

Short Paper

## First record of *Hemiptarsenus autonomus* (Mercet, 1924) (Hymenoptera: Eulophidae) in the Middle East

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**Abstract:** *Hemiptarsenus autonomus* (Mercet, 1924) (Hymenoptera: Eulophidae, Eulophinae) was found for the first time outside of Europe. Studied specimen was collected by a Malaise trap in the north west of Iran, East-Azərbayjan province, Khajeh (46°38'E & 38°09'N). Current record of *Hemiptarsenus* species of Iran adds up to seven species. These species and their geographical distribution in Iran are listed.

**Key words:** Chalcidoidea, new distribution, record, Iran, fauna.

### Introduction

Eulophidae (Hymenoptera: Chalcidoidea) of Iran has been listed by Hesami *et al.* (2010) and Talebi *et al.* (2011). They listed 122 eulophid species from different parts of Iran including three species of the genus *Hemiptarsenus* Westwood, 1833 (Hesami *et al.*, 2010; Talebi *et al.*, 2011).

Recently Lotfalizadeh *et al.* (2015) reported *Hemiptarsenus waterhousii* Westwood, 1833 as a parasitoid of alfalfa leaf miners in the northwest of Iran and Shafiee *et al.* (2015) reported *Hemiptarsenus nuperus* Narendran, 2011.

Zhu and Huang (2003) during cladistics study and review of the genus *Hemiptarsenus* in Hungary, mentioned the following combination of characters for the genus: toruli located well above lower margin of eyes; scape reaching well beyond vertex; forewing costal cell narrow, at least 10 times as long as wide (Zhu and Huang, 2003).

This report includes new record of one species of the genus *Hemiptarsenus* from Iran.

### Materials and Methods

Samplings were made in using the Malaise trap in East-Azərbayjan province, Khajeh, Iran during summer of 2015. All the materials were subsequently transferred to the laboratory at Department of Plant Protection, East-Azərbayjan Research Center for Agriculture and Natural Resources, Tabriz. External morphology was illustrated using an Olympus™ SZH, equipped with a Canon™ A720 digital camera. The specimens were identified according to reliable keys and descriptions (Peck *et al.*, 1964; Zhu and Huang, 2003).

General data regarding geographical distribution, biology as well as brief taxonomic comments are given for each species.

The specimens are deposited in the insect collection of the Department of Plant Protection, Agriculture and Natural Resources of East-Azərbayjan, Tabriz, Iran.

### Results

Our studied specimen was identified as *Hemiptarsenus autonomus* (Mercet). This species was considered as an independent

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Handling Editor: Ali Asghar Talebi

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Received: 1 March 2016, Accepted: 6 May 2016

Published online: 24 May 2016

genus, *Cleolophus* Mercet, 1924 having long pronotum (Fig. 1A) but Bouček (1959) studying Eulophinae of the central Europe synonymized this genus under the genus *Hemiptarsenus*.

***Hemiptarsenus autonomus* (Mercet, 1924)** (Fig. 1)  
*Material examined:* Iran, East-Azarbaijan, Khajeh (46°38'E & 38°09'N, 1550m), 01.July.2015, Malaise trap, Piruznia, A. leg., 1♀.

**Diagnosis:** Body mainly yellow-brown with violaceous reflections (Fig. 1A); wing narrow, with two fuscous cross bands (Fig. 1B), costal cell extremely narrow; antennae inserted near middle of face, scape well exceeding front ocellus and vertex, funiculus 4-segmented in female, 2-4 funicular segments subquadrate, apex of clava whitish (Fig. 1B).

**Biological association:** The studied specimen was collected via a Malaise trap, although it has previously been reported in association with

microlepidoptera, Gracillariidae and Nepticulidae on Poaceae (Noyes, 2015). Collection area is a mountainous region in the northwest of Iran mainly with halophytic plants.

**Geographical distribution.** This species is new record for Iran and the Middle East countries. It has hitherto been known from Austria, Bulgaria, Czech Republic, France, Hungary, Moldova, Russia, Serbia, Slovakia and Spain (Noyes, 2015).

### Discussion

Six species of the genus *Hemiptarsenus* have previously been reported from Iran (see Table 1) and *H. autonomus* was added to this list (Table 1), extending its geographical distribution to the Middle East. Of the genus *Hemiptarsenus*, 4, 0 and 1 species have been reported from Turkey, Iraq and Azerbaijan, respectively (Noyes, 2015).



**Figure 1.** *Hemiptarsenus autonomus*: A- Female in dorsal view, B- Female in lateral view.

**Table 1.** List of *Hemiptarsenus* species known from Iran and their distribution in Iran.

Species	Distribution in provinces (City)	References
<i>Hemiptarsenus autonomus</i> (Mercet, 1924)	East-Azarbaijan (Khajeh)	<b>New record</b>
<i>Hemiptarsenus nuperus</i> Narendran, 2011	Kerman (Kouhpayeh, Darbasiyab)	Shafiee <i>et al.</i> (2015)
<i>Hemiptarsenus zilahisebessi</i> Erdős, 1951	Fars (Maharloo, Shiraz and Kaftarak)	Hesami <i>et al.</i> (2010) and Dousti <i>et al.</i> (2008)
<i>Hemiptarsenus wailesellae</i> Nowicki, 1929	Tehran Tehran	Zahiri <i>et al.</i> (2003), Asadi <i>et al.</i> (2006) and Haghani <i>et al.</i> (2009) Zahiri <i>et al.</i> (2003)
<i>Hemiptarsenus waterhousii</i> Westwood, 1833	Fars (Ghalat)	Hesami <i>et al.</i> (2010)
<i>Hemiptarsenus varicornis</i> (Girault, 1913)	East-Azarbaijan (Ajabshir, Shabestar and Khosro-Shahr, Hormozgan)	Lotfalizadeh <i>et al.</i> (2015) Yefremova <i>et al.</i> (2007)
<i>Hemiptarsenus unguicellus</i> (Zetterstedt, 1838)	Fars (Shiraz, Kaftarak)	Hesami <i>et al.</i> (2010)

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## گزارش جدید زنبور (*Hemiptarsenus autonomus* (Mercet, 1924) (Hymenoptera: Eulophidae) از خاورمیانه

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دریافت: ۱۱ اسفند ۱۳۹۴؛ پذیرش: ۱۷ اردیبهشت ۱۳۹۵

**چکیده:** گونه *Hemiptarsenus autonomus* (Mercet, 1924) (Hymenoptera: Eulophidae, Eulophinae)

برای نخستین بار در خارج کشورهای اروپایی یافت شد. نمونه مورد بررسی با استفاده از تله مالیز در شمال غرب ایران، آذربایجان شرقی، خواجه (46°38'E & 38°09'N) جمع آوری شد. با احتساب این گونه، گونه‌های متعلق به جنس *Hemiptarsenus* در ایران به هفت گونه رسید. لیست این گونه‌ها تهیه و پراکنش جغرافیایی آنها در ایران لحاظ شد.

**واژگان کلیدی:** Chalcidoidea، پراکنش جدید، گزارش، ایران، فون