the rachilla bearing rather distant, spirally arranged, solitary or paired staminate flowers. Staminate flower trigonous, ± as broad as long; calyx to 2 mm, the base slightly stipitate, apically with 3 slightly imbricate, low, ciliate triangular lobes, the surface minutely papillose to scaly; corolla c. 3–5 mm, with 3 broad, triangular, valvate, glabrous petals joined only at the very base; stamens 15–16 crowded into an ill-defined ring, the anthers aligned ± radially rather than circumferentially; filaments free, slender 0·3–0·8 mm, anthers somewhat misshapen, 1–1·5 mm × 0·4 mm, latrorse (with respect to connective); pistillode lacking, though floral apex ± visible. Pistillate flower broadly ellipsoidal c. 12 × 5·5 mm; calyx c. 6 mm, with a solid base to 2·5 mm, and 3 broad, triangular, somewhat cucullate, ciliate, scaly, imbricate sepals, to 5 × 6 mm; petals 3, free glabrous, c. 9 × 6 mm, imbricate in the proximal portion, valvate in distal c. 2 mm, the imbricate margins ciliate; staminodes 8 (? always), minute, flattened; ovary ellipsoidal, c. 9 × 3 mm, tipped by 3 broad, triangular stigmas to 2 × 1·5 mm. Young fruit green tinged brownish, fusiform, to 22 × 5 mm; tipped by the stigmatic remains; mature fruit not known (Fig. 3).

DISTRIBUTION. Borneo, Sarawak, 1st Division, G. Pueh Forest Reserve, known only from the type (see above).

HABITAT. In G. Pueh Forest Reserve, *A brachypoda* is quite common in kerangas forest where it seems to be confined to sloping ground near valley bottoms at an altitude of about 50 m above sea level.

The specific epithet refers to the short stem. In the field I had identified this palm as *Pichisermollia subacaulis* (*Areca subacaulis*), and it was not until I examined the material in detail back at Kew that I realized that what I had collected was a new species. *A brachypoda* belongs to section *Microareca*; the interfoliar inflorescence isolates it from other species of the section except for *A. subacaulis*. The latter is easily distinguished by the rachillae ending in conspicuous stiff points devoid of flowers, by the fusiform rather than globular flowers and by the 7–9 as opposed to 15–16 stamens.

6. Areca chaiana *J. Dransf.* sp. nov. montana ad sectionem *Microarecam* ut videtur pertinens sed inflorescentia spicata basi triades numerosos congestosque ferenti, floribus staminatis complanatis petalis latis statim distinguibilis. Typus: Borneo, Sarawak, 2nd Division, Lubok Antu, Sg. Jelok, near Bukit Sengkajang, Lanjak-Entimau Protected Forest, *Paul Chai* S 33986 (holotypus K; isotypi BH, KEP, L, SAR).

Erect, solitary undergrowth palm. Stem to 2·5 m tall, c. 1·8 cm diam., internodes c. 1·7–2 cm, bearing caducous chocolate brown scales; nodal scars to 4 mm wide. Crownshaft well-defined, light greenish yellow when fresh, drying mid-brown, 27 × 3 cm; leaf sheaths neatly abscising, c. 17 cm long, longitudinally striate, bearing sparse, minute, brown scales; ligule to 3 cm, soon tattering. Leaf pinnate, excluding sheath to 85 cm, including petiole to 15 × 0·3 cm; leaflets about 10 on each side of the rachis, ± close, mostly 1–4 ribbed except for the broader terminal pair which may be 4–8 ribbed, concolorous, drying greenish brown, proximal leaflets c. 26 × 2–3 cm, mid-leaf leaflets c. 36 × 0·7–2·5 cm, apical pair c. 20 × 2·5–5·5 cm, all acuminate except for apical leaflets which are lobed; minute scales abundant on both surfaces. Inflorescences infrafoliar, simply spicate, to c. 15 cm, arcuate; prophyll winged, (only fragments available); peduncle short c. 20 × 7 mm

