



Three new species of *Calliandra* in section *Monticola* (Leguminosae, Mimosoideae) from Chapada Diamantina, Bahia, Brazil

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Abstract

Three new species of *Calliandra* section *Monticola* are described and illustrated: *C. bromelioides*, *C. lewisii* and *C. oroboensis*. All of them are endemic to the Chapada Diamantina, Bahia, Brazil. In addition we present a study of the pollen morphology using light microscopy and scanning electron micrographs. An identification key for the three new species and the most morphologically similar species in section *Monticola* is also provided.

Key words: “Campos rupestres”, Ingeae, Pollen morphology, Taxonomy

Introduction

Calliandra has undergone major taxonomic changes since its description by Bentham (1840: 138). In addition to the new species described, the geographic range of the genus was expanded to the Old World (Bentham 1875, Harms 1921, Thulin *et al.* 1981); new classifications were proposed (Bentham 1844, 1875) and new genera were segregated, *Afrocalliandra* E.R. Souza & L.P. Queiroz (Souza *et al.* 2013: 1213), *Viguieranthus* Villiers (2002: 271) and *Zapoteca* H.M.Hern. (Hernández 1986: 757). In 1998, Barneby restricted the genus to 132 exclusively neotropical species, grouped into five sections, defined primarily by the architecture of the inflorescences (*Androcallis* Barneby (1998: 21), *Acistegia* Barneby (1998: 139), *Acroscias* Barneby (1998: 146), *Calliandra* and *Microcallis* Barneby (1998: 197). However, phylogenetic studies by Souza *et al.* (2013) showed that the genus and its sections (*sensu* Barneby 1998), except the section *Acroscias* (*C. haematomma* (De Candolle) (1825: 456) Bentham (1844: 103) and *C. pedicellata* Bentham (1844: 102)), are not monophyletic. Based on this result, a new infrageneric classification was proposed for *Calliandra* with the inclusion of *Guinetia* L.Rico & M.Sousa (in Rico Arce *et al.* 1999: 977) and the description of two new sections and a new sectional status for *Calliandra* ser. *Tsugoideae* Barneby (1998: 190; Souza *et al.* 2013) were presented.

The genus *Calliandra* has the morphological synapomorphies of 8-celled calymmate polyads and the loss of foliar nectaries and comprises a total of 142 species, including the three new species described below, distributed in six sections (*Androcallis*, *Calliandra*, *Microcallis*, *Monticola* E.R. Souza & L.P. Queiroz (Souza *et al.* 2013: 1215), *Septentrionales* E.R. Souza & L.P. Queiroz (Souza *et al.* 2013: 1214) and *Tsugoideae* (Barneby) E.R. Souza & L.P. Queiroz (Souza *et al.* 2013: 1215). Of those, 23 were newly described over the past 30 years from the mountains of Chapada Diamantina, located in the north part of the Espinhaço Range, in the state of Bahia, northeastern Brazil (Renvoize 1981, Barneby 1998, Souza & Queiroz 2004, Souza 2010).

The Espinhaço Range is the main centre of diversity of the genus, with 50 species, of which 46 occur in the Chapada Diamantina and 36 (including three new species described below) are endemic to the “campos rupestres”. The other major centres of diversity are the southern United States and Mexico to Central America, with 35 species, and northwestern South America (Colombia, Venezuela) with 29 species (Souza *et al.* 2013).

In the current classification, the 36 endemic species of *Calliandra* encountered in the Espinhaço Range are treelets to densely branched shrubs or rhizomatous subshrubs with inflorescences composed of terminal

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