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Hydrophiloidea (Coleoptera: Helophoridae, Hydrochidae and Hydrophilidae) Fauna of Adıyaman Province

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ABSTRACT: In this study, the aquatic coleoptera species collected from Adıyaman province in 2013-2014 were evaluated. Overall, 46 taxa concerning the superfamily of Hydrophiloidea (Coleoptera: Helophoridae, Hydrochidae and Hydrophilidae) were detected in the area. Within these species, 38 taxa for South-eastern Anatolian region and 43 taxa for Adıyaman province were recorded for the first time.

Keywords: Adıyaman, Helophoridae, Hydrochidae, Hydrophilidae, Turkey.

Adıyaman İli Hydrophiloidea (Coleoptera: Helophoridae, Hydrochidae ve Hydrophilidae) Faunası

ÖZET: Bu çalışmada, 2013-2014 yıllarında Adıyaman İlinden toplanan sucul kınkanatlı türleri değerlendirilmiştir. Araştırma alanında Hydrophiloidea (Coleoptera: Helophoridae, Hydrochidae ve Hydrophilidae) üst familyasına ait 46 taxa tespit edilmiştir. Bu türlerden 38 taxa Güneydoğu Anadolu Bölgesi ve 43 taxa Adıyaman ili için ilk kez kaydedilmiştir.

Anahtar Kelimeler: Adıyaman, Helophoridae, Hydrochidae, Hydrophilidae, Türkiye

INTRODUCTION

Turkey has seven geographical regions (Aegean, Black sea, Central Anatolian, Eastern Anatolian, Marmara, Mediterranean and South-eastern Anatolian

region) and 81 provinces (Anonymous 1, 2016). Adıyaman is a city and located in the South-eastern Anatolian region, Turkey shown in the Figure 1 (Anonymous 2, 2016).

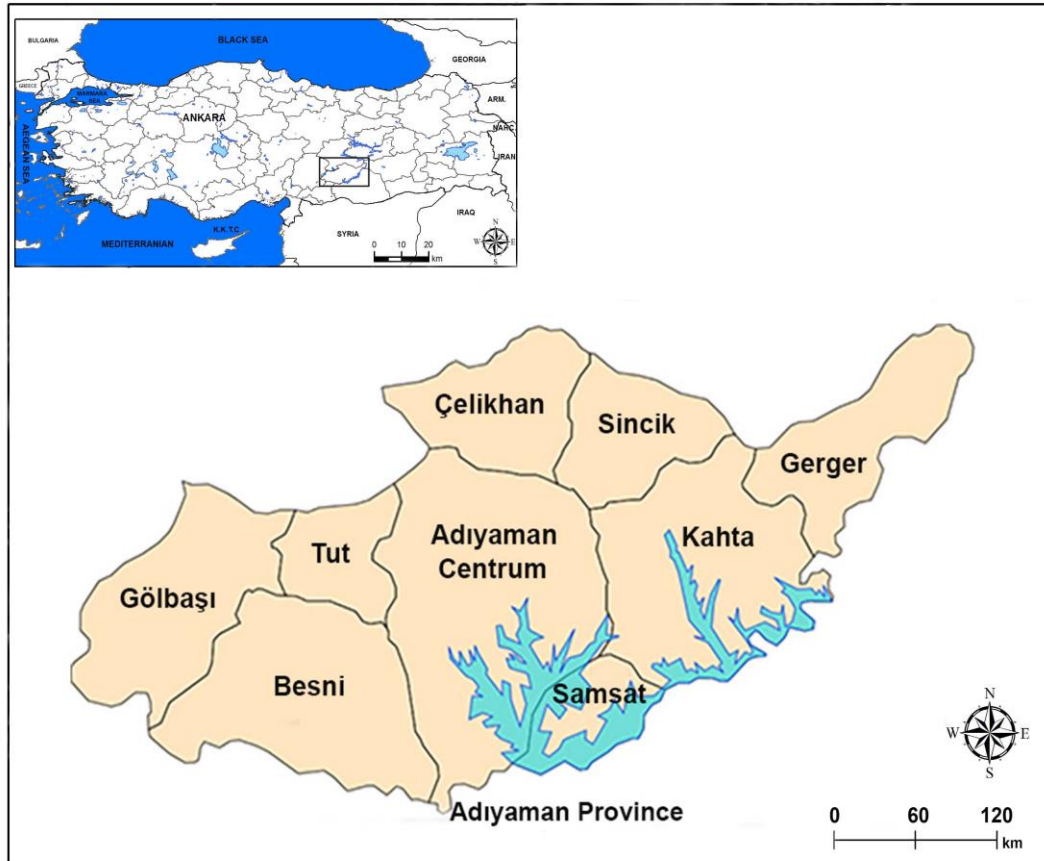


Figure 1. Map of the research area.

It has a semi-corrupted Mediterranean and terrestrial climate and its elevation is 669 meters. It has nine districts named as Adıyaman-centrum, Besni, Çelikhan, Gölbaşı, Gerger, Kahta, Samsat, Sincik, and Tut. All districts have very different geographic structures from each other; for example, Nemrut Mountain has 2150 meters length in Kahta district. On the other side, Centrum, Kahta and Samsat districts have coasts on the Atatürk Dam Lake. There are three lakes (Büyük, Azaplı and İnekli lakes) and many ponds that have very significant biodiversity in Gölbaşı district. Gerger district has big canyons and a dam lake (Anonymous 3, 2016).

