

Dypsis 'stumpy'

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1. *Dypsis carlsmithii*:
transplanted, Hawaii
(Photo: Bill Langer).

A spectacular massive palm, found growing in a private garden in Hawaii, has flowered and fruited, providing seeds that have been widely distributed. For long known as *Dypsis* 'stumpy,' it is described here as a new species.

Over the past three decades there has been an almost insatiable demand for seeds of Madagascar palms. Seeds of even common, widespread species such as *Dypsis lutescens* and *D. madagascariensis* continue to be harvested in the wild and exported in large quantity, and seeds of many other species are widely available. Of course, there are often problems in identifying palms from their seeds alone, particularly in the case of large genera in which palms of markedly different vegetative appearance may have seeds that are virtually indistinguishable. Some of the seeds leaving Madagascar are undoubtedly correctly named. They have flowered and fruited and seem to belong to the designated species. Others, however, are either incorrectly named (not surprising given the problems mentioned above) or carry just nicknames. Sobriquets such as 'slick willy', 'mealy bug' and others are widely used by growers needing reference points when the scientific name is uncertain. In many instances there is absolutely no way of telling where in Madagascar the seeds were collected, information that might help in narrowing down the identity. When asked to try to identify such mystery plants, it has always been easy to say "Wait until it flowers and fruits and then let us know – we should then have little difficulty in naming it."

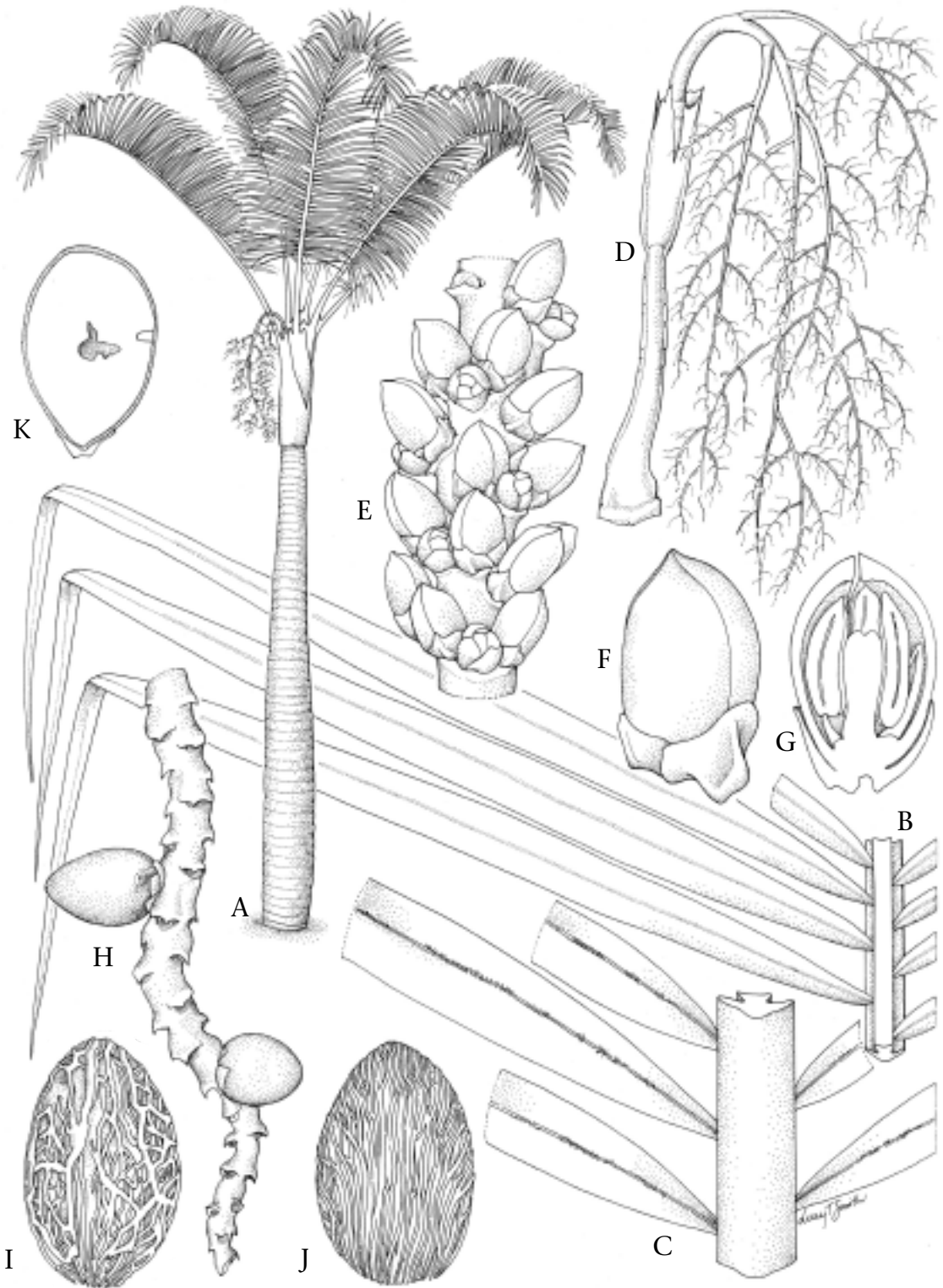
When Palms of Madagascar was published (Dransfield & Beentje 1995), we hoped that the identification of these mystery palms would immediately become possible, but, of course, this was not the case. In the Carlsmith Estate near Hilo on the island of Hawaii grows one such palm (Figs. 1–5), clearly a *Dypsis* and thus almost certainly from Madagascar. One of us (JM) knew the palm well and had dubbed it (in the days before Palms of Madagascar was published) *Chrysalidocarpus* 'stumpy' – or *Dypsis* 'stumpy' as we should really call it. However, it proved impossible to key out with certainty in Palms of Madagascar. The palm fruits regularly and has been used as a source of seeds, so *Dypsis* 'stumpy' is beginning to be known among palm enthusiasts, and it seems important that its botanical identity should be established. JM sent material to JD at Kew in the hope that a name would be easily provided but, despite JD trying hard to squeeze it into the variability of known species, it has become obvious that it represents an undescribed taxon.

