

Catoblastus distichus, an Interesting New Palm from Colombia

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Intensive collections of palms on the western slopes of the Cordillera Occidental, in northern Colombia, since 1982, have resulted in a number of interesting findings (Bernal in preparation, Bernal and Henderson in preparation, Galeano in press). The species described here was collected in that area for the first time in January 1982, when most individuals bore inflorescences at different stages of development, but not one had ripe fruits. Although fruits are usually required to determine species of *Catoblastus*, it was immediately evident that the species was undescribed, and efforts were made to collect fruiting material. After two literally fruitless expeditions in May 1982 and June 1983, fruits were finally collected in March 1984, and the species can now be described in full.

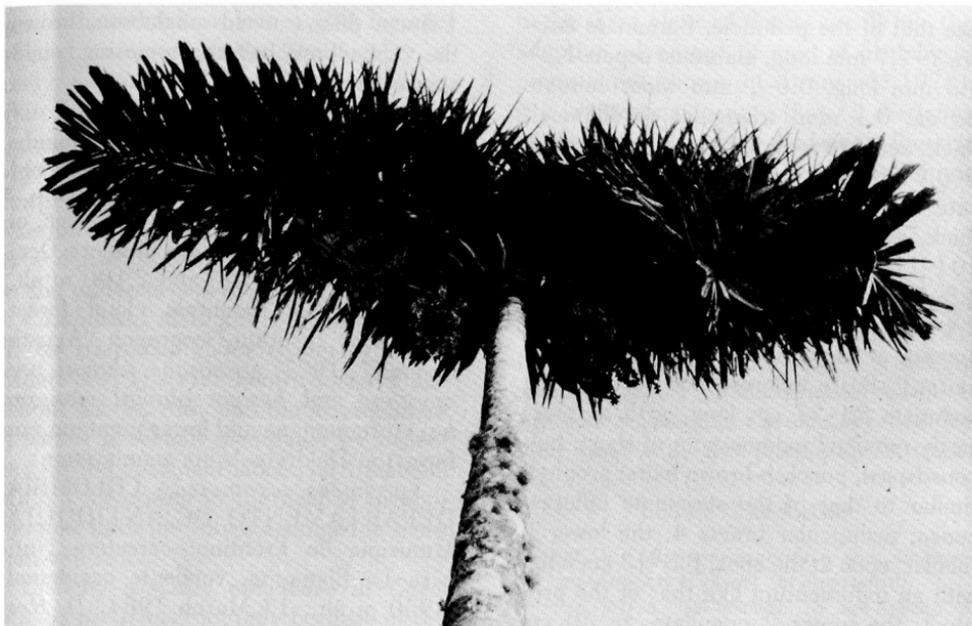
Catoblastus distichus R. Bernal, sp. nov. (Figs. 1,2)

Caudex solitarius ad 17 m altus, radicebus epigeis ad 1.8 m altis sustentatus. Folia 4-6, disticha; pinnae utrinque 27-32, in segmentos 2-7 fissae, segmentis utrinque 90-131. Inflorescentiae 7-11 in quoque nodo, ramosae, bracteae peduncularibus 4. Flores masculi staminibus (7-) 10 (-11). Fructus 2.2-2.5 cm longi, 1.9-2.1 cm diametro, ellipsoideo-subglobosi, exocarpium oculo inermi leve. Albumen aequabile.

Typus: Colombia, *D. Restrepo et al.* 144 (holotypus COL, isotypus MEDEL).

