

10. DYP SIS MANANJARENSIS

A large and beautiful tristichous palm, in the horticultural world known as 'mealy bug', because of the prominent scales on the leaf sheath, petiole and rachis. These scales are white and waxy, with scalloped edges, and are unique within the genus. The scientific name comes from the fivondronana or 'county' of Mananjary, where the type was collected.

DISTRIBUTION. East coast between Vatoman-dry and Tolanaro.

HABITAT. Moist or dry forest (remnants), also ?rejuvenating in savoka; slight or steep mid slopes; alt. 30–200 m.

LOCAL NAMES. *Laafa*, *Lakatra* (general palm names on East coast), *Ovodaafa* (Antaisaka).

USES. Good palm heart, and cut down for this; the rachis produces a fibre formerly much used by the Betsimisaraka.

CONSERVATION STATUS. Vulnerable. Though this species may be locally common, the total number HB has seen are only a few hundred. Over the whole distribution area the vegetation is being destroyed for agricultural land or by burning; the cutting for palm-heart targets this palm specifically.

Dypsis mananjarensis (Becc.) Beentje & J. Dransf. **comb. nov.**

SYNONYMS:

Chrysalidocarpus mananjarensis Jum. & H. Perrier in Ann. Inst. Bot.-Géol. Colon. Marseille sér. 3, 1 (1): 33, t. 17 (1913); Jum. in Ann. Inst. Bot.-Géol. Colon. Marseille sér. 10, 3: 25 (1922); Jum. in Cat. Pl. Madagascar, Palmae: 10 (1938); Jum. & H. Perrier in Fl. Madagascar 30: 117 (1945). Type: none mentioned, but loc.: Madagascar, Vatovavy forest, *Perrier* 12073 (P).

Chrysalidocarpus fibrosus Jum. in Ann. Inst. Bot.-Géol. Colon. Marseille sér. 10, 3: 10 (1922); Jum. in Cat. Pl. Madagascar, Palmae: 9 (1938); Jum. & H. Perrier in Fl. Madagascar 30: 103 (1945), **synon. nov.** Type: Madagascar, forests in Vatoman-dry region, *Perrier* 14158 (P). NOTE: within the enlarged genus *Dypsis*, the epithet *fibrosa*/um has been used earlier for *Dictyosperma fibrosum* = *Vonitra fibrosa* = *Dypsis fibrosa*.

Solitary palm. **TRUNK** 6–25 m, cylindrical, 14–29 cm diam. (to 12 cm diam. near the crown), internodes 10–50 cm (near the crown to 5 cm), green, ringed, nodal scars white, 2–4 cm; wood very hard with red fibres. **LEAVES** tristichous, porrect to arching, 6–10 per crown; sheath 0.6–1.6 m long, a quarter to two-thirds open, whitish green to pale yellow-green to bright orange-yellow in recently exposed sheaths, with characteristic slightly sunken, white, waxy, large (4–12 × 2–3 mm) scales with scalloped edges, auricles c. 1 cm; petiole absent or up to 12 cm long, with scales as the sheath, 5–10 × 3–7 cm diam., deeply canaliculate with sharp edges; rachis 3–3.5 m long, in mid-leaf 2.5–4 cm wide, proximally canaliculate, more distally keeled, pale brown, with scales as the sheath; leaflets slightly irregular or in groups of 3–7, but always in several planes, arching, 121–149 on each side of the rachis, the group interval 1.5–17 cm, basal leaflets 35–150 (–300) × 0.8–2.8 cm, median 100–135 × 2.2–4.6 cm, distal 18–50 × 0.5–2.5 cm, acuminate, glabrous, waxy, main vein 1 with thickened margins. **INFLORESCENCE** infrafoliar, branched to 3 orders, arching and with pendulous rachillae; peduncle 18–40 cm long, 6–12 × 3.5–7 cm diam., pale green, glabrous; prophyll erect, 45–65 × 11–17 cm, clearly 2-winged, borne at 5–8 cm above the base of the peduncle; peduncular bract inserted at 15–18 cm above the base of the peduncle, deciduous, 80–120 × 10–20 cm, beaked for



