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A study on the fauna of Scarabaeoidea (Coleoptera) from Golestan province, Northern Iran

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Abstract

This paper deals with the fauna of Scarabaeoidea (Coleoptera) in Golestan province, northern Iran. In total 15 species from 13 genera (*Adoretus*, *Aphodius*, *Amphimallon*, *Cetonischema*, *Copris*, *Euonthophagus*, *Glaphyrus*, *Netocia*, *Onthophagus*, *Pentodon*, *Valgus*, *Polyphylla*, *Stalagmosoma*) were collected and recorded from the mentioned region.

Key words: Coleoptera, Scarabaeoidea, Fauna, Golestan, Iran.

Zusammenfassung

Diese Arbeit untersucht die Scarabaeoidea (Coleoptera) Fauna der Golestan-Provinz im Nord-Iran. Insgesamt wurden aus dieser Region 15 Arten aus 13 Gattungen (*Adoretus*, *Aphodius*, *Amphimallon*, *Cetonischema*, *Copris*, *Euonthophagus*, *Glaphyrus*, *Netocia*, *Onthophagus*, *Pentodon*, *Valgus*, *Polyphylla*, *Stalagmosoma*) gesammelt und gemeldet.

Introduction

The superfamily Scarabaeoidea comprises worldwide more than 35,000 species (RATCLIFFE & PAULSEN 2008). The family Scarabaeidae as presently defined consists of over 30,000 species of beetles worldwide (RATCLIFFE et al. 2002). Scarab beetles are one of the most important insect groups, and they are a conspicuous component of the beetle fauna in almost all ecosystems (WOODRUFF 1973). Scarabs are stout-bodied beetles, many with bright metallic colors, measuring between 5-60 mm. They have distinctive, clubbed antennae composed of plates called lamellae that can be compressed into a ball or fanned out like leaves to sense odors (NIKOLAJEF 1987; RATCLIFFE et al. 2002). The fauna of Iranian Scarabaeidae was poorly studied which totally 150 species have been recorded by MODARRES AWAL (1997) and about 20 species in other papers until that time (PETROVITZ 1954; PETROVITZ 1958; BARAUD 1968; BORTESI & ZUNINO 1974; ZAIRI 1976; PETROVITZ 1980; KABAKOV 1982; NIKODÝM & KRÁL 1998). After that nearly 40 species have been recorded from different authors (NIKODÝM & KRÁL 1998; BARARI et al. 1998a, b; ZIANI & GUDENZI 2000; BARARI 2001; KEITH & AHRENS 2002; MODARRES AWAL 2006; ZIANI & GUDENZI 2006; ZIANI & GUDENZI 2007; ZIANI 2006, 2011; MONTREUIL & SERRI 2007; KEITH & ULIANA 2008; MOWLAVI et al. 2008; MORADI GHARAKHLOO & ZIANI 2009; ZIANI & GUDENZI 2009; MORADI GHARAKHLOO & ZIANI 2010; ZIANI & MORADI GHARAKHLOO 2010; GHAHARI et al. 2011; YARMAND et al. 2012); additionally several species which are listed in catalogue of Palaearctic Coleoptera (LÖBL & SMETANA 2006).

Golestan province is in the north of Iran and south of the Caspian Sea. Geographically, Golestan is divided into two sections, the plains and the mountains of the Alborz range. In the eastern Alborz section, the direction of the mountains faces northeast and gradually decreases in height. The highest point of the province is Shavar, at 3,945 m above sea level. Golestan climate is temperate for most of the year. The aim of this paper is faunistic survey on Scarabaeoidea in some regions of Golestan province (northern Iran).

Materials and Methods

The materials of this research were collected from some regions of Golestan province (northern Iran) during 2008-2011. The methods for collecting were sweeping net, light traps, and knock down. All the collected specimens were put in alcohol (ethanol 75%) and determined by the authors. Information concerning date of collection, locality, altitude in brackets, and number of specimens in brackets are given. The classification and nomenclature of scarab beetles suggested by LAWRENCE & NEWTON (1995), RATCLIFFE et al. (2002), and LÖBL & SMETANA (2006) have been followed.

