

A faunistic study on Ichneumonidae (Hymenoptera) in Alborz, Guilan and Qazvin provinces, Iran

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Abstract: This paper deals with a faunistic survey of Ichneumonidae (Hymenoptera) collected from some regions of three provinces, Alborz, Guilan and Qazvin in northern part of Iran. In total, 66 species in 47 genera and 13 subfamilies were collected and identified: Acaenitinae (two species, two genera), Anomaloninae (two species, two genera), Banchinae (six species, six genera), Campopleginae (six species, three genera), Cremastinae (three species, two genera), Cryptinae (eleven species, seven genera), Ichneumoninae (three species, three genera), Mesochorinae (five species, two genera), Metopiinae (eight species, four genera), Orthocentrinae (five species, five genera), Phygadeuontinae (two species, two genera), Pimplinae (five species, four genera) and Tryphoninae (seven species, five genera).

Introduction

The family Ichneumonidae (Hymenoptera) has a cosmopolitan distribution, with 47 generally recognized subfamilies, 1,601 genera, and 25,292 described species (Yu et al., 2016). Ichneumonidae is one of the most species richness families of all insects with an estimated number of 60,000 species in the world (Townes, 1969); however,

Gauld (2006) estimated 30,000 species only for the South American tropics. Most of the members of this family are parasitoids of holometabolous insects (such as Coleoptera, Diptera, Hymenoptera, Lepidoptera, Raphidioptera, Trichoptera), and some species parasitize spiders (egg sacs, spiderlings, or adults) or egg sacs of pseudoscorpions (Gürbüz et al., 2011; Kolarov et al., 2016).

Faunistic knowledge of the family Ichneumonidae in Iran is largely incomplete due to the lack of regional studies and taxonomic complexity of this group, in comparison with well-studied other western Palaearctic countries. The purpose of this paper is to record the species of Ichneumonidae of the Alborz, Guilan and Qazvin provinces as part of ongoing faunistic studies of Ichneumonidae in Iran. In the present study, 65 ichneumonid species were collected, of which six species are recorded for the first time from Iran.

Material and methods

The specimens of this research were collected from some regions of Alborz, Guilan and Qazvin provinces by Malaise traps and sweeping nets, as well as examining of many preserved specimens in some insect collections and museums. Literature used to identify the specimens included Townes (1969), Broad (2011), and Rouse & Villemant (2012) on the subfamily level; Townes (1969; 1970a, b; 1971) and Bennett (2015) on the generic level; Rossem (1966), Delrio (1975), Horstmann (1968, 1990), Kasparyan (1981), Schwarz (2002, 2007), Humala (2002), Çoruh & Özbek (2008), Jussila et al. (2010), Rouse & Villemant (2012), and Vas (2016) on the specific level. Classification, nomenclature and distributional data of Ichneumonidae suggested by Yu *et al.* (2016) have been followed.

List of species

In total, 66 species within 47 genera and 13 subfamilies of Ichneumonidae were collected and identified from Alborz, Guilan and Qazvin provinces. Among them, six species are new records for the fauna of Iran: *Cratocryptus furcator* (Gravenhorst, 1829), *Cremastus inflatipes* Roman, 1939, *Dicaelotus erythrogaster* (Holmgren, 1890), *Dusona insignita* (Förster, 1868), *Eridolius flavomaculatus* (Gravenhorst, 1829) and *Plectiscidea collaris* (Gravenhorst, 1829). The list of species is given below alphabetically with distributional data.

Subfamily Acaenitinae Foerster, 1869

***Leptacoenites notabilis* (Desvignes, 1856)**

Material examined: Guilan province, Talesh (Khalifeh Sara), 1♂, September 2013.

General distribution: Austria, Bulgaria, former Czechoslovakia, France, Germany, Greece, Hungary, Italy, Poland, Romania, Russia, Spain, Ukraine, United Kingdom, former Yugoslavia.

***Mesoclistus rufipes* (Gravenhorst, 1829)**

Material examined: Alborz province, Taleghan, 2♀, August 2016.

