



Nine new *Zonopimpla* Ashmead (Hymenoptera, Ichneumonidae, Pimplinae) and key to species from Venezuela

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Abstract

Zonopimpla Ashmead is an exclusively Neotropical genus with the greatest number of species in Central America. In order to better understand the *Zonopimpla* species occurring in Venezuela, samplings using Malaise traps were conducted at six-months intervals in Aragua, Lara and Merida states in Venezuela from 2001–2003. Specimens from three major entomological museums were also examined. Nine new *Zonopimpla* species are described and illustrated: *Z. diazi* sp. nov., *Z. moralesi* sp. nov., *Z. pereirai* sp. nov., *Z. pseudoatriceps* sp. nov., *Z. rodriguezi* sp. nov., *Z. sebastiani* sp. nov., *Z. torrellasi* sp. nov., *Z. vasquezi* sp. nov., and *Z. victoriae* sp. nov. A taxonomic key for the Venezuelan species of *Zonopimpla* is provided, including also *Z. atriceps* (Cresson) and *Z. fasciata* Townes.

Key words: Hymenoptera, Ichneumonidae, Pimplinae, *Camptotypus*, Venezuela

Introduction

Pimplinae is widely distributed in tropical ecosystems, and is considered the most biologically diverse subfamily in Ichneumonidae (Gauld 1995). *Zonopimpla* (Ashmead) is included in the *Camptotypus* genus-group and comprises a great number of Neotropical wasp species which are solitary or gregarious parasitoids on prepupal and pupal holometabolous insects inhabiting leaf mines, galls or cocoons (Gauld 1991).

In Tropical America, the *Camptotypus* genus-group is represented by *Zonopimpla*, *Clydonium* Townes, *Odontopimpla* Cameron, while in the Old World and northern Australia this genus-group includes only *Camptotypus* Kriechbaumer, *Hemipimpla* Saussure and *Parvipimpla* Gauld (Sääksjärvi *et al.* 2004). More recently, a new genus, *Amazopimpla* Sääksjärvi, Palacio, Gauld, Jussila and Salo, and six new species in the tropical *Camptotypus* genus-group were described from northern South America (Sääksjärvi *et al.* 2003).

Species of the *Camptotypus* genus-group are rarely collected. In the 1960's, *Zonopimpla* included only 8 described species (Townes and Townes 1966). More recently, other 24 species from Costa Rica were included and there are likely many other undescribed species, as this genus is recognized as including a higher number of species in Pimplinae in Central America (Gauld *et al.* 1998). Phylogenetic studies conducted by Sääksjärvi *et al.* (2004) on the *Camptotypus* genus-group, recognized *Zonopimpla* as a plesiomorphic basal genus at least until majority of species are described, when a more exhaustive analysis might reveal clear groups of species that could be accorded generic status.

Zonopimpla is a moderately large tropical American genus (Townes and Townes 1966), being found higher diversity and abundance in rain forests from about 400 up to 1500 m in Costa Rica (Gauld 1991). On the other hand, although, *Zonopimpla* species seem to be widely distributed from 450 to 2500 meters in Venezuela (Diaz 1997), there have been fewer comprehensive studies about this genus, so far. Besides description of *Zonopimpla fasciata* (the type-species of *Cenodontis*) from a specimen collected in Puerto Cabello (Townes 1969), only *Z. atriceps* have been recognized as occurring in Venezuela (Diaz 1997). Thus, lacking information prompted us to carry out more intensive collections to improve our knowledge on *Zonopimpla* species occurring in Venezuela.