

Linzer biol. Beitr.	47/1	505-511	31.7.2015
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New data on the predator Heteroptera from Mazandaran and Golestan provinces, northern Iran

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A b s t r a c t : Samplings in different regions of Golestan and Mazandaran provinces (northern Iran), allowed the caught of 19 species of Heteroptera from the families Anthocoridae, Geocoridae, Miridae, Nabidae, and Reduviidae which represent new data for these regions.

K e y w o r d s : Heteroptera, fauna, predator, Golestan, Mazandaran, Iran.

Introduction

Heteroptera is one of the most important orders of insect which includes agricultural pests, predators and blood-sucking. With more than 40,000 described species, Heteroptera (Hemiptera) are part of the most successful radiation of nonholometabolous insects (WEIRAUCH & SCHUH 2011). The predator species have efficient role in biological control of pests. The fauna of Iranian Heteroptera was studied well and all the data were catalogued by the authors (GHAHARI et al. 2009a, b, 2010a, b, 2012, 2013a, b; GHAHARI & MOULET 2012, 2013; GHAHARI & HEISS 2012; GHAHARI & CHEROT 2014; GHAHARI et al. 2014). The aim of this work is a faunistic survey on predator bugs in Golestan (36.8393°N 54.4444°E) and Mazandaran (36.5656°N 53.0588°E) provinces. These two provinces which are located in the south of Caspian Sea contain diverse flora and fauna. Therefore conducting of faunistic studies on different insect taxa such as Heteroptera in these regions will result to new findings.

Materials and Methods

The materials were collected by sweeping net and aspirator and were identified by the authors. The system, nomenclature, and distribution data follow HENRY (1988), KERZHNER (1996), PUTSHKOV & PUTSHKOV (1996), PERICART (1996).

Results

Totally 19 species of Heteroptera were collected from different regions of Golestan and Mazandaran provinces which are new data for these provinces. The list of species is given below together with distribution and biology data.

Family Anthocoridae FIEBER, 1836**Subfamily Anthocorinae FIEBER, 1836****Tribe Anthocorini FIEBER, 1836****Genus *Anthocoris* FALLÉN, 1814*****Anthocoris flavipes* REUTER, 1884**

Material examined: Golestan province, Gorgan, 1♀, 2♂♂, 15.ix.2012.

General distribution: Armenia, China (Western Plateau), Kazakhstan (Asian part), Kirgizia, Tadjikistan, Indian Tibet (PERICART 1996).

***Anthocoris nemoralis* (FABRICIUS, 1794)**

Material examined: Mazandaran province, Sari, 2♀♀, 4♂♂, 8.vii.2012.

General distribution: Widespread in Europe (from Great Britain to Russia), North Africa (Algeria, Egypt, Libya, Morocco, Tunisia), and Central Asia. Introduced to North America (PERICART 1996; HENRY 1988).

Biology: *A. nemoralis* attacks and feeds upon psyllids, Aphids (both living on herbs or deciduous trees), on eggs and caterpillars of Tineidae and Tortricidae (Lepidoptera); it has been mentioned also against Acari (PÉRICART 1972).

Tribe Oriini CARAYON, 1958**Genus *Orius* WOLFF, 1811****Subgenus *Dimorphella* REUTER, 1884*****Orius (Dimorphella) albidipennis* (REUTER, 1884)**

Material examined: Golestan province, Gorgan, 3♀♀, 5♂♂, 22.x.2012. Mazandaran province, Savadkooh, 5♀♀, 7♂♂, 5.iv.2013.

General distribution: Spain, Africa (southwards to Nigeria), Near East, Arabian Peninsula, Iraq, Iran, Central Asia, and Pakistan (PERICART 1996).

Biology: It is known to feed upon Aphids, Thysanoptera and some Lepidoptera pests of cotton (PÉRICART 1972).

Subgenus *Heterorius* WAGNER, 1952***Orius (Heterorius) horvathi* (REUTER, 1884)**

Material examined: Golestan province, Gorgan, 1♀, 4♂♂, 22.x.2012.

General distribution: Widespread in Europe (from France to Russia), Morocco, and Palaearctic Asia (from Turkey to China) (PERICART 1996).

