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Taxonomy and geographic distribution of the species of *Centris* of the *hyptidis* group (Hymenoptera: Apidae: Centridini), with description of a new species from central Brazil[1]

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Abstract

The species of *Centris* of the *hyptidis* group are revised. The group, composed by *C. hyptidis* Ducke, *C. hyptidoides* Roig-Alsina, and *C. thelyopsis* **n. sp.**, exhibits unique morphological characters within the genus, like fore- and midtrochanters with a laminar expansion at the base, and elaiospathes strongly modified. An updated catalog, and floral and distributional records are provided for each species, as well as an identification key and a distribution map. The male of *C. hyptidoides* is described for the first time and a modern diagnosis for *C. hyptidis* is presented. A new species, *C. thelyopsis* **n. sp.**, is described from Goiás State, in central Brazil. It can be easily distinguished from the two previously known species by its predominant orange pilosity, including that of the hind legs and metasoma.

Key words: oil bees, new species, Neotropical

Introduction

The bee genus *Centris* contains 230 valid species, distributed in 12 subgenera (Moure *et al.* 2007). In spite of being relatively abundant and well represented in collections and museums, its species are difficult to identify correctly, mostly due to the confusing taxonomic history of the genus, the great number of described taxa and lack of modern revisionary works.

As regards the internal classification of *Centris*, most subgenera seem to represent well-delimited, monophyletic taxa. For a few species, however, allocation to subgenus is somewhat arbitrary, as currently happens with *Centris hyptidis* Ducke and closely related species. *C. hyptidis* has been difficult to associate with other groups of species because of some unique morphological features (as, for example, the fore- and midtrochanters with a basal laminar projection, and fore elaiospathes with a rudimentary secondary comb), being tentatively included in the subgenera *C.* (*Ptilotopus*) (Cockerell 1912), *Centris s. str.* (Aguiar & Martins 1997), *C.* (*Paracentris*) (Vogel & Machado 1991; Silveira *et al*. 2002; Moure *et al*. 2007), *C.* (*Ptilocentris*) (Ayala 1998; Zanella 1999, 2000b; Vivallo *et al*. 2002; Aguiar *et al*. 2003), and *C.* (*Wagenknechtia*) (Roig-Alsina 2000), even though the phylogenetic relationships between this species and the subgenera mentioned above have never been demonstrated. According to preliminary results of a phylogenetic study (F. Vivallo, unpublished data), *C. hyptidis* and *C. hyptidoides* Roig-Alsina form a lineage, which is closely related to *C.* (*Wagenknechtia*), supporting the relationship suggested by Roig-Alsina (2000).

In this paper, the species of the *hyptidis* group are revised, and diagnoses for *C. hyptidis* and *C. hyptidoides* are presented, and the male of *C. hyptidoides* and a new species from central Brazil, *Centris thelyopsis* **n. sp.**, are described. Additionally, information on their distribution and floral records is provided.

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