Helophoridae family has a single genus: *Helophorus* Fabricius, 1775. This genus includes more than 190 species (Angus, 1984, 1985, 1988, 1992; Smetena, 1985). Approximately 150 species were reported from Palaearctic Region (Angus, 1992; Chiesa, 1959; Hebauer, 1994) and 41 species from Nearctic Region (Smetena, 1985); nevertheless, only 3 Oriental Region originated-species were reported (Angus, 1992; Hansen, 1999). 51 species were recorded concerning six subgenera in Turkey as follows; (*Helophorus* (*Atracthelophorus*), *H.* (*Empleurus*), *H.* (*Eutrichelophorus*), *H.* (*Rhopalhelophorus*), *H.* (s. str.), *H.* (*Transithelophorus*), *H.* (*Trichelophorus*) (Darilmaz and İncekara, 2011; Taşar et al., 2012).

Hydrochidae family has a single genus: *Hydrochus* Leach, 1817 (Hansen, 1987, 1991). This genus includes about 200 species worldwide (Hidalgo-Galiana et al., 2010). 27 species and two subspecies were reported from Palaearctic Region (Hansen, 2004). Seven species were recorded in Turkey: *Hydrochus brevis* (Herbst, 1793), *H. elongatus* (Schaller, 1783), *H. flavipennis* Kuster, 1852, *H. farsicus* Hidalgo-Galiana et al. 2010, *H. ignicollis* Motschulsky, 1860, *H. megaphallus* Berge Henegouwen, 1988, *H. nodulifer* Reitter, 1897 (Darilmaz and İncekara, 2011).

Hydrophilidae is a large family and has four subfamilies like Horelophinae, Horelophopsinae, Hydrophilinae and Sphaeridiinae (Short and Fikacek, 2011; Bayram et al., 2012). This family is also known as water scavenger beetle. It was reported that the species of Hydrophilinae and Sphaeridiinae subfamilies appeared in Palaearctic Region (Hansen, 2004). The Hydrophilidae family has 169 genera and 2835 species all over the world (Short and Fikacek, 2011). 102 species were reported from Turkey (Darilmaz and İncekara, 2011; İncekara et al., 2011; Taşar, 2014; Polat et al., 2015).

There is not any detailed study about Hydrophiloidea (Coleoptera) from Adıyaman province and other provinces of South-eastern Anatolian region, unless stated otherwise. The aim of this study was to present prosperity of species of Hydrophiloidea in Adıyaman province, Turkey. Besides, this study contributes new data for Turkish Hydrophiloidea Fauna.

MATERIALS and METHODS

The specimens were collected from freshwater habitats of Adıyaman province (Turkey) with sieves having 3,15x1 and 3,15x0,5 mm mesh size. The beetles were killed with ethyl acetate and stored in small bottles until identification. Specimens were cleaned with brush before identification. Aedeagophores of collected specimens were dissected under a stereo microscope in the laboratory. The identified species were converted into museum material and deposited in the private collections of the author at Adıyaman University, Turkey.

RESULTS and DISCUSSION

In the current study, 46 species of three families were collected and identified as following: Helophoridae (with 7 species), Hydrochidae (with 2 species) and Hydrophilidae (with 37 species). Locality data of collected specimens were presented in Table 1.

Within these species: *Cercyon laminatus* Sharp, 1873, *Enochrus calabricus* (Ferro, 1986) and *Hydrochus elongatus* (Schaller, 1783) were recorded for the second time from Turkey. 38 species were recorded for the first time from South-eastern Anatolian region. 41 species and two subspecies were reported as new records for Adıyaman province.

Determined species and their locality data are listed below:

Family: Helophoridae

Genus: *Helophorus* Fabricius, 1775

Subgenus: *Eutrichelophorus* Sharp, 1915

Helophorus (E.) *micans* (Faldermann, 1835)

Material examined: A1, 04.06.2013, 5 ex.; A13, 04.06.2013, 4 ex.; A17, 28.04.2014, 2 ex.; A17, 22.05.2014, 2 ex.; A17, 22.05.2014, 1 ex.; A17, 19.06.2014, 2 ex.; A17, 14.07.2014, 2 ex.; A17, 28.08.2014, 1 ex.; A18, 20.09.2013, 6 ex.; A18, 20.09.2013, 3 ex.; A19, 28.04.2014, 2 ex.; A19, 28.04.2014, 1 ex.; A19, 22.05.2014, 2 ex.; A19, 30.05.2014, 2 ex.

Subgenus: *Helophorus* Fabricius, 1775

Helophorus (s. str.) *aquaticus* (Linnaeus, 1758)

Material examined: A11, 20.06.2013, 2 ex.; A10, 04.06.2013, 1 ex.; A38, 28.05.2014, 1 ex.

