

A Faunistic Study on Aquatic Coleoptera (Helophoridae: Hydrophilidae) Species in Elazığ Province, Turkey

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Abstract.- In this study, we have recorded 46 species and one subspecies of aquatic Coleoptera (Helophoridae: Hydrophilidae) belonging to 14 genera (*Helophorus*, *Paracymus*, *Anacaena*, *Berosus*, *Chaetarthria*, *Enochrus*, *Helochares*, *Hydrobius*, *Hydrochara*, *Laccobius*, *Cymbiodyta*, *Coelostoma*, *Cercyon* and *Cryptopleurum*) based on the inventories conducted between 2011-2012 in Elazığ province of Turkey. Of these, *Cryptopleurum crenatum* (Kugelann 1794) has been newly recorded for the Hydrophilidae fauna of Eastern Anatolia region. In addition, all species of Helophoridae and Hydrophilidae (except *Berosus spinosus* (Steven, 1808)) were new records for the Coleoptera fauna of Elazığ.

Key words: Coleoptera, Helophoridae, Hydrophilidae.

INTRODUCTION

Elazığ province is located in the southwest of Eastern Anatolia Region, in North Euphrate part between the 40° 21' and 38° 30' east longitude and 38° 17' and 39° 11' north latitude. It has an area of 9281 km² consisting of 8455 km² of land and 826 km² dam site. The province's land forms consist of mountainous areas, plains and plateaus. Its main river is Euphrate and its branches. Having an area of 86 km² Lake Hazar is a tectonic lake extending southwest-northeast direction. As Elazığ province is surrounded by such significant dams as Keban, Kıralkızı and Özlüce it includes rather different aquatic and semi-aquatic habitats with different altitudes.

The Helophoridae is a large family consisting of a single subfamily only of a single genus, *Helophorus*. This genus comprises more than 190 species (Incekara *et al.*, 2004a), represented in 3 major zoogeographical regions (Palearctic, Nearctic and Ethiopian) (Balfour-Browne, 1958; Chiesa, 1964; Angus, 1988, 1992, 1998; Smetana, 1985; Hansen, 1987, 1999, 2004; Hebauer, 1994).

The Hydrophilidae is a large family, represented in all parts of the world and consisting of 172 genera and about 2716 known species. Of the four subfamilies recognized only two (Hydrophilinae, Sphaeridiinae) are recorded from

the Palearctic region (Balfour-Browne, 1958; Chiesa, 1964; Gentili and Chiesa, 1975; Wooldridge, 1978; Gentili, 1974, 1979, 1981, 1988, 1991, 2000; Smetana, 1985; Hansen, 1987, 1999, 2004; Schödl, 1991, 1993, 1997, 1998; Hebauer, 1994; Hebauer and Klausnitzer, 1998; Gentili and Whitehead, 2000; Mart *et al.*, 2003). So far, 48 species and two subspecies of Helophoridae, 19 genera and 99 species of Hydrophilidae have been recorded from Turkey (Darılmaz and İncekara, 2011; Aydoğan, 2011; Türken, 2011; Yılmaz, 2011). The aim of this study is to determine Helophoridae and Hydrophilidae in Elazığ province, of which only one species has been known so far and thereby to contribute to the Turkish aquatic Coleoptera fauna

MATERIALS AND METHODS

In summer seasons of 2011 and 2012, specimens of Hydrophilidae were collected by means of a sieve, perforated ladle and net with 1 mm pores from the shallow areas of various springs, streams, lakes and ponds in Elazığ province of Turkey. Firstly collected samples were killed by ethyl acetate in the research area and then aedeagophores of the beetles were dissected under a stereo microscope in the laboratory. Photographs of the main diagnostic characters were made using Olympus SZX16 microscope. All samples have been deposited in the Zoological Museum of Department of Biology, Bingöl University.

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Family: Helophoridae

Genus: *HELOPHORUS* Fabricius, 1775

Subgenus: *Helophorus* Fabricius, 1775

1. *Helophorus syriacus* Kuwert, 1885

Material examined

Elazığ: Karakoçan, Akpınar, 39°03'36N 40°05'40E, 1635 m, 24.V.2012, 7♂ 2♀, det., A. Mart; Yücekonak, 39°01'43N 40°08'18E, 1575 m, 24.V.2012, 5♂ 4♀, det., A. Mart; Sarıbaşak, 39°05'04N 40°08' 26E, 1531 m, 24.V.2012, 1♂ 2♀, det., A. Mart; Yenikaya 38°57'24N 40°12'43E, 1611 m, 25.V.2012, 1♂ 1♀, det., A. Mart; Bulgurcuk, 38°57'24N 40°10'59E, 1611 m, 25.V.2012, 1♂ 1♀, det., A. Mart. Kovancılar, Gümüş kaynak, 39°36'19N 39°43'57E, 888 m, 25.V.2012, 7♂ 14♀, det., A. Mart; Emirhan, 38°46'36N 39°48'30E, 1476 m, 25.V.2012, 22♂ 6♀, det., A. Mart; Maden, Kartaldere, 38°33'48N 39°26'16E, 1429 m, 25.V.2012, 10♂ 5♀, det., A. Mart. Palu, Yılbaşı, 38°52'13N 40° 10'04E, 1757 m, 25.V.2012, 2♂ 2♀, det., A. Mart; Karasungur, 38°48'18N 40°04'38E, 1353 m, 25.V. 2012, 4♂ 5♀, det., A. Mart. Sivrice, Yedikardeş, 38°24'08N 39°17'43E, 1844 m, 19.VI.2012, 20♂ 23♀, det., A. Mart.

Distribution in Turkey

Adana, Antakya, Amanos Mountains, Balıkesir, Bingöl, Çorum, Denizli, Diyarbakır, Erzincan, Gaziantep, İzmir, Mardin, Muş, Samsun and Tokat (Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

2. *Helophorus aquaticus* (Linnaeus, 1758)

Material examined

Elazığ: Karakoçan, Söğütlü, 38°53'51N 40°06'15E, 1287 m, 24.V.2012, 3♂ 3♀, det., A. Mart; Altınoluk, 38°54'00N 40°06'46E, 1228 m, 24.V.2012, 17♂ 12♀, det., A. Mart; Çan, 39°09'10N 40°12'37E, 1321 m, 24.V.2012, 2♂ 6♀, det., A. Mart; Akpınar, 39° 04'06N 40°06'39E, 1637 m, 24.V.2012, 14♂ 11♀, det., A. Mart; Yücekonak, 39°01'43N 40°08'18E, 1575m, 24.V.2012, 27♂ 21♀, det., A. Mart; Sarıbaşak, 39°05'04N 40°08'26E,

1531 m, 24.V.2012, 3♂, det., A. Mart; Çavuşoğlu, 39°01'12N 40°05'59E, 1359 m, 24.V.2012, 11♂ 14♀, det., A. Mart. Palu, Karasungur, 38° 48' 18N 40°04'38E, 1353m, 25.V.2012, 1♂ 1♀, det., A. Mart; Yılbaşı, 38°52'13N 40°10'04E, 1757m, 25.V.2012, 4♂, det., A. Mart.

Distribution in Turkey

Adana, Aksaray, Ankara, Bayburt, Bilecik, Bingöl, Bitlis, Bursa, Bolu, Çorum, Diyarbakır, Erzincan, Erzurum, Hakkâri, Giresun, Gümüşhane, Isparta, İçel, İstanbul, Kars, Kastamonu, Kayseri, Kırklareli, Mardin, Muş, Ordu, Sakarya, Samsun, Sinop, Sırnak and Van (İncekara, 2004; Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

3. *Helophorus grandis* (Illiger, 1798)

Material examined

Elazığ: Karakoçan, Elazığ road 30. km, 38°57'49N 40°13'07E, 1752 m, 24.V.2012, 1♂, det., A. Mart; Bulgurcuk, 38°57'24N 40°10'59E, 1161 m, 25.V.2012, 1♂, det., A. Mart. Kovancılar, Gümüş kaynak, 38°36'19N 39°43'57E, 888 m, 25.V.2012, 2♂ 2♀, det., A. Mart.

Distribution in Turkey

Antalya, Tokat and Bitlis (Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

Subgenus: *Empleurus* Hope, 1838

4. *Helophorus nubilus* Fabricius, 1776

Material examined

Elazığ: Karakoçan, Kurudibi, 39°09'19N 40°09'01E, 1247 m, 24.V. 2012, 1♂, det., A. Mart; Elazığ road 30. km, 38°57'49N 40°13'07E, 1752 m, 24.V.2012, 1♂ 1♀, det., A. Mart.

Distribution in Turkey

Adana, Ağrı, Amanos Mountains, Ankara, Bayburt, Bingöl, Bitlis, Erzincan, Erzurum, Giresun,

Gümüşhane, Hakkâri, Isparta, İçel, İstanbul, İzmir, Kırklareli, Konya, Muğla, Muş, Ordu, Sakarya, Sırnak, Tokat, Van and Zonguldak (İncekara, 2004; Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

Subgenus: *Eutrichelophorus* Sharp, 1915

5. *Helophorus micans* Falderman, 1835

Material examined

Elazığ: Karakoçan, Kalkankaya, 38°56'42N 40°05'55E, 1153 m, 24.V. 2012, 2♂ 2♀, det., A. Mart; Altınoluk, 38°54'00N 40°06'46E, 1228 m, 24.V.2012, 2♂ 2♀, det., A. Mart; Yücekonak, 39°01'43N 40°08'18E, 1575 m, 24.V.2012, 13♂ 24♀, det., A. Mart; Çavuşoğlu, 39°01'12N 40°05'59E, 1359 m, 24.V.2012, 2♂ 1♀, det., A. Mart; Akpınar, 39°04' 06N 40°06'39E, 1637 m, 24.V.2012, 1♂ 1♀, det., A. Mart; Bulgurcuk, 38°57'24N 40° 10'59E, 1611m, 25.V.2012, 8♂ 3♀, det., A. Mart. Kovancılar, Emirhan, 38°46'17N 39°49'05E, 1411 m, 25.V.2012, 1♂, det., A. Mart. Maden, Kartaldere, 38°33'48N 39°26'16E, 1429 m, 25.V. 2012, 8♂ 1♀, det., A. Mart.

