

Linzer biol. Beitr.	42/2	861-872	25.7.2010
---------------------	------	---------	-----------

A faunistic survey on Heteroptera (Insecta) of Western Iran

H. SAKENIN, N. SAMIN, J. RASTEGARI, M. HAVASKARY, S. IMANI & R.E. LINNAVUORI

A b s t r a c t : The fauna heteropteran families (Insecta: Heteroptera) was studied in Western Iran (including, three provinces West *Azerbaijan*, Kurdistan and Kermanshah provinces). Totally 133 species were collected from the twenty three families including, Berytidae, Coreidae, Cydnidae, Gerridae, Hebridae, Hydrometridae, eptopodidae, Lygaeidae, Mesovelidae, Miridae, Nepidae, Notonectidae, Pentatomidae, Piesmatidae, Plataspidae, Pleidae, Reduviidae, Rhopalidae, Saldidae, Scutelleridae, Stenocephalidae, Tingidae and Veliidae.

K e y w o r d s : Heteroptera, Fauna, Western Iran.

Introduction

Heteroptera with about 37.000 described species worldwide, and possibly another 25.000 species remaining to be described. The world fauna is divided into roughly 75 families. These insects are important group among the insect orders not only for its numbers of species but also for their distribution and food preference. Heteroptera, are generally regarded as a suborder of the Hemiptera (TRIPLEHORN & JOHNSON 2005). They can often be identified by the structure of the forewing or hemelytron which consisting of a hardened or thickened basal portion and a membranous apical portion (KELTON 1980). These insects have sucking mouthparts encased in a labium or rostrum that is used to guide the mouthparts to the food source or prey (LODOS & ÖNDER 1986). Most of the Heteroptera feed on plants or plant material such as seeds, fruits or pollen which some of them known as serious plant pests (DOLLING 1991). On the other hand, predacious bugs, catch other insects and Acarina, reduce the number of agricultural pests and may be used in biological control (SCHUH 1995, MEYER 2005). Considering the importance of Heteroptera, in this research the fauna of these insects was studied in some regions of western Iran.

Materials and Methods

The specimens were collected from three provinces of western Iran including, West Azerbaijan, Kurdistan and Kermanshah provinces by the authors and their colleagues and students through the recent years (2005-2008), under stones by hand, by sweeping of vegetation and water levels of rivers and by light traps methods. Totally 23 regions were sampled which included Bukan, Myandoab, Mahabad, Sardasht, Takab, Piranshahr, Naghadeh, Shahindezh, Oshnavieh (West Azerbaijan province), Baneh, Saghez, Marivan, Ghorveh, Sanandaj, Kamyaran, Bijar (Kurdistan province), Kermanshah,

Gilangharb, Paveh, Javanrood, Sahneh, Ravansar, Songhor (Kermanshah province). The collected materials were put in ethanol 75% for identification or confirmation by the heteropterists. The information concerning specific name, describer and description date, locality and date of collection and number of specimens are provided. Detailed information about synonymies and distribution of quoted species are available in AUKEMA & RIEGER (1995, 1996, 1999, 2001, 2006), HOUSTON & MAYNARD (1995) and HOUSTON & WELLS (2002).

Results

In this research totally 133 species of 23 heteropteran families were collected from West Azerbaijan, Kurdistan and Kermanshah provinces of western Iran.

Family Berytidae

Berytinus minor (HERRICH-SCHAEFFER 1835)

M a t e r i a l : Kurdistan province: Kamyaran, 1 specimen, September 2007.

Family Coreidae

Arenocoris waltlii (HERRICH-SCHAEFFER 1835)

M a t e r i a l : West Azerbaijan province: Bukan, 2 specimens, September 2008, on *Bromus* sp.

Bothrostethus annulipes (HERRICH-SCHAEFFER 1835)

M a t e r i a l : Kermanshah province: Paveh, 1 specimen, March 2006, on *Bromus* sp.