Helophorus (s. str.) *grandis* (Illiger, 1798)

Material examined: A3, 04.06.2013, 2 ex.; A10, 04.06.2013, 3 ex.; A45, 28.05.2014, 2 ex.; A46, 05.06.2013, 4 ex.; A21, 03.05.2014, 4 ex.; A22, 06.05.2014, 2 ex.; A30, 03.05.2014, 2 ex.; A49, 03.06.2013, 10 ex.; A50, 03.06.2013, 10 ex.

Helophorus (s. str.) *syriacus* Kuwert, 1885

Material examined: A2, 06.06.2013, 4 ex.; A47, 05.06.2013, 4 ex.; A48, 05.06.2013, 2 ex.; A31, 03.06.2013, 2 ex.; A49, 03.06.2013, 5 ex.; A50, 03.06.2013, 5 ex.

Table 1. Location of the sampling sites

Abbreviation	Sampling site	Coordinates	Altitude (m)
A1	Adıyaman, centrum	37°55'24"N 38°17'00"E	1160
A2	Adıyaman, centrum	37°43'41"N 38°11'50"E	685
A3	Adıyaman, centrum, Koçali	37°55'54"N 38°15'26"E	1067
A4	Adıyaman, centrum, Boğazkaya	37°53'33"N 38°31'28"E	850
A5	Adıyaman, centrum, Boğazözü	37°50'36"N 38°24'39"E	682
A6	Adıyaman, centrum, Sinke	37°52'59"N 38°29'56"E	767
A7	Adıyaman, centrum, Çakal	37°42'22"N 38°09'10"E	606
A8	Adıyaman, centrum, Hasancık	37°47'07"N 38°25'14"E	700
A9	Adıyaman, centrum, Kuruçay	37°46'58"N 38°20'72"E	584
A10	Çelikhan	37°59'06"N 38°15'35"E	1270
A11	Besni, Akpınar	37°44'54"N 37°46'37"E	814
A12	Besni, Su gözü	37°39'20"N 37°48'30"E	700
A13	Gölbaşı	37°47'57"N 37°39'45"E	900
A14	Gölbaşı	37°47'28"N 37°37'35"E	901
A15	Gölbaşı	37°48'11"N 37°40'07"E	900
A16	Gölbaşı, Saydere	37°45'22"N 37°44'52"E	842
A17	Gölbaşı, Azaplı Lake	37°45'59"N 37°33'20"E	880
A18	Gölbaşı, Büyük Lake	37°47'44"N 37°38'35"E	881
A19	Gölbaşı, Gözeler Pond	37°43'56"N 37°30'38"E	883
A20	Gölbaşı, Karaburun	37°45'53"N 37°35'51"E	907
A21	Kahta	37°53'51"N 38°34'40"E	836
A22	Kahta	37°53'05"N 38°34'28"E	835
A23	Kahta	37°46'33"N 38°38'48"E	635
A24	Kahta	37°51'55"N 38°40'39"E	740
A25	Kahta, Yassıkaya fountain	37°55'22"N 38°36'28"E	630
A26	Kahta, Değirmenbaşı	37°57'40"N 38°40'17"E	867
A27	Kahta, Subaşı	37°58'14"N 38°40'44"E	973
A28	Kahta, Doluca	37°54'32"N 38°34'27"E	865
A29	Kahta, Kozagaç	37°53'44"N 38°34'25"E	844
A30	Kahta, Karakuş Hill	37°52'10"N 38°35'03"E	872
A31	Kahta, Daşlıca	37°53'44"N 38°34'26"E	768
A32	Kahta, Karadut, Tanbaşı	37°54'50"N 38°48'59"E	854
A33	Kahta, Cendere Bridge	37°56'11"N 38°36'40"E	612
A34	Kahta Stream	37°52'03"N 38°37'18"E	550
A35	Kahta, Kahta Stream, Teğmenli	37°54'55"N 38°36'58"E	580
A36	Kahta-Gerger way	37°51'43"N 38°40'25"E	700
A37	Kahta, Old Kahta	37°56'03"N 38°38'07"E	664
A38	Gerger	38°00'37"N 39°01'25"E	598
A39	Gerger	37°56'36"N 38°51'58"E	680
A40	Gerger	37°59'01"N 38°56'43"E	555
A41	Gerger	37°51'44"N 38°40'27"E	760
A42	Gerger, Eceler	37°53'27"N 38°51'22"E	804
A43	Gerger, Ballı	37°53'17"N 38°51'16"E	600
A44	Gerger, Güzelsu	37°52'45"N 38°55'40"E	765
A45	Gerger, Karagöl (Sülüklü Lake)	37°59'25"N 38°49'22"E	1115
A46	Gerger, Sutepe	37°56'14"N 38°48'39"E	915
A47	Gerger, Kütüklü	37°58'25"N 38°49'05"E	1165
A48	Gerger, Şahintepe	37°55'24"N 38°48'39"E	870
A49	Sincik	38°01'47"N 38°37'10"E	1227
A50	Sincik	38°01'10"N 38°37'12"E	1200
A51	Sincik-Gerger way	37°51'36"N 38°35'46"E	777
A52	Sincik, Çatbahçe	37°57'51"N 38°36'00"E	707
A53	Tut	37°47'02"N 37°50'53"E	660
A54	Samsat	37°45'34"N 38°32'08"E	588

Subgenus: *Rhopalohelophorus* Kuwert, 1886

***Helophorus* (R.) *brevipalpis* *brevipalpis* Bedel, 1881**

Material examined: A13, 04.06.2013, 1 ex.; A20, 20.06.2013, 1 ex.; A17, 24.06.2013, 1 ex.; A17, 28.04.2014, 1 ex.; A18, 18.08.2013, 1 ex.; A19, 24.06.2013, 2 ex.; A19, 30.05.2014, 1 ex.

