



A new species of *Mimosa* (Leguminosae) from Brazil

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Abstract

A new species of *Mimosa* is described from the Atlantic Rainforest and ecotone with the Cerrado of southeastern Brazil, in the states of Minas Gerais, Rio de Janeiro and São Paulo: *M. porrecta* L. Jordão, M.P. Morim & Baumgratz (Leguminosae). Related to *M. sensitiva*, it shares morphological affinities with this species but differs in having porrect-stellate trichomes, a new type of trichome for the genus, on the stems, and the dendritic trichomes in the fruits. The conservation status was assessed, according to IUCN criteria, as Least Concern.

Key words: Mimosoideae; subserie *Mimosa*; taxonomy; trichomes

Introduction

Mimosa Linnaeus (1753: 516) (Leguminosae) is a monophyletic genus (Luckow *et al.* 2000, 2005, Bessega *et al.* 2008, Simon *et al.* 2011), and one of the largest genera of the family in Brazil. Simon *et al.* (2011) estimated about 536 species, but several new species have been described recently (Savassi-Coutinho *et al.* 2012, Dutra & Garcia 2013a,b,c, Morales *et al.* 2013; Santos-Silva & Tozzi 2012, Santos-Silva *et al.* 2013a, Grings & Ribas 2013).

Mimosa is pantropical, with its center of diversity in the Neotropics, and only 40 species in the Old World. The species inhabit tropical, subtropical and dry forests, wetlands, grassland, *restinga* (sandy coastal-plain habitat), savannas, prairies, and deserts. Many species are endemic, and it is believed that South America is the center of origin of the genus (Barneby 1991, Simon *et al.* 2011). The main diversity and endemism centers are Mexico, the Brazilian Cerrado, and subtropical South America (including areas of southern Brazil, Paraguay, Argentina and Uruguay), with secondary centers in the Caribbean, Andes, Brazilian *campos rupestres* (montane savanna) and Madagascar (Barneby 1991, Grether *et al.* 1996, Simon & Proença 2000, Villiers 2002). According to Dutra & Morim (2014), 344 species occur in Brazil.

The most recent taxonomic revision of *Mimosa* was conducted by Barneby (1991), who proposed a new infrageneric classification. This treatment recognized 479 Neotropical species, in five sections (*Batocaulon* DC., *Calothamnos* Barneby, *Habbasia* DC., *Mimadenia* Barneby and *Mimosa* L.). However, molecular phylogenetic studies have demonstrated that the sections are not monophyletic, with the exception of *Mimadenia* (Simon *et al.* 2011).

Although an extensive revision has been accomplished for *Mimosa*, several taxonomic complexities remain unsolved, mainly because of the wide morphological variability and the large number of species. Several vegetative and reproductive characteristics are diagnostic for *Mimosa* species. One of these is the indumentum, which has been used to circumscribe the taxa because of the great diversity of trichome types (Barneby 1991, Santos-Silva *et al.* 2013b).

Recently, Jordão (2014) studied *Mimosa* in the Atlantic Domain in a region of southeastern Brazil, and recorded 38 taxa for this genus, among them a new species close to *M. sensitiva*. This new species is described here, and can be identified based on a new trichome type, not yet reported for *Mimosa*; the inflorescence shape; and the morphology of the calyx and fruit.

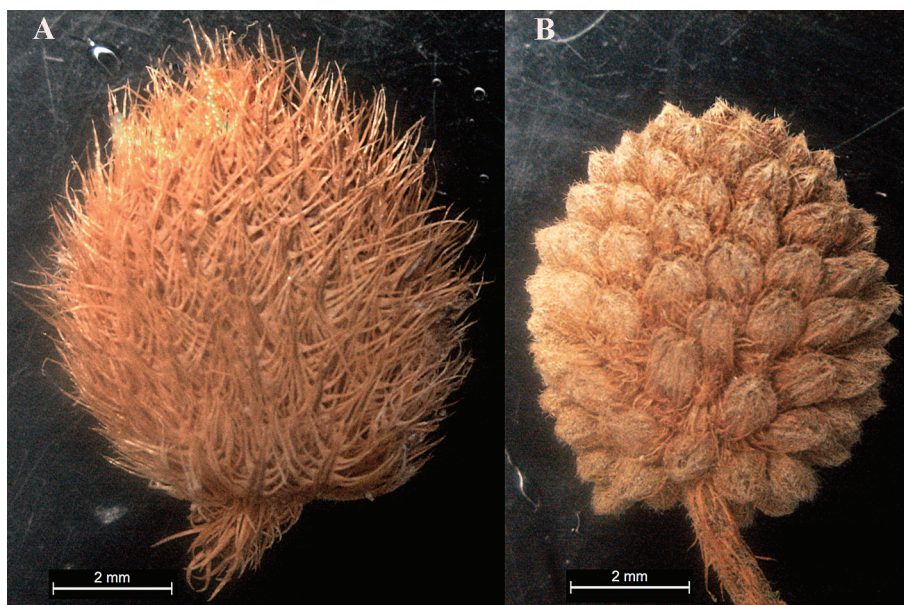


FIGURE 6. Inflorescence shape: conelike, in *M. sensitiva* var. *sensitiva* (A), and moriform, in *M. sensitiva* var. *malitiosa* (B) (A. D. Araujo 452, RB; B. S.A. Mori s.n., RB 204966).

Characteristics of the fruit are also significant for taxonomy of *Mimosa*, as previously noted by Barneby (1991), Dutra (2009) and Simon *et al.* (2011). The craspedium of *M. porrecta* differs from other related species in having the epicarp densely covered with porrect-stellate trichomes, and the replum with dendritic trichomes.

IUCN Conservation assessment:—*M. porrecta* has a scandent shrubby habit. It occurs only in southeastern Brazil, in the states of Minas Gerais, Rio de Janeiro and São Paulo (EOO=132,653 km², GeoCAT), in highland areas of the Atlantic Forest and Cerrado domains between 650 and 1640 m altitude. It is common in disturbed sites, open and pasture areas, and forest and roadsides. Although *M. porrecta* occurs in heavily human-impacted areas, it is also found in several Conservation Units of Rio de Janeiro State, including Serra da Bocaina National Park, Serra dos Órgãos National Park, Mata do Cedro Ecological Station, and Serra Nova State Park. This species is subject to ten threatening situations considering the municipalities of occurrence. These factors support our assessment of the extinction risk for *M. porrecta* as Least Concern (LC).

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