

A CONTRIBUTION TO THE ACULEATE HYMENOPTERA (INSECTA) FROM IRAN

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ABSTRACT

This study based on 184 specimens of Crabronidae, Pompilidae, Scoliidae, Sphecidae, Vespidae collected from different regions of Iran. In the present study, a total of 56 taxa were identified, of which the following are first records for Iran: *Arachnospila abnormis* (Dahlbom), *Evaetes pontomoravicus* (Šustera), and *Tachyagetes kasakstanus* Wolf (Pompilidae), *Dasyscolia ciliata araratca* (Radoszkowski), *Scolia fallax* Eversmann, and *Scolia (Scolia) fuciformis* (Scopoli) (Scoliidae).

Keywords: Hymenoptera, Crabronidae, Pompilidae, Scoliidae, Sphecidae, Vespidae, Fauna, Iran.

INTRODUCTION

Iran has different geographical regions with many diverse vegetations and climates. The faunistic studies are very important for cataloging the fauna of Iran. The faunistic and taxonomic papers treating the families Sphecidae and Crabronidae in Iran have increased rapidly through recent years (Esmaili and Rastegar, 1974; Abd-Rabou *et al.*, 2005; Ebrahimi, 2005, 2008; Ghazi-Soltani *et al.*, 2006; Fallahzadeh *et al.*, 2006, 2009; Ghahari *et al.*, 2009); but the fauna of Iranian Pompilidae, Scoliidae, and Vespidae has been poorly studied thus far (Modarres Awal, 1997; Wolf, 2003). However, surely these few studies are not enough to document the entire Hymenoptera Fauna of Iran. Therefore the aim of this paper is to make a faunistic study of Crabronidae, Pompilidae, Scoliidae, Sphecidae, and Vespidae in some regions of Iran to explore the biodiversity of Iranian Hymenoptera.

MATERIALS AND METHODS

In the present study, specimens were collected from the Iranian provinces of Kordestan, West and East Azarbayjan, Ilam, Ardabil, Sistan and Baluchestan, Guilan, Khuzestan, Mazandaran, Kermanshah, Golestan, Kerman, Bushehr, and Khorasan during the period between 2005-2008. Sweep nets and malaise traps were used to collect specimens. Identification, classification, and nomenclature of specimens were accomplished according to Betrem (1935), Bohart and Menke (1976), Carpenter (1987), Lelej (1995), Wolf (2003), Bitsch *et al.* (2007), and Pulawski (2009). Additionally, some specimens of different insect collections in some universities, including Qaemshahr and Garmsar Branches of Islamic Azad University and also Tehran Science and Research Campus, were checked.

RESULTS AND DISCUSSION

Family Crabronidae

Subfamily Astatinae

Astata apostata Mercet, 1910

Material examined: Kordestan: Bijar, Sanandaj, 4♂, July 2006.

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***Astata jucunda* Pulawski, 1959**

Material examined: West Azarbayjan: Oshnavieh, 1♀, July 2007.

***Astata quettae* Nurse, 1903**

Material examined: Ilam: Ilam, Dehloran 3♀, 5♂, October 2005.

Subfamily Bembecinae***Bembecinus hungaricus* (Frivaldszky, 1877)**

Material examined: West Azarbayjan: Maco, 3♀, August 2007.

***Bembecinus peregrinus* (F. Smith, 1856)**

Material examined: Ardabil: Aslandooz, Germy, Pars-Abad, 7♀, September 2008.

***Bembecinus validior* Gussakovskij, 1952**

Material examined: Sistan and Baluchestan: Zabol, 2♂, May 2008.

***Bembix arenaria* Handlirsch, 1893**

Material examined: Ardabil: Meshkinshahr, 2♀, September 2008.

***Bembix gracilis* Handlirsch, 1893**

Material examined: Guilan: Lahijan, Chaboksar, 3♂, August 2008.

***Stizus combustus* (F. Smith, 1856)**

Material examined: Sistan and Baluchestan: Chabahar, 2♀, May 2008.

