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A new flower fly species of *Cepa* Thompson & Vockeroth (Diptera: Syrphidae) from the Valdivian evergreen forest hotspot, Chile

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Abstract

The Neotropical region has a high species richness of flower flies. However, there are many known species awaiting proper description. *Cepa* Thompson & Vockeroth is a Neotropical genus with scattered records and few individuals collected of its three species. In the present study, a female of a new species of *Cepa* is described, *C. simonettii* Barahona-Segovia **sp. nov.**, from the Valdivian evergreen forest representing the first record of this genus in Chile. In addition, an identification key to all known species of *Cepa* is provided. Morphological and biogeographic aspects of this new *Cepa* species are discussed, as well as the potential phylogenetic relationship with other members of Merodontini.

Key words: Merodontini, Neotropical region, *Nothofagus*, temperate forest

Resumen

La región Neotropical tiene una alta riqueza de especies de moscas de las flores. Sin embargo, muchas especies aún esperan ser descritas. *Cepa* Thompson & Vockeroth es un género Neotropical escasamente registrado y con pocos individuos recolectados de sus tres especies. En el presente trabajo, se describe una hembra de una nueva especie de *Cepa*, *C. simonettii* Barahona-Segovia **sp. nov.**, del bosque perennifolio Valdiviano que representa el primer registro de este género en Chile. Además, se proporciona una clave de identificación de todas las especies conocidas de *Cepa*. Discutimos aspectos morfológicos y biogeográficos de la nueva especie de *Cepa*, así como la posible relación filogenética de esta con otras especies de Merodontini.

Palabras claves: Merodontini, región Neotropical, *Nothofagus*, Bosque templado

Introduction

Flower flies (Diptera: Syrphidae) are represented worldwide by more than 5,900 species of 202 genera, in all biogeographic realms except Antarctica (Thompson 1999; Brown 2009; Thompson *et al.* 2010). This family is considered an important group of pollinators of different plants, both in crops and natural areas (Ssymank *et al.* 2008; Lander *et al.* 2009; Canali & Loni 2010; Klecka *et al.* 2018), as well as biological controllers of crop pests (Bugg *et al.* 2008). In addition, they have been used as biological indicators (Sommaggio 1999; Van Steenis & Zuidhoff 2013; Alaniz *et al.* 2018). Syrphidae comprises four subfamilies, Syrphinae, Pipizinae, Microdontinae and Eristalinae (Mengual *et al*. 2015), including saprophagous, predatory and phytophagous larvae (Rotheray & Gilbert 2011; Martínez-Falcón *et al.* 2012; Ricarte *et al.* 2012; Ricarte *et al.* 2017).

Neotropical flower flies were catalogued for the first time by Williston (1886), later revised by Fluke (1956, 1957) and finally by Thompson *et al.* (1976). More recently, Thompson (1999) published an identification key to the genera of Neotropical Syrphidae, with description of new genera and species. In his work, Thompson (1999)

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