



(c. 0.3 cm) truncate and dentate apices, apices of median leaflets unequally bifid for 2–3 cm and attenuate, glaucous, with tufts of large red-brown ramenta to 4 mm long proximally and abaxially on the midrib, and with many minute scattered scales on the veins (invisible in *Guillaumet* 2527), main veins 1–5, faint; young leaves reddish. **INFLORESCENCE** interfoliar, the part outside the leaf sheath arching through 180°, branched to 2 orders; peduncle 34–57 cm long, proximally c. 2 × 0.5 cm, distally 1.5–2.3 × 0.6–1.2 cm, distally with scattered scales, glabrescent; prophyll 42–75 cm long and 4–5.5 cm wide, borne at 5–17 cm above the base of the peduncle, open for 16–25 cm and hooded distally with an acute apex, coriaceous, ?slightly waxy, abaxially pale brown with scattered scales, adaxially red-brown and glabrous; peduncular bract inserted at 27–34 cm from the base of the peduncle, 39–53 cm long, not or hardly beaked, split over its entire length or closed in the distal part, distally hooded and 12 cm wide, pale brown with scattered scales, not deciduous but remaining contiguous with the prophyll for the most part and similar to the prophyll; non-tubular peduncular bracts near the apex of the peduncle, 1.3–2 cm long, triangular, acute; rachis 11–28 cm long, glabrous, with 5–14 branched and 12–20 unbranched first order branches; first order branches subtended by rachis bracts to 1 × 0.5 cm, with a secondary rachis of up to 6 cm long and with flattened base 9–17 × 3–8 mm and with 2–8 rachillae; rachillae porrect, 10–31 cm, 2–4 mm diam., with rather dense triads in slight pits and with distinct, entire, triangular, acute rachilla bracts. **STAMINATE FLOWERS** with sepals 2–2.2 × 1.8–2 mm; petals connate for c. 0.5 mm, 3.1–3.4 × 1.9–2 mm; stamens 6, slightly unequal with the antepetalous ones with filaments slightly wider at the base, filaments 1.6–2 mm long and cylindrical, anthers 1.8–2 × 0.6 mm, the locules parallel and obtuse, dorsifixed and versatile; pistillode c. 2.4 mm high, 0.6 mm diam. **PISTILLATE FLOWERS** with sepals 2.7–3 × 2.4–3.4 mm; petals 3.5–4.2 × 3–4 mm; staminodes 0.6–0.8 mm, flat; gynoeceum 3.2–3.6 × 2.9–3 mm. **FRUIT** ovoid to ellipsoid with a rounded apex, 10–12 × 8–9 mm, with anastomosing fibrous endocarp. **SEED** slightly obovoid with rounded apex and apiculate base, 8–9.5 × 5.5–6 mm, with subaequatorial depression; endosperm homogeneous.

NOTE. Differs from *D. lutescens* (which occurs in the same localities, in the same habitat) in the longer petiole, the smaller number of leaflets, the longer petals and the more robust rachillae; the inflorescence branches to 2 orders, while in *D. lutescens* it usually branches to 3

orders (but occasionally is branched to 2 orders). From *D. psammophila* it differs in the generally larger leaves (petiole, rachis, leaflets) with many scattered scales; the much longer prophyll and stouter rachillae.

SPECIMENS SEEN. Fenoarivo Atn.: Tampolo, Feb. 1970 (fr., young leaf), *Guillaumet* 2527 (K, P). Ampasimanolotra: Tampina, Nov. 1920 (fl.), *Perrier* 13292 (P, type) and (fr.), *Perrier* 15988 (P); 8 km S of Ambila-Lemaitso, Sept. 1991 (dead infl.), *Beentje* 4445 (BH, K, MO, P, TAN).

35. DYPISIS PSAMMOPHILA

Another species close to *D. lutescens*, but much more slender with spindly stems towering above the coastal bush. The name means ‘sand-loving’, since this taxon is restricted to coastal white sands.

DISTRIBUTION. E Madagascar, between Soanierana-Ivongo and Ambila-Lemaitso.

HABITAT. Coastal forest on white sand; alt. 5 m.

LOCAL NAMES. Not recorded.

USES. Not recorded.

CONSERVATION STATUS. Critical. The distribution area is small, and over the whole area the habitat is being destroyed. Numbers are estimated at less than a hundred.

Dypsis psammophila *Beentje* sp. nov.

D. lutescens affinisissima sed caulis gracilioribus nigris, vagina folii brevioris, foliolis brevioribus angustioribus, inflorescentia in 2 ordinibus ramificantibus differt. Typus: Madagascar, Ambila-Lemaitso, *Dransfield* JD6495 (Holotypus K; isotypus TAN).