***Helophorus* (R.) *daedalus* d'Orchymont, 1932**

Material examined: A38, 28.05.2014, 2 ex.; A39, 28.05.2014, 2 ex.; A45, 28.05.2014, 1 ex.; A48, 05.06.2013, 4 ex.; A14, 04.06.2013, 2 ex.; A13, 20.06.2013, 2 ex.; A32, 28.05.2014, 2 ex.

***Helophorus* (R.) *hilaris* Sharp, 1916**

Material examined: A2, 06.06.2013, 4 ex.; A4, 28.05.2014, 2 ex.; A5, 28.05.2014, 2 ex.; A11, 20.06.2013, 4 ex.; A10, 04.06.2013, 4 ex.; A38, 28.05.2014, 2 ex.; A39, 28.05.2014, 2 ex.; A48, 05.06.2013, 4 ex.; A40, 18.06.2013, 2 ex.; A13, 04.06.2013, 4 ex.; A13, 04.06.2013, 2 ex.; A17, 04.06.2013, 10 ex.; A17, 20.06.2013, 10 ex.; A17, 24.06.2013, 4 ex.; A17, 28.04.2014, 2 ex.; A17, 22.05.2014, 2 ex.; A17, 22.05.2014, 2 ex.; A17, 19.06.2014, 4 ex.; A17, 14.07.2014, 1 ex.; A17, 28.08.2014, 2 ex.; A18, 24.06.2013, 4 ex.; A18, 18.08.2013, 4 ex.; A18, 20.09.2013, 2 ex.; A19, 04.06.2013, 4 ex.; A19, 20.06.2013, 4 ex.; A19, 20.06.2013, 4 ex.; A19, 24.06.2013, 4 ex.; A19, 24.06.2013, 4 ex.; A19, 20.09.2013, 6 ex.; A19, 28.04.2014, 2 ex.; A19, 28.04.2014, 2 ex.; A19, 22.05.2014, 2 ex.; A19, 30.05.2014, 3 ex.; A19, 19.06.2014, 2 ex.; A19, 14.07.2014, 1 ex.; A20, 20.06.2013, 2 ex.; A22, 06.05.2014, 1 ex.; A31, 03.06.2013, 2 ex.; A32, 27.04.2014, 1 ex.; A32, 28.05.2014, 1 ex.

Family: Hydrochidae

Genus: *Hydrochus* Leach, 1817

***Hydrochus* *elongatus* (Schaller, 1783)**

Material examined: A19, 30.05.2014, 11 ex.; A19, 22.05.2014, 2 ex.; A19, 22.05.2014, 3 ex.

***Hydrochus* *flavipennis* Kuster, 1852**

Material examined: A19, 28.04.2014, 3 ex.; A19, 30.05.2014, 1 ex.; A32, 30.09.2014, 1 ex.

Family: Hydrophilidae

Subfamily: Hydrophilinae Latreille, 1802

Tribe: Anacaeini Hansen, 1991

Genus: *Anacaena* Thomson, 1859

***Anacaena* *globulus* (Paykull, 1798)**

Material examined: A14, 37°47'28"N 37°37'35"E, 901m, 04.06.2013, 1 ex.

***Anacaena* *limbata* (Fabricius, 1792)**

Material examined: A15, 20.06.2013, 2 ex.; A17, 20.06.2013, 3 ex.; A17, 24.06.2013, 2 ex.; A18, 24.06.2013, 2 ex.; A19, 24.06.2013, 5 ex.; A19, 24.06.2013, 4 ex.; A19, 28.04.2014, 4 ex.; A19, 22.05.2014, 2 ex.; A19, 30.05.2014, 2 ex.; A33, 17.06.2013, 2 ex.

***Anacaena* *rufipes* (Guillebeau, 1896)**

Material examined: A4, 28.05.2014, 1 ex.; A11, 20.06.2013, 2 ex.; A38, 28.05.2014, 2 ex.; A39, 28.05.2014, 3 ex.; A45, 28.05.2014, 2 ex.; A46, 05.06.2013, 2 ex.; A40, 18.06.2013, 3 ex.; A19, 30.05.2014, 5 ex.; A16, 20.06.2013, 1 ex.; A33, 17.06.2013, 2 ex.; A31, 03.06.2013, 2 ex.; A32, 18.06.2013, 4 ex.; A32, 21.09.2013, 2 ex.; A32, 30.09.2014, 2 ex.; A30, 17.06.2013, 2 ex.; A50, 03.06.2013, 1 ex.; A51, 18.06.2013, 2 ex.; A53, 06.06.2013, 1 ex.

