

Contribution to the knowledge Scarabaeoidea (Coleoptera) of Guilan Province, Northern Iran

Materiały do poznania Scarabaeoidea (Coleoptera)
Prowincji Guilan w Północnym Iranie

Marek BUNALSKI¹, Hassan GHAHARI²

¹ Department of Entomology and Environmental Protection, Poznań University of Life Sciences, Dąbrowskiego 159, 60-594 Poznań, Poland; email: bunalski@up.poznan.pl

² Department of Plant Protection, Yadegar – e- Imam Khomeini (RAH) Branch, Islamic Azad University, Tehran, Iran; email: hghahari@yahoo.com

ABSTRACT: The paper deals with species diversity of Scarabaeoidea (Coleoptera) of Guilan Province, Northern Iran. In total 22 species of 17 genera (*Adoretus* LAPORTE, *Aethiessa* BURMEISTER, *Anomala* SAMOUELLE, *Aphodius* ILLIGER, *Blitopertha* REITTER, *Cetonia* FABRICIUS, *Glaphyrus* LATREILLE, *Gymnopleurus* ILLIGER, *Onthophagus* LATREILLE, *Oryctes* ILLIGER, *Oxythyrea* MULSANT, *Paroniticellus* BALTHASAR, *Pentodon* HOPE, *Polyphylla* HARRIS, *Protaetia* BURMEISTER, *Scarabaeus* LINNAEUS, *Valgus* SCRIBA) were collected and identified. *Protaetia funesta* (MEN.) has been recorded from Iran for the first time.

KEY WORDS: Coleoptera, Scarabaeidae, Glaphyridae, Northern Iran, Guilan Province, new records.

Introduction

The superfamily Scarabaeoidea is a large, diverse, cosmopolitan group of beetles which comprises more than 35,000 species worldwide (RATCLIFFE & PAULSEN 2008). Scarabaeoidea are adapted to most habitats, and they are herbivores, coprophages, necrophages, fungivores, saprophages, and sometimes carnivores. Some are myrmecophilous, termitophilous, or ectoparasitic. Some are agricultural pests that may

destroy crops while others are used in the biological control of dung and dung flies (MACHATSCHKE 1972, NIKOLAJEV 1987, HANSKI & CAMBEFORT 1991).

The fauna of Iranian Scarabaeoidea was poorly studied (PETROVITZ 1954, 1958, 1980; BARAUD 1968, BORTESI & ZUNINO 1974, ZAIRI 1976, KABAKOV 1982, NIKODÝM & KRÁL 1998, BARARI & all. 1998a, 1998b; BARARI 2001, KEITH & AHRENS 2002, MODARRES AWAL 2006, ZIANI & GUDENZI 2000, 2006, 2007, 2009; ZIANI 2006, 2011; MONTREUIL & SERRI 2007, KEITH & ULIANA 2008, MOWLAVI & all. 2008, MORADI GHARAKHLOO & ZIANI 2009, 2010; ZIANI & MORADI GHARAKHLOO 2010, GHAHARI & all. 2011, YARMAND & all. 2012). The first checklist of Iranian Scarabaeidae was prepared by MODARRES AWAL (1997) with 150 species. The checklist of Iranian Scarabaeoidea with 509 species was prepared by BUNALSKI & all. (2014).



Fig. Map of Iran showing the Guilan Province (source: Wikipedia)

Guilan Province lies along the Caspian Sea (Fig.), just west of the province of Mazandaran, east of the province of Ardabil, north of the provinces of Zanjan and Qazvin. The province has a humid temperate climate with abundant annual rainfall. The Alborz range provides further diversity to the land in addition to the Caspian coasts. The amount of humidity is truly high in the warm seasons of the year in Guilan, however, the coasts are much cooler and pleasant at the same time. Despite of the high humidity, Guilan is known for its moderate, mild and Mediterranean-like climate.

The aim of this research is faunistic work on the superfamily Scarabaeoidea of Guilan Province, Northern Iran.

Materials and Methods

The materials for this research were collected from some regions of Guilan Province during 2007–2011. The methods for collecting were a sweeping net, light traps, and knock down. All the collected specimens were put in alcohol (ethanol 75%) and classified by the authors. Information concerning the date of collection, locality, altitude, coordinates and number of specimens (in brackets) are given. The classification, nomenclature and distribution of scarab beetles suggested by LÖBL & SMETANA (2006) and SMITH (2006) have been followed.

Results

Totally 22 species of scarab beetles of 17 genera have collected and identified from some regions of Guilan Province. The list of species is given below with distribution data.

Family: GLAPHYRIDAE MAC LEAY, 1819

Genus: *Glaphyrus* LATREILLE, 1807

***Glaphyrus micans micans* FALDERMANN, 1835**

Distribution: Turkey, Syria, Iran, Iraq, Transcaucassus.