General distribution: Austria, Belgium, Bulgaria, Croatia, former Czechoslovakia, Finland, France, Germany, Hungary, Italy, Luxembourg, Poland, Romania, Spain, Sweden, Switzerland, Ukraine, former Yugoslavia.

Subfamily Anomaloninae Viereck, 1918

***Camposcopus nigricornis* (Wesmael, 1849)**

Material examined: Qazvin province, Avaj, 3♀, September 2016.

General distribution: Austria, Belgium, former Czechoslovakia, Estonia, Finland, France, Germany, Hungary, Ireland, Japan, Latvia, Netherlands, Poland, Romania, Russia, Sweden, Switzerland, United Kingdom.

***Erigorgus latro* (Schrank, 1781)**

Material examined: Alborz province, Savojbalagh (Soltan-Abad), 1♂, 2♀, August 2016.

General distribution: Azerbaijan, Bulgaria, former Czechoslovakia, Finland, France, Germany, Hungary, Ireland, Italy, Moldova, Norway, Poland, Romania, Russia, Spain, Sweden, Tunisia, Ukraine, United Kingdom.

Subfamily Banchinae Wesmael, 1845

***Cryptopimpla anomala* Holmgren, 1860**

Material examined: Guilan province, Talesh (Subatan), 1♀, September 2013.

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General distribution: Canada, former Czechoslovakia, Finland, France, Germany, Hungary, Norway, Russia, Sweden, Switzerland, USA, United Kingdom.

***Cryptopimpla calceolata* (Gravenhorst, 1829)**

Material examined: Alborz province, Taleghan, 1♂, 1♀, August 2016.

General distribution: Belarus, Belgium, Bulgaria, former Czechoslovakia, Denmark, Finland, France, Georgia, Germany, Hungary, Italy, Lithuania, Moldova, Netherlands, Poland, Romania, Russia, Spain, Sweden, Switzerland, Ukraine, United Kingdom.

***Exetastes notatus* Holmgren, 1860**

Material examined: Qazvin province, Takestan (Jafar-Abad), 1♂, July 2016.

General distribution: Austria, Belgium, China, former Czechoslovakia, France, Germany, Hungary, Mongolia, Poland, Romania, Russia, Spain, Sweden, former Yugoslavia.

***Glypta ceratites* Gravenhorst, 1829**

Material examined: Qazvin province, Avaj, 2♂, September 2016.

General distribution: Austria, Belarus, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Moldova, Mongolia, Netherlands, Norway, Poland, Romania, Russia, Spain, Sweden, Switzerland, United Kingdom.

***Lissonota lineolaris* (Gmelin, 1790)**

Material examined: Alborz province, Nazar-Abad, 1♂, 3♀, August 2016.

General distribution: Austria, Belarus, Belgium, Bulgaria, China, former Czechoslovakia, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Japan, Latvia, Lithuania, Netherlands, Norway, Poland, Romania, Russia, Spain, Sweden, Switzerland, Ukraine, United Kingdom.

***Syzeuctus bicornis* (Gravenhorst, 1829)**

Material examined: Guilan province, Fooman (Khalilsara), 2♀, June 2012.

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General distribution: Austria, Belarus, Belgium, Czech Republic, France, Germany, Hungary, Italy, Latvia, Poland, Romania, Russia, Spain, Sweden, Switzerland, United Kingdom.

Subfamily Campopleginae Förster, 1869

***Dusona insignita* (Förster, 1868)**

Material examined: Qazvin province, Alamoot, 2♂, 1♀, September 2016. *New record for Iran.*

General distribution: Bulgaria, former Czechoslovakia, Finland, France, Germany, Hungary, Italy, Kazakhstan, Latvia, Moldova, Netherlands, Poland, Romania, Russia, Sweden, Switzerland, Ukraine, United Kingdom.

***Dusona opaca* (Thomson, 1887)**

Material examined: Qazvin province, Abyek (Miankooh), 1♀, September 2016.

General distribution: Austria, Bulgaria, former Czechoslovakia, Germany, Hungary, Kazakhstan, Poland, Romania, Russia, United Kingdom.