Genus: *Paracymus* Thomson, 1867

***Paracymus* *chalconolus* (Solsky, 1874)**

Material examined: A38, 28.05.2014, 2 ex.; A19, 28.04.2014, 3 ex.; A19, 22.05.2014, 2 ex.; A19, 19.06.2014, 2 ex.; A19, 14.07.2014, 1 ex.; A19, 28.08.2014, 3 ex.; A19, 29.09.2014, 2 ex.

Tribe: Berosini Mulsant, 1844

Genus: *Berosus* Leach, 1817

Subgenus: *Berosus* Leach, 1817

***Berosus* (s. str.) *affinis* Brullé, 1835**

Material examined: A19, 20.06.2013, 4 ex.; A19, 24.06.2013, 5 ex.; A19, 18.08.2013, 2 ex.; A19, 20.09.2013, 2 ex.; A19, 28.04.2014, 4 ex.; A19, 28.04.2014, 4 ex.; A19, 22.05.2014, 2 ex.; A19, 30.05.2014, 2 ex.; A19, 19.06.2014, 2 ex.; A19, 14.07.2014, 4 ex.; A19, 28.08.2014, 2 ex.; A19, 29.09.2014, 2 ex.

***Berosus* (s. str.) *byzantinus* Ganglbauer, 1904**

Material examined: A19, 28.04.2014, 3 ex.; A19, 28.04.2014, 3 ex.; A19, 30.05.2014, 2 ex.

Tribe: Chaetarthriini Bedel, 1881

Genus: *Chaetarthria* Stephens, 1835

***Chaetarthria* *seminulum* (Herbst, 1797)**

Material examined: A40, 18.06.2013, 2 ex.

Tribe: Hydrophilini Latreille, 1802

Subtribe: Acidocerina Zaitzev, 1908

Genus: *Chasmogenus* Sharp, 1882

***Chasmogenus* *livornicus* (Kuwert, 1890)**

Material examined: A17, 24.06.2013, 5 ex.; A17, 18.08.2013, 2 ex.; A17, 20.09.2013, 4 ex.; A19, 24.06.2013, 2 ex.; A19, 18.08.2013, 4 ex.; A19, 20.09.2013, 3 ex.; A19, 28.04.2014, 2 ex.; A19, 22.05.2014, 2 ex.; A19, 30.05.2014, 2 ex.; A19, 19.06.2014, 2 ex.; A19, 14.07.2014, 3 ex.; A19, 28.08.2014, 4 ex.; A19, 29.09.2014, 2 ex.

Genus: *Cymbiodyta* Bedel, 1881

***Cymbiodyta* *marginella* (Fabricius, 1792)**

Material examined: A17, 24.06.2013, 4 ex.; A17, 18.08.2013, 2 ex.; A17, 20.09.2013, 2 ex.; A19, 20.06.2013, 4 ex.; A19, 24.06.2013, 5 ex.; A19, 18.08.2013, 2 ex.; A19, 20.09.2013, 4 ex.; A19, 28.04.2014, 2 ex.; A19, 28.04.2014, 2 ex.; A19, 22.05.2014, 2 ex.; A19, 30.05.2014, 2 ex.; A19, 19.06.2014, 2 ex.; A19, 14.07.2014, 1 ex.; A19, 28.08.2014, 2 ex.; A19, 29.09.2014, 2 ex.

Genus: Enochrus Thomson, 1859

Subgenus: Enochrus Thomson, 1859

Enochrus (s. str.) melanocephalus (Olivier, 1792)

Material examined: A19, 28.04.2014, 1 ex.

Subgenus: Lumetus Zaitzev, 1908

Enochrus (L.) bicolor (Fabricius, 1792)

Material examined: A45, 28.05.2014, 1 ex.; A13, 04.06.2013, 1 ex.; A17, 24.06.2013, 5 ex.; A19, 20.06.2013, 2 ex.; A19, 24.06.2013, 4 ex.; A19, 28.04.2014, 3 ex.; A19, 22.05.2014, 1 ex.; A19, 30.05.2014, 3 ex.; A32, 21.09.2013, 5 ex.; A35, 28.05.2014, 2 ex.; A54, 28.04.2014, 2 ex.

Enochrus (L.) calabricus (Ferro, 1986)

Material examined: A4, 28.05.2014, 1 ex.; A46, 05.06.2013, 1 ex.

Enochrus (L.) halophilus (Bedel, 1878)

Material examined: A4, 28.05.2014, 1 ex.; A11, 20.06.2013, 3 ex.; A41, 05.06.2013, 1 ex.; A43, 18.06.2013, 3 ex.; A44, 18.06.2013, 2 ex.; A15, 20.06.2013, 1 ex.; A17, 24.06.2013, 5 ex.; A19, 20.06.2013, 5 ex.; A19, 22.05.2014, 1 ex.; A19, 30.05.2014, 1 ex.; A36, 18.06.2013, 2 ex.; A32, 19.08.2013, 3 ex.; A32, 27.04.2014, 3 ex.; A32, 28.05.2014, 4 ex.

