## 14. Ravenea lakatra (Jum.) Beentje comb. nov.

Louvelia lakatra Jum. in Ann. Inst. Bot.-Géol. Colon. Marseille 4, 5,1: 50 (1927); Jum. & H. Perrier in Fl. Madagascar 30: 164 (1945). Type: Madagascar, Analamazaotra, Anevoka, *Perrier* 12022 (holotype P), synon. nov.

Slender palm; trunk 4.5-14 m, DBH 13-17 cm, to 11 cm across near the crown; nodal scars c. 1 cm (to 3.5 cm near crown), internodes 10-16 cm (c. 2 cm near crown), light brown; wood very hard, with black fibre layer; sheath remnants clothing distal part of trunk; short, erect woody sheath base remnants set at nodes over the whole length of trunk, very hard, to 7 cm long; base of crown c. 22 cm across. Leaves 8-10 in the crown, porrect, slightly arching, held on edge in distal part of leaf; sheath  $75-80 \times 16$  cm, with down-pointing fibres on margins, white-tomentose, with black internal fibres; petiole 80-160 cm. proximally  $5-6 \times 3-6$  cm across, distally  $4 \times 3$  cm across, canaliculate, with very sharp (almost sawtooth) edges, proximally closely denticulate, with white or grey tomentum but glabrescent; rachis 234-350 cm, in midleaf 1·2-2·2 × 1·3 cm across, with white to grey tomentum but quickly glabrescent; leaflets stiff, in one plane, mid-green, 87-98 on each side of the rachis, the proximal  $42-102 \times 10^{-2}$ 0.8-3.8 cm, the median  $66-77 \times 2.7-4.7$  cm (interval 3-4 cm), distal  $23-49 \times 0.7-2.3$  cm; few small ramenta near the rachis, but these deciduous; sinuous transverse veinlets clearly visible. Staminate inflorescence interfoliar, solitary, branched to 1 order (only seen as dead); peduncle not seen; prophyll not seen; peduncular bracts seen 89, 103 cm; rachis c. 92 cm; rachillae 6 – 30 cm, 1 – 1 · 5 mm across; pedicel  $1 \cdot 2 - 1 \cdot 6$  mm; calvx connate for 1 mm, with free lobes  $0 \cdot 8 \times 10^{-1}$ 0.2-0.3 mm; petals probably connate for 1.8 mm, free lobes  $5-5.5 \times 1.3$  mm; stamens? in 2 series, the epipetalous ones adnate for/inserted at  $2 \cdot 2 - 2 \cdot 5$  mm. the filaments absent, the anthers  $1.5 \times 0.5$  mm. Pistillate inflorescence solitary, erect, interfoliar among old leafbases in fruit, branched to 1 order; peduncle 82-130 cm, proximally  $3\cdot 5-4\times 1\cdot 5-2$  cm, distally  $2\cdot 5\times 1\cdot 5$  cm, densely white-brown pubescent; prophyll  $10-25 \times 5$  cm, tattering, white, membranous; peduncular bracts 20-43 cm, 30-40 cm (inserted at 22-24 cm from the base of the peduncle), 140 cm (inserted at 48 cm), 88-119 cm (inserted at 60-87 cm), all densely white- to brown-pubescent abaxially, glabrous adaxially; rachis 44 – 86 cm, white-tomentose, with 50-70 porrect rachillae; rachillae 7-65 cm, 2 mm across, sinuous, proximally 11 × 5 mm; pedicels 3-6 mm; bracteole 1.5 × 1.5 mm, connate for up to 1 mm; calyx connate for 2-2.5 mm, 3.5 mm across, the free lobes  $0.8-2 \times 0.9-1.2$  mm; petals  $5-8 \times 2.5-5.5$  mm. Fruit blackish, slightly depressed globose, 15-20 mm, 18-21 mm across, with terminal stigmatic remains, 1-/2-/3-seeded; each seed with sclerified layer 8-11 mm and 6-10.6 mm across with sharp distal acumen 2.5-3 mm, the layer 0.3-0.35 mm thick; seed 9-10 mm, 5-10 mm across, with distal acumen of 1.5 mm; seed coat black, 0.2 mm thick.

