

Contribution to the study of Eulophidae (Hymenoptera: Chalcidoidea) of Fars province of Iran: II- Subfamilies Entiinae and Eulophinae, with a preliminary checklist of Eulophidae species in Iran

Shahram HESAMI*

Islamic Azad University, Shiraz branch, Department of Plant Protection, Shiraz, Iran
**(Corresponding author, Email: hesami@iaushiraz.ac.ir)*

Ebrahim EBRAHIMI

Department of Insect Taxonomy, Iranian Research Institute of Plant Protection, Tehran, Iran

Hadi OSTOVAN

Islamic Azad University, Fars Science and Research Branch, Department of Entomology, Marvdasht, Iran

Zoya YEFREMOVA

Department of Zoology, Ul'yanovsk State Pedagogical University, Ul'yanovsk, Russia

Abstract

The eulophid subfamilies Entiinae and Eulophinae collected in Fars province of Iran during 2004 to 2007 were studied. The subfamily Entiinae (=Euderinae) is recorded from Iran. One species of Entiinae and 13 species of Eulophinae are listed among them four species are recorded for the first time from Iran. Available biological data and geographical distribution of each species is mentioned briefly. A checklist of recorded species of Eulophidae from Iran (until 2011) is provided.

Key words: Eulophidae, Entiinae, Euderinae, Eulophinae, Iran, Fars, checklist.

Introduction

The Eulophidae represent the largest family within the parasitic Hymenoptera superfamily Chalcidoidea. Currently the family is represented by 4472 described species that are accommodated in 297 genera, although it has been estimated that there could be several times that number of actual species (Yefremova, 2002; Noyes, 2010).

Although the majority of species are parasitoids, the family also contains phytophagous and predator species. Parasitoids may be ectoparasitoids (Eulophinae and Entiinae) or endoparasitoids (Entedoninae and Tetrastichinae). Several species of Eulophidae are important in biocontrol programs throughout the world (Noyes, 2010).

* Corresponding author, Email: hesami@iaushiraz.ac.ir
Received: 22 February 2011, Accepted: 5 June 2011

The first recorded species of Eulophidae in Iran was *Tetrastichus epilachnae* (Girard) (Kiryukhin, 1948). Davatchi & Chodjai (1969) reported two other species. Modarres-Awal (1994) cited 17 valid species of Eulophidae in his list of agricultural pests and their natural enemies in Iran. Shojai (1998) listed 13 species that have been deposited in the Zoological Museum of the College of Agriculture, Tehran University. The eulophid wasps of Iran have received attention recently (e. g. Doğanlar, 1992; Dousti *et al.*, 2008; Ebrahimi *et al.*, 2009; Hesami *et al.*, 2005; Hesami *et al.*, 2006; Hesami *et al.*, 2007; Hesami *et al.*, 2010; Mahani *et al.*, 2003; Rezaei *et al.*, 2003; Talebi *et al.*, 2005; Talebi *et al.*, 2011; Yefremova *et al.*, 2007; Zahiri *et al.*, 2003). Hesami *et al.* (2010) previously were listed four species of Entedoninae and 11 species of Tetrastichinae from Fars province of Iran. Here we report some other species from subfamilies Entiinae (=Euderinae) and Eulophinae from Fars province of Iran. In addition, results of many studies were scattered in different publications and have never been summarized. So a checklist of 119 species of Eulophidae reported so far from Iran is provided. The present list was compiled to provide a reference for future studies on this family in Iran.

Materials and Methods

This paper is a result of twenty-two collection trips of first author to the different localities of Fars province during the years 2004-2007. The eulophid wasps were reared from hosts or captured by sweep net and Malaise trap. The specimens are deposited in the Zoological Institution of Russian Academy of Science, St. Petersburg (ZISP), and Department of Plant Protection, Islamic Azad University, Shiraz branch. The taxonomic arrangement of Bouček (1988) for subfamilies is followed in this paper except for Entiinae (Hansson & Straka 2009). The morphological terminology follows Graham (1987, 1991) and Gibson (1997). Synonyms, combinations and misspelling are according to Noyes (2010). The Checklist is based on a comprehensive review of literature.

Results

Species account

Subfamily Entiinae (=Euderinae)

Genus *Euderus* Haliday, 1844

Euderus agrili Bouček, 1963

Material examined: 8 ♂ 4♀, Sadra road, Campus of Islamic Azad University of Shiraz (29°45' N, 52°28' E, 1750 m), 2 May 2007, ex. Larvae of Buprestidae on almond.

Biology. Parasitoid of larvae of *Agilus* sp. (Coleoptera: Buprestidae).

Distribution. West Palaearctic.

Subfamily Eulophinae

Genus *Cirrospilus* Westwood, 1832

Cirrospilus variegatus (Masi, 1907)

Synonyms. *Atoposoma variegatum* Masi, 1907; *Zagrammosoma variegata* (Masi, 1907).

Materials examined. 5♀, Shiraz, Besat Research Center (29° 31' N, 52° 36' E, 1450 m), 9-16 July 2006, ex. Larvae of *Calycomyza humeralis* (von Roser, 1840) (Diptera; Agromyzidae) on aster.

Biology. Solitary ectoparasitoid of lepidopterous and dipterous leafminers.

Distribution. Cosmopolitan

Genus *Diglyphus* Walker, 1844

***Diglyphus isaea* (Walker, 1838)**

Synonyms. *Cirrospilus isaea* Walker, 1838; *Asecodes isaea* (Walker, 1838); *Diglyphus bisannulatus* Forster, 1861; *Diglyphus clavicornis* Walker, 1872; *Diglyphus ornatus* Forster, 1861; *Diglyphus viridis* (Thomson, 1878); *Entedon gracilis* Goureau, 1851; *Solenotus viridis* Thomson, 1878; *Elachistus phytomyzae* Rondani, 1877

Material examined. 4♂ 1♀, Shiraz (29° 45' N, 52° 28' E, 1600-1700 m), 5-15 August 2006, ex larvae of *Liriomyza trifolii* Burgess (Diptera: Agromyzidae) on basil, 7♂ 4♀, Shiraz (29° 45' N, 52° 28' E, 1600-1700 m), 25-29 September 2007, ex *L. trifolii* on cucumber, 5♂ 1♀, Shiraz, Zafar abad (29° 24' N, 52° 35' E, 1400-1500 m), 1-4 October 2007, ex. Larvae of *L. trifolii* on gourd, 2♀, Dashte Arjan (29° 34' N, 51° 56' E, 2100 m), 21 October 2006, sweeping in alfalfa field.