Distribution in Turkey

Adana, Ağrı, Aksaray, Bayburt, Bingöl, Hatay, Balıkesir, Burdur, Çanakkale, Çorum, Diyarbakır, Erzincan, Erzurum, Giresun, İçel, İzmir, Kayseri, Muş, Samsun, Tokat, Trabzon, Tuz Lake and Van Lake (İncekara, 2004; Mart, 2005; Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

Subgenus *Atracthelophorus* Kuwert, 1886

6. *Helophorus daedalus* d'Orchymont, 1932

Material examined

Elazığ: Karakoçan, Karakoçan dam, 38°57'30N 40°03'22E, 1100 m, 16. VI.2012, 1♂ 1♀, det., A. Mart; Bulgurcuk, 38°55'22N 40°13'00E, 1763 m, 16.VI.2012, 2♂ 4♀, det., A. Mart; Bahçecik, 38°53'16N 40°05'15E, 1147 m, 16.VI.2012, 4♂ 4♀, det., A. Mart.

Distribution in Turkey

Ankara, Bayburt, Bingöl, Bitlis, Çorum, Diyarbakır, Erzincan, Erzurum, Giresun, Gümüşhane, Hakkâri, İzmir, Kayseri, Muş, Ordu, Samsun, Şırnak, Tokat and Van (Mart, 2005; Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

7. *Helophorus abeillei* Guillebeau, 1896

Material examined

Elazığ: Karakoçan, Bulgurcuk, 38°57'24N 40°10'59E, 1611 m, 25.V. 2012, 1♂, det., A. Mart; Elazığ road 30. km, 38°57'49K 40°13'07D, 1752 m, 24.V.2012, 1♂ 1♀, det., A. Mart. Palu, Yılbaşı, 38°52'13N 40°10'04E, 1757 m, 25.V.2012, 1♂ 3♂, det., A. Mart.

Distribution in Turkey

Adana, Ağrı, Antalya, Bayburt, Bingöl, Bitlis, Erzincan, Erzurum, Gümüşhane, Hakkâri, Muş and Van (İncekara, 2004; Mart, 2005; Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

8. *Helophorus montenegrinus* Kuwert, 1885

Material examined

Elazığ: Karakoçan, Altınoluk, 38°55'15N 40°04'43E, 1152 m, 16.VI. 2012, 1♂, det., A. Mart; Bahçecik, 38°53'16N 40°05'15E, 1147 m, 16.VII.2012, 1♂, det., A. Mart.

Distribution in Turkey

Ankara, Balıkesir, Bolu, Bursa, Giresun, İçel, İstanbul, Kastamonu, Kırklareli, Ordu, Samsun, Sinop, Tokat, Trabzon and Van (Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

9. *Helophorus lewisi* Angus, 1985

Material examined

Elazığ: Karakoçan, Akpınar, 39°03'36N

40°05'40E, 1635 m, 24.V.2012, 3♂ 2♀, det., A. Mart; Çavuşoğlu, 39°01'12N 40°05'59E, 1359m, 24.V.2012, 2♂ 9♀, det., A. Mart.

Distribution in Turkey

Bayburt, Bingöl, Bitlis, Çorum, Diyarbakır, Erzincan, Giresun, Gümüşhane, Hatay, Kayseri, Muş, Ordu, Samsun, Şırnak and Tokat (Mart, 2005; Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

Subgenus: *Rhopalohelophorus* Kuwert, 1886
10. *Helophorus frater* d'Orchymont, 1926

Material examined

Elazığ: Karakoçan, Kalkankaya, 38°56'42N 40°05'55E, 1153 m, 24.V. 2012, 2♂ 3♀, det., A. Mart; Yalıntaş, 39°02'44N 39°58'42E, 1225 m, 24.V.2012, 7♂ 6♀, det., A. Mart; Bahçecik, 38°53'16N 40°05'15E, 1147 m, 16.VI.2012, 2♂ 4♀, det., A. Mart; Karapınar, 38°58'31N 40°00'41E, 1081 m, 17.VII.2012, 6♂ 19♀, det., A. Mart. Kovancılar, Gümüş kaynak, 38°36'19N 39°43'57E, 888 m, 25.V.2012, 1♂ 1♀, det., A. Mart. Palu, Seydili stream, 38°42'34N 39°53'00E, 901 m, 19.VI.2012, 3♂ 2♀, det., A. Mart.

Distribution in Turkey

Bayburt, Bingöl, Erzincan, Erzurum, Giresun, Gümüşhane, İzmir, Kayseri, Muş, Samsun, Tokat and Van (Mart, 2005; Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

11. *Helophorus hilaris* Sharp, 1916

Material examined

Elazığ: Karakoçan, Akpınar, 39°03'36N 40°05'40E, 1635 m, 24.V.2012, 1♂ 1♀, det., A. Mart; Karakoçan dam, 38°57'30N 40°03'22E, 1100 m, 16.VI.2012, 2♂ 5♀, det., A. Mart.

Distribution in Turkey

Ağrı, Bayburt, Bingöl, Bitlis, Diyarbakır,

Erzincan, Erzurum, Giresun, Gümüşhane, Hakkâri, Kayseri, Mardin, Muş, Ordu, Samsun, Tokat, Şırnak and Van (Mart, 2005; Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

12. *Helophorus discrepans* Rey, 1885

Material examined

Elazığ: Karakoçan, Kalkankaya, 38°56'42N 40°05'55E, 1153 m, 24.V. 2012, 1♂, det., A. Mart; Elazığ road 30. km, 38°57'49N 40°13'07E, 1752 m, 24.V.2012, 1♂, det., A. Mart.

Distribution in Turkey

Ağrı, Artvin, Ankara, Antalya, Bayburt, Bingöl, Bitlis, Bolu, Çorum, Erzurum, Erzincan, Giresun, Gümüşhane, Hakkâri, Kayseri, Muş, Ordu, Tokat, Trabzon, Van and Yozgat (Mart, 2005; Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

13. *Helophorus pallidipennis* Mulsant and Wachanru, 1852

Material examined

Elazığ: Karakoçan, Çavuşoğlu, 39°01'12N 40°05'59E, 1359 m, 24.V. 2012, 1♂, det., A. Mart; Yücekonak, 39°01'43N 40°08'18E, 1575 m, 24.V.2012, 1♂, det., A. Mart.

Distribution in Turkey

Adana, Ankara, Bingöl, Bitlis, Çanakkale, Diyarbakır, Erzincan, Erzurum, Içel, İzmir, Karaman, Kayseri, Muş, Şırnak and Van (Mart, 2005; Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

14. *Helophorus paraminutus* Angus, 1986

Material examined

Elazığ: Karakoçan, Karakoçan dam,

38°57'30N 40°03'22E, 1100 m, 16. VI.2012, 2♂ 4♀, det., A. Mart.

Distribution in Turkey

Ağrı, Antalya, Bingöl, Erzincan, Muş and Van (Mart, 2005; Darılmaz and İncekara, 2011; Taşar, 2011).

Remark

Newly recorded from Elazığ province.

Family: Hydrophilidae

Subfamily: Hydrophilinae

Genus: *ANACAENA* Thomson, 1859

1. *Anacaena limbata* (Fabricius, 1792)

Material examined

Elazığ: Karakoçan, Kurudibi, 39°09'19N 40°09'01E, 1247 m, 24.V. 2012, 3♂ 2♀, det., A. Mart; Karaçan göleti, 38°08'42N 40°14'51E, 1562 m, 17.VII.2012, 1♂ 2♀, det., A. Mart; Alayağmur, 38°53'10N 39° 52'54E, 921 m, 26.VIII. 2012, 1♂ 1♀, det., A. Mart; Yoğunağaç, 38°58'14N 39°53'33E, 1006 m, 26.VIII.2012, 1♂ 3♀, det., A. Mart. Kovancılar, Bayramyazı, 38°48'15N 39°59'24E, 1116 m, 26.VIII.2012, 3♂ 2♀, det., A. Mart.

Distribution in Turkey

Ankara, Bayburt, Bingöl, Bitlis, Çorum, Giresun, Gümüşhane, Muş, Ordu, Sivas, Trabzon, Yozgat and Van (Mart, 2005, 2009; Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011).

Remark

Newly recorded from Elazığ province.

