



**Dypsis
tsaratananensis**

visited by botanists for a long time. Numbers are unknown. The fact that the palm-heart was so popular bodes ill for this species, but at least it is a clustering one which makes harvesting less final.

Dypsis tsaratananensis (Jum.) Beentje & J. Dransf. **comb. nov.**

SYNONYM:

Neodypsis tsaratananensis Jum., Ann. Inst. Bot.-Géol. Colon. Marseille sér. 4, 2 (2): 15 (1924); Jum., Cat. Pl. Madagascar, Palmae: 19 (1938); Jum. & H. Perrier, Fl. Madagascar 30: 140, fig. 38 (1945). Lectotype (selected here): Madagascar, Tsaratanana, *Perrier* 15265bis (Holotype P).

Clustering palm, intermediate in size between *D. lutescens* and *D. baronii* (Perrier). **LEAVES:** sheath 18 cm or more long, pale brown, distally with small scales, 5.5 cm wide when flat; petiole 12–46 cm long, proximally 1.5 × 0.4 cm, distally 1.1 × 0.3 cm, with sparse scales; rachis in mid-leaf 1.3–1.5 cm wide, keeled, sub-glabrous or with some white waxy scales; leaflets 55–60 on each side of the rachis, in groups of 1–4, group interval 3.5–8 cm, the proximal 40–70 × 0.7–0.9 cm, median 55–60 × 1.5–1.7 cm (interval < 0.5 cm), distal 13–30 × 0.5–1.7 cm, main vein 1, margins thickened, glabrous, apices unequally bifid, attenuate. **INFLORESCENCE** interfoliar, branched to 2 orders (more?), recurved; peduncular bract (fide Perrier) beaked, deciduous; rachis c. 24 cm long, with 9 branched and 16 unbranched first order branches; first order branches seen (distal?) with a rachis to 4 cm long, 8 × 3 mm diam., with 5 rachillae, glabrous; rachillae 9–19 cm long, c. 2 mm diam., glabrous, with distant superficial triads; rachilla bract rounded. **STAMINATE FLOWERS** with sepals 2.3–2.5 × 1.8–2 mm; petals connate to the receptacle for 1.8–2.2 mm, free parts 4.3–4.8 × 2–3 mm; stamens 6, uniseriate, filaments 3.6–4.5 mm, flattened, anthers 1.5–1.6 × 0.6–0.8 mm, versatile, obtuse; pistillode 2–2.3 × 0.8–1 mm. **PISTILLATE FLOWERS** with sepals 2.5–2.7 × 2.2–3.5 mm; petals 3–3.8 × 3 mm; staminodes c. 0.4 mm; ovary 2 × 1.2 mm. **FRUIT** ellipsoid, 12–15 × 9–11 mm, rounded at the apex; endocarp fibrous, the fibres much anastomosing. **SEED** 13–14 × 9–10.5 mm, with few ruminations to 1 mm deep, corresponding to slight grooves on the outside.

NOTE. Data in protologue, not apparent in type or its label: inflorescence branched to 2 or 3 orders.

The flowers (present in one of the syntypes) are not described in the protologue, which is most unusual; Jumelle only mentions buds.

The leaves, and local name, are reminiscent of *D. madagascariensis*, but the inflorescence and fruit look more like *D. baronii*. This species is close to *D. oreophila*.

SPECIMENS SEEN. Ambanja/Bealanana: Tsaratanana massif, Dec. 1922 (fl., fr.), *Perrier* 15265 (P, syntype); idem, May 1924 (fr.), *Perrier* 15265bis (P, lectotype).

42. DYPISIS OREOPHILA

Another clustering, montane species, with distinctive small inflorescences. The epithet *oreophila* means mountain-loving, a reference to the habitat. This is a very attractive species.

DISTRIBUTION. Tsaratanana, Marojejy, high ground near Maroantsetra and Mandritsara.

HABITAT. Moist montane forest, on steep slopes; 500–1700 m. Said to be frequent in the forests of the Tsaratanana peaks, between 1000–1600 m (protologue).



Dypsis oreophila, in mountain forest, Marojejy.



**Dypsis
oreophila**

LOCAL NAMES. *Kindro, Lafaza* (Antankarana); *Fitsiriky* (Sambirano Sakalava).

USES. Palm-heart edible, highly esteemed. The hollowed out stems are used for blowpipes.

CONSERVATION STATUS. Vulnerable. The distribution area is limited. The fact that the palm-heart is highly esteemed bodes ill for the future. Numbers unknown.

Dypsis oreophila *Beentje nom. nov.*

SYNONYMS:

Neodypsis gracilis Jum., Ann. Inst. Bot.-Géol. Colon. Marseille 1, 1: 19 (1933); Jum., Cat. Pl. Madagascar, Palmae: 17 (1938). Type: Madagascar, Tsaratanana, *Perrier* 16076 (P, Lectotype, chosen here).

Phloga gracilis (Jum.) H. Perrier, Fl. Madagascar 30: 126 (1945), **synon. nov.**

NOTE: the specific epithet was predated in *Dypsis*; *Adelodypsis gracilis* Becc. from 1906 is a synonym of *D. pinnatifrons*.