There is something rather unsatisfactory about describing a palm from cultivated material without knowing precisely whence the palm came. Given the circumstances of rather un-controlled palm seed collection from all over the island, we feel sure that this will not be the only undescribed taxon to be introduced into cultivation. There is,

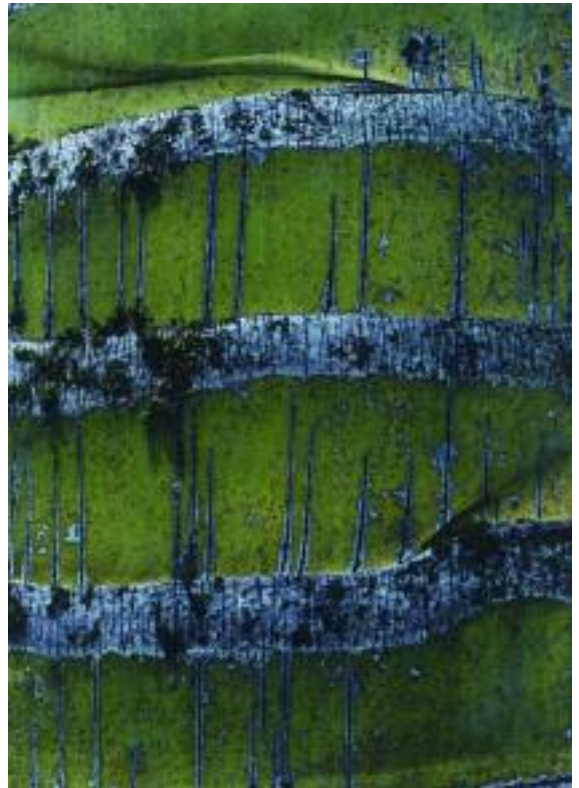
of course, already a precedent in the genus *Dypsis* for naming species from cultivation. *Chrysalidocarpus cabadae* (= *Dypsis cabadae*) was described from palms cultivated in the Caribbean and now well known in cultivation but still not known in the wild. *Neodypsis leptocheilos* (= *Dypsis leptocheilos*) was described from material cultivated in Tahiti and only very recently has a herbarium collection been made in the wild (Dan Turk, pers. comm.), and *Chrysalidocarpus glaucescens* was described from plants cultivated in Trinidad. This last name is currently regarded as a synonym of *D. lutescens*.

Dypsis carlsmithii J. Dransf. & J. Marcus sp. nov., palma robusta compacta inter species arborescentias solitarias, foliolis numerosis regulariter dispositis, inflorescentia interfoliacea ramosissima, rachillis gracilibus brevisibus, endospermio homogeneo differt. Typus: Hawaii, Hilo, in horto Don Carlsmith, *J. Marcus s.n.* (Holotypus K).