***Dusona pineticola* (Holmgren, 1872)**

Material examined: Guilan province, Siahkal (Siahbijar), 1♀, August 2017.

General distribution: Austria, Belarus, Belgium, Bulgaria, former Czechoslovakia, Finland, Germany, Kazakhstan, Kyrgyzstan, Mongolia, Norway, Poland, Romania, Russia, Sweden, Tajikistan.

***Dusona spinipes* (Thomson, 1887)**

Material examined: Qazvin province, Avaj, 2♀, September 2016.

General distribution: Belarus, Belgium, former Czechoslovakia, Finland, France, Germany, Hungary, Japan, Moldova, Netherlands, Poland, Romania, Russia, Spain.

***Olesicampe pubescens* (Ratzeburg, 1844)**

Material examined: Guilan province, Talesh (Subatan), 1♂, 1♀, September 2013.

General distribution: Austria, Belgium, Finland, France, Germany,

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Hungary, Latvia, Luxembourg, Moldova, Poland, Romania, Russia, Sweden, United Kingdom.

***Xylophylax teredo* (Hartig, 1847)**

Material examined: Guilan province, Chaboksar, 2♂, June 2012.

General distribution: Austria, Belgium, former Czechoslovakia, Finland, France, Germany, Hungary, Italy, Poland, Romania, Russia, Switzerland.

Subfamily Cremastinae Förster, 1869

***Cremastus geminus* Gravenhorst, 1829**

Material examined: Qazvin province, Takestan (Jafar-Abad), 2♂, 3♀, July 2016.

General distribution: Austria, Bulgaria, China, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Italy, Latvia, Lithuania, Macedonia, Mongolia, Montenegro, Norway, Poland, Russia, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom, former Yugoslavia.

***Cremastus inflatipes* Roman, 1939**

Material examined: Qazvin province, Abyek (Zargar), 1♀, September 2016. *New record for Iran.*

General distribution: Bulgaria, Finland, Italy, Montenegro, Romania, Turkey, former Yugoslavia.

***Temelucha guttifer* (Thomson, 1890)**

Material examined: Guilan province, Talesh, 1♂, September 2013.

General distribution: Bulgaria, Poland, Romania, Russia, Spain, Sweden, Tunisia, Turkey.

Subfamily Cryptinae Kirby, 1837

***Agrothereutes fumipennis* (Gravenhorst, 1829)**

Material examined: Alborz province, Eshtehard, 1♂, 2♀, July 2016.

General distribution: Austria, Azerbaijan, Belgium, Bulgaria, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Italy, Latvia, Lithuania, Netherlands, Norway, Poland,

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Romania, Russia, Spain, Sweden, Switzerland, Tunisia, Ukraine, United Kingdom.

***Agrothereutes leucorhaeus* (Donovan, 1810)**

Material examined: Guilan province, Siahkhal (Siahbijar), 1♂, 2♀, August 2017.

General distribution: Austria, Belgium, Bulgaria, Czechoslovakia, Finland, France, Germany, Israel, Latvia, Lithuania, Norway, Poland, Romania, Spain, Sweden, Switzerland, Turkey, United Kingdom.

***Cratocryptus furcator* (Gravenhorst, 1829)**

Material examined: Guilan province, Fooman (Khalilsara), 2♀, June 2012. *New record for Iran.*

General distribution: Austria, Belgium, Canada, former Czechoslovakia, Estonia, Finland, Germany, Hungary, Latvia, Netherlands, Poland, Russia, USA, United Kingdom.

***Cryptus bucculentus* Tschek, 1871**

Material examined: Alborz province, Taleghan, 1♀, August 2016.

General distribution: Albania, Algeria, Austria, France, Greece, Hungary, Italy, Morocco, Spain, Tunisia, former Yugoslavia.

***Cryptus leucocheir* (Ratzeburg, 1844)**

Material examined: Guilan province, Amlash (Shirchak), 2♂, 1♀, May 2015.

