

# *Lemurophoenix* (*Palmae: Arecoideae*), a new genus from Madagascar

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*Summary.* *Lemurophoenix* with a single species, *L. halleuxii* from north-eastern Madagascar is described and its affinities discussed.

The existence of a very large tree palm, known locally as “hovitra vari mena” (“red-lemur palm”), in the forests of northeastern Madagascar was brought to my attention by a palm enthusiast, Dr M. E. Darian of Vista, California who had also drawn my attention to the possible existence of a cocoid palm, *Voanioala* (Dransfield 1989). Photographs of the palm suggested a plant of great size and considerable beauty, but fragments of leaves and inflorescence brought out of Madagascar by Darian were insufficient to allow a generic assignment. However, corky-warted fruits said to belong to the “red-lemur palm” were unlike fruits of any palm recorded for Madagascar, and very young staminate flower buds seemed to show the presence of at least 20 stamens, multistaminy being unusual in Malagasy palms. These tantalising fragments were all that was available during the period of preparation of *Genera Palmarum* (Uhl & Dransfield 1987); they clearly belonged to an undescribed palm, but were insufficient for an adequate description. Furthermore, the fragments presented so many unusual features that their conspecificity was called into question. It was thus necessary to wait patiently for an opportunity to carry out fieldwork. The first period of fieldwork in October 1986 yielded fruiting material of the “red-lemur palm”; this was sufficient to show that the palm did not belong to any described genus, but flowers would be needed to prepare a good description. On my second visit to the Maroantsetra region of northeast Madagascar in February 1988, excellent material was obtained at staminate anthesis, and although the material of pistillate flowers was still very young, much of the structure is already discernible. There remain some problems in interpreting fruit structure which may only be resolved if developmental material is available. In the meantime a name is required for this species; it is already in enthusiasts’ collections and because it is so rare in the wild it is essential that action be taken to conserve it, and this also requires that it have a name.

The generic name that I propose for this wonderful palm reflects the Malagasy local name while the specific epithet honours Dominic Halleux, who together with Gerard Jean and Dr Darian has discovered and brought to my attention several remarkable Malagasy palms.

***Lemurophoenix*** *J. Dransf.* gen. nov. Palma monoeca pleonantha inermis foliis reduplicato-pinnatis, vaginis columnam coronae formantibus; inflore-

scientia infrafoliaris in 3 ordines ramificans prophyllum et bracteam peduncularem unicam ferens; rachillae flores basin in triades apicem versus flores masculos singulatim vel binatim ferentes; flores masculi 52–59 staminibus; flores feminei 10–12 staminodiis; fructus magnus, suberoso-verrucatus, reliquiis stigmatum basilaribus, endocarpio crasso tumorem cordiformem basilem ferenti, endospermio superficialiter ruminato, embryone apicali. Typus. *L. halleuxii* J. Dransf.

Massive solitary unarmed monoecious pleoanthic tree palm. Trunk bare, ringed with leaf scars. Leaf reduplicately pinnate; sheath tubular, forming a well developed crownshaft, bearing wax and scales; petiole rather short, channelled adaxially, rounded or ridged abaxially, densely covered with caducous chocolate-brown scales; rachis adaxially somewhat channelled near the base, ridged distally, abaxially rounded or flattened, scaly as the petiole; leaflets very regular, numerous, linear-lanceolate, long acuminate, except near the leaf tip where bifid; adaxial leaflet surface glabrous, abaxial bearing a few large dark brown ramenta near the base on the main vein and more numerous small ramenta on secondary veins, pale brown peltate scales abundant on all veins; transverse veinlets not visible. Inflorescence infrafoliar, branched to 3 orders, the whole inflorescence exposed long before anthesis, protandrous; peduncle moderate in length; prophyll splitting along one side; peduncular bract longer than the prophyll; first-order branches widely spreading, the basal few branched to the third order, the distal branched to the second order or unbranched; rachillae numerous, elongate, pendulous or spreading, somewhat swollen, with flowers partially embedded in shallow pits; rachilla bracts rather obscure, forming the lower lip to the pits; floral bracteoles minute, included in the pits. Flowers borne in triads of a central pistillate and two lateral staminate for about two-thirds the rachilla length, and in pairs of staminate flowers in the distal third. Staminate flower in bud  $\pm$  bullet-shaped; sepals 3,  $\pm$  distinct, minutely connate at the base, imbricate, strongly keeled and gibbous; petals 3,  $\pm$  distinct in bud, valvate, boat-shaped, adaxially grooved, glabrous, later the floral receptacle greatly enlarging carrying the petal bases above the calyx, the petals becoming reflexed by a swollen pulvinus at the petal bases; stamens 52–59, borne on the dome-shaped receptacle, filaments terete, straight or contorted in bud, rarely filaments partially connate, anthers frequently rather irregular in outline due to close-packing in the bud, basally sagittate, medifixed, latrorse; pollen elliptic, monosulcate with perforate tectate exine; pistillode columnar, hidden among the filament bases. Pistillate flower known only in immature bud; sepals 3, distinct, imbricate, unequal, rounded; petals 3, distinct, basally strongly imbricate, with triangular valvate tips; staminodes 10–12, minute, tooth-like or strap-shaped, distributed evenly around the gynoeceium; gynoeceium pseudomonomerous, ovoid, stigmas apical, as yet scarcely developed, ovule hemianatropous, basally attached. Fruit large, globose, the epicarp cracked polygonally into low corky warts, stigmatic remains basal; mesocarp rather spongy, easily separable from the endocarp; endocarp spherical, with a basal heart-shaped pale brown button; endosperm very shallowly and sparsely ruminant; embryo apical. Germination adjacent-ligular; eophyll bifid.

**Lemurophoenix halleuxii** *J. Dransf.* sp. nov. Palma pergrandis, formosissima solitaria caule usque 20 m et columna coronae roseo-griseata usque 1.5 m longa; rachis folii usque 4.25 m longa foliolis c. 60 utrinsecus regulariter