

Syagrus* × *mirandana*, a Naturally Occurring Hybrid of *S.* *coronata* and *S.* *microphylla

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1. A *Syagrus* × *mirandana* inflorescence extending far above its own foliage.



A naturally-occurring hybrid between *Syagrus coronata* (Mart.) Becc. and *S. microphylla* Burret was found in Bahia, Brazil, and is herein described.

A recent paper by Hodel (2011) nicely summarized *Syagrus* hybrids that occur naturally or have been made by man. Many of these were reported by Glassman (1987). However, there is one unreported naturally-occurring hybrid that needs to be added to the list. It should come as no surprise that one of the parents of this newly described hybrid is *Syagrus coronata*, which I often refer to as the “Don Juan” of the genus, because it easily crosses with other *Syagrus* species. Thus far *S. coronata* is known to cross with *S. cearensis* Noblick, *S. romanzoffiana* (Cham.) Glassman, *S. schizophylla* (Mart.) Glassman and *S. vagans* (Bondar) A.D. Hawkes to form respectively: *S. × costae* Glassman, *S. × camposportoana* (Bondar) A.D. Hawkes, *S. × tostana* (Bondar) Glassman and *S. × matafome* (Bondar) A.D. Hawkes. Hodel (2011) even mentioned a man-made hybrid with *S. microphylla* Barb.Rodr. The following is a description of its natural hybrid with *S. microphylla*.

***Syagrus* × *mirandana* Noblick sp. hyb. nov.**
Palma acaulis, tronco subterraneo. Pinnae irregulariter 2–3 aggregatae, lobis apicalibus obtusis. Rhachis foliorum 56–95 cm valde recurvata. *Syagrus microphyllae* similis sed major rachillis longioribus et numerosis. Inflorescentia altitudinem foliorum multo excedens. Typus: BRAZIL. Bahia: Municipio de

Sento Sé, Serra do Alegre 3 km S of Campo Largo in the Serra do Pau d’Arco, ca. 9E40’S 41E18’W, 7 Oct 1988, L.R. Noblick & J.L. dos S. Lima 4613 (holotypus, CEPEC; isotypi, F, CPATSA, BAH, NY, MO, US). Figs. 1–4.

Palm, small, solitary or appearing clustered, unarmed. **Stem** subterranean. **Leaves** 5–12 in crown, spirally arranged and spreading, strongly recurved; sheathing leaf base not measured, fibrous; petiole 6–28 cm long with untoothed margins, channeled; rachis 56–95 cm long; leaflets waxy green on upper surface and whitish on the lower, 28–38 along each side, irregularly distributed in clusters of 2 or 3 along rachis in divergent planes, those of middle series 14–34 × 1.4–2.7 cm, with mostly asymmetric tips. **Inflorescence** androgynous, interfoliar, prophyll 18–20 × 2 cm wide, 2-keeled; peduncular bract woody, finely sulcate, light grayish green, total length approximately 89–146 cm long, expanded or inflated portion 30–41 × 3.5–4 cm, bearing a 1.5–3 cm beak; peduncle ca. 55–118 × 0.8 cm, rachis 25–42 cm long, rachillae 8–18, 13–26 cm long and 5 mm in diameter at the base and 1 mm in diameter at the tip, each rachilla subtended by a bract 2–3 mm long and 3 mm wide, pistillate portion 4–11 cm long, with (1–)7–11 pistillate flowers or fruits per rachilla, staminate portion 9–14 cm long. **Staminate flowers** arranged

2. The habit and desolate habitat of *Syagrus* × *mirandana*, which is easily visible among the other native plants, especially during the dry season.



spirally in triads (1 pistillate and 2 staminate) on the lower portion and in dyads or singly on upper portion of the rachilla, cream in color, 5–7 × 3.0–3.5 mm, sepals and petals 3, sepals 1 × less than 1 mm, glabrous, petals valvate, 6–7 × 2.5–3.0 mm with acute tips, glabrous with indistinct nerves, stamens 6, ca. 4–5 mm long, anther 3–4 mm long, filaments 1–2 mm long, pistillode 1.0–1.5 mm and trifid.; **Pistillate flowers** grayish brown in color, 6–7 × 4–5 mm, sepals and petals 3, sepals 5–7 × 4–5 mm, petals imbricate, 4–6 × 2–3 mm, pistil 3 × 2 mm (aborted?), stigmas 3, staminodial ring about 1 mm high. **Fruit** none seen, seeds none seen.