Ceraleptus lividus STEIN 1858

M a t e r i a l : West Azerbaijan province: Myandoab, 3 specimens, July 2005, on *Centaurea* sp.

Coreus marginatus ssp. *marginatus* (LINNAEUS 1758)

M a t e r i a l : Kurdistan province: Bijar, 1 specimen, July 2007.

Coriomeris affinis (HERRICH-SCHAEFFER 1839)

M a t e r i a l : West Azerbaijan province: Myandoab, 2 specimens, July 2005, on *Juniperus excelsa*.

Coriomeris denticulatus (SCOPOLI 1763)

M a t e r i a l : Kermanshah province: Javanrood, 6 specimens, August 2006.

Coriomeris hirticornis (FABRICIUS 1794)

M a t e r i a l : Kurdistan province: Baneh, 4 specimens, August 2007, on *Setaria* sp.

Coriomeris pallidus REUTER 1900

M a t e r i a l : Kermanshah province: Kermanshah, 1 specimen, June 2006.

Gonocerus juniperi HERRICH-SCHAEFFER 1839

M a t e r i a l : West Azerbaijan province: Myandoab, 3 specimens, July 2005, on *Juniperus oxycedrus*.

Haploprocta sulcicornis ssp. *sulcicornis* (FABRICIUS 1794)

M a t e r i a l : Kermanshah province: Paveh, 2 specimens, March 2006.

***Haploprocta umbrina* JAKOVLEV 1883**

M a t e r i a l : Kurdistan province: Kamyaran, 1 specimen, September 2007, on *Junipeus oxycedrus*.

***Spathocera tenuicornis* JAKOVLEV 1883**

M a t e r i a l : Kurdistan province: Bijar, 4 specimens, July 2007, on *Pinus sylvestris* and *Acantholimon* sp.

***Spathocera tuberculata* HORVÁTH 1882**

M a t e r i a l : West Azerbaijan province: Mahabad, 1 specimen, June 2008, on *Pinus* sp.

Family C y d n i d a e

***Byrsinus nigroscutellatus* (MONTANDON 1900)**

M a t e r i a l : Kurdistan province: Sanandaj, 1 specimen, July 2007.

***Canthophorus wagneri* ASANOVA 1964**

M a t e r i a l : West Azerbaijan province: Takab, 2 specimens, August 2005.

***Crocistethus waltianus* (FIEBER 1837)**

M a t e r i a l : West Azerbaijan province: Piranshahr, 3 specimens, October 2005.

***Sehirus dissimilis* HORVÁTH 1919**

M a t e r i a l : West Azerbaijan province: Oshnavieh, 2 specimens, July 2005.

***Sehirus ovatus* (HERRICH-SCHAEFFER 1840)**

M a t e r i a l : West Azerbaijan province: Maco, 3 specimens, September 2005.

***Stibaropus henkei* (JAKOVLEV 1874)**

M a t e r i a l : West Azerbaijan province: Myandoab, 4 specimens, April 2008.

Family G e r r i d a e

***Aquarius najas* (DE GEER 1773)**

M a t e r i a l : West Azerbaijan province: Myandoab, Naghadeh, Oshnavieh, 10 specimens, October 2007.

***Aquarius paludum* (FABRICIUS 1794)**

M a t e r i a l : Kurdistan province: Kamyaran, Ghorveh, 7 specimens, September 2007.

***Gerris argentatus* (SCHUMMEL 1832)**

M a t e r i a l : Kermanshah province: Kermanshah, 5 specimens, June 2006.

***Gerris asper* (FIEBER 1860)**

M a t e r i a l : West Azerbaijan province: Myandoab, 5 specimens, July 2005.

***Gerris costae* (HERRICH-SCHAEFFER 1850)**

M a t e r i a l : Kermanshah province: Ravansar, Paveh, 8 specimens, March 2006.