General distribution: Austria, Bulgaria, former Czechoslovakia, France, Germany, Hungary, Lithuania, Netherlands, Poland, Romania, Spain, Tajikistan, Turkey, Ukraine.

***Cubocephalus nigriventris* (Thomson, 1874)**

Material examined: Guilan province, Talesh, 1♀, September 2013.

General distribution: Austria, Belgium, Canada, former Czechoslovakia, Finland, France, Germany, Hungary, Japan, Latvia, Lithuania, Norway, Poland, Sweden, USA, United Kingdom.

***Cubocephalus sperator* (Müller, 1776)**

Material examined: Guilan province, Amlash (Shirchak), 3♀, May 2015.

General distribution: Austria, Azerbaijan, Belgium, Bulgaria,

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former Czechoslovakia, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Romania, Russia, Spain, Sweden, Switzerland, United Kingdom.

***Enclisis macilenta* (Gravenhorst, 1829)**

Material examined: Alborz province, Taleghan, 2♂, August 2016.

General distribution: Austria, Belarus, Belgium, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Italy, Lithuania, Moldova, Netherlands, Norway, Poland, Romania, Sweden, Switzerland, United Kingdom.

***Enclisis vindex* (Tschek, 1871)**

Material examined: Guilan province, Masal, 1♀, June 2015.

General distribution: Austria, Belgium, Bulgaria, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Italy, Latvia, Lithuania, Luxembourg, Norway, Poland, Romania, Spain, Sweden, United Kingdom, former Yugoslavia.

***Listrognathus obnoxius* (Gravenhorst, 1829)**

Material examined: Qazvin province, Takestan (Rahim-Abad), 1♂, 2♀, July 2016.

General distribution: Austria, Azerbaijan, Belarus, Bulgaria, former Czechoslovakia, Denmark, France, Germany, Hungary, Italy, Lebanon, Moldova, Poland, Romania, Russia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, former Yugoslavia.

***Plectocryptus digitatus* (Gmelin, 1790)**

Material examined: Qazvin province, Abyek (Miankooh), 2♀, September 2016.

General distribution: Austria, Azerbaijan, Belgium, Bulgaria, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Latvia, Moldova, Netherlands, Norway, Poland, Romania, Sweden, Switzerland, United Kingdom.

Subfamily Ichneumoninae Latreille, 1802

***Coelichneumon desinatorius* (Thunberg, 1822)**

Material examined: Qazvin province, Takestan, 1♂, 1♀, July 2016.

General distribution: Austria, Azerbaijan, Belarus, Belgium, Bulgaria, former Czechoslovakia, Estonia, Finland, France, Germany, Hungary, Italy, Latvia, Netherlands, Norway, Poland, Romania, Russia, Spain, Sweden, Ukraine, United Kingdom.

***Dicaelotus erythrogaster* (Holmgren, 1890)**

Material examined: Guilan province, Asalem, 2♀, September 2018.

New record for Iran.

General distribution: Bulgaria, former Czechoslovakia, Finland, France, Germany, Greece, Hungary, Italy, Netherlands, Romania, Spain, Sweden, Turkey.

***Eutanyacra crispatoria* (Linnaeus, 1758)**

Material examined: Alborz province, Taleghan, 1♀, August 2016.

General distribution: Austria, Azerbaijan, Belarus, Belgium, former Czechoslovakia, Finland, France, Germany, Hungary, Netherlands, Norway, Romania, Spain, Sweden, Switzerland, United Kingdom.

Subfamily Mesochorinae Förster, 1869

***Astiphromma mandibulare* (Thomson, 1886)**

Material examined: Guilan province, Amlash (Shirchak), 1♂, 1♀, May 2015.

General distribution: Austria, Bulgaria, former Czechoslovakia, Finland, Germany, Hungary, Japan, Korea, Lithuania, Moldova, Poland, Romania, Russia, Sweden, Ukraine, United Kingdom.

***Mesochorus giberius* (Thunberg, 1822)**

Material examined: Qazvin province, Moalem-Kelayeh, 2♂, 3♀, July 2016.