Enochrus (L.) ochropterus (Marsham, 1802)

Material examined: A48, 05.06.2013, 1 ex.; A13, 04.06.2013, 1 ex.; A17, 28.04.2014, 1 ex.; A17, 22.05.2014, 1 ex.; A18, 20.09.2013, 1 ex.; A19, 24.06.2013, 3 ex.; A19, 30.05.2014, 2 ex.

Enochrus (L.) politus (Küster, 1849)

Material examined: A11, 20.06.2013, 2 ex.; A38, 28.05.2014, 3 ex.; A48, 05.06.2013, 2 ex.; A13, 04.06.2013, 2 ex.; A18, 18.08.2013, 1 ex.; A19, 28.04.2014, 2 ex.; A19, 22.05.2014, 1 ex.; A19, 30.05.2014, 3 ex.; A31, 03.06.2013, 3 ex.; A36, 18.06.2013, 1 ex.; A32, 27.04.2014, 1 ex.; A30, 03.06.2013, 1 ex.; A51, 18.06.2013, 6 ex.

Enochrus (L.) quadripunctatus (Herbst, 1797)

Material examined: A5, 28.05.2014, 8 ex.; A17, 24.06.2013, 1 ex.; A17, 28.04.2014, 1 ex.; A19, 20.06.2013, 1 ex.; A19, 22.05.2014, 3 ex.; A32, 27.04.2014, 2 ex.; A32, 30.09.2014, 5 ex.; A35, 28.05.2014, 2 ex.; A37, 03.06.2013, 1 ex.

Subgenus: Methydrus Rey, 1885

Enochrus (M.) affinis (Thunberg, 1794)

Material examined: A19, 28.04.2014, 2 ex.; A19, 22.05.2014, 5 ex.; A19, 30.05.2014, 2 ex.

Genus: Helochares Mulsant, 1844

Subgenus: Helochares Mulsant, 1844

Helochares (s. str.) lividus (Forster, 1771)

Material examined: A2, 06.06.2013, 4 ex.; A6, 30.09.2014, 3 ex.; A45, 28.05.2014, 5 ex.; A19, 30.05.2014, 4 ex.; A51, 18.06.2013, 4 ex.; A32, 37°55'14"N 38°48'02"E, 854m, 21.09.2013, 2 ex.

Helochares (s. str.) obscurus (O. F. Müller, 1776)

Material examined: A17, 04.06.2013, 5 ex.; A17, 20.06.2013, 3 ex.; A17, 24.06.2013, 4 ex.; A17, 18.08.2013, 4 ex.; A17, 20.09.2013, 2 ex.; A17, 28.04.2014, 2 ex.; A17, 22.05.2014, 2 ex.; A17, 22.05.2014, 4 ex.; A17, 19.06.2014, 4 ex.; A17, 14.07.2014, 4 ex.; A17, 28.08.2014, 5 ex.; A17, 29.09.2014, 2 ex.; A19, 20.06.2013, 2 ex.; A19, 24.06.2013, 2 ex.; A19, 24.06.2013, 2 ex.; A19, 18.08.2013, 2 ex.; A19, 20.09.2013, 3 ex.; A19, 28.04.2014, 2 ex.; A19, 28.04.2014, 2 ex.; A19, 22.05.2014, 2 ex.; A19, 30.05.2014, 2 ex.; A19, 19.06.2014, 2 ex.; A19, 14.07.2014, 2 ex.; A19, 28.08.2014, 3 ex.; A19, 29.09.2014, 2 ex.

Subtribe: Hydrobiusina Mulsant, 1844

Genus: Hydrobius Leach, 1815

Hydrobius fuscipes (Linnaeus, 1758)

Material examined: A46, 05.06.2013, 2 ex.; A17, 24.06.2013, 2 ex.; A31, 03.06.2013, 2 ex.; A49, 03.06.2013, 1 ex.

Genus: Limnoxenus Motschulsky, 1853

Limnoxenus niger (Gmelin, 1790)

Material examined: A17, 24.06.2013, 4 ex.; A19, 24.06.2013, 8 ex.; A19, 28.04.2014, 4 ex.; A19, 22.05.2014, 2 ex.; A19, 30.05.2014, 2 ex.

Subtribe: Hydrophilina Latreille, 1802

Genus: Hydrochara Berthold, 1827

Hydrochara dichroma (Fairmaire, 1892)

Material examined: A38, 28.05.2014, 1 ex.; A43, 18.06.2013, 1 ex.; A19, 30.05.2014, 1 ex.; A31, 03.06.2013, 2 ex.; A37, 03.06.2013, 2 ex.; A30, 17.06.2013, 2 ex.; A29, 17.06.2013, 1 ex.

Genus: Brownepphilus Mouchamps, 1959

Brownepphilus major (İncekara et al., 2009)

Material examined: A17, 18.08.2013, 1 ex.

Genus: Hydrophilus Geoffroy, 1762

Subgenus: Hydrophilus Geoffroy, 1762

Hydrophilus (s. str.) piceus (Linnaeus, 1758)

Material examined: A19, 20.06.2013, 1 ex.; A19, 30.05.2014, 1 ex.