DISTRIBUTION. E Madagascar: between Andasibe and Vangaindrano. HABITAT. Moist lowland forest on slight midslope or ridgecrest; 90-850 m. SPECIMENS EXAMINED. Moramanga: Andasibe, Nov. 1986, (juv.), Dransfield et al. ID 6424 (K, P, TAN); Anevoka, (prob. Dec. 1914) (fr.), Perrier 12022

(holotype P). Ifanadiana: Tsaratanana (juv.), Beentje 4440 (K, MO, TAN). Manakara: 39 km NNE of Manakara, July 1992 (fr.), Beentje & Andriampaniry 4726 (BH, K, MO, P, TAN). Farafangana: Manombo, Nov. 1991 (y.fr.), Beentje 4523 (BH, K, MO, P, TAN); idem, Jan. 1993 (old stam.), Beentje & Andriampaniry 4793 (K, TAN).

LOCAL NAMES & USES. 'Lakatra'; at Andasibe extensively used as a source of fibre for weaving of high-quality hats, the young leaves being harvested; this prevents the trees from growing, and most populations are pruned to a perpetually juvenile rosette stage. In its southern distribution area not well known, 'Lakatra' and 'Tsilanitafika' (cannot be cut down by an army) used occasionally.

The type and the material I found much further south agree perfectly in leaf and inflorescence details. The Flora (Jumelle & Perrier de la Bathie 1945), but not the protologue, describes the tree as being 15-30 m high, and with a DBH of 15-30 cm, while the wood is described as white and soft. I would treat these later additions with suspicion.

The seed is unique within the genus in having a pointed acumen.

## 15. Ravenea albicans (Jum.) Beentje comb. nov.

Louvelia albicans Jum. in Ann. Inst. Bot.-Géol. Colon. Marseille 5, 1, 1: 5 (1933); Jum. & H. Perrier in Fl. Madagascar 30: 162 (1945), synon. nov. Pollen illustrated in Genera Palmarum (1987): 27, Plate 1.7: H. Type: Madagascar, Masoala, Perrier 11939 (holotype P).

Slender undergrowth palm; trunk 3-6 m, DBH up to 11 cm, covered in marcescent, litter-trapping sheath bases. Leaves c. 8 in the crown, porrect, 3-4 m long; sheath c. 72 cm, with brown-velvety tomentum over green; petiole 0 – 34 cm, proximally about  $5 \times 4$  cm across, distally  $3.7 \times 3.3$  cm across, canaliculate; rachis c. 3.7 m long, in midleaf 2-2.2 cm wide with 8 mm wide keel, with transverse ('zebra') striping especially abaxially; leaflets stiff, in one plane. 45-47 on each side of the rachis, the proximal  $62-65 \times 2 \cdot 2 - 2 \cdot 5$  cm, median  $75-83 \times 6 \cdot 6 - 7 \cdot 2$  cm (the protologue gives  $50-60 \times 2-2 \cdot 5$ , but in the type the apices are broken off and the leaflets are folded) (interval 4.5-5 cm), distal  $20-25 \times 0.8-1.5$  cm; abaxially with continuous white tomentum. Staminate inflorescences solitary, interfoliar, branching to 1 order, hardly exserted, mostly hidden among sheaths and leaf remnants; peduncle distally 12 × 6 mm, dense white-puberulous; with 3(-4?) bracts, the first being destroyed at anthesis, the ones seen 25 cm, 30 cm, 32-35 cm; rachillae 5-8 cm long, 2.5 mm across; calyx reduced to 3 small triangular teeth < 2 mm; petals elongated, triangular and acuminate, 5.5-6.5 mm, free or hardly connate at the base; episepalous stamens with large filament, appearing free among the spread petals; epipetalous stamens with filament connate to inner side of petals, the anthers therefore appearing sessile. Pistillate inflorescences solitary, interfoliar, erect, 126-150 cm. branched to 1 order; peduncle 94-120 cm, proximally 2.5-3.4 × 1.2-1.7 cm across, distally  $1.5 \times 0.8$  cm; prophyll c.  $18 \times 7.5$  cm; peduncular bracts seen 27 cm, 34 cm, 46 cm; rachis 8-12 cm; rachillae 8-13 in number, 17-29 cm long; pedicels 1-2 mm; flowers unknown. Fruit unknown. Eophyll bifid, with the