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Five new species of *Baeus* Haliday, 1833 (Hymenoptera: Platygastroidea: Scelioninae) from Brazil with an updated key to Neotropical species

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Abstract

The species of the genus *Baeus* are small endoparasitoids wasps that attack spiders' egg sacs. Although there are data of occurrence in several biogeographical regions, their distribution records are scarce, especially due to their small size, making difficult to collect them in natural environments. In this paper, five new species of *Baeus* are described as results of collections made in southeastern Brazil: *Baeus fluminensis* **new species**, *B. itatiaiaensis* **new species**, *B. leucophthalmus* **new species**, *B. melanocephalus* **new species** and *B. morenus* **new species**. An updated key to the known Neotropical species of the genus is also provided.

Key words: Parasitoid wasps, spiders, egg sacs, Neotropical Region, taxonomy

Introduction

Representatives of Scelioninae are idiobiont endoparasitoids that develop inside the eggs of other arthropods (Masner & Hanson, 2006; Masner & Arias-Penna, 2007). Species of Scelioninae are distributed worldwide and represented by 2500 species in the neotropics (Masner & Hanson, 2006). The genus *Baeus* Haliday, 1833 is represented by 28 known species worldwide, nine of which occur in the Neotropical Region (Margaría *et al.* 2006a, b). The species of this genus are arguably the smallest scelionines, often smaller than 0.5 mm (Carey *et al.* 2006). Morphologically, the species of *Baeus* are round, with the head wider than the mesosoma, geniculate antenna with club of similar size to the first antenomere and strong sexual dimorphism, with wingless females and winged males (Galloway & Austin, 1984). As in other genera of Baeini, the species of *Baeus* attack exclusively spiders' eggs, with known hosts in the families Araneidae, Linyphiidae and Theridiidae, between others (Loiácono & Margaría, 2004; Masner & Hanson, 2006). Therefore they might be used as biological agents against poisonous spiders, which are harmful to humans, livestock or other mammals. An example of this is *Baeus latroducti* Dozier, 1931, which uses *Latroductus mactans* (Fabricius) (Theridiidae) as a host, having convincing rate of parasitisation (Pierce, 1933 apud Laiácono & Margaría, 2004). Here we describe five new species of *Baeus* from southeastern Brazil and update the identification key to the female Neotropical *Baeus* species proposed by Margaría *et al.* (2006b).

Material and methods

Terminology for morphological features follows Masner & Denis (1996). Abbreviations used in the text are: antenomeres (A), ocular-ocellar distance (OOD), posterior-ocellar distance (POD) and tergum (T). Measurements are given in millimeters (mm). Some relative proportions were used following the methodology proposed by Margaría *et al.* (2006a, b). The specimens here described were collected using pitfall traps of 19 cm in diameter and