

Diving beetles of Ahvaz City, Khuzestan Province, Iran (Coleoptera: Dytiscidae)

H.V. SHAVERDO, M. ESFANDIARI, A. KHADEMPUR, H. NASSERZADEH & A. GHODRATI

Abstract

Twenty-one species of Dytiscidae are reported from the city of Ahvaz, Khuzestan Province, Iran. *Cybister lateralimarginalis ponticus* SHARP, 1882, *Hydroporus inscitus* SHARP, 1882, and *Laccophilus sordidus* SHARP, 1882 are recorded for the first time from Iran.

Key words: Coleoptera, Dytiscidae, faunistics, new records, Khuzestan Province, Iran.

Introduction

Despite of numerous papers on the Dytiscidae of Iran, diving beetles of Khuzestan were still poorly studied. The first notable account was published by HOSSEINIE (1994) but only as a generic list. MCCULLERS (1976) reported *Hydroglyphus geminus* (F., 1792), *Herophydrus musicus* (KLUG, 1834), *Nebrioporus lanceolatus* (WALKER, 1871), and, under the question mark, *Deronectes schuberti* WEWALKA, 1971 from Khuzestan Province. *Deronectes schuberti* was so far known only from the type locality (Kahramanmaraş Province, Turkey), and the Iranian record is obviously based on misidentification.

FERY & HOSSEINIE (1998) described *Deronectes youngi* from Khuzestan Province (Ramhormoz). FERY et al. (2005, 2012) recorded *Hygotus orthogrammus* (SHARP, 1882) from several localities in Khuzestan and from one locality together with *Herophydrus musicus* and *Hydaticus ponticus* SHARP, 1882; as well as *Hyphoporus solieri* AUBÉ, 1838, which was recorded from Iran for the first time.

So far, seven species of Dytiscidae were known from Khuzestan Province and 123 species were known from Iran (DARILMAZ et al. 2013, NILSSON & HÁJEK 2013).

During almost 30 years, especially during 2009–2011, the Karun River and some stagnant water bodies in the city of Ahvaz (Khuzestan Province) were sporadically sampled for water insects by members of the Department of Plant Protection (Entomology section), Shahid Chamran University of Ahvaz. Twenty-one species of Dytiscidae (larvae and adults) collected during these years are listed in this paper.

Description of the region and sampling localities

The Karun River is situated in south-western Iran and is the most effluent river of the country. This 890 km long river rises in the Zard Kuh Mountains of Bakhtiari District in the Zagros Range and flows into the Persian Gulf. Before passing through Ahvaz, the capital of the province, the river receives many tributaries. Karun River receives agricultural, industrial, and urban waste waters and pollutions mainly when it enters the Khuzestan plain region. Ahvaz is located on the banks of Karun River and is a main polluting area. The city is situated in the geographical centre of the Ahvaz Ridge, where it is cut in two parts by the Karun River.

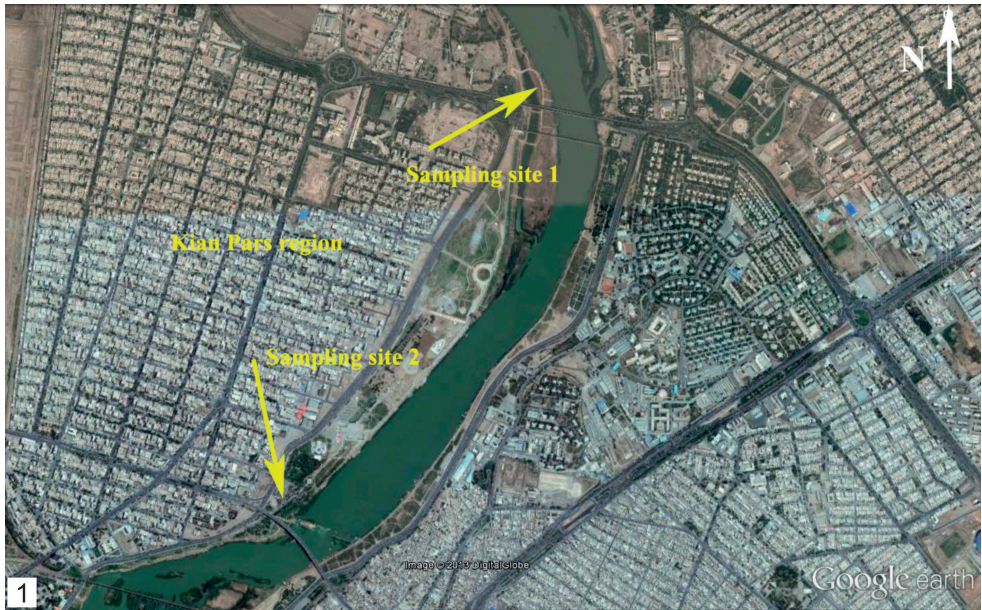


Fig. 1: Aerial view of Ahvaz City, Kian Pars region, indicating sampling sites 1 and 2.

