

LISTS OF SPECIES

Insecta, Hymenoptera, Chalcidoidea, Eurytomidae and Torymidae in Iran

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Abstract: A taxonomic checklist of 43 species of Eurytomidae belonging to seven genera, and 41 species of Torymidae belonging to 15 genera, are currently recognized as occurring in Iran. Based mostly on various faunistic survey reports; no eurytomid or torymid species with collection records from Iran have previously been listed. Therefore; we did not intend to confirm identifications of previous studies, except in very obvious cases. A more comprehensive collection-based study is needed to confirm the actual Iranian occurrence of each species listed in this checklist.

Introduction

In the Chalcidoidea, the family Eurytomidae with 1400 described species and the family Torymidae with 960 species are important in regulating the populations of many insect species (Noyes 2008). For the Iranian fauna, studies of Hedicke (1921), Boucek (1952; 1977), Nikolskaya (1952) and Burks (1971) contain some faunistic reports on Iranian Eurytomidae. Modares Awal (1997) cited eight valid species of Eurytomid wasps in his list of agricultural pests and their natural enemies in Iran. In recent years some faunistic studies have been done on Iranian Eurytomidae and some new species have been described (Narendran and Lotfalizadeh 1999; Zerova et al. 2004; Lotfalizadeh et al. 2007; Zerova and Seryogina, 2008; Zerova et al. 2008). Some studies on Torymidae in Iran have recently been conducted by various local and foreign scientists (Modares Awal 1997; Ebrahimi and Ahmadian 2002; Rakhsahani et al. 2003a; b; Azizkhani et al. 2005; Delvare 2005; Lotfalizadeh and Gharali 2005; Askew et al. 2006a; Fallahzadeh et al. 2008; Hesami et al. 2008; Lotfalizadeh and Khalghani 2008). Although many studies have been carried out on the Eurytomidae and Torymidae fauna in Iran, their results have not been collated and published. This checklist was compiled to provide a reference for future studies on the fauna of these families in Iran.

Materials and Methods

The present checklist aims at reviewing as many references as possible to the Eurytomidae and Torymidae, and listing every species with an Iranian record. However; we did not intend to confirm identifications by previous workers except for very obvious cases. We follow the classification and taxonomic arrangement of Noyes (2008).

Results

Forty-three Eurytomidae species belonging to seven genera and 41 Torymidae species belonging to 15 genera are listed as follows:

FAMILY EURYTOMIDAE Walker, 1832

Bruchophagus astragali Fedoseeva, 1954

Iranian Records: province of Chaharmahal-Bakhtiyari (Haghighian 2004); province of West Azerbaijan (Zerova et al. 2008).

Distribution outside Iran: Bulgaria; Georgia; Germany; Hungary; Kazakhstan; Mongolia; Romania; Russia; Sweden; Turkmenistan.

Bruchophagus gibbus (Boheman, 1836)

Iranian Records: province of Khuzestan (Eslamizadeh and Ebrahimi 2002; Eslamizadeh et al. 2008).

Distribution outside Iran: Argentina; Australia; Austria; Azerbaijan; Bulgaria; Canada; Chile;

Finland; Germany; Hungary; India; Iraq; Italy; Netherlands; New Zealand, China; Peru; Romania; Russia; Sweden; Ukraine; United Kingdom; United States of America.

Bruchophagus glycyrrhizae Nikolskaya, 1952
Iranian Record: province of Qazvin (Arbab et al. 2004).
Distribution outside Iran: India; Iraq; Kazakhstan.

Bruchophagus mutabilis Nikolskaya, 1952
Iranian Records: province of Qazvin (Arbab et al. 2004); Iran (Nikolskaya 1952).
Distribution outside Iran: Bulgaria; France; Kazakhstan.

Bruchophagus nikolskajae Zerova, 1975
Iranian Record: province of Khorasan (Dashti and Lotfalizadeh 2008).
Distribution outside Iran: Kyrgyzstan.

Bruchophagus robiniae Zerova, 1970
Iranian Record: province of Tehran (Rakhshani et al. 2005).
Distribution outside Iran: Armenia; Bulgaria; Ukraine; Uzbekistan.

Bruchophagus roddi Gussakovsky, 1933
Iranian Records: East Azerbaijan; Hamadan; Kermanshah; Kurdistan; West Azerbaijan; Tehran and Zanjan provinces (Modares Awal 1997); Iran (Noyes 2008).
Distribution outside Iran: Argentina; Australia; Austria; Bulgaria; Canada; Chile; Czech Republic; France; Germany; Hungary; India; Iraq; Israel; Kazakhstan; Mexico; Moldova; Netherlands; New Zealand; Poland; Peru; Romania; Russia; Slovakia; Turkey; Ukraine; United States of America; Uzbekistan; Yugoslavia.

Bruchophagus trjapitzini Zerova, 2008
Iranian Record: province of West Azerbaijan (Zerova et al. 2008).

Eurytoma abdita Zerova, 1995
Iranian Record: province of West Azerbaijan (Zerova et al. 2008).
Distribution outside Iran: Kazakhstan; Russia; Ukraine.

Eurytoma acroptilae Zerova, 1986
Iranian Records: province of Ilam (Gharali 2004; Gharali and Zerova 2004a).
Distribution outside Iran: Azerbaijan; Kazakhstan; Tadjikistan; Ukraine; Uzbekistan.

Eurytoma amygdali Enderlein, 1907
Iranian Records: Iran (Modares Awal 1997); province of Yazd (Mohammadi Khoramabadi and Amin 2006).
Distribution outside Iran: Armenia; Azerbaijan; Bosnia and Herzegovina; Bulgaria; Cyprus; France; Georgia; Greece; Hungary; Israel; Jordan; Lebanon; Republic of Macedonia; Russia; Syria; Turkey; Ukraine.