2. *Anacaena lutescens* (Stephens, 1829)

Material examined

Elazığ: Karakoçan Karakoçan dam, 38°57'30N 40°03'22E, 1100 m, 16. VI.2012, 3♀, det., A. Mart; Altınoluk, 38°55'15N 40°04'43E, 1152 m, 17.VI.2012, 1♂ 3♀, det., A. Mart; Kurudibi, 39°09'19N 40°09'01E, 1247 m, 17.VI.2012, 3♂ 2♀, det., A. Mart; Karapınar, 38°58'31N 40° 00'41E, 1081m, 17.VI.2012, 2♂, det., A. Mart; Kucak, 39°

08'31N 40°07'12E, 1353 m, 17.VI.2012, 3♂ 6♀, det., A. Mart; Karaçan pond, 38°08'42N 40°14'51E, 1562 m, 17.VII.2012, 1♂ 4♀, det., A. Mart; Akpınar, 39°04'06N 40°06'39E, 1637 m, 17.VII. 2012, 3♂ 4♀, det., A. Mart. Maden, Hatunköy, 38°27'21N 39° 30'03E, 1250 m, 19.VI.2012, 2♂ 5♀, det., A. Mart; Işıktepe, 38°27'48N 39°31'23E, 1237 m, 19.VII.2012, 3♂ 1♀, det., A. Mart.

Distribution in Turkey

Artvin, Balıkesir, Bayburt, Bilecik, Bingöl, Bursa, Çanakkale, Erzincan, Giresun, Gümüşhane, Kocaeli, Ordu, Sivas and Trabzon (İncekara, 2004; Mart, 2005, 2009; Darılmaz and İncekara, 2011; Bayram, 2011).

Remark

Newly recorded from Elazığ province.

3. *Anacaena rufipes* (Guillebeau, 1896)

Material examined

Elazığ: Karakoçan, Pilavtepe, 39°08'03N 40°11'05E, 1489 m, 25.V. 2012, 6♂ 12♀, det., A. Mart; Yücekonak, 39°01'40N 40°08'33E, 1614 m, 24.V.2012, 3♂ 2♀, det., A. Mart; Mahmutlu, 38°51'42N 39°58'34E, 1043 m, 17.VI.2012, 5♂ 3♀, det., A. Mart; Akpınar, 39°04'06N 40°06'39E, 1637 m, 25.VIII.2012, 4♂ 3♀, det., A. Mart; Yoğunağaç, 38°58'14N 39°53'33E, 1006 m, 27.IX.2012, 2♂ 2♀, det., A. Mart. Maden, Dutpınar, 38°24' 47N 39°36'43E, 1182 m, 19.VI.2012, 1♂ 1♀, det., A. Mart. Sivrice, Sivrice parting of the ways, 38°27'52N 39°16'46E, 1258 m, 25.V.2012, 1♀, det., A. Mart.

Distribution in Turkey

Bayburt, Bingöl, Bitlis, Erzincan, Giresun, Gümüşhane, Isparta, İstanbul, Muş, Ordu, Samsun, Sivas, Tokat, Trabzon and Van (İncekara, 2004; Mart, 2005, 2009; Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

Genus: *PARACYMUS* Thomson, 1867

1. *Paracymus chalceolus* (Solsky, 1874)

Material examined

Elazığ: Karakoçan, Yoğunağaç, 38°58'53N 39°53'34E, 1070 m, 17.VII.2012, 13♂ 9♀, det., A. Mart; Kurudibi, 39°09'19N 40°09'01E, 1247 m, 25.VIII.2012, 6♂ 2♀, det., A. Mart; 39°09'19N 40°09'01E, 1247 m, 25.VIII.2012, 21♂ 14♀, det., A. Mart. Maden, Kartaldere, 38°33'15N 39°35'55E, 1409 m, 19.VI.2012, 19♂ 7♀, det., A. Mart; 38°33'15N 39° 35'55E, 1409 m, 17.VII.2012, 3♂ 2♀, det., A. Mart; Plajköy, 38°29'57N 39°30'20E, 1242 m, 20.VII.2012, 2♂ 3♀, det., A. Mart. Sivrice, Sivrice parting of the ways, 38°27'52N 39°16'46E, 1258 m, 25.V.2012, 4♂ 8♀, det., A. Mart; 38°27'52N 39° 16'46E, 1258 m, 19.VI.2012, 3♂ 3♀, det., A. Mart.

Distribution in Turkey

Bayburt, Bingöl, Bitlis, Muş and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Türken, 2011).

Remark

Newly recorded from Elazığ province.

2. *Paracymus scutellaris* (Rosenhauer, 1856)

Material examined

Elazığ: Karakoçan, Yoğunağaç, 38°58'53N 39°53'34E, 1070 m, 17.VI.2012, 14♂ 17♀, det., A. Mart; Karasakal, 38°57'15N 39°53'34E, 1017 m, 17.VI.2012, 2♂ 2♀, det., A. Mart.

Distribution in Turkey

Bayburt, Bingöl, Gümüşhane, İçel, Muğla, Ordu, Sakarya and Samsun (Darılmaz and İncekara, 2011).

Remark

Newly recorded from Elazığ province.

Genus: *BEROSUS* Leach, 1817

Subgenus: *Berosus* Leach, 1817

1. *Berosus signaticollis* (Charpentier, 1825)

Material examined

Elazığ: Karakoçan, Sarıbaşak, 39°05'04N

40°08'26E, 1531 m, 24.V.2012, 2♂ 6♀, det., A. Mart; Başyurt, 38°18'45N 39°59'23E, 1108 m, 25.V.2012, 3♂ 3♀, det., A. Mart; Çan, 39°09'10N 40°12'37E, 1321 m, 24.V.2012, 1♂ 1♀, det., A. Mart; Hamurkesen, 39°04'05N 40°06'38E, 1630 m, 17.VI.2012, 4♂ 9♀, det., A. Mart; Yücekonak, 39°01'40N 40°08'33E, 1614m, 17.VII.2012, 1♂, det., A. Mart.

Distribution in Turkey

Amasya, Ankara, Antalya, Aydın, Bayburt, Bingöl, Erzincan, Isparta, İzmir, Kars, Kastamonu, Kayseri, Ordu, Samsun, Sivas and Tokat (Darılmaz and İncekara, 2011; Bayram, 2011; Yılmaz, 2011)

Remark

Newly recorded from Elazığ province.

Subgenus: *Enoplurus* Hope, 1838

2. *Berosus spinosus* (Steven, 1808)

Material examined

Elazığ: Kovancılar, Emirhan, 38°46'17N 39°49'05E, 1411 m, 25.V.2011, 2♂, det., A. Mart; 38°46'36N 39°48'30E, 1476m, 27.VI.2012, 2♂, det., A. Mart.

Distribution in Turkey

Adana, Afyon, Aksaray, Ankara, Antalya, Aydın, Bayburt, Bingöl, Bitlis, Çorum, Denizli, Edirne, Elazığ, Erzincan, İçel, İzmir, Kars, Kayseri, Kırşehir, Malatya, Muş, Ordu, Samsun, Sivas and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011).

Genus: *CHAETARTHRIA* Stephens, 1835

1. *Chaetarthria seminulum* (Herbst, 1797)

Material examined

Elazığ: Maden, Kaşlıca, 38°30'17N 39°41'26E, 1743 m, 19.VI.2012, 1♀, det., A. Mart; 38°30'17N 39°41'26E, 1743 m, 29.IX.2012, 3♀, det., A. Mart.

Distribution in Turkey

Aydın, Balıkesir, Bayburt, Bilecik, Bursa, Çanakkale, Erzincan, Erzurum, Giresun, Gümüşhane, İstanbul, İzmir, Muğla, Ordu, Rize,

Sakarya, Tokat, Trabzon, Samsun, Sivas and Van (Darılmaz and İncekara, 2011; Bayram, 2011; Türken, 2011).

Remark

Newly recorded from Elazığ province.

Genus: *CYMBIODYTA* Bedel, 1881

1. *Cymbiodyta marginella* (Fabricius, 1792)

Material examined

Elazığ: Karakoçan, Kurudibi, 39°09'19N 40°09'01E, 1247 m, 24.V. 2012, 16♂ 24♀, det., A. Mart; 39°09'19N 40°09'01E, 1247 m, 17.VI.2012, 6♂ 17♀, det., A. Mart; 39°09'19N 40°09'01E, 1247 m, 19.VII.2012, 13♂ 9♀, det., A. Mart; Karaçan pond, 39°08'42N 40°14'51E, 1562 m, 19.VII.2012, 2♂ 1♀, det., A. Mart.

Distribution in Turkey

Bitlis, Isparta, Kayseri, Muş, Samsun and Sivas (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

Genus: *ENOCHRUS* Thomson, 1859

Subgenus: *Lumetus* Zaitzev, 1908

1. *Enochrus bicolor* (Fabricius, 1792)

Material examined

Elazığ: Karakoçan, Çan parting of the ways, 39°58'16N 40°01'09E, 1093 m, 24.V.2012, 1♂, det., A. Mart. Maden, Gezin, 38°29'49N 39°30'18E, 1234 m, 04.VI. 2011, 8♂ 9♀, det., A. Mart; Işıktepe, 38°27'48N 39°31'23E, 1237 m, 19.VII.2012, 1♂, det., A. Mart; Plajköy, 38°29'57N 39°30'20E, 1242 m, 20.VII.2012, 4♂ 2♀, det., A. Mart; 38°29'57N 39°30'20E, 1242 m, 27.VIII.2012, 13♂ 9♀, det., A. Mart; 38°29'57N 39°30'20E, 1242 m, 27.IX.2012, 14♂ 19♀, det., A. Mart. Sivrice, Sivrice parting of the ways, 38°27'47N 39°16'54E, 1242 m, 19.VI.2012, 3♂ 2♀, det., A. Mart.