Fig. 2: Karun River, sampling site 1. Photograph by Mehdi Esfandiari.



Fig. 3: Pools in riverside park, sampling site 2. Photograph by Aida Ghodrati.

Ahvaz Ridge divides Khuzestan Province into two regions: the rolling hills and mountainous regions north and east of the ridge and the plains and marsh lands drained by Karun, Karkheh, and Jarahi Rivers to its south and west. Ahvaz lies at an average elevation of 20 meters above sea level. It has a desert climate, with long, extremely hot summers (it is consistently one of the hottest cities on the planet during the summer, 45–50°C) and mild (the temperature rarely falls to zero), short winters (LINNAVUORI 2009). The predominant vegetation type of Khuzestan Province is scattered trees (*Populus euphratica* and *Tamarix* spp. are common on river banks) and shrubs with steppe-like ground cover, which changes into desert-like formation from the hills towards the south-west. The main plant species of the wetlands and tidal flats are *Phragmites australis* and *Typha angustifolia* (HÖBERLANDT 1983, LINNAVUORI 2009).

For two of the sampling sites detailed information is available (site 1: margin of backwater branch of Karun River, much vegetation (mostly *Phragmites* and some species of Cyperaceae), sediment of sand and silt, ca. 16 m a.s.l., 31°21'18"N 48°41'59"E, leg. A. Khadempur (Figs. 1–2); site 2: artificial pools without natural banks, in riverside park of Karun River, no vegetation, sediment of sand and silt, ca. 16 m a.s.l., 31°20'12"N 48°41'12"E, leg. A. Khadempur (Figs. 1, 3) – these pools are situated 70–100 m from the river, they are temporal, being once or twice in a month filled with water from Karun River by a pumping station). In Table 1 these two sites are indicated as “Karun River” and “pools”. The distance between site 1 and 2 is about 2.5 km.

The remaining localities are almost exclusively without precise information about the collecting site. The beetles have been collected in Ahvaz, near Karun River from 1984 to 2011, and their labels usually carry general information: “Iran, Khuzestan Province, Ahvaz City, 20 m a.s.l., 31°18'N 48°41'E, date”. In Table 1, these sites are listed under “Ahvaz”.

Material

The specimens studied are deposited in the Naturhistorisches Museum Wien, Vienna, Austria, and in the Insect and Mite Collection of Ahvaz, located at the Department of Plant Protection, College of Agriculture, Shahid Chamran University of Ahvaz, Iran.

Results

156 adults and five larvae of 21 species of Dytiscidae were collected and studied. One of the larvae, a third instar larva of *Colymbetes* sp., could not be identified to species with certainty, because of the five species of *Colymbetes* occurring in Iran, only larvae of *C. fuscus* (L., 1758) are described. However, this single larva most probably belongs to *C. vagans* SHARP, 1882.

16 species are reported for the first time from Khuzestan Province. Two species and one subspecies are recorded for the first time from Iran: *Hydroporus inscitus* SHARP, 1882, *Laccophilus sordidus* SHARP, 1882, and *Cybister lateralimarginalis ponticus* SHARP, 1882. By now, 23 dytiscid species are known from Khuzestan Province and 125 species and one subspecies from Iran.

The results of the study are presented in Table 1.

Table 1: List of Dytiscidae collected in Ahvaz. Species recorded from Iran for the first time are indicated by a double asterisk (**). Species recorded from Khuzestan Province for the first time are indicated by a single asterisk (*).

	Karun River site 1	pools site 2	Ahvaz
* <i>Colymbetes vagans</i> SHARP, 1882		28.IV.2010 (1 ♂) [25.II.2011 (1 larva) – see comments above]	IV.1984 (1 ex.); 1.V.1995 (1 ex.); 15.VIII.1995 (2 exs.); 2005 (1 ex.); 2006 (1 ex.); 8., 24.II.2008 (2 exs.); 3., 21., 30.III.2008 (3 exs.); 2., 8., 13, 26.IV.2008 (4 exs.); IV.2008 (3 exs.); V.2008 (1 ex.); IV.2010 (2 exs.); 13.V.2010 (1 ex.); 2010 (1 ex.); 21.II.2011 (1 ex.); 15.IX.2011 (1 ex.); 2011 (1 ex.)
* <i>Rhantus suturalis</i> (MACLEAY, 1825)		28.IV.2010 (4 larvae); 25.II.2011 (1 ♂)	15.VIII.1995 (1 ex.); 10.V.2001 (1 ex.); II.2004 (1 ex.); VI.2004 (1 ex.); 21.I.2006 (1 ex.); 2006 (3 exs.); II.2008 (1 ex.); 16., 21., 23.IV.2008 (3 exs.); IV.2008 (1 ex.); 2., 9.V.2008 (2 exs.); V.2008 (1 ex.); 18.VI.2009 (1 ex.); 22.III.2010 (2 exs.); 14.IV.2010 (1 ex.)
* <i>Eretes griseus</i> (F., 1781)		2.IV.2010 (1 ♀)	9.IV.2008 (1 ♂)
** <i>Cybister lateralimarginalis ponticus</i> SHARP, 1882			2006 (1 ♂, 1 ♀); 13.V.2010 (1 ♀); 16.II.1995 (1 ♂)
* <i>Cybister tripunctatus lateralis</i> (F., 1798)			IV.2003 (1 ♂); 20., 25.IV.2007 (1 ♀, 1 ♂); 24.II.2008 (1 ♂); 21., 27.III.2008 (3 ♀ ♀); IV.2008 (1 ♂, 1 ♀); 8.IV.2008 (1 ♂); 13.IV.2008 (1 ♀); 26.IV.2008 (1 ♂); 7.X.2009 (1 ♀); 2.IV.2011 (1 ♂); 20.IX.2011 (1 ♂); 16.VI.2012 (1 ♂)
* <i>Dytiscus dimidiatus</i> BERGSTRÄSSER, 1778			22.IV.2011 (1 ♂)
* <i>Hydaticus histrio</i> CLARK, 1864			1997 (1 ♀)

