

# *Syagrus evansiana*, a New Palm from Minas Gerais, Brazil

LARRY R. NOBLICK  
*Montgomery Botanical Center  
11901 Old Cutler Road  
Miami, Florida 33156 USA*



1. *Syagrus evansiana* in habitat with its blue to gray-green foliage.

A new, nearly stemless species of *Syagrus* (Figs. 1 & 2) has been discovered in the campo rupestre regions of Minas Gerais, Brazil and is named here *S. evansiana*.

Don Evans, Fairchild Tropical Botanic Garden's retired Director of Grounds Management, placed on my desk the dried leaf and spicate inflorescence of a nearly stemless palm that he had collected and photographed on a 1992 expedition with Roberto Burle Marx in the state of Minas Gerais. Even though the leaves had an uncanny resemblance to *Syagrus duartei* Glassman (Serra do Cipó) and *S. glaucescens* Glaz. ex Becc. (Serra da Diamantina), the inflorescence was far too small for either of these species and it was north of their normal distribution ranges. *Syagrus duartei* and *S. glaucescens* are separated by size differences (Glassman 1987). Since I did not have enough information on this palm, I waited for the opportunity to investigate its habitat in Minas Gerais in person. Years passed, when Harri Lorenzi wrote that he was going to the Diamantina region of Minas Gerais to photograph *S. mendanhensis* and asked me if there were any other palms in that region that were in need of checking. I immediately asked him to investigate the palm Don had discovered. So it was with a great deal of excitement that he e-mailed me a few weeks later with photos and a conviction that it was a new species. He even put it into his revised palm book as *Syagrus* sp. nov. 1 (Lorenzi 2004). Finally, in June of 2008 we visited this region together and learned that it had a larger distributional range than we had anticipated. The description of the new species follows.

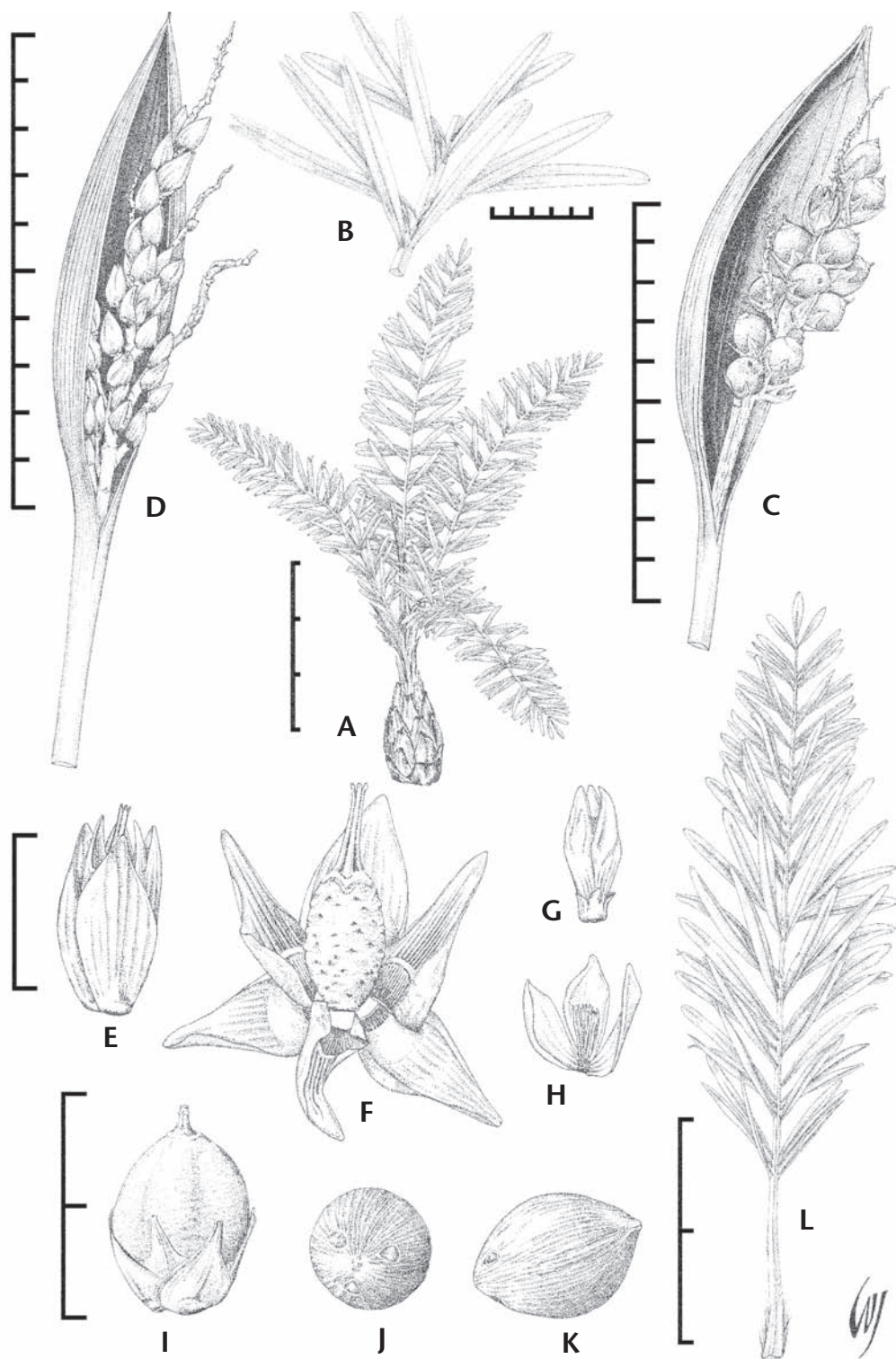
***Syagrus evansiana* Noblick sp. nov.**, a *S. glaucescens* et *S. duartei* statura brevior, plerumque acaule, inflorescentia plerumque spicata, bractea peduncularis brevior 7–22 cm, inflorescentiis brevioribus 4.5–10 cm, staminibus brevioribus 4–5 mm, fructibus brevioribus 2.0–2.3 cm × 1.3–1.5 cm, et endocarpio cum 3–5 poris differt. Typus. Brazil, Minas Gerais, Montes Claros, N side of BR 365 (Pirapora\Montes Claros) at km 70.5, S17°04'05.9" W044°20'19.0" 960 m, 20 Jun 2008, Rodrigo Tsuji, H. Lorenzi, L.A. Ventura, L.R. Noblick 2703 (Holotypus: HPL! Isotypi: R! BHC! FTG! K! NY!). (Fig. 3.)