***Stizus niloticus* Handlirsch, 1892**

Material examined: Khuzestan: Ahwaz, 1♂, March 2006.

Subfamily Crabroninae***Ancistromma asiaticum* Gussakovskij, 1935**

Material examined: West Azarbayjan: Ourmieh, Oshnaveh, 4♀, 3♂, September 2007.

***Trypoxylon latilobatum* Antropov, 1991**

Material examined: West Azarbayjan: Ourmieh, Salmas, 4♀, September 2007.

***Trypoxylon syriacum* Mercet, 1906**

Material examined: East Azarbayjan: Arasbaran, 3♀, August 2007.

***Crabro cribrarius* Linnaeus, 1758**

Material examined: Mazandaran: Behshahr, 1♂, April 2008.

***Ectemnius rubicola* (Dufour and Perris, 1840)**

Material examined: Khorasan: Bojnord, 2♀, July 2008.

***Lindenius albilabris* (Fabricius, 1793)**

Material examined: Kermanshah: Kermanshah, 2♀, August 2007.

***Tachysphex pompiliformis* (Panzer, 1805)**

Material examined: Kordestan: Marivan, Kamyaran, 5♀, June 2006.

Subfamily Mellininae***Mellinus crabroneus* (Thunberg, 1791)**

Material examined: Golestan: Maraveh-Tappeh, 2♀, 1♂, September 2008

Subfamily Pemphredoninae***Mimesa jacobsoni transiliensis* Budrys, 1985**

Material examined: West Azarbayjan: Salmas, 2♀, June 2007.

***Ammoplanus (Ammoplanus) angularis* Gussakovskij, 1952**

Material examined: Golestan: Gonbad, 1♀, July 2006.

Subfamily Philanthinae***Cerceris dorsalis* Eversmann, 1849**

Material examined: Kordestan: Sanandaj, 1♂, 4♀, July 2006.

***Cerceris pulchella* Klug, 1845**

Material examined: Kerman: Kahnooj, 2♂, April 2007.

***Cerceris rybyensis* (Linnaeus, 1771)**

Material examined: Guilan: Rasht, Fooman, 3♀, August 2007.

***Cerceris sabulosa* (Panzer, 1799)**

Material examined: East Azarbayjan: Tabriz, 3♀, August 2007.

***Cerceris spinipectus* F. Smith, 1856**

Material examined: Kermanshah: Gilan-Gharb, 1♂, August 2007; Golestan: Bandar-Torkman 3♀, September 2008.

***Philanthus coarctatus* Spinola, 1838**

Material examined: Khuzestan province: Andimeshk, 1♀, 2♂, October 2007.

Family Sphecidae**Subfamily Ammophilinae*****Ammophila dolichodera* Kohl, 1884**

Material examined: Kermanshah: Ravansar, 4♀, October 2005.

***Ammophila haimatosoma* Kohl, 1884**

Material examined: Kerman: Jiroft, 2♂, April 2007.

***Ammophila pubescens* Curtis, 1836**

Material examined: East Azarbayjan province: Maragheh, Tabriz, 4♀, September 2007.

***Podalonia affinis* (W. Kirby, 1798)**

Material examined: Khuzestan: Ahwaz, 2♀, March 2006.

Subfamily Chloriontinae***Chlorion semenowi occidentale* (de Beaumont, 1962)**

Material examined: Bushehr: Brazjan, 2♀, April 2007.

***Chlorion splendidum* Fabricius, 1804**

Material examined: Khorasan: Serakhs, 1♂, June 2005.

Subfamily Sphecinae***Prionyx crudelis* (F. Smith, 1793)**

Material examined: Khuzestan: Khorramshahr, 1♀, March 2006.

***Prionyx subfuscatus* (Dahlbom, 1845)**

Material examined: Khuzestan: Abadan, 3♀, March 2006.

***Prionyx viduatus* (Christ, 1791)**

Material examined: Sistan and Baluchestan: Nikshahr, 2♀, 1♂, May 2008.

Family Pompilidae
Subfamily Pompilinae

***Arachnospila abnormis* (Dahlbom, 1842)**

Material examined: West Azarbayjan: Piranshahr, 1♀, October 2007. New record for the fauna of Iran.

