

# TECTIPHIALA, A NEW GENUS OF PALMAE FROM MAURITIUS

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## ABSTRACT

*Tectiphiala ferox*, a monotypic genus of arecoid palms in the *Oncosperma* alliance, is described and illustrated as new from Mauritius and is distinguished in a key to genera of the alliance.

Mr. Marc d'Unienville, asked by his friend and neighbor Mr. Jean-Alain Lalouette to locate seed of *Acanthophoenix*, returned from hunting on crown lands at Declerc, Mauritius, nearly a decade ago with the inflorescence of a spiny palm and observations on the plant. Mr. Lalouette, recognizing the palm as different, took it to Dr. R. E. Vaughan who, in turn, forwarded photographs for examination in 1969 followed by specimens in 1970. The palm has subsequently been studied in the field in 1971 and 1972 and proves to represent an eighth genus in the *Oncosperma* alliance of arecoid palms (Moore 1973). For it I propose the name *Tectiphiala* from the Latin *tectus* (covered, concealed) and *phiala* (a broad, flat-bottomed drinking vessel, saucer, bowl) because the bracts subtending the triads of flowers as seen from the side resemble a shallow cup and are at first obscured by the overlapping staminate buds. The following synoptic key attempts to put the genus in perspective relative to other genera of the alliance, all of which are characterized by fruit with an operculate endocarp and by the presence of spines on some or all vegetative parts.

1. Leaves with pinnae all 1-ribbed, regularly or irregularly arranged, acute or acuminate; sheaths usually forming a prominent tubular crownshaft: inflorescence usually infraxillary; peduncular bract enclosed by the prophyll, both inserted close together on the peduncle, splitting and caducous at anthesis; peduncle short, about as long as the rachis; rachillae straight or twisted and coiled in bud: staminate flowers asymmetrical, sepals acute, half as long as the acute petals or less.
2. Fruit ovoid, with apical or excentrically apical stigmatic residue; perianth about half as high as the fruit; seed with homogeneous endosperm: pinnae irregularly arranged in groups of 2-7 and borne in several planes, not armed with slender spines along the midrib above: rachillae essentially straight in bud; triads borne in six vertical rows, each triad subtended by a prominent saucerlike bract and the bracts approximate but obscured by the overlapping staminate buds, becoming prominent when flowers have fallen. Mascarene Islands. *Tectiphiala*
2. Fruit ellipsoid to globose, with lateral to basal stigmatic residue; perianth less than half as high as the fruit: pinnae variously arranged: triads spirally arranged and separated, subtended by smaller bracts.
3. Fruit ellipsoid, with basal stigmatic residue; seed with homogeneous endosperm: staminate flowers with ca. 9 stamens scarcely exceeding the petals and with a prominent, slender, elongate, trifid pistillode much exceeding the stamens and petals: prophyll and inner bract thick, rather densely spiny: pinnae not armed with slender spines on the midrib above near the base. Seychelles. *Deckenia*
3. Fruit globose to ellipsoid, with stigmatic residue lateral at, above, or slightly below the middle: staminate flowers with 6-12 stamens and ovoid, trifid pistillode shorter than the stamens and petals.

4. Stamens exerted at anthesis; pistillode minutely trifid: seed with homogeneous endosperm: trunk spineless; pinnae with very long black bristles or spines on midrib above toward the base: bracts of inflorescence thin, sparsely to densely hairy. Mascarene Islands. .... *Acanthophoenix*
4. Stamens included at anthesis; pistillode deeply trifid: seed with ruminant endosperm: trunk usually armed with rings of stout spines: pinnae lacking bristles or spines on midrib above: bracts of inflorescence thickish, spiny. Ceylon to Borneo and Sumatra. .... *Oncosperma*
1. Leaves with blades undivided laterally or irregularly divided into pinnae of varying width, these with mostly more than 1 principal rib and acute, bifid, or toothed at the apex, or the undivided blade toothed along the margin; sheaths open, not forming a prominent crownshaft: inflorescences interfoliar or at length becoming infrafoliar; peduncular bract inserted at some distance above the prophyll and much exceeding it, caducous, the prophyll dorsiventrally flattened, markedly ancipitous, open apically, persistent; peduncle elongate, usually exceeding the rachis; rachillae straight in bud: staminate flowers symmetrical or asymmetrical; sepals usually rounded and markedly imbricate, broader than high: seed with ruminant endosperm.
5. Staminate flowers with petals about twice as long as sepals; stamens 6; pistillode large, truncate, 3-angled and -lobed, about as high as the petals: pinnae with toothed apices, the veins parallel throughout.
6. Fruit large, 2.0-2.5 cm in diam.; endocarp conspicuously ridged and crested; seed more or less ridged and with anastomosing raphe branches: leaf blade almost appearing undivided, the pinnae scarcely disjunct. Seychelles. .... *Verschaffeltia*
6. Fruit small, 5 mm in diam. or less; endocarp not ridged; seed not ridged, the raphe branches few, ascending: pinnae clearly separated along the rachis. Seychelles. .... *Roscheria*
5. Staminate flowers with petals about 4 times as long as the sepals; stamens numerous (18 or more); pistillode neither truncate nor angled nor lobed but sometimes minutely trifid: pinnae acute to acuminate or incised-bifid, the veins convergent at apex.
7. Fruit ovoid: staminate flowers asymmetrical; stamens ca. 18, the filaments tapered to their attachment and the anthers more or less versatile; pistillode small, slender: leaf blade usually undivided, though incised marginally and the lobes bifid: inflorescence twice-branched. Seychelles. .... *Phoenicophorium*
7. Fruit subglobose: staminate flowers symmetrical with subnavicular petals; stamens 40-50, the filaments expanded at the point of attachment, anthers scarcely versatile; pistillode ovoid, minutely trifid: leaf blade pinnate with separated, mostly 2-3-ribbed, acute to acuminate pinnae: inflorescence simply branched. Seychelles. .... *Nephrosperma*

### TECTIPHIALA H. E. Moore, gen. nov.

Palmae monoeciae dense spinosae cespitosae vel solitariae. Folia pinnata vaginis tubularibus spinosis pinnis unicostatis fasciculatis. Inflorescentiae infrafoliales vel interfoliales simpliciter ramosae prophylo et bractea pedunculi proxime insertis. Flores in triadibus dispositi bracteis triadum prominentibus per alabastros masculos celatis staminibus floris masculi 6 (-7) filamentis in alabastro plus minusve torsivis ad apicem erectis antheris dorsifixis. Fructus ovoideus laevis stigmate apicali endocarpio operculato endospermio homoganeo embryone basali.

*Tectiphiala ferox* H. E. Moore, sp. nov. (Figs. 1-4).

Caules ad 2 m alti. Folia ca. 2.5 m longa pinnis utrinsecus 60 2-7-fasciculatis. Rachillae ca. 5. Fructus ovoideus ca. 1.3 cm altus 0.7 cm in diam.