Palm, solitary and acaulescent or nearly so with a very short to subterranean trunk, whole plant usually less than 60 cm in height, but varying from 40–100 cm in height. Leaves gray-green, 3–11 in number; leaf sheath plus the petiole ca. 10–40 cm long, sheathing leaf base ca. 10–20 cm long, fibrous with papery membrane between the fine principal warp fibers, tending to disintegrate along the margins of the pseudo-petiole; true petiole

absent to nearly 18 (–26.5) cm long and 0.6–1.5 cm wide by 0.3–0.8 cm thick, channeled adaxially and rounded abaxially, pseudopetiole (true petiole plus part of the sheath) to 10–33 cm long; rachis 21–92 cm long; leaflets medium to dark gray green becoming lighter when dried, discolorous, adaxial surface waxy, but abaxial surface with a thicker white waxy coating, leaflets 18–48 along one side, irregularly distributed in clusters of 2–4 (–5) along the rachis and inserted in divergent planes, ramenta or tomentum absent at leaflet insertion and along the abaxial midvein of the leaflets; basal leaflets 4–27 cm long by 0.2–0.8 cm wide, middle leaflets 12–30 cm long and 1.5–3 cm wide, apical leaflets 3–12 cm long and 0.1–0.9 cm wide, both lobes of the asymmetric tip rounded. Inflorescence androgynous, interfoliar, commonly spicate, with a total length of 4.5–17 cm from the first flowers or basal primary branch to the apex; prophyll 6–16 cm × 1.5–2.5 cm; peduncular bract woody, sulcate,

2. Spike inflorescence of *Syagrus evansiana* with mature male flowers.





3. Diagnostic Plate of *Syagrus evansiana*: A. Habit; B. Leaflets; C. Infructescence; D. Inflorescence; E. Receptive pistillate flower; F. Pistillate flower opened to see ovary; G. Staminate flower; H. Staminate flower opened to see stamens; I. Fruit; J. Endocarp end view showing pores; K. Endocarp side view; L. Leaf. Habit, leaf and leaflets drawn from images supplied by Harri Lorenzi. Reproductive parts drawn from *Lorenzi 4276*. All scales are in 1 cm units except A and L which are in 1 dm units.



