



**Dypsis
acuminum**

pale brown distally with scattered black scales, waxy, without ligules but with rounded shoulders; petiole 11–16 cm, proximally c. 1.2 × 0.6 cm, distally 0.8–1.3 × 0.6–0.7 cm diam., channelled with sharp edges, red-brown with blackish scales; rachis with dense to scattered blackish scales, in mid-leaf 0.6–1.2 × 0.6–0.7 cm diam.; leaflets regular, c. 30 on each side of the rachis, acuminate, proximal 35–36 × 0.3–1 cm, median 27–39 × 1.2–1.8 cm (interval 1.5–3 cm), distal 6–30 × 0.3–1.4 cm, main veins 1, glabrous but for 3–4 scattered rameta. **INFLORESCENCE** interfoliar at anthesis, infrafoliar in fruit, branched to 1 or 2 orders; peduncle 28–41 cm long, proximally c. 2 × 0.4 cm, distally 1.2 × 0.6 cm, glabrous; prophyll 30–35 cm long, borne at 6–9 cm above the base of the peduncle, with scattered scales but glabrescent, open for the distal 10 cm; peduncular bract inserted at 18–20 cm from the base of the peduncle, 36–37 cm long, split over its whole length or except for the distal 3–4 cm, beaked for 3–4 cm, with dense but scattered scales; non-tubular peduncular bracts 1–1.3 cm, near the apex of the peduncle; rachis 12–34 cm, with 15–18 unbranched first order branches, in the type with one of the branches bifurcate; rachillae 10–25 cm long, 2.5–4 mm diam., glabrous, with quite dense triads, slightly sunken in pits; rachilla bract c. 2 mm long, acute to acuminate. **STAMINATE FLOWERS** unknown. **PISTILLATE FLOWERS** only known from the young fruiting stage, with the sepals 2.8–3.6 × 3–4 mm; petals 3.5–5.2 × 4–6 mm; staminodes 0.5–1 mm; gynoecium probably c. 4 mm high. **FRUIT** ellipsoid, 9–10 × 6–7 mm., rounded at apex; endocarp fibrous, with few anastomations. **SEED** ellipsoid, 8–8.5 × 5.5–6 mm, the base with a slight bump and a sub-basal depression corresponding to the embryo, the apex rounded; endosperm homogeneous.

NOTE. The altitude on the type is indicated as 2000 m, but the highest point in the Manongarivo Mts., Antsatrotro, is 1876 m. This taxon is probably the same as *D. onilahensis*; only the branching pattern of the inflorescence is distinct, being much less branched in *D. acuminum*.

SPECIMENS SEEN. Ambanja: Manongarivo, probably Antsatrotro, May 1909 (y.fr.), *Perrier* 15801 (P, type). Andapa: Marojejy, Feb. 1989 (y.fr.), *Miller & Lowry* 3941 (P, TAN).

33. DYPISIS LUTESCENS

One of the best-known Madagascar palms (at least under its old name): this species is very widespread in cultivation all over the tropics, doing well under a wide range of conditions. This is in strange contrast to its native country, where it is restricted to a special habitat: white sand forest in a narrow strip close to the sea. The name means ‘becoming yellow’ and refers (probably) to the leaf sheath, petiole and rachis.

DISTRIBUTION. E Madagascar.

HABITAT. Littoral forest or heath vegetation on white sand, also on rock; persists in secondary growth and may be locally common. Alt. 5–35 m.

LOCAL NAMES. *Rehazo*, *Lafahazo*, *Lafaza* (Betsimisaraka).