Eurytoma arctica Thomson, 1875
Iranian Records: province of Markazi (Ebrahimi 1993; Modares Awal 1997).
Distribution outside Iran: Austria; Belgium; Croatia; Czech Republic; Denmark; Finland; Germany; Hungary; Norway; Poland; Russia; Slovakia; Sweden; Switzerland; United Kingdom.

Eurytoma blastophagi Hedqvist, 1963
Iranian Record: province of East Azerbaijan (Lotfalizadeh and Khalghani 2008).
Distribution outside Iran: Europe; Germany; Norway; Peoples' Republic of China; Russia; Sweden; USSR.

Eurytoma brunniventris Raatzeburg, 1852
Iranian Records: Kordestan; Kermanshah and Ilam provinces (Nazemi-Rafie et al. 2007); province of West Azerbaijan (Zargarani et al. 2008).
Distribution outside Iran: Austria; Bosnia and Herzegovina; Bulgaria; Croatia; Czech Republic; France; Germany; Hungary; Italy; Japan; South Korea; Netherlands; Romania; Russia; Serbia; Spain; Sweden; Ukraine; United Kingdom.

Eurytoma calicotomae Zerova, 2005
Iranian Record: province of West Azerbaijan (Zerova et al. 2008).
Distribution outside Iran: Israel

Eurytoma caninae Lotfalizadeh and Delvare, 2007
Iranian Record: province of East Azerbaijan (Lotfalizadeh et al. 2007); West Azerbaijan and Tehran provinces (Lotfalizadeh et al. 2006).
Distribution outside Iran: France; Morocco.

Eurytoma collina Zerova, 1984
Iranian Records: East Azerbaijan and Tehran provinces (Lotfalizadeh et al. 2006).
Distribution outside Iran: Tadjikistan; Turkmenistan; Uzbekistan.

Eurytoma curculionum Mayr, 1878
Iranian Records: province of Markazi (Ebrahimi 1993; Modares Awal 1997).

Distribution outside Iran: Austria; Bosnia and Herzegovina; Finland; France; Germany; Hungary; India; Italy; Morocco; Norway; Poland; Republic of Macedonia; Sweden; Turkey; United Kingdom.

Eurytoma ghazvini Zerova, 2004

Iranian Records: province of Qazvin (Zerova et al. 2004); Iran (Zerova and Seryogina 2006).

Eurytoma goidanichi Bouček, 1970

Iranian Records: Iran (Haeselbarth 1983).

Distribution outside Iran: Croatia; Czech Republic; Germany; Italy; Moldova; Republic of Macedonia; Russia; Slovakia; Turkmenistan; Ukraine; Serbia.

Eurytoma iranica Narendran and Lotfalizadeh, 1999

Iranian Record: province of Fars (Narendran and Lotfalizadeh 1999).

Eurytoma iranicola Zerova, 2007

Iranian Records: province of Kerman (Zerova et al. 2004); Iran (Zerova and Seryogina 2006); province of Chaharmahal-Bakhtiari (Lotfalizadeh and Khalghani 2008).

Eurytoma lactucae Zerova, 2008

Iranian Record: province of Lorestan (Zerova et al. 2008).

Eurytoma morio Boheman, 1836

Iranian Records: East Azerbaijan, Isfahan, Tehran and Zanjan provinces (Modares Awal 1997); province of East Azerbaijan (Lotfalizadeh and Khalghani 2008).

Distribution outside Iran: Austria; Belgium; Croatia; Czech Republic; Denmark; Finland; France; Germany; Hungary; India; Israel; Italy; Kazakhstan; Lebanon; Lithuania; Moldova; Mongolia; Morocco; Netherlands; Norway; China; Poland; Romania; Russia; Serbia; Slovakia; Spain; Sweden; Switzerland; Turkmenistan; Ukraine; United Kingdom; Yemen.

Eurytoma pistaciae Rondani, 1877

Iranian Records: province of Tehran (Rakhshani et al. 2003b); province of West Azerbaijan (Zargarani et al. 2008); Iran (Askew et al. 2006a; b).

Distribution outside Iran: Austria; Bulgaria; Croatia; Germany; Hungary; Italy; Japan; Korea-South; China; Romania; Russia; Spain; Switzerland; Turkey; Ukraine; United Kingdom.

Eurytoma plotnikovi Nikolskaya, 1934

Iranian Records: East Azerbaijan, Fars, Isfahan, Kerman, Khorasan, Markazi, Semnan and Zanjan provinces (Modares Awal 1997); province of Isfahan (Basirat and Seyedoleslami 1998; 2000).

Distribution outside Iran: Greece; Israel; China.

Eurytoma robusta Mayr, 1878

Iranian Record: province of West Azerbaijan (Zerova et al. 2008).

Distribution outside Iran: Austria; Bulgaria; Czech Republic; Denmark; Europe; France; Germany; Greece; Hungary; Italy; Moldova; Netherlands; Palearctic; Romania; Slovakia; Spain; Sweden; Switzerland; Turkey; United Kingdom (excl. Northern Ireland); USSR; Yugoslavia (Federal Republic).

Eurytoma rosae Nees, 1834

Iranian Records: East Azerbaijan and Tehran provinces (Lotfalizadeh et al. 2006); province of Tehran (Rakhshani et al. 2003b); Iran (Askew et al. 2006a; b).

Distribution outside Iran: Andorra; Argentina; Armenia; Austria; Belgium; Bulgaria; Czech Republic; Finland; France; Germany; Greece; Hungary; Iran; Italy; Kazakhstan; Malaysia; Netherlands; North Africa; China; Poland; Romania; Serbia; Slovakia; Spain; Sweden; Switzerland; Turkey; United Kingdom; Yugoslavia (former).

Exeurytoma caraganae Burks, 1971

Iranian Record: province of Tehran (Burks 1971).

Distribution outside Iran: Turkmenistan.

Nikanoria shohadae Zerova, 2008

Iranian Record: province of West Azerbaijan (Zerova et al. 2008).