Biology. Parasitoid of lepidopterous and dipterous leafminers.

Distribution. Cosmopolitan.

***Diglyphus crassinervis* Erdős, 1958**

Material examined. 2♀, Shiraz, Zafar abad (29° 24' N, 52° 35' E, 1400-1500 m), 26 June 2006, ex. Larvae of *L. trifolii* of cucumber, 2♀, Shiraz (29° 45' N, 52° 28' E, 1600-1700 m), 29 September 2007, ex. Larvae of *C. humeralis* on aster.

Biology. Parasitoid of agromyzid leafminers.

Distribution. Europe, Middle East, North of Africa.

***Diglyphus pusztensis* Erdős & Novicky, 1951**

Synonyms. *Ceraninus pusztensis* (Erdős & Novicky, 1951); *Cycloscapus pusztensis* Erdős & Novicky, 1951; *Diglyphus fulvipes* Erdős, 1961; *Diglyphus tibiscanus* Erdős, 1958.

Material examined. 2♀, Shiraz, Sadra road (29° 45' N, 52° 28' E, 1740 m), 21 April 2007, sweeping in wheat field.

Biology. Parasitoid of Agromyzidae.

Distribution. Palaearctic, Russia and Japan.

This is a new record for the fauna of Iran

Genus *Elasmus* Westwood, 1833

***Elasmus nudus* Nees, 1834**

Synonyms. *Aneure nuda* Nees, 1834; *Elasmus albipennis* Thomson, 1878.

Material examined. 2♂ 1♀, Shiraz, Ab-barik (29° 44' N, 52° 37' E, 1840 m), 20 June 2007, sweeping in licorice (*Glycyrrhiza glabra* L.).

Biology. Primary parasitoid of Lepidoptera (Choreutidae, Lymantriidae, Pyralidae, Tortricidae) and secondary parasitoid of Hymenoptera (Braconidae, Ichneumonidae).

Distribution. Europe.

Genus *Hemiptarsenus* Westwood, 1833***Hemiptarsenus unguicellus* (Zetterstedt, 1838)**

Synonyms. *Entedon unguicellus* Zetterstedt, 1838; *Eulophus antilope* Förster, 1841; *Eulophus cinctipes* Stephens, 1846; *Eulophus divisus* Walker, 1872; *Eulophus janthea* Dalla Torre, 1898; *Eulophus laogonus* Walker, 1839; *Eulophus myodes* Walker, 1839; *Eulophus nonus* Walker, 1839; *Eulophus nycteus* Walker, 1839; *Eulophus opicornis* Förster, 1841; *Elachestus pellucens* Förster, 1841; *Eulophus piscus* Walker, 1839; *Eulophus sexradiatus* Förster, 1841; *Eulophus villius* Walker, 1839; *Hemiptarsenus antilope* (Förster, 1841)

Material examined. 2♀ 1♂, Shiraz, Kaftarak (29° 38' N, 52° 40' E, 1640 m), 23 April 2006, sweeping in alfalfa field.

Biology. Primary parasitoid of Coleoptera (Curculionidae and Scolytidae), Diptera (Agromyzidae and Ephydriidae), Lepidoptera (Elachistidae, Noctuidae, Pyralidae and Yponomeutidae).

Distribution. North hemisphere.

This is a new record from Iranian fauna.

***Hemiptarsenus waterhousii* Westwood, 1833**

Synonyms. *Eulophus waterhousii* (Westwood, 1833); *Hemiptarsenus arenarius* Erdős, 1951

Material examined. 1♀, Ghalat (29° 48' N, 52° 19' E, 2090 m), 11 July 2006, Malaise trap.

Biology. Primary parasitoid of Diptera (Agromyzidae) and Lepidoptera (Bucullatricidae, Gracillariidae, Momphidae, Noctuidae).

Distribution. Europe, Yemen.

This is a new record for the fauna of Iran.

***Hemiptarsenus zilahisebessi* Erdős, 1951**

Synonym. *Hemiptarsenus Zilahi-Sebessi* Erdős, 1951

Material examined. 1♀, Maharloo (29° 27' N, 52° 44' E, 1470 m), 14 October 2006, sweeping in alfalfa field, 1♀ 1♂, Shiraz, Kaftarak (29° 38' N, 52° 40' E, 1640 m), 17 March 2007, sweeping in parsley field, 1♀, Maharloo (29° 27' N, 52° 44' E, 1470 m), 15 October 2007, sweeping in corn field.

Biology. Parasitoid of Agromyzidae (Diptera), Nepticulidae (Lepidoptera) and Curculionidae (Coleoptera).

Distribution. Palearctic.

Genus *Hyssopus* Girault, 1916***Hyssopus nigrutilus* (Zetterstedt, 1838)**

Synonyms. *Cirrospilus aphaca* Walker, 1839, *Elachertus nigrutilus* (Zetterstedt, 1838), *Elachistus nigrutilus* (Zetterstedt, 1838), *Entedon nigrutilus* Zetterstedt, 1838, *Eulophus aphaca* (Walker, 1839)

Material examined. 2♀, Sepidan, Homaijan (30° 13' N, 52° 04' E, 2000 m), 18 October 2006, sweeping in maize field; 1♀, Dashte Arjan (29° 40' N, 51° 59' E, 1850 m), 21 October 2006, sweeping in alfalfa field.

Biology. Primary parasitoid of Diptera (Tephritidae), Hymenoptera (Vespidae, Cynipidae), Lepidoptera (Gelechiidae, Momphidae, Sesiidae and Tortricidae).

Distribution. Europe, Turkmenistan, Japan, China and Korea.

This is a new record for the fauna of Iran.

Genus *Pnigalio* Schrank, 1802

***Pnigalio nemati* (Westwood, 1838)**

Synonyms. *Eulophus nemati* Westwood, 1838, *Eulophus tischbeinii* Ratzeburg, 1848, *Pnigalio nemati* (Westwood, 1838), *Pnigalio tischbeinii* (Ratzeburg, 1848)

Material examined. 2♂, Shiraz, Akbar abad ring way (29° 40' N, 52° 33' E, 1730 m), 4 May 2006, sweeping in terebinth pistachio.

Biology. Parasitoid of Coleoptera and Hymenoptera.

Distribution. Europe, Canada.