diam. (at insertion of prophyll) greenish cream when fresh, drying dark, bearing scattered pale scales, proximal c. ⅓ of axis bearing numerous spirally arranged triads, distal portion bearing spirally arranged, solitary or paired staminate flowers, subtended by relatively conspicuous triangular rachilla bracts c. 1 × 1 mm. Staminate flower rather irregularly flattened due to close packing; calyx base stipitate, c. 1 × 0·5 mm, flattened, glabrous; calyx lobes narrow-triangular, c. 2 × 0·5 mm, keeled, the margins minutely ciliate; petals variable, striate c. 9 × 2–3·5 mm; stamens 6, ± epipetalous, filaments c. 2 × 0·2 mm, anthers medifixed, ± divergent at tip and base, c. 5·5 × 0·5 mm, latrorse; pistillode absent. Pistillate flower sessile; sepals 3, ovate, imbricate, cucullate, minutely scaly, striate, c. 8 × 4 mm; petals 3, ovate, imbricate except at the very tip, minutely ciliate at margins, c. 7 × 3 mm; staminodes ?6, minute; ovary ± fusiform, c. 6 × 1·2 mm. Mature fruit ± fusiform and somewhat curved at the tip, c. 30 × 8 mm, with apical stigmatic residue c. 2 mm diam.; pericarp drying dull brown, longitudinally striate; seed basally attached filling a space c. 20 × 6 mm, shrinking to 12 × 5 mm (Fig. 4).

DISTRIBUTION. Borneo, Sarawak, 2nd Division, known only from the type (see above).

HABITAT. 'Near river bank on slope in open place. Altitude 2000 ft a.s.l.'

This curious species is the only member of the genus with a truly spicate inflorescence. So anomalous did the aspect of the palm appear to me in the herbarium, that at first I thought it might be a species of *Nenga*; however, examination of the flowers and fruit indicates affinity with *Areca* rather than *Nenga* and it must be regarded as an aberrant member of section *Microareca*.

7. Areca dayung *J. Dransf.* in Bot. J. Linn. Soc. 81: 30 (1980). Type: Borneo, Sarawak, 4th Division, Bintulu, Bt. Nyabau, *Dransfield* JD 785 (holotype K; isotype BH).

In the protologue, the peduncle is cited as 7 mm long; this is a misprint for 7 cm long. Recently collected material of this species from the Lambir Hills National Park in the 4th Division, shows a shorter peduncle than in the type, and a more well-defined crownshaft. Observations on the Lambir population suggest that the poorly developed crownshaft and rather long peduncle are features of short-stemmed juveniles; when an aerial stem is developed, the leaves abscise more clearly. Details of this additional gathering are: Borneo, Sarawak, 4th Division, Miri, Lambir Hills National Park, mile 21, *Dransfield et al.* JD 5950 (BH, BO, K, L, SAR).

8. Areca furcata *Becc.* in Malesia 1: 23 (1877). Type: Borneo, Sarawak, 7th Division, on hills at Belaga, *Beccari* PB 3787 (holotype FI).

Additional specimens: BORNEO, SARAWAK. 4th Division, Bintulu, Similajau Forest Reserve, Ulu Sinrok, *Ashton* S 18352 (A, K, L, SAR, SING); Bintulu to Miri Road, mile 13, *Dransfield* JD 781 (K); Tatau, Anap, Ulu Muput Kanan, base of Bt. Naung, *Ashton* S 19357 (K, SAR) & S 19358 (A, BO, K, KEP, L, MEL, MOSC, P, SAN, SAR, SING); Miri, Bt. Lambir National Park, *Dransfield et al.* JD 5959 (BH, BO, K, L, SAR); 7th Division, Hose Mountains, Bt. Salong, *Paul Chai* S 37251 (BH, K, KEP, L, SAR); Temalad, Ulu Mujong, *Ashton* S 13994 (K, SAR), S 13995 (K, SAR), S 17228 (BH, K,