COMMON NAME: None recorded.

ETYMOLOGY: The specific epithet *mirandana* is named to honor Dr. E.E. Miranda, who first drew our attention to the existence of this palm. He is a researcher at CPATSA (Centro de Pesquisa Agropecuario Tropico Semiárido, EMBRAPA), a federally supported research center for the tropical semiarid areas of Brazil based in Petrolina, Pernambuco.

DISTRIBUTION AND HABITAT: To date, this palm has been found only in the Serra do Alegre, Sento Se, Bahia. However, it could potentially be found wherever the ranges of *S. coronata* and *S. microphylla* populations overlap. It grows above 1000 m in a disjunct cerrado (called *gerais* or *campo limpo*), or open savanna, which has few other tree species other than the occasional *S. coronata*, thus the name *campo limpo* meaning clean field. The soil is very poor, fine grain whitish to brownish sand or gravel. The cerrado is disjunct in that it is surrounded by arid caatinga vegetation at the lower elevations and is disjunct from the cerrados west of the São Francisco River.

CONSERVATION: This hybrid is not common, it was found only once, but with several plants of it at the locality where it was first collected. A Brazilian colleague searched for it as recently as 2009 and was unable to locate any plants (Harri Lorenzi, pers. comm.). However, the area is large, desolate, monotonously repetitive, and the plants are short enough, that it might be difficult to spot if they were not in flower at the time. Conditions apparently must be ideal for the hybrid to form, because it occurs infrequently and has not been seen in other areas where the two parent species are known to overlap.

PHENOLOGY: Collected in flower in October.

USES: None recorded.

OBSERVATIONS: This infrequent palm hybrid is intermediate in several characters (Table 1) between the only other two *Syagrus* species in the area, *S. coronata* and *S. microphylla*, and is most definitely the hybrid between these two species. It demonstrates hybrid vigor in at least two associated characters: the peduncle and peduncular bract. The peduncle grows to 118 cm long (vs. 90 cm and 55 cm for *S. coronata* and *S. microphylla* respectively). The total peduncular bract length grows to 146 cm long (vs. 112 cm and 68 cm for *S. coronata* and *S. microphylla* respectively)(Fig. 1). It is easily distinguished from *S. coronata* by its acaulescent growth habit, smaller branched inflorescence, and smaller leaves with fewer leaflets (Table 1). One can separate it from *S. microphylla* due to its larger size, longer and strongly recurved leaf rachis (Fig. 2), a larger inflorescence with more numerous rachillae (8–18 vs. 3–13), and a longer peduncle that protrudes above the height of its own foliage

3. A *Syagrus × mirandana* inflorescence with its narrow 3.5–4 cm peduncular bract, similar to *S. microphylla*.





4. The short *Syagrus microphylla* is the probable mother plant of *Syagrus* × *mirandana* with short leaves and an inflorescence that is about the same height as its foliage.

or surrounding vegetation (Fig. 1). In many characters this hybrid is closer to *S. microphylla*, the mother plant (Fig. 4), with its acaulescent habit, similar number of leaves in the crown, narrow peduncular bract (to 3–4 cm in width vs. 8–21 for *S. coronata*) and similar sized female or pistillate flowers (5–7 mm vs. 7–12 mm long for *S. coronata*). The height of the inflorescence above the rest of the plant is an especially good field character for spotting this acaulescent palm because *S. microphylla* has an inflorescence that rarely extends much above the height of its own foliage (Fig. 4) and the plants themselves are often not much higher than the surrounding vegetation. The pistil is very small in the hybrid and may be aborted.

ADDITIONAL SPECIMENS EXAMINED: BRAZIL. Bahia: Municipio de Remanso [Sento Se?], *Miranda s.n.* (Herbarium at CPATSA).

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Table 1. Medial measurements demonstrating hybrid nature of *S.* × *mirandana*.

Character	<i>S. coronata</i>	<i>S.</i> × <i>mirandana</i>	<i>S. microphylla</i>
Leaf rachis (cm)	100–275	56–95	29–62
Leaflet number	80–130	28–38	18–36
Middle leaflet length (cm)	22–70	14–34	10–22
Prophyll length (cm)	35–55	18–20	8–17
Inflorescence length (cm)	30–95	25–42	7–18
Rachillae number	39–78	8–18	3–16