



Entomofauna

ZEITSCHRIFT FÜR ENTOMOLOGIE

Band 34, Heft 28: 369-376

ISSN 0250-4413

Ansfelden, 2. Januar 2013

A contribution to the knowledge of Odonata (Insecta) from West Azarbaijan province, northwestern Iran

**Jinoos RASTEGAR, Mohammad HAVASKARY, Shahrokh KHODAPARAST & Aras
RAFEII**

Abstract

The fauna of Odonata from West Azarbaijan province is studied in this paper. Totally 25 species from 19 genera and 8 families (including, Aeshnidae, Calopterygidae, Coenagrionidae, Cordulegastridae, Corduliidae, Euphaeidae, Gomphidae and Libellulidae) were collected.

Key words: Odonata, Fauna, West Azarbaijan, Iran.

Zusammenfassung

Vorliegende Arbeit behandelt die Libellenfauna (Odonata) der Provinz West-Aserbaidschan im Nordwesten des Irans. Insgesamt gelang der Nachweis von 25 Arten aus 19 Gattungen und 8 Familien (Aeshnidae, Calopterygidae, Coenagrionidae, Cordulegastridae, Corduliidae, Euphaeidae, Gomphidae und Libellulidae).

Introduction

Odonata are an order of aquatic palaeopterous insects with 5.680 valid species of the world (KALKMAN et al. 2008). Adult odonates are medium to large in size, often conspicuous and/or brightly colored insects and are aerial predators hunting by sight. They generally are found at or near freshwater although some species roam widely and may be found far from their breeding sites. The larvae are predatory, aquatic and occur in all manner of inland waters. To some extent the presence of odonates may be taken as an indicator of ecosystem quality. Local faunal composition may be strongly affected by any change in water flow, turbidity, etc., or in aquatic or waterside vegetation. The greatest numbers of species are found at sites which offer a wide variety of microhabitats (CORBET 1962, 1999; HECKMAN 2006; KIAUTA & TYAGI 2007; SURHONE et al. 2010).

The fauna of Iranian Odonata was studied rather well (SCHMIDT 1954; BLOM 1982; LOHMANN 1990, 1992; HEIDARI & DUMONT 2002; KALKMAN et al. 2004; MAJIDI-SHILSAR et al. 1998; SAKENIN et al. 2008, 2011; EBRAHIMI et al. 2009; GHAHARI et al. 2009). In this paper, the fauna of Odonata from West Azarbaijan province (located in North West of Iran, bordering with Turkey, Iraq and Armenia, and the provinces of East Azarbaijan, Zanzan and Kurdistan) is dealt with. West Azarbaijan province covers an area of 43.660 km². The climate of the province is largely influenced by the rainy winds of the Atlantic Ocean and Mediterranean. According to existing meteorological data, local temperatures vary within the province. The highest temperature reaches 34 °C in July, and the lowest temperature is -16°C in January. West Azerbaijan province encompasses vast and fertile plains, high mountains, rivers with high volume of water, vineyards, orchards, luxuriant forest and rangelands, mountain outskirt with wonderful flora, magnificent wildlife and beautiful shores around the lake with different recreational facilities, which all together form one of the most beautiful and spectacular region in Iran.

Materials and Methods

The specimens for this research were collected from different habitats (especially close to freshwater bodies, mainly along canals, pools, streams, ponds and small seasonal rivers) of West Azarbaijan province (northwestern Iran). The adults of Odonata were collected with long-handed aerial net with a net opening of at least 17 inches. The collected specimens were put in alcohol 75% or pinned and determined according to DUMONT (1991), BROOKS (1997), GARRISON et al. (2006), DIJKSTRA & LEWINGTON (2006) and KALKMAN (2006).

Results

In this paper which deals with the faunistic survey of Odonata from West Azarbaijan province, totally 25 species from 19 genera and 8 families were collected from various localities. The list of collected species with the altitudes of sampled regions is given below.

Order O d o n a t a FABRICIUS 1792

Family A e s h n i d a e RAMBUR 1842

Genus *A e s h n a* FABRICIUS 1775

Aeshna serrata HAGEN 1856

M a t e r i a l e x a m i n e d : West Azarbaijan province: Khoy (1162 m), 1 ♀, August 2008.