***Pnigalio pectinicornis* (Linnaeus, 1758)**

Synonyms. *Chalcis pectinicornis* (Linnaeus, 1758), *Elachestus fusciventris* Nees, 1834, *Entedon pectinicornis* (Linnaeus, 1758), *Eulophus coecilius* Walker, 1839, *Eulophus fuscicornis* Förster, 1841, *Eulophus pectinicornis pilicornis* (Ratzeburg, 1844), *Haltichella pectinicornis* (Linnaeus, 1758), *Pnigalio coecilius* (Walker, 1839), *Pnigalio lucumo* (Walker, 1839)

Material examined. 2♀, Sepidan, Ski piste (30° 58' N, 51° 58' E, 2800 m), sweeping in pasture plants.

Biology. Primary parasitoid of Coleoptera, Diptera, Lepidoptera and Hymenoptera.

Distribution. Worldwide.

***Pnigalio soemius* (Walker, 1839)**

Synonyms. *Eulophus flavipes* Erds, 1954, *Eulophus meriones* Walker, 1839, *Eulophus nigroaeneus* Erds, 1954, *Eulophus prothenor* Walker, 1839, *Eulophus punctiscuta* Thomson, 1878, *Pnigalio nigroaeneus* (Erds, 1954)

Material examined. 2♂, Ghalat (29° 48' N, 52° 19' E, 2090 m), 11 July 2006, Malaise trap, 1♀ 2♂, Jahrom (28° 31' N, 53° 34' E, 1280 m), reared from citrus leaves infested with *Phyllocnistis citrella* Stainton (Lepidoptera: Gracillariidae).

Biology. Primary parasitoid of Coleoptera, Diptera, Lepidoptera and Hymenoptera and Secondary parasitoid of some Eulophidae.

Distribution. Europe, Middle East, Pakistan, China, Korea.

Genus *Zagrammosoma* Ashmead, 1904

***Zagrammosoma talitzkii* (Bouček, 1961)**

Synonyms. *Cirrospilus* (*Zagrammosoma*) *talitzkii* Bouček, 1961, *Cirrospilus talitzkii* Bouček, 1961

Material examined. 1♀, Shiraz, Dokuhak (29° 79' N, 52° 43' E, 1780 m), 11 september 2007, sweeping in apple orchard.

Biology. Parasitoid of dipterous and lepidopterous leafminers.

Distribution. Some European countries.

Disussion

Among the 14 species recorded in this paper, four species are new records for Iran including *Diglyphus puztensis*, *Elasmus nudus*, *Hemiptarsenus unguicellus*, *Hyssopus nigrutilus*. Also records of ten previously recorded species of Eulophidae are confirmed. The subfamily Entiinae (formerly Euderinae, see

Hansson & Straka, 2009) is recorded from Iran. Most of the species occur commonly in the other zoogeographical regions, three species are cosmopolitan (*C. variegates*, *D. isaeae*, *P. pectinicornis*), two species are distributed throughout the Palearctic region (*D. pustzensis*, *H. zilahisebessi*), three species previously reported in European countries (*E. nudus*, *H. waterhousii*, *Z. talitzkii*), five species are distributed in Northern hemisphere (*D. crassinervis*, *H. unguicellus*, *H. nigrifulus*, *P. nemati*, *P. soemius*) and one species in West Palaearctic (*E. agrili*). Based on the present article and review of literatures, recently there are 119 species of Eulophidae recorded from Iran (Table 1), one species of Entiinae, 21 species of Entedoninae, 53 species of Eulophinae and 44 species of Tetrastichinae. However, it seems that the Iranian fauna of Eulophidae is very rich and we should work further to understand the Eulophidae fauna of Iran, both, in more regions and examine more material.

Table 1. Checklist of recorded species of Eulophidae from Iran (until 2011).

	Species	References
Entiinae (=Euderinae)		
1	<i>Euderus agrili</i> Bouček, 1963	Hesami, 2009
Entedoniane		
2	<i>Achrysocharoides suprafolius</i> (Askew, 1974)	Amiri <i>et al.</i> , 2009
3	<i>Ceraninus amanosus</i> Doğanlar <i>et al.</i> , 2009	Tan <i>et al.</i> , 2010
4	<i>Ceraninus menes</i> (Walker, 1839)	Tan <i>et al.</i> , 2010
5	<i>Ceraninus planititanus</i> Erdős, 1966	Tan <i>et al.</i> , 2010
6	<i>Chrysocharis amyite</i> (Walker, 1839)	Yefremova <i>et al.</i> , 2007
7	<i>Chrysocharis laomedon</i> (Walker, 1839)	Mernejad & Basirat, 2009; Hesami <i>et al.</i> , 2010
8	<i>Chrysocharis polyzo</i> (Walker, 1839)	Zargaran <i>et al.</i> , 2010
9	<i>Derostenus persicus</i> Gumovsky, 2003	Gumovsky, 2003
10	<i>Entedon biroi</i> Erdős, 1944	Gumovsky, 1999
11	<i>Entedon ergias</i> Walker, 1839	Askew & Bouček, 1968
12	<i>Entedon thomsonianus</i> Erdős, 1944	Rajabi <i>et al.</i> (in press)
13	<i>Euderomphale bemisiae</i> Viggiani, 1977	Ghahari <i>et al.</i> , 2006
14	<i>Euderomphale chelidonii</i> Erdős, 1966	Ghahari <i>et al.</i> , 2006
15	<i>Neochrysocharis aratus</i> (Walker, 1838)	OILB, 1971
16	<i>Neochrysocharis formosus</i> (Westwood, 1833)	OILB, 1971; Hesami <i>et al.</i> , 2006; Ebrahimi <i>et al.</i> , 2009
17	<i>Neochrysocharis longiventris</i> (Askew, 1979)	Amiri <i>et al.</i> , 2009
18	<i>Pediobius cassidae</i> Erdős, 1951	Yefremova <i>et al.</i> , 2007
19	<i>Pediobius crassicornis</i> (Thomson, 1878)	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009
20	<i>Pediobius illustris</i> (Waterston, 1915)	Askew & Bouček, 1968
21	<i>Pediobius italicus</i> Bouček, 1968	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009