Distribution in Turkey

Aksaray, Ankara, Antalya, Bitlis, Denizli, Edirne, Erzincan, İçel, İzmir, Kars, Kayseri,

Kırşehir, Muş, Ordu, Sivas and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011).

Remark

Newly recorded from Elazığ province.

2. *Enochrus fuscipennis* (Thomson, 1884)

Material examined

Elazığ: Karakoçan, Söğütlü, 38°55'16N 40°04'53E, 1161 m, 24.V.2012, 9♂ 3♀, det., A. Mart; Altınoluk, 38°54'00N 40°06'46E, 1228 m, 24.V.2012, 2♂ 3♀, det., A. Mart; Yücekonak, 39°02'12N 40°08'22E, 1676 m, 24.V.2012, 2♂ 3♀, det., A. Mart; 39°02' 12N 40°08'22E, 1676 m, 17.VII.2012, 4♂ 4♀, det., A. Mart; 39°01'49N 40°08'20E, 1600m, 17.VI.2012, 4♂ 2♀, det., A. Mart. Kovancılar, Emirhan, 38°46'17N 39°49'05E, 1411 m, 24. V.2012, 2♂, det., A. Mart; Çaybağı parting of the ways, 38°41'26N 39°48'31E, 1031 m, 26. VIII.2012, 2♂ 2♀, det., A. Mart; Taşören, 38°42'59N 39°46'41E, 1154 m, 26.VIII.2012, 8♂ 2♀, det., A. Mart. Maden, Gezin, 38°29'49N 39°30'18E, 1234 m, 04.VI.2011, 2♂ 1♀, det., A. Mart; Kavak, 38°27'39N 39°30'05E, 1238 m, 04.VI.2012, 2♂ 2♀, det., A. Mart; Hanevleri, 38°24'48N 39°34'13E, 1364 m, 19.VI.2012, 9♂ 4♀, det., A. Mart; Hatunköy, 38°27'21N 39° 30'03E, 1250m, 19.VI.2012, 2♂ 2♀, det., A. Mart; Kartaldere, 38°33'15N 39°35'55E, 1409 m, 17.VI.2012, 19♂ 17♀, det., A. Mart. Palu, Seydili stream, 38°42'34N 39°53'00E, 901 m, 24. V.2012, 6♂ 7♀, det., A. Mart; 38°42'34N 39°53'00E, 901 m, 26.VIII.2012, 1♂ 1♀, det., A. Mart. Sivrice, Sivrice parting of the ways, 38°27'47N 39°16'54E, 1242 m, 25.V.2012, 11♂ 4♀, det., A. Mart; 38°27'47N 39°16'54E, 1242 m, 19.VI.2012, 13♂ 10♀, det., A. Mart; 38°27' 47N 39°16'54E, 1242 m, 19.VII.2012, 3♂, det., A. Mart; 38°27'47N 39°16'54E, 1242 m, 26. VIII.2012, 1♂ 1♀, det., A. Mart; Alaattin, 38°22'44N 39°19'11E, 1617m, 19.VII.2012, 1♂ 1♀, det., A. Mart; Dedeyolu, 38°28'33N 39°12'30E, 1083 m, 27.VIII.2012, 12♂ 11♀, det., A. Mart; 38°28'33N 39°12'30E, 1083 m, 28.IX.2012, 4♂ 13♀, det., A. Mart.

Distribution in Turkey

Artvin, Aksaray, Ankara, Balıkesir, Bayburt, Bingöl, Bitlis, Bursa, Çanakkale, Çorum, Denizli, Erzincan, Erzurum, Giresun, Gümüşhane, Isparta, İzmir, Kayseri, Muş, Ordu, Rize, Sivas and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

3. *Enochrus halophilus* (Bedel, 1878)*Material examined*

Elazığ: Karakoçan, Akpınar, 39°04'06N 40°06'39E, 1637 m, 24.V.2012, 1♂ 1♀, det., A. Mart; Yoğunağaç, 38°58'53N 39°53'34E, 1070 m, 17.VI.2012, 1♂ 4♀, det., A. Mart; Karakoçan dam, 38°57'30K 40°03'22D, 1100 m, 25.VIII.2012, 1♂ 1♀, det., A. Mart.

Distribution in Turkey

Afyon, Bitlis, Isparta, Kayseri, Muş and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

4. *Enochrus ochropterus* (Marsham, 1802)*Material examined*

Elazığ: Karakoçan, Akpınar, 39°03'36N 40°05'40E, 1635 m, 24.V. 2012, 2♂ 1♀, det., A. Mart; Altınoluk, 38°55'15N 40°04'43E, 1152 m, 16.VI.2012, 4♂ 7♀, det., A. Mart.

Distribution in Turkey

Bitlis, Bolu and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Türken, 2011).

Remark

Newly recorded from Elazığ province.

5. *Enochrus politus* (Küster, 1849)*Material examined*

Elazığ: Karakoçan, Kuşbayırı, 39°09'34N

40°13'45E, 1367 m, 17.VII. 2012, 9♂ 4♀, det., A. Mart; 39°08'41N 40°14'43E, 1564 m, 25.VIII.2012, 2♂ 3♀, det., A. Mart; Yoğunağaç, 38°58'53N 39°53'34E, 1070 m, 17.VII.2012, 1♂ 1♀, det., A. Mart. Kovancılar, Emirhan, 38°46'17N 39°49'05E, 1411 m, 19.VII.2012, 2♂ 4♀, det., A. Mart. Maden, Kaşlıca, 38°30'17N 39°41'26E, 1743 m, 19.VI.2012, 13♂ 8♀, det., A. Mart; 38°30' 17N 39°41'26E, 1743 m, 18.VII.2012, 14♂ 9♀, det., A. Mart. Palu, Seydili stream, 38°42' 34N 39°53'00E, 901 m, 19.VII.2012, 6♂ 8♀, det., A. Mart; 38°52'13N 40°10'04E, 1757 m, 25.VIII.2012, 2♂ 2♀, det., A. Mart. Sivrice, Yedikardeş, 38°24'08N 39°17'43E, 1844 m, 19. VII.2012, 3♂ 2♀, det., A. Mart; Alaattin, 38°22'44N 39°19'11E, 1617 m, 19.VII.2012, 2♂ 7♀, det., A. Mart.

Distribution in Turkey

Bitlis, Muş, Uşak and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Türken, 2011).

Remark

Newly recorded from Elazığ province.

6. *Enochrus quadripunctatus* (Herbst, 1797)*Material examined*

Elazığ: Karakoçan, Yücekonak, 39°01'49N 40°08'20E, 1600 m, 17.VI. 2012, 3♂ 2♀, det., A. Mart; Karasakal, 38°57'15N 39°53'34E, 1017m, 17.VI.2012, 13♂ 11♀, det., A. Mart; Kurudibi, 39°09'19N 40°09'01E, 1247 m, 17.VI.2012, 2♂ 7♀, det., A. Mart; Üçbudak, 38°59'52N 39°55'48E, 1212 m, 17.VI.2012, 4♂ 4♀, det., A. Mart. Maden, Kartaldere, 38°33'15N 39°35'55E, 1409 m, 25.V.2012, 3♂ 9♀, det., A. Mart; 38°33'15N 39°35'55E, 1409 m, 19.VI.2012, 3♂ 2♀, det., A. Mart; 38°33'15N 39°35'55E, 1409 m, 17.VII.2012, 2♂ 2♀, det., A. Mart; Hatunköy, 38°27'21N 39°30'03E, 1250 m, 19.VI.2012, 2♂ 2♀, det., A. Mart; Işıktepe, 38°27'48N 39°31'23E, 1237 m, 19.VII.2012, 15♂ 3♀, det., A. Mart.

Distribution in Turkey

Antalya, Bingöl, Bitlis, Denizli, Edirne, Isparta, Ordu, Sivas and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

7. *Enochrus testaceus* (Fabricius, 1801)

Material examined

Elazığ: Karakoçan, Kurudibi, 39°09'19N 40°09'01E, 1247 m, 17.VI. 2012, 1♀, det., A. Mart.

Distribution in Turkey

Balıkesir, Bitlis, Çanakkale, Isparta, İçel, Kayseri Muş and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

Genus: *HELOCHARES* Mulsant, 1844

Subgenus: *Helochares* Mulsant, 1844

1. *Helochares lividus* (Forster, 1771)

Material examined

Elazığ: Karakoçan, Altınoluk, 38°55'16N 40°04'43E, 1152 m, 25.VIII. 2012, 13♂ 19♀, det., A. Mart; Çatal road, 39°01'27N 40°04'20E, 1266 m, 25.VIII.2012, 1♂ 1♀, det., A. Mart; 39°01'27N 40°04'20E, 1266 m, 28.IX.2012, 1♂, det., A. Mart; Yoğunağaç, 38°58'14N 39°53'33E, 1006 m, 26.VIII.2012, 1♂ 1♀, det., A. Mart. Kovancılar, Çaybağı parting of the ways, 38°41'26N 39°48'31E, 1031 m, 26.VIII.2012, 18♂ 14♀, det., A. Mart; Bayramyazı, 38°48'15N 39°59'24E, 1116 m, 26.VIII.2012, 2♂ 1♀, det., A. Mart.

