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## **A study on Sphecidae and Crabronidae from Iran (Hymenoptera: Apoidea)**

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### **Abstract**

This paper deals with distribution of some species of Sphecidae and Crabronidae (Hymenoptera: Apoidea) in Iran. In total 8 species of Sphecidae from 6 genera, and 18 species of Crabronidae from 14 genera is studied in this paper. One species, *Belomicrus schulthessii* KOHL, 1924 (Crabronidae), is newly recorded from Iran.

Key words: Hymenoptera, Apoidea, Sphecidae, Crabronidae, digger wasp, Iran.

### **Zusammenfassung**

Vorliegende Arbeit befasst sich mit dem Vorkommen einiger Arten der Familien Sphecidae und Crabronidae (Hymenoptera: Apoidea) im Iran. Insgesamt gelang es 8 Arten der Familie Sphecidae und 18 Arten der Familie Crabronidae nachzuweisen. *Belomicrus schulthessii* KOHL, 1924 konnte erstmals für den Iran betätigt werden.

## Introduction

Sphecidae is a cosmopolitan family in three subfamilies: Ammophilinae, Sceliphrinae and Sphecinae (YILDIRIM 2011), and Crabronidae is the largest of the spheciform families in two subfamilies: Crabroninae and Larrinae (YILDIRIM 2011; PULAWSKI 2012). Crabronidae is represented by about 9000 species in the world (CUBUK & GULMEZ 2013). They are powerful predators of insects. Prey consists of an exceptionally wide range of insects and spiders (Araneae): 12 orders of insects are known to be preyed upon (BOHART & MENKE 1976; GOULET & HUBER 1993). The fauna of Iranian digger wasps was poorly studied (e.g. de BEAUMONT 1957, 1970; ESMALI & RASTEGAR 1974; EBRAHIMI 1993a, 1993b, 2000a, 2000b, 2005, 2008; EBRAHIMI et al. 1995; GHAZI-SOLTANI et al. 2006; FALLAHZADEH et al. 2006, 2009; SAKENIN et al. 2010, 2011). The aim of this paper is presenting a list of some species which were obtained from different regions of Iran.

## Materials and Methods

The materials of this paper were collected from some regions of Iran during 2005-2010 by different researchers and students. The specimens are preserved in some insect collections of Islamic Azad University and museums. In this paper, classification and nomenclature follows that of PULAWSKI (2012).

## Results

Totally 26 species (8 species belonging to Sphecidae, and 18 species belonging to Crabronidae) are studied in this paper. The list of species is given below. Families as well as species names within genera are arranged alphabetically.

### **Family Sphecidae (LATREILLE, 1802)**

#### **Genus *Ammophila* W. KIRBY, 1798**

##### ***Ammophila sabulosa* (LINNAEUS, 1758)**

**Material examined:** Hamadan province: Hamadan, 1♂, summer 2005. West Azarbaijan province: Ourmieh, 1♀, 1♂, spring 2008.

##### ***Ammophila sinensis* SICKMANN, 1894**

**Material examined:** Guilan province: Lahijan, 1♂, spring 2007.

**Genus *Palmodes* KOHL, 1890**

***Palmodes strigulosus* (COSTA, 1861)**

Material examined: West Azarbaijan province: Ourmieh, 1♂, summer 2006.

**Genus *Podalonia* FERNALD, 1927**

***Podalonia hirsuta* (SCOPOLI, 1763)**

Material examined: Isfahan province: no locality cited, 1♂, 2♀, April 2009.

**Genus *Prionyx* LINDEN, 1827**

***Prionyx nudatus* (KOHL, 1885)**

Material examined: Kermanshah province: Kermanshah, 2♂♂, 1♀, April 2005.

**Genus *Sceliphron* KLUG, 1801**

***Sceliphron destillatorium* (ILLIGER, 1807)**

Material examined: West Azarbaijan province: Makoo, 1♀, unknown date.

**Genus *Sphex* LINNAEUS, 1758**

***Sphex flavipennis* FABRICIUS, 1793**

Material examined: Ardabil province: Mshkinshahr, 1♀, summer 2007.

***Sphex pruinosus* GERMAR, 1817**

Material examined: West Azarbaijan province: Ourmieh, 1♀, August 2010.

**Family *Craonidae***

**Genus *Astata* LATREILLE, 1796**

***Astata minor* KOHL, 1885**

Material examined: East Azarbaijan province: Tabriz, 3♀, June 2006.

