



Paepalanthus echinoides (Eriocaulaceae), a new species from central Brazil with notes on leaf and scape anatomy

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Abstract

Paepalanthus echinoides, a new species of *Paepalanthus* sect. *Conodiscus*, is described and illustrated. This new species is endemic to central Brazil, growing in sandy and humid soils. It is easily distinguished by its dimerous flowers, small leaves arranged in a rosette, the capillaceous and numerous scapes, the small capitula, and the adpressed, dark brown spathes. We present comparisons with *P. sphaerocephalus* and *P. exiguus*, the other two species of *P.* sect. *Conodiscus*. We also provide a distribution map and photographs, as well as comments on morphological variation, anatomy of leaves and scapes, habitat, phenology, and conservation status.

Key words: Poales, Paepalanthoideae, *Paepalanthus* sect. *Conodiscus*, Taxonomy, Endemism

Introduction

Paepalanthus Martius (1834: 28) *nom. cons.* is the largest genus of Neotropical Eriocaulaceae and one of the largest genera of Brazilian Angiosperms (Forzza *et al.* 2010, Sano *et al.* 2015). It consists of ca. 400 species, being represented in Brazil by 338 of them, 323 endemic (Giulietti & Hensold 1990, Sano *et al.* 2015). Species diversity in this group is concentrated in the Espinhaço Range of Minas Gerais and Bahia states, but is also significant in the Venezuelan Tepuis and in central Brazil (Giulietti & Hensold 1990, Stützel 1998, Sano *et al.* 2015). The genus is placed within Paepalanthoideae and may be easily distinguished by its hairy capitula not subtended by lateral paraclades, pistillate flower with free, fully developed petals, and stigmatic/nectariferous branches arising from the same insertion point on the style (Koernicke 1863, Ruhland 1903, Sano 2004).

The great species diversity in *Paepalanthus* is concurrent with the considerable morphological variation in both vegetative and reproductive organs, which has been the basis of its infrageneric classification (Ruhland 1903). One of the few groups in this genus with dimerous flowers, *Paepalanthus* sect. *Conodiscus* Ruhland (1903: 181) is characterized by its small linear leaves, spherical capitula, and hemispherical to sub-cylindrical receptacle (Ruhland 1903). This group traditionally includes three species: *P. eriocauloides* Ruhland (1903: 182), *P. sphaerocephalus* Ruhland (1903: 182), and *Paepalanthus exiguus* (Bongard 1831: 627) Koernicke (1863: 314). However, the former two species are variants of the same taxon and the synonym of *P. eriocauloides* under *P. sphaerocephalus* will be further proposed (P.T. Sano, unpublished data).

Fieldtrips made in Central Brazil in the state of Goiás and observations on herbarium specimens revealed a new species in that group, usually misidentified as *Paepalanthus eriocauloides*. We describe and illustrate it here, and we also provide a distribution map and insights on the anatomy of its leaves and scapes. In addition, comments on its morphological variation, habitat, phenology, and conservation status are also presented.