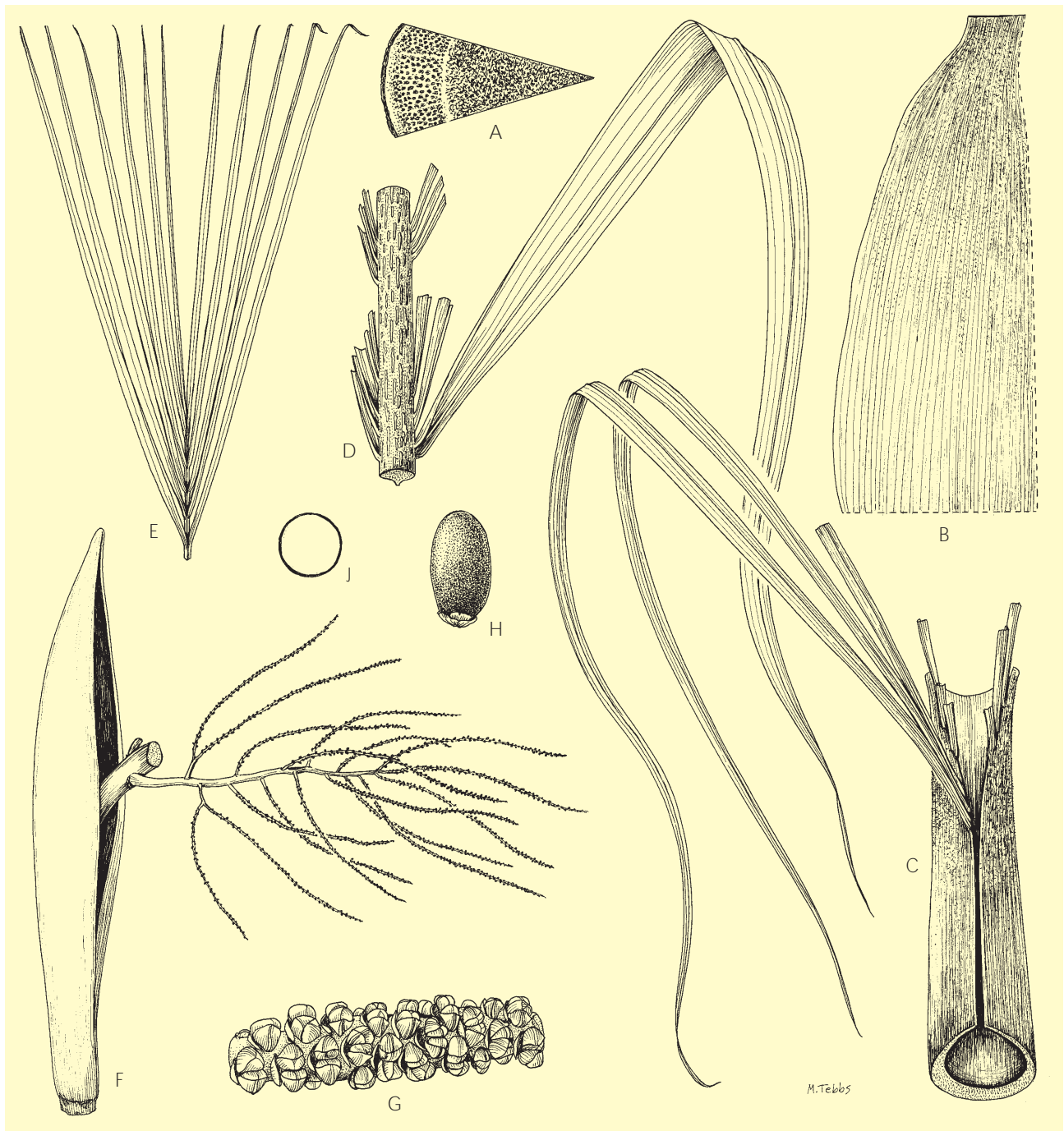
Dypsis mananjarensis



Dypsis mananjarensis, a magnificent tree palm at Amby (*Beentje & Beentje* 4727).

6–10 cm, closed in the distal 15 cm, coriaceous, with a waxy bloom; non-tubular peduncular 8–29 × 4–7 cm; rachis 70–106 cm long, pale pastel green with 14–23 branched and 14–20 unbranched first order branches; rachillae whitish to pale pastel green, 17–58 cm long, 3–5 mm diam. **STAMINATE FLOWERS** with sepals 1.3–1.6 × 1.2–1.5 mm, red-spotted; petals 2–2.2 × 1.4–1.5 mm; stamens 6, uniseriate, filaments 1.7–2 mm, anthers 1–1.3 × 0.6–0.7 mm, versatile; pistillode 1.5–1.7 × 0.4–0.7 mm. **PISTILLATE FLOWERS** with sepals 1.5–2 × 1.6–2.3 mm, petals 2.2–2.4 × 1.8–2.3 mm; staminodes 0.2–0.4 mm; gynoecium 2–3.5 × 2–4 mm. **FRUIT** globose or nearly so, 4–6 mm, with fibrous endocarp, the fibres slightly anastomosing. **SEED** globose, 3.5–4.5 mm, with sub-basal depression, rounded at the base, apiculate or rounded at the apex, with homogeneous endosperm (occasionally with undulate edges).

