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The orchid-bee fauna (Hymenoptera: Apidae) of a forest remnant in southern Bahia, Brazil, with new geographic records and an identification key to the known species of the area

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Abstract

The orchid bee fauna of Parque Estadual da Serra do Conduru, in the state of Bahia, one of the largest remnants of Atlantic Rain Forest in northeastern Brazil, was surveyed for orchid bees for the first time. Six hundred and twenty-two males belonging to 20 species were actively collected with insect nets during 40 hours from the 26th to the 31st of January, 2010. *Euglossa cyanochlora* Moure, 1996—a very rare species previously known only from the type locality—was found, the northernmost record for this species in the Atlantic Forest domain. *Euglossa viridis* (Perty, 1833) and *Euglossa amazonica* Dressler, 1982, this latter species recently recorded for the state of Alagoas, are also reported for the first time in the state of Bahia. An identification key for all species recorded in the area is also provided.

Key words: Atlantic Forest, Euglossina, euglossine bees, Hexapoda

Introduction

Contrary to many bee groups, which are more diverse in more xeric biomes and open vegetation such as savannas or deserts (see Michener 2007), orchid bees (Hymenoptera: Apidae: Euglossina) are a group of essentially forest-dependent bees, although a few species do occur in savanna-like habitats (*e.g.*, Nemésio & Faria Jr. 2004; Nemésio & Silveira 2006b) or even in more xeric areas, such as rocky fields in high elevations (*e.g.*, Nemésio 2005). This preference for forested areas makes these bees more susceptible to environmental changes, particularly in those areas under severe human impact, as is eastern Brazil. Almost all of the largest Brazilian cities are situated within the original distribution of the Atlantic Forest and such an enormous human population has dramatically impacted this biome (Galindo-Leal & Câmara 2003). Animals and plants which are endemic in such fragmented biomes are, of course, more prone to population declines and even extinction and, for this reason, Nemésio (2009, 2010a) has warned that some orchid-bee species with restricted geographic distributions within the Atlantic Forest domain should be closely monitored since their habitats are being wiped out rapidly. It is impossible, however, to make any conclusions about the conservation status of any animal group if even the faunistic composition and actual geographic distribution of its species are poorly or not known.

The Atlantic Forest has been considered one of the earth's biological "hotspots" (Mittermeier *et al.* 1999) and the region of the southern state of Bahia and northern state of Espírito Santo is probably the hottest portion of this hotspot, with the highest levels of endemism for many taxonomic groups (*e.g.*, Dean 1995; Thomas *et al.* 1998; Sambuichi *et al.* 2008). There have been two studies of orchid bees carried out in this area, but both remain unpublished (Bonilla-Gómez 1999; Melo 2005). The few and sporadic collections in the area have revealed an astonishing high diversity and even new species (*e.g.*, Moure 1996). The main goal of this study is to expand distributional and taxonomic knowledge on the orchid bees of the Brazilian Atlantic Forest by providing relevant data on the orchid-bee species found in a previously unsampled area of one of the most threatened biomes in the world.

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