



**Dypsis
linearis**

mm, anthers 0.8–1.8 × 0.4–1 mm, versatile; pistillode 0.6–1.3 × 0.2–0.7 mm, conical with obtuse apex. **PISTILLATE FLOWERS** with sepals 1–2 × 1.3–3.3 mm; petals 2.5–3.6 × 2.3–3.5 mm; staminodes 0.2–0.6 mm; gynoecium 2.8–4 × 2–3.2 mm. **FRUIT** yellow to red, 6–9 × 4–6 mm. **SEED** 5–6.5 × 3–3.3 mm, with homogeneous endosperm.

NOTE. The protologue of *D. linearis* incorporates characters of both syntypes (*Forsyth Major* 604 and 606) but as the floral characters derive clearly from *Forsyth Major* 606, we choose that as the holotype. *Forsyth Major* 604 is *D. heterophylla*.

We have decided that the differences between *C. ambolo*, *N. procumbens* and *D. linearis* are spurious, and we hereby put *C. ambolo* and *N. procumbens* in the synonymy of *D. linearis*, which is the oldest name.

The type of *C. ambolo* has up to six petals, the innermost much smaller than the outer; there may be up to eight stamens. The peduncular bract of *C. ambolo* was considered to be that of a *Chrysalidocarpus*, and therefore Jumelle felt in 1928 this was a *Chrysalidocarpus*, but the specific epithet was already in use in that genus.

C. ambolo caused Jumelle problems. He had drawn up a list of differences between the genera *Neophloga* and *Chrysalidocarpus* based on the peduncular bract (deciduous, beaked and splitting all over from the apex downwards in *Chrysalidocarpus*, remaining and splitting only at or near the apex in *Neophloga*), the leaf sheath (membranous in *Neophloga*, coriaceous in *Chrysalidocarpus*) and the habit, plus a few more characters of the “sometimes, but not always” kind. This taxon, first described by him in *Neophloga*, then had to be put in *Chrysalidocarpus* because of the peduncular bract, which was beaked; a problem was that the leaf sheath was of the *Neophloga* kind (mem-

branous). In 1945 it had, without explanation, been returned to *Neophloga* with the note that it had all the characters of that genus, but the peduncular bract of a *Chrysalidocarpus*.

N. procumbens was mentioned by Jumelle (1929), but not treated; Jumelle wondered whether this was a *Neophloga* or a *Chrysalidocarpus*, because of the lack of a peduncular bract on the older inflorescence he saw.

N. linearis var. *distachya* is *D. heterophylla*.

Moramanga: Ambatovola, 1912 (fl.), *Perrier* 11994 (P) is probably this species, but has regular leaflets. It is described by Perrier as clustering and 1–2.5 m high, but has the typical yellow-orange inflorescence axes. One inflorescence has a bifurcate proximal rachilla.

