



A new species of *Sinningia* (Gesneriaceae) and additional floristic data from Serra dos Carajás, Pará, Brazil

ANDRÉA ONOFRE DE ARAUJO¹* & ALAIN CHAUTEMS²

¹Universidade Federal do ABC, Centro de Ciências Naturais e Humanas, Santo André, SP, Brazil; email: andrea.onofre@ufabc.edu.br

²Conservatoire & Jardin Botaniques de la Ville de Genève, Chambésy, Switzerland

*author for correspondence

Abstract

The new species *Sinningia minima* (Gesneriaceae) from Serra dos Carajás (Pará, Brazil) is described and illustrated. It is readily distinguished from its congeners by its minute size, being smaller in all vegetative and fertile organs than any other *Sinningia* species. It is also the first member of this genus registered for the Pará State. New floristic data and an identification key to the Gesneriaceae from the Serra do Carajás are also provided.

Key words: canga flora, miniature Ligeriinae, taxonomy

Introduction

In the course of taxonomic studies on Brazilian Gesneriaceae, a new species was recognized during a field excursion in the Serra do Carajás. At first sight, it was assigned to genus *Sphaerorrhiza* Roalson & Boggan (2005: 236), but closer morphological examination and preliminary phylogenetic analysis clearly placed it within the genus *Sinningia* Nees (1825: 297).

Sinningia (tribe Gesnerieae, subtribe Ligeriinae) is a genus of over 70 species distributed from southern Mexico to northern Argentina, with the greatest species richness in southeastern Brazil (Chautems *et al.* 2010, Perret *et al.* 2003, 2006, Weber *et al.* 2013). The genus is found in almost all Brazilian Phytogeographic Domains and almost all States of Brazil, but phylogenetic data have shown that the subtribe originated in the Atlantic Rainforest where the vast majority of species still occurs (Araujo *et al.* 2015, Perret *et al.* 2006, 2013). Plant size in this genus varies from a few cm, for some miniature species, to over 200 cm for the largest, though most species measure between 8 and 50 cm.

The region of the Serra dos Carajás, in the southeast of the State of Pará (Brazil), is part of the hydrographic system of the Araguaia-Tocantins. The longest axis of the Serra extends 160 km (east-west) and the minor axis stretches 60 km, with elevation from 150 m to 897 m (Serra Sul) above sea level (IBAMA 2004). The Serra dos Carajás harbors mostly tropical rainforest (about 95% of the area) that varies from dense to open forest occupying different elevations. The remaining area is restricted to the top of the hills and is formed of ironstone outcrops locally called “canga” (or “metalophilous savanna” or “campo rupestre” or “canga hematítica”) covered by low and open vegetation growing directly on the mineral deposits of iron (Ab’Saber 1986, IBAMA 2004, Secco & Mesquita 1983, Silva *et al.* 1986). The “canga” areas are intensely mined for extraction of iron (it is currently the largest site of iron-ore extraction in the world), gold and others metals. This activity leads to irreversible habitat degradation due to massive excavations (Carmo & Jacobi 2012, Carmo *et al.* 2012). Less than 1% of the areas of “canga” in Brazil are included in conservation units insuring integral protection. Floristic studies are needed in order to inventory the plant communities that are only found in this environment. These data are essential for understanding the biological importance of these communities and for taking the necessary measures towards their preservation (Jacobi & Carmo 2008, Jacobi *et al.* 2011, Carmo *et al.* 2012, Carmo & Jacobi 2013).

Data discussed in this paper were obtained through field work undertaken by the first author, as well as examination of the many Gesneriaceae specimens collected in the Serra dos Carajás by the Universidade Federal de Minas Gerais research group and housed at the BHCN herbarium, analysis of virtual herbaria specimens and observation of cultivated material.