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Novelties in *Chamaecrista* (Fabaceae, Caesalpinioideae) from the Brazilian Cerrado

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Abstract

Chamaecrista irwiniana, a new species of *Chamaecrista* sect. *Absus* subsect. *Absus* ser. *Rigidulae*, is here described and illustrated. Its morphological affinities, geographical distribution, ecology, conservation status, and information about leaf anatomy are also presented. Additionally, a complete description, distribution, and the first illustration of *C. nummulariifolia*, an endemic species to the states of Goiás and Minas Gerais, classified as vulnerable according to the IUCN guidelines, are provided.

Key words: Cerrado, Chapada dos Veadeiros, endemism, new species

Introduction

Chamaecrista Moench (1794: 272) is the largest genus of the Leguminosae subfamily Caesalpinioideae found in the Cerrado Biome. It encompasses 117 species, of which 43 are endemic (Souza & Bortoluzzi 2015). In this biome, species of *Chamaecrista* usually grow in cerrado *sensu stricto* or cerrado rupestre, in flat areas, slopes, or hilltops, and also in rocky fields, where they stand out due to their asymmetrical flowers with lively yellow petals, viscous inflorescence or not, and elastically dehiscent fruits (Irwin & Barneby 1978, 1982).

The taxonomy of *Chamaecrista* was revised by Irwin & Barneby (1982). However, some of its infrageneric taxa (i.e. sections and series) encompass species that present difficult delimitation and misconceptions, as well as very variable morphology, which makes them promising for studies. One of these taxa is *C.* ser. *Rigidulae* (Bentham 1870: 142) H.S. Irwin & Barneby (1982: 654), which belongs to *C.* sect. *Absus* subsect. *Absus* (Colladon 1816: 116) H.S. Irwin & Barneby (1982: 644). This taxon is predominantly distributed in Central Brazil, as stated by Souza & Silva (2015), particularly in the state of Goiás, where 25 of its 27 species have been recorded.

During phylogenetic and taxonomic studies of *C.* ser. *Rigidulae*, developed by the first two authors, it was observed that one of the species in this taxon, *C. nummulariifolia* (Bentham 1870: 144) H.S. Irwin & Barneby (1982: 654), comprises a specific complex due to its morphology related to *C. decumbens* (Bentham 1840: 79), *C. filicifolia* (Bentham 1870: 148) H.S. Irwin & Barneby (1982: 655), *C. polita* (H.S. Irwin & Barneby 1978: 118) H.S. Irwin & Barneby (1983: 654), and other species in the genus that are misidentified or have no determination.

After analyzing collections of these taxa we noted that a set of collections from Chapada dos Veadeiros region, recognized by Irwin & Barneby (1978, 1982) as *C. nummulariifolia*, actually correspond to a new species, which is herein described, illustrated, and named *C. irwiniana*. Similarly, we concluded that the remaining collections belong to *C. nummulariifolia*, a taxon that has an incomplete description and a complicated taxonomic history. Therefore, it is here redescribed and we provide the first illustration of this taxon.

Chamaecrista irwiniana and *C. nummulariifolia* are compared morphologically with their allied species. Additionally, we discuss their conservation status, ecology, phenology, and environmental preferences. The foliar anatomy of *C. irwiniana* is also provided and constitutes the first information about this parameter for species of the *Rigidulae* series.

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