentum abundant between the spines and caducous powdery white indumentum present on spines; leaf sheath terminating in two lateral auricles 20–23 × 2–3 cm, rather sparsely armed with black or pale straw-coloured spicules to 70 mm, usually about 20 mm long, sometimes the spines developed as reflexed grapnel groups; auricles markedly convex; petiole 30–75 × 0.7–1.7 cm, oval to semicircular in cross-section armed with pale reflexed grapnel spines on abaxial surface, without spiculae, the adaxial surface sometimes densely armed with short, stiff, upward pointing, bulbous-based scattered spines to 1 mm long, when young covered in inflated plate-like indumentum borne on small tubercles, the indumentum caducous, leaving a brown scabrid surface; whole leaf excluding the sheath 1–2.5 m, subcirrate; leaflets 40–50 cm each side of the rachis, 2.5–3 cm distant near the base, up to 5 cm distant in the distal area, regularly arranged, stiff, divaricate in the distal area, 21–33 × 1.5–1.9 cm except near the leaf tip where very much smaller; bristles absent from the adaxial surface of the leaf base except an occasional solitary bristle to 1.5 mm long; leaflet margins sparsely armed with bristles not exceeding 1 mm long, the 3 veins sparsely armed on adaxial surface with bristles to 2.5 mm long, and mid vein armed on abaxial surface with 3–5 distant bristles to 2 mm long in the most distal quarter of its length. Young leaf pinkish tinged, rapidly turning dark green. Staminate and pistillate inflorescences often ± the same size, but quite variable depending on vigour of the plant; prophyll narrowly to broadly lanceolate, 15–27 × 1.5–5 cm, either unarmed or variously armed with short to long bristles to 2.5 cm, scattered or grouped, also with this brown indumentum and with sparse caducous inflated cells as on the leaf sheaths. Staminate inflorescence with axis to 20 cm long, branching to 2 orders, the

ultimate branches to about 2 cm long, bearing solitary staminate flowers; bracteole and involucre similar, cupular, forming an alveolus about 2 mm diam. Staminate flower with calyx tubular in lower 1 mm with three triangular fringed lobes about  $1 \times 3$  mm; corolla to 5 mm, tubular in the lower 1 mm, the three lobes about 2.5 mm wide at the base, brown somewhat striate; filaments epipetalous, c. 1 mm long; anthers c. 3 mm long; pollen canary yellow; pistillode minute, 3-lobed, about 0.5 mm long. Sterile staminate flower like fertile staminate, but somewhat flattened. Pistillate flower to  $10 \times 4$  mm; calyx tubular in lower 2.5 mm, with 3 triangular, slightly apiculate lobes to  $2 \times 3$  mm; corolla split to  $\frac{3}{4}$  length with narrow triangular petals to  $7 \times 3.5$  mm at the base; staminodes borne at the mouth of the corolla tube, with filaments about 1 mm long and empty anthers to 2 mm long; ovary ovoid about  $3.75 \text{ mm} \times 2.5 \text{ mm}$  tipped with 3 fleshy arcuate stigmas to 5 mm long, 0.5 mm wide near the base. Fruiting perianth slightly increasing in size. Mature fruit bright magenta, c.  $3 \times 2.5$  cm, rounded, covered in 22 vertical rows of grossly swollen and convex, deeply grooved scales, the fruit apex inconspicuously beaked; seed with sarcotesta c.  $2.5 \times 2$  cm; diaspore to  $8 \times 6 \times 4$  mm; endosperm homogeneous: embryo basal. Eophyll unknown.

BORNEO. Sarawak, 4th Division, G. Mulu National Park, *Dransfield* JD 5327 (holotype K; isotypes BH, L, SAR), 5266 (BH, K, SAR), 5329 (BH, K, L, SAR).

HABITAT. *Pogonotium divaricatum* is known only from the Gunung Mulu National Park on the borders of the 4th and 5th Divisions, and seems to be characteristic of 'kerangas' forest occurring in the less waterlogged palm-rich facies, growing with *Pichisermollia insignis* (Becc.) H. Mont. Net., *Daemonorops spectabilis* Becc., and *Areca minuta* Scheff. It was also found on a low ridge-top in a facies of mixed Dipterocarp forest where mor-humus had accumulated, growing with *Areca minuta*. It is a most extraordinary palm.

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