The male gonostylus of the orchid bee genus *Euglossa* (Apidae: Euglossini)

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Abstract

Genital characters remain unexplored in *Euglossa* and they could be of great value in recognizing species and understanding the phylogeny of the group as in other bee genera. We examined the external morphology of the male gonostylus in 49 species of *Euglossa* belonging to five subgenera and eight species groups. Unlike the other euglossine genera, the male gonostylus in *Euglossa* is morphologically diverse. We recognized and illustrated five types of gonostyli that were sometimes consistent within species groups, and might be taxonomically and phylogenetically informative. We hope to draw more attention to and encourage future systematic studies on *Euglossa* using these genital characters.

Key words: Euglossini, *Euglossa*, genital morphology, taxonomy

Introduction

Among the Neotropical orchid bees (Apidae: Euglossini), *Euglossa* Latreille is the largest genus with more than 100 described species (Michener 2000, Ramírez *et al*. 2002). Dressler (1978, 1982) and Moure (1989) recognized, primarily on external features (e.g., mid tibial velvet area, sternal tufts, shape of hind tibia and mandibular teeth, etc), six subgenera (*Glossura, Glossuropoda, Glossurella, Euglossa, Euglossella* and *Dasystilbe*) and about a dozen informal species groups. The subgenera were synonymized by Michener (2000), although several authors continue to use and recognize them (e.g., Ramírez *et al*. 2002, Bembé 2004, Cameron 2004, Roubik 2004). For convenient reference, we retained this subgeneric arrangement in this paper.

Morphological characters of the male hidden sterna and genital capsule have rarely