General distribution: Eastern Palaearctic, Nearctic, Neotropical, Oriental, Western Palaearctic.

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***Mesochorus nuncupator* (Panzer, 1800)**

Material examined: Qazvin province, Takestan (Rahim-Abad), 2♀, July 2016.

General distribution: Eastern Palaearctic, Europe, Nearctic, Neotropical, Western Palaearctic.

***Mesochorus politus* Gravenhorst, 1829**

Material examined: Alborz province, Savojbalagh (Kordan), 1♂, August 2016.

General distribution: Austria, Belgium, former Czechoslovakia, Finland, France, Germany, Hungary, Japan, Korea, Latvia, Myanmar, Netherlands, Norway, Poland, Romania, Russia, Sweden, United Kingdom.

***Mesochorus testaceus* Gravenhorst, 1829**

Material examined: Qazvin province, Takestan, 1♂, 1♀, July 2016.

General distribution: Austria, Belgium, Bulgaria, Czech Republic, Finland, France, Germany, Greece, Hungary, Latvia, Netherlands, Norway, Poland, Romania, Russia, Sweden, United Kingdom.

Subfamily Metopiinae Förster, 1869

***Chorinaeus cristator* (Gravenhorst, 1829)**

Material examined: Alborz province, Savojbalagh, 2♂, 1♀, August 2016.

General distribution: Austria, Azerbaijan, Belgium, Bulgaria, Czech Republic, Finland, France, Germany, Hungary, Ireland, Italy, Lithuania, Moldova, Netherlands, Poland, Romania, Russia, Sweden, Switzerland, Ukraine, United Kingdom, former Yugoslavia.

***Chorinaeus subcarinatus* Holmgren, 1858**

Material examined: Qazvin province, Alamoot, 2♀, September 2016.

General distribution: Eastern Palaearctic, Europe, Nearctic, Western Palaearctic.

***Exochus lictor* Haliday, 1838**

Material examined: Guilan province, Siahkal (Deylaman), 1♀, August 2017.

General distribution: Eastern Palaearctic, Europe, Nearctic, Western Palaearctic.

***Exochus prosopius* Gravenhorst, 1829**

Material examined: Guilan province, Asalem, 2♂, 2♀, September 2018.

General distribution: Austria, Belgium, Bulgaria, former Czechoslovakia, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Japan, Latvia, Lithuania, Malta, Moldova, Netherlands, Norway, Poland, Romania, Russia, Spain, Sweden, Ukraine, United Kingdom.

***Hypsicera curvator* (Fabricius, 1793)**

Material examined: Qazvin province, Takestan, 2♀, July 2016.

General distribution: Eastern Palaearctic, Europe, Nearctic, Western Palaearctic.

***Hypsicera femoralis* (Geoffroy, 1785)**

Material examined: Guilan province, Astara (Giladeh), 1♀, September 2012.

General distribution: Australasian, Eastern Palaearctic, Ethiopian, Europe, Nearctic, Neotropical, Oceanic, Oriental, Western Palaearctic.

***Triclistus globulipes* (Desvignes, 1856)**

Material examined: Guilan province, Rudsar (Rahim-Abad), 1♂, 1♀, June 2014.

General distribution: Austria, Belarus, Belgium, China, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Japan, Korea, Latvia, Lithuania, Moldova, Morocco, Netherlands, Poland, Romania, Russia, Slovakia, Sweden, Switzerland, Ukraine, United Kingdom.

***Triclistus podagricus* (Gravenhorst, 1829)**

Material examined: Alborz province, Savojbalagh (Kordan),

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1♂, 2♀, August 2016.

General distribution: Austria, Belarus, Belgium, Bulgaria, Canada, Czech Republic, Denmark, Finland, France, Georgia, Germany, Hungary, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Romania, Russia, Sweden, Switzerland, Turkey, USA, Ukraine, United Kingdom.

Subfamily Orthocentrinae Förster, 1869

***Aperileptus albipalpus* (Gravenhorst, 1829)**

Material examined: Guilan province, Rudsar (Rahim-Abad), 1♀, June 2014.