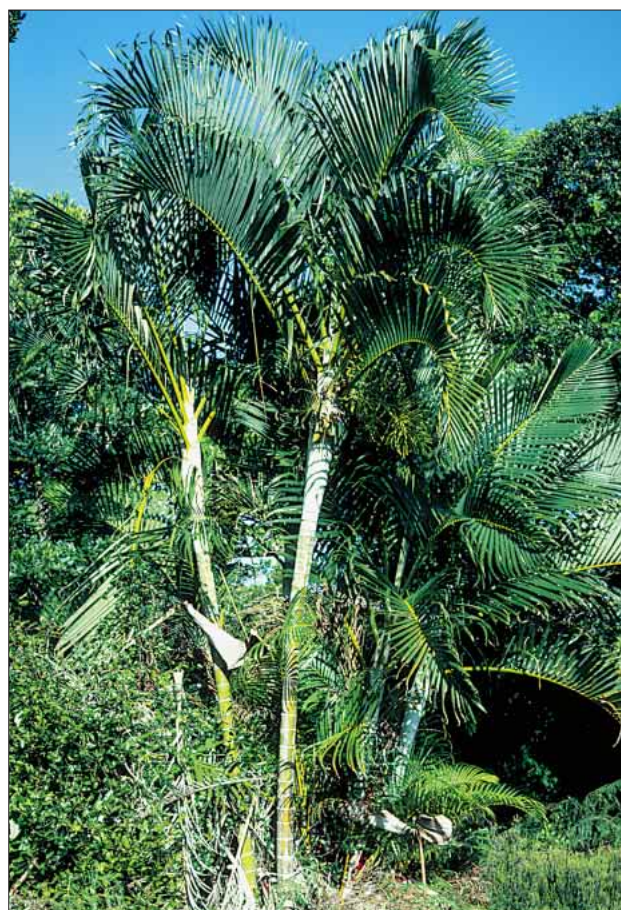
USES. Local uses not recorded, but this is one of the most important ornamental palms in commerce.

CONSERVATION STATUS. Not threatened. Total numbers of this palm in the wild are estimated at more than a thousand.

Dypsis lutescens (*H. Wendl.*) *Beentje & J. Dransf. comb. nov.*

SYNONYMS:

Chrysalidocarpus lutescens H. Wendl., Bot. Zeitg. 36, 8: 117 (1878); Beccari, Bot. Jahrb. 38, Beibl. 87: 32 (1906); Beccari, *Palme del Madagascar* 38 (1914); Jum., Ann. Inst. Bot.-Géol. Colon. Marseille



Dypsis lutescens, in coastal forest on white sand, Ambila-Lemaitso (*Dransfield et al.* JD6441).

sér. 10, 3: 13 (1922); Jum., Cat. Pl. Madagascar, Palmae: 9 (1938); Jum. & H. Perrier, Fl. Madagascar 30: 103, fig. 29 (1945). Type: none indicated. Lectotype (selected here): Madagascar, Ambila-Lemaitso, *Dransfield et al.* JD6441 (Holotype K; isotypes BH, P, TAN).

Chrysalidocarpus baronii* var. *littoralis Jum. & H. Perrier, Ann. Inst. Bot.-Géol. Colon. Marseille sér. 3, 1 (1): 35 (1913). Type: none mentioned, but *Perrier* 12058 corresponds with locality in protologue; Madagascar, near Tampolo R mouth, *Perrier* 12058 (Holotype P).

Chrysalidocarpus glaucescens Waby, Kew Bull. 1923:376 (1923). Type: cult. Victoria Gardens, Trinidad, *Waby* 9849 (Holotype K).

Graceful clustering palm in tufts of 4–20 plants. **STEMS** 1–7 m high, occasionally with 1–2 small branches, 5–12 cm diam., the base occasionally with a swelling to 30 cm high, 40 cm diam.; inter-

nodes 2–12 cm, yellowish or pale grey-brown, more distally green to grey with waxy white bloom. **LEAVES** 5–11, spiral or more often tristichous, porrect and strongly arching; sheath yellowish with white waxy bloom, (28–) 39–60 cm, 11–15 cm diam., abaxially with dense scattered scales distally, adaxially orange and glabrous, with slight ligules (to 3 mm) or with rounded shoulders; petiole 19–37 cm long, proximally 1.7–3.5 × 2.5 cm, distally 0.7–2 × 0.8–2 cm, channelled with sharp edges, yellow or yellowish orange, with few abaxial scales, proximally on the adaxial side with a triangular swollen extension to the sheath lining; rachis 1.1–1.9 m long, proximally channelled, in mid-leaf keeled and 1.5–1.8 × 0.9 cm diam., yellow or yellow-orange, with small scattered scales; leaflets 44–59 on each side of the rachis, regular, stiff, in one plane on each side of the rachis but the leaflets on opposite sides at an angle of 90–120°, adaxially green, abaxially slightly waxy and grey, the proximal 35–66 × 0.6–1.8 cm, median 44–70 × 1.3–3 cm (interval 1.7–4 cm), distal