Clustering palm. **STEMS** to 4 (-6) m, 3 cm diam., 1.7 cm diam. near crown; bark tending to be black, internodes c. 15 cm near base, 1.2-1.8 cm near crown; crownshaft 40 cm, green with white wax. **LEAVES** arcuate, c. 2 m; sheath 27-30 cm, with dense scattered scales, no ligule; petiole 20 cm, proximally 0.5 × 0.45 cm, distally 0.5 × 0.4 cm diam., with minute scales; rachis c. 76 cm long, with densely scattered scales; leaflets c. 40 on each side of the rachis, regular, strongly curved, proximal 27-41 × 0.3-0.8 cm, median 36-37 × 0.7-0.9 cm, distal 8.5-37 × 0.2-0.9 cm, adaxially glaucous, main vein 1, ramenta few or sometimes 0-1, basal, otherwise glabrous, apex attenuate, unequally bifid. **INFLORESCENCE** branching to 2 orders; peduncle 31 cm, with non-sheathing peduncular bracts (10-12 mm) at 26 and 29 cm above the base of the peduncle; prophyll 21-2 cm; peduncular bract 41 cm (from base of peduncle, not insertion point), glabrous; rachis c. 13 cm, 7 × 4 mm diam. proximally; narrowly triangular, 7 mm; rachillae 13-18 cm, with bare basal part 1.5-2 mm diam., glabrous, with triads distant and in slight pits;

rachilla bracts broadly ovate, acute. **STAMINATE FLOWERS** unknown. **PISTILLATE FLOWERS** known only as remnant parts on fruit; sepals 1.4-1.5 × 1.3-1.7 mm, broadly ovate, rounded, minutely ciliolate; petals c. 2 × 1.8-2.4 mm, imbricate with ?valvate apiculate tips, broadly ovate, minutely ciliolate. **FRUIT** ellipsoid, 9-10 × 5-6 mm; endocarp fibrous. **SEED** 7-8.5 × 4-5 mm, rounded at both base and apex; endosperm homogeneous.

NOTE. Differs from *D. lutescens* in the smaller dimensions of the leaf (sheath, leaflets) with no scattered scales abaxially; the inflorescence always branched to 2 orders only; the shorter rachis; the shorter pistillate sepals; and the smaller fruit and seed. The differences with *D. arenarum* are enumerated under the latter.

Moore 9920 from the Masoala Peninsula (Ambatobe



Dypsis psammophila. **A** leaf sheath, petiole and basal leaflets, and infructescence × 1/3; **B** mid section of leaf × 1/3; **C** leaf tip × 1/3; **D** fruit × 2; **E** fruit in cross section × 2.5. All from *Dransfield et al.* JD6495. Drawn by Margaret Tebbs.

on the Onive R., April 1971, fr., *Moore* 9920 at P) seems intermediate between this taxon and *D. onilahensis*. It occurs in low canopy rain forest, has the inflorescence and fruit of the former, but the leaves resemble those of the latter – although admittedly on the short side. It has no petiole. The habit is also more like *onilahensis*, with a solitary trunk c. 10 m high and 7.5 cm in diameter. The local name was *lafazovombona*.

SPECIMENS SEEN. Ampasimanolotra: 5 km S of Ambila-Lemaitso, Nov. 1986 (bud), *Dransfield* JD6437 (K, TAN); idem, March 1988 (fr.), *Dransfield et al.* JD6495 (K, TAN; type).

SIGHT RECORD. Soanierana-Ivongo: S of Manompana (*Beentje*). Sainte-Marie: Île Sainte-Marie (*Dransfield*).

36. DYPsis PEMBANA

A curious 'outlier' of the genus, only known from Pemba Island, just off the African mainland, from which it takes its name. Pemba has several more links with Madagascar: there is the fruit bat *Pteropus voeltzkowi*, with the other members of its genus in Madagascar, the Comoro Islands and through to southeast Asia and the Pacific; and the Aroid *Typhonodorum lindleyanum* occurs in Pemba, Zanzibar/Unguja and Madagascar.



Dypsis pembana. A basal part of petiole $\times 1/6$; B basal part of leaf rachis $\times 1/4$; C mid section of leaf $\times 1/4$; D leaf tip $\times 1/4$; E inflorescence $\times 1/4$; F detail of rachilla $\times 5$; G staminate flower $\times 8$; H fruit $\times 2.5$; J seed in section $\times 2.5$. A – C, E – H, J from *Williams* H177/56, D from *Greenway* 1488. Drawn by Margaret Tebbs.