

Abdul Rahman Putra al-haj, the first Prime Minister of Malaysia, gave point to our spontaneous intent to honor him and the ideals he promoted; we have named the palm *Areca tunku*.

Areca tunku J. Dransf. & Lim Chong-Keat sp. nov. (Figs. 1-4).

Ad sectionem *Arecellam* H. A. Wendl. & Drude pertinens, a ceteris speciebus Sumatranis vel Malayanis *Arecae* petiolo carenti et rachillis crassis purpureis bene distincta; *A. jugahpunya* J. Dransf. et *A. ahmadii* J. Dransf. speciebus borneensibus affinis sed a *A. jugahpunya* inflorescentia rachillis paucioribus minoribus petalis floris masculi non connatis et a *A. ahmadii* habitu caulescenti et inflorescentia infrafoliacea pedunculo brevi distincta. Typus: Peninsular Malaysia, Terengganu, *J. Dransfield et al.* JD5178 (holotypus K; isotypus KEP).

Solitary, unarmed, monoecious palm to 2.5 m tall. Stem often stilt-rooted at the base, dull green when young, becoming pale brown, 2-6 cm diam., internodes 2-3 cm, nodal scars ca. 0.5 cm wide. Crown composed of ca. 8 leaves, these sometimes tardily abscissing, the whole crown tending to trap leaf litter. Crownshaft to 13-25 cm long, 3-7 cm diam., often partially obscured by the marcescent leaf sheaths. Leaf variably dissected; leaf sheaths 13-20 cm long, dull green to brown, often tinged purple, drying pale brown, striate, bearing thin pale brown scales; petiole absent to very short, not exceeding 5 cm long; rachis to 1 m long, adaxially channelled near the base, abaxially rounded or angled, pale brownish green, sometimes tinged purple; blade irregularly dissected, leaflets adaxially dark shiny green, slightly paler abaxially, usually borne close

together, 5-24 on each side of the rachis, varying from narrow to broad, 22-65 × 0.7-10 cm, composed of 1-6 folds, acuminate and somewhat sigmoid except for the terminal shallowly-lobed pair, main veins bearing minute brown punctiform scales. Inflorescence sometimes bursting through marcescent sheaths, erect, 8.5-22 cm, almost always branching to 1 order only, very rarely the basalmost branch bearing a branch of the second order, all axes cream-colored, turning yellowish orange, greenish or deep purple; prophyll 8-22 × 2.5-4 cm, ancipitous, elliptic-lanceolate, winged throughout, creamy brown to pale green, tinged with carmine purple, becoming striate on drying, bearing bands of scattered pale brown scales;

peduncle $20-30 \times 7-10 \times 5$ mm glabrous, bearing an inconspicuous, incomplete, low ridge-like peduncular bract ca. 1 mm high, just above the prophyll scar; rachis to 7 cm long; rachillae 6-12, very stiff and stout, borne in two neat rows on either side of the rachis, congested at first, later often widely spreading, $5-12 \times 0.2-0.4$ cm, sometimes slightly curved, bearing flowers only along one side (the distal side); triads borne only at the very base of the rachillae, 1-6 per rachilla, rarely absent, distally the rachillae bearing paired or solitary staminate flowers, the flowers cream-colored or greenish tinged, often markedly contrasting with the purplish rachillae. Staminate flowers terete, ca. $4-10 \times 1.5-2$ mm; calyx cup-shaped, sometimes strongly explanate, to 0.75 mm high, three-lobed, the lobes triangular to 1×1 mm; petals 3, distinct, $4.5-10 \times 1.5-2.5$, abaxially slightly striate; stamens 6, filaments 0.75-

1.5 mm, anthers $2.5-5.5 \times 1$ mm, apically and basally sagittate; pollen monosulcate with finely punctate tectate exine; pistillode minute. Pistillate flowers at anthesis cream-colored, borne on enlarged rachillae; buds varying greatly in size depending on stage of development, just before anthesis to 19×9 mm; sepals 3, strongly imbricate, irregularly ovate 10×9 mm; petals 3, basally strongly imbricate 10×9 mm, with triangular valvate tips to 5×5 mm; staminodes 3, irregularly dentiform to strap-shaped; ovary ovoid 14×4 mm, stigmas 3, strongly adpressed in bud, expanding and becoming reflexed at anthesis, white, fleshy, triangular ca. 5×5 mm. Fruit borne on the enlarged, dark brown or blackened rachillae, up to about 12 fruits developing on a single inflorescence; mature fruit $3-4.5 \times 1.5-3$ cm, dull purplish green to brown, with blackened stigmatic remains borne on a white-

ringed beak to 12×6 mm; epicarp smooth, becoming striate on drying; mesocarp thin, pale, inner fibers of mesocarp broad, black, conspicuous, closely adhering to the endocarp; endocarp thin, closely adhering to the seed. Seed to 25×15 mm; endosperm deeply ruminate, embryo basal. Seedling leaf bifid (Fig. 1).

Distribution: Sumatra (Sumatera Utara) and Peninsular Malaysia.

Specimens Examined: PENINSULAR MALAYSIA. Terengganu: Besut, Ulu Sungei Kemia, alt. 530 m, Cockburn FRI 8212 (KEP); Besut, Ulu Setiu Forest Reserve, alt. 500 m, Dransfield et al. JD5178 (holotype K; isotype KEP), alt. 50 m, Dransfield et al. JD5169 (K, KEP); Ulu Nerus Forest Reserve, alt. 200 m, Dransfield et al. JD6511 (K, KEP). Johor: Labis Forest Reserve, Wong Khoo Meng FRI 32485 (KEP). Perak: Upper Perak, Belum Forest Reserve, alt. 800 m, Lim Chong-Keat et al. 90/069, 90/524, 90/542 (K, KEP).

SUMATRA. Sumatera Utara: Langkat, Bohorok, Bukit Lawang, alt. 500 m, Dransfield et al. JD3144 (BO), JD3145 (BO), JD3170 (BO), JD3263 (BO, K).

In Peninsular Malaysia *Areca tunku* is a palm of hill dipterocarp forest; in Sumatra it occurs in similar habitats. The North Sumatran population seems to consist of plants at the small end of the range of variation. Within populations in Terengganu, the range of variation is considerable, making suspect any separation of the Sumatran plants on the basis of size alone.

The uniseriate staminate flowers (Fig. 1) suggest that *Areca tunku* is a member of Wendland and Drude's section *Arecella* in Furtado's sense (Furtado 1933). The swollen frequently purplish rachillae (Figs. 1,4) seem to suggest a relationship with *Areca jugahpunya* J. Dransf. and *A. ahmadii* J. Dransf. (Dransfield 1984), two Bornean species. However, these two species are immediately distinguishable by their

acaulescent habit; furthermore *A. ahmadii* has interfoliar inflorescences with very long peduncles and slender, less strongly beaked fruit, while *A. jugahpunya* is a much more massive palm, with a short peduncle as in *A. tunku*, but with much larger inflorescences with many (20) rachillae and large staminate flowers with petals connate for half their length. The peduncle form and colors of the inflorescence make *A. tunku* especially distinctive and striking.

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