



## Parasitoids (Hymenoptera: Braconidae: Aphidiinae) attacking aphids feeding on Prunoideae and Maloideae crops in Southeast Europe: aphidiine-aphid-plant associations and key

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### Abstract

Original information on aphidiine braconids attacking aphids feeding on Prunoideae (i.e., *Prunus* spp.) and Maloideae (i.e., *Malus domestica*, *Cydonia oblonga*, *Pyrus communis*) plants in Southeast Europe is presented. A total of 15 species are keyed and illustrated with scanning electron micrographs and line drawings. The aphidiines presented in this work have been identified from 21 aphid taxa. Ninety-three aphidiine-aphid-plant associations are presented, 21 of which are new.

**Key words:** review, key, Aphidiinae, aphids, Prunoideae, Maloideae, Southeast Europe

### Introduction

Prunoideae and Maloideae (Rosaceae) crops are of great economic importance, covering large areas of Southeast Europe. For example, in Greece they comprise 57,318 Ha and 25,929 Ha, respectively, and produce 237,492 tons and 221,050 tons, respectively (N.S.S.G. 2003). In Serbia they cover about 173,000 Ha and 40,000 Ha, respectively, and produce 767,000 tons and 257,000 tons, respectively (Mratinić *et al.* 2007).

Aphids are important pests of Prunoideae and Maloideae crops in Southeast Europe, causing great damage both directly and indirectly (e.g., different types of galls, leaf deformation, flower and early fruit drop, underdeveloped shoots, honeydew coverings infested by sooty mold, transmission of plant viruses) (Blackman & Eastop 2000). However, aphid numbers are affected greatly by the activity of their natural enemies (Starý 1970, 1976; Kavallieratos & Lykouressis 1999, 2004; Kavallieratos & Tomanović 2001; Tomanović & Brajković 2001; Tomanović & Kavallieratos 2002; Kavallieratos *et al.* 2001, 2002a, 2002b, 2003, 2004a, 2004b, 2004c, 2005a, 2005b, 2006; Tomanović *et al.* 1996, 2003, 2006a, 2006b).

Continuing our research efforts on aphidiine braconids, we present a key for the identification of aphidiines attacking aphids feeding on *Prunus armeniaca*, *Prunus avium*, *Prunus cerasus*, *Prunus domestica*, *Prunus domestica* var. *insititia*, *Prunus dulcis*, *Prunus persica*, *Malus domestica*, *Cydonia oblonga* and *Pyrus communis* in agroecosystems. Sixteen years of data on aphidiine-aphid-plant associations in Southeast Europe are presented. The purpose of this study was to identify the spectrum of aphidiines attacking aphids feeding on