***Dicyrtomellus tingitanus* (Wolf, 1988)**

Material examined: West Azarbayjan: Piranshahr, 3♀, October 2007.

***Eoferreola erythraea* (Pallas, 1773)**

Material examined: East Azarbayjan: Arasbaran, 1♂, 2♀, August 2007.

***Eoferreola manticata* (Pallas, 1771)**

Material examined: Mazandaran: Amol, Mahmood-Abad, Fereydonkenar, 3♂, 5♀, September 2005.

***Evagetes pontomoravicus* (Šustera, 1938)**

Material examined: West Azarbayjan: Piranshahr, Oshnavieh, 2♀, October 2007. New record for the fauna of Iran.

***Tachyagetes kasakstanus* Wolf, 1987**

Material examined: Golestan: Maraveh-Tappeh, 2♀, September 2008. New record for the fauna of Iran.

Subfamily Pepsinae

***Priocnemis rufozonatus* (Costa, 1887)**

Material examined: West Azarbayjan: Maco, 3♀, August 2007.

Family Scoliidae
Subfamily Scoliinae

***Colpa (Colpa) sexmaculata* (Fabricius, 1781)**

Material examined: West Azarbayjan: Piranshahr, Oshnavieh, 4♀, October 2007.

***Colpa (Heterelis) quinquecincta quinquecincta* (Fabricius, 1793)**

Material examined: Kordestan: Bijar, 2♂, July 2006.

***Dasyscolia ciliata araratica* (Radoszkowski, 1890)**

Material examined: Ardabil: Meshkinshahr, 2♀, September 2008. New record for the fauna of Iran.

***Megascolia bidens* (Linnaeus, 1767)**

Material examined: East Azarbayjan: Arasbaran, 7♀, 4♂, August 2007.

***Megascolia maculata maculata* (Drury, 1773)**

Material examined: East Azarbayjan: Arasbaran, 3♀, 5♂, August 2007.

***Scolia fallax* Eversmann, 1849**

Material examined: West Azarbayjan: Piranshahr, 1♀, October 2007. New record for the fauna of Iran.

***Scolia (Scolia) fuciformis* (Scopoli, 1786)**

Material examined: West Azarbayjan: Maco, 1♀, 1♂, August 2007. New record for the fauna of Iran.

***Scolia galbula* (Pallas, 1771)**

Material examined: Kermanshah: Kermanshah, Ravansar, 4♀, 3♂, August 2007.

Family Vespidae
Subfamily Vespinae

***Vespa crabro* Linnaeus, 1758**

Material examined: Khorasan: Bojnord, Mashhad, Ghoochan, 3♀, 5♂, July 2008.

***Vespula rufa* (Linnaeus, 1758)**

Material examined: Mazandaran: Behshahr, 1♀, August 2006.

***Vespula vulgaris* (Linnaeus, 1758)**

Material examined: East Azarbayjan: Arasbaran, 4♂, September 2006.

Subfamily Polistinae***Polistes dominulus* (Christ, 1791)**

Material examined: Khorasan: Serakhs, 2♂, June 2005.

***Polistes nimpha* (Christ, 1791)**

Material examined: Khorasan: Serakhs, Torbat Heydarieh, 3♂, June 2005.

***Polistes bischoffi* Weyrauch, 1937**

Material examined: East Azarbayjan: Arasbaran, 2♀, September 2006.

A total of 25 species belonging to Crabronidae, 7 species belonging to Pompilidae, 8 species belonging to Scoliidae, 10 species belonging to Sphecidae, and 6 species belonging to Vespidae were identified from different regions of Iran. From these species, six taxa, *Arachnospila abnormis* (Dahlbom), *Evagetes pontomoravicus* (Šustera), *Tachyagetes kasakstanus* Wolf, *Dasyscolia ciliata araratrica* (Radoskovsky), *Scolia fallax* Eversmann and *Scolia (Scolia) fuciformis* (Scopoli) are new records for the fauna of Iran.

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