Table 1- continued

	Species	References
22	<i>Pediobius lysis</i> (Walker, 1839)	Yefremova <i>et al.</i> , 2007
23	<i>Pediobius metallicus</i> (Nees, 1834)	Mahmoudi <i>et al.</i> , 2011
24	<i>Pediobius pyrgo</i> (Walker, 1839)	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009; Hesami <i>et al.</i> , 2010
25	<i>Pediobius saulius</i> (Walker, 1839)	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009
Eulophinae		
26	<i>Aulogygnus gallarum</i> (Linnaeus, 1761)	Yefremova <i>et al.</i> , 2007
27	<i>Aulogygnus skianeuros</i> (Ratzeburg, 1844)	Zargaran <i>et al.</i> , 2008
28	<i>Cirrospilus ingenuus</i> Gahan, 1932	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009
29	<i>Cirrospilus lyncus</i> Walker, 1838	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009
30	<i>Cirrospilus persicus</i> Lotfalizadeh & Delvare, 2011	Lotfalizade & Delvare, 2011
31	<i>Cirrospilus pictus</i> (Nees, 1834)	Baniameri & Mohammadi-Pour, 2007; Zargaran <i>et al.</i> , 2010
32	<i>Cirrospilus scapus</i> Yefremova, 2007	Yefremova <i>et al.</i> , 2007
33	<i>Cirrospilus staryi</i> Bouček, 1958	Ebrahimi <i>et al.</i> , 2009
34	<i>Cirrospilus variegatus</i> (Masi, 1907)	Hesami <i>et al.</i> , 2004
35	<i>Cirrospilus viticola</i> (Rondani, 1877)	Ebrahimi <i>et al.</i> , 2009
36	<i>Cirrospilus vittatus</i> Walker, 1838	Talebi <i>et al.</i> , 2005; Asadi <i>et al.</i> , 2006
37	<i>Diaulinopsis arenaria</i> (Erdős, 1951)	Dousti <i>et al.</i> , 2008; Yefremova <i>et al.</i> , 2007
38	<i>Dichotomus acerinus</i> Forster, 1878	OILB, 1971
39	<i>Diglyphus begini</i> (Ashmead, 1904)	Mahmoudi <i>et al.</i> , 2011
40	<i>Diglyphus chabrias</i> (Walker, 1838)	Yefremova <i>et al.</i> , 2007; Fallahzadeh <i>et al.</i> , 2006
41	<i>Diglyphus crassinervis</i> Erdős, 1958	Talebi <i>et al.</i> , 2005
42	<i>Diglyphus isaea</i> (Walker, 1838)	Talebi <i>et al.</i> , 2005; Asadi <i>et al.</i> , 2006
43	<i>Diglyphus minoens</i> (Walker, 1838)	Yefremova <i>et al.</i> , 2007
44	<i>Diglyphus poppoea</i> Walker, 1848	Dousti, 2008
45	<i>Diglyphus pulchripes</i> (Crawford, 1912)	Dousti <i>et al.</i> , 2008
46	<i>Diglyphus pusztensis</i> Erdős & Novicky, 1951	Current article
47	<i>Diglyphus scapus</i> Yefremova, 2006	Hesami <i>et al.</i> , 2006
48	<i>Elachertus fenestratus</i> Nees, 1834	Behdad, 1982; Sahragard, 1977
49	<i>Elachertus gallicus</i> Erdős, 1958	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009
50	<i>Elasmus nudus</i> Nees, 1834	Yefremova & Strakhova, 2010
51	<i>Euplectrus bicolor</i> (Swederus, 1795)	Naseri <i>et al.</i> , 1998
52	<i>Euplectrus flavipes</i> (Fonscolombe, 1832)	Eghtedar, 1989; Shojai, 1989
53	<i>Euplectrus liparidis</i> Ferriere, 1941	Yefremova <i>et al.</i> , 2007
54	<i>Hemiptarsenus unguicellus</i> (Zetterstedt, 1838)	Current article
55	<i>Hemiptarsenus varicornis</i> (Girault, 1913)	Yefremova <i>et al.</i> , 2007

Table 1- continued

	Species	References
56	<i>Hemiptarsensis wailesellae</i> S. Novicky, 2003	Zahiri <i>et al.</i> , 2003
57	<i>Hemiptarsenus waterhousii</i> Westwood, 1833	Current article
58	<i>Hemiptarsenus zilahisebessi</i> Erdős, 1951	Talebi <i>et al.</i> , 2005; Asadi <i>et al.</i> , 2006
59	<i>Hyssopus geniculatus</i> (Hartig, 1838)	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009
60	<i>Hyssopus nigritulus</i> (Zetterstedt, 1838)	Current article
61	<i>Necremnus leucarthros</i> (Nees, 1834)	Akbari-Noushad, 1995
62	<i>Necremnus tidius</i> (Walker, 1839)	Yefremova <i>et al.</i> , 2007
63	<i>Pnigalio agraulis</i> (Walker, 1839)	Yefremova <i>et al.</i> , 2007; Amiri <i>et al.</i> , 2009; Ebrahimi <i>et al.</i> , 2009
64	<i>Pnigalio nemati</i> (Westwood, 1838)	Current article
65	<i>Pnigalio rotundiventris</i> (Erdős, 1954)	Yefremova <i>et al.</i> , 2007
66	<i>Pnigalio soemius</i> (Walker, 1839)	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009
67	<i>Ratzeburgiola cristatus</i> (Ratzeburg, 1848)	Dousti <i>et al.</i> , 2008
68	<i>Rhcnopelte crassicornis</i> (Nees, 1834)	Yefremova <i>et al.</i> , 2007
69	<i>Pnigalio pectinicornis</i> (L., 1758)	Haeselbarth, 1989; Yefremova <i>et al.</i> , 2007
70	<i>Stenomiesius rufescens</i> (Retzius, 1783)	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009
71	<i>Sympiesis acalle</i> (Walker, 1848)	Amiri <i>et al.</i> , 2009
72	<i>Sympiesis angustipennis</i> (Erdős, 1954)	Yefremova <i>et al.</i> , 2007
73	<i>Sympiesis euspilaperygis</i> (Erdős, 1958)	Pirhadi <i>et al.</i> , 2008
74	<i>Sympiesis gordius</i> (Walker, 1839)	Yefremova <i>et al.</i> , 2007; Amiri <i>et al.</i> , 2009
75	<i>Sympiesis grahami</i> (Erdős, 1966)	Zargaran <i>et al.</i> , 2010
76	<i>Sympiesis gregori</i> Bouček, 1959	Yefremova <i>et al.</i> , 2007
77	<i>Sympiesis sericeicornis</i> (Nees, 1834)	Haeselbarth, 1985; Amiri <i>et al.</i> , 2009
78	<i>Zagrammosoma talitzkii</i> (Bouček, 1961)	Yefremova <i>et al.</i> , 2007; Amiri <i>et al.</i> , 2009
Tetrastichinae		
79	<i>Aprostocetus artemisicola</i> Graham, 1987	Hesami <i>et al.</i> , 2010
80	<i>Aprostocetus aurantiacus</i> (Ratzeburg, 1848)	Lotfalizadeh <i>et al.</i> , 2006
81	<i>Aprostocetus beyazus</i> Doğanlar, 1992	Doğanlar, 1992
82	<i>Aprostocetus bucculentus</i> Kostjukov, 1978	Yefremova <i>et al.</i> , 2007; Lotfalizadeh <i>et al.</i> , 2008
83	<i>Aprostocetus ceroplastae</i> (Girault, 1916)	Talebi <i>et al.</i> , 2008
84	<i>Aprostocetus eurytomae</i> (Nees, 1834)	Lotfalizadeh <i>et al.</i> , 2006
85	<i>Aprostocetus forsteri</i> (Walker, 1847)	Yefremova <i>et al.</i> , 2007; Hesami <i>et al.</i> , 2010
86	<i>Aprostocetus lachares</i> (Walker, 1839)	Domenchini, 1966; Graham, 1987; Hesami <i>et al.</i> , 2010
87	<i>Aprostocetus lutescens</i> Askew, 1997	Alemansour <i>et al.</i> , 2010
88	<i>Aprostocetus neglectus</i> (Domenchini, 1957)	Domenchini, 1966; Graham, 1987
89	<i>Aprostocetus persicus</i> Yefremova & Yegorenkova, 2007	Yefremova <i>et al.</i> , 2007

