



A review of *Aphidius* Nees (Hymenoptera: Braconidae: Aphidiinae) in Iran: host associations, distribution and taxonomic notes

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Abstract

A survey of aphid parasitoids belonging to *Aphidius* Nees was conducted in several parts of Iran, and 17 species were identified between 2001 and 2005. Parasitoids were reared from field-collected aphids, and the tritrophic associations of parasitoids, their aphid hosts, and the respective food plants were determined. The species of *Aphidius* parasitoids are listed with their distribution and aphid-plant associations. An illustrated key for species identification is presented. Ambiguity of some characters is discussed, and the more reliable characters are indicated and used for the identification key.

Key words: *Aphidius*, parasitoids, aphids, Iran, host associations

Introduction

Aphidiinae are solitary obligatory endoparasitoids of aphids (Starý 1970b). *Aphidius* Nees is a diverse genus in the subfamily and has an extensive and variable host range when all included species are considered (Kavallieratos *et al.* 2001; Pennacchio & Höller 1990; Starý 1976). Due to the great potential of *Aphidius* species as biological control agents, much research has been done on the systematics, biology, and ecology of species in the genus (Schelt 1996; Gargiulo *et al.* 1988; Al Dobai & Praslicka 1999; Wiackowski *et al.* 1997). Starý (1973) reviewed and keyed the European species of *Aphidius*. Pennacchio (1990), Tomanović *et al.* (2003) and Kavallieratos *et al.* (2006) treated the taxonomy and tritrophic associations of *Aphidius* species in Italy, Serbia and Montenegro and Greece, respectively.

The generic position of *Aphidius* is now well defined except for its paraphyly with regard to *Lysaphidius* Smith (Kambhampati *et al.* 2000; Sanchis *et al.* 2000). Tomanović *et al.* (2007) synonymized *Lysaphidius* with *Aphidius* on the basis of phylogenetic analyses. The validity of *Euaphidius* Mackauer as a separate genus is also the subject of disagreement among taxonomists. Mackauer (1961) erected *Euaphidius*, but Starý (1973)