Trunk 10-17 m high, 12-17 cm diam.,

grayish, with a thick outer layer of hard, blackish fibers, supported by a cone of stilt roots 0.5-1.8 m high, 0.8-1 m diam. at base, individual roots 3-5 cm diam., with conical spines 2-3 mm long. Leaves 4-6, perfectly distichous; sheath 104-160 cm long, purple, forming a conspicuous crownshaft, the latter cylindrical toward base and strongly compressed toward apex in the same plane as the leaves, marginally dry with very scattered, appressed, short, purplish hairs; petiole 7-17 cm long, green and terete when fresh, 2.2-3.8 cm diam. when dry, with a thin, brown-rufous indumentum of strongly appressed hairs, except for a light glabrous stripe on the adaxial surface; rachis 206-296 cm long, 1.3-2.6 cm wide at middle, adaxially acute, striate, with a brown-ferruginous tomentum, eventually glabrescent and exposing the furfuraceous surface, abaxially light brown, with an indumentum of appressed, flattened and scalelike white hairs; pinnae 27-32 on each side, longitudinally divided (except the basal, subapical and apical) into 2-7 segments, in total 90-131 segments on each side, these rather stiff, arranged in many planes but never downwards, covered above near base with an indumentum like that of the rachis, otherwise glabrous, except for some short, bulbous-based, purplish hairs, very scattered along the veins, with long brownish hairs very scattered on the surface below, the veins with short, appressed, bulbous-based, yellowish hairs more densely arranged; segments of each pinna linear, 0.9-5.5 cm wide, the outer much wider



1. The crown of *Catoblastus distichus* seen from below.

than the inner; lowermost pinnae 38–50.5 cm long, usually undivided, second pair of pinnae 56–69 cm, middle pinnae 72–91.5 cm, apical pinnae connate into a narrow flabellum 17–18 cm along the lower margin, to ca. 9 cm wide at the apex. Inflorescences 7–11 per node, only the central one maturing, and either staminate or pistillate. Staminate inflorescences 26–31 cm long; peduncle 10–15.5 cm long, with short, purplish-brown tomentum; prophyll 5.5 cm long, 4 cm diam., tubular, bicarinate, with appressed, caducous, purplish hairs; peduncular bracts 4, the lower 2 tubular, open at the apex, 4.3–9.5 cm long, with scattered rufous hairs, the upper 2 cucullate, shortly rostrate, 20–25 cm long, slightly striate, with brownish tomentum toward base, the remaining surface with very scattered, easily removed, short, purplish hairs; rachis 5.5–8.5 cm long, with dense indumentum of short, bulbous-based, yellowish-brown hairs; rachillae 12–15, to 14 cm long, with an indumentum



2. *Catoblastus distichus*, note lateral rows of inflorescence scars.

like that of the peduncle. Staminate flowers 7–7.7 mm long, glabrous; sepals 1.2–1.5 mm long, 0.6–1 mm wide, connate for ca. 0.1 mm, triangular to elliptical, thick, acute to rounded at the apex; petals 5–6.7 mm long, 1.8–2.3 mm wide, imbricate at base, narrowly ovate-triangular, thick, acute or acuminate; stamens (7–) 10 (–11); filaments 1–2 mm long; anthers 4.5–5.8 mm long, including an apiculum 0.4–0.8 mm long, sometimes shortly unequal at base, with a few long, caducous hairs. Pistillate inflorescence 53 cm long; peduncle 23–27 cm long, with a thick, easily removed indumentum of short, bulbous-based, purplish-brown hairs; prophyll similar to that of the staminate inflorescence; peduncular bracts 4, the lower 2 tubular, open at the apex, 8.5–13 cm long, with an indumentum like that of the prophyll, the upper 2 cucullate, to 40 cm long, with an indumentum like that of the upper bracts of the staminate inflorescence; rachis 14–23 cm long, with an indumentum like that of the peduncle; rachillae 15–24, to 45 cm long, 4–5 mm diam. at middle, with an indumentum like that of the peduncle. Pistillate flowers (just fertilized) 12–15 mm long; sepals 2.3–2.8 mm long, 2–4 mm wide, shortly connate at base, ovate to suborbiculate; petals 4.5–5.5 mm long, 4–6 mm wide, ovate to broadly so, rounded at the apex, glabrous; fertile carpel 12–13 mm long, 7.5–9 mm diam., somewhat unequally ellipsoid to ovoid, verruculous, with bulbous-based, yellowish-brown hairs; stigmas sessile, 4–5 mm long; sterile carpels minute, ellipsoid; staminodes minute, triangular or linear. Fruits 2.2–2.5 cm long, 1.9–2.1 cm diam., ellipsoid-subglobose, sparsely pubescent with short, bulbous-based, brownish hairs, more or less glabrescent; pericarp ca. 1 mm thick, the surface smooth to the naked eye, minutely granulose under a lens, dull, somewhat rough to the touch; fruiting perianth 1.3–1.4 cm diam.; stigmas 5–6 mm long. Seeds 1.7–

1.8 cm diam., ovoid-subglobose, brown, the raphe branches anastomosing; endosperm homogeneous.