Distribution in Turkey

Adana, Aksaray, Ankara, Bingöl, Bitlis, Çorum, Erzurum, Edirne, Isparta, İzmir, Muş, Ordu, Samsun, Sivas, Tokat and Trabzon (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

2. *Helochares obscurus* (O. F. Müller, 1776)

Material examined

Elazığ: Karakoçan, Yücekonak, 39°01'40N

40°08'33E, 1614 m, 24.V. 2012, 1♂ 9♀, det., A. Mart; Kurudibi, 39°09'19N 40°09'01E, 1247 m, 24.V.2012, 3♂ 2♀, det., A. Mart; Kucak, 39°08'31N 40°07'12E, 1353 m, 17.VI.2012, 1♂ 3♀, det., A. Mart; Kuşbayırı, 39°08'41N 40°14'43E, 1564 m, 25.VIII.2012, 3♂ 4♀, det., A. Mart.

Distribution in Turkey

Adana, Ankara, Balıkesir, Bayburt, Bursa, Çanakkale, Bingöl, Giresun, Isparta, İzmir, Kayseri, Sakarya, Ordu, Samsun and Sivas (İncekara and Darılmaz, 2011; Bayram, 2011; Yılmaz, 2011)

Remark

Newly recorded from Elazığ province.

Genus: *HYDROBIUS* Leach, 1815

1. *Hydrobius fuscipes* (Linnaeus, 1758)

Material examined

Elazığ: Karakoçan, Altınoluk, 38°55'15N 40°04'43E, 1152 m, 16.VI. 2012, 2♂ 3♀, det., A. Mart; Karakoçan dam, 38°57'30N 40°03'22E, 1100 m, 17.VI.2012, 1♂ 1♀, det., A. Mart; Yoğunağaç, 38°58'53N 39°53'34E, 1070 m, 17.VI.2012, 1♂ 1♀, det., A. Mart; Hamurkesen, 39°04'05N 40°06'38E, 1630 m, 17.VI.2012, 1♂ 1♀, det., A. Mart; Üçbudak, 38°59'52N 39°55'48E, 1212 m, 17.VI.2012, 6♂ 2♀, det., A. Mart. Kovancılar, Emirhan, 38°46'17N 39°49'05E, 1411 m, 19.VII.2012, 2♂, det., A. Mart. Maden, Kartaldere, 38°33'15N 39°35'55E, 1409 m, 19.VI.2012, 8♂ 12♀, det., A. Mart; Kaşlıca, 38°30'17N 39°41' 26E, 1743 m, 18.VII.2012, 2♂ 2♀, det., A. Mart. Palu, Seydili deresi, 38°42'34N 39°53'00E, 901 m, 19.VII.2012, 1♂, det., A. Mart. Sivrice, parting of the ways, 38°27'52N 39°16'46E, 1258m, 25.V.2012, 1♀, det., A. Mart; Alaattin, 38°22'44N 39°19'11E, 1617 m, 19.VI.2012, 2♂ 2♀, det., A. Mart.

Distribution in Turkey

Ankara, Artvin, Bayburt, Bilecik, Bingöl, Bitlis, Çorum, Erzincan, Erzurum, Giresun, Gümüşhane, Isparta, İçel, İzmir, Kayseri, Konya, Muş, Ordu, Rize, Samsun, Sivas, Tokat, Trabzon and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

Genus: *HYDROCHARA* Berthold, 1827

1. *Hydrochara dichroma* (Fairmaire, 1892)

Material examined

Elazığ: Karakoçan, Akpınar, 39°04'06N 40°06'39E, 1637 m, 24.V.2012, 4♂ 3♀, det., A. Mart; Yücekonak, 39°01'40N 40°08'33E, 1614 m, 24.V.2012, 1♂ 1♀, det., A. Mart; Altınoluk, 38°54'00N 40°06'46E, 1228 m, 24.V.2012, 1♂ 1♀, det., A. Mart; Sagun, 38° 54'26N 39°55'49E, 1014 m, 17.VI.2012, 1♂ 2♀, det., A. Mart; Üçbudak, 38°59'52N 39°55' 48E, 1212 m, 17.VI.2012, 2♂ 1♀, det., A. Mart; Yenikaya, 38°58'40N 40°12'43E, 1735 m, 17.VII.2012, 1♂ 1♀, det., A. Mart; Kuşbayırı, 39°09'34N 40°13'45E, 1367m, 17.VI.2012, 1♂ 3♀, det., A. Mart. Kovancılar, Bayramyazı, 38°48'15N 39°59'24E, 1116 m, 26.VIII.2012, 1♂ 1♀, det., A. Mart. Maden, Kaşlıca, 38°30'17N 39°41'26E, 1743 m, 18.VII.2012, 12♂ 9♀, det., A. Mart; 38°33'04N 39°35'37E, 1408 m, 27.VIII.2012, 2♂ 1♀, det., A. Mart; 38°33'04N 39°35'37E, 1408 m, 29.IX.2012, 2♂ 2♀, det., A. Mart; Işıktepe, 38° 27'48N 39°31'23E, 1237 m, 19.VII.2012, 3♂, det., A. Mart; Hanevleri, 38°24'48N 39°34'13E, 1364 m, 19.VII.2012, 3♂ 2♀, det., A. Mart. Palu, Yılbaşı, 38°52'13N 40°10'04E, 1757 m, 19.VII.2012, 4♂ 1♀, det., A. Mart.

Distribution in Turkey

Adana, Ankara, Amasya, Balıkesir, Bayburt, Bingöl, Çanakkale, Erzincan, Erzurum, Giresun, Gümüşhane, İstanbul, İzmir, Kayseri, Muş, Ordu, Rize, Samsun, Sivas, Tokat, Trabzon and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011).

Remark

Newly recorded from Elazığ province.

Genus: *LACCOBIUS* Erichson, 1837

Subgenus: *Dimorpholaccobius* Zaitzev, 1938

1. *Laccobius bipunctatus* (Fabricius, 1775)

Material examined

Elazığ: Karakoçan, MYO araound, 38°56'35N

40°03'00E, 1102 m, 16. VI.2012, 1♀, det., A. Mart. Kovancılar, Bayramyazı, 38°48'15N 39°59'24E, 1116 m, 29.IX. 2012, 1♀, det., A. Mart. Maden, Kartaldere, 38°33'15N 39°35'55E, 1409 m, 19.VI.2012, 1♂ 1♀, det., A. Mart. Sivrice, Sürek, 38°22'53N 39° 21'23E, 1457 m, 19.VI.2012, 1♂, det., A. Mart.

Distribution in Turkey

Afyon, Artvin, Bayburt, Bingöl, Bitlis, Bolu, Çorum, Erzincan, Erzurum, Giresun, Gümüşhane, Isparta, Kastamonu, Muş, Ordu, Sivas, Trabzon and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

2. *Laccobius halophilus* Gentili, 1982

Material examined

Elazığ: Kovancılar, Çaybağı, 38°40'37N 39°37'29E, 837 m, 26.VIII. 2012, 2♂ 2♀, det., A. Mart.

Distribution in Turkey

Antalya, Bayburt, Bingöl, Diyarbakır, Erzurum, Giresun, Mersin, Muğla and Kayseri (Mart, 2005, 2009; Darılmaz and İncekara, 2011).

Remark

Newly recorded from Elazığ province.

3. *Laccobius hindukuschi* Chiesa, 1966

Material examined

Elazığ: Kovancılar, Çaybağı, 38°40'37N 39°37'29E, 837 m, 26.VIII. 2012, 1♂ 4♀, det., A. Mart. Maden, Soğuksu araound, 38°24'06N 39°39'29E, 935 m, 20.VI.2011, 6♂ 2♀, det., A. Mart. Palu, Seydili stream, 38°42'53N 39°54'43E, 894 m, 26. VIII.2012, 1♂, det., A. Mart.

Distribution in Turkey

Adana, Adıyaman, Ankara, Antakya, Antalya, Artvin, Balıkesir, Bayburt, Bingöl, Bitlis, Burdur, Denizli, Diyarbakır, Erzincan, Erzurum, Gaziantep, Giresun, Gümüşhane, Isparta, İstanbul,

İzmir, Kastamonu, Kayseri, Mardin, Mersin, Muş, Ordu, Sivas, Tokat, Tunceli and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

4. *Laccobius obscuratus aegaeus* Gentili, 1974

Material examined

Elazığ: Karakoçan, Söğütlü, 38°53'51N 40°06'15E, 1287 m, 08.X.2011, 1♂ 1♀, det., A. Mart; Sagun, 38°54'26N 39°55'49E, 1014 m, 20.VII.2012, 2♂ 4♀, det., A. Mart; Karasakal, 38°56'27N 39°53'35E, 1102 m, 26.VIII.2012, 1♂ 2♀, det., A. Mart. Kovancılar, Bayramyazı, 38°48'15N 39°59'24E, 1116 m, 29.IX.2012, 2♂ 3♀, det., A. Mart. Maden, Soğuksu around, 38°25'10N 39°39'26E, 960 m, 20.VI.2011, 1♂ 7♀, det., A. Mart; Kaşlıca, 38°30'26N 39°41'43E, 1709 m, 09.IX.2011, 1♂, det., A. Mart; 38°30'17N 40°05'19E, 1743 m, 19.VI.2012, 2♂ 6♀, det., A. Mart; 38°30'17N 40°05'19E, 1743 m, 18.VII.2012, 9♂ 7♀, det., A. Mart; Dutpınar, 38°24'47N 39°36'43E, 1182 m, 19.VI.2012, 6♂ 8♀, det., A. Mart; Plajköy, 38°29'57N 39°30'20E, 1242 m, 29.IX.2012, 2♂ 2♀, det., A. Mart. Palu, Karasungur, 38°48'18N 40°04'38E, 1353 m, 19.VII.2012, 1♂ 9♀, det., A. Mart; Yılbaşı, 38°52'13N 40°10'04E, 1757 m, 19.VII.2012, 1♂ 4♀, det., A. Mart. Sivrice, Alaattin, 38°22'44N 39°19'11E, 1617 m, 19.VI.2012, 6♂ 9♀, det., A. Mart; Yedikardeş, 38°24'08N 39°17'43E, 1844 m, 19.VII.2012, 1♂ 3♀, det., A. Mart.