Table 1- continued

	Species	References
90	<i>Aprostocetus taxi</i> Graham, 1987	Razmi <i>et al.</i> , 2011
91	<i>Aprostocetus toddaliae</i> (Risbec, 1958)	Fallahzadeh <i>et al.</i> , 2006, Fallahzadeh <i>et al.</i> , 2010
92	<i>Aprostocetus trjaitzini</i> (Kostjukov, 1976)	Fallahzadeh <i>et al.</i> , 2008
93	<i>Aprostocetus venustus</i> (Gahan, 1914)	Yefremova <i>et al.</i> , 2007
94	<i>Aprostocetus zosimus</i> (Walker, 1839)	Graham, 1991; Hesami <i>et al.</i> , 2010
95	<i>Baryscapus anasillus</i> Graham, 1991	Nazemi-Rafie <i>et al.</i> , 2007
96	<i>Baryscapus conwentziae</i> (Ferriere, 1959)	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009
97	<i>Baryscapus endemus</i> (Walker, 1839)	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009
98	<i>Baryscapus erynniae</i> (Domenichini, 1966)	Mahani <i>et al.</i> , 2003; Hesami <i>et al.</i> , 2010
99	<i>Baryscapus evonymellae</i> (Bouche, 1834)	Graham, 1991; Hesami <i>et al.</i> , 2006
100	<i>Baryscapus hylesini</i> Graham, 1991	Yefremova <i>et al.</i> , 2007
101	<i>Baryscapus impeditus</i> (Nees, 1834)	Dousti <i>et al.</i> , 2008
102	<i>Baryscapus nigroviolaceus</i> (Nees, 1834)	Yefremova <i>et al.</i> , 2007
103	<i>Baryscapus oophagus</i> (Otten, 1942)	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009, Hesami <i>et al.</i> , 2010
104	<i>Baryscapus pallidae</i> Graham, 1991	Graham, 1991
105	<i>Baryscapus sugonjaevi</i> (Kostjukov, 1976)	Fallahzadeh <i>et al.</i> , 2011
106	<i>Chouioia cunea</i> Yang, 1989	Rezaei <i>et al.</i> , 2003
107	<i>Citrostichus phillocnistoides</i> (Narayanan, 1960)	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009
108	<i>Leptocybe invasa</i> Fisher & LaSalle, 2004	Hesami <i>et al.</i> , 2004; Mendel <i>et al.</i> , 2004
109	<i>Melittobia acasta</i> (Walker, 1839)	Thompson, 1954
110	<i>Minotetrastichus platanellus</i> (Mercet, 1922)	Haeselbarth, 1983
111	<i>Minotetrastichus frontalis</i> (Nees, 1834)	Amiri <i>et al.</i> , 2009
112	<i>Neotrichoporoides szelenyii</i> (Erdős, 1951)	Hesami <i>et al.</i> , 2010
113	<i>Oomyzus brevistigma</i> (Gahan, 1936)	Azmayesh-fard & Esmaili, 1981; Hesami <i>et al.</i> , 2010
114	<i>Oomyzus gallerucae</i> (Fonscolombe, 1832)	Azmayesh-fard & Esmaili, 1981; Domenichini, 1966; Zohdi & Talebi, 2011
115	<i>Oomyzus incertus</i> (Ratzeburg, 1844)	Domenichini, 1966; Graham, 1991
116	<i>Oomyzus sokolowskii</i> (Kurdjumov, 1912),	Golizadeh <i>et al.</i> , 2008; Afunizadeh <i>et al.</i> , 2010
117	<i>Pronotalia carlinarum</i> (Szelényi & Erdős, 1951)	Lotfalizadeh & Kazemi, 2010
118	<i>Pronotalia orobanchiae</i> Graham, 1991	Graham, 1991
119	<i>Sigmophora brevicornis</i> (Panzer, 1804)	Hesami <i>et al.</i> , 2006
120	<i>Tamarix radiata</i> (Waterston)	Hasanpour <i>et al.</i> , 2009
121	<i>Tamarixia upis</i> (Walker, 1839)	Yefremova <i>et al.</i> , 2007; Ebrahimi <i>et al.</i> , 2009
122	<i>Tetrastichus epilachnae</i> (Giard, 1896)	Kiryukhin, 1948; Herting, 1973

Acknowledgment

The authors express their sincere thanks to Dr. H. Lotfalizadeh (Iranian Research Institute of Plant Protection) and Dr. M. Fallahzede (Islamic Azad University, Jahrom branch) for his useful comments and providing some literatures.