SPECIMENS SEEN. Ambatondrazaka: Bemainty to Androndramanitra, March 1951 (fr.), *Cours* 4234 (P); Anonokambo (Nonokambo), Jan. 1967 (bud), *Bognier* 186 (K). Moramanga: Mantady, Dec. 1991 (bud), *Beentje & Andriampaniry* 4538 (K, MO, TAN); idem, Dec. 1992 (fl.), *Beentje & Andriampaniry* 4777 (K, TAN); Ambalafary, Anivomaro, Feb. 1968 (bud), *Service Forestier* SF 26668 (P). Ambatondrazaka: Manakambahiny, Oct. 1958 (bud), *Rakotovo* RN 9600 (K, P). Ambositra: Ambohimombo forest, Jan. 1895 (fl.), *Forsyth Major* 606 (K, lectotype). Ampasimanolotra/Nosy Varika: Sahalampona-Ampita, Jan. 1945 (bud), *Cours* 2437 (K, P, TAN). Mahanoro: Bas-Mangoro, Oct. 1927 (bud), *Perrier* 18043 (P). Ifanadiana: Ambohirafia, March 1985 (fr.), *Dorr* 3891, 3892 (K); Ranomafana, March 1991 (fl., fr.), *Beentje* 4424 (K, TAN) and 4426 (K); idem, July 1992 (bud), *H. Beentje & J. Beentje* 4735 (K); idem, trail to Maharira, March 1992 (y.fr.), *Malcomber & Rakoto* 1333 (K, P); Ambinanindrano, July 1992 (fl., fr.), *Beentje & Andriampaniry* 4731 (BH, K, MO, P, TAN); idem, Jan. 1993 (fl.), *Beentje & Andriampaniry* 4797 (K, MO, TAN); 3 hours walk E of Tsaratanana, March 1991 (fl., y.fr.), *Beentje* 4436 (K, TAN). Mananjary: Mt Vatovavy, Oct. 1911 (fl.), *Perrier* 12071 (P, type of *C. ambolo/N. mananjarensis*). Ambalavao: Ambatomboayo, Oct. 1954 (bud), *Rakotovo* 574 (P); E slopes of Andringitra Mts, near Ihovika R., Sept. 1911 (bud), *Perrier* 11977 (P, type of *N. procumbens*). Ambalavao: Betroka/Iakora: Mt. Kalambatitra, Nov. 1933 (fl.), *Humbert* 11859 (P). Iakora: between Kalambatitra Col and the Manambolo R., Nov. 1933 (fl.), *Humbert* 12109 (P). Tolanaro: Akaramy R. upstream from Mahamavo, Jan./Feb. 1934 (fl.), *Humbert* 13904 (P); Andohahela, col Tanatana, Dec. 1989 (fl.), *Dransfield et al.* JD6777 (K, TAN).

WITHOUT ANY LOCALITY: no date (before 1946) (bud), *Homolle* 2437 (P)—probably the Cours collection with a wrong label.

55. DYPISIS BONSAI

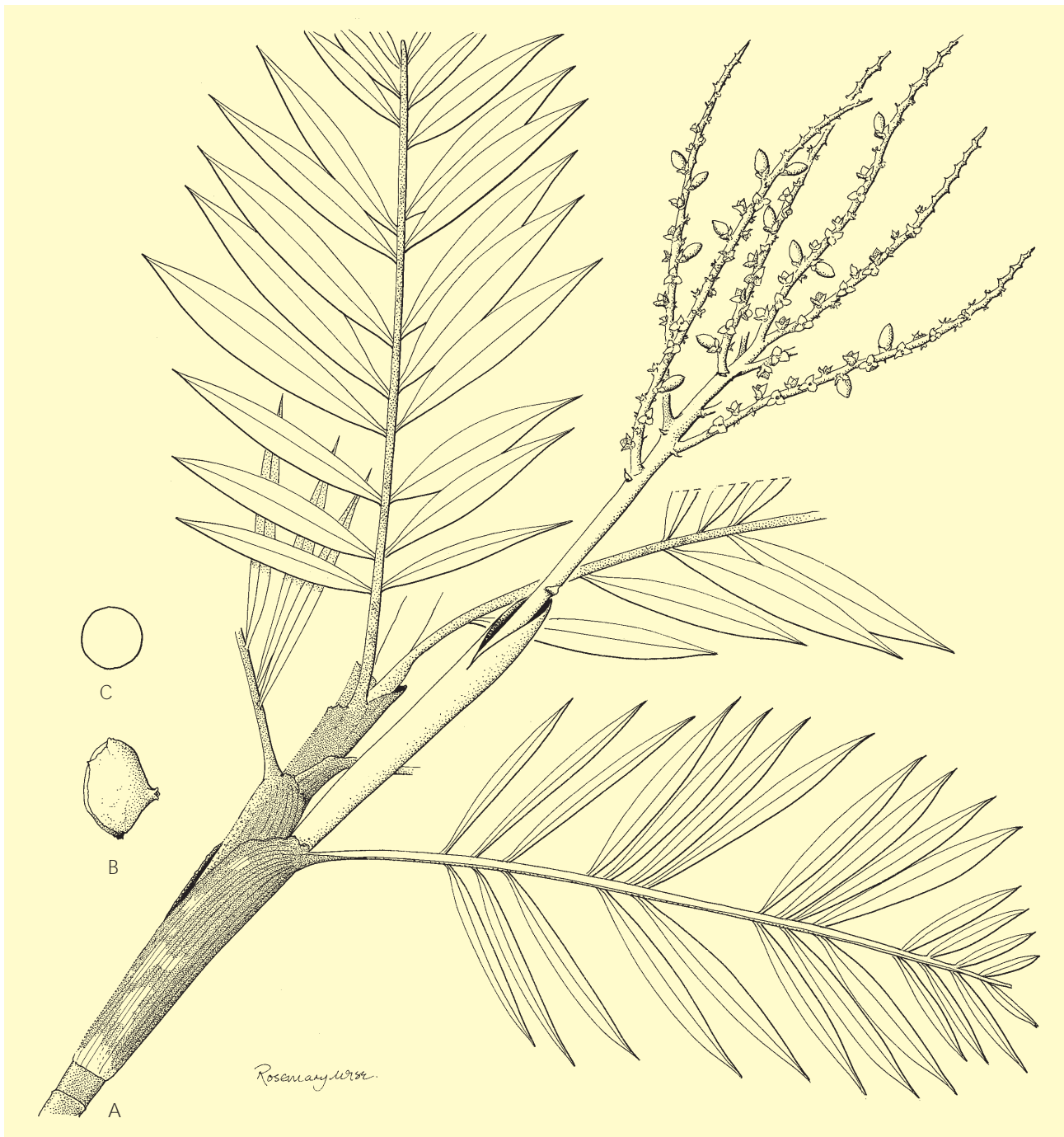
A beautiful little palm, with a name which is Japanese for ‘dwarf tree’ or ‘dwarfed tree’; we believe this is a wind-dwarfed taxon, and it is one of the most beautiful of the smaller Madagascar palms; of course, the taxon has no connection with Japan, but it looks like a bonsai tree.