**Genus *Belomicrus* A. COSTA, 1871**

***Belomicrus schulthessii* KOHL, 1924**

Material examined: Golestan province: Bandar-Torkman, 1♀, October 2010. **New record for Iran.**

**Genus *Bembix* FABRICIUS, 1775**

***Bembix bidentata* VANDER LINDEN, 1829**

Material examined: Mazandaran province: Ramsar, 2♀, September 2007.

**Genus *Cerceris* LATREILLE, 1802**

***Cerceris albofasciata* (ROSSIUS, 1790)**

Material examined: Ardabil province: no locality cited, 1♂, summer 2010.

***Cerceris eryngii* MARQUET, 1875**

Material examined: Hamadan province: Hamadan, 1♀, unknown date.

**Genus *Crabro* FABRICIUS, 1775**

***Crabro cribrarius* (LINNAEUS, 1758)**

Material examined: Kermanshah province: Kermanshah, 1♀, unknown date.

**Genus *Gastrosericus* SPINOLA, 1839**

***Gastrosericus electus* NURSE, 1903**

Material examined: Golestan province: Golestan National Park, 2♂♂, September 2010. Mazandaran province: Behshahr, 1♂, 3 October 2010.

***Gastrosericus waltlii* SPINOLA, 1839**

Material examined: Kerman province: Kerman, 2♀♀, 1♂, unknown date.

**Genus *Gorytes* LATREILLE, 1804**

***Gorytes quinquecinctus* (FABRICIUS, 1793)**

Material examined: East Azarbaijan province: Khomarloo, 2♀♀, June 2006.

**Genus *Liris* FABRICIUS, 1804**

***Liris niger* (FABRICIUS, 1775)**

Material examined: Mazandaran province, Behshahr, 1♀, 3 October 2010.

**Genus *Mimesa* SHUCKARD, 1937**

***Mimesa crassipes* (COSTA, 1869)**

Material examined: East Azarbaijan province: Azarshahr, 1♀, August 2007.

**Genus *Oxybelus* LATREILLE, 1796**

***Oxybelus mucronatus* (FABRICIUS, 1793)**

Material examined: Ardabil province: no locality cited, 1♂, summer 2008.

**Genus *Palarus* LATREILLE, 1802**

***Palarus histrio* SPINOLA, 1838**

Material examined: Golestan province, Gonbad, 1♀, August 2010.

**Genus *Philanthus* FABRICIUS, 1790**

***Philanthus triangulum* (FABRICIUS, 1775)**

**M a t e r i a l e x a m i n e d :** Kermanshah province: Kermanshah, 1♀, 1♂, April 2005. Ilam province: Abdanan, 2♀ ♀, 1♂, spring 2007. Khorasan province: Sabzevar, 1♀, summer 2009.

**Genus *Tachysphex* KOHL, 1883**

***Tachysphex brevipennis* MERCET, 1909**

**M a t e r i a l e x a m i n e d :** Khorasan province: Sabzevar, 2♂ ♂, summer 2009.

***Tachysphex consocius* KOHL, 1892**

**M a t e r i a l e x a m i n e d :** East Azarbaijan province: Miyaneh, 1♀, unknown date.

***Tachysphex tarsinus* (LEPELETIER, 1845)**

**M a t e r i a l e x a m i n e d :** East Azarbaijan province: Harris, 1♂, May 2007.

**Genus *Tachytes* PANZER, 1806**

***Tachytes pygmaeus* KOHL, 1888**

**M a t e r i a l e x a m i n e d :** Khuzestan province: no locality cited, 1♂, April 2008.

## **Discussion**

In this research 45 specimens of Sphecidae and Crabronidae were studied and totally 26 species from 20 genera are listed in this paper as the fauna of Iran. This research and also other published data on Iranian digger wasps indicate that the fauna of these insects is diverse in Iran and it is necessary that the faunistic surveys on these taxa are continued in order to completing the fauna of Iran. On the other hand the presence of an impressive list on Iranian digger wasps (same as Turkish fauna, LJUBOMIROV & YILDIRIM 2008) is really absent. Additionally, digger wasps are powerful predators on insects and so studying on their preys can be interesting research subject. The type of prey ranges from spiders to various dictyopterans or orthopteroids to caterpillars (of either Lepidoptera or other Hymenoptera); the vast majority practice mass provisioning, providing all the prey items prior to laying the egg (BOHART & MENKE 1976).