Distribution in Turkey

Adana, Ankara, Antalya, Artvin, Aydın, Balıkesir, Bayburt, Bingöl, Bilecik, Bitlis, Bolu, Burdur, Bursa, Çanakkale, Çorum, Denizli, Erzincan, Erzurum, Giresun, Gümüşhane, Isparta, İstanbul, İzmir, Kastamonu, Kayseri, Kırklareli, Kocaeli, Konya, Manisa, Mersin, Muğla, Muş, Niğde, Ordu, Osmaniye, Rize, Samsun, Sinop, Sivas, Tokat, Trabzon and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

5. *Laccobius sculptus* d'Orchymont, 1935

Material examined

Elazığ: Karakoçan, Bulgurcuk, 38°55'49N 40°06'35E, 1181 m, 08.VII. 2011, 11♂ 2♀, det., A. Mart; Karakoçan dam, 38°57'18N 40° 03'32E, 1120 m, 16.VI.2012, 5♂ 4♀, det., A. Mart; 38°57'30N 40°03'22E, 1100 m, 25.VIII.2012, 13♂ 16♀, det., A. Mart; Mahmutlu, 38°51'42N 39°58'34E, 1043 m, 17.VI.2012, 6♂ 2♀, det., A. Mart; Kuşçu, 38°49'48N 39°58'21E, 1065 m, 26.VIII.2012, 13♂ 11♀, det., A. Mart; 38°49'48N 39°58'21E, 1065 m, 27.IX.2012, 3♂ 3♀, det., A. Mart; Kırğıl, 38°54'36N 39°53'53E, 1056 m, 27.IX.2012, 1♂ 1♀, det., A. Mart. Kovancılar, Çaybağı, 38°40'37N 39°37'29E, 837 m, 26.VIII.2012, 1♂ 3♀, det., A. Mart. Maden, Soğuksu around, 38°24'06N 39°39'29E, 935 m, 20.VI.2011, 6♂ 7♀, det., A. Mart. Palu, Seydili stream, 38°42'34N 39°53'00E, 901 m, 19.VI.2012, 8♂ 2♀, det., A. Mart; 38°42'53N 39°54'43E, 894 m, 26.VIII.2012, 13♂ 18♀, det., A. Mart; 38°42'34N 39°53' 00E, 901 m, 28.IX.2012, 6♂ 9♀, det., A. Mart.

Distribution in Turkey

Bingöl, Bitlis, Diyarbakır, Muş and Şanlıurfa (Darılmaz and İncekara, 2011; Aydoğan, 2011).

Remark

Newly recorded from Elazığ province.

6. *Laccobius simulatrix* d'Orchymont, 1932

Material examined

Elazığ: Karakoçan, Sarıcan, 38°54'40N 40°10'07E, 1516 m, 20.VII. 2012, 8♂ 3♀, det., A. Mart. Kovancılar, Gümüşkaynak, 39°36'19N 39°43'57E, 888 m, 25.V. 2012, 1♂ 2♀, det., A. Mart; Çaybağı, 38°40'37N 39°37'29E, 837 m, 26.VIII.2012, 1♂ 4♀, det., A. Mart. Maden, Soğuksu around, 38°25'10N 39°39'26E, 960 m, 20.VI.2011, 9♂ 7♀, det., A. Mart; Plajköy, 38°29'57N 39°30'20E, 1242 m, 20.VII.2012, 17♂ 11♀, det., A. Mart; 38°29'57N 39°30'20E, 1242 m, 27.IX.2012, 1♂ 1♀, det., A. Mart. Palu, Seydili

stream, 38°42' 34N 39°53'00E, 901 m, 19.VI.2012, 4♂ 4♀, det., A. Mart. Sivrice, Sivrice parting of the ways, 38°28'16N 39°16'59E, 1238 m, 04.VI.2011, 1♂, det., A. Mart; 38°27'52N 39°16'46E, 1258 m, 19.VII.2012, 19♂ 12♀, det., A. Mart; 38°27'52N 39°16'46E, 1258 m, 27.VIII.2012, 14♂ 17♀, det., A. Mart; Yedikardeş, 38°24'08N 39°17'43E, 1844 m, 19.VII.2012, 1♂ 1♀, det., A. Mart; Dedeyolu, 38°28'33N 39°12'30E, 1083 m, 28.IX.2012, 2♂ 2♀, det., A. Mart.

Distribution in Turkey

Adana, Ağrı, Aksaray, Ankara, Antalya, Artvin, Aydın, Balıkesir, Bayburt, Bingöl, Bitlis, Bolu, Bursa, Çanakkale, Çorum, Denizli, Edirne, Erzincan, Erzurum, Giresun, Gümüşhane, Hakkari, Isparta, İçel, İstanbul, İzmir, Kahramanmaraş, Kars, Kayseri, Kırklareli, Kırşehir, Kocaeli, Manisa, Muğla, Muş, Niğde, Ordu, Osmaniye, Samsun, Sivas, Tokat, Trabzon, Van and Yozgat (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

7. *Laccobius sipylus* d'Orchymont, 1939

Material examined

Elazığ: Karakoçan, Karasakal, 38°56'27N 39°53'35E, 1102 m, 26.VIII. 2012, 1♂ 1♀, det., A. Mart; Çatal road, 39°01'27N 40°04'20E, 1266 m, 28.IX.2012, 1♂ 4♀, det., A. Mart. Kovancılar, Aşağı Mirahmet, 38°45'57N 40°03'03E, 1361 m, 26.VIII.2012, 1♂ 2♀, det., A. Mart. Sivrice: Dedeyolu, 38°28'33N 39°12'30E, 1083 m, 27.VIII.2012, 1♂ 1♀, det., A. Mart; 38°28'33N 39°12'30E, 1083 m, 28.IX.2012, 1♂ 1♀, det., A. Mart.

Distribution in Turkey

Antalya, Artvin, Balıkesir, Bingöl, Bitlis, Çanakkale, Çorum, Denizli, Diyarbakır, Hatay, Erzincan, Hatay, Isparta, Kayseri, Mersin, Muş, Sivas, Samsun, Tokat and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

8. *Laccobius striatulus* (Fabricius, 1801)

Material examined

Elazığ: Karakoçan, Sagun, 38°54'26N 39°55'49E, 1014 m, 17.VI.2012, 1♂ 1♀, det., A. Mart; Okçular, 39°03'22N 39°59'02E, 1257 m, 25.VIII.2012, 3♂ 9♀, det., A. Mart; Çatal road, 39°01'27N 40°04'20E, 1266 m, 25.VIII.2012, 1♂ 6♀, det., A. Mart.

Distribution in Turkey

Ankara, Antalya, Artvin, Balıkesir, Bayburt, Bilecik, Bingöl, Bitlis, Bolu, Bursa, Çanakkale, Erzincan, Erzurum, Eskişehir, Giresun, Gümüşhane, Hatay, Isparta, İstanbul, İzmir, Kayseri, Kocaeli, Konya, Kütahya, Malatya, Manisa, Muğla, Ordu, Sakarya, Samsun, Sivas, Tokat, Trabzon and Van (Darılmaz and İncekara, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

9. *Laccobius syriacus* Guillebeau, 1896

Material examined

Elazığ: Karakoçan, Söğütlü, 38°53'51N 40°06'15E, 1287 m, 08.X.2011, 9♂ 14♀, det., A. Mart; Karasakal, 38°57'15N 39°53'34E, 1017 m, 17.VI.2012, 4♂ 9♀, det., A. Mart; Sagun, 38°54'26N 39°55'49E, 1014 m, 17.VI.2012, 4♂ 2♀, det., A. Mart; Kuşbayırı, 39°08'41N 40°14'43E, 1564 m, 25.VIII.2012, 4♂ 13♀, det., A. Mart; Yalıntaş, 39°03'36N 39° 59'45E, 1304 m, 17.VI.2012, 2♂ 3♀, det., A. Mart; Karakoçan dam, 38°57'30N 40°03'22E, 1100 m, 28.IX.2012, 2♂ 4♀, det., A. Mart; Akpınar, 39°04'06N 40°06'39E, 1637 m, 17.VII. 2012, 6♂ 10♀, det., A. Mart; Bahçecik, 38°53'16N 40°05'15E, 1147 m, 25.VIII.2012, 2♂ 2♀, det., A. Mart; Dumluyazı, 39°08'31N 40°07'14E, 1364 m, 25.VIII.2012, 2♂ 3♀, det., A. Mart; Çatal road, 39°01'27N 40°04'20E, 1266 m, 25.VIII.2012, 27♂ 19♀, det., A. Mart; Üçbudak, 38°59'33N 39°55'14E, 1231 m, 26.VIII.2012, 23♂ 12♀, det., A. Mart; Alayağmur, 38°53'10N 39°52'54E, 921 m, 26.VIII.2012, 14♂ 32♀, det., A.