Genus *A n a c i a e s c h n a* SELYS 1878

Anaciaeschna isoceles (MÜLLER 1767)

M a t e r i a l e x a m i n e d : West Azarbaijan province: Seroo (1627 m), 2 ♀, May 2008.

Genus *A n a x* LEACH 1815

Anax parthenope (SELYS 1839)

M a t e r i a l e x a m i n e d : West Azarbaijan province: Salmas (1325 m), 1 ♀, October 2007.

Genus *C a l i a e s c h n a* SELYS 1883

Caliaeschna microstigma (SCHNEIDER 1845)

M a t e r i a l e x a m i n e d : West Azarbaijan province: Ourmieh (1366 m), 1 ♀, July 2006.

Family C a l o p t e r y g i d a e SELYS 1850

Genus *C a l o p t e r y x* LEACH 1815

Calopteryx hyalina MARTIN 1909

M a t e r i a l e x a m i n e d : West Azarbaijan province: Bookan (1374 m), 2 ♂♂, 1 ♀, June 2008.

Family C o e n a g r i o n i d a e KIRBY 1890

Genus *E n a l l a g m a* CHARPENTIER 1840

Enallagma cyathigerum CHARPENTIER 1840

M a t e r i a l e x a m i n e d : West Azarbaijan province: Oshnaviyeh (1461 m), 1 ♂, September 2007. Hassanloo (1297 m), 1 ♀, July 2008.

Genus *I s c h n u r a* CHARPENTIER 1840

Ischnura elegans ebneri SCHMIDT 1838

M a t e r i a l e x a m i n e d : West Azarbaijan province: Myandoab (1338 m), 2 ♂♂, 1 ♀, April 2007. Khoy (1162 m), 2 ♀, August 2008.

Genus *Pyrrhosoma* CHARPENTIER 1840

***Pyrrhosoma nymphula* (SULZER 1776)**

Material examined: West Azarbaijan province: Myandoab (1338 m), 1 ♀, April 2007.

Family *Cordulegasteridae* CALVERT 1893

Genus *Cordulegaster* LEACH 1815

***Cordulegaster picta* SÉLYS 1854**

Material examined: West Azarbaijan province: Khoy (1143 m), 1 specimen, May 2008.

Family *Corduliidae* SELYS 1850

Genus *Cordulia* LEACH 1815

***Cordulia aenea* (LINNAEUS 1758)**

Material examined: West Azarbaijan province: Makoo (1286 m), 1 specimen, September 2009.

Genus *Sonjagaster* LOHMANN 1992

***Sonjagaster nobilis* (MORTON 1916)**

Material examined: West Azarbaijan province: Naqadeh (1348 m), 2 ♂♂, 1 ♀, July 2007.

Family *Euphaeidae* SELYS 1853

Genus *Epallage* CHARPENTIER 1840

***Epallage fatime* (CHARPENTIER 1840)**

Material examined: West Azarbaijan province: Ourmieh (1444 m), 1 ♀, August 2007.

Family *Gomphidae* RAMBUR 1842

Genus *Gomphus* LEACH 1815

***Gomphus davidi* SÉLYS 1887**

Material examined: West Azarbaijan province: Khoy (1143 m), 1 specimen, May 2008.

Genus *Onychogomphus* SELYS 1854

***Onychogomphus lefebvrei* (RAMBUR 1842)**

Material examined: West Azarbaijan province: Naqadeh (1339 m), 1 ♂, 2 ♀♀, July 2007. Naqadeh (1348 m), 1 ♂, July 2007.

Family Libellulidae LEACH 1815

Genus Crocothemis BRAUER 1868

***Crocothemis servilia* (DRURY 1773)**

Material examined: West Azarbaijan province: Khoy (1162 m), 1 ♀, August 2008.

Genus Libellula LINNAEUS 1758

***Libellula pontica* SELYS 1887**

Material examined: West Azarbaijan province: Bookan (1388 m), 1 ♂, 2 ♀, June 2008.