DISTRIBUTION. Marojejy area and Masoala Peninsula; possibly Zahamena.

HABITAT. Low forest or ericoid vegetation on ridge crests; 1000–1700 m.

LOCAL NAMES. Not recorded.

USES. Not recorded.



Dypsis bonsai. **A** crown and infructescence $\times 2/5$; **B** fruit $\times 2$; **C** seed in section $\times 2$. All from *Zjhra & Hutcheon 203*. Drawn by Rosemary Wise.

CONSERVATION STATUS. Vulnerable. Occurs in a fire-susceptible habitat, over a limited area. Numbers presumably low (possibly fewer than 300).

Dypsis bonsai *Beentje sp. nov.*

A ceteris speciebus *Dypsidis* solitariis foliolis parvis fasciculatis inflorescentia breve erecta aliquanto robusta axibus aurantiacus distincta. Typus: Madagascar, Ambanizana, Andohitsitondroina Pk, *Schatz & Modeste 2897* (Holotypus K; isotypi MO, P, TAN).

Solitary palm. **STEMS** 1–2 m tall; distal internodes 0.7–1.3 cm, 6–8 mm diam, reddish pubescent; nodal scars 2 mm. **LEAVES** 4 in the crown (always?), pinnate; sheath 6.5–9 cm long, the outer open, densely reddish pubescent, with auricles 3 mm; petiole 1–4 cm

long, 2–2.5 mm wide, densely to sparsely pubescent; rachis 10–18 cm long, in mid-leaf c. 2 mm wide, densely to sparsely pubescent; leaflets 10–14 on each side of the rachis, in groups of 2–5, the group interval 1.5–5 cm, the proximal 4–9 \times 0.2–1 cm, median 5.5–11 \times 0.6–2.2 cm, distal 3–5 \times 0.2–1.2 cm, main veins faint, 1 (–5), with scattered scales or almost glabrous, but distally on the margin with some longer scales, apices acuminate, unequal, distal pair joined for 0.5–1.2 cm, narrowly dentate. **INFLORESCENCE** interfoliar, branched to 1–2 orders with orange axes; peduncle (13–) 22–28 cm long, 3–6 mm diam., densely pubescent; prophyll 13–20 cm long, 8–11 mm wide, with scattered scales, open in the distal few cm; peduncular bract inserted at c. 15 cm from the base of the peduncle, c. 11 cm long, open for two-thirds, with a 3 mm long beak, quickly deciduous; non-tubular peduncular bract 2–6 \times 5 mm; rachis 3–5.5 cm long, puberulous, with up to 3 (but