Biology: *Aphis pomi* DE GEER (Aphididae) is the only prey mentioned for *O. horvathi* but this is not certain (PÉRICART 1972).

***Orius (Heterorius) minutus* (LINNAEUS, 1758)**

Material examined: Mazandaran province, Qaemshahr, 3♀♀, 3♂♂, 6.iv.2013.

General distribution: Widespread in Europe and Palaearctic Asia, introduced to North America (PERICART 1996; HENRY 1988).

Biology: This species preys Aphids, Psyllids, Jassidae, eggs of bugs and of butterflies, it is not improbable that it partially be phytophagous (PÉRICART 1972).

Subgenus *Orius* WOLFF, 1811

***Orius (Orius) niger* (WOLFF, 1811)**

Material examined: Golestan province, Gorgan, 2♂♂, 15.ix.2012.

General distribution: Widespread in Europe (from Great Britain to Russia), North Africa (Algeria, Egypt, Libya, Morocco, Tunisia), and Palaearctic Asia (from Turkey to India and China) (PERICART 1996).

Biology: *Orius niger* feeds on Aphididae, Thysanoptera, Acari, eggs of bugs and of butterflies (PÉRICART 1972).

Family Geocoridae BAERENSPRUNG, 1860

Subfamily Geocorinae BAERENSPRUNG, 1860

Genus *Geocoris* FALLÉN, 1814

Subgenus *Geocoris* FALLÉN, 1814

***Geocoris (Geocoris) megacephalus* (ROSSI, 1790)**

Material examined: Mazandaran province, Joibar, Qaemshahr, 5♀♀, 2♂♂, 6.x.2012.

General distribution: Holomediterranean, extending into the Middle East and Middle Asia.

Biology: An active predator of various larvae of Heteroptera (particularly of *Ischnodemus*) (PÉRICART 1998).

Subgenus *Piocoris* STÅL, 1872

***Geocoris (Piocoris) luridus* (FIEBER, 1844)**

Material examined: Golestan province, Kordkoy, 3♀♀, 2♂♂, 15.ix.2012.

General distribution: Eremian, extending from North Africa to Middle East, Middle Asia, Ethiopia, and Sudan.

Biology: *G. luridus* feeds upon Aphids and little Heteroptera (both eggs and larvae) living on several *Tamarix* (Tamaricaceae) (PÉRICART 1998).

Family M i r i d a e HAHN, 1833

Subfamily D e r a e o c o r i n a e DOUGLAS & SCOTT, 1865

Tribe Deraeocorini DOUGLAS & SCOTT, 1865

Genus *Deraeocoris* KIRSCHBAUM, 1856

***Deraeocoris (Camptobrochis) punctulatus* (FALLÉN, 1807)**

M a t e r i a l e x a m i n e d : Golestan province, Salikandeh, 1♀, 1♂, 14.vii.2012.

G e n e r a l d i s t r i b u t i o n : Holarctic species (GHAHARI & CHEROT 2014).

***Deraeocoris (Camptobrochis) serenus* (DOUGLAS & SCOTT, 1868)**

M a t e r i a l e x a m i n e d : Mazandaran province, Chalus, 2♀ ♀, 10.ix.2011.

G e n e r a l d i s t r i b u t i o n : West Palaearctic species (GHAHARI & CHEROT 2014).

***Deraeocoris (Knightocapsus) lutescens* (SCHILLING, 1837)**

M a t e r i a l e x a m i n e d : Golestan province, Golestan National Park, 2♀ ♀, 1♂, 8.vii.2013.

G e n e r a l d i s t r i b u t i o n : Widely distributed species, known from Europe, North-Africa and Middle- East (GHAHARI & CHEROT 2014).

Family N a b i d a e A. COSTA, 1853

Subfamily N a b i n a e A. COSTA, 1853

Tribe Nabini A. COSTA, 1853

Genus *Nabis* LATREILLE, 1802

Subgenus *Nabis* LATREILLE, 1802

***Nabis (Nabis) palifer* SEIDENSTÜCKER, 1954**

M a t e r i a l e x a m i n e d : Mazandaran province, Ramsar, 5♀ ♀, 2♂ ♂, 14.ix.2012.

G e n e r a l d i s t r i b u t i o n : Irano-Turanian, extending from the Balkan Peninsula to south-west China, north India and Nepal (KERZHNER 1996).