***Gerris gibbifer* (Schummel 1832)**

M a t e r i a l : Kermanshah province: Javanrood, 2 specimens, August 2006.

***Gerris lacustris* (LINNAEUS 1758)**

M a t e r i a l : Kurdistan province: Baneh, 3 specimens, August 2007.

***Gerris thoracicus* (SCHUMMEL 1832)**

M a t e r i a l : West Azerbaijan province: Sardasht, 6 specimens, August 2008.

Family H e b r i d a e

***Hebrus pusillus* (FALLEN 1807)**

M a t e r i a l : Kurdistan province: Ghorveh, 2 specimens, September 2007.

Family H y d r o m e t r i d a e

***Hydrometra stagnorum* (LINNAEUS 1758)**

M a t e r i a l : Kurdistan province: Bijar, 4 specimens, July 2007.

Family L e p t o p o d i d a e

***Leptopus marmoratus* (GOEZE 1778)**

M a t e r i a l : Kurdistan province: Kamyaran, 1 specimen, September 2007.

Family L y g a e i d a e

***Artheneis foveolata* SPINOLA 1837**

M a t e r i a l : Kurdistan province: Kamyaran, 3 specimens, September 2007.

***Beosus maritimus* (SCOPOLI 1763)**

M a t e r i a l : West Azerbaijan province: Bukan, 1 specimen, September 2008.

***Camptocera glaberrima* (WALKER 1872)**

M a t e r i a l : Kermanshah province: Songhor, 4 specimens, July 2006.

***Cymophyes ochroleuca* FABRICIUS 1870**

M a t e r i a l : Kurdistan province: Saghez, 1 specimen, June 2007.

***Cymus melanocephalus* FABRICIUS 1861**

M a t e r i a l : West Azerbaijan province: Mahabad, 2 specimens, June 2008.

***Emblethis denticollis* HORVATH 1878**

M a t e r i a l : West Azerbaijan province: Myandoab, 1 specimen, April 2008.

***Emblethis verbasci* (FABRICIUS 1803)**

M a t e r i a l : Kermanshah province: Ravansar, 3 specimens, April 2005.

***Geocoris ater* (FABRICIUS 1787)**

M a t e r i a l : Kurdistan province: Bijar, 6 specimens, July 2007.

***Heterogaster affinis* HERRICH-SCHAEFFER 1835**

M a t e r i a l : West Azerbaijan province: Piranshahr, 1 specimen, October 2005.

***Lygaeus equestris* ssp. *equestris* (LINNAEUS 1758)**

M a t e r i a l : Kermanshah province: Javanrood, 2 specimens, August 2006.

***Lygaeus pandurus* ssp. *pandurus* (SCOPOLI 1763)**

M a t e r i a l : West Azerbaijan province: Myandoab, 3 specimens, April 2008.

***Metopoplax fuscinervis* STÅL 1872**

M a t e r i a l : West Azerbaijan province: Naghadeh, 1 specimen, October 2007.

***Microplax limbata* FABRICIUS 1864**

M a t e r i a l : Kermanshah province: Ravansar, 2 specimens, April 2005.

***Ortholomus punctipennis* (HERRICH-SCHAEFFER 1838)**

M a t e r i a l : West Azerbaijan province: Sardasht, 3 specimens, August 2008.

***Oxycareus longiceps* WAGNER 1954**

M a t e r i a l : Kurdistan province: Kamyaran, 1 specimen, September 2007.

***Piocoris erythrocephalus* (LE PELETIER & SERVILE 1825)**

M a t e r i a l : West Azerbaijan province: Maco, 1 specimen, September 2005.

***Rhyparochromus concors* (HORVATH 1878)**

M a t e r i a l : Kermanshah province: Kermanshah, 1 specimen, June 2006.

***Rhyparochromus lynceus* (FABRICIUS 1775)**

M a t e r i a l : Kurdistan province: Bijar, 2 specimens, July 2007.