Genus Orthetrum NEWMAN 1833

***Orthetrum brunneum* (FONSCOLOMBE 1837)**

Material examined: West Azarbaijan province: Seroo (1629 m), 1 ♂, May 2008.

***Orthetrum chrysostigma* (BURMEISTER 1839)**

Material examined: West Azarbaijan province: Makoo (1647 m), 1 ♂, 2 ♀, September 2008. Myandoab (1344 m), 1 ♀, April 2007.

***Orthetrum sabina* (DRURY 1770)**

Material examined: West Azarbaijan province: Ourmieh (1377 m), 2 ♀, July 2006. Seroo (1622 m), 2 ♂, May 2008.

***Orthetrum taeniolatum* (SCHNEIDER 1845)**

Material examined: West Azarbaijan province: Mahabad (1352 m), 1 ♂, 1 ♀, June 2007.

Genus Sympetrum NEWMAN 1833

***Sympetrum fonscolombii* (SELYS 1840)**

Material examined: West Azarbaijan province: Takab (1819 m), 1 ♂, September 2006.

***Sympetrum pedemontanum* (MÜLLER 1766)**

Material examined: West Azarbaijan province: Seroo (1635 m), 1 ♂, 1 ♀, May 2008.

***Sympetrum sanguineum* (MÜLLER 1764)**

Material examined: West Azarbaijan province: Makoo (1626 m), 1 ♂, September 2008.

Genus Trithemis BRAUER 1868

***Trithemis festiva* (RAMBUR 1842)**

Material examined: West Azarbaijan province: Piranshahr (1457 m), 1 ♂, July 2008.

Acknowledgement

The authors are grateful to M. Schorr of Germany for sending necessary literature. The research was supported by Islamic Azad University (Khoy and Garmsar Branches).

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Author's addresses:

Jinoos RASTEGAR

Department of Entomology, Garmsar Branch

Islamic Azad University, Semnan, Iran

E-mail: jinoos.rastegar@yahoo.com

Mohammad HAVASKARY

Young Research Club, Central Tehran Branch

Islamic Azad University, Tehran, Iran

E-mail: m_havaskary@yahoo.com

Shahrokh KHODAPARAST

Department of Entomology

Garmsar Branch, Islamic Azad University

Semnan, Iran

Aras RAFIEI

Department of Biology, Faculty of Basic Science

Tehran Central Branch, Islamic Azad University

Tehran, Iran

Druck, Eigentümer, Herausgeber, Verleger und für den Inhalt verantwortlich:

Maximilian SCHWARZ, Konsulent f. Wissenschaft der Oberösterreichischen Landesregierung, Eibenweg 6, A-4052 Ansfelden, E-Mail: maximilian.schwarz@liwest.at.

Redaktion: Erich DILLER, ZSM, Münchhausenstraße 21, D-81247 München;
Roland GERSTMEIER, Lehrstuhl f. Tierökologie, H.-C.-v.-Carlowitz-Pl. 2, D-85350 Freising
Fritz GUSENLEITNER, Lungitzerstr. 51, A-4222 St. Georgen/Gusen;
Wolfgang SPEIDEL, MWM, Tengstraße 33, D-80796 München;
Thomas WITT, Tengstraße 33, D-80796 München.

Adresse: Entomofauna, Redaktion und Schriftentausch c/o Museum Witt, Tengstr. 33, 80796 München, Deutschland, E-Mail: thomas@witt-thomas.com; Entomofauna, Redaktion c/o Fritz Gusenleitner, Lungitzerstr. 51, 4222 St. Georgen/Gusen, Austria, E-Mail: f.gusenleitner@landesmuseum.at

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Zeitschrift/Journal: [Entomofauna](#)

Jahr/Year: 2013

Band/Volume: [0034](#)

Autor(en)/Author(s): Rastegar Jinoos, Havaskary Mohammad, Khodaparast Shahrokh, Rafeii Aras

Artikel/Article: [A contribution to the knowledge of Odonata \(Insecta\) from West Azarbaijan province, northwestern Iran 369-376](#)