Tribe: Laccobiini Bertrand, 1954

Genus: Laccobius Erichson, 1837

Subgenus: Dimorpholaccobius Zaitzev, 1938

Laccobius (D.) bipunctatus (Fabricius, 1775)

Material examined: A12, 20.06.2013, 2 ex.; A44, 18.06.2013, 2 ex.; A45, 28.05.2014, 2 ex.; A19, 30.05.2014, 3 ex.; A20, 20.06.2013, 2 ex.; A23, 03.06.2013, 1 ex.; A33, 17.06.2013, 2 ex.; A28, 03.06.2013, 1 ex.; A36, 18.06.2013, 2 ex.; A34, 18.06.2013, 2 ex.; A32, 18.06.2013, 3 ex.; A54, 28.04.2014, 2 ex.; A51, 18.06.2013, 2 ex.

Laccobius (D.) hauserianus Kniz, 1914

Material examined: A34, 18.06.2013, 1 ex.

Laccobius (D.) hindukuschi Chiesa, 1966

Material examined: A1, 04.06.2013, 1 ex.; A4, 28.05.2014, 2 ex.; A5, 30.09.2014, 2 ex.; A12, 20.06.2013, 2 ex.; A38, 28.05.2014, 2 ex.; A39, 28.05.2014, 2 ex.; A48, 05.06.2013, 2 ex.; A45, 28.05.2014, 2 ex.; A47, 05.06.2013, A40, 18.06.2013, 2

ex.; A17, 20.06.2013, 2 ex.; A16, 20.06.2013, 1 ex.; A21, 03.05.2014, 3 ex.; A24, 30.09.2014, 2 ex.; A33, 17.06.2013, 2 ex.; A31, 03.06.2013, 2 ex.; A32, 18.06.2013, 4 ex.; A32, 19.08.2013, 2 ex.; A32, 21.09.2013, 2 ex.; A32, 27.04.2014, 2 ex.; A32, 20.06.2014, 3 ex.; A32, 30.09.2014, 2 ex.; A30, 03.06.2013, 3 ex.; A29, 17.06.2013, 2 ex.; A52, 17.06.2013, 2 ex.

***Laccobius (D.) obscuratus aegaeus* Gentili, 1974**

Material examined: A1, 04.06.2013, 1 ex.; A4, 28.05.2014, 2 ex.; A5, 30.09.2014, 2 ex.; A3, 04.06.2013, 2 ex.; A39, 28.05.2014, 1 ex.; A45, 11.15m, 28.05.2014, 2 ex.; A21, 03.05.2014, 1 ex.; A24, 30.09.2014, 2 ex.; A31, 03.06.2013, 1 ex.; A32, 18.06.2013, 2 ex.; A32, 21.09.2013, 2 ex.; A32, 28.05.2014, 1 ex.; A32, 30.09.2014, 2 ex.; A27, 03.06.2013, 2 ex.; A53, 06.06.2013, 1 ex.

***Laccobius (D.) sinuatus* Motschulsky, 1849**

Material examined: A4, 28.05.2014, 3 ex.; A38, 28.05.2014, 1 ex.; A48, 05.06.2013, 1 ex.; A24, 30.09.2014, 2 ex.; A33, 17.06.2013, 3 ex.; A31, 03.06.2013, 2 ex.; A37, 03.06.2013, 1 ex.; A35, 28.05.2014, 5 ex.; A32, 18.06.2013, 1 ex.

Remark: This species is a widespread European species, ranging from southern Scandinavia to North Africa and reaches to Balkans and European Russia in the east (Hansen, 1999). However, this species was firstly reported from Turkey in İzmir province (Sahlberg, 1913), this is the first report from South-eastern Anatolian Region of Turkey.

***Laccobius (D.) sipylus* d'Orchymont, 1939**

Material examined: A4, 28.05.2014, 2 ex.; A5, 28.05.2014, 2 ex.; A11, 20.06.2013, 2 ex.; A40, 18.06.2013, 2 ex.; A38, 28.05.2014, 2 ex.; A39, 28.05.2014, 1 ex.; A43, 18.06.2013, 1 ex.; A42, 30.09.2014, 2 ex.; A17, 24.06.2013, 1 ex.; A16, 20.06.2013, 1 ex.; A21, 03.05.2014, 2 ex.; A24, 30.09.2014, 2 ex.; A33, 17.06.2013, 2 ex.; A31, 03.06.2013, 2 ex.; A35, 28.05.2014, 2 ex.; A32, 18.06.2013, 3 ex.; A32, 19.08.2013, 3 ex.; A32, 21.09.2013, 2 ex.; A32, 29.08.2014, 2 ex.; A32, 30.09.2014, 1 ex.; A30, 03.06.2013, 3 ex.; A30, 17.06.2013, 2 ex.; A30, 21.09.2013, 2 ex.; A36, 18.06.2013, 2 ex.; A54, 28.04.2014, 2 ex.; A52, 17.06.2013, 2 ex.; A53, 06.06.2013, 2 ex.