***Rhyparochromus vulgaris* (SCHILLING 1829)**

M a t e r i a l : West Azerbaijan province: Shahindezh, 4 specimens, June 2008.

***Scolopostethus affinis* (SCHILLING 1829)**

M a t e r i a l : West Azerbaijan province: Bukan, 3 specimens, September 2008.

***Scolopostethus grandis* HORVATH 1881**

M a t e r i a l : Kurdistan province: Kamyaran, 1 specimen, September 2007.

***Scopiastes affinis* (SCHILLING 1829)**

M a t e r i a l : West Azerbaijan province: Sardasht, 3 specimens, August 2008.

***Spilostethus saxatilis* (SCOPOLI 1763)**

M a t e r i a l : Kermanshah province: Songhor, 1 specimen, July 2006.

***Trapezonotus ullrichi* (FABRICIUS 1836)**

M a t e r i a l : West Azerbaijan province: Mahabad, 2 specimens, June 2008.

***Tropinysius senecionis* (SCHILLING 1829)**

M a t e r i a l : West Azerbaijan province: Oshnavieh, 4 specimens, July 2005.

Family Mesovelidae

***Mesovelia vittigera* HORVATH 1895**

M a t e r i a l : Kurdistan province: Baneh, 3 specimens, August 2007.

Family Miridae

***Atomoscelis onusta* (FIEBER 1861)**

M a t e r i a l : Kermanshah province: Songhor, 1 specimen, July 2006.

***Brachycoleus decolor* REUTER 1887**

M a t e r i a l : West Azerbaijan province: Mahabad, 3 specimens, June 2008.

***Calocoris affinis* (HERRICH-SCHAEFFER 1835)**

M a t e r i a l : Kurdistan province: Ghorveh, 2 specimens, September 2007.

***Capsodes infuscatus* (BRULL 1832)**

M a t e r i a l : West Azerbaijan province: Piranshahr, Sardasht, 5 specimens, August 2008.

***Deraeocoris ruber* (LINNAEUS 1758)**

M a t e r i a l : West Azerbaijan province: Oshnavieh, 1 specimen, July 2005.

***Deraeocoris rutilus* (HERRICH-SCHAEFFER 1838)**

M a t e r i a l : Kurdistan province: Kamyaran, 2 specimens, September 2007.

***Deraeocoris schach* (FABRICIUS 1781)**

M a t e r i a l : Kermanshah province: Javanrood, 2 specimens, August 2006.

***Halticus macrocephalus* FIEBER 1858**

M a t e r i a l : West Azerbaijan province: Piranshahr, 1 specimen, October 2005.

***Macrolophus nubilus* (HERRICH-SCHAEFFER 1835)**

M a t e r i a l : West Azerbaijan province: Oshnavieh, 3 specimens, July 2005.

***Orthotylus eleagni* JAKOVLEV 1880**

M a t e r i a l : Kurdistan province: Baneh, 1 specimen, August 2007.

***Orthops kalmii* (LINNAEUS 1758)**

M a t e r i a l : West Azerbaijan province: Sardasht, 2 specimens, August 2008.

***Phytocoris phrygicus* WAGNER 1955**

M a t e r i a l : West Azerbaijan province: Mahabad, 1 specimen, June 2008.

***Pilophorus clavatus* (LINNAEUS 1767)**

M a t e r i a l : Kermanshah province: Gilanharb, 4 specimens, July 2006.

***Salicarus roseri* (HERRICH-SCHAEFFER 1839)**

M a t e r i a l : West Azerbaijan province: Myandoab, 1 specimen, July 2005.

***Stenodema laevigatum* (LINNAEUS 1758)**

M a t e r i a l : Kermanshah province: Ravansar, 2 specimens, April 2005.

***Sthenarus rotermundi* (SCHOLTZ 1847)**

M a t e r i a l : Kurdistan province: Saghez, 1 specimen, June 2007.