4. The "campo rupestre" or rocky fields habitat of *Syagrus evansiana* in Minas Gerais near Itacambira.

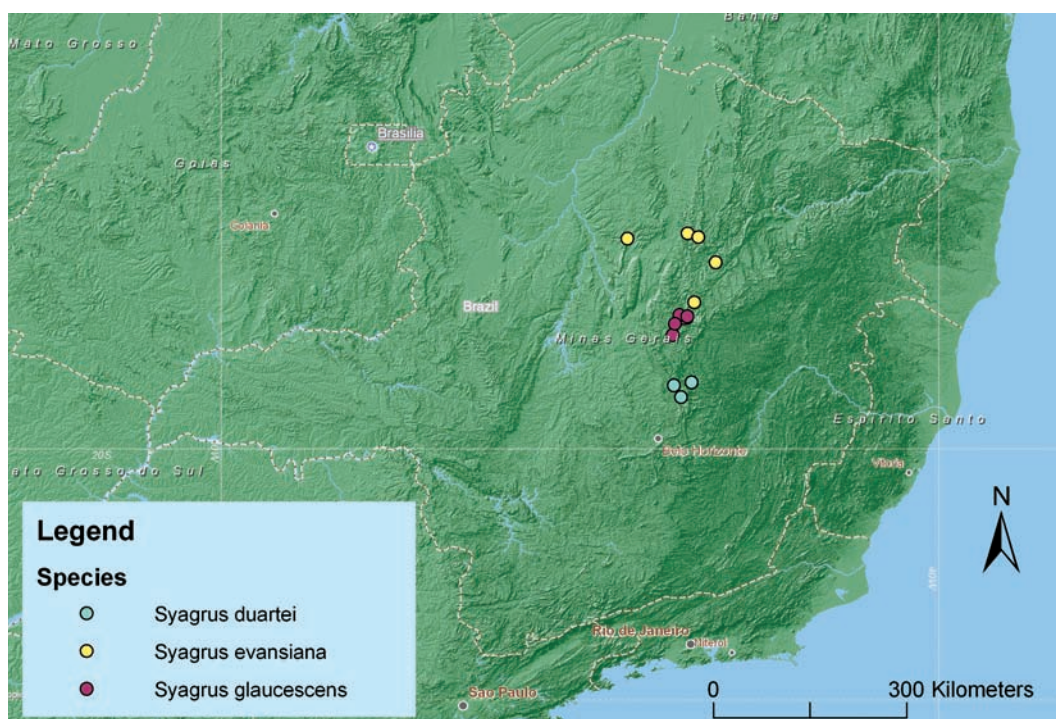
exterior with scattered thin indument becoming increasingly dense near the base, total length ca. 12–48 cm including a beak of 0–1.5 cm, expanded or inflated portion 7–22 cm long, with 1.5–7 cm diam. and 3–11 cm perimeter and 1–2 mm thickness; peduncle glabrous, ca. 8–27 cm long, somewhat flattened in cross-section, 0.3–0.7 × 0.3–0.5 cm diam., rachis 0–6 cm long measured between the lowest and upper branches, primary branches glabrous, numbering 1–8, 4.5–10 cm long at the apex, (2–) 5–8 cm at the base, 4–5 mm diam. at the base and 1–2 mm diam. at its tip, pistillate portion 2–5 cm long with 3–12 pistillate flowers or fruits per primary branch, staminate portion 2–7 cm long; staminate flowers yellow, arranged in triads on the lower portion or in staminate dyads or singly on the upper portion of the primary branch, 8–10 mm long and 4–5 mm wide, sepals and petals 3, sepals 1.5–2 mm long and 1.5–2 mm wide, usually keeled and connate at the base, petals valvate, 7 mm long and 4–5 mm wide with acute tips, nerves indistinct, stamens 6, 4–5 mm long, anthers 3.5–4.0 mm long, filaments 1 mm long, pistillode trifid and less than 1 mm long; basal pistillate flowers elongate pyramidal, glabrous, 11–19 mm long and 5–10 mm wide (apical flowers 8–10 mm × 4–7 mm), sepals and petals 3,

sepals imbricate 11–19 mm long and 4–5 mm wide, petals unnerved, imbricate at the base but (upper 4–5 mm) valvate at the tips, 10–11 mm long and 3.5–4.0 mm wide, pistil, with lepidote indument from base to nearly the base of the stigmas, 10–11 mm long and 3.5–4.0 mm in diam., stigmas 3–5, and 3 mm long, glabrous, staminodial ring about 1–3 mm high and 6-dentate; fruit yellowish brown when mature, obscured by a thick brown indument or lepidote tomentum, globose, about as long as wide 2–2.3, 1.4–1.5 cm in diam. with a 1–2 mm thick fleshy-fibrous (pulpy) mesocarp and ca. 1 mm thick endocarp, endocarp ca. 1.4–1.6 cm long × 1.1–1.3 cm diam. with 3–5 visible endocarp pores on the basal end and seed nearly globose ca. 8 mm in diam.

**Common Name:** *palmerinha*.

**Etymology:** The specific epithet honors Don Evans, retired Director of Grounds Management at Fairchild Tropical Botanic Garden, Miami, Florida, USA.

