



## A new species of *Centris* (*Paracentris*) Cameron, 1903 from northeastern Brazil, with a key for the *Centris* species of the Caatinga region (Hymenoptera: Apidae)

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### Abstract

*Centris* (*Paracentris*) Cameron is one of the subgenera with the greatest species richness of the bee tribe Centridini. In this paper, *Centris nordestina*, a new Brazilian species of the subgenus is described, and due to its close relationship with a clade of Andean species, a new biogeographical track is defined uniting northeastern Brazil with the Andes. For the first time a key for the species of the Caatinga region, the semiarid region of northeastern Brazil, is provided.

**Key words:** Bees, Apoidea, Neotropical, Taxonomy

### Introduction

*Centris* Fabricius, 1804 is one of the most important groups of non-corbiculate bees in the Neotropical Region (Thiele 2002). Taxonomically it is a complex genus, due both to the large number of described species as well as the lack of modern revisions allowing their readily identification. The resolution of this problem began about a decade ago with revisions of some subgenera and species groups (Zanella, 2002; Vivallo *et al.*, 2002, 2003; Vivallo & Melo, 2009), as well as studies of regional faunas (Snelling, 1984; Roig-Alsina, 2000; Thiele, 2003). Those contributions allowed the recognition of valid species and new synonyms as well as the identification of new species from different parts of the continent, many of which are still to be described. Adding to these activities, this paper describes a new species of *Centris* (*Paracentris*) Cameron, 1903 from northeastern Brazil, increasing the number of known South American species of the subgenus and representing a new biogeographical track, since its most closely related species occur in the Andes. Additionally, a key to the species of *Centris* of the Caatinga, the semiarid region of northeastern Brazil, is provided.

### Material and methods

General morphological terminology follows Michener (2007). Antennal flagellomeres are indicated as F1, F2, etc.; metasomal terga and sterna as T1 to T7, and S1 to S8, respectively. All the measurements are given in millimeters (mm). The position of the vertex in relation to the eyes was considered in frontal view. The upper interocular distance (UID) was measured using the shortest distance between the eyes in frontal view. The lower interocular distance (LID) was measured at the same level as the maximum clypeal width. The diameter of the anterior ocellus was measured in frontal view. The antennal flagellomeres were measured on their middle line, while the scape was measured on its lateral-external side. The mandibular teeth are numbered from the apex to the base of the mandible, with the apical tooth the 1<sup>st</sup>, and the other ones 2<sup>nd</sup> and 3<sup>rd</sup>, respectively. Due to the badly worn forewing apices, its length was estimated from the base of the wing to its apex, considering the natural curvature of the anterior surface. Despite of some of the mouthparts were exposed, the number of maxillary palpomeres could not be observed.