Dypsis lutescens. **A** habit, greatly reduced; **B** leaf sheath × 1/4; **C** distal part of petiole with lowermost leaflets × 1/4; **D** mid section of leaf × 1/4; **E** leaf tip × 1/4; **F** basal portion of inflorescence rachis and part of peduncle and prophyll × 1/3; **G** detail of rachilla × 3; **H** staminate flower × 7. All from *Dransfield et al.* JD6441. Drawn by Margaret Tebbs.



**Dypsis
lutescens**
(x: sight records)

7–37 × 0.6–1.5 cm (terminal pair joined for up to 3.5 cm), the apices attenuate, with 5–9 faint veins but with only the midrib very prominent on both surfaces, with a few tufts of large ramenta on the abaxial midrib, and with many small scattered glands in long lines on the minor veins (these sometimes absent?). **INFLORESCENCE** interfoliar, sometimes the fruiting stage infrafoliar, spreading, with spreading rachillae, branched to 3 orders (rarely to 2 or 4 orders); peduncle 34–88 cm long, flattened, proximally 2.7–6 × 1–3 cm, distally c. 1.3–2.7 × 0.6 cm diam., glabrous; prophyll 31–102 cm, borne at 5–47 cm above the base of the peduncle, 3.3–4.2 cm wide, with narrow wings, split only at the apex for 7–16 cm, with scattered scales; peduncular bract inserted at 38–68 cm from the base of the peduncle, 48–60 cm long, 4.5 cm wide, closed for the distal 10 cm, with a beak of 2–5 cm, pale brown, waxy and glabrous or with a few scattered scales, abscising and carried up by the lengthening inflorescence and rather quickly deciduous; non-tubular peduncular bracts few, 3–5 × 10–12 mm; rachis 20–110 cm, glabrous, with 5–13 branched and 8–14 unbranched first order branches, the proximal of these with flattened bases 1–1.5 × 0.6–0.7 cm and subtended by bracts of 6–7 mm high; rachillae 6–30 cm long, 2–5 mm diam.; triads distant proximally, more dense distally, inserted in shallow pits; rachilla bracts proud, acute. **STAMINATE FLOWERS** with sepals 1.6–1.8 × 2–2.4 mm, hooded, rounded, gibbous, keeled; petals connate for 1–1.3 mm to the receptacle, free for 1.3–2.2 × 2–2.3 mm, ovate, acute; stamens 6, uniseriate, the filaments 2.8–3.2 mm long, anthers 1.6–1.8 × 0.8 mm, dorsifixed; pistillode 2.5–2.8 × 0.4–0.5 mm. **PISTILLATE FLOWERS** with sepals 2–2.2 × 2.4–2.5 mm, hooded, neither gibbous nor keeled; petals free, 2.8–3.2 × 2.3–3 mm, orbicular or broadly ovate, with small apicula; staminodes 0.3–0.4 mm, thin, empty; ovary c. 3 × 1.4 mm, with short stigmas. **FRUIT** yellow, ellipsoid to obovoid, 12–18 × 7–10 mm, with a pointed apex; endocarp long-fibrous, the fibres almost free. **SEED** ovoid with an obtuse apex and a pointed base, 11–16 × 6–9.5 mm, with homogeneous endosperm. Germination adjacent-ligular; eophyll bifid.

