

First report of the aphid parasitoid *Aphidius ervi* Haliday (Hymenoptera, Braconidae, Aphidiinae) from South Africa

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In August 2010, *Aphidius ervi* Haliday (Hymenoptera, Braconidae, Aphidiinae) was reared from a sample of the potato aphid, *Macrosiphum euphorbiae* (Thomas), which was collected in the field on *Malva parviflora* L. (Malvaceae) at the Experimental Farm of the University of Pretoria, Pretoria, South Africa (25°45'03.6"S 28°15'28.9"E). This is the first record of this parasitoid from South Africa. Voucher specimens are deposited in the South African National Collection of Insects, ARC-Plant Protection Research Institute, Pretoria (ARC-PPRI; accession numbers AcP 9504–AcP 9509).

Aphidius ervi is a solitary, koinobiont endoparasitoid (Colinet *et al.* 2005) of several economically important aphid pests (Starý 1976; Boivin *et al.* 2012). The species originates from the Palaearctic Region and has been successfully introduced into North and South America, Australia, New Zealand and Asia (Starý 1974; Marsh 1977; Milne 1986; Cameron & Walker 1989; Takada 2002; Starý *et al.* 2007). *Aphidius ervi* is commercially available and commonly used as a biological control agent for the pea aphid, *Acyrtosiphon pisum* (Harris), *M. euphorbiae*, and several other aphid pests (Wei *et al.* 2005; Boivin *et al.* 2012). The parasitoid is used mainly against aphids infesting legumes and, to a lesser extent, against aphids on cereals (Cameron *et al.* 1984), tomato, sweet pepper, eggplant, gerbera, roses, cucumber and beans (Kos *et al.* 2009; Boivin *et al.* 2012).

Several authors reported on the oligophagous nature of *A. ervi* in laboratory and field studies (Sigsgaard 2000; Lumbierres *et al.* 2007; Starý *et al.* 2007). Of the aphid species parasitized by *A. ervi*, at least 15 are known to occur in South Africa according to Millar (1990). These include the Macrosiphini *Acyrtosiphon kondoi* Shinji, *A. pisum*, *A. malvae* (Mosley), *Aulacorthum solani* (Kaltenbach), *Diuraphis noxia* (Kurdjumov), *M. euphorbiae*, *M. rosae* (L.), *Metopolophium dirhodum* (Walker), *Myzus persicae* (Sulzer), *Sitobion avenae* (F.) and *S. fragariae* (Walker) (Starý 1976; Marsh 1977; Takada 2002;

Tomanović *et al.* 2003; Lumbierres *et al.* 2007; Starý *et al.* 2007; Boivin *et al.* 2012), and the four Aphidini *Aphis gossypii* Glover, *Rhopalosiphum maidis* (Fitch), *R. padi* (L.), and *Schizaphis graminum* (Rondani) (Marsh 1977; Tomanović *et al.* 2003; Lumbierres *et al.* 2007; Starý *et al.* 2007).

Aphidius matricariae Haliday and *A. rhopalosiphii* De Stefani-Perez are the only recorded *Aphidius* species imported through the Insect Quarantine facility of ARC-PPRI (Pretorius 2008) and released in South Africa (G.L. Prinsloo, pers. comm.). These parasitoids were introduced during 1988 from Turkey and during 1989–90 from the U.S.A. and Australia for the biological control of the Russian wheat aphid, *D. noxia* (Marasas *et al.* 1997; Pretorius 2008). In addition, *Aphidius colemani* Viereck has been reported from South Africa (Remaudière *et al.* 1985). The only African records of *A. ervi* are from North Africa (Starý 1976). *Aphidius ervi* was introduced into Burundi in East Africa but did not establish (Starý, pers. comm.). It is, therefore, not clear when and how *Aphidius ervi* arrived and became established in South Africa but there is no doubt that it can contribute to the natural control of aphid pests.

ACKNOWLEDGEMENTS

Aphidius ervi was identified by P. Starý (Biology Centre, Institute of Entomology, Academy of Sciences of the Czech Republic). The identity of *Macrosiphum euphorbiae* was confirmed by I.M. Millar (Biosystematics Division, ARC-Plant Protection Research Institute, South Africa). M. Nel (Department of Plant Science, University of Pretoria) identified *Malva parviflora*.

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