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## References

- BOHART R.M. & A.S. MENKE (1976): Sphecid wasps of the world. A generic revision. – University of California Press, Berkeley, Los Angeles, London. 1 color plate, IX+695 pp.
- CUBUK F.T. & Y. GULMEZ (2013): New records of Crabronidae (Insecta: Hymenoptera) from Turkey. – *Journal of Entomological Research Society* **15** (1): 33-36.
- GOULET H. & J.T. HUBER (1993): Hymenoptera of the world: An identification guide to families. – Centre for Land and Biological Resources Research, vii+668 pp, Ottawa, Ontario.
- de BEAUMONT J. (1957): Sphecidae du nord de l'Iran (Hym.). – *Mitteilungen der Schweizerischen Entomologischen Gesellschaft* **30**: 127-139.
- de BEAUMONT J. (1970): Sphecidae de l'Iran (Hym.). – *Stuttgarter Beiträge zur Naturkunde* **220**: 1-18.
- EBRAHIMI E. (1993a): The sphecid wasps of subfamily Sphecinae in Iran. – *Journal of Entomological Society of Iran* **12 & 13**: 87-104 (In Persian with English abstract).
- EBRAHIMI E. (1993b): Introduction of *Pemphredon lethifera* and its biological study in Iran. – *Proceeding of the 11<sup>th</sup> Plant Protection Congress of Iran, Rasht, 28 August-2 September 1993 Rasht, University of Guilan, Iran, p. 250.*
- EBRAHIMI E. (2000a): The first report on three orthopteran predator wasps in Iran. – *Proceedings of the 14<sup>th</sup> Iranian Plant Protection Congress, Isfahan, 5-8 September 2000 Isfahan, Isfahan University of Technology, Iran, Vol. I, Pests, p. 361.*
- EBRAHIMI E. (2000b): The first record of three predator wasps in Iran. – *Proceedings of the 14<sup>th</sup> Iranian Plant Protection Congress, Isfahan, 5-8 September 2000 Isfahan, Isfahan University of Technology, Iran, Vol. I, Pests, p. 362.*
- EBRAHIMI E. (2005): An identification guide to the Sphecidae of Iran (Insecta, Hymenoptera). – *Journal of Entomological Society of Iran* **24** (2): 109-135.
- EBRAHIMI E. (2008): A contribution to the sphecid wasps of Iran (Hymenoptera: Sphecidae), including first record of six species. – *Journal of Entomological Society of Iran* **28** (1): 93-97.
- EBRAHIMI E., KHARAZI PAKDEL A. & M. ESMAILI (1995): The first record of four aphid predator wasps in Iran. – *Proceedings of 12<sup>th</sup> Iranian Plant Protection Congress, 2-7 September 1995 Karaj, Karaj Junior College of Agriculture, Iran, p. 290.*
- ESMAILI M. & R. RASTEGAR (1974): Identified species of Aculeate Hymenoptera of Iran. – *Journal of Entomological Society of Iran* **2** (1): 41-52.
- FALLAHZADEH M., SHOJAEI M. & H. OSTOVAN (2006): First record of four Sphecid wasps from Iran. – *Applied Entomology and Phytopathology* **73** (2): 125.
- FALLAHZADEH M., OSTOVAN H. & N. SAGHAEI (2009): A contribution to the fauna of Sphecidae and Crabronidae (Hymenoptera) in Fars province. – *Iran Plant Protection Journal* **1** (2): 234-248.

- GHAZI-SOLTANI G., EBRAHIMI E. & S. IRANIPUR (2006): A new record of a crabronid wasp (Hym.: Sphecidae) for Iran from East Azarbaijan province. – VIII<sup>th</sup> European Congress of Entomology, 17-22 September 2006 Izmir, Turkey, Supplementary Abstract Book 2, RVPP-08.
- LJUBOMIROV T. & E. YILDIRIM (2008): Annotated catalogue of the Ampulicidae, Sphecidae, and Crabronidae (Insecta: Hymenoptera) of Turkey. – Pensoft Publishers, 316 pp.
- PULAWSKI W.J. (2012): Catalog of Sphecidae sensu lato. – [http://research.calacademy.org/ent/catalog\\_sphecidae.htm](http://research.calacademy.org/ent/catalog_sphecidae.htm). 11.12.2012
- SAKENIN H., SAMIN N. & N. BAGRIACIK (2010): A contribution to the Aculeate Hymenoptera (Insecta) from Iran. – *Eflatounia* **10**: 15-20.
- SAKENIN H., SAMIN N., SHAKOURI M.J., MOHEBBI H.R., EZZATPANAH S. & S. MOEMEN BEITOLLAHI (2011): A faunistic survey of the insect predators in some regions of Iran. – *Calodema* **142**: 1-10.
- YILDIRIM E. (2011): Contribution to the knowledge of the Sphecidae and Crabronidae (Hymenoptera: Aculeata) fauna of Turkey. *Entomologie faunistique – Faunistic Entomology* **64** (3): 73-82.

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