

**Contributions to the knowledge the darkling beetles (Coleoptera:  
Tenebrionidae) of Arasbaran, Northwestern Iran**

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**ABSTRACT.** Eleven tenebrionid species from ten genera, including: *Adesmia* FISCHER von WALDHEIM, *Stenosis* HERBST, *Pimelia* FABRICIUS, *Crypticus* LATREILLE, *Dendarus* DEJEAN, *Pedinus* LATREILLE, *Gonocephalum* SOLIER, *Opatrum* FABRICIUS, *Blaps* FABRICIUS and *Laena* LATREILLE, belonging to four subfamilies (Pimeliinae, Diaperinae, Tenebrioninae and Lagriinae) were collected in Arasbaran, Northwestern Iran. Ten species and one genus are new for Iranian fauna.

**KEY WORDS:** Tenebrionidae, chorology, new records, Iran, East Azerbaijan, Arasbaran.

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INTRODUCTION

Tenebrionidae are mostly rather large, flightless beetles, although a few species living in rotten wood and in stored products are small. With more than 15 000 known species, darkling beetles are one of the most common members of the beetle, or coleopteran, community (SOLDATI & SOLDATI 2003). Darkling beetles can be found in desert or semidesert regions all over the world. They burrow under stones, bark and leaf litter. Some species even move through sand, "swimming" with their legs. The darkling beetles that inhabit the most torrid deserts can withstand temperatures of 50°C. They have long legs that keep their

bodies at a safe distance from the burning sand and enable them to move at top speed. Many are excellent burrowers and can bury themselves in the sand in a flash to escape the scorching sun (SCHAWALLER 1996, BOUCHARD et al. 2005).

Darkling beetles are probably useful as indicators of environmental quality, in that their presence signifies that the places where they occur are relatively undisturbed. The great majority of these insects are scavengers. In nature, they are quite content to feed on dried or rotting plant residue. Man has made many a darkling beetle's day by storing vast quantities of grain products (WATT 1974, SCHAWALLER 1996).

Arasbaran is an important region in East Azerbaijan province. This biosphere reserve situated in the north of Iran at the border to Armenia and Azerbaijan belongs to the Caucasus Iranian Highlands. In-between the Caspian, Caucasus and Mediterranean region, the area covers mountains up to 2 200 meters, high alpine meadows, semi-arid steppes, rangelands and forests, rivers and springs. Arasbaran is the territory of about 23 500 nomads who are mainly living in the buffer and transition zones. Economic activities in the biosphere reserve are mainly agriculture, animal husbandry, horticulture, apiculture, handicrafts and tourism, but business activities can be found also in urbanized areas. The location of Arasbaran is 38°40' to 39°08'N; 46°39' to 47°02'E and its altitude is 250 to 2 887 meters above sea level.

#### MATERIALS AND METHODS

The specimens were collected in different regions of Arasbaran under stones and on the ground by hand and knock down, sweeping of vegetation and pitfall trap methods. The investigated regions were: Khodafarin, Ahar, Khomarloo, Horand, Abshahmad, Kalibar, Aras boundary and Aynalo. The information concerning specific name, describer and description date, locality and date of collection, place and plant on which the species were collected, determinant and number of specimens (in brackets) was given. Subfamilies and tribes were given in phylogenetic order and species were listed alphabetically within each tribus. Classification and nomenclature of darkling beetles suggested by LAWRENCE & NEWTON (1995), IWAN (2001), SOLDATI & SOLDATI (2003) have been followed.

#### RESULTS

In this study, eleven species from ten genera, belonging to four subfamilies of Tenebrionidae, were collected in different regions of Arasbaran, Northwestern Iran. The list of species with synonyms and distributional data is given below.

**Subfamily: Pimeliinae LATREILLE, 1802****Tribe: Adesmiini LACORDAIRE, 1859*****Adesmia (Adesmia) anthracina* KLUG, 1830**

Material: East Azerbaijan province, Arasbaran, Aynalo, on the ground (2), July 2005.

Distribution: Syria, Israel, Lebanon.

Remarks: species new for Iranian fauna.

**Tribe: Pimeliini LATREILLE, 1802*****Pimelia (Camphonota) subglobosa* PALLAS, 1781**

Material: East Azerbaijan province, Arasbaran, Aras boundary, on the ground (2), August 2005. East Azerbaijan province, Arasbaran, Aynalo, on *Avena fatua* (Gramineae) (1), July 2005.

