



<http://dx.doi.org/10.11646/zootaxa.4059.1.11>

<http://zoobank.org/urn:lsid:zoobank.org:pub:6F891C2F-6082-43A1-9E8C-06C320B2BA45>

Three new species of the parasitic wasps genus *Spilomicrus* Westwood (Hymenoptera: Diapriidae) from the East Palearctic Region

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Abstract

Three new species of *Spilomicrus* Westwood from the East Palearctic with occipital flange broad and notauli broad and deep posteriorly, *S. notaulus* sp. nov., *S. nottoni* sp. nov. and *S. lubomasneri* sp. nov., are described, illustrated and keyed. Variation of the character states, distribution and comparative diagnosis of each species are provided.

Key words: Hymenoptera, Diapriidae, *Spilomicrus*, East Palearctic, Russia, Japan, South Korea, new species, key

Introduction

The genus *Spilomicrus* Westwood, 1832 (Hymenoptera: Diapriidae) comprises 167 valid species worldwide, 44 of which are record in the Palearctic Region (Johnson 1992, Hymenoptera Online 2015). All members of this genus are small to medium-sized (1.0–4.5 mm) parasitoid wasps with a primarily dark, smooth and shining body. Species of *Spilomicrus* from the East Palearctic can be identified using the generic key by Kozlov (1995). Generic synonymy is documented in Johnson (1992) and Notton (2014). Hosts of *Spilomicrus* species are known from Diptera and the larvae of Curculionidae (Scolytinae) and Staphylinidae (Thompson 1954, Honda 1969, Hoffmeister 1989, Masner 1991, Notton 1999, Masner & García 2002).

Well over 50 species of *Spilomicrus* are estimated to exist in the Easter Palearctic, however only three valid species were previously known from Japan (Honda 1969, Notton 1999). Masner (1991) published a revised key to the North American *Spilomicrus* species and divided the Nearctic species into four species groups. This division can be also applied to the Palearctic fauna. Based on the following characters the three species described in this paper belong to the *Spilomicrus stigmatalis* Westwood group: mandible more-or-less equidentate; clypeus rounded; posterior scutellar pits are developed; metasoma long-ovoid, slightly flattened dorsally; ovipositor valves without specialized structures; and median keel of the propodeum raised but not pointed. However two characters, the broad occipital flange and the broad and deep distally but shallow proximally notauli differentiate them from all presently described species of the *S. stigmatalis* group.

Material and methods

The 336 specimens examined in this study were collected in different localities of the Russian Far East, South Korea and Japan using yellow pan traps, Malaise traps, and by net sweeping. Type material of the new species is deposited in the collection the Zoological Institute of the Russian Academy of Sciences (ZISP, St. Petersburg, Russia), and some paratypes in the Canadian National Insects Collection (CNIC, Ottawa, Canada) and the National History Museum (BMNH, London, U.K.). Morphological terminology and abbreviations follow Masner & García (2002), Yoder (2004), Chemyreva & Kolyada (2013) and the Hymenoptera Anatomy Ontology (Yoder et al, 2010). Measurements follow Yoder (2004). We define the additional anatomical terms: **anterior incision of mesopleuron**—the notch that is situated at the border between the pronotum and mesopleuron that is significantly