



Article

New species of *Prototilla* Schuster, 1949 from Argentina and diagnoses of the genus based on male and female (Hymenoptera: Bradynobaenidae: Typhoctinae: Eotillini)

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Abstract

Diagnoses for the genus *Prototilla* Schuster, 1949 based on males and females, new generic and specific characters, and descriptions of four new species (*Prototilla nigra* Torrén, Fidalgo, Roig-Alsina & Brothers, **sp. nov.** and *P. intercalata* Torrén, Fidalgo, Roig-Alsina & Brothers, **sp. nov.** based on males, and *P. striata* Torrén, Fidalgo, Roig-Alsina & Brothers, **sp. nov.** and *P. telteca* Torrén, Fidalgo, Roig-Alsina & Brothers, **sp. nov.** based on females) are provided. *Prototilla typhoctoides* (Martinez & Fritz, 1974), **comb. nov.** is transferred from *Eotilla*. A comparative table between the two genera of the tribe Eotillini and a key to the species of *Prototilla* are presented.

Key words: *Prototilla*, *Eotilla*, diagnosis, key to species

Introduction

Schuster (1949) described *Prototilla* and *Eotilla* and placed them in a new subfamily (Eotillinae) within the family Mutillidae, along with four other subfamilies (Typhoctinae, Apterogyninae, Sphaerophthalminae and Mutillinae) found in the Neotropical region. The type species of *Prototilla* (*P. anomala* Schuster, 1949), based on the male, remains the only known representative of the genus to the present.

In phylogenetic studies and classification of Hymenoptera Aculeata, Brothers (1975, 1999) and Brothers and Carpenter (1993) placed Eotillini and Typhoctini as tribes of Typhoctinae, but distant from Mutillidae and relocated within Bradynobaenidae (with Chyphotinae, Apterogyninae and Bradynobaeninae). Genise (1986) treated the four subfamilies mentioned above as separate families within a superfamily Bradynobaenoidea; his rank elevation of aculeate taxa has not been adopted.

Recent molecular phylogenetic studies of the superfamily Vespoidea by Pilgrim *et al.* (2008) indicate that the family Bradynobaenidae — according to the concept of Brothers (1975) — is paraphyletic; they placed Apterogyninae and Bradynobaeninae in Bradynobaenidae within a superfamily Scolioidea, and Chyphotinae and Typhoctinae in Chyphotidae within a superfamily Thynnoidea. This mainly molecular analysis has, however, not yet been properly evaluated or tested by other analyses, so we retain the generally used classification. Heraty *et al.* (2011) in their study of the phylogeny of Hymenoptera, although including only a small number of genera of Vespoidea (and only *Chyphotes* Blake, 1886 for Bradynobaenidae), confirmed the lack of a close relationship between Mutillidae and *Chyphotes*, and showed a close relationship between *Chyphotes* and *Colocistis* Krombein, 1942 (their only representative of Tiphidae).

At present, the Typhoctinae contains two tribes: Typhoctini with *Typhoctes* Ashmead, 1899 (North and Central America) and *Typhoctoides* Brothers, 1974 (Chile and Argentina) and Eotillini with *Eotilla* (Chile and Argentina)