



Two new species of aphid parasitoids (Hymenoptera, Braconidae, Aphidiinae) from the Balkan Peninsula

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Abstract

Two new species of aphid parasitoids from the Balkan Peninsula are described. *Aphidius chaetosiphonis* sp. n. was reared from *Chaetosiphon* sp./ *Potentilla clusiana*, while *Aphidius balcanicus* sp. n. was reared from *Acyrtosiphon malvae* / *Geranium* spp. associations. The taxonomic position of both species has been discussed.

Key words: *Aphidius chaetosiphonis* sp. n., *Aphidius balcanicus* sp. n., tritrophic associations, high mountains

Introduction

The Balkan Peninsula is one of the six biodiversity hotspots in Europe (Horvat *et al.* 1974; Kryštufek & Reed 2004) which are characterized by very diverse ecosystems, combined with a high percentage of plant endemism (Turrill 1929; Horvat *et al.* 1974). These factors could lead to species diversity patterns of aphids and parasitoids (Dolphin & Quicke, 2001). In the last two decades intensive research on aphid parasitoid diversity in this area has resulted in the description of a large number of new and endemic species of aphid parasitoids belonging to the subfamily Aphidiinae (Starý *et al.* 1998; Kavallieratos & Lykouressis 2000; Kavallieratos *et al.* 2001; Tomanović & Starý 2001; Tomanović & Kavallieratos 2002; Tomanović *et al.* 2002; Kavallieratos *et al.* 2003; Tomanović *et al.* 2003b; 2003c; Petrović *et al.* 2009; Tomanović *et al.* 2009, Žikić *et al.* 2009), as well as many new tritrophic interactions (plants–aphids–parasitoids) (Tomanović *et al.* 1998; Kavallieratos *et al.* 2004). Four out of 13 recently described species from the Balkans belong to the genus *Aphidius* Nees (Kavallieratos *et al.* 2001; Tomanović & Starý 2001; Tomanović & Kavallieratos 2002; Petrović *et al.* 2009). *Aphidius*, with over 100 species described worldwide is the most diverse (Starý 1973; Achterberg 2010) and also taxonomically the most problematic genus within the subfamily (Eady 1969; Punglerl 1986; Tomanović *et al.* 2003a; 2007; Rakhshani *et al.* 2008). Within *Aphidius* we can recognize several species complexes which suggest cryptic species as follows: *ervi* complex (Pennacchio & Tremblay, 1986; Hufbauer *et al.* 2004), *urticae* complex (Starý 1972; Petrović *et al.* 2009), *uzbekistanicus-rhopalosiphii* complex (Starý 1981; Höller 1991). As well, the taxonomic and phylogenetic status of several closely related genera (e.g. *Lysaphidus* Smith, *Diaeretellus* Starý, *Diaeretiella* Starý, *Euaphidius* Mackauer, *Remaudiereia* Starý) with *Aphidius* is still unclear (Tomanović *et al.* 2007; Kambhampati *et al.* 2000; Sanchis *et al.* 2000; Achterberg 2010).

In this paper we describe two new *Aphidius* species from the Balkan Peninsula and discuss their biology and taxonomic position within the genus.