***Laccobius (D.) syriacus* Guillebeau, 1896**

Material examined: A2, 06.06.2013, 4 ex.; A5, 28.05.2014, 4 ex.; A7, 30.09.2014, 2 ex.; A8, 05.06.2013, 4 ex.; A9, 03.05.2014, 4 ex.; A6, 30.09.2014, 2 ex.; A11, 20.06.2013, 2 ex.; A41, 05.06.2013, 2 ex.; A38, 28.05.2014, 2 ex.; A43, 18.06.2013, 2 ex.; A42, 30.09.2014, 2 ex.; A44, 18.06.2013, 2 ex.; A45, 28.05.2014, 2 ex.; A47, 05.06.2013, 2 ex.; A46, 05.06.2013, 1 ex.; A13, 04.06.2013, 2 ex.; A14, 04.06.2013, 2 ex.; A17, 04.06.2013, 2 ex.; A17, 18.08.2013, 2 ex.; A17, 20.09.2013, 2 ex.; A17, 28.04.2014, 3 ex.; A17, 19.06.2014, 2 ex.; A17, 14.07.2014, 2 ex.; A17, 28.08.2014, 1 ex.; A17, 29.09.2014, 2 ex.; A18,

24.06.2013, 2 ex.; A18, 18.08.2013, 2 ex.; A19, 24.06.2013, 2 ex.; A19, 18.08.2013, 2 ex.; A19, 20.09.2013, 2 ex.; A19, 20.06.2013, 3 ex.; A19, 28.04.2014, 2 ex.; A19, 30.05.2014, 2 ex.; A19, 19.06.2014, 1 ex.; A19, 14.07.2014, 2 ex.; A19, 28.08.2014, 2 ex.; A19, 29.09.2014, 2 ex.; A20, 20.06.2013, 2 ex.; A23, 03.06.2013, 4 ex.; A24, 30.09.2014, 2 ex.; A31, 03.06.2013, 2 ex.; A26, 03.06.2013, 2 ex.; A37, 03.06.2013, 1 ex.; A34, 18.06.2013, 2 ex.; A35, 28.05.2014, 2 ex.; A32, 18.06.2013, 5 ex.; A32, 19.08.2013, 2 ex.; A32, 21.09.2013, 2 ex.; A32, 29.08.2014, 3 ex.; A32, 30.09.2014, 2 ex.; A30, 03.06.2013, 2 ex.; A30, 17.06.2013, 2 ex.; A30, 21.09.2013, 2 ex.; A30, 03.05.2014, 2 ex.; A27, 03.06.2013, 2 ex.; A25, 17.06.2013, 1 ex.; A54, 28.04.2014, 2 ex.; A51, 18.06.2013, 2 ex.; A53, 06.06.2013, 2 ex.

Subgenus: *Microlaccobius* Gentili, 1974

***Laccobius (M.) alternus* Motschulsky, 1855**

Material examined: A4, 28.05.2014, 1 ex.; A5, 28.05.2014, 2 ex.; A9, 03.05.2014, 5 ex.; A39, 28.05.2014, 1 ex.; A21, 03.05.2014, 6 ex.; A30, 03.06.2013, 2 ex.; A54, 28.04.2014, 2 ex.; A53, 06.06.2013, 1 ex.

***Laccobius (M.) gracilis* Motschulsky, 1855**

Material examined: A1, 04.06.2013, 1 ex.; A4, 28.05.2014, 2 ex.; A5, 30.09.2014, 8 ex.; A7, 30.09.2014, 1 ex.; A8, 05.06.2013, 1 ex.; A9, 03.05.2014, 10 ex.; A41, 05.06.2013, 1 ex.; A45, 28.05.2014, 1 ex.; A48, 05.06.2013, 1 ex.; A19, 24.06.2013, 1 ex.; A19, 20.09.2013, 1 ex.; A16, 20.06.2013, 1 ex.; A24, 30.09.2014, 2 ex.; A32, 18.06.2013, 1 ex.; A32, 19.08.2013, 2 ex.; A32, 21.09.2013, 2 ex.; A32, 30.09.2014, 2 ex.; A35, 28.05.2014, 2 ex.; A35, 17.06.2013, 1 ex.; A54, 28.04.2014, 6 ex.; A52, 17.06.2013, 1 ex.; A53, 06.06.2013, 1 ex.

***Laccobius (M.) quaesitus* Gentili, 1988**

Material examined: A41, 05.06.2013, 1 ex.; A21, 03.05.2014, 2 ex.; A33, 17.06.2013, 1 ex.; A35, 28.05.2014, 1 ex.; A53, 06.06.2013, 1 ex.

Subfamily: Sphaeridiinae Latreille, 1802

Tribe: Coelostomatini Heyden, 1891

Genus: *Coelostoma* Brullé, 1835

Subgenus: *Coelostoma* Brullé, 1835

***Coelostoma* (s. str.) *orbiculare* (Fabricius, 1775)**

Material examined: A44, 18.06.2013, 2 ex.; A17, 29.09.2014, 2 ex.; A19, 18.08.2013, 2 ex.; A19, 30.05.2014, 2 ex.; A32, 19.08.2013, 2 ex.; A32, 30.09.2014, 1 ex.; A30, 03.06.2013, 1 ex.; A30, 17.06.2013, 2 ex.; A49, 03.06.2013, 1 ex.

Tribe: Megasternini Mulsant, 1844

Genus: *Cercyon* Leach, 1817

Subgenus: *Cercyon* Leach, 1817

***