***Tuponia hippophaes* (FIEBER 1861)**

M a t e r i a l : West Azerbaijan province: Oshnavieh, 3 specimens, July 2005.

Family N e p i d a e

***Nepa cinerea* LINNAEUS 1758**

M a t e r i a l : West Azerbaijan province: Myandoab, 3 specimens, July 2005.

Family N o t o n e c t i d a e

***Notonecta viridis* (DEL COURT 1909)**

M a t e r i a l : Kurdistan province: Ghorveh, 1 specimen, September 2007.

Family P e n t a t o m i d a e

***Aelia albobittata* Fabricius 1868**

M a t e r i a l : West Azerbaijan province: Myandoab, Takab, Bukan, 3 specimens, September 2006.

***Bagrada amoenula* (WALKER 1870)**

M a t e r i a l : Kurdistan province: Kamyaran, 2 specimens, September 2007.

***Codophila pusio* (KULTUR 1846)**

M a t e r i a l : West Azerbaijan province: Shahindezh, 1 specimen, June 2008.

***Dyroderes umbriculatus* (FABRICIUS 1775)**

M a t e r i a l : Kermanshah province: Sahneh, 1 specimen, June 2006.

***Eysarcoris fabricii* KIRKALDY 1904**

M a t e r i a l : West Azerbaijan province: Shahindezh, 1 specimen, June 2008.

***Picromerus bidens* (LINNAEUS 1758)**

M a t e r i a l : Kurdistan province: Sanandaj, 5 specimens, July 2007.

***Sciocoris macrocephalus* FABRICIUS 1852**

M a t e r i a l : Kermanshah province: Sahneh, 3 specimens, June 2006.

***Tarisa virescens* HERRICH-SCHAEFFER 1851**

M a t e r i a l : Kermanshah province: Gilangharb, 1 specimen, July 2006.

Family P i e s m a t i d a e

***Piesma capitatum* (WOLFF 1804)**

M a t e r i a l : Kurdistan province: Saghez, 1 specimen, June 2007.

***Piesma kolenatti* (FIEBER 1861)**

M a t e r i a l : Kermanshah province: Sahneh, 3 specimens, June 2006.

***Piesma maculatum* (LAPORTE DE CASTELNAU 1833)**

M a t e r i a l : West Azerbaijan province: Myandoab, 2 specimens, April 2008.

***Piesma quadratum* (FIEBER 1844)**

M a t e r i a l : Kurdistan province: Sanandaj, 1 specimen, July 2007.

***Piesma salsolae* (BECKER 1867)**

M a t e r i a l : Kermanshah province: Songhor, 1 specimen, July 2006.

***Piesma silenes* (HORVATH 1888)**

M a t e r i a l : Kurdistan province: Saghez, 4 specimens, June 2007.

Family P l a t a s p i d a e

***Coptosoma scutellatum* (GEOFFROY 1785)**

M a t e r i a l : West Azerbaijan province: Myandoab, 1 specimen, July 2005.

Family P l e i d a e

***Plea leachi* MACGREGOR 1899**

M a t e r i a l : West Azerbaijan province: Shahindezh, 2 specimens, June 2008.

Family R e d u v i d a e

***Androclus pictus* (HERRICH-SCHAEFFER 1848)**

M a t e r i a l : West Azerbaijan province: Naghadeh, 2 specimens, October 2007.

***Coranus angulatus* STÅL 1874**

M a t e r i a l : West Azerbaijan province: Naghadeh, 1 specimen, October 2007.

***Reduvius fedtschenkianus* (OSHANIN 1871)**

M a t e r i a l : Kurdistan province: Kamyaran, 2 specimens, September 2007.

***Reduvius pallipes* (KLUG 1839)**

M a t e r i a l : Kermanshah province: Sahneh, 1 specimen, June 2006.