Material examined: Siahkhal, 25 m, 36°56'N 49°54'E, (3), July 2008.

Family: SCARABAEIDAE LATREILLE, 1802

Subfamily: Scarabaeinae LATREILLE, 1802

Tribe: Scarabaeini LATREILLE, 1802

Genus: *Scarabaeus* LINNAEUS, 1758

***Scarabaeus (Ateuchetus) armeniacus* MÉNÉTRIES, 1832**

Distribution: Balkans, Southern Russia, Transcaucassus, Iran, Iraq, Turkey, Syria, Israel.

Material examined: Asalem, 46 m, 37°43'N 48°57'E, (2), August 2011.

Tribe: Oniticellini KOLBE, 1905**Genus: *Paroniticellus* BALTHASAR, 1963*****Paroniticellus festivus* (STEVEN, 1809)**

Distribution: Transcaucassus, Southern Russia, Turkey, Iran, Central Asia.

Material examined: Fooman, 34 m, 37°13'N 49°19'E, (3), June 2010; Lahijan, 4 m, 37°14'N 50°02'E, (4), August 2011.

Tribe: Gymnopleurini LACORDAIRE, 1856**Genus: *Gymnopleurus* ILLIGER, 1803*****Gymnopleurus mopsus mopsus* PALLAS, 1781**

Distribution: Southern Europe, Turkey, Middle East, Transcaucassus, Southern Russia, Central Asia, Mongolia, SW China.

Material examined: Lahijan, 4 m, 37°14'N 50°02'E, (2), August 2011.

Tribe: Onthophagini BURMEISTER, 1846**Genus: *Onthophagus* LATREILLE, 1802*****Onthophagus (Furconthophagus) furcatus* (FABRICIUS, 1781)**

Distribution: Morocco, Southern & Central Europe, Turkey, Middle East, Central Asia, Mongolia (ZIANI 1995).

Material examined: Lahijan, 4 m, 37°14'N 50°02'E, (3), August 2011.

***Onthophagus (Onthophagus) illyricus* (SCOPOLI, 1763)**

Distribution: Central & Southern Europe, Caucasus, Iran, Iraq, Turkey, Syria.

Material examined: Masal, 70 m, 37°23'N 49°00'E, (4), August 2007.

***Onthophagus (Paleonthophagus) fissicornis* (STEVEN, 1809)**

Distribution: SE Europe, Turkey, Middle East (BRAUD 1992).

Material examined: Rezvanshahr, 5 m, 37°32'N 48°57'E, (2), August 2011.

***Onthophagus (Paleonthophagus) lemur* (FABRICIUS, 1781)**

Distribution: Central & Southern Europe, Caucasus, Turkey, Iran, Central Asia, Mongolia.

Material examined: Rasht, 39 m, 37°16'N 49°42'E, (3), June 2010.

***Onthophagus (Paleonthophagus) lucidus* (STURM, 1800)**

Distribution: SE Europe, Turkey, Middle East.

Material examined: Siahkal, 25 m, 36°56'N 49°54'E, (3), July 2008.

Subfamily: Aphodiinae LAECH, 1815

Tribe: Aphodiini LAECH, 1815

Genus: *Aphodius* ILLIGER, 1798

***Aphodius (Calamosternus) granarius* (LINNAEUS, 1767)**

Distribution: Cosmopolitan.

Material examined: Masal, 70 m, 37°23'N 49°00'E, (2), August 2007.

Fooman, 34 m, 37°13'N 49°19'E, (3), June 2010.

Subfamily: Rutelinae MAC LEAY, 1819

Tribe: Adoretini BURMEISTER, 1844

Genus: *Adoretus* LAPORTE, 1840

***Adoretus persicus* REITTER, 1889**

Distribution: Iran.

Material examined: Asalem, 46 m, 37°43'N 48°57'E, (2), August 2011.

Tribe: Anomalini MULSANT, 1842

Genus: *Anomala* SAMOUELLE, 1819

***Anomala splendida* MÉNÉTRIES, 1832**

Distribution: Georgia, Azarbaijan, Iran.

Material examined: Rasht, 39 m, 37°16'N 49°42'E, (3), June 2010.

Genus: *Blitopertha* REITTER, 1903

***Blitopertha nigripennis* REITTER, 1888**

Distribution: SE Russia, Turkmenistan, Transcaucassus, Iran, Eastern Turkey, Middle East.

Material examined: Lahijan, 4 m, 37°14'N 50°02'E, (1), August 2011.

