

Short communication

NEW APHID PARASITOIDS
(HYMENOPTERA: BRACONIDAE: APHIDIINAE)
IN THE REGION OF MARMARA, TURKEY

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Members of Aphidiidae are very important pest insects which usually live in colonies. The economic importance of these parasitic aphids is a matter of major concern. Their attacks cause serious damage: they rob the plant of sap; and their salivary secretions are toxic, causing growth-stunting and deformation of leaves, stems or roots, and acting as a vector of viruses which cause many diseases in plants (ÖZDEMİR *et al.*, 2006; VAN EMDEN & HARRINGTON, 2007).

Aphidiines are small and weakly sclerotised insects. All species are solitary koinobiont parasitoids of aphids (SHAW & HUDDLESTON, 1991). The subfamily currently contains about 250 known species from West Palaearctic, including 34 from Turkey (YU *et al.*, 2006).

Despite the vast scientific literature on aphid pests and their enormous economic importance, only a few studies of the taxonomy of these Aphidiidae parasitoids as well as of the parasitoid-aphid associations have been conducted in Turkey (ÖLMEZ & ULUSOY, 2003; EL MALI *et al.*, 2004; ASLAN *et al.*, 2004; GÜZ & KILINÇER, 2005). The aim of this study was to contribute to the knowledge of the Aphidiinae fauna of the Turkish Marmara region.

Parasitoid Aphidiinae samples were collected on cultivated and noncultivated landscapes from different localities in the Marmara Region between 1989 and 2003. The specimens were collected by day using a sweeping-net. They were then transferred into a hand-made aspirator and were immediately killed with a 70% alcohol solution. We followed YU *et al.* (2006) for general distribution data on each species. Other data

come from manuscripts in the literature cited herein. The study materials have been preserved in the Entomology Museum at the Biology Department of the Faculty of Arts and Science at Trakya University.

In this survey, a total of seventeen species of the Aphidiinae parasitoids were recorded in seven genera (*Adialytus* Förster, *Aphidius* Nees, *Binodoxys* Mackauer, *Diaeretiella* Starý, *Ephedrus* Hal., *Lysiphlebus* Förster, *Praon* Hal.) in the region of Marmara (Tab. I).

Table I. Records of Aphidiinae in the Region of Marmara, Turkey.

Species	Locality	Date	Distribution in other regions in Turkey
<i>Adialytus salicaphis</i> (Fitch, 1855)	Edirne İstanbul	07.1989	Ankara, Konya
<i>Aphidius absinthii</i> Marshall, 1896	Edirne	05.1989	Kahramanmaraş
<i>Aphidius avenae</i> Haliday, 1834	Bursa	07.1993	Gaziantep
<i>Aphidius colemani</i> Viereck, 1912	Edirne Bilecik Tekirdağ	05.1989 06.1993 06.2003	Adana, Ankara, Diyarbakır, Hatay, İçel, İzmir
<i>Aphidius eadyi</i> Starý, González and Hall, 1980	Bursa	07.1993	Ankara, Diyarbakır
<i>Aphidius ervi</i> Haliday, 1834	Balıkesir Bilecik Bursa Çanakkale Edirne Tekirdağ	07.1993 07.1993 07.1993 07.1993 05.1989 06.2003	Adana, Ankara
<i>Aphidius funebris</i> Mackauer, 1961	Bilecik Bursa Edirne	06.1993 07.1993 07.1989	Ankara, Kahramanmaraş
<i>Aphidius matricariae</i> Haliday, 1834	Adapazarı Bilecik Bursa Edirne İzmit	07.1993 07.1993 07.1993 05.1989 07.1993	İzmir, Adana, Diyarbakır, Hatay, İçel, Kahramanmaraş
<i>Aphidius transcaspicus</i> Telenga, 1958	Adapazarı Bilecik Bursa Edirne İzmit Tekirdağ	07.1993 06.1993 06.1993 06.1989 07.1993 06.2003	Diyarbakır, Muğla, Kahramanmaraş
<i>Aphidius uzbekistanicus</i> Luzhetski, 1960	Edirne	07.1989	Ankara, Kahramanmaraş, Tekirdağ Diyarbakır
<i>Binodoxys angelicae</i> (Haliday, 1833)	Edirne	07.1989	Adana, Ankara, Antalya, Diyarbakır, Hatay, İçel, İzmir, Kahramanmaraş
<i>Diaeretiella rapae</i> (McIntosh, 1855)	Edirne	07.1989	Adana, Ankara, Diyarbakır, Erzurum, İçel, İzmir, Kahramanmaraş, Konya
<i>Ephedrus plagiator</i> (Nees, 1811)	Çanakkale Edirne Yalova	09.2002 07.2002 10.2001	Ankara
<i>Lysiphlebus fabarum</i> (Marshall, 1896)	Adapazarı Bursa	07.1993 07.1993	Ankara, Diyarbakır, Hatay, İçel, İzmir, Konya, Mardin, Muğla, Şanlıurfa, Tekirdağ, Kahramanmaraş