***Reduvius testaceus* (HERRICH-SCHÄFFER 1845)**

M a t e r i a l : Kermanshah province: Songhor, 3 specimens, July 2006.

***Rhynocoris annulatus* (LINNAEUS 1758)**

M a t e r i a l : West Azarbayjan Province: Maco, 2 specimens, September 2005.

***Rhynocoris iracundus* (PODA 1761)**

M a t e r i a l : Kurdistan province: Sanandaj, 1 specimen, July 2007.

***Rhynocoris punctiventris* HERRICH-SCHAEFFER 1846**

M a t e r i a l : Kurdistan province: Marivan, 1 specimen, June 2007.

***Rhynocoris monticola* (OSHANIN 1890)**

M a t e r i a l : West Azerbaijan province: Takab, 1 specimen, August 2005.

***Rhynocoris rubrogularis* (HORVATH 1880)**

M a t e r i a l : West Azerbaijan province: Oshnavieh, 2 specimens, July 2005.

***Vachiria deserta* (BECKER 1867)**

M a t e r i a l : West Azerbaijan province: Myandoab, 3 specimens, July 2005.

Family R h o p a l i d a e

***Dicranocephalus agilis* (SCOPOLI 1763)**

M a t e r i a l : Kurdistan province: Kamyaran, 4 specimens, September 2007.

***Dicranocephalus albipes* (FABRICIUS 1781)**

M a t e r i a l : Kermanshah province: Kermanshah, 2 specimens, June 2006.

***Dicranocephalus setulosus* (FERRARI 1874)**

M a t e r i a l : West Azerbaijan province: Takab, 2 specimens, September 2006.

***Maccevethus corsicus corsicus* SIGNORET 1862**

M a t e r i a l : Kurdistan province: Ghorveh, 4 specimens, September 2007.

***Maccevethus errans caucasicus* (KOLENATI 1845)**

M a t e r i a l : West Azerbaijan province: Mahabad, 3 specimens, June 2008.

***Maccevethus lutheri* WAGNER 1953**

M a t e r i a l : West Azerbaijan province: Piranshahr, 1 specimen, October 2005.

***Rhopalus conspersus* (FIEBER 1837)**

M a t e r i a l : Kermanshah province: Songhor, 3 specimens, July 2006.

***Rhopalus maculatus* (FIEBER 1837)**

M a t e r i a l : West Azerbaijan province: Naghadeh, 4 specimens, October 2007.

***Rhopalus rufus* SCHILLING 1829**

M a t e r i a l : Kurdistan province: Sanandaj, 1 specimen, July 2007.

***Rhopalus subrufus* (GMELIN 1790)**

M a t e r i a l : West Azerbaijan province: Sardasht, 2 specimens, August 2008.

***Stictopleurus crassicornis* (LINNAEUS 1758)**

M a t e r i a l : West Azerbaijan province: Oshnavieh, 4 specimens, July 2005.

***Stictopleurus pictus* (FIBER 1861)**

M a t e r i a l : Kermanshah province: Sahneh, 1 specimen, June 2006.

***Stictopleurus punctatonervosus* (GOEZE 1778)**

M a t e r i a l : Kurdistan province: Baneh, 1 specimen, August 2007.

***Stictopleurus subtomentosus* (REY 1888)**

M a t e r i a l : Kurdistan province: Bijar, 2 specimens, July 2007.

Family **S a l d i d a e**

***Saldula fucicola* (SAHLBERG 1870)**

M a t e r i a l : West Azerbaijan province: Myandoab, Oshnavieh, 6 specimens, April 2008.

***Salda morio* ZETTERSTEDT 1838**

M a t e r i a l : Kurdistan province: Marivan, 1 specimen, June 2007.

***Saldula pallipes* (FABRICIUS 1794)**

M a t e r i a l : West Azerbaijan province: Naghadeh, 2 specimens, October 2007.