NOTE. Collections from several large populations in the Manakara area show that the variation within populations may range from almost regular leaflets in almost one plane to grouped and fanned leaflets (Perrier describes the leaflets of *C. fibrosus* as “non groupés mais non tous inserés sur un même plan”). The group interval of 11–17 cm in the type of *C. mananjarensis* is rather extreme, the norm being 1–6 cm; it is possible that the leaf parts in this type come from a leaf from a young plant. The protologue of *C. mananjarensis* states that the type is a



Dypsis mananjarensis. A section of stem × 1/6; B leaf sheath × 1/6; C distal part of petiole with lowermost leaflets × 1/4; D mid section of leaf, viewed from beneath, showing patches of white scales × 1/4; E leaf tip × 1/4; F basal portion of inflorescence rachis and part of peduncle and peduncular bract × 1/4; G detail of rachilla × 2; H young fruit × 3; J fruit in cross section × 3. All from *Beentje & Beentje 4727*. Drawn by Margaret Tebbis.

robust palm with a short trunk 4–6 m high, and this is certainly the size of an young tree; all flowering or fruiting specimens we have observed had trunks over 6 m tall, and usually over 10 m.

SPECIMENS SEEN. Vatomandry: 6 km S of Ambalatenina, Oct. 1991 (y. fr.), *Beentje* 4506 (BH, K, MO, P, TAN); *Levazy*, SW of Vatomandry, Dec. 1921 (bud, fr.), *Perrier* 14158 (P, type of *D. fibrosa*). Ifanadiana: Ambinanindrano, Jan. 1993 (stam.fl.), *Beentje & Andriampaniry* 4798 (K). Mananjary: Mt Vatovavy, Oct. 1911 (bud, fr.), *Perrier* 12073 (P, type of *D. mananjarensis*). Manakara: Amby, July 1992 (y.fr.), *Beentje & Beentje* 4727 (BH, K, MO, P, TAN); idem, July 1992 (stam.fl.), *Beentje* 4728 (K); idem, Jan. 1993 (fr.), *Beentje & Andriampaniry* 4796 (K, TAN). Farafangana: Manombo, Nov. 1991 (bud), *Beentje* 4521 (BH, K, MO, P, TAN). Tolanaro: 6km N of Mandromodromotra, March 1992 (y.fr.), *Beentje & Andriampaniry* 4613 (K, TAN).

SIGHT RECORD: Ifanadiana: Ranomafana, 2 km N of town, 1991, fide Beentje (said to be over 50 years old); HB has also seen seedlings with the typical 'mealy-bug' scales in Ranomafana National Park forest.

11. DYP SIS MALCOMBERI

An impressive and massive tristichous palm. The species is named for Simon Malcomber, enthusiastic plant collector and tree climber, who took a great deal of trouble to obtain more material of this rare species.

DISTRIBUTION. Only known from the Andohahela.

HABITAT. Moist forest; slight or steep mid slopes, occasionally near forest streams; alt. 400–800 m.

LOCAL NAMES. *Rahosy*, *Vakaka* (Antanosy).

USES. The outer wood is used to make planks for walls.

CONSERVATION STATUS. Vulnerable. Only known from a single small area. Though this species occurs in a protected area (Andohahela is a Reserve Spéciale) the felling for construction purposes seems to continue.

***Dypsis malcomberi* Beentje sp. nov.**

D. piluliferae et *D. mananjarensis* similis sed vagina folii glabra forma rachillarum bracteas triadium conspicuas et flores confertim tectarum recedit. Typus: Madagascar, Andohahela, Col Tanatana, *Dransfield et al.* JD6779 (Holotypus K; isotypi P, TAN).

Solitary palm. **TRUNK** 15–25 m, 25–35 cm diam., distally 14–15 cm diam., at the base slightly bulbous with a few aerial roots, internodes 10–28 cm (distally 5–6 cm), slightly stepped, finely fissured and brown, ringed, nodal scars c. 2 cm. **LEAVES** tristichous, 6–8 per crown, plumose; sheath bright green to yellow-green, waxy, swollen, 1.5–2 m, 17–25 cm diam., closed or open for up to one quarter of its length, glabrous, auricles absent or up to 4 × 10 cm; petiole 20–50 cm, 4–8 cm diam., bright green, glabrous, canaliculate with sharp edges; rachis 3–4 m long, bright green, in mid-leaf 4–5 cm diam., proximally canaliculate, distally keeled; leaflets in groups of 2–8 or only slightly irregular, the group interval 1–13 cm, the leaflets fanned to almost in one plane, drooping in their distal part, 135–188 on each side of the rachis, basal 80–110 (–220) × 0.6–3.2 cm, median 93–135 × 2.8–4.6 cm, distal 10–50 × 1–2 cm, attenuate, main vein 1, bright green, not waxy, glabrous but for the ramenta. **INFLORESCENCE** infrafoliar, branched to 3–4 orders, arching and with pendulous rachillae in fruit; peduncle green, 20–30 cm long, 6–16 × 3–5 cm diam., glabrous; prophyll 42–73 × 12–20 cm, borne at 8–9 cm above the base of the peduncle, glabrous, splitting abaxially; peduncular bract borne at 15 cm above the base of the peduncle, deciduous, 72–117 × 16 cm, beaked for 8–21 cm, green, glabrous with a waxy bloom; rachis 60–124 cm, green, glabrous, with 18–21 branched and 12–17 unbranched first order branches; rachillae 15–48



Dypsis malcomberi



Dypsis malcomberi, a common tree palm at Andohahela.