Distribution: Bulgaria, Greece, Macedonia, Turkey.

Remarks: species new for Iranian fauna.

**Tribe: Stenosini LACORDAIRE, 1859*****Stenosis (Stenosis) orientalis* BRULLÉ, 1832**

Material: East Azerbaijan province, Arasbaran, Khodafarin, under stone (1), June 2005.

Distribution: Albania, Greece, Turkey.

Remarks: species new for Iranian fauna.

**Subfamily: Diaperinae LATREILLE, 1802****Tribe: Crypticini BRULLÉ, 1832*****Crypticus (Crypticus) quisquilius* (LINNAEUS, 1760)**

Synonyms: *glaber* FABRICIUS, 1775; *laevis* GMELIN, 1790; *laticollis* PANZER, 1796; *luctuosus* SCHRANK von PAULA, 1781; *niger* GEOFFROY, 1785; *pusillus* HERBST, 1799; *opacus* BRANCSIK, 1899; *strauchi* ROUBAL, 1911

Material: East Azerbaijan province, Arasbaran, Kaleibar, on *Berberis vulgaris* (Berberidaceae) (1), June 2005.

Distribution: Europe, Asia, North Africa.

Remarks: genus and species new for Iranian fauna.

**Subfamily: Tenebrioninae LATREILLE, 1802****Tribe: Pedinini ESCHSCHOLTZ, 1829****Subtribe: Dendarina SEIDLITZ, 1889*****Dendarus (Pandarinus) coelatus* BRULLÉ, 1832**

Material: East Azerbaijan province, Arasbaran, Khomarloo, on the ground (2), August 2006.

Distribution: Albania, Greece, Italia, Turkey.

Remarks: species new for Iranian fauna.

***Dendarus (Dendarus) stygius stygius* WALTL, 1838**

Material: East Azerbaijan province, Arasbaran, Horand, dung (2), October 2005.

Distribution: Greece, Turkey.

Remarks: species new for Iranian fauna.

**Subtribe: Pedinina ESCHSCHOLTZ, 1829*****Pedinus (Pedinus) kiesenwetteri* SEIDLITZ, 1893**

Material: East Azerbaijan province, Arasbaran, Khodafarin, under stone (1), June 2006.

Distribution: Turkey.

Remarks: species new for Iranian fauna.

**Tribe: Opatrini BRULLÉ, 1832****Subtribe: Opatrina BRULLÉ, 1832*****Gonocephalum (Gonocephalum) costatum* (BRULLÉ, 1832)**

Synonym: *lineare* KÜSTER, 1849

Material: East Azerbaijan province, Arasbaran, Abshahmad, on the ground (1), September 2005.

Distribution: South Europe, Cyprus, Iran, Israel, Syria, Turkey.

Remarks: first time recorded from Arasbaran.

***Opatrum (Opatrum) geminatum* BRULLÉ, 1832**

Synonym: *asiaticum* REITTER, 1904

Material: East Azerbaijan province, Arasbaran, Ahar, on *Amaranthus* sp. (Amaranthaceae) (1), under stone (1), June 2006.

Distribution: Azerbaijan, Armenia, Greece, Cyprus, Lebanon, Syria, Turkey.

Remarks: species new for Iranian fauna.

**Tribe: Blaptini LEACH, 1815**

**Subtribe: Blaptina LEACH, 1815**

***Blaps (Blaps) tibialis* REICHE, 1857**

Synonym: *strigicollis* BAUDI di SELVA, 1875

Material: East Azerbaijan province, Arasbaran, Kaleibar, under stone (4), September 2005.

Distribution: Bulgaria, Greece, South Russia, Turkey, Ukraine, Israel.

Remarks: species new for Iranian fauna.

**Subfamily: Lagriinae LATREILLE, 1825**

**Tribe: Laenini SEIDLITZ, 1896**

***Laena hopffgarteni* WEISE, 1878**

Material: East Azerbaijan province, Arasbaran, Khodafarin, on *Hibiscus trionum* (Malvaceae) (1), September 2001.

Distribution: Bulgaria, Romania, Bosnia-Herzegovina, Croatia, Macedonia, Serbia, Montenegro, Turkey.

Remarks: species new for Iranian fauna.

Iran is a large country incorporating various geographical regions and climates and surely there is a diverse fauna of Tenebrionidae in Iran. To find new species and distributional records, more studies should be conducted on this important insect group in different regions of Iran.

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