**Distribution and Ecology:** Brazil, locally common in the well-drained, rocky soils and high grassy plains (900–1300 m) of the "campo rupestre" regions (Fig. 4) northwest and north of Diamantina, Minas Gerais, with its *S. glaucescens* populations (Fig. 5), but also in



5 (top). Map showing the state of Minas Gerais, Brazil and the known distribution of *Syagrus evansiana*, *S. glaucescens* and *S. duartei*. 6 (bottom). The type locality of *Syagrus evansiana*, a cerrado between Pirapora and Montes Claros, Minas Gerais.

high altitude cerrado (west of Montes Claros). (Fig. 6) It is not a rare plant; in fact, it is common on the Cadeia do Espinhaço, Minas

Gerais (MG). There are areas where it is a dominant plant, i.e. on the high flat grassy plateaus near Itacambira.

**Table 1. A comparison between *Syagrus evansiana* and two other closely related species, *S. duartei* and *S. glaucescens*.**

	<i>S. duartei</i>	<i>S. glaucescens</i>	<i>S. evansiana</i>
Peduncular Bract length (cm)	33–73	37–83	12–48
Peduncular Bract length Inflated portion (cm)	20–45	25–40	7–22
Peduncle length (cm)	26–50	21–64	8–27
Inflorescence length (cm)	15–36	16–29	4.5–17
Rachis length (cm)	7–23	5–16	0–8
Stamen length (mm)	8–10.5	6–8.5	4–5
Anther length (mm)	6–9.5	5–7.5	3.5–4
Pistillate flower length (mm)	20–22	8–14	10–19
Pistillate flower width (mm)	4.5–6	4–6	5–10
Fruit length (cm)	3–3.8	2.5–3	2–2.3
Fruit width (cm)	2.5–3.2	1.6–2.5	1.3–1.5
Number of Endocarp pores	3	3	3–5

**Phenology:** Flowering in June–August and also December and with mature fruits in December.

**Additional Specimens Examined:** BRAZIL, Minas Gerais, Municipio de Juramento, SE of the city of Juramento on Rd. to Itacambira (Itacambira\Montes Claros), Serra Catuni, border between Juramento and Itacambira. 17°00'S, 43°30'W, Aug 1992. *Don Evans s.n* (FTG); Municipio de Itacambira, 17 Dec 2003, *H.Lorenzi 4269* (HPL), na estrada de terra para Caçaratiba, 17 Dec 2003, *H. Lorenzi 4276* (FTG, HPL).

**Uses:** This palm has ornamental potential. It is petite with attractive foliage.

**Notes:** *Syagrus glaucescens* and *Syagrus duartei* are the two most similar looking palms to *S. evansiana* in terms of foliage. However, *S. evansiana* is smaller overall in relation to the other two (Table 1). The inflated or expanded portion of the peduncular bract is smaller in *S. evansiana* (7–22 cm vs. 20–40 cm). It has a smaller inflorescence, often a spike (4.5–17 cm vs. 15–36 cm long), and smaller rachis (0–8 cm vs. 5–23 cm). *Syagrus evansiana* fruits are less than 2.5 cm long (2.3 cm), while *S. duartei* have the largest fruits at nearly 4 cm (3.8 cm) in length. One unusual character of this new *Syagrus* species is the variable number of pores in its endocarp, with most having three, but several having as many as four and five pores.

The overall size of the plants increase (from less than 40 cm to more than a meter) from the western side of its distribution (west of Montes Claros) to the eastern side of its distribution (north of Diamantina), from rocky soils to deep clay soils.

#### Acknowledgments

Thanks to my friend and former Fairchild Tropical Botanical Garden (FTBG) colleague, Don Evans, for bringing this palm to my attention and for his additional remembrances on the matter. A special thanks to Harri Lorenzi, for his excellent fieldwork, photos and collections. Sincere thanks to FTBG, where I am a research associate, and especially to their volunteer, Wes Jurgens, who furnished the diagnostic plate. The impetus for publishing this species was provided by the National Science Foundation Grant #0212779.

#### LITERATURE CITED

- GLASSMAN, S. 1987. Revisions of the palm genus *Syagrus* Mart. and other selected genera in the *Cocos* alliance. Illinois Biological Monographs 56: 1–230.
- LORENZI, H., H.M. DE SOUZA, J.T. DE MEDEIROS COSTA, L.S.C. DE CERQUEIRA AND E. FERREIRA. 2004. Palmeiras Brasileiras e Exóticas Cultivadas. Instituto Plantarum de Estudos da Flora Ltda. pp. 416.