***Saldula saltatoria* (LINNAEUS 1758)**

M a t e r i a l : Kurdistan province: Sanandaj, 1 specimen, July 2007.

Family **S c u t e l l e r i d a e**

***Odontotarsus freyi* PUTON 1882**

M a t e r i a l : Kermanshah province: Songhor, 1 specimen, July 2006.

***Odontotarsus rufescens* FABRICIUS 1861**

M a t e r i a l : Kurdistan province: Kamyaran, 1 specimen, September 2007.

***Psacasta marmottani* PUTON 1887**

M a t e r i a l : West Azerbaijan province: Takab, 2 specimens, August 2005.

Family **S t e n o c e p h a l i d a e**

***Dicranocephalus albipes* (FABRICIUS 1781)**

M a t e r i a l : West Azerbaijan province: Naghadeh, 1 specimen, October 2007.

Family **T i n g i d a e**

***Catoplatus nigriceps* HORVATH 1905**

M a t e r i a l : Kurdistan province: Ghorveh, 1 specimen, September 2007.

***Corythucha arcuata* (SAY 1832)**

M a t e r i a l : Kermanshah province: Songhor, 2 specimens, July 2006.

***Dictyonota strichnocera* FABRICIUS 1844**

M a t e r i a l : West Azerbaijan province: Takab, 1 specimen, August 2005.

***Monosteira lobulifera* REUTER 1888**

M a t e r i a l : Kurdistan province: Sanandaj, 2 specimens, July 2007.

***Physatocheila confinis* HORVATH 1905**

M a t e r i a l : West Azerbaijan province: Naghadeh, 1 specimen, October 2007.

***Tingis (Neolasiotropis) pilosa* HUMMEL 1825**

M a t e r i a l : West Azerbaijan province: Myandoab, 3 specimens, July 2005.

Family V e l i i d a e

Microvelia (Microvelia) reticulata (BURMEISTER 1835)

M a t e r i a l : Kurdistan province: Sanandaj, 1 specimen, July 2007.

Velia affinis filippii TAMANINI 1947

M a t e r i a l : Kermanshah province: Paveh, 4 specimens, March 2006.

Velia caprai (KOLENATI 1857)

M a t e r i a l : Kurdistan province: Marivan, 1 specimen, June 2007.

Discussion

Diverse fauna of Heteroptera was collected from sampled regions of western Iran in this research. Totally 323 specimens were collected, and the richest families are Lygaeidae, Miridae, Rhopalidae, Coreidae and Reduviidae with 25, 17, 14, 13 and 11 species, respectively. Among the collected species, several of them are predators and have important role in biological control of agricultural pests. In this research all regions of western Iran were not sampled, and therefore it is expected that several other heteropteran species are remainder to be determined. Surely, continuing these faunal surveys is necessary for completing the fauna of Heteroptera in different regions of Iran.

Acknowledgments

We are grateful to P. Putshkov of Ukraine, D. Redei of Hungary, P. Moulet of France and D. Rider of USA for valuable helps in progress of the project. The research was supported by Islamic Azad University (Qaemshahr and Garmsar, and Tehran Science & Research Branches).

Zusammenfassung

Vorliegende Arbeit behandelt die Wanzenfauna des westlichen Irans (einschließlich West-Aserbaidschan, Kurdistan und der Provinz Kermānshāh). Insgesamt konnten 133 Arten der 23 Familien Berytidae, Coreidae, Cydnidae, Gerridae, Hebridae, Hydrometridae, Leptopodidae, Lygaeidae, Mesovelidae, Miridae, Nepidae, Notonectidae, Pentatomidae, Piesmatidae, Plataspidae, Pleidae, Reduviidae, Rhopalidae, Saldidae, Scutelleridae, Stenocephalidae, Tingidae und Veliidae nachgewiesen werden.