<i>Hydaticus ponticus</i> SHARP, 1882	1.XII.2011 (2 ♀♀)		25.V.2003 (1 ♀); V.2004 (1 ♂); 9.V.2008 (1 ♂); 25.I.2012 (1 ♀); 28.VI.2012 (1 ♀)
<i>Hydroglyphus geminus</i> (F., 1792)		9., 19.XI.2009, 20.III.2010, 15.VI.2011 (2 ♂♂, 2 ♀♀)	
* <i>Hydroglyphus signatellus</i> (KLUG, 1834)	30.IX.2010, 4.XI.2011 (15 exs.)		2004 (30 exs.)
** <i>Hydroporus inscitus</i> SHARP, 1882		11.III.2011 (1 ♂)	
<i>Nebriporus lanceolatus</i> (WALKER, 1871)	25.X.2011 (1 ♀)		
* <i>Hydrovatus cuspidatus</i> (KUNZE, 1818)		5.XI.2010 (1 ♀)	
<i>Herophydrus musicus</i> (KLUG, 1834)	5.VI.2011 (5 exs.)		
* <i>Hygrotus confluens</i> (F., 1787)		20.V.2010 (1 ♂)	
* <i>Hygrotus inscriptus</i> (SHARP, 1882)		10.III.2011 (1 ♂, 3 ♀♀)	
* <i>Hygrotus saginatus</i> (SCHAUM, 1857)			2006 (1 ♂)
<i>Hyphoporus solieri</i> AUBÉ, 1838		28.IV.2010 (2 ♀♀)	IV.2008 (1 ex.)
* <i>Laccophilus poecilus</i> (KLUG, 1834)	1.XII.2011 (1 ♂)		
* <i>Laccophilus sharpi</i> RÉGIMBART, 1889	29.X.2010 (2 ♂♂, 2 ♀♀); 1.XII.2011 (3 ♂♂, 2 ♀♀)		
** <i>Laccophilus sordidus</i> SHARP, 1882	5.VI.2011 (1 ♂); 18.XI.2011 (1 ♀)		

Faunistic notes

Cybister lateralimarginalis ponticus SHARP, 1882

First record from Iran. This subspecies was previously known from Iraq.

Hydroporus inscitus SHARP, 1882

First record from Iran. This is the most northern limit of the distribution of the species. It was previously known from Iraq, Kuwait, Oman, and Yemen.

Hyphoporus solieri AUBÉ, 1838

Second record from Iran. Recently this species was recorded for the first time from Khuzestan (10 km N Bandar-e Emam Khomeyni) by FERY et al. (2012). This is the most northern limit of the distribution of the species. It is also known from Egypt, Saudi Arabia, and Kuwait.

***Laccophilus sordidus* SHARP, 1882**

First record from Iran. This is the most northern limit of the distribution of the species. It was previously known from Egypt, Saudi Arabia, and Yemen.

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Dr. Helena V. SHAVERDO
Naturhistorisches Museum, Burgring 7, A – 1010 Wien, Austria
 (shaverdo@mail.ru, helena.shaverdo@nhm-wien.ac.at)

Dr. Mehdi ESFANDIARI, Amir KHADEMPUR & Aida GHODRATI
Department of Plant Protection, College of Agriculture, Shahid Chamran University of Ahvaz, 61357-43311 Ahvaz, Iran (esfandiari@scu.ac.ir, apameini@yahoo.com)

Hiva NASSERZADEH
Insect Taxonomy Research Department, Iranian Research Institute of Plant Protection, Evin/Tabnak St., P.O. Box 1454, IR – 19395 Tehran, Iran (h_naserzadeh@yahoo.com)

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