Sycophila biguttata (Swederus, 1795)

Iranian Records: East Azerbaijan and Tehran provinces (Lotfalizadeh et al. 2006); East Azerbaijan, Ilam and Lorestan provinces (Lotfalizadeh and Gharali 2007); province of Lorestan (Azizkhani et al. 2005); Kordestan and Kermanshah provinces (Nazemi-Rafie et al. 2007); province of West Azerbaijan (Zargarani et al. 2008).

Distribution outside Iran: Austria; Belgium; Bosnia and Herzegovina; Bulgaria; Croatia; France; Germany; Hungary; Italy; Kazakhstan; Moldova; Montenegro; Netherlands; North Africa; Poland; Republic of Macedonia; Romania; Russia; Serbia; Slovenia; Spain; Sweden; Turkey; Ukraine; United Kingdom.

Sycophila binotata (Fonscolombe, 1832)
Iranian Record: province of East Azerbaijan (Lotfalizadeh and Gharali 2007).
Distribution outside Iran: Bulgaria; Croatia; France; Italy; Montenegro; Spain; Russia.

Sycophila flavicollis (Walker, 1834)
Iranian Record: province of Kordestan (Nazemi-Rafie et al. 2007).
Distribution outside Iran: Bulgaria; Caucasus; Croatia; Czech Republic; Europe; Germany; Hungary; Netherlands; Poland; Romania; Slovakia; Spain; Sweden; United Kingdom; Yugoslavia (Federal Republic).

Sycophila iracemae Nieves Aldrey, 1984
Iranian Record: Iran (Askew et al. 2006b).
Distribution outside Iran: France; Spain.

Sycophila submutica (Thomson, 1875)
Iranian Records: province of Ilam (Gharali and Zerova 2004b; Lotfalizadeh and Gharali 2007).
Distribution outside Iran: Andorra; Austria; Belgium; Bosnia and Herzegovina; Bulgaria; Croatia; Czech Republic; Denmark; Finland; France; Germany; Greece; Hungary; Iraq; Kazakhstan; Moldova; Montenegro; Netherlands; Republic of Macedonia; Romania; Serbia; Spain; Sweden; Switzerland; Turkey; United Kingdom.

Sycophila variegata (Curtis, 1831)
Iranian Records: Ilam and Lorestan provinces (Lotfalizadeh and Gharali 2007); province of Lorestan (Azizkhani et al. 2005); province of West Azerbaijan (ZARGARAN et al. 2008).
Distribution outside Iran: Bulgaria; Croatia; Czech Republic; France; Hungary; Iraq; Italy; Japan; Korea-South; China; Romania; Slovakia; Sweden; Turkey; United Kingdom.

Systole albipennis Walker, 1832
Iranian Records: Iran (Bouček 1952; 1977; Peck 1963).
Distribution outside Iran: Bulgaria; Canada; Chile; Croatia; Czech Republic; France; Germany; Hungary; India; Italy; Moldova; Montenegro; Netherlands; Romania; Sweden; Switzerland; Ukraine; United Kingdom.

Systole coriandri Gussakovsky, 1933
Iranian Record: Iran (Zerova 1978).
Distribution outside Iran: Afghanistan; Argentina; Brazil; Bulgaria; Caribbean; Chile; Central America; India; Japan; Malaysia; Moldova; North Africa; China; Romania; Russia; United States of America; Uzbekistan.

Systole foeniculi Otten, 1941
Iranian Records: Iran (Otten 1941; Bouček 1952; 1988; Zerova 1978).
Distribution outside Iran: Afghanistan; Bulgaria; Central Asia; New Caledonia; New Zealand.

Tetramesa leucospae Zerova and Madjdzadeh, 2005
Iranian Records: Mazandaran province (Madjdzadeh et al. 2005).

Tetramesa maderae (Walker, 1849)
Iranian Records: province of Tehran (Modares Awal 1997); province of Fars (Dousti 2006); Iran (Popescu 2004).
Distribution outside Iran: Canada; Italy; Madeira; Mexico; Turkey; Ukraine; United Kingdom; United States of America.

Tetramesa persica (Hedicke, 1921)
Iranian Record: province of Hamadan (Hedicke 1921).

Tetramesa tritici (Fitch, 1859)
Iranian Record: province of Tehran (Modares Awal 1997).
Distribution outside Iran: Brazil; Canada; Russia; Spain; United States of America.

FAMILY TORYMIDAE Walker, 1833

Adontomerus confusus Askew, 2000
Iranian Record: province of Hormozghan (Lotfalizadeh and Gharali 2005).
Distribution outside Iran: Canary Islands.

Adontomerus crassipes (Bouček, 1982)
Iranian Records: province of Ilam (Gharali and Zerova 2004; Lotfalizadeh and Gharali 2005).
Distribution outside Iran: Algeria; Spain.

Adontomerus impolitus (Askew & Nieves Aldrey, 1988)
Iranian Record: province of West Azerbaijan (Zerova et al. 2008).
Distribution outside Iran: Spain; Turkey; Uzbekistan.

Exopristoides hypecoi Zerova & Stojanova, 2004
Iranian Record: province of West Azerbaijan (Zerova et al. 2008).
Distribution outside Iran: Bulgaria

Exopristus trigonomerus (Masi, 1916)
Iranian Record: province of West Azerbaijan (Zerova et al. 2008).

Distribution outside Iran: Bosnia Hercegovina; Croatia; Czech Republic; Czech Republic; Europe; France; Greece; Hungary; Italy; Macedonia; Moldova; Mongolia; North Africa; Palaearctic; Romania; Slovakia; Spain; Transcaucasus (Zakavkaz); Turkey; Ukraine; USSR.

Cryptopristus salviae Zerova, 2008

Iranian Record: province of East Azerbaijan (Zerova et al. 2008).

Glyphomerus aylax Stojanova, 2005

Iranian Record: province of West Azerbaijan (Zerova et al. 2008).

Distribution outside Iran: Bulgaria.