General distribution: Eastern Palaearctic, Nearctic, Western Palaearctic.

***Catastenus femoralis* Förster, 1871**

Material examined: Qazvin province, Alamoot, 1♀, September 2016.

General distribution: Eastern Palaearctic, Nearctic, Western Palaearctic.

***Helictes erythrostroma* (Gmelin, 1790)**

Material examined: Guilan province, Astara (Giladeh), 2♂, September 2012.

General distribution: Austria, Bulgaria, Canada, former Czechoslovakia, Estonia, Finland, France, Germany, Italy, Lithuania, Netherlands, Norway, Poland, Russia, Sweden, Switzerland, USA.

***Plectiscidea collaris* (Gravenhorst, 1829)**

Material examined: Guilan province, Siahkal (Deylaman), 2♀, August 2017. *New record for Iran.*

General distribution: Nearctic, Western Palaearctic.

***Proclitus paganus* (Haliday, 1838)**

Material examined: Qazvin province, Moalem-Kelayeh, 2♀, July 2016.

General distribution: Eastern Palaearctic, Nearctic, Western Palaearctic.

Subfamily Phygadeuontinae Förster, 1869

***Atractodes arator* Haliday, 1838**

Material examined: Guilan province, Lahijan (Barkosara), 1♀, May 2015.

General distribution: Armenia, Austria, Finland, Georgia, Germany, Lithuania, Norway, Poland, Russia, Spain, Sweden, Ukraine, United Kingdom.

***Phygadeuon variabilis* Gravenhorst, 1829**

Material examined: Alborz province, Eshtehard, 2♀, July 2016.

General distribution: Austria, Azerbaijan, Belgium, Czech Republic, Denmark, Finland, France, Germany, Hungary, India, Ireland, Italy, Latvia, Netherlands, Poland, Romania, Russia, Spain, Sweden, Switzerland, Tunisia, United Kingdom, former Yugoslavia.

Subfamily Pimplinae Wesmael, 1845

***Dolichomitus mesocentrus* (Gravenhorst, 1829)**

Material examined: Alborz province, Savojbalagh (Soltan-Abad), 2♂, 2♀, August 2016.

General distribution: Afghanistan, Albania, Austria, Belarus, Belgium, Bulgaria, China, Croatia, Czech Republic, Finland, France, Germany, Hungary, Italy, Japan, Kazakhstan, Korea, Latvia, Netherlands, Norway, Poland, Romania, Russia, Spain, Sweden, Switzerland, Turkey, USA, United Kingdom, former Yugoslavia.

***Liotryphon crassiseta* (Thomson, 1877)**

Material examined: Alborz province, Eshtehard, 1♂, 1♀, July 2016.

General distribution: Azerbaijan, Belgium, Bulgaria, former Czechoslovakia, Finland, France, Germany, Greece, Hungary, Italy, Lithuania, Moldova, Netherlands, Norway, Poland, Romania, Spain, Sweden, Switzerland, Turkey, United Kingdom, former Yugoslavia.

***Pimpla arctica* Zetterstedt, 1838**

Material examined: Guilan province, Masal, 2♂, June 2015.

General distribution: Eastern Palaearctic, Oriental, Western Palaearctic.

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***Pimpla flavicoxis* Thomson, 1877**

Material examined: Guilan province, Lahijan (Bijarboneh), 1♂, 1♀, May 2015.

General distribution: Armenia, Austria, Belarus, Belgium, Bulgaria, former Czechoslovakia, Finland, France, Georgia, Germany, Hungary, Iceland, Latvia, Lithuania, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Sweden, United Kingdom, former Yugoslavia.

***Pimpla insignatoria* (Gravenhorst, 1807)**

Material examined: Guilan province, Lahijan (Barkosara), 2♀, May 2015.

General distribution: Armenia, Austria, Azerbaijan, Belarus, Bulgaria, Denmark, France, Georgia, Germany, Hungary, Netherlands, Poland, Romania, Russia, Ukraine, former Yugoslavia.

