flowers, and with *Juania* of Juan Fernandez. Beccari further commented that when the fruit is known, it might be convenient to consider *Oraniopsis* as a distinct genus. However, Essig in his recent synopsis of *Orania* (Essig 1980) made no mention of the generic discordance of *O. appendiculata*, or even of the subgenus *Oraniopsis*.

Good fruiting material collected by H. E. Moore and preserved in the Bailey Hortorium prompted J. Dransfield and N. W. Uhl to look again at the generic affinities of this well-known but little understood Queensland palm and we were immediately struck by the similarities to *Ceroxylon* rather than to Arecoid palms. A. K. Irvine in the meantime had independently realized that many features of *O. appendiculata* are quite anomalous; the present paper is a result of collaborating since December 1982. During 1983 and early 1984 A. K. Irvine collected complete material, including staminate and pistillate inflorescences and ripe fruit, allowing us to confirm affinity with *Ceroxylon* rather than *Orania*. In fact we believe *O. appendiculata* to represent a new genus, closely related to *Ceroxylon* and adding an extraordinary trans-Pacific or trans-Indian Ocean link to the distribution pattern of the tribe Ceroxyleae (subfamily Pseudophoenicoideae). We have chosen to use Beccari's subgeneric name *Oraniopsis* for the new genus, although we must emphasize that there is no relationship between the new genus and *Orania*, except that caused by misunderstanding.

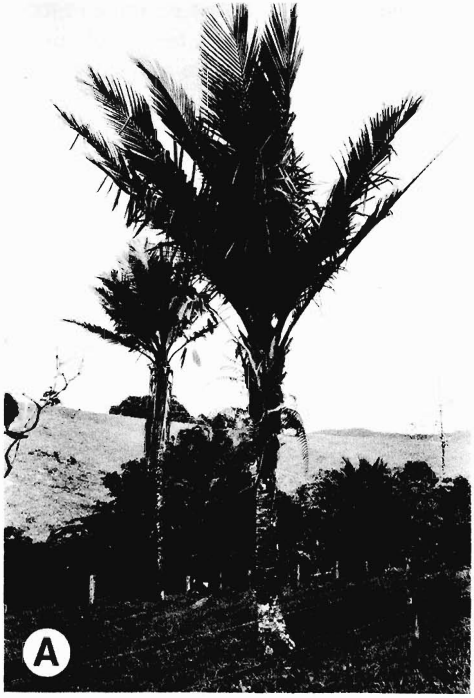
Oraniopsis (*Beccari*) *J. Dransfield, A. K. Irvine & N. Uhl* **gen. nov.** (Figs. 1, 2)

Orania Zippelius subgenus *Oraniopsis* Beccari in Beccari & Pichi-Sermolli, Webbia 11: 172. 1955.

Genus novum Australiense ad tribum Ceroxylearum pertinens et ut videtur Ceroxyloni simillimum sed prophyllo incompleto floribus bracteolas ferentibus, petalis liberis, staminibus egregiis, 3 inter petala insertis, 3 epipetalis differt. Palma solitaria, inermis, pleonantha, dioeca. Folio reduplicate pinnata, foliolis discoloribus, numerosis, regulariter dispositis. Inflorescentiae unisexuales, solitariae, axillares, interfoliaceae, foliis breviores, 4-ordinibus ramorum; prophyllum vaginis foliorum occultum, incomplete tubulosum; pedunculus elongatus, 3–5 bracteas magnas ferens, bracteis 2–3 distalibus inflorescentiam alabastro includentibus; rachillae numerosae; flores solitarii, spiraliter dispositi vel subdistichi, unusquisque bracteolam ferens. Flos staminatus calyce cupulari, petalis 3 carnosis, staminibus 6 et pistillodio parvo vel magno. Flos pistillatus staminato similis sed antheris vacuis et ovario magno trilobato. Fructus rotundatus, vestigio stigmatis basi, endospermio homogeneo, embryone subbasali.