Table I (continued)

Species	Locality	Date	Distribution in other regions in Turkey
<i>Lysiphlebus fabarum</i> (Marshall, 1896)	Edirne İzmit	07.1989 07.1993	
<i>Praon exsoletum</i> (Nees, 1811)	Edirne	07.1989	-
<i>Praon volucre</i> (Haliday, 1833)	Bilecik Bursa Çanakkale Edirne Tekirdağ	07.1993 09.1992 07.1993 07.1989 06.2003	Adana, Ankara, İçel, Tekirdağ, Diyarbakır
<i>Praon yomenae</i> Takada, 1968	Bilecik Bursa	07.1993 09.1992 07.1993	-

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References: ASLAN, M.M., UYGUN, N. & STARÝ, P., 2004. Phytoparasitica, 32: 255-263. EL-MALI, M.U., STARÝ, P., SAHBAZ, A. & AZSEMERCL, F., 2004. Egyptian Journal of Biological Pest Control, 14: 355-370. GÜZ, N. & KILINÇER, N., 2005. Phytoparasitica, 33: 359-366. ÖLMEZ, S. & ULUSOY, M.R., 2003. Phytoparasitica, 31: 524-528. ÖZDEMİR, I., TOROS, S., KILINÇER, A.N. & GÜRKAN, M.O., 2006. Ekoloji, 58: 38-41. SHAW, M.R. & HUDDLESTON, T., 1991. Classification and biology of braconid wasps (Hymenoptera: Braconidae). Handbooks for the Identification of British Insects, Vol. 7, Part 11. Royal Entomological Society of London, UK, 126 pp. VAN EMDEN, H.F. & HARRINGTON, R., 2007. Aphids as crop pests. CABI, Wallingford, 768 pp. YU, D.S., ACHTERBERG, C. & HORSTMANN, K., 2006. Interactive Catalogue of World Ichneumonoidea Taxonomy, biology, morphology and distribution, Compact disc (Master version), Taxapad.

НОВИ НАЛАЗИ ПАРАЗИТСКИХ ОСА
(HYMENOPTERA: BRACONIDAE: APHIDIINAE)
У МАРМАРА РЕГИОНУ, ТУРСКА

УЗЛЕМ ЧЕТИН ЕРДОГАН, ЖЕЉКО ТОМАНОВИЋ И АХМЕТ БЕЈАРСЛАН

Извод

Идентификоване су врсте и родови субфамилије Aphidiinae (Hymenoptera, Braconidae) сакупљене са различитих локалитета Мармара региона, Турска. Укупно је нађено 17 врста паразитских оса из 7 родова: *Adalytus salicaphis* (Fitch, 1855), *Aphidius absinthii* Marshall, 1896, *A. avenae* Haliday, 1834, *A. colemani* Viereck, 1912, *A. eadyi* Stary, Gonzales and Hall, 1980, *A. ervi* Haliday, 1834, *A. funebris* Mackauer, 1961, *A. matricariae* Haliday, 1834, *A. transcaspicus* Telenga, 1958, *A. uzbekistanicus* Luzhetski, 1960, *Binodoxys angelicae* (Haliday, 1833), *Diaeretiella rapae* (McIntosh, 1855), *Ephedrus plagiator* (Nees, 1811), *Lysiphlebus fabarum* (Marshall, 1896), *Praon exsoletum* (Nees, 1811), *Praon volucre* (Haliday, 1833) и *Praon yomenae* Takada, 1968.

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