

prophyll c. 60 × 20 cm (to 1.2 m, fide Perrier), woody, densely scaly, slightly beaked, only opening near the apex; peduncular bract deciduous (inserted at 55 cm), the distal portion seen with white wax and minute peltate scales, probably beaked; non-sheathing peduncular bract at 91 cm (4.5–5 cm high, base around peduncle), at 105 cm (3.5 cm high, 9 cm wide), at 110 cm (1 × 9 cm); rachis c. 106 cm, densely puberulous, with c. 26 branched and 8 unbranched first order branches; main first order branches with a rachis of up to 42 cm, proximally up to 4 × 1.5 cm diam., with up to 12 branched and 9 unbranched secondary branches; rachillae 9–42 cm, densely puberulous, 2.5–4 mm diam., whitish or pale yellow; triads dense, set in slight pits subtended by entire, rounded bracts. **STAMINATE FLOWERS** in bud with sepals 1.2–1.3 × 1.2–1.3 mm; petals 1.5–1.8 × 1.3–1.4 mm; stamens 6, 1-seriate, with filaments c. 1 mm and narrowly cylindrical, anthers 1–1.2 × 0.4 mm with parallel locules, versatile and dorsifixed; pistillode c. 0.8 × 0.3 mm. **PISTILLATE FLOWERS** with sepals 1.5–2.2 × 1.6–2.4 mm, concave, orbicular, rounded, minutely ciliate; petals 2–2.6 × 2.1–2.8 mm, broadly obovate with a small apiculus; staminodes 6, 0.4–1 mm high, thin and flat; ovary c. 2.5 × 1.8 mm, asymmetrical. **FRUIT** ellipsoid with rounded apex, 12–15 × 6–8 mm, orange; endocarp fibrous. **SEED** narrowly ellipsoid, 11–12 × 5–5.5 mm, acute at base, rounded at apex, with homogeneous endosperm with slight marginal undulations.

NOTE. Quite distinct from other large solitary species with grouped leaflets by its long and interfoliar inflorescence with densely puberulous rachillae, and homogeneous endosperm.



Dypsis prestoniana. View of crown with infructescence (Beentje & Andriampaniry 4672).

SPECIMENS SEEN. Mahanoro: Masomeloka, Jan. 1922 (fl.), Perrier 14202 (P). Midongy: 6 km ENE of Midongy, May 1992 (fr.), Beentje & Andriampaniry 4672 (Holotype K; isotypes BH, MO, P, TAN; type); 8 km ENE of Midongy, May 1992 (fr.), Beentje & Andriampaniry 4673 (K, TAN).

13. DYPISIS TOKORAVINA

An immense and very beautiful palm of primary forest. We have not seen the flowers, but the tree is so distinctive, especially with its enormous leaf sheaths which are open and swollen, that it deserves to be named.

DISTRIBUTION. Maroantsetra and Mananara.

HABITAT. Lowland rain forest; edge of swamp in valley bottom and ridge tops; c. 420 m.

LOCAL NAMES. *Tokoravina* (Betsimisaraka; toko means group, ravina leaf).

USES. Not recorded.

CONSERVATION STATUS. Endangered. Only known from two populations, with few (< 20) individual trees known; the population at Antanambe is in an area under agricultural pressure.



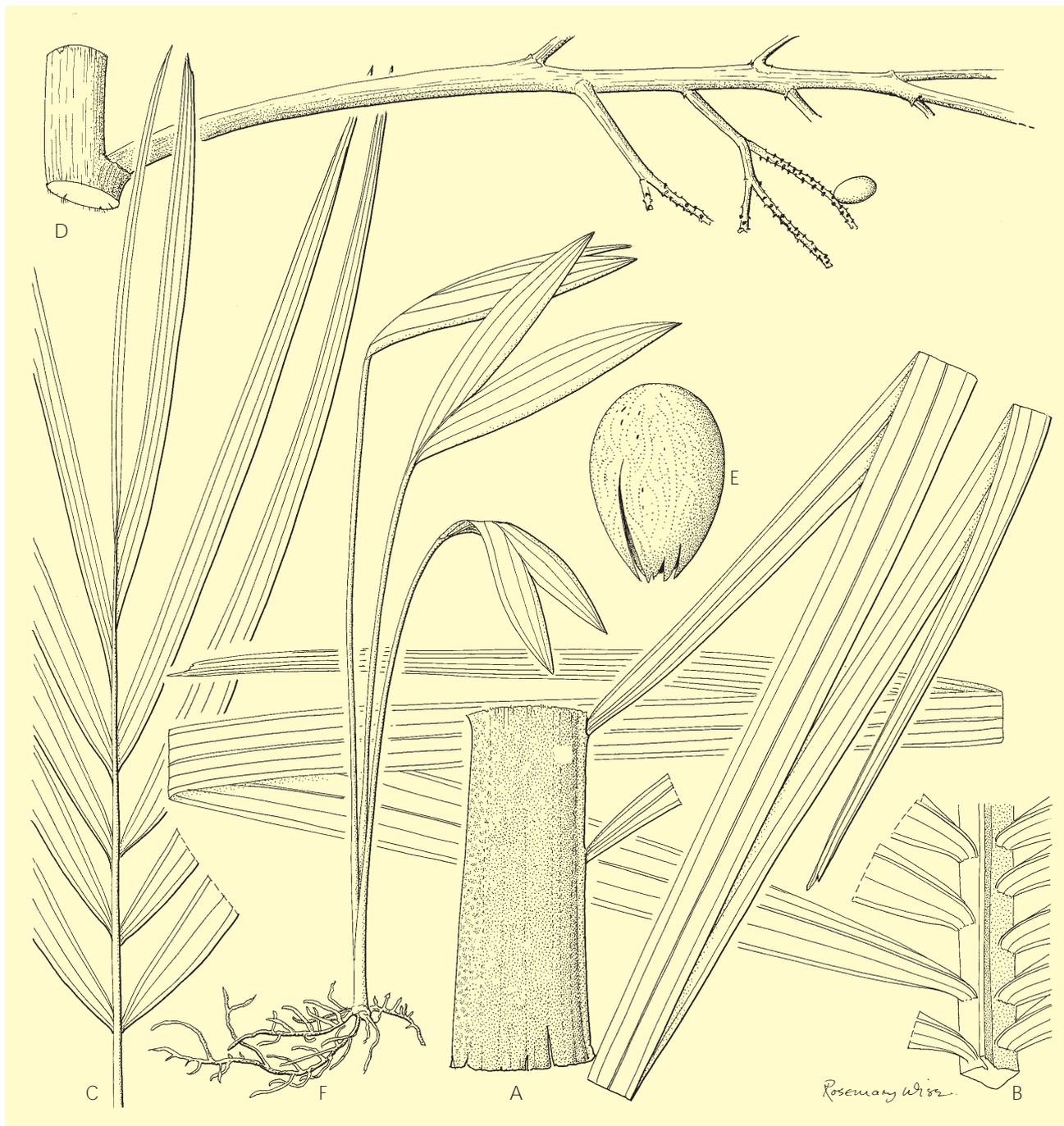
Dypsis tokoravina, growing in the Mananara Biosphere Reserve (Photo: B. Rogers).