Mart; Yoğunağaç, 38°58'14N 39°53'33E, 1006 m, 26.VIII.2012, 2♂ 4♀, det., A. Mart; Kurudibi, 39°09'19N 40°09'01E, 1247 m, 28.IX. 2012, 1♂ 1♀, det., A. Mart. Kovancılar, Çaybağı parting of the ways, 38°41'26N 39°48'31E, 1031 m, 26.VIII.2012, 4♂ 4♀, det., A. Mart; Aşağı Mirahmet, 38°45'57N 40°03'03E, 1361 m, 26.VIII.2012, 2♂ 4♀, det., A. Mart; Bayramyazı, 38°48'15N 39°59'24E, 1116 m, 26.VIII. 2012, 21♂ 21♀, det., A. Mart; Topağaç, 38°44'31N 39°39'29E, 1065m, 26.VIII.2012, 9♂ 23♀, det., A. Mart; Taşören, 38°42'59N 39°46'41E, 1154 m, 26.VIII.2012, 2♂ 4♀, det., A. Mart; Kaçan, 38°42' 31N 39°37'18E, 961 m, 26.VIII.2012, 11♂ 10♀, det., A. Mart. Maden, Soğuksu around, 38°24'06N 39° 39'29E, 935 m, 20.VI.2011, 8♂ 11♀, det., A. Mart; Kaşlıca, 38°30'26N 39°41'43E, 1709 m, 09.IX.2011, 5♂ 6♀, det., A. Mart; Dutpınar, 38°24'47N 39°36' 43E, 1182 m, 19.VI.2012, 7♂ 9♀, det., A. Mart; Kartaldere, 38°33'15N 39°35'55E, 1409 m, 19.VI.2012, 16♂ 9♀, det., A. Mart; Hanevleri, 38°24'48N 39°34'13E, 1364 m, 19.VI.2012, 3♂ 3♀, det., A. Mart; Yenibahçe, 38°25'00N 39°32'49E, 1413 m, 19.VI.2012, 2♂ 6♀, det., A. Mart; Plajköy, 38°29'57N 39°30'20E, 1242 m, 20.VII.2012, 1♂ 1♀, det., A. Mart. Palu, Murat river edge, 38°42'58N 39°53'59E, 879 m, 08.X.2011, 7♂ 14♀, det., A. Mart; Yılbaşı, 38°52'13N 40°10'04E, 1757 m, 25.V.2012, 9♂ 2♀, det., A. Mart; Seydili stream, 38°42'34N 39°53'00E, 901 m, 19.VI.2012, 5♂ 3♀, det., A. Mart. Sivrice, Sürek, 38°22'53N 39°21'23E, 1457 m, 19.VI.2012, 12♂ 16♀, det., A. Mart; Sivrice parting of the ways, 38°27'47N 39°16' 54E, 1242m, 19.VI.2012, 1♂ 1♀, det., A. Mart; Alaattin, 38°22'44N 39°19'11E, 1617 m, 19. VII.2012, 2♂ 2♀, det., A. Mart; Dedeyolu, 38°28'33N 39°12'30E, 1083 m, 27.VIII.2012, 19♂ 14♀, det., A. Mart.

Distribution in Turkey

Adana, Afyon, Aksaray, Ankara, Antakya, Antalya, Artvin, Aydın, Balıkesir, Bayburt, Bingöl, Bilecik, Bitlis, Bolu, Burdur, Bursa, Çorum, Denizli, Diyarbakır, Edirne, Erzincan, Erzurum, Gaziantep, Giresun, Gümüşhane, Hakkâri, Hatay, Isparta, İzmir, Kahramanmaraş, Kars, Kayseri, Kastamonu, Konya, Mardin, Mersin, Muğla, Muş, Ordu, Osmaniye, Rize, Sakarya, Samsun, Sinop, Sivas, Şanlıurfa, Tokat, Trabzon and Van (Darılmaz

and Incekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

Subgenus *Microlaccobius* Gentili, 1974

10. *Laccobius gracilis* Motschulsky, 1855

Material examined

Elazığ: Karakoçan, Sarıbaşak, 39°05'04N 40°08'26E, 1526 m, 24.V. 2012, 1♂ 1♀, det., A. Mart; Okçular, 39°03'22N 39°59'02E, 1257 m, 25.VIII.2012, 2♂ 2♀, det., A. Mart; Çatal road, 39°01'27N 40°04'20E, 1266 m, 25.VIII.2012, 1♂ 2♀, det., A. Mart. Kovancılar, Çaybağı, 38°40'37N 39°37'29E, 837 m, 26.VIII. 2012, 1♂ 3♀, det., A. Mart. Maden, Soğuksu around, 38°25'10N 39°39'26E, 960 m, 20.VI.2011, 1♂ 1♀, det., A. Mart. Palu, Seydili stream, 38°42'53N 39°54'43E, 894 m, 26.VIII.2012, 1♂, det., A. Mart.

Distribution in Turkey

Adana, Adıyaman, Afyon, Ankara, Antakya, Antalya, Artvin, Aydın, Bayburt, Balıkesir, Bilecik, Bingöl, Bitlis, Bolu, Burdur, Bursa, Çanakkale, Çorum, Denizli, Diyarbakır, Edirne, Erzincan, Erzurum, Gaziantep, Giresun, Gümüşhane, Hakkâri, Hatay, Isparta, İstanbul, İzmir, Kars, Kastamonu, Kayseri, Kilis, Kütahya, Manisa, Mardin, Mersin, Muğla, Muş, Niğde, Ordu, Rize, Samsun, Sinop, Sivas, Şırnak, Trabzon, Toros dağları, Van and Yozgat (Darılmaz and Incekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

Genus: *COELOSTOMA* Brullé, 1835

Subgenus: *Coelostoma* Brullé, 1835

1. *Coelostoma orbiculare* (Fabricius, 1775)

Material examined

Elazığ: Karakoçan, Yücekonak, 39°01'40N 40°08'33E, 1614 m, 24.V. 2012, 1♂ 4♀, det., A. Mart; Bahçecik, 38°53'16N 40°05'15E, 1147 m, 16.VI.2012, 4♂ 4♀, det., A. Mart; Kurudibi, 39°09'19N 40°09'01E, 1247 m, 17.VI.2012, 3♀,

det., A. Mart; Hamurkesen, 39°04'05N 40°06'38E, 1630 m, 20.VII.2012, 1♂, det., A. Mart; Karakoçan dam, 38°57'30N 40°03'22E, 1100 m, 25.VIII.2012, 2♂ 1♀, det., A. Mart; Dumluyazı, 39°08'31N 40°07'14E, 1364 m, 25.VIII.2012, 2♂ 2♀, det., A. Mart; Alayağmur, 38°53'10N 39°52'54E, 921 m, 26.VIII.2012, 1♂ 1♀, det., A. Mart; Kuşçu, 38°49'48N 39°58'21E, 1065 m, 27.IX. 2012, 1♂ 3♀, det., A. Mart. Kovancılar, Çaybağı, 38°40'37N 39°37'29E, 837 m, 26.VIII.2012, 1♂ 1♀, det., A. Mart; Taşören, 38°42'59N 39°46'41E, 1154 m, 26.VIII.2012, 1♀, det., A. Mart. Maden, Kaşlıca, 38°30'26N 39°41'43E, 1709 m, 09.IX.2011, 1♂ 1♀, det., A. Mart; Hatunköy, 38°27'21N 39°30'03E, 1250 m, 19.VI.2012, 2♂ 7♀, det., A. Mart; Hanevleri, 38°24'48N 39°34'13E, 1364 m, 19.VI.2012, 1♂, det., A. Mart. Palu, Yılbaşı, 38°52'13N 40° 10'04E, 1757 m, 25.V.2012, 1♂ 1♀, det., A. Mart. Sivrice, Sivrice parting of the ways, 38°27' 52N 39°16'46E, 1258 m, 25.V.2012, 1♀, det., A. Mart; Alaattin, 38°22'44N 39°19'11E, 1617 m, 19.VI.2012, 1♂ 1♀, det., A. Mart.

Distribution in Turkey

Ankara, Artvin, Bayburt, Bursa, Bingöl, Bitlis, Çanakkale, Çorum, Erzincan, Erzurum, Giresun, Gümüşhane, Isparta, İçel, Kayseri, Muş, Ordu, Samsun, Sivas, Tokat Trabzon and Van (Darılmaz and İncekara, 2011; Aydoğan, 2011; Bayram, 2011; Türken, 2011; Yılmaz, 2011).

Remark

Newly recorded from Elazığ province.

Genus: *CERCYON* Leach, 1817

Subgenus: *Dicyrtocercyon* Ganglbauer, 1904

1. *Cercyon ustulatus* (Preysslner, 1790)

Material examined

Elazığ: Maden, Kaşlıca, 38°30'17N 39°41'26E, 1743m, 19.VI.2012, 1♀, det., A. Mart.

Distribution in Turkey

Artvin, Bilecik, Bingöl, Bitlis, Erzincan, Erzurum, Ordu, Sivas and Van (Darılmaz and İncekara, 2011; Bayram, 2011; Türken, 2011).

Remark

Newly recorded from Elazığ province.

Genus: *CRYPTOPLEURUM* Mulsant, 1844

1. *Cryptopleurum crenatum* (Kugelann, 1794)

Material examined

Elazığ: Karakoçan, Yücekonak, 39°02'12N 40°08'22E, 1670m, 25.VIII. 2012, 1♀, det., A. Mart.