***Scambus inanis* (Schrank, 1802)**

Material examined: Alborz province, Eshtehard (Hassan-Abad), 2♂, 3♀, July 2016.

General distribution: Austria, Azerbaijan, Belarus, Bulgaria, Canada, Czech Republic, Denmark, Finland, France, Germany, Hungary, Italy, Lithuania, Moldova, Mongolia, Netherlands, Norway, Poland, Romania, Russia, Serbia, Spain, Sweden, Switzerland, USA, Ukraine, United Kingdom, former Yugoslavia.

Subfamily Tryphoninae Shuckard, 1840

***Ctenochira pastoralis* (Gravenhorst, 1829)**

Material examined: Qazvin province, Moalem-Kelayeh, 1♂, 1♀, July 2016.

General distribution: Albania, Austria, Azerbaijan, Belgium, Bulgaria, former Czechoslovakia, Finland, France, Georgia, Germany, Hungary, Ireland, Italy, Latvia, Netherlands, Norway, Poland, Russia, Spain, Sweden, Switzerland, United Kingdom.

***Eridolius dorsator* (Thunberg, 1822)**

Material examined: Guilan province, Lahijan, 2♀, May 2015.

General distribution: Armenia, Austria, Belarus, Belgium,

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Bulgaria, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Kazakhstan, Latvia, Lithuania, Mongolia, Netherlands, Norway, Poland, Romania, Russia, Sweden, Switzerland, Ukraine, United Kingdom.

***Eridolius flavomaculatus* (Gravenhorst, 1829)**

Material examined: Alborz province, Eshtehard (Hassan-Abad), 1♂, 2♀, July 2016. *New record for Iran.*

General distribution: Azerbaijan, Belarus, Belgium, Bulgaria, former Czechoslovakia, Finland, France, Georgia, Germany, Hungary, Italy, Kyrgyzstan, Latvia, Mongolia, Netherlands, Norway, Poland, Romania, Russia, Spain, Sweden, USA, United Kingdom.

***Eridolius similis* (Holmgren, 1857)**

Material examined: Qazvin province, Moalem-Kelayeh, 2♀, July 2016.

General distribution: Austria, Azerbaijan, Belgium, former Czechoslovakia, Estonia, Finland, France, Germany, Hungary, Kyrgyzstan, Latvia, Lithuania, Netherlands, Norway, Portugal, Russia, Sweden.

***Excavarus apiarius* (Gravenhorst, 1829)**

Material examined: Qazvin province, Alamoot, 1♂, 1♀, September 2016.

General distribution: Austria, Azerbaijan, Belgium, Bulgaria, former Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Korea, Netherlands, Norway, Poland, Romania, Russia, Sweden, Tajikistan, Ukraine, United Kingdom.

***Exyston subnitidus* (Gravenhorst, 1829)**

Material examined: Gilan province, Astara (Giladeh), 1♂, September 2012.

General distribution: Austria, Azerbaijan, Belgium, Bulgaria, former Czechoslovakia, Finland, France, Germany, Moldova, Netherlands, Russia, Spain, Switzerland, Turkey, Ukraine, United Kingdom.

***Otoblastus luteomarginatus* (Gravenhorst, 1829)**

Material examined: Alborz province, Eshtehard, 1♂, 1♀, July 2016.

General distribution: Armenia, Austria, Azerbaijan, Belgium, Bulgaria, former Czechoslovakia, France, Georgia, Germany, Hungary, Italy, Japan, Moldova, Netherlands, Poland, Romania, Russia, Spain, Sweden, Turkey, Ukraine, United Kingdom.

Discussion

This faunistic paper indicates that there is a diverse fauna of ichneumonid wasps in three provinces, Alborz, Guilan and Qazvin. Of course, all the regions of these provinces have not been sampled intensively, which in this case will result to new findings for these provinces as well as Iranian fauna. Additionally, some species of Ichneumonidae are efficient natural enemies of several economically important agricultural pests, which studies on biological aspects of these beneficial insects are necessary in order to establish biological control programs.

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