References

- Akbari-Noushad, S.D. 1995. Biology of alfalfa weevil, *Hypera postica* (Gyll.) (Coleoptera: Curculionidae) in East Azarbaijan. *Proceedings of the 12th Iranian Plant Protection Congress, Vol.1 Pests*, p.92.
- Afunizadeh, M., Karimzadeh, J., Broad, G., Shojai, M., Emami, M. S., Lotfalizadeh, H., Papp, J., LaSalle, J., Whitefield, J.B., van Achterberg, K. & Shaw, M. R. 2010. Larval and pupal parasitoids of *Plutella xylostella* in Isfahan province. *Proceedings of the 19th Iranian Plant Protection Congress, Vol.1, Pests*, p.115.
- Alemansour, H., Asadi, R. & Alehosein, S.A. 2010. Introduction of hymenopteran parasitoids of *Eurytoma* sp. (Hym.: Eurytomidae) a seed pest of medicinal plant *Ephedra procera* (Ephedraceae) in Fars province, Iran. *Proceedings of the 19th Iranian Plant Protection Congress, Vol.1, Pests*, p.163.
- Amiri, A., Talebi, A.A., Navone, P. & Yefremova, Z. 2009. Parasitoid wasp complex of *Phyllonorycter corylifoliella* (Lep.: Gracillariidae) in the Fars Province of Iran, and notes on their morphology and abundances. *Applied Entomology and Phytopathology*, 77 (1): 1-14.
- Asadi, R., Talebi, A.A., Fathipour, Y., Moharramipour, S. & Rakhshani, E. 2006. Identification of parasitoids and seasonal parasitism of the agromyzid leafminers genus *Liriomyza* (Dip.: Agromyzidae) in Varamin, Iran. *Journal of Agricultural Science and Technology*, 8: 293-303.
- Askew, R.R. & Bouček, Z. 1968. Index of Palaeactic Eulophidae (excl. Tetrastichinae). In Delucchi, V. & Remaudiere, G. (Eds.): *Index of entomophagous insects*. - Paris. 223 pp.
- Azmayesh-fard, P. & Esmaili, M. 1981. An investigation on the species of elm leaf beetle parasitoids and their application for population density reduction of their host in Karadj. *Journal of Entomological Society of Iran*, 6 (1/2): 21-31.
- Baniameri, V. & Mohammadi-Pour, A. 2007. New records of three parasitoids wasps on *Bucculatrix ulmella* Zeller (Lep.: Bucculatricidae) from Iran. *Applied Entomology and Phytopathology*, 75 (1): 37.
- Behdad, E. 1982. *Pests of Filed Crops in Iran*. Plant Pests and Diseases Research Institute, Iran (in Persian).
- Bouček, Z. 1988. *Australasian Chalcidoidea (Hymenoptera): A biosystematic revision of genera of fourteen families with a reclassification of species*. CAB International, Wallingford, UK.
- Davatchi, A. & Chodjai, M. 1969. *Les Hymenopteres Entomophages de l'Iran (Etudes Faunistiques)*. Université de Teheran, Faculté d'Agronomie, Publication no. 107.
- Doğanlar, M. 1992. A new species of *Aprostocetus* Westwood, 1833 from Iran (Hymenoptera, Eulophidae, Tetrastichinae). *Entomofauna*, 13 (31): 528-535.

- Domenchini, G. 1966. Index of Palaearctic Tetrastichinae (Hymenoptera: Eulophidae). In Delucchi, V. & Remaudiere, G. (Eds.): *Index of entomophagous insects*. - Paris. 101 pp.
- Dousti, A. F., Kamali, K., Nouri Ganbalani, G. & Ostovan, H. 2008. Report of four hymenopteran species of Eulophidae, parasitoids of *Liriomyza trifolii* (Dip.: Agromyzidae) in Shiraz, Iran. *Journal of Entomological Society of Iran*, 27 (2) Supplement: 9-10.
- Dousti, A.F. 2008. Report of *Diglyphus poppoea* (Hym.: Eulophidae) from Iran. *Journal of Entomological Society of Iran*, 27 (2) Supplement: 25-26.
- Ebrahimi, E., Malekzadeh, M. R. & Yefremova, Z. 2009. Parasitoids of *Phyllocnistis citrella* (Lep., Gracillariidae) in Iran. *Applied Entomology and Phytopathology*, 76 (2): 81-92.
- Eghtedar, E. 1989. Some biological researches on beet army worm in the Shiraz region, Iran. *Applied Entomology and Phytopathology*, 56: 57-63.
- Fallahzadeh, M., Gharaat, M.A. & Saghaei, N. 2010. The first record of genus and species *Anicetus italicus* (Hymenoptera: Encyrtidae) a parasitoid of *Ceroplastes rusci* in Iran. *Proceedings of the 19th Iranian Plant Protection Congress, Vol.1, Pests*, p.121.
- Fallahzadeh, M., Naghibinezhed, M., Shojaei, M. & Ostovan, H. 2006. The first report of two species of Eulophidae (Hymenoptera) from Iran. *Applied Entomology and Phytopathology*, 73(2): 126 (English), 44 (Persian).
- Fallahzadeh, M., Japoshvili, G., Saghaei, N. & Daane, K. M. 2011. Natural enemies of *Planococcus ficus* (Hemiptera: Pseudococcidae) in Fars Province vineyards, Iran. *Biocontrol Science and Technology*, 21(4): 427-433.
- Fallahzadeh, M., Shojai, M., Ostovan, H. & Kamali, K. 2008. Natural enemies of *Planococcus ficus* (Hemiptera: Pseudococcidae) in Fars province vineyards, Iran. *Proceedings of the 18th Iranian Plant Protection Congress, Vol. 1, Pests*, p. 79.
- Ghahari, H., Huang, J., Abd-Rabou, S., Ostovan, H. & Wang, Z. H. 2006. A contribution of the Iranian Platygasteridae, Eulophidae and Aphelinidae (Hymenoptera) as the parasitoids of whiteflies (Homoptera: Aleyrodidae). *Entomological Journal of East China*, 15(3): 166-170.
- Gibson, G. A. P. 1997. Chapter 2: Morphology and Terminology. In: Gibson, G. A. P., Huber, J. T., Woolley, J. B. (Eds.) *Annotated Keys to the Genera of Nearctic Chalcidoidea (Hymenoptera)*. National Research Council, Canada, pp.: 16-44.
- Golizadeh, A., Kamali, K., Fathipour, Y., Abbasipour, H. & Baur, H. 2008. Report of the parasitoid wasp, *Oomyzus sokolowskii* (Hym.: Eulophidae), from Iran. *Journal of Entomological Society of Iran*, 27 (2) Supplement: 29-30.
- Graham, M. W. R. de V. 1987. A reclassification of the European Tetrastichinae (Hymenoptera: Eulophidae) with a revision of certain genera. *Bulletin of the British Museum (Natural History), Entomology series*, 55: 1-392.
- Graham, M. W. R. de V. 1991. Reclassification of European Tetrastichinae (Hymenoptera: Eulophidae): revision of the remaining genera. *Memoirs of the American Entomological Institute*, 42: 1-322.
- Gumovsky, A. V. 1999. Review of the genus *Entedon* Dalman, 1820 (Hymenoptera, Eulophidae, Entedoninae). 4. Revision of the *cyanelus* group. *Annales Histoire-Natural Museum Nationales Hungarica*, 91: 141-176.