Distribution in Turkey

Trabzon (Mart, 2009; Darılmaz and İncekara, 2011).

DISCUSSION

The Helophoridae and Hydrophilidae fauna of Turkey has been studied by several domestic and foreign scientists. According to their reports, total number of the Helophoridae (50) and Hydrophilidae (99) fauna of Turkey consist of 149 taxon. There are a total of 81 administrative divisions in Turkey of which 22 provinces (Aksaray, Amasya, Ankara, Artvin, Balıkesir, Bayburt, Bilecik, Bingöl, Bursa, Çanakkale, Çorum, Erzincan, Erzurum, Giresun, Gümüşhane, Kayseri, Ordu, Samsun, Tokat, Trabzon, Rize and Yozgat) were relatively well studied for Helophoridae and Hydrophilidae (Darılmaz and İncekara, 2001). This is the first study to determine the Helophoridae and Hydrophilidae fauna of Elazığ province. Until the present work, no record of belonging to the Helophoridae family has been known in Elazığ province. But the only species which has already been known in Elazığ province is *Berosus spinosus* (Steven, 1808) belonging to Hydrophilidae family.

In this study, 14 species belonging to the family Helophoridae in Elazığ province have been registered for the first time. In addition to the number of known species of the family Hydrophilidae 32 species and one subspecies have been recorded for the first time. And, *Cryptopleurum crenatum* (Kugelann 1794) has been recorded for the first time in the Eastern Anatolian region.

In order to improve our knowledge on Turkish water beetles, we have to focus on no searched or less searched areas.

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REFERENCES

- ANGUS, R., 1988. Notes on the *Helophorus* (Coleoptera, Hydrophilidae) occurring in Turkey, Iran and neighbouring territories. *Rev. Suisse Zool.*, **95**: 209–248.
- ANGUS, R., 1992. *Insecta, Coleoptera, Hydrophilidae, Helophorinae. Süßwasserfauna von Mitteleuropa 20/10–2*, Gustav Fischer Verlag, Stuttgart, Jena, New York, pp 142.
- ANGUS, R., 1998. A new Turkish *Helophorus*, with notes on *H. griseus* Herbst and *H. montanus* d'Orchymont (Col., Hydrophiloidea). *Ent. Mon. Mag.*, **134**: 5–9.
- AYDOĞAN, Z., 2011. *Faunistic investigations on the species of Hydrophilidae (Coleoptera) in Bitlis and Muş provinces*. M.S. thesis, Atatürk University, Graduate School of Natural and Applied Sciences, Erzurum, Turkey.
- BALFOUR-BROWNE, F., 1958. *British Water Beetles III*, Ray Society, London, pp. 210.
- BAYRAM, S., 2011. *Systematic investigations on the species of Hydrophilidae (Coleoptera) in Sivas province*, M.S. thesis, Atatürk University, Graduate School of Natural and Applied Sciences, Erzurum, Turkey.
- CHIESA, A., 1964. Hydrophilidae de Grece et de Turquie (Recoltes Em. Janssens 1959– 1962). *Bull. Ann. Soc. R. Ent. Belg.*, **100**:315–322.
- DARILMAZ, M.C. AND INCEKARA, Ü., 2011. Checklist of Hydrophiloidea of Turkey (Coleoptera: Polyphaga), *J. nat. Hist.*, **45**: 11, 685–735
- GENTILI, E., 1974. Descrizione di nuove entità appartenenti al genere *Laccobius* Erichson, 1837e proposta per un nuovo inquadramento sottogenerico. *Boll. Mus. Civ. Stor. Nat. Verona*, **20**: 549–565.
- GENTILI, E., 1979. Aggiunte alla revisione dei *Laccobius* paleartici (Coleoptera, Hydrophilidae). *Boll. Soc. Ent. Ital.*, **111**: 43–50.
- GENTILI, E., 1981. Risultati delle spedizioni entomologiche Cecoslovacco–Iraniche in Iran Coleoptera: Hydrophilidae. Coleotteri del genere *Laccobius*. *Acta Ent. Mus. Nat. Pragae*, **40**: 91–94.
- GENTILI, E., 1988. Verso una revisione del genere *Laccobius* (Coleoptera, Hydrophilidae). *Annuario Oss. Fis. Terr. Mus. A. Stoppani Semin. Arc. Milano*, **9**:31–47.
- GENTILI, E., 1991. Elementi per una revisione del genere *Laccobius* (Coleoptera, Hydrophilidae). *G. Ital. Ent.*, **5**: 381–389.
- GENTILI, E., 2000. Distribuzione del genere *Laccobius* (Coleoptera, Hydrophilidae) in Anatolia e problemi relativi. *Lav. Soc. Ital. Biogeog.*, **21**:173–214.
- GENTILI, E. AND CHIESA, A., 1975. Revisione dei *Laccobius* paleartici (Coleoptera: Hydrophilidae). *Mem. Soc. Ent. Ital.*, **54**:1–187.
- GENTILI, E. AND WHITEHEAD, P.F., 2000. A new species of *Laccobius* (Col., Hydrophilidae) from Lycia, Turkey. *Ent. Mon. Mag.*, **136**:73–76.
- HANSEN, M., 1987. The Hydrophilidae (Coleoptera) of Fennoscandia and Denmark. *Fauna Ent. Scand.*, **18**: 1–253.
- HANSEN, M., 1999. *World catalogue of insects. Volume 2. Hydrophiloidea (s. str.) (Coleoptera)*, Apollo Books, Stenstrup, Denmark, pp. 415.
- HANSEN, M., 2004. *Hydrophiloidea*. In: *Catalogue of Palaearctic Coleoptera* (eds. I. Löbl and A. Smetana), Vol. 2, pp 36–43, Apollo Books, Stenstrup, Denmark.
- HEBAUER, F., 1994. The Hydrophiloidea of Israel and the Sinai (Coleoptera: Hydrophiloidea). *Zool. Middle East*, **10**:74–137.
- HEBAUER, F. AND KLAUSNITZER, B., 1998. *Süßwasserfauna von Mitteleuropa 20/7, 8, 9, 10 Insecta: Coleoptera: Hydrophiloidea (Exkl. Helophorus)*, Spektrum Akademischer Verlag, Heidelberg, Berlin, pp.134.
- İNCEKARA, Ü., 2004. *Systematic investigations on the species of Helophoridae, Hydrophilidae and Hydrochidae (Coleoptera) in Erzincan province*, Ph.D. thesis, Atatürk University, Graduate School of Natural and Applied Sciences, Erzurum, Turkey.
- MART, A., INCEKARA, Ü. AND ERMAN, O., 2003. A new species of *Laccobius* Erichson, 1837 (Coleoptera: Hydrophilidae: Hydrophilinae) from Turkey. *Aquat Insects*, **25**:75–80.
- MART, A., 2005. *Systematic investigations on the species of Helophoridae, Hydrophilidae and Hydrochidae (Coleoptera) in Bingöl province*, Ph.D. thesis, Atatürk University, Graduate School of Natural and Applied Sciences, Erzurum, Turkey
- MART, A., 2009. Water scavenger beetles (Coleoptera: Hydrophilidae) Provinces of Central Black Sea Region of Turkey. *J. Ent. Res. Soc.*, **11**: 47–70.
- SCHÖDL, S., 1991. Revision der Gattung *Berosus* LEACH 1. Teil: Die Palaarktischen Arten der Untergattung *Enoplurus* (Coleoptera: Hydrophilidae). *Koleopterol. Rundsch.*, **61**: 111–135.
- SCHÖDL, S., 1993. Revision der Gattung *Berosus* LEACH 3.Teil: Die palaarktischen und orientalischen Arten der Untergattung *Berosus* s.str. (Coleoptera: Hydrophilidae). *Koleopterol. Rundsch.*, **63**:189–233.
- SCHÖDL, S., 1997. Taxonomic studies on the genus *Enochrus* (Coleoptera: Hydrophilidae). *Ent. Probl.*, **28**: 61–66.
- SCHÖDL, S., 1998. Taxonomic revision of *Enochrus* (Coleoptera: Hydrophilidae) I. The *E. bicolor* species

- complex. *Ent. Probl.*, **29**:111–127.
- SMETANA, A., 1985. Revision of the subfamily Helophorinae of the Nearctic region (Coleoptera: Hydrophilidae). *Mem. entomol. Soc. Can.*, **131**: 1-151.
- TAŞAR, G.E., 2011. *Investigation of Helophoridae (Coleoptera) fauna in Lake Van basin*, Ph.D. thesis, Atatürk University, Graduate School of Natural and Applied Sciences, Erzurum, Turkey.
- TÜRKEN, H., 2011. *Investigation of fauna of Hydrophilidae (Coleoptera) in Van province*, M.S. thesis, Atatürk University, Graduate School of Natural and Applied Sciences, Erzurum, Turkey.
- WOOLDRIDGE, D. P., 1978. *Paracymus* of the Palearctic faunal region (Coleoptera: Hydrophilidae). *J. Kans. entomol. Soc.* **51**:123–130.
- YILMAZ, A., 2011. *Faunistic and systematic investigations on the species of Helophoridae and Hydrophilidae (Coleoptera) in Isparta Province*, M.S. thesis, Süleyman Demirel University, Graduate School of Natural and Applied Sciences, Isparta, Turkey.

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