



A taxonomic review of the *Palpada ruficeps* species group, with the description of a new flower fly from Colombia (Diptera: Syrphidae)

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Abstract

A new species of flower flies, *Palpada prietorum* Mengual spec. nov. (Diptera: Syrphidae: Eristalinae) is described from Cali, Colombia. The new species belongs to the *ruficeps* subgroup in the *vinetorum* species group. An identification key is provided for the species of the *ruficeps* subgroup, as well as a comparison of morphological diagnostic characters to separate these taxa. Fragments of the mitochondrial cytochrome c oxidase subunit I (COI) gene, the D2-3 region of the nuclear 28S rRNA gene and the nuclear internal transcribed spacer (ITS2) are supplied for two species, *Palpada prietorum* spec. nov. and *Palpada ruficeps* (Macquart, 1842).

Key words: Systematic, Diptera

Introduction

Flower flies of the subfamily Eristalinae (Diptera: Syrphidae) are among the most common and conspicuous flower flies. These flies are common pollinators almost wherever flowers are found, being absent only in truly arid areas and the Polar Regions. The larvae of eristaline flower flies are filter feeders in all kinds of aquatic media and are commonly called rat-tailed maggots. Occasionally these larvae are accidentally swallowed by humans, thus causing myiasis. Otherwise, the larvae contribute to the purification of water by filtering out microorganisms and other products. Flies of the subtribe Eristalina are currently placed into 16 genera and 400 species (Thompson, 2003).

Palpada Macquart, 1834 is a large group of tropical eristaline flies found only in the New World, belonging to the tribe Eristalini (Diptera: Syrphidae: Eristalinae). *Palpada* species are large flies, with a tuberculate laterally pilose face, with bare or pilose eyes, bare arista, petiolate cell R1, sinuate vein R4+5, and simple legs except for metafemur sometimes moderately swollen (Thompson 1972). The last comprehensive identification key for *Palpada* species was published in 1934 by C. H. Curran as a key to *Eristalis* Latreille, 1804, but including less than the half of the currently known *Palpada* species and many non *Palpada* species. Later, Lagrange (1987a, b; 1992a, b, c) revised the Argentine *Palpada* species. In the last catalog of Neotropical flower flies, 102 species were listed for *Palpada* (Thompson et al. 1976) and since that catalog 6 species have been described, many names reduced to synonyms or transferred to other genera (net 85 species) and some 24 species await description. Thompson (2003) provided a key to all the genera and groups of the subtribe Eristalina (Syrphidae: Eristalinae: Eristalini) as well as some nomenclatural notes for *Palpada*. The most recent study about *Palpada* species is Thompson (1999), where he described three new species from the *scutellaris* and *vinetorum* groups. *Palpada* species are found in the southern Nearctic and Neotropical Regions and a total