NOTE. Wendland described the genus *Chrysalidocarpus* and the species *Chrysalidocarpus lutescens* at the same time; he also mentioned that this was a common indoors palm in Europe, known as *Areca* or *Hyophorbe indica* or *lutescens*, and also as *Areca borbonica* or *A. dicksoni* (= *Dictyospermum album*);

none of these names refers to the Madagascar material. [*Chrysalidocarpus lutescens* is not based on the Bory name *Hyophorbe lutescens*, since Wendland states categorically that he is describing the species as distinct from *Hyophorbe*. *Areca lutescens* Bory was described from specimens from Réunion, and is a synonym of *Hyophorbe indica* Gaertn. *Areca borbonica* is an old garden name for *Dictyosperma album* (Bory) H. Wendl. & Drude. None of these palms conforms to the description Wendland gave for his new species, with its green leaf-sheaths with a waxy bloom combined with a clustering habit].

With *D. arenarum* and *D. psammophila* it forms a complex that requires further study, particularly since all three taxa occur in the same area and almost in the same habitat. This complex seems close to *D. baronii* and *D. onilahensis*, to which it bears an uncanny resemblance.

We are tentatively including *Chrysalidocarpus glaucescens* Waby in synonymy. This species was based on a particularly glaucous and robust plant cultivated in Trinidad. It is certainly larger in all its parts than *D. lutescens* but we do not think it can be anything else.

SPECIMENS SEEN. Sambava: 7km NE of Anjangoveratra, June 1992 (sd.), *Beentje & Andriampaniry* 4690 (K, TAN, MO). Maroantsetra: Maroantsetra For. Sta., Oct. 1963 (ster.), *Moore* 9018 (TAN); Manambia, Oct. 1986 (y. infl.), *Dransfield et al.* JD6407 (K, P, TAN). Mananara Avaratra: Tapolo (Tampolo) R mouth, Oct. 1911 (bud), *Perrier* 12058 (P); Antanambe, Oct. 1991 (fl.), *Beentje* 4460 (BH, K, MO, P, TAN). Toamasina: Mahatsara For. Res., Feb. 1992 (fr.), *Noyes et al.* 922 (K, P); Foulpointe (Mahavelona), Dec. 1962 (fl.), *Bosser* 16826 (P); 45km N of Toamasina, Feb. 1975 (fl.), *Croat* 32483 (P, TAN). Ampasimanolotra: Ambila, May 1928 (fr.), *Decary* 6303 (K, P, TAN); 5km S of Ambila-Lemaitso, Nov. 1986 (fl.), *Dransfield et al.* JD6441 (K, P, TAN). Manakara: 5km S of Manakara, May 1992 (old infl.), *Beentje & Andriampaniry* 4676 (K, TAN).

SIGHT RECORDS. Sambava: occasional near Antsirabe Avaratra (*Beentje* 1992). Soanierana-Ivongo: common along the coastal road (*Beentje* 1992). Mahanoro: S of Mahanoro (*Beentje* 1991). Sainte-Marie: Ile Sainte-Marie (*Dransfield* 1994).

CULTIVATED. England: Hort. Kew, May 1901 (fl.), *anon.* s.n. (K); idem, June 1979 (fl) & Sept. 1984 (fr.), 000-73.12576 (K). Côte d'Ivoire: 17 km W of Abidjan, June 1970 (fl.), *Leeuwenberg* 8033 (K). Mozambique: Maputo, Feb. 1982 (fr.), *de Koning* 8645 (K). Singapore: Hort. Singapore, anno 1902, *Ridley* s.n. (K); and anno 1920, *anon.* s.n. (K); and June 1929 (fl., fr.), *Furtado* s.n. (K). U.S.A.: Oahu, Hort. Honolulu, Nov. 1930 (fr.), *Wilder* s.n. (K). Trinidad & Tobago: Hort. Tobago, March 1909 (fl.), *Broadway* 2971 (K); Port of Spain, Feb. 1920 (fl.), *Waby* 98749 (K).

34. DYPISIS ARENARUM

This species can easily be confused with *D. lutescens*, which grows in the same area, but has a longer petiole and fewer leaflets; the seed is also much smaller. The name means 'of the sands', since the species occurs on sand near the sea.

DISTRIBUTION. Between Soanierana-Ivongo and Vatamandry.

HABITAT. Littoral forest near fresh water; alt. 1–15 m.