Dypsis tokoravina *Beentje* sp. nov.

Palma ingens inter species maximas foliis aggregatis vagina folii reclusa tumida geniculata rachillis longis gracilibus endospermio homoganeo distinctissima. Type: Madagascar, Antalavia, *Dransfield et al.* JD6739 (Holotypus K; isotypi P, TAN).

Solitary palm. **TRUNK** c. 20 m, c. 60 cm diam. at the base, 45–50 cm diam. at breast height, 30 cm diam. near the crown; internodes c. 1.2 cm, dull reddish brown, vertically fissured. **LEAVES** 10–14 in the crown, subtristichous, arcuate; sheath scarcely forming crown-shaft, 0.7–1 m long, very swollen, almost kneed, open for much of its length, greyish brown, bright red-brown within, with lateral auricles; petiole 6–34 cm long, c. 6 × 8 cm diam., deeply grooved; rachis grey-brown; rachis c. 2.7 m long, in mid-leaf c. 5 cm wide and 4 cm deep, keeled; leaflets 80–110 on each side of the rachis, stiff, held irregularly in groups of 3–8 in different planes, curled,

grey-waxy beneath, interval between the groups 4–5 cm, between the leaflets within the groups 1–2 cm, the proximal c. 115 × 1.3–2.6 cm, median 100–128 × 3.3–4 cm, distal 25–37 × 1–2.3 cm, main vein 1, with thickened leaf margins, with tufts of ramenta and scattered scales on the minor veins, distal pair joined for c. 2 cm, dentate. **INFLORESCENCE** interfoliar, branched to 3 orders, huge, c. 3 m, with rather spreading rachillae; peduncle c. 2 m long, c. 8 cm wide near the base; peduncular bract c. 1 m long, curved, reddish brown tomentose; first order branches with an axis of up to 42 cm, proximally 15 × 9 mm diam., with up to 12 rachillae; rachillae numerous, very slender (c. 2.5 mm diam.), ?glabrous, with shallow pits. **STAMINATE FLOWERS** unknown. **PISTILLATE FLOWERS** unknown. **FRUIT** obovoid, with pointed base, 15–20 × 11–13 mm; endocarp fibrous. **SEED** not seen entire, but with homogeneous endosperm. **EOPHYLL** entire, bifid.



Dypsis tokoravina. **A** proximal part of leaf with lowermost leaflets $\times 1/3$; **B** mid section of leaf $\times 1/3$; **C** leaf tip $\times 1/3$; **D** first order inflorescence branch $\times 1/3$; **E** empty endocarp $\times 2$; **F** seedling $\times 1/2$. **A** – **D** from *Dransfield et al.* JD6739, **E**, **F** from *Dransfield & Beentje*. JD7507. Drawn by Rosemary Wise.



**Dypsis
tokoravina**



Dypsis ifanadianae, a tree palm growing near Ifanadiana (Beentje & Beentje 4729).

NOTE. Though this species slightly resembles giants such as *D. bejfo* and *D. pilulifera*, the open leaf sheaths make it immediately recognizable. The open sheath and large size are reminiscent of *D. prestoniana*, but that taxon has a more slender trunk.

SPECIMENS SEEN. Maroantsetra: Antalavia, Nov. 1989 (dead infl.), Dransfield *et al.* JD6739 (K, P, TAN, type). Mananara Avaratra: Antanambe, Oct. 1994 (fr.), Dransfield & Beentje 7507 (K, TAN).

14. DYP S I S I F A N A D I A N A E

A rather slender tree palm reminiscent of *D. lastelliana* through the pendulous leaflets, but immediately distinct from that species by its green leaf-sheath. The name comes from the nearest large town and administrative unit.

DISTRIBUTION. Only known from the Ifanadiana area.

HABITAT. Lowland rain forest; steep mid slopes; 200–450 m.

LOCAL NAMES. Not recorded.

USES. Not recorded.

CONSERVATION STATUS. Critical. Restricted to a small area, where clearing of forest is continuing apace; less than fifty trees known.

Dypsis ifanadianae Beentje *sp. nov.*

Palma insignis habitu *D. lastelliana* superficialiter similis sed vagina folii viride non brunneo-tomentosa, *D. nauseosae* affinis sed



**Dypsis
ifanadianae**