References

- AUKEMA B. & C. RIEGER (1995): Catalogue of the Heteroptera of the Palaearctic Region. Volume 1. Enicocephalomorpha, Dipsocoromorpha, Gerromorpha and Leptopodomorpha. — The Netherlands Entomological Society, Ponsen & Looijen, Amsterdam, xxvi + 222 pp.
- AUKEMA B. & C. RIEGER (1996): Catalogue of the Heteroptera of the Palaearctic Region. Volume 2. Cimicomorpha I. — The Netherlands Entomological Society, Ponsen & Looijen, Amsterdam, xiv + 361 pp.

- AUKEMA B. & C. RIEGER (1999): Catalogue of the Heteroptera of the Palaearctic Region. Volume 3. Cimicomorpha II. — The Netherlands Entomological Society, Ponsen & Looijen, Amsterdam, 577 pp.
- AUKEMA B. & C. RIEGER (2001): Catalogue of the Heteroptera of the Palaearctic Region. Volume 4. Pentatomomorpha I. — The Netherlands Entomological Society, Ponsen & Looijen, Amsterdam, 346 pp.
- AUKEMA B. & C. RIEGER (2006): Catalogue of the Heteroptera of the Palaearctic Region. Volume 5. Pentatomomorpha II. — The Netherlands Entomological Society, Ponsen & Looijen, Amsterdam, 550 pp.
- DOLLING W.R. (1991): The Hemiptera, keys to British Heteroptera. — Natural History Museum Publications, Oxford University Press, 274 pp.
- HOUSTON W.W.K. & G.V. MAYNARD (1995): Zoological Catalogue of Australia. Vol. 27.3 — A. CSIRO, Melbourne, Australia. 506 pp.
- HOUSTON W.W.K. & A. WELLS (2002): Zoological Catalogue of Australia. Vol. 27. — B. CSIRO, Melbourne, Australia. 737 pp.
- KELTON L.A. (1980): The Plant Bugs of the Prairie Provinces of Canada Heteroptera: Miridae. — Biosystematics Research Institute Ottawa, Ontario Research Branch. Agriculture Canada, 416 pp.
- LODOS N. & F. ÖNDER (1986): Heteroptera Türkiye ve Palearktik Bölge familyarlar hakkında Genel Bilgi. — Ege Üniversitesi Ziraat Fakültesi, 111 pp.
- MEYER J.R. (2005): Hemiptera Suborder Heteroptera. Department of Entomology NC State University. — Last Updated March 8, 2005. Available in: <http://www.cals.ncsu.edu/course/ent425/compendium/hetero~1.html#class>.
- SCHUH R.T. (1995): Plant Bugs of the World (Insecta: Heteroptera: Miridae). Systematic, Catalog, Distributions, Host List, and Bibliography. — New York Entomological Society, 1329 pp.
- TRIPLEHORN C.A. & N.F. JOHNSON (2005): Borror and DeLong's introduction to the study of insects (7th Edition). — Peter Marshall Publication, 864 pp.

Author's addresses:

Hamid SAKENIN
College of Agriculture, Islamic Azad University
Qaemshahr Branch, Mazandaran, Iran
E-mail: hchelave@yahoo.com

Najmeh SAMIN
Department of Entomology, Islamic Azad University
Science & Research Branch, Tehran, Iran
E-mail: n_samin63@yahoo.com

Jinoos RASTEGAR
Department of Entomology, Islamic Azad University
Garmsar Branch, Semnan, Iran
E-mail: jinoosrastegar@yahoo.com

Mohammad HAVASKARY
Young Researchers Club, Islamic Azad University
Central Tehran Branch, Iran
E-mail: m_havaskary@yahoo.com

Sohrab IMANI
Department of Entomology, Islamic Azad University
Science & Research Branch, Tehran, Iran
E-mail: imanisohrab@yahoo.com

Rauno E. LINNAVUORI
Saukkokuja 10, FIN-21220 Raisio, Finland
E-mail: rauno.linnavuori@kolumbus.fi