Subgenus *Tropiconabis* KERZHNER, 1968

***Nabis (Tropiconabis) capsiformis* GERMAR, 1838**

M a t e r i a l e x a m i n e d : Golestan province, National Park, 2♀ ♀, 1♂, 10.vii.2012.

G e n e r a l d i s t r i b u t i o n : Cosmotropical (KERZHNER 1996; KERZHNER & HENRY 2008).

Family Reduviidae LATREILLE, 1807

Subfamily Harpactorinae AMYOT & SERVILLE, 1843

Genus *Coranus* CURTIS, 1833

***Coranus (Coranus) aegyptius* (FABRICIUS, 1775)**

Material examined: Mazandaran province, Joibar, Sari, 3 ♀♀, 2.ix.2012.

General distribution: Eremian: from Madeira and The Canary Archipelago, North Africa, Near East, Arabic Peninsula, Central Asia; known in Tropical Africa (Senegal, The Sudan, Tchad) (KMENT & JINDRA 2005; PUTSHKOV & MOULET 2010).

Biology: In laboratory conditions the species consumes spiders but this is maybe not a rule (PUTSHKOV & MOULET 2010).

Genus *Rhynocoris* HAHN, 1833

***Rhynocoris ibericus* KOLENATI, 1857**

Material examined: Golestan province, Gorgan, 1 ♀, 2 ♂♂, 15.ix.2012.

General distribution: Ponto-Mediterranean and Central Asia from Greece to Turkmenistan.

Biology: Adults feed upon caterpillars and butterflies living on Apiaceae and other plants; in laboratory conditions they eat bees, wasps and Pentatomids (PUTSHKOV & MOULET 2010).

***Rhynocoris persicus* (JAKOVLEV, 1877)**

Material examined: Mazandaran province, Ramsar, 2 ♀♀, 1 ♂, 14.ix.2012.

General distribution: Ponto-Turanian (Caucasus, Central Asia, Near East) (PUTSHKOV & PUTSHKOV 1996).

Subfamily Reduviinae AMYOT & SERVILLE, 1843

Genus *Reduvius* FABRICIUS, 1775

***Reduvius jakovleffi* REUTER, 1892**

Material examined: Mazandaran province, Behshahr, Neka, 2 ♀♀, 2 ♂♂, 27.viii.2012.

General distribution: Eremian: Cyprus, Egypt, Near East, Central Asia, Arabic Peninsula; quoted in Afghanistan by PUTSHKOV & PUTSHKOV (1996).

***Reduvius pallipes* KLUG, 1830**

Material examined: Mazandaran province, Kiakola, 2 ♀♀, 3 ♂♂, 23.x.2012.

General distribution: North Africa, Italy (Sicily), Malta, Balkan Peninsula, Near east, Arabian Peninsula, Pakistan (PUTSHKOV & PUTSHKOV 1996; AUKEMA et al. 2013).

***Reduvius testaceus* (HERRICH-SCHAEFFER, 1845)**

Material examined: Golestan province, Salikandeh, 3♀, 14.vii.2012.

General distribution: Mainly an Asian species, westward to Croatia; North Africa (PUTSHKOV & PUTSHKOV 1996; AUKEMA et al. 2013).

Acknowledgments

The authors are grateful R.E. Linnavuori (Finland) and H. Ostovan (Iran) for identification of some specimens. We are also grateful to F. Gusenleitner and K. Traxler (Austria) for editing the manuscript. The research was supported by Shahre Rey Islamic Azad University (Iran) and Museum Requien (France).

Zusammenfassung

Bei Aufsammlungen in den nordiranischen Provinzen Golestan und Mazandaran gelang der Nachweis von 10 Wanzenarten der Familien Anthocoridae, Geocoridae, Miridae, Nabidae und Reduviidae.

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Zeitschrift/Journal: [Linzer biologische Beiträge](#)

Jahr/Year: 2015

Band/Volume: [0047_1](#)

Autor(en)/Author(s): Ghahari Hassan, Moulet Pierre, Bahnood Saeid

Artikel/Article: [New data on the predator Heteroptera from Mazandaran and Golestan provinces, northern Iran 505-511](#)