



Four new taxa of acaulescent *Syagrus* (Arecaceae) from Brazil

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Abstract

Three new species and a new subspecies of acaulescent *Syagrus* palms are described as new to science. These occur in the central western cerrado region of Brazil: *Syagrus emasensis* and *S. menzeliana* from southwestern Goiás, *S. guimaraesensis* from south central Mato Grosso and finally *S. graminifolia* subsp. *cabraliensis* from north central Minas Gerais.

Keywords: Arecales, Arecoideae, Cocoseae, Palmae

Introduction

The genus *Syagrus* currently contains 56 species (Lorenzi *et al.* 2010, Noblick 2014, Soares *et al.* 2013). Of these 56 species, 26 are acaulescent (Noblick 2013). The word acaulescent translates as “without a trunk” and a trunk is defined as an above ground stem. While these palms appear to have no above ground stem, they do all have short, subterranean stems. Many of these acaulescent *Syagrus* are difficult to identify from herbarium material, but leaflet anatomy has been found to be useful in their identification (Glassman 1972, Noblick 2013).

The discovery that the acaulescent *Syagrus petraea* (Mart.) Beccari (1916: 467) was a Bolivian endemic (Noblick *et al.* 2010), rather than the broadly distributed morphologically variable species that many botanists assumed that it was (Henderson *et al.* 1995, Govaerts & Dransfield 2005), has forced us to take a closer look at all Brazilian acaulescent *Syagrus*. The species described here were discovered during ongoing efforts towards a revision of the genus *Syagrus*, with a concerted effort to understand the acaulescent forms. Recent research conducted in the cerrados of Goiás, Mato Grosso and Minas Gerais has uncovered several new palms including these three new species and one new subspecies. These four new taxa are here described with others to follow later.

Taxonomic Treatment

Syagrus graminifolia subsp. *cabraliensis* Noblick & Lorenzi, *subsp. nov.* (Figs. 1, 2A).

Small usually clustering palm with short and subterranean stems and with a grass-like appearance that differs from the other varieties or forms of *Syagrus graminifolia* (Drude) Beccari (1916: 466). by its spike inflorescence (instead of branched to 2–7 rachillae) and its affinity for growing on surface deposits of iron ore called “canga.”

Type:—BRAZIL, Minas Gerais: Joaquin Felício, ca. 14 km from the city fountain plaza, just outside of the Parque Estadual da Serra Cabral. Elevation ca. 1137 m, 17°41'48.6"S, 44°13'09.8"W (-17.696833, -44.219389), 29 January 2014, L. Noblick & H. Lorenzi 5659 (holotype ESA!, isotypes HPL!, BHCB!, RB!, SP!, K!, FTG!, NY!, MO!, US!).

Small palm, solitary to clustering to 40–50 cm. *Stem* short and subterranean. *Leaves* number 3–6 in the crown, *sheathing leaf base* ca. 8–12 cm long; *pseudopetiole* (true petiole plus part of the sheath) 9–17 cm long, true *petiole* 7.5–13 × 0.4–0.5 cm by 0.2–0.3 cm thick, channeled adaxially and rounded abaxially, abaxial side of petiole and rachis tomentose; *rachis* 26–34 cm long; *leaflets* narrow and quickly fold longitudinally on drying, slightly lighter on the abaxial surface,

Common name:—None recorded.

Etymology:—The specific epithet “guimaraesensis” refers to the Parque Nacional de Chapada dos Guimarães from where it was discovered and the type collected with the kind permission and cooperation of the national park service.

Distribution and habitat:—South central Mato Grosso. Grows in very rocky sandy soils both within and outside of the National Park of the Chapada dos Guimarães, near the town of Chapada dos Guimarães. Growing in decomposed sandstone soils, with specimens seen as far south as Rondonópolis and as far north as Diamantino. Also reported to be growing as far as 350 km to the west and at elevations usually above 600 m, but never in large numbers.

Conservation:—This species is well protected within the national park and it usually grows in very rocky soils which are of no agricultural importance, except for pasture, therefore, by IUCN version 3.1 criteria, this palm should be classified as LC, least concern.

Phenology:—Fruiting and flowering in the month of January in exposed areas, but neither flowering nor fruiting in shadier areas at this time of year.

Uses:—None recorded. It may have possible use as an ornamental in rock gardens.

Additional specimens examined:—BRAZIL, Mato Grosso: Chapada dos Guimarães, Mirante do Centro Geodésico, 19 October 1995, *Hatschbach, G. et al.* 63584 (FTG!); Chapada dos Guimarães, na estrada para Cuiabá, km 49, próximo ao Parque Nacional da Chapada dos Guimarães, 680 m, 15°23'41.3"S, 55°50'4.2" W (-15.394806, -55.8345), 9 December 2009, *Lorenzi, H., R. Campos & K. Soares* 6786 (HPL!); PARNA Chapada dos Guimarães, 19 November 1999, *L.A. Neto, M. Aragona, F.T. Paroli* 989 (UFMT!); Chapada dos Guimarães, Parque Nacional da Chapada dos Guimarães, near the Monumento da Pedra in the National Park near km 49, Elevation ca. 601 m, 15°23'40.3"S, 055°50'05.6"W (-15.394528, -55.834889), 12 January 2014, *L. Noblick & H. Lorenzi* 5639 (ESA!, HPL!, FTG!, NY!); Diamantino, cerca de 20 km após o limite do município de Diamantino. Área de grandes afloramentos rochosos, 23 April 1983, *E.C.C. Moraes et al.* 278 (UFMT!).

Notes:—This species resembles the Bolivian *S. petraea*, which was formerly the name erroneously given to most acaulescent *Syagrus* in Brazil with a spike inflorescence. It even grows in a similar environment of decomposed sandstone weathered into “chapada” topography. However, morphologically *Syagrus guimaraesensis* differs in having a shorter leaf rachis (11–56 vs. 40–125 cm), fewer leaflets (6–16 vs. 19–42 leaflets), thicker leaf blades (5C vs. 5D) and different anatomy. Their leaflet anatomy differs by the following characters: *S. guimaraesensis* has large major veins (vs. small major veins), presence of adaxial minor veins near the leaflet margin (vs. no adaxial minor veins near the leaflet margin) and small fiber bundles between the major veins along the adaxial surface (vs. large fiber bundles between the veins) (Fig. 5C vs. Fig. 5D).

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