Vernacular name: “*macana*.”

Distribution: Known only from a restricted region in northern Colombia, on the western slopes of the Cordillera Occidental, between 1,700 and 2,100 m alt., in an area of mountain cloud forest, mapped by Instituto Geográfico “Agustín Codazzi” (1977) as *bosque pluvial premontano* and *bosque pluvial montano bajo* (premontane and lower montane rain forest) in Holdridge’s life zone system.

Specimens examined: COLOMBIA. DEPARTAMENTO DE ANTIOQUIA: Municipio de Frontino: carretera Nutibara–La Blanquita, verriente occidental, 1,950 m alt., 17 March 1984, *D. Restrepo et al.* 144 (COL, holotype; MEDEL, isotype); same locality, 4 January 1982, *G. Galeano & R. Bernal* 465 (COL), 466 (COL); same locality, 1,800–1,900 m. alt., 6 January 1982, *G. Galeano & R. Bernal* 483 (COL). Municipio de Urros, camino al Parque Nacional Natural de Las Orquídeas, páramo de San Pedro, 2,100 m alt., 23 June 1982, *R. Bernal & G. Galeano* 378 (COL).

This new species is readily distinguished from all others so far known in *Catoblastus sensu lato*, by the combination of distichous leaves, purple crownshaft, divided pinnae provided below with long, brownish hairs very scattered on the surface, the staminate flowers with (7–) 10 (–11) stamens, and the ellipsoid-subglobose fruits, with the exocarp appearing smooth to the naked eye. In fruit characters it recalls *Catoblastus kalbreyeri* (Burret) Burret and *Catostigma inconstans* Dugand,* but neither of these

* *Catostigma inconstans* was transferred to *Catoblastus* by Glassman (1972: 63), but his new combination was not validly published, according to article 33.2 of the International Code of Botanical Nomen-

species has distichous leaves. The former, which I have seen at the type locality, is easily distinguished by the very thick, white indumentum that initially covers the peduncular bracts; the latter species, of which I have seen photographs taken by Cuatrecasas (the collector of the type) and determined by Dugand, is characterized by a dense tomentum of yellowish hairs on the undersurface of pinnae.

Catoblastus distichus is the first species of the Iriarteoid Major Group of palms (Moore 1973) so far known to have distichous leaves. Although the arrangement of leaves is seldom mentioned by collectors on the specimen labels, all Iriarteoid palms I have seen in the field or in photographs have the leaves arranged in more than two rows.

Distichy is easily noticeable in *Catoblastus distichus*, not only because of the quite unusual aspect of the palm, particularly when seen from below (Fig. 1), but also because the scars of the old inflorescences are arranged in two conspicuous vertical rows (Fig. 2), and the crownshaft is remarkably compressed toward the apex

clature (Voss et al. 1983), since a full and direct reference to the place of publication of the basionym was not given, Glassman's complete citation of *Catostigma inconstans* on page 64 was intended only as a regular entry of the Index, and not as the reference to the basionym of the new combination made on page 63. Glassman's new combination is here validated as follows:

Catoblastus inconstans (Dugand) Glassman, comb. nov. Basionym: *Catostigma inconstans* Dugand, *Caldasia* 2: 392. 1944 Type: *Cuatrecasas 14957* (COL, holotype; F, isotype).

in the same plane of the leaves. While the adaptive advantage (if any) of distichy in palms is not known (cf. Dransfield 1978), it is interesting to note that *C. distichus* grows together with *Aiphanes linearis* Burret, another palm with distichous leaves.

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