- Gumovsky, A. V. 2003. Review and taxonomic notes on the genus *Derostenus* (Hymenoptera, Eulophidae). *Vestnik Zoologii*, 37(6): 3–14.
- Haeselbarth, E. 1983. *Determination list of entomophagous insects*. No. 9. Bulletin. Section Regionale Ouest Palaeartique, Organisation Internationale de Lutte Biologique, 6(1):1-49.
- Haeselbarth, E. 1985. *Determination list of entomophagous insects*. No. 10. Bulletin. Section Regionale Ouest Palaeartique, Organisation Internationale de Lutte Biologique, 8(4):1-61.
- Haeselbarth, E. 1989. *Determination list of entomophagous insects*. No. 11. Bulletin. Section Regionale Ouest Palaeartique, Organisation Internationale de Lutte Biologique, 12(7): 1-63.
- Hansson, C. & Straka, J. 2009. The name Euderinae (Hymenoptera: Eulophidae) is a junior homonym. *Proceedings of the Entomological Society of Washington*, 111: 272-273.
- Hasanpour, M., Talebi, A. A., Rakhshani, E. & Ameri-Siahouei, A. 2009. Identification of natural enemies of citrus psylla, *Diaphorina citri* Kuwayama (Hem., Psyllidae) in Hormozgan province. *Journal of Entomological Research (Islamic Azad University, Arak branch)*, 1(3): 185-195.
- Herting, B. 1973. Coleoptera to Strepsiptera. A catalogue of parasites and predators of terrestrial arthropods. Section A. Host or Prey/Enemy. Commonwealth Agricultural Bureaux, Institute of Biological Control, 3: 9-11.
- Hesami, S. 2009. *Faunistic Study of Eulophid Wasps (Hymenoptera: Eulophidae) and biology of Clostrocercus formosus in Central Region of Fars province*. Ph.D. Thesis, Islamic Azad University, Science and Research branch, Tehran, Iran.
- Hesami, S., Alemansoor, H. & Seyedebrahimi, S. 2005. Report of *Leptocybe invasa* (Hym.: Eulophidae), gall wasp of *Eucalyptus camaldulensis* with notes on biology in Shiraz vicinity. *Journal of Entomological Society of Iran*, 24: 99-108.
- Hesami, S., Yefremova, Z., Ebrahimi, E. & Ostovan, H. 2006. Little known and new species of Eulophidae (Hymenoptera, Chalcidoidea) from Iran. *Entomofauna*, 27 (32): 393-402.
- Hesami, S., Yefremova, Z. & Seyedebrahimi, S. 2007. Report of *Cirrospilus variegates* (Hymenoptera: Eulophidae), parasitoid of Dipterous leafminers from Iran. *Journal of Entomological Society of Iran*, 26: 93-94.
- Hesami, S., Ebrahimi, E., Ostovan, H., Shojai, M., Kamali, K., Yefremova, Z. & Yegorenkova, E. 2010. Contribution to the study of Eulophidae (Hymenoptera: Chalcidoidea) of Fars province of Iran: I- Subfamilies Entedoninae and Tetrastichinae. *Munis Entomology & Zoology*, 5 (1): 148-157.
- Kiryukhin, G. 1948. *Syngenaspis oleae* Clovee. *Applied Entomology and Phytopathology*, 6-7: French 22-23, Persian 69-76.
- Lotfalizadeh, H., Avand-Faghih, A., Roshandel, S. & Jafari-Nadushan, A. 2008. Parasitoids of the almond seed wasp, *Eurytoma amygdali* Enderlin (Hym.: Eurytomidae) in Iran. *Applied Entomology and Phytopathology*, 75(2): 41-42.
- Lotfalizadeh, H. & Delvare, G. 2006. Iranian species of *Cirrospilus* Westwood (Hymenoptera: Eulophidae) with the description of a new species. *Tijdschrift voor Entomologie*, 154:173-180.

- Lotfalizadeh, H. & Kazemi, M.H. 2010. Hymenopterous parasitoids of safflower fruit fly (Diptera: Tephritidae) in Iran. *Proceedings of the 7th International congress of Hymenopterists, 20-26 June 2010, Köszege, Hungary*, p.96.
- Lotfalizadeh, H., Rasplus, J.E. & Delvare, G. 2006. Rose gall wasps and their associated fauna (Hymenoptera) in Iran. *Redia*, LXXXIX: 73-85.
- Mahani, M. K., Hatami, B., Seyedoleslami, H. & Lassale, J. 2003. Report of *Baryscapus erynniae* (Hym.: Eulophidae) from Iran. *Journal of Entomological Society of Iran*, 22: 87-88.
- Mehrnejad, M. R. & Basirat, M. 2009. Parasitoid complex of the pistachio twig borer moth, *Kermania pistaciella*, in Iran. *Biocontrol Science and Technology*, 19 (5): 499-510
- Mendel, Z., Protasov, A., Fisher N. & LaSalle, J. 2004. Taxonomy and biology of *Leptocybe invasa* gen. & sp. n. (Hymenoptera: Eulophidae), an invasive gall inducer on *Eucalyptus*. *Australian Journal of Entomology*, 43: 51-63.
- Modarres-Awal, M. 1994. *List of Agricultural Pests and their Natural Enemies in Iran*. Ferdowsi University of Mashhad, Publication No. 147.
- Nasari, M., Safaralizadeh, M. H. & Yazdanshenas, O. A. 1998. Introduction of *Euplectrus bicolor* Swedeus ectoparasitoid of *Mythimna lorei* Dup. *Proceedings of the 13th Iranian Plant Protection Congress, Vol.1, Pests*, p.58.
- Nazemi-Rafie, J., Talebi, A. A., Sadeghi, E. & Melika, G. 2007. Parasitoids (Hym., Chalcidoidea) reared from Oak Gall Wasps (Hym., Cynipidae) in West of Iran, with five new species records. *Journal of Entomological Research Society*, 9(3): 43-56.
- Noyes, J. S. 2011. *Universal Chalcidoidea Database. World Wide Web electronic publication*. Available from: <http://www.nhm.ac.uk/entomology/chalcidoids/index.html>. (accessed 05-May-2011).
- OILB. 1971. Liste d'identification des entomophages 8.: 1-64. Organisation internationale de lutte biologique (OILB) Genève.
- Pirhadi, A., Radjabi, G. R., Ebrahimi, E., Ostovan, H., Shekarian Moghadam, B., Mohiseni, A. A., Mozaffarian, F. & Ghavami, S. 2008. Natural enemies of cereal leafminer *Syringopais temeratella* Led. (Lep.: Elachistidae) in Lorestan province. *Proceedings of the 18th Iranian Plant Protection Congress, Vol. 1, Pests*, p.71.
- Rajabi, M., Madjdzadeh, S.M. & Lotfalizadeh, H. (in press): New distribution record of *Entedon thomsonianus* Erdös (Hym.: Eulophidae) from Iran. *Applied Entomology and Phytopathology* (Submitted to publish).
- Razmi, M., Karimpour, Y., Safaralizadeh, M. H. & Safavi, S.A. 2011. Parasitoid complex of cabbage large white butterfly *Pieris brassicae* (L.) (Lepidoptera, Pieridae) in Urmia with new records from Iran. *Journal of Plant Protection Research*, 51(3): 248-251.
- Rezaei, V., Moharramipour, S. & Talebi, A.A. 2003. The first report of *Psychophagus omnivorus* and *Chouioia cunea* parasitoid wasps of American white webworm *Hyphantria cunea* (Lep.: Arctiidae) from Iran. *Applied Entomology and Phytopathology*, 70: En 33, Pe 137-138.
- Sahragard, A. 1977. Bioecology of *Cephus pygmeus* L. *Proceedings of the 5th Iranian Plant Protection Congress*, pp. 61-62.
- Shojai, M. 1998. *Entomology, Ethology, Social Life and Natural Enemies (Biological Control)*. 3rd volume, University of Tehran Press (in Persain).