Species unica: **Oraniopsis appendiculata** (F. M. Bailey) J. Dransfield, A. K. Irvine & N. W. Uhl (*Areca appendiculata* F. M. Bailey).

Medium, solitary, unarmed, pleonanthic, dioecious palm. Stem erect, sometimes quite tall, becoming bare, leaf scars apparently not very conspicuous. Leaves numerous, reduplicately pinnate, ± upward-pointing, marcescent, several dead leaves hanging vertically for some time, forming a skirt below the crown before falling completely (Fig. 1B); sheath apparently tubular at first, soon splitting opposite the petiole, the leaf base then open; petiole short, adaxially channeled, ± glabrous, abaxially rounded, densely covered with scales and tomentum, the margins smooth and rather sharp; rachis ± stiffly held, adaxially flattened or channeled near the base, abaxially rounded, distally angled adaxially, a minute flange present at the junction between the flattened and angled areas of the rachis, both surfaces of the


A


B


C


D

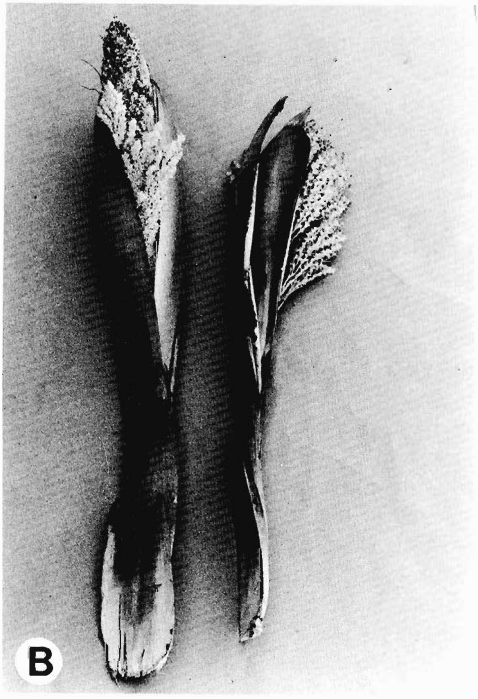
rachis bearing scattered scales; leaflets very numerous, single-fold, regularly arranged, ± stiff, ± linear, unevenly acute or acuminate, the basalmost few on each side short, narrow and crowded, adaxial surface ± glabrous or with scattered scales along the midrib, abaxial surface covered with dotlike scales and a dense felt of indumentum (Fig. 2D); transverse veinlets not evident.

Inflorescences solitary, axillary, interfoliar, shorter than the leaves, staminate and pistillate superficially similar, branching to 4 orders; prophyll short, obscured by the leaf bases, incompletely tubular, 2-keeled, ± leathery, becoming fibrous and disintegrating distally, sparsely tomentose, the basal margins decurrent; peduncle elongate ± flattened and winged at the base, distally ± elliptical in cross-section, sparsely to densely tomentose; peduncular bracts 3–5, elongate, the first inserted near the prophyll, the rest ± evenly spaced along the peduncle, the distal 2–3 ± enclosing the inflorescence in bud, ± beaked, leathery, tubular at first, then splitting longitudinally and becoming flattened, sparsely to densely tomentose, eventually caducous, leaving circular or crescentic scars; rachis slightly shorter than the peduncle; rachis bracts numerous, inconspicuous, short, triangular, acute or acuminate, membranous, incomplete, each subtending a first-order branch; first-order branches with a basal bare portion, distally bearing spirally arranged second-order branches each subtended by a minute incomplete bract; rachillae crowded, ± twisted or zigzag at anthesis, (the pistillate spreading but remaining rather zigzag in fruit), bearing rather distant, spirally arranged or subdistichous, minute triangular bracts, each subtending a short stalk bearing a minute, membranous, incomplete, triangular bracteole and terminating in a solitary flower. Staminate flowers symmetrical, or somewhat misshapen from close packing, open from early in development; sepals 3, very small, triangular, membranous, connate basally and forming a cup; petals 3, free, fleshy, much longer than the sepals, narrow, triangular; stamens 6, almost as long as or longer than the petals, the antesepalous inserted between the petals in, apparently, the same whorl (? by displacement), the antepetalous epipetalous, filaments very fleshy with ± conical, swollen bases, tapering to the connective, anthers ± oblong, ± versatile, basally somewhat sagittate, latrorse; pollen elliptic, monosulcate, exine semitectate, the distal face perforate, the proximal face reticulate; pistillode usually very much shorter than the filaments, 3-angled, apically trifid. Pistillate flowers as the staminate but with slightly broader sepals and petals; staminodes as the stamens, the empty anthers large; gynoecium tricarpellate, triovulate, conspicuously 3-lobed, stigmas apical, short, becoming recurved; ovules laterally attached, ? hemianatropous. Mature fruit developing from 1 carpel, rounded, the stigmatic and carpel remains basal; epicarp smooth, yellow at maturity; mesocarp ± fleshy, with horizontal fibers and stone cells; endocarp obsolescent. Seed, rounded, the integuments thick, ± woody,