Single-stemmed palm. *Stems* to 6 m tall, ca. 51 cm diam. at breast height, decreasing distally to ca. 40 cm diam. below the crownshaft; internodes ca. 10 cm long. *Mature leaf* curved and with a slight twist; *sheath* 140 cm long, ca. 80 cm wide when opened out, adaxially reddish brown, abaxially green to mid-brown with some wax and sparse scattered scales, with triangular lobes at the sheath mouth; petiole 45 cm long, proximally ca. 12 cm wide, distally 9 cm, abaxially waxy, abaxially convex, adaxially deeply grooved and with sharp margins; rachis ca. 3 m long, in mid-leaf 6 cm wide, abaxially with scattered scales, adaxially with a few scales, adaxially keeled, abaxially rounded; leaflets ca. 90 on each side of the rachis, regularly arranged, at intervals of ca. 4 cm, proximal ca. 90 × 3 cm, median ca. 92 × 4 cm, distal ca. 25 × 2 cm, adaxially glabrous or nearly so, abaxially with conspicuous crowded dark brown ramenta, main vein 1, apices attenuate. *Inflorescence* interfoliar, branched to 3–4 orders; peduncle ca. 3.5 m long, proximally 7 cm wide, distally 6 cm wide; prophyll at least 40 cm long, borne at ca. 60 cm above the base of the peduncle, glabrous or nearly so; peduncular bract inserted at 90 cm from the base of the peduncle, not preserved; rachis ca. 1 m long, with ca. 19 first order branches, the proximal of these with a secondary rachis of up to 70 cm long and 25 mm diam. at base, with very numerous rachillae; rachillae 6–8 cm long, 1.5–2 mm diam., glabrous, bearing short triangular bracts to 1 × 1.5 mm. *Staminate flower buds* 3.2 × 2.2 mm; sepals rounded-triangular, keeled and irregularly gibbous, 1.5 × 1.5 mm; petals 2.8 × 1.8 mm, minutely connate basally; stamens 6 with filaments 1.5 × 0.2 mm, inflexed at tip, anthers elongate, 1.9 × 0.9 mm, the connective ca. 0.2 mm



2. *Dypsis carlsmithii*: A habit $\times ca.1/100$; B mid portion of leaf viewed from above $\times 1/6$; C leaflets viewed from below $\times 1/3$; D dry inflorescence $\times 1/50$; E detail of rachilla $\times 4$; F staminate flower $\times 10$; G staminate flower in section $\times 10$; H detail of rachilla in immature fruit $\times 2$; I, J seed $\times 2$; K seed in section $\times 2$. Drawn by Lucy T. Smith.



3 (upper left). *Dypsis carlsmithii*: details of crown. 4 (upper right). Details of crown showing dead inflorescence. 5 (lower left). Details of crown with fresh inflorescence, photographed before the palm was transplanted. 6 (lower right). Detail of trunk (all photos by Bill Langer).

wide, brown; pistillode columnar, 3-grooved, 1.5×0.5 mm. *Pistillate flowers* with sepals 1.5×1.5 mm; petals ca. 1×1 mm; staminodes at least three, toothlike, ca. 0.1 mm long; ovary ca. 1.2 mm diam. *Fruit* irregularly ovoid-ellipsoid, 16×9 mm, with stigmatic remains eccentrically apical; epicarp smooth, black; mesocarp thin fleshy; endocarp covered with a loose layer of broad anastomosing fibres. Seed 13×8 mm, endosperm homogeneous; embryo lateral. (Fig. 2).

SPECIMEN SEEN. HAWAII. Cultivated in the Carlsmith Estate, Hilo, December 1996, *J. Marcus s.n.* (Holotype K).

In *Palms of Madagascar* (Dransfield & Beentje 1995) this species keys out to the two couplets that include *Dypsis saintelucei*, *D. tsaravoasira* and *D. nauseosa*. It differs from the first two in having ruminant endosperm while from the last it differs in having much shorter, more slender rachillae.

Dypsis tanalensis, an incompletely known taxon, is mentioned also at this point in the key, but this also has a ruminant endosperm. In general appearance *D. carlsmithii* does not resemble any of these. In some ways the inflorescence resembles that of *D. prestoniana* and *D. tokoravina*, but these two are even more robust and have fascicled leaflets.

Acknowledgments

We should like to thank Don Carlsmith for access to his garden and permission to sample the spectacular palm that now bears his name. Lucy Smith prepared the analytical plate and Bill Langer took the photographs.

LITERATURE CITED

DRANSFIELD, J. AND H.J. BEENTJE. 1995. *The Palms of Madagascar*. The Royal Botanic Gardens Kew and the International Palm Society.

