



## A new species of *Allagoptera* (Arecaceae) from the Cerrado of central Brazil

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### Abstract

A new species of *Allagoptera* from the Cerrado of central Brazil is described. The new species is distinguished by its solitary habit, open crown, and very long inflorescence rachis conspicuously curved at maturity. The new species, *A. robusta*, is compared morphologically and anatomically with *A. campestris* and *A. leucocalyx*.

**Key words:** anatomy, conservation, Federal District, Goiás, Palmae, palms

### Introduction

The genus *Allagoptera* Nees (1821) is distinguished within the subfamily Arecoideae by its spicate inflorescences bearing congested staminate and pistillate flowers. *Allagoptera* is highly supported as a monophyletic taxon (Gunn 2004). In addition, it is a sister genus to a clade that includes *Attalea* Kunth in Humboldt, Bonpland & Kunth (1815[1816]: 309), *Cocos* Linnaeus (1735: 1188), *Lytocaryum* Toledo (1944: 6), and *Syagrus* Martius (1824: 18–19), albeit with little support (Dransfield *et al.* 2008; Meerow *et al.* 2009). A taxonomic revision of this genus was published by Moraes (1996), who recognized four species: *A. arenaria* (Gomes) Kuntze (1891: 726), *A. brevicealyx* Moraes (1993: 21), *A. campestris* (Martius) Kuntze (1891: 726), and *A. leucocalyx* (Drude) Kuntze (1891: 726). However, in the Genera Palmarum (Dransfield *et al.* 2008), *Polyandrocos* Barbosa Rodrigues (1901: 7) was synonymized under *Allagoptera*, adding a fifth species to this genus.

Species in *Allagoptera* occur on sandy soils in beaches and dunes, open Cerrado areas, grasslands, savannas, and forest edges, both in Brazil and in Paraguay and Bolivia (Dransfield *et al.* 2008; Moraes 1996). The estimated number of species in Brazil ranges from four (Leitman *et al.* 2012) to five (Lorenzi *et al.* 2010). Mendonça *et al.* (2008) recognized two Cerrado species: *A. campestris* and *A. leucocalyx*. In addition to these, a new species was found in the state of Goiás and Distrito Federal (Martins 2012). This new species (*A. robusta*) is described in the present paper, and its morpho-anatomical traits are compared to the traits of two morphologically related species (*A. campestris* and *A. leucocalyx*).

### Material & Methods

We used a stereomicroscope at the botany laboratory of the herbarium of Universidade de Brasília, Brazil (UB) for the morphological analysis. Dissected samples were photographed using a Leica MZ6 digital camera attached to the stereomicroscope.

For the anatomical study, we sampled individuals of *A. robusta* (Martins 1131) and *A. campestris* (Martins 228) collected in Distrito Federal, Brazil, and of *A. leucocalyx* (Martins 1093) collected in Cavalcante, Goiás, Brazil. Samples were removed from the middle third of the pinnae at the median portion of the rachis of a mature leaf. Samples were preserved in 70% ethanol (Jensen 1962) and 25% aqueous glycerin. Cross sections were made free-hand using a Ranvier microtome and cleared in 30% sodium hypochlorite for five hours and 50% sodium hypochlorite for two

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