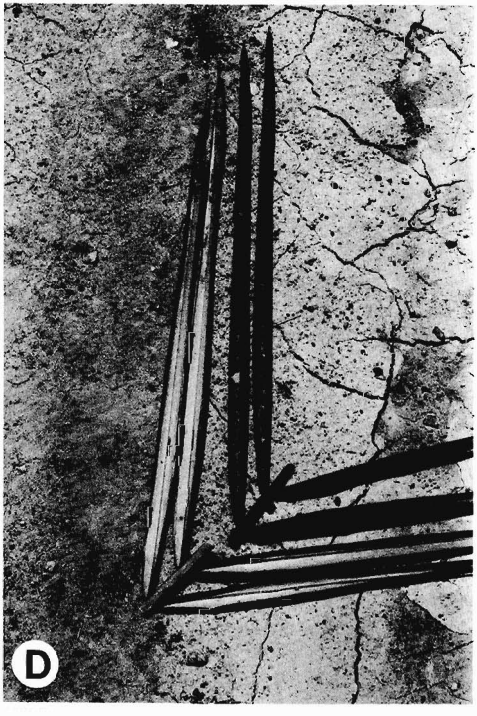
←

1. *Oraniopsis appendiculata*. A. Watson Road Millaa Millaa, Atherton Tablelands, North Queensland. Form of palms left exposed after clearing land for dairy farming, some 60–70 years earlier. The palms are 9 meters tall × 20 cm stem diameter, and would have at least been taller than the reach of cattle 60–70 years ago and noticeable enough for the farmer to leave standing. B. Kelly Road, Millaa Millaa, North Queensland. Old inflorescences in axils of leaves. C. Watson Road, Millaa Millaa, North Queensland. Exposed palm with full size but ⅔ mature, green fruit. Foreground: *Drynaria rigidula*, an epiphytic fern growing on the palm. Background right: *Calamus moti*. D. Topaz, North Queensland. In rain forest gully near edge. Overall height 9 meters. 1-12-1984. Photos by Tony Irvine.


A


B


C


D

with a basal short spur, and few sparsely branched, impressed vascular strands; endosperm homogeneous with a narrow central hollow; embryo sub-basal. Germination adjacent-ligular; seedling leaf bifid with entire tips.

Oraniopsis appendiculata (*F. M. Bailey*) *J. Dransfield, A. K. Irvine & N. W. Uhl*, **comb. nov.**

Areca appendiculata F. M. Bailey, in Dep. Agric. Bot. Bulletin 4: 18. 1891. Type: Queensland, Bellenden-Ker, *F. M. Bailey* s.n. in 1889 (BRI).