Results and Discussion

Among the 37 collected specimens of Scarabaeoidea from Golestan province, totally 15 species from 13 genera were identified. Additionally many other specimens were collected which their identification is progressed. Since Golestan province included diverse flora and various geographical regions, a diverse fauna of Scarabaeoidea is expected for this region where must be studied further. Although neither species of this research is new country record, but however these faunistic works are valuable for increasing the knowledge of specialists on the Iranian fauna. Of course determining the main host plants of Scarabaeoidea and also the most important natural enemies of these insects can be valuable research topics. The list of species (15 species from 13 genera) is given below.

Genus *Adoretus* LAPORTE DE CASTELNAU, 1840

***Adoretus nigrifrons* (STEVEN, 1809)**

Material examined: 10 Km S of Azad-Shahr (284 m), (1), 11 June 2010. Bandar-Torkaman (22 m), (1), August 2010.

Genus *Aphodius* ILLIGER, 1798

***Aphodius (Biralus) menetriesi* MÉNÉTRIES, 1849**

Material examined: 45 Km E of Minoo-Dasht (960 m), (1), 11 June 2010.

Genus *Amphimallon* BERTHOLD, 1827

***Amphimallon leuthneri* REITER, 1902**

Material examined: Golestan National Park, N of Armodlu, (3), August 2007.

Genus *Cetonischema* REITTER, 1898

***Cetonischema speciosa* (ADAMS, 1817)**

Material examined: Maraveh-Tappeh (218 m), (2), July 2010.

Genus *Copris* MÜLLER, 1764

***Copris lunaris* (LINNAEUS, 1758)**

Material examined: Bandar-Gaz (6 m), (4), April 2010. Gonbad (11 m), (3), July 2010.

Genus *Euonthophagus* BALTHASAR, 1959

***Euonthophagus gibbosus* (SCRIBA, 1790)**

Material examined: Galikesh (132 m), (4), October 2010.

Genus *Glaphyrus* LATREILLE, 1802

***Glaphyrus oxypterus* (PALLAS, 1771)**

Material examined: Gorgan, near Nahar-Khoran (450 m), (2), 28 May 2001.

Genus *Netocia* COSTA, 1852

***Netocia ignisternum* REITTER, 1891**

Material examined: Gorgan (64 m), (1), June 2010.

Genus *Onthophagus* LATREILLE, 1802

***Onthophagus (Palaeonthophagus) vacca* (LINNAEUS, 1767)**

Material examined: Golestan National Park, Sulgard (1847 m), (6), September 2010.

***Onthophagus (Palaeonthophagus) ruficapillus* BRULLÉ, 1832**

Material examined: Minoo-Dasht (175 m), (3), September 2006. Ali-Abad (130 m), (4), May 2010.

Genus *Pentodon* HOPE, 1837

***Pentodon sulcifrons* KUSTER, 1848**

Material examined: Gorgan (141 m), (1), June 2007. Ramyan (220 m), (1), July 2010.

Genus *Polyphylla* HARRIS, 1842

***Polyphylla adspersa* MOTSCHULSKY, 1853**

Material examined: Bandar-Torkaman (18 m), (2), August 2010. Galikesh (117 m), (1), October 2010.

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

Material examined: Minoo-Dasht (178 m), (3), September 2006. Golestan National Park, S of Qalan, (1851 m), (1), August 2007. Kalaleh (135 m), (2), August 2009. Gomishan (- 4 m), (1), April 2010. Golestan National Park, N of Sulgard (1944 m), (2), October 2010.

Genus *Stalagmosoma* BURMEISTER, 1842

***Stalagmosoma albella* (PALLAS, 1781)**

Material examined: Golestan National Park, S of Qalan, (1), August 2007.

Genus *Valgus* SCRIBA, 1790

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

Material examined: Golestan National Park, N of Yaghtiklan, (2), August 2007.

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