The Aquatic Beetles Families: Hydraenidae and Hydrophilidae in County Khoramabad

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Abstract: This investigation was carried out during 2016-2017 in order to identify the aquatic beetle species of county Khoramabad in west of Iran. Four genera and seven species belonging to families Hydrophilidae and Hydraenidae were found. Three species, Berosus luridus (Linnaeus, 1761), Limnebius nitidus (Marsham, 1802) and Ochthebius nilssoni (Hebauer, 1986) are recorded for the first time from Iran.

Key words: Aquatic, Hydraenidae, Hydrophilidae, Khoramabad.

1. Introduction
Aquatic insects are a group of arthropods that live in the water at some stage of their lives. Some of them live by the water and are somehow dependent on water. Considering the importance of the environment and increasing the level of contamination of current and static water, study of aquatic insects is of great importance, because the presence or absence of this group of living organisms in aquatic ecosystems reflects the water quality conditions [1]. The aquatic beetle fauna of Iran has received little attention but recent studies on Iranian aquatic beetles documented the paucity of knowledge on these animals [2-12]. Iran is a large country with various geographical regions and climates and, therefore, in this project, we present new information on the occurrence of some aquatic beetle species in county Khoramabad. However, many more species presumably exist in Iran yet to be discovered. The objective of this study as a part of our ongoing research on the aquatic beetle fauna of Iran is to improve our knowledge of this group.

2. Materials
In 2016-2017, the water beetle fauna from county Khoramabad was studied. These counties are located in West of Iran (Fig. 1). For collecting aquatic beetles, sweeping the water with a metal sieve or net was the main method. The samples were separated by means of forceps and sorted in flat, white tray. The beetles were preserved in 96% alcohol and then they were identified to genera and species levels using valid keys Epler (1996), samples were then sent to Germany for confirmation of identification. And in alcohol preserved specimens are maintained in laboratory of the Department of Entomology of Arak Azad University.

3. Results
List of species
Family: Hydrophilidae
Genus Berosus Leach, 1817
Berosus spinosus (Steven, 1808)
Material examined: Lorestan, Khoramabad, Kashkan river, 33°55’ N, 92°47’ E, 1,134 m.
General distribution: Widespread along the European coast, from Fennoscandia to the Atlantic coast of Western Europe, southwards to the Mediterranean; also around the Caspian Sea and in saline inland localities in Central and Southeastern Europe [13].
Distribution in Iran: Astara [14].
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Fig. 1. The map of Lorestan province.

*Berosus luridus* (Linnaeus, 1761) (Fig. 2)

Material examined: Lorestan, Khoramabad, Karvansara, Agricultural stream, 33°75′ N, 48°48′ E, 1,247 m.

General distribution: Widely distributed throughout the Palearctic region.

Distribution in Iran: The species is recorded for the first time from Iran.

Description: Body length 4.5 mm, Pronotum has dark engravings. The Tegmina have longitudinal deep strie. Mezosternum has mid valve that is broad and wide in the posterior half.

**Genus Enochrus** (Thomson, 1859)

*Enochrus politus* (Kuster, 1849)

Material examined: Lorestan, Khoramabad, Asadabad, River, 33°55′ N, 48°11′ E, 1,147 m.

General distribution: Europe: Italy, Portugal, Spain; North Africa: Algeria, Canary Islands, Egypt, Morocco, Madeira Archipelago, Tunisia; Asia: Arab Emirates, Afghanistan, Cyprus, Israel, Lebanon, Syria, Turkey [15-17].

Distribution in Iran: Gilan: Amlash [18].

*Enochrus quadripunctatus* (Herbst, 1797)

Material examined: Lorestan, Khoramabad, Asadabad, River, 33°81′ N, 48°24′ E, 1,120 m.

General distribution: Palearctic region and Bosnia Herzegovina, China, Denmark, France, Germany, Israel, Italy, Norway, Russia, Ukraine, Slovenia, Sweden.

Distribution in Iran: Ghaemshahr [18].

*Enochrus fuscipennis* (Thomson, 1884)

Material examined: Lorestan, Khoramabad, Zardabad, River, 33°49′ N, 48°55′ E, 1,635 m.

General distribution: Palearctic region: Bosnia Herzegovina, China, Denmark, France, Germany, Israel, Italy, Norway, Russia, Ukraine, Slovenia, Sweden and Nearectic region: Canada and American [19].

Distribution in Iran: Gilan, Mazandaran, Qazvin.

**Family: Hydraenidae Mulsant, 1844**

**Genus Limnebius** Leach, 1815

*Limnebius nitidus* (Marsham, 1802) (Fig. 3)
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Fig. 2  Habitus of Berosus luridus.

Fig. 3  Habitus of Limnebius nitidus.

Fig. 4  Habitus of Ochthebius nilssoni.

Material examined: Lorestan, Khoramabad, Zardabad, River, 33°49′ N, 48°55′ E, 1,635 m.

General distribution: Denmark, France, Spain, North of Italy.

Distribution in Iran: The species is recorded for the first time from Iran.

Description: Body length 1.5 mm and the color is black, head and pronotum, shiny and smooth with very clear troughs. Reduced networking and it can be seen only in the lateral parts. In males, the sixth abdominal sternite lacks hair and any other appendages and this sternite in males is longer than female.

Genus Ochthebius Leach, 1815

Ochthebius nilssoni (Hebauer, 1986)(Fig. 4)

Material examined: Lorestan, Khoramabad, Kashkan river, 33°55′ N, 92°47′ E, 1,134 m.

General distribution: North of Sweden[20].

Distribution in Iran: The species is recorded for the first time from Iran.

Description: Body length 1.6 mm, dorsal surface of the body metallic. The pronotum has distinct and regular troughs. The tegmina are very narrow, approximately 1.4 mm wider than the pronotum.

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References


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