Orania appendiculata (F. M. Bailey) Domin in Bibliothec. Bot. 85: 498. 1915.

Orania beccarii F. M. Bailey in Queensland Agric. Journal 23: 35. 1909. Type as for *A. appendiculata*.

Trunk up to 20 m tall, 20–45 cm diam. at breast height, gray, irregularly marked with leaf scars. Leaves ca. 8–15 in crown, up to ca. 6 m long; sheathing base cup-like, rather short ca. 20 cm wide at the base, tapering to ca. 15 cm wide, and then narrowing into the petiole; petiole up to ca. 65 cm long, up to ca. 7.0 × 6.0 cm in section, the margins ± winged, ca. 1–2 cm deep, sharp, abaxially brown tomentose; rachis becoming adaxially ridged at ca. half its length; leaflets up to ca. 110 on each side of the rachis, the apical pair composed of 2–4 folds, the rest all single-fold, basal leaflets ca. 15–20 × 0.5–0.8 cm, mid-leaf leaflets to ca. 100 × 4.5 cm, apical pair up to ca. 43 × 4.5 cm, leaflets held at ca. 60° from the rachis except near the tip where ca. 30°; adaxial surface dark green, abaxial surface mealy, grey-white, tinged brown, with numerous small, dark brown scales. Inflorescences 80–120 cm long; peduncle up to ca. 75 cm long, up to ca. 4 × 2 cm in cross-section, strongly flattened and winged at the base; prophyll borne near the base of the peduncle, ca. 25 × 6 cm, abaxially open to the base, adaxially splitting irregularly; peduncular bract 1 inserted 6–13.5 cm above the base, up to ca. 60 cm long, split abaxially, opening out somewhat, ca. 10 cm wide at widest point, strongly keeled; peduncular bract 2 inserted ca. 20–26 cm above the base, 60–135 × 8–12 cm; peduncular bract 3 inserted ca. 25–50 cm above the base, slightly smaller than bract 2; peduncular bract 4, where present, inserted up to 70 cm above the base, either similar to bract 3, up to 87 cm long or dissimilar, triangular, membranous, ca. 5 cm long, incompletely sheathing with long decurrent margins; peduncular bract 5, where present, inserted up to 70 cm from the base, membranous, subulate, ca. 6 cm long; rachis ca. 35–45 cm long; rachis bracts triangular, membranous, easily disintegrating, the basal to 4 × 1 cm, the distal very small and inconspicuous; first-order branches ca. 70 in staminate, 30–40 in pistillate inflorescence, spirally arranged; rachillae very numerous, staminate ca. 3–5 × 0.15 cm, pistillate ca. 4–10 × 0.2 cm. Staminate flowers cream-colored, borne on pedicels ca. 1.2 × 1.2 mm; calyx ca. 1 mm high with lobes to 0.5 mm; petals ca. 6 × 2 mm; filaments ca. 3–3.5 mm long, ca. 1

←

2. *Oraniopsis appendiculata*. A. Watson Road, Millaa Millaa, North Queensland. An exposed staminate palm 7 meters tall, stem diameter 22 cm, on land cleared 60–70 years earlier for dairy farm. Note epiphytes: *Drynaria rigidula* (a fern) and *Schefflera actinophylla* (Araliaceae) Umbrella Tree. Background left: *Calamus moti*. Note the palms would have at least been taller than the reach of cattle 60–70 years ago. B. Keith Davis's farm, Watson Road, Millaa Millaa, North Queensland. Staminate inflorescence left, pistilate inflorescence right. C. Leaf, Topaz, North Queensland. Taken at Timberlea, Atherton (Irvine's home), daughter Rina (nearly 10 years old) and son Ian (4 years old). D. Kelly Road, Millaa Millaa, North Queensland, Australia. Upper and lower leaflet surfaces, greyish white below, green above. 1-12-1984. Photos by Tony Irvine.