



## Description of a new species of *Bradynobaenus* (Hymenoptera: Bradynobaenidae) from Argentina, with a key to the females of the genus

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### Abstract

The new species *Bradynobaenus riojanus* (Hymenoptera: Bradynobaenidae) is described from two localities in the province of La Rioja, Argentina. It is closely related to *B. chubutinus* Brèthes. A revised key to the females of the genus is provided.

**Key words:** Bradynobaenidae, *Bradynobaenus*, key to species

### Introduction

*Bradynobaenus* Spinola is the only genus in the subfamily Bradynobaeninae, which is a group of wasps that has been included by different authors in the past among mutillids, scoliids, or tiphids (Genise, 1986). This uncertain systematic position was studied by Brothers (1975), who found evidence that the bradynobaenines, together with the typhoctines, chypotines and apterogynines form a monophyletic group, the family Bradynobaenidae. Brothers and Carpenter (1993), and Brothers (1999) corroborated the close phylogenetic relationship of these four groups, and the monophyly of the family. The last molecular phylogenetic studies of Vespoidea by Pilgrim *et. al* (2007) suggest that Bradynobaenidae is a paraphyletic group, wherein Bradynobaeninae is a sister group of Tiphinae, and Chypotinae and Typhoctinae are related with the other subfamilies of Tiphidae.

Genise (1986) included the Bradynobaenidae as the only family within Bradynobaenoidea, raising several other groups of aculeate wasps to the superfamily level. This classification has not been followed by other hymenopterists; most follow Brothers (1975), including the family within the Vespoidea (Carpenter, 1981; Gauld and Bolton, 1988; Fernández, 2001; Fernández and Sharkey, 2006).

The Bradynobaenidae are represented in South America by the two subfamilies Bradynobaeninae and Typhoctinae. The first subfamily includes the single genus *Bradynobaenus*, species of which are restricted to xeric areas of north and central Chile and of western and southern Argentina. The Typhoctinae include the genera *Typhoctes* Ashmead and *Typhoctoides* Brothers (Typhoctini), and *Eotilla* Schuster and *Prototilla* Schuster (Eotillini). With the exception of *Typhoctes*, which is most diverse in Central America and reaches Colombia to the south (Brothers, 2006), all the other genera are endemic to desertic areas in Chile, Argentina and Bolivia.

The genus *Bradynobaenus* has been revised by Genise (1986), and catalogued by Nonveiller (1990). Seven species are recognized: *B. australis* Perez D'Angello, *B. gayi* Spinola, and *B. wagenknechti* Reed from Chile, and *B. bidentatus* Genise, *B. chubutinus* Brèthes, *B. cordobensis* Genise, and *B. subandinus* Genise from Argentina. Most species are known from the female sex, except *B. australis* for which only males are known; both sexes are known for *B. chubutinus*, *B. gayi* and *B. wagenknechti*.