Subfamily: Melolonthinae SAMOUELLE, 1819

Tribe: Melolonthini SAMOUELLE, 1819

Genus: *Polyphylla* HARRIS, 1841

***Polyphylla (Polyphylla) olivieri* LAPORTE, 1840**

Distribution: Balkans, Turkey, Syria, Israel, Transcaucassus, Iran.

Material examined: Rasht, 39 m, 37°16'N 49°42'E, (5), June 2010; Lahijan, 4 m, 37°14'N 50°02'E, (4), August 2011; Rezvanshahr, 5 m, 37°32'N 48°57'E, (3), August 2011.

Subfamily: Dynastinae MAC LEAY, 1819

Tribe: Pentodontini MULSANT, 1842

Genus: *Pentodon* HOPE, 1837

***Pentodon bidens sulcifrons* KÜSTER, 1848**

Distribution: Balkans, SE Europe, Southern Russia, Transcaucassus, Eastern Turkey, Iran, Iraq, Middle East.

Material examined: Lahijan, 4 m, 37°14'N 50°02'E, (3), August 2011.

Tribe: Oryctini MULSANT, 1842

Genus: *Oryctes* ILLIGER, 1798

***Oryctes nasicornis latipennis* MOTSCHULSKY, 1845**

Distribution: Southern Russia, Transcaucassus, Iran.

Material examined: Lahijan, 4 m, 37°14'N 50°02'E, (2), August 2011.

Subfamily: Cetoniinae LEACH, 1815

Tribe: Cetoniini LEACH, 1815

Genus: *Aethiessa* BURMEISTER, 1842

***Aethiessa zarudnyi* KISERITZKIJ, 1910**

Distribution: Eastern Turkey, Azarbaijan, Iran, Afghanistan, Turkmenistan.

Material examined: Siahkal, 25 m, 36°56'N 49°54'E, (1), July 2008.

Genus: *Cetonia* FABRICIUS, 1775

***Cetonia aeratula* REITTER, 1891**

Distribution: Georgia, Azarbaijan, Iran, Turkmenistan.

Material examined: Rasht, 39 m, 37°16'N 49°42'E, (4), June 2010.

Genus: *Protaetia* BURMEISTER, 1842

***Protaetia (Netocia) funesta* (MÉNÉTRIES, 1836)**

Distribution: Middle East, Eastern Turkey, Armenia.

Material examined: Asalem, 46 m, 37°43'N 48°57'E, (2), August 2011.

New for Iranian fauna.

***Protaetia (Netocia) ungarica ignisternum* (REITTER, 1891)**

Distribution: Eastern Turkey, Azarbaijan, Iran, Iraq, Turkmenistan.

Material examined: Fooman, 34 m, 37°13'N 49°19'E, (1), June 2010.

Genus: *Oxythyrea* MULSANT, 1842

***Oxythyrea cinctella cinctella* (SCHAUM, 1841)**

Distribution: Balkans, Turkey, Middle East, Iran, Iraq, Afghanistan, SE Russia, Central Asia, Pakistan, SW China.

Material examined: Rezvanshahr, 5 m, 37°32'N 48°57'E, (5), August 2011.

Tribe: Valgini MULSANT, 1842

Genus: *Valgus* SCRIBA, 1790

***Valgus hemipterus* (LINNAEUS, 1758)**

Distribution: North Africa, Europe, North & Western Asia, Central Asia.

Material examined: Masal, 70 m, 37°23'N 49°00'E, (1), August 2007; Rezvanshahr, 5 m, 37°32'N 48°57'E, (3), August 2011.

Discussion

In the research, some regions of Guilan province (totally 7 localities) were covered for sampling and in total 22 species were collected. With attention to the high floral diversity and various agricultural and forest ecosystems of the mentioned province, surely the fauna of Scarabaeoidea is more diverse. Continuing the faunistic surveys is necessary to discover new records and new distribution data on this taxon in Guilan province. Additionally, faunistic works on scarabaeoid beetles can be valuable research which was poorly studied in Iran.

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STRESZCZENIE

Na podstawie badań terenowych przeprowadzonych na 7 stanowiskach w Prowincji Guilan w północnym Iranie wykazano 22 gatunki Scarabaeoidea należące do 17 rodzajów: *Adoretus* LAP., *Aethiessa* BURM., *Anomala* SAM., *Aphodius* ILL., *Blitopertha* REITT., *Cetonia* F., *Glaphyrus* LATR., *Gymnopleurus* ILL., *Onthophagus* LATR., *Oryctes* ILL., *Oxythyrea* MULS., *Paroniticellus* BALTH., *Pentodon* HOPE, *Polyphylla* HARR., *Protaetia* BURM., *Scarabaeus* L., *Valgus* SCR. *Protaetia funesta* (MEN.) została podana jako nowa dla fauny Iranu.

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