



## Taxonomic notes on *Megalopta* Smith, 1853 (Hymenoptera: Halictidae: Augochlorini) with a synopsis of the species in the state of Minas Gerais, Brazil

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### Abstract

There are twenty-seven described species in the nocturnal bee-genus *Megalopta* Smith, 1853 (Hymenoptera: Halictidae); of these, 10 were recorded from Brazil but none in the Brazilian state of Minas Gerais. Here, five species of *Megalopta* are recorded for this state, two of them described as new. Four of these species belong in the subgenus *Megalopta* Smith s.str.: *M. (M.) aegis* (Vachal, 1904), *M. (M.) amoena* (Spinola, 1853), *M. (M.) sodalis* (Vachal, 1904) and *M. (M.) guimaraesi* **sp.n.**, and one: *M. atlantica* **sp.n.**, belongs to the subgenus *Noctoraptor* Engel, Brooks & Yanega, 1997, which is recorded for the first time for Brazil. A key for the identification of these five species is provided. Based on the examination of the types of species described by H. Friese and J. Vachal, *M. ecuadoria* Friese, 1926 and *M. ochrias* (Vachal, 1904) are proposed to be junior synonyms of *M. amoena*; and *M. aethautis* (Vachal, 1904) is proposed to be a junior synonym of *M. fornix* (Vachal, 1904). Lectotypes are designated for *M. aeneicollis* Friese, 1926, *M. armata* Friese, 1926; *M. boliviensis* Friese, 1926; *M. cuprea* Friese, 1911; and *M. sulciventris* Friese, 1926. Evidence that *Megalopta* s.str. is rendered paraphyletic by the recognition of the subgenus *Noctoraptor* is presented and the potential use of aromatic baits for the inventory of local *Megalopta* faunas is discussed.

**Key words:** Neotropics, nocturnal bees, taxonomy, synonymies, lectotype designations, polymorphism

### Introduction

*Megalopta* is a neotropical group of nocturnal bees distributed from southern Mexico to northern Argentina (Engel 2006). Its individuals are variable in size, generally ranging from 10 mm to 15 mm in length (Michener 2000), with specimens of some species as *M. genalis* Meade-Waldo, 1916, reaching up to 18 mm (Engel 2000). Female *Megalopta* build nests in dead trunks, twigs and lianas (Janzen 1968; Arneson & Wcislo 2003; Wcislo *et al.* 2004) and are facultatively social (Arneson & Wcislo 2003; Wcislo & Gonzalez 2006).

*Megalopta* is the most diverse group of nocturnal bees (Engel 2000), with 27 described species (Moure 2007), which were divided by Engel *et al.* (1997) in two subgenera, *Megalopta* Smith *sensu stricto* and *Noctoraptor* Engel, Brooks and Yanega, 1997, the latter comprising only three species of putative nest parasites (Engel *et al.* 1997; Engel 2000; Hinojosa-Diaz & Engel, 2003) or, maybe, social parasites (Biani & Wcislo 2007).

Current taxonomic knowledge of *Megalopta* is very rudimentary and based on rather old literature (*e.g.*, Spinola 1853; Smith 1853; Cockerell 1900, 1923; Vachal 1904; Ducke 1908; Meade-Waldo 1916; Friese 1926; Schwarz 1934; Moure 1958), with the last comprehensive revision of the genus being that of Friese (1926). For this reason, Janzen (1968) described the taxonomy of *Megalopta* as “chaotic”, and Sakagami and Moure (1967) stated that most specimens in the genus were troublesome to identify to species.

Three main factors have hindered our knowledge on *Megalopta* taxonomy: 1) specimens are poorly