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A review of *Paroplitis* (Braconidae, Microgastrinae), and description of a new genus from New Zealand, *Shireplitis*, with convergent morphological traits

J. FERNÁNDEZ-TRIANA¹, D.F. WARD², S. CARDINAL¹, C. VAN ACHTERBERG³

¹Canadian National Collection of Insects, 960 Carling Avenue, Ottawa, K1A 0C6, Ontario, Canada

²New Zealand Arthropod Collection, Landcare Research, Private Bag 92170, Auckland, New Zealand.

³Department of Terrestrial Zoology, Naturalis Biodiversity Center, Postbus 9517, 2300 RA Leiden, The Netherlands

Abstract

A new genus of Microgastrinae, *Shireplitis* Fernández-Triana and Ward, is described as endemic from New Zealand. *Shireplitis* resembles the Holarctic genus *Paroplitis* Mason, although morphological and molecular data reveal they are not likely to be closely related but are an example of convergent evolution. *Shireplitis* comprises species mostly found in moss, litter, or tussock grasslands, usually at moderate altitude on several New Zealand mountain ranges. Keys to all species from both genera are provided. Seven new species are described: *Paroplitis vietnamensis* van Achterberg and Fernández-Triana, and six *Shireplitis* species authored by Fernández-Triana and Ward: *S. bilboi*, *S. frodoi*, *S. meriadoci*, *S. peregrini*, *S. samwisei* and *S. tolkiени*.

Key words: Microgastrinae, *Paroplitis*, *Shireplitis*, Holarctic, New Zealand, Vietnam

Introduction

The genus *Paroplitis* was named by Mason (1981) to accommodate three Holarctic species which superficially resemble small specimens of *Microplitis* –although they are not closely related with the latter genus. *Paroplitis* can be easily recognized by its relatively small size, short and robust legs, short antenna (in females with a single rank of placodes per segment), mostly smooth metasomal terga, and propodeum usually with median and transverse carinae. Since Mason (1981), only one other species has been described (Papp 1991), but the distribution of known species has broadened across Europe (summarized in Yu *et al.* 2012) and North America (Fernández-Triana 2010).

As a result of studies being carried out by the authors on the Microgastrinae fauna of New Zealand (DW and JFT) and the Oriental region (CvA and JFT), new material representing one additional species of *Paroplitis* was discovered in Vietnam. Specimens of what at first seemed to be additional species from New Zealand were later found to represent a different genus, which is described below.

Methods

This study is based on the examination of material housed in the Canadian National Collection of Insects (CNC), Ottawa, Canada; the New Zealand Arthropod Collection (NZAC), Landcare Research, Auckland, New Zealand; the Entomological Research Museum (LUNZ), Lincoln University, Lincoln, New Zealand; Naturalis Biodiversity Center (RMNH), Leiden, the Netherlands; and Institute of Ecology & Biological Resources (IEBR), Vietnamese Academy of Science & Technology, 18 Hoang Quoc Viet Road, Cau Giay, Ha Noi, Vietnam.

Morphological terms and measurements of structures are mostly as used by Mason (1981), Huber & Sharkey (1993), Whitfield (1997), and Karlsson & Ronquist (2012). “Body length” refers to the anatomical line that is median and extends between the anteriormost point of the head and the posteriormost point of the metasoma (excluding ovipositor and ovipositor sheaths); and “fore wing length” refers to the anatomical line that extends between the median margin of the first axillary sclerite and the distalmost point of the wing blade. Throughout the keys the acronyms T1 and T2 are used for morphological terms mediotergite 1, and mediotergite 2.