Clustering palm, occasionally appearing solitary. **TRUNK** 2–8 m high; diam. 3–4 cm, stepped and ringed, with some of the bark corky (diseased?); internodes distally dark green, 1–3.5 cm, scars 0.2–1.2 cm wide, pale brown; crownshaft conspicuous, pale green with wax. **LEAVES** 6–8 in the crown; young leaves tinged pink; sheath pale brown, 18–55 cm long, with rounded shoulders, pale green or brown, waxy, distally with few to many reddish scales; petiole 2–50 cm long, proximally 0.5–1.5 × 0.3–0.9 cm, distally 0.5–0.9 × 0.4–0.5 cm diam., with many scattered reddish scales, proximally with a triangular adaxial extension to the sheath lining; rachis 0.5–1.5 m long, in mid-leaf 0.3–1.6 cm wide, slightly keeled, with many reddish scales or only with some white waxy scale remnants; leaflets 25–45 on each side of the rachis, in groups of 2–5 in mid-leaf, group interval 2.5–12 cm, fanned within the groups, the proximal 8–33 × 0.4–1.8 cm, median 14–46 × 1.1–2.7 cm (interval 0.3–2 cm), distal 5.5–30 × 0.3–2.6 cm, main vein 1, plus thickened margins, with scattered scales to glabrous, or with a few ramenta 3–5 mm long, apices bifid, unequally attenuate. **INFLORESCENCE** infraxillary, recurved, branched to 1–2 orders; peduncle 6–11.5 cm, proximally 9–10 × 4–5 mm diam., distally c. 5 × 5 mm, glabrous; prophyll 8–34 cm × 1.2–4 cm, borne at 2–4.5 cm above the base of the peduncle, split over most of its length, pale brown, waxy, with scattered



Dypsis oreophila. Detail of inflorescence (*Dransfield et al.* JD6756).

scales to glabrous; peduncular bract inserted at 3.5–7 cm from the base of the peduncle, 10–24 cm long, splitting over its entire length except for the 1–5 cm long beak, sometimes deciduous, pale brown, waxy, with scattered scales or glabrous; non-tubular peduncular bract c. 4.5 cm long; rachis 1.5–9 cm long, glabrous, with 0–9 branched and 5–19 unbranched first order branches, the proximal of these with a rachis up to 2 cm long, 5–8 × 3–4 mm diam., with up to 4 rachillae; rachillae 3.5–14.5 cm, green to cream at anthesis, sinuous, 2–3 mm diam., with scattered reddish scales or glabrous, the triads spirally arranged, quite dense, slightly sunken; rachilla bract rounded or acute, 1.5–2 mm; flowers cream or reddish, without scent. **STAMINATE FLOWERS** with sepals 2.8–3 × 2.6–3.2 mm, broadly ovate, proximally gibbous, keeled, acute or obtuse, ciliolate; petals connate to a receptacle 1.8 mm high, free for 2.8–3 × 2.6–3 mm, triangular and acute; stamens 6, equal, the filaments connate at their base for 0.3–0.5 mm, 2.8–3.3 × 0.8 × 0.3 mm, flattened with reddish specks, the anthers 1.7–2 × 0.8–0.9 mm, dorsifixed, versatile, the locules parallel and obtuse; pistillode conical-columnar, 2.4–2.8 mm high, 0.6–1.2 mm diam. **PISTILLATE FLOWERS** with sepals 1.8–3.5 × 2.3–3.8 mm, keeled, rounded, ciliolate; petals 2.8–4.5 × 2.6–4.6 mm, ciliolate; staminodes six, flat, elongate, 0.6–1.3 mm long; ovary c. 3.8 × 3.2 mm. **FRUIT** subglobose to slightly obovoid, rounded at base and apex, 5–11 × 3–8 mm; mesocarp 0.5 mm thick; endocarp fibrous, densely anastomosing. **SEED** ellipsoid, 6–7.5 × 3.5–7 mm, pointed at the base, rounded at the apex, with a slight subbasal depression, the surface with anastomosing channels; endosperm ruminant, the intrusions somewhat dense, irregular, 1.5–2.5 mm deep.

NOTE. Close to *D. tsaratananensis*, but differs in the much shorter inflorescence rachis (6–9 rather than 24+ cm), fewer leaflets (25–45 on each side of the rachis,



Dypsis oreophila. A petiole with lowermost leaflets $\times 1/3$; B mid section of leaf $\times 1/3$; C leaf tip $\times 1/3$; D inflorescence at staminate anthesis $\times 1/3$; E young infructescence $\times 1/3$; F staminate flower $\times 7$; G very young fruit $\times 4$; H fruit in cross section $\times 3$. All from Dransfield *et al.* JD6756. Drawn by Rosemary Wise.

rather than 55–60 on each side of the rachis, smaller leaflets (median 14–46, not 55–60 cm), fruit (5–11 \times 3–8, not 12–15 \times 9–11) and seed (6–8 \times 3–7, not 13–14 \times 9–11). Most of these characters are not very strong, except for the fruit and seed ones, which in our opinion are important. Maybe further collections will blur the distinctions.

It is rather unclear why this was included in *Phloga* in the Flora (Jumelle and Perrier, 1945). Staminate flowers were unknown, so the only reason must have been its size. Jumelle and Perrier (1945) included *Phloga*

sambiranensis as a synonym, but this has a much longer inflorescence and we believe this is wrong.

SPECIMENS SEEN. Ambanja/Ambilobe/Bealanana: Massif de Tsaratanana, Jan. 1923 (y.fr.), Perrier 15647 (P, syntype); idem, April 1924 (bud, fr.), Perrier 16076 (P, syntype). Andapa: Marojejy East Peak, NW of Mandena, Oct. 1988 (fl., y.fr.), Miller 3510 (P); idem, Feb. 1989 (fr.), Miller & Lowry 3975 (K, MO); idem, Nov. 1989 (fl.), Dransfield *et al.* JD6756 (K, P, TAN); W slopes of Mt Beondroka, Oct. 1989 (fr.), Miller & Randrianasolo 4378 (K). Maroantsetra: Mafaipoza, Oct. 1912 (fr.), Perrier 12055 (P). ?Mandritsara: between Andalinena and Mandritsara, Nov. 1922 (bud, y.fr.), Perrier 14980 (P).