usually without) forked first order branches, and 5–13 unbranched first order branches; rachillae 4–12 cm long, 1.5–2.5 mm diam., densely pubescent or puberulous, or with sparse scales. **STAMINATE FLOWERS** with sepals orange, 1.3–1.8 × 1.2–1.7 mm; petals orange, 2–2.6 × 1.3–1.5 mm (on an up to 0.6 mm high receptacle); stamens 6, white, uniseriate, the filaments 0.6–0.9 mm long and thin, the anthers 1.2–1.3 × 0.5–0.7 mm, dorsifixed with parallel locules; pistillode 0.7–1 × 0.3 mm, conical. **PISTILLATE FLOWERS** with sepals 1–2 × 1.3–2.2 mm; petals 3–3.4 × 3–3.6 mm; staminodes 6, 0.2–1 mm; pistil c. 2.5 × 1.9 mm. **FRUIT** only seen young, then golden yellow and c. 8.5 × 4 mm, with subaequatorial stigmatic remains. **SEED** 8 × 3.5 mm, with homogeneous endosperm.

NOTE. Slightly similar to *D. linearis* in the stout, erect inflorescence with orange axes and very hairy, rather fat rachillae; but distinct in much slighter build, the build and size of the leaflets. Other relationships are probably with *D. concinna* and *D. heterophylla*.

Nosy Varika: Sakaleona valley, June 1939 (fl., y.fr.), *Decary* 14220 (P) is similar, but differs in the petiole (6–11 cm long), rachis (to 23 cm long), peduncle (14–16.5 cm), rachillae 14–18 cm long; the peduncular bract is inserted at 8 cm from the base of the peduncle, and is 10.5 cm long. *Pistillate flowers* were within the range given above; fruit was 6–6.5 × 4–5 mm, and seed 4 × 3 mm, with homogeneous endosperm.

SPECIMENS SEEN. Andapa: E Marojejy, W of Manantenina R, March 1949, (y.fr.), *Humbert & Cours* 23729 (P); idem, (bud), *Humbert* 23682b (K, P); Mt Beondroka, N of Maroambihy, March 1949 (bud), *Humbert* 23493 (K, P). Maroantsetra: Ambanizana, Andohitsitondroina Pk, Dec. 1989 (fl.), *Schatz & Modeste* 2897 (Holotype K; isotypes MO, P, TAN); idem, March 1992 (y.fr.), *Zjhra & Hutcheon* 203 (K).



**Dypsis
bonsai**

SIMILAR SPECIMENS. Several collections from the Ambatondrazaka/Zahamena area are reminiscent of both *D. bonsai* and *D. concinna*: Ambatondrazaka: Sahamalaza, Aug. 1937 (bud), *Herb. Jard. Tananarive* 18.8.1937 (K, P); Zahamena, March 1941 (old infl., fr.), *Decary* 16680 (P); Manaka E, April 1961 (old infl.), *Serv. Eaux & Forêts RN* 11850b (K, P). Differences with above description: sheath 8–10 cm, petiole 0–0.2 cm, rachis 11–34 cm; leaflets 14–21 on each side of the rachis, the proximal 1–5 cm long; almost glabrous. Inflorescence with peduncle 14–21 cm; peduncular bract 4–8 cm long (inserted at 10–13 cm), rachis 1–6 cm with 4–8 branches; rachillae 3–6.5 cm; fruit 7–9.5 mm × 4–5 mm, seed c. 6.5 × 3.5 mm.

56. DYP SIS CAUDATA

A very distinctive species with its long-acuminate, even caudate leaflet tips (hence the name), which are pendulous at almost right angles to the main part of the leaf. The custard yellow flowers are particularly attractive.

DISTRIBUTION. Masoala Peninsula, known from a single site.



Dypsis caudata. A beautiful palm with neat foliage and custard yellow flowers, Antalavia (*Dransfield et al.* JD6478).