- Talebi, A.A., Asadi, R., Fathipour, Y., Kamali, K., Moharramipour, S. & Rakhshani, E. 2005. Eulophid parasitoids of agromyzid leafminers genus *Liriomyza* (Dipt.: Agromyzidae) in Tehran, Iran. *IOBC WPRS Bulletin*, 28: 263-266.
- Talebi, A. A., Mohammadi Khoramabadi, A. & Rakhshani, E. 2011. Checklist of eulophid wasps (Insecta: Hymenoptera: Eulophidae) of Iran. *Check List*, 7(6): 708-719.
- Tan, J. L., Mirab-balou, M., He, J. H. & Chen, X. X. 2010. The Thrips-attacking Genus *Ceranisus* (Hymenoptera: Eulophidae: Entedoninae) from Iran. *Entomotaxonomia*, 32 (1): 62-68.
- Thompson, W. R. 1954. A catalogue of the parasites and predators of insect pests. Section 2. Host parasite catalogue. Part 3. Hosts of the Hymenoptera (Calliceratid to Evaniid). Commonwealth Agricultural Bureaux, The Commonwealth Institute of Biological Control, Ottawa, Ontario, Canada: 191-332.
- Yefremova, Z. A. 2002. Catalogue of the Eulophidae (Hymenoptera: Chalcidoidea) of Russia. *Linzer Biologische Beiträge*, 34/1: 563-618.
- Yefremova, Z., Ebrahimi E. & Yegorenkova E. 2007. The subfamilies Eulophinae, Entedoninae and Tetrastichinae in Iran, with description of new species (Hymenoptera, Eulophidae). *Entomofauna*, 28(25): 321-356.
- Yefremova, Z. A. & Strakhova, I. S. 2010. A Review of the Species of the Genus *Elasmus* Westwood (Hymenoptera, Eulophidae) from Russia and Neighboring Countries. *Entomological Review*, 90 (7): 903-926.
- Zahiri, B., Moharramipour, S. & Talebi, A.A. 2003. The first report of *Hemiptarsenus zilahisebessi* and *H. wailesellae* (Hym.: Eulophidae), parasitoids of leafminer *Liriomyza sativae* (Dipt.: Agromyzidae) from Iran. *Journal of Entomological Society of Iran*, 24: 125-126.
- Zargaran, M.R., Lotfalizadeh, H., Safaralizadeh, M.H. & Saatlou, V.B. 2010. First report of parasitoids of populus leafminer in Iran. *Applied Entomology and Phytopathology*, 77 (2): 1-2.
- Zargaran, M. R., Sadeghi, S. E., Bakhshali Saatlo, V. & Melika, G. 2008. Identification of oak gall wasps parasitoids in west Azarbaijan. *Proceedings of the 18th Iranian Plant Protection Congress, Vol. 1, Pests*, p. 83.
- Zohdi, H. & Talebi, A.A. 2011. Study on some biological characteristics of *Tetrastichus gallerucae* (Hym. Eulophidae), important parasitoid of Elm leaf beetle eggs in Kerman, Iran. *Archives of Phytopathology and Plant Protection*, 44 (11): 1075-1080.

معرفی گونه‌هایی از زنبورهای زیرخانواده‌های *Eulophinae* و *Entiinae* از خانواده *Eulophidae* (Hymenoptera: Chalcidoidea) در استان فارس، به همراه چک لیست مقدماتی گونه‌های این خانواده در ایران

شهرام حسامی*

دانشگاه آزاد اسلامی، واحد شیراز، گروه گیاه پزشکی، شیراز، ایران

ابراهیم ابراهیمی

بخش رده بندی حشرات، موسسه تحقیقات گیاه پزشکی کشور، تهران، ایران

هادی استوان

دانشگاه آزاد اسلامی، واحد علوم و تحقیقات فارس، گروه حشره شناسی، مرودشت، ایران

زویا یغرمووا

گروه جانورشناسی، دانشگاه ایالتی اولیانووسک، روسیه

چکیده

طی تحقیقاتی در سال‌های ۱۳۸۳ تا ۱۳۸۶ در استان فارس، فون زنبورهای زیرخانواده *Entiinae* (=Euderinae) و *Eulophinae* از خانواده *Eulophidae* مورد بررسی قرار گرفت. یک گونه از زیرخانواده *Entiinae* و ۱۳ گونه از زیرخانواده *Eulophinae* جمع آوری شد. اطلاعات زیستی و پراکنش جغرافیایی گونه‌های جمع آوری شده ذکر شده است. در ضمن چک لیستی از کلیه گونه‌های گزارش شده خانواده *Eulophidae* از ایران (تا سال ۲۰۱۱) ارائه گردیده است.

واژه‌های کلیدی: زنبور، *Eulophidae*، *Entiinae*، *Eulerinae*، *Eulophinae*، ایران، فارس، چک لیست

*مسئول مکاتبات، پست الکترونیک: hesami@iaushiraz.ac.ir