



Article

urn:lsid:zoobank.org:pub:F3E4E49D-B342-4E7A-BF08-A4139710B378

Aphidiinae (Hymenoptera, Braconidae, Aphidiinae) from Slovenia, with description of a new *Aphidius* species

KATARINA KOS¹, STANISLAV TRDAN¹, ANDJELJKO PETROVIĆ², PETR STARÝ³,
NICKOLAS G. KAVALLIERATOS⁴, OLIVERA PETROVIĆ-OBRAĐOVIĆ⁵ & ŽELJKO TOMANOVIĆ²

¹ Department of Agronomy, Biotechnical Faculty, University of Ljubljana, Jamnikarjeva 101, SI-1111 Ljubljana, Slovenia; e-mail: katarina.kos@bf.uni-lj.si; stanislav.trdan@bf.uni-lj.si

² Institute of Zoology, Faculty of Biology, University of Belgrade, Studentski trg 16, SER-11000 Belgrade, Serbia; e-mail: andjeljko@bio.bg.ac.rs; ztoman@bio.bg.ac.rs

³ Institute of Entomology, Biology Center, Academy of Sciences of the Czech Republic, Branišovská 31, CS-370 05 České Budějovice, Czech Republic; e-mail: stary@entu.cas.cz

⁴ Laboratory of Agricultural Entomology, Department of Entomology and Agricultural Zoology, Benaki Phytopathological Institute, 8 Stefanou Delta str., 14561, Kifissia, Attica, Greece; e-mail: nick_kaval@hotmail.com

⁵ Department of Plant Protection, Faculty of Agriculture, University of Belgrade, Nemanjina 6, SER-11081 Zemun, Serbia.

Abstract

Over the period 2006–2010, 40 species of primary parasitoids belonging to eleven genera were found and reared from 50 species of host aphids, from a total of 106 host plants collected from 62 localities all around Slovenia. Over 230 tritrophic associations have been reviewed, including four associations which are reported for the first time; *Ephedrus plagiator*/*Staticobium limonii*/*Limonium angustifolium*, *Praon necans*/*Staticobium limonii*/*Limonium angustifolium*, *Aphidius sus-si*/*Delphinobium* sp./*Aconitum maximum* and *Ephedrus persicae*/*Brachyunguis tamaricis*/*Tamarix gallica*. The parasitoid species from Slovenia have been grouped in seven faunal complexes according to their origin, e.g. 11 species from European deciduous forest, 3 species from Far Eastern deciduous forest, 20 species from Eurasian Steppes, 1 Mediterranean species, 2 species from Holarctic Forest Tundra, 2 species from Boreal Europe, and 1 Nearctic species. Also, a new aphid parasitoid species *Aphidius staticobii* sp.n. Tomanović and Petrović has been described from the association *Staticobium limonii*/*Limonium angustifolium*.

Key words: *Aphidius*, new species, tritrophic associations, Aphidiinae, Slovenia

Introduction

Aphids are among the most important pests that can seriously hinder world food production. They can adversely affect crop yield and quality by either direct feeding on plants or indirectly by excretion of body wax and honeydew that reduces the market value of the crop. Aphids are also important vectors of the plant viruses that can transmit approximately 275 virus species, causing diseases of major economic importance in crops (Hull 2002; Katis *et al.* 2007). More than 4700 aphid species are known worldwide (Remaudiere & Remaudiere 1997) and about 190 species have been reported to transmit plant viruses (Nault 1997; Katis *et al.* 2007).

Aphids are a predominantly northern temperate group and more than 75% of the species have been described from the Palaearctic region (Holman 2009), approximately 1500 species from Europe (Petrović-Obradović 2003). In Slovenia, few studies of the aphidofauna have been carried out, except for the descriptions of some important pest species. Janežič recorded 131 aphid species as vectors of numerous potato viruses (1989), while Hržič (1996) found 77 more aphid species in the seed potato crops. Modic and Urek (2008) concluded that the Slovenian aphid fauna consisted of 197 species.

Aphids are extensively attacked by three main categories of natural enemies, predators, parasitoids and pathogens (Völkl *et al.* 2007; Van Veen *et al.* 2008). About 400 species of aphid parasitoids from more than 55 genera are known worldwide. They belong to the subfamily Aphidiinae and represent solitary koinobiont