Glyphomerus flavabdomen Zerova, 2008

Iranian Record: province of West Azerbaijan (Zerova et al. 2008).

Glyphomerus stigma (Fabricius, 1793)

Iranian Records: province of East Azerbaijan (Lotfalizadeh and Gharali 2005); Azerbaijan-e-Sharghi and Tehran provinces (Lotfalizadeh et al. 2006); province of Tehran (Rakhshani et al. 2003b).

Distribution outside Iran: Andorra; Austria; Bulgaria; Canada; Croatia; Czech Republic; France; Germany; Greece; Hungary; Italy; Japan; Kyrgyzstan; Netherlands; Romania; Russia; Serbia; Slovakia; Spain; Sweden; Switzerland; Turkey; United Kingdom; United States of America.

Idiomacromerus papaveris (Förster, 1856)

Iranian Records: Ilam and Qazvin provinces (Lotfalizadeh and Gharali 2005); province of Qazvin (Arbab et al. 2004); province of West Azerbaijan (Zerova et al. 2008).

Distribution outside Iran: Andorra; Austria; Bulgaria; Croatia; Czech Republic; France; Germany; Hungary; Israel; Italy; Moldova; Republic of Macedonia; Spain; Turkey.

Idiomacromerus perplexus (Gahan, 1914)

Iranian Records: Ardabil and Qazvin provinces (Lotfalizadeh and Gharali 2005).

Distribution outside Iran: Argentina; Armenia; Canada; Chile; Hungary; Mexico; Romania; Russia; Serbia; United States of America; Uruguay; Uzbekistan; Yugoslavia (former).

Idiomacromerus terebrator (Masi, 1916)

Iranian Record: province of East Azerbaijan (Lotfalizadeh and Gharali 2005).

Distribution outside Iran: Armenia; Bulgaria; Croatia; Czech Republic; France; Germany; Hungary; Italy; Moldova; New Zealand; Republic of Macedonia; Romania; Russia; Slovakia; Ukraine; United States of America; Uzbekistan.

Megastigmus aculeatus (Swederus, 1795)

Iranian Records: province of Tehran (Rakhshani et al. 2003a; b); Iran (Peck 1963; Grissell 1979; Xu and He 1995; O'Connor 2003; Roques and Skrzypczynska 2003).

Distribution outside Iran: Armenia; Austria; Bosnia and Herzegovina; Bulgaria; Croatia; Czech Republic; Denmark; Ethiopia; Finland; France; Germany; Greece; Hungary; Iran; Iraq; Italy; Japan; Kazakhstan; Moldova; Montenegro; Morocco; Netherlands; New Zealand; China; Poland; Romania; Russia; Serbia; Slovakia; Spain; Somalia; South Africa; Sweden; Switzerland; Tadjikistan; Turkmenistan; Ukraine; United Kingdom; United States of America.

Megastigmus almusiensis Doğanlar, 1989

Iranian Record: Iran (Nieves-Aldrey et al. 2008).

Distribution outside Iran: Turkey.

Megastigmus bipunctatus (Swederus, 1795)

Iranian Records: province of Qazvin (Zarnegar et al. 2008).

Iranian Records: Austria; Bulgaria; Czech Republic; Denmark; Estonia; Finland; France; Germany; Hungary; Italy; Kazakhstan; Montenegro; Morocco; Netherlands; Poland; Romania; Russia; Serbia; Slovakia; Slovenia; Spain; Sweden; Switzerland; Ukraine; United Kingdom; Uzbekistan.

Megastigmus dorsalis (Fabricius, 1798)

Iranian Records: province of Lurestan (Azizkhani et al. 2005; Lotfalizadeh and Gharali 2005); Kordestan and Kermanshah provinces (Nazemi-Rafie et al. 2007); province of West Azerbaijan (Zargaran et al. 2008).

Distribution outside Iran: Bulgaria; Bosnia and Herzegovina; Croatia; Czech Republic; Denmark; France; Germany; Hungary; India; Italy; Moldova; Netherlands; China; Republic of Macedonia; Romania; Russia; Serbia; Slovakia; Sweden; Turkey; Ukraine; United Kingdom.

Megastigmus dunicola Bouèek, 1982

Iranian Record: province of Kermanshah (Nazemi-Rafie et al. 2007).

Distribution outside Iran: France; Spain.

Megastigmus pistaciae Walker, 1871

Iranian Records: East Azerbaijan, Fars, Hamadan, Isfahan, Khorasan, Markazi, Semnan, Tehran and Zanjan provinces (Abai and Adeli 1984; Modares Awal 1997; Mehrnejad 2001; Jalilvand and Gholipour 2002); province of Isfahan (Basirat and Seyedoleslami); province of Qazvin (Lotfalizadeh and Gharali 2005); Iran (Zoebelein 1966; Grissell and Prinsloo 2001; Nikolskaya and Zerova 1978; Rice and Michailides 1988; Roques and Skrzypczynska 2003).

Distribution outside Iran: Afghanistan; Algeria; Australia; Bulgaria; Croatia; Cyprus; France; Greece; Israel; Italy; Mexico; Montenegro; Morocco; China; Portugal; Tunisia; Turkey; Turkmenistan; Ukraine; United States of America; Uzbekistan.

Megastigmus rosae Bouček, 1971

Iranian Record: province of East Azerbaijan (Lotfalizadeh and Gharali 2005).

Distribution outside Iran: Armenia; Austria; Azerbaijan; Bulgaria; Czech Republic; Georgia; Germany; Kazakhstan; Russia; Switzerland; Tadjikistan; Turkey; Turkmenistan; Ukraine.

Megastigmus stigmatizans (Fabricius, 1798)

Iranian Records: province of Lorestan (Azizkhani et al. 2005); Kordestan and Kermanshah provinces (Nazemi-Rafie et al. 2007).

Distribution outside Iran: Austria; Bosnia and Herzegovina; Bulgaria; Croatia; Czech Republic; France; Germany; Hungary; Italy; Russia; Serbia; Slovakia; Slovenia; Sweden; Ukraine; United Kingdom.

Microdontomerus annulatus (Spinola, 1808)

Iranian Records: province of Ilam (Gharali 2004; Lotfalizadeh and Gharali 2005); province of Tehran (Modares Awal 1997).

Distribution outside Iran: Austria; Bulgaria; Croatia; Czech Republic; Egypt; Germany; Hungary; Italy; Libya; Moldova; Montenegro; Pakistan; Romania; Serbia; Slovakia; Spain; Sweden; Turkey; United Kingdom.

Monodontomerus aereus Walker, 1834

Iranian Records: province of East Azarbaijan (Nikdel et al. 2004); province of Qazvin (Gharali et al. 2005; Lotfalizadeh and Gharali 2005).

Distribution outside Iran: Armenia; Austria; Bosnia and Herzegovina; Bulgaria; Canada; Croatia; Czech Republic; France; Georgia; Germany; Greece; Hungary; India; Italy; Japan; Kazakhstan; Moldova; Netherlands; North Africa; Poland; Republic of Macedonia; Romania;

Russia; Serbia; Slovakia; Spain; Switzerland; Turkey; Ukraine; United Kingdom; United States of America.

Monodontomerus aeneus (Fonscolombe, 1832)

Iranian Record: Iran (Baur 2005).

Distribution outside Iran: Austria; Azerbaijan; Canada; Chile; Croatia; Czech Republic; France; Georgia; Germany; Hungary; Italy; Kazakhstan; Romania; Russia; Spain; Sweden; Ukraine; United Kingdom; United States of America.

Monodontomerus obscurus Westwood, 1833

Iranian Record: province of Ardabil (Lotfalizadeh and Gharali 2005).

Distribution outside Iran: Azores; Bulgaria; Canada; Chile; Croatia; Czech Republic; Denmark; Egypt; France; Germany; Hungary; India; Israel; Italy; Kazakhstan; Lebanon; Moldova; Netherlands; Pakistan; Republic of Macedonia; Romania; Russia; Slovakia; Spain; Sweden; Switzerland; Turkey; Turkmenistan; Ukraine; United Kingdom; United States of America.

Monodontomerus vicicellae (Walker, 1847)

Iranian Records: Mazandaran and Tehran provinces (Tremewan 1976; 1977).

Distribution outside Iran: Austria; Croatia; Czech Republic; Finland; France; Germany; Hungary; Italy; Moldova; Mongolia; Netherlands; Republic of Macedonia; Russia; Serbia; Slovakia; Spain; Ukraine; United Kingdom.

Oopristus turkestanicus (Skriptshinsky, 1929)

Iranian Records: province of Tehran (Steffan 1968; Modares Awal 1997); Iran (Farooqi 1986).

Distribution outside Iran: Iraq; Pakistan; Uzbekistan.

Podagrion bouceki Delvare, 2005

Iranian Records: province of Kerman (Delvare 2005).

Distribution outside Iran: Benin; Burkina Faso; Cameroon; Gambia; Guinea; Ivory Coast; France; Morocco; Oman; Portugal; Senegal; Spain; Somalia; South Africa.

Podagrion pachymerum (Walker, 1833)

Iranian Record: province of Yazd (Ebrahimi and Ahmadian 2002).

Distribution outside Iran: Algeria; Austria; Bulgaria; Croatia; Czech Republic; France; Germany; Hungary; India; Italy; Madeira; Moldova; Poland; Romania; Slovakia; Spain; Syria; Ukraine.

Podagrionella caudata Narendran, 1994
Iranian Record: province of Sistan-Baluchestan (Tatogh et al. 2008).
Distribution outside Iran: India.

Podagrionella lichtensteini (Picard, 1933)
Iranian Record: province of East Azerbaijan (Lotfalizadeh and Gharali 2005).
Distribution outside Iran: Canary Islands; France; Kazakhstan; Spain.

Pseuderimerus irani Zerova and Seryogina, 2008
Iranian Record: province of Lorestan (Zerova and Seryogina, 2008).

Pseudotorymus euphorbiae Zerova and Seryogina, 1999
Iranian Record: province of Ilam (Lotfalizadeh and Gharali 2005).
Distribution outside Iran: Ukraine.

Pseudotorymus medicaginis (Mayr, 1874)
Iranian Record: province of East Azerbaijan (Lotfalizadeh and Gharali 2005).
Distribution outside Iran: Austria; Czech Republic; Mongolia; Romania; Sweden; Ukraine; United Kingdom.

Pseudotorymus militaris (Boheman, 1834)
Iranian Record: province of West Azerbaijan (Zerova et al. 2008).
Distribution outside Iran: Czech Republic; Europe; Germany; Sweden; Turkey; Ukraine; United Kingdom (excl. Northern Ireland).

Pseudotorymus regalis Askew, 2006
Iranian Records: province of Lorestan (Askew et al. 2006a); Iran (Askew et al. 2006b).

Pseudotorymus stachidis (Mayr, 1874)
Iranian Record: province of Fars (Fallahzadeh et al. 2008).
Distribution outside Iran: Austria; Hungary; Sweden.

Torymus auratus (Müller, 1764)
Iranian Records: province of East Azerbaijan (Lotfalizadeh and Gharali 2005; Lotfalizadeh et

al. 2006); province of Kordestan (Modares Awal 1997).

Distribution outside Iran: Austria; Bulgaria; Czech Republic; France; Georgia; Germany; Hungary; Moldova; Netherlands; Romania; Slovakia; Sweden; Ukraine; United Kingdom; United States of America.

Torymus bedeguaris (Linnaeus, 1758)
Iranian Records: East Azerbaijan and Tehran provinces (Lotfalizadeh and Gharali 2005; Lotfalizadeh et al. 2006); East Azerbaijan, Isfahan and Tehran provinces (Modares Awal 1997); province of Tehran (Rakhshani et al. 2003b); Iran (Askew et al. 2006a; b).

Distribution outside Iran: Andorra; Armenia; Austria; Azerbaijan; Belgium; Bulgaria; Canada; Croatia; Czech Republic; Denmark; France; Georgia; Germany; Greece; Hungary; Italy; Kazakhstan; Kyrgyzstan; Moldova; Netherlands; Romania; Russia; Serbia; Slovakia; Spain; Sweden; Switzerland; Tadzhikistan; Turkey; Turkmenistan; Ukraine; United Kingdom; United States of America.

Torymus erucarum (Schrank, 1781)
Iranian Record: province of West Azerbaijan (Zargaran et al. 2008).

Distribution outside Iran: Austria; Croatia; Czech Republic; France; Germany; Hungary; Italy; Republic of Macedonia; Moldova; Netherlands; Poland; Portugal; Russia; Serbia; Slovakia; Spain; Sweden; Ukraine; United Kingdom.

Torymus geranii (Walker, 1833)
Iranian Records: province of Ilam (Lotfalizadeh and Gharali 2005); province of Lorestan (Azizkhani et al. 2005).

Distribution outside Iran: Azerbaijan; Belgium; Croatia; France; Germany; Japan; Korea-South; Netherlands; China; Poland; Portugal; Russia; Serbia; Slovakia; Sweden; Ukraine; United Kingdom.

Torymus lapsanae (Hoffmeyer, 1930)
Iranian Record: Fars and Tehran provinces (Hesami et al. 2008).

Distribution outside Iran: France; Hungary; Sweden; Ukraine.

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Literature Cited

- Abai, M. and E. Adeli. 1984. List of pest of forest trees and shrubs of Iran. Tehran: Ministry of Agriculture and Rural development. 147 p.
- Arbab, A., B. Gharali and M. Zerova. 2004. Report of three species of Chalcidoidea from Iran. Journal of Entomological Society of Iran 24: 129-130.
- Askew, R.R., S.E. Sadeghi and M. Tavakoli. 2006a. Chalcidoidea (Hym.) in galls of *Diplolepis mayri* (Schlechtendal) (Hym., Cynipidae) in Iran, with the description of a new species of *Pseudotorymus Masi* (Hym., Torymidae). Entomologists Monthly Magazine 142: 1-6.
- Askew, R.R., O. Plantard, J.F. Gómez, M. Hernandez Nieves, and J.L. Nieves-Aldrey. 2006b. Catalogue of parasitoids and inquilines in galls of Aylacini, Diplolepidini and Pediaspidini (Hym., Cynipidae) in West Palaearctic. Zootaxa 1301: 1-60.
- Azizkhani, E., G. Rasulian, A. Kharazi-Pakdel, S.E. Sadeghi, M. Tavakoli and G. Melika. 2005. Report of eight species of parasitoid wasps belonging to Chalcidoidea from Cynipid galls on oak trees. Journal of Entomological Society of Iran 25(1): 79-80.
- Basirat, M. and H. Seyedoleslami. 1998. Distribution, importance and biology of univoltine pistachio seed wasp *Eurytoma plotnikovi* Nikolskaya (Hym.: Eurytomidae) in Isfahan province. Proceedings of 13th Iranian Plant Protection Congress, Vol. 1, Pests: 114.
- Basirat, M. and H. Seyedoleslami. 2000. Biology of pistachio seed wasp in Isfahan province, Iran. Journal of Science and Technology of Agriculture and Natural Resources 4(1): 137-148.
- Baur, H. 2005. Determination list of entomophagous insects nr 14. Bulletin. Section Regionale Ouest Palaearctique, Organisation Internationale de Lutte Biologique 28(11): 1-71.
- Bouček, Z. 1952. A new pest of cumin, *Systole albipennis* Walk. (Eurytomidae, Chalc., Hym.). Folia Zoologica Entomologica 1: 4-9.
- Bouček, Z. 1977. A faunistic review of the Yugoslavian Chalcidoidea (Parasitic Hymenoptera). Acta Entomologica Jugoslavica, Supplement 13: 1-145.
- Bouček, Z. 1988. Australasian Chalcidoidea (Hymenoptera). A biosystematic revision of genera of fourteen families, with a reclassification of species. Wallingford, Oxon: CAB International Institute of Entomology. 832 p.
- Burks, B.D. 1971. A synopsis of the genera of the family Eurytomidae (Hym., Chalcidoidea). Transactions of the American Entomological Society. 97: 1-89.
- Dashti, M. and H. Lotfalizadeh. 2008. On the occurrence of *Bruchophagus nikolskajae* Zerova, 1975 (Hym.: Eurytomidae): a seed-eater wasp of *Ermurus spectabilis* in Iran. Proceedings of 18th Iranian Plant Protection Congress, Vol. 1, Pests: 106.
- Delvare, G. 2005. A revision of the West-Palaearctic *Podagrion* (Hymenoptera: Torymidae), with the description of *Podagrion bouceki* sp.nov. Acta Societatis Zoologicae Bohemoslovenicae 69: 65-88.
- Dousti, A.F. 2006. The first record of *Tetramesa maderae* (Hym.: Eurytomidae) from Iran. Proceedings of 17th Iranian Plant Protection Congress, Vol. 1., Pests: 66.
- Ebrahimi, E. 1993. An introduction to the new six parasitoid wasps for the fauna of Iran. Journal of Entomological Society of Iran 12/13: 25.
- Ebrahimi, E. and H.A. Ahmadian. 2002. Report of *Podagrion pachymerum* (Hym., Torymidae) from Iran. Proceedings of 15th Iranian Plant Protection Congress, Vol. 1, Pests: 166.
- Eslamizadeh, R. and E. Ebrahimi. 2002. Biology and damage level of alfalfa seed wasp *Bruchophagus gibbus* (Boheman) (Eurytomidae) in Khuzestan province. Proceedings of 15th Iranian Plant Protection Congress, Vol. 1, Pests: 28.
- Eslamizadeh, R., M. Barzkar, A.A. Shooshidezfuli and M. Karami Nejad. 2008. Investigation on the effect of last cutting time on damage rate of *Bruchophagus gibbus* on Baghdadi alfalfa seed yield in Khuzestan. Proceedings of 18th Iranian Plant Protection Congress, Vol. 1, Pests: 388.
- Fallahzadeh, M., M. Shojai, H. Ostovan, and K. Kamali. 2008. The first report of *Pseudotorymus stachidis* (Hym.: Torymidae) from Iran. Journal of Entomological Society of Iran 27(2): 17-18.
- Farooqi, S.I. 1986. Family Torymidae; 20: p. 1-430. In B.R. Suubba Rao and M. Hayat (ed.). The Chalcidoidea (Insecta: Hymenoptera) of India and the adjacent countries. Part II, Oriental Insects. USA: Associated Publishers.
- Gharali, B. 2004. Study of natural enemies of safflower shoot flies in Ilam province. Proceedings of 16th Iranian Plant Protection Congress, Vol. 1, Pests: 54.
- Gharali, B. and M. Zerova. 2004a. The first report on *Eurytoma acroptilae* Zerova, 1986, parasitoid of safflower shoot flies from Iran. Applied Entomology and Phytopathology 71: 32-33.
- Gharali, B. and M. Zerova. 2004b. Natural enemies of safflower gall wasp, *Isocolus* sp. (Cynipidae: Aylacini) in Ilam province. Proceedings of 16th Iranian Plant Protection Congress: 55.
- Gharali, B., H. Lotfalizadeh, E. Ebrahimi, and M. Zerova. 2005. Record of *Monodontomerus aereus* (Hym.: Torymidae) from Iran. Journal of Entomological Society of Iran 25(1): 66.
- Grissell, E.E. 1979. Family Torymidae; p. 748-769 In K.V. Krombein, P.D. Hurd, D.R. Smith and B.D. Bruks (ed.). Catalog of Hymenoptera in America North of Mexico 1, Washington: Smithsonian Institution Press.
- Grissell, E.E. and G.L. Prinsloo. 2001. Seed-feeding species of *Megastigmus* (Hymenoptera: Torymidae) associated with Anacardiaceae. Journal of Hymenoptera Research 10(2): 271-279.
- Haesselbarth, E. 1983. Determination list of entomophagous insects Nr. 9. Bulletin. Section Regionale Ouest Palaearctique, Organisation Internationale de Lutte Biologique 6(1): 1-49.

- Haghighian, F. 2004. *Bruchophagus astragali* (Hymenoptera: Eurytomidae) as a pest of rangeland legumes in Chaharmahal and Bakhtiary province. Proceedings of 16th Iranian Plant Protection Congress, Vol. 1, Pests: 135.
- Hedicke, H. 1921. Beiträge zu einer Monographie der paläarktischen Isosominen (Hym., Chalc.). Archiv für Naturgeschichte (A) 86: 1-167.
- Hesami, S., M. Behzadi, E. Ebrahimi, S. Miresmaili and M. Doğanlar. 2008. Report of *Torymus lapsanae* (Hym.: Torymidae), a parasitoid of *Diplolepis rosae* (Hym.: Cynipidae) from Iran Journal of Entomological Society of Iran Supplement. 27: 17-18.
- Lotfalizadeh, H. and B. Gharali. 2005. Introduction to the Torymidae fauna (Hymenoptera: Chalcidoidea) of Iran. Zoology in the Middle East 36: 67-72.
- Lotfalizadeh, H. and B. Gharali. 2007. Some notes on the genus *Sycophila* Walker, 1871 (Hymenoptera: Eurytomidae) in the west of Iran. Zool. Middle East 40: 77-84.
- Lotfalizadeh, H., G. Delvare and J.-Y. Rasplus. 2007. *Eurytoma caninae* sp.n. (Hymenoptera, Eurytomidae), a common species previously overlooked with *E. rosae*. Zootaxa 1640: 55-68.
- Lotfalizadeh, H., J.Y. Rasplus and G. Delvare. 2006. Rose gall wasps and their associated fauna (Hymenoptera) in Iran. Redia 89: 73-85.
- Jalilvand, N. and Y. Gholipour. 2002. Pistachio production in Iran: II. Main Iranian pistachio pests. NUCIS Newsletter 2002 11: 23-25.
- Madjdzadeh, M., M.D. Zerova and H. Dawah. 2005. A new species of *Tetramesa* (Hymenoptera, Eurytomidae) from Iran. Vestnik. Zoologii 39: 65-66.
- Mehrnejad, M.R. 2001. The current status of pistachio pests in Iran. Cahiers Options Méditerranéennes 56: 315-322.
- Modares Awal, M. 1997. List of agricultural pests and their natural enemies in Iran. (Revised edition). Mashhad: Ferdowsi University Press. 429 p.
- Mohammadi Koramabadi, A. and H. Amin 2006. Preliminary screening of several varieties of almonds to almond seed wasp *Eurytoma amygdali* Enderlein in Mehriz of Yazd province. Proceedings of 17th Iranian Plant Protection Congress, Vol. 1, Pests: 314.
- Narendran, T.C. and H. Lotfalizadeh. 1999. A new species of *Eurytoma* Illiger (Hymenoptera: Eurytomidae) parasitic on *Eulecanium rugulosum* ARCH. (Homoptera: Coccidae) from Iran. Iran Agricultural Research 18: 197-204.
- Nazemi-Rafie, J., A.A. Talebi, E. Sadeghi and G. Melika. 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.
- Nikdel, M., B. Sadaghian and A. Dordaei. 2004. Collection and identification of brown-tail moth's natural enemies in Arasbaran forest. The Joint Agriculture and Natural Resources Symposium, Tabriz – Ganja: 1-5.
- Nieves-Aldrey, J.L., M. Hernandez Nieves, and J.F. Gómez. 2008. Larval morphology and biology of three European species of *Megastigmus* (Hymenoptera, Torymidae, Megastigminae) parasitoids of gall wasps, including a comparison with the larvae of two seed-infesting species. Zootaxa 1746: 46-60.
- Nikolskaya, M. 1952. Chalcids of the fauna of the USSR (Chalcidoidea). Opredeliteli po Faune SSSR, Moscow and Leningrad: Zoologicheskim Institutom Akademii Nauk SSSR. 575 p.
- Nikolskaya, M.N. and M.D. Zerova. 1978. Torymidae (Callimomidae); p. 358-374 In G.S. Medvedev (ed.). Opredelitel Nasekoma Evropeyskoy Chasti SSSR, vol. III, Hymenoptera II. Leningrad: Nauka.
- Noyes, J. 2008. Universal Chalcidoidea Database. Database accessible at <http://www.nhm.ac.uk/entomology/chalcidoids/> Captured on 30 August 2008.
- O'Connor, J.P. 2003. *Megastigmus aculeatus* (Swederus) (Hym., Torymidae), new to Ireland. Entomologists Monthly Magazine 139: 124.
- Otten, E. 1941. Gezogene Chalcididen und ihre Wirte. II. Arbeiten über Morphologische und Taxonomische Entomologie 8: 255-266.
- Peck, O. 1963. A catalogue of the Nearctic Chalcidoidea (Insecta, Hymenoptera). The Canadian Entomologist, Supplement 30: 1-1092.
- Popescu, I.E. 2004. Eurytomid wasps (Hymenoptera, Chalcidoidea, Eurytomidae) new for Romanian fauna (II). Analele Stiintifice ale Universitatii "Al. I. Cuza" Iasi (Biologie Animala) 50: 100-101.
- Rakhshani, E., A.A. Talebi and T.C. Narendran. 2005. Report of *Bruchophagus robiniae* (Hym.: Eurytomidae) from Iran. Journal of Entomological Society of Iran 25(1): 81-82.
- Rakhshani, E., A.A. Talebi, Y. Fathipour and S. Moharrampour. 2003a. The first report of rose seed gall wasp, *Megastigmus aculeatus* Swederus (Hymenoptera: Torymidae) from Iran. Proceedings of the 2nd Applied-Scientific Seminar on Flowers and Ornamental Plants: 9.
- Rakhshani, E., A.A. Talebi, S. Sadeghi, E. Ebrahimi and C. Thuroczy. 2003b. Report of five wasps species associated with dog rose galls in Iran. Journal of Entomological Society of Iran 23(1): 107-108.
- Rice, R.E. and T.J. Michailides. 1988. Pistachio seed chalcid *Megastigmus pistaciae* Walker (Hymenoptera, Torymidae) in California, USA. Journal Economic Entomology. 81: 1446-1449.
- Roques, A. and M. Skrzypczynska. 2003. Seed-infesting chalcids of the genus *Megastigmus* Dalman, 1820 (Hymenoptera: Torymidae) native and introduced to the west Palearctic region: taxonomy, host specificity and distribution. Journal of Natural History 37: 127-238.
- Steffan, J.R. 1968. Observations sur *Chalcedectus sinaiticus* (Ms.) et descriptions de *C. balachowskyi* sp.n. (Hym. Chalcedectidae) et d'*Oopristus safavii*

- gen.n., sp.n. (Hym. Torymidae), deux parasites d'importance économique en Iran. *Entomophaga* 13(3): 209-216.
- Tatogh, A., H. Lotfalizadeh and E. Rakhshani. 2008. Occurrence of *Podagrionella caudata* Narendran, 1994 (Hym.: Torymidae), an oothecal parasitoid of the mantids in Iran. *Proceedings of 18th Iranian Plant Protection Congress*, Vol. 1, Pests: 64.
- Tremewan, W.G. 1976. Further notes on *Zygaena* Fabricius (Lep., Zygaenidae) from Iran. *Entomologist's Gazette* 27: 215-220.
- Tremewan, W.G. 1977. On *Zygaena* Fabricius (Lep., Zygaenidae) collected in Iran in 1976. *Entomologist's Gazette* 28: 223-227.
- Xu, Z.H. and J.H. He. 1995. Note on species of the phytophagous group of *Megastigmus* (Hymenoptera: Torymidae) from China. *Entomotaxonomia* 17: 243-253.
- Zargaran, M.R., S.E. Sadeghi, V. Bakhshali Saatlo and G. Melika. 2008. Identification of oak gallwasps parasitoids in West Azarbaijan. *Proceedings of 18th Iranian Plant Protection Congress*, Vol. 1, Pests: 83.
- Zarnegar, A., H. Lotfalizadeh and B. Gharali. 2008. The first report of *Megastigmus bipunctatus* (Swederus, 1795) (Hymenoptera: Torymidae) from Iran. *Proceedings of 18th Iranian Plant Protection Congress*; Vol. 1; Pests: 95.
- Zerova, M.D. 1978. Eurytomidae; p. 328-358 *In* G.S. Medvedev (ed.). *Opredelitel Nasekoma Evropeyskoy Chasti SSSR*; Vol. III; Hymenoptera II. Leningrad: Nauka.
- Zerova, M.D. and L.Y. Seryogina. 2006. A review of Palearctic species of the genus *Eurytoma* of robusta species group (Hymenoptera, Eurytomidae) with a description of two new species. *Zoologičeskij žurnal* 85: 1196-1106.
- Zerova, M.D., M.R. Mehrnejad, B. Gharali and L. Y. Seryogina, 2004. Two new species of the genus *Eurytoma* (Hymenoptera, Eurytomidae) from Iran. *Vestnik. Zoologii* 38: 81-84.
- Zoebelein, G. 1966. Probleme der Bekämpfung schädlicher Insekten in der Landwirtschaft im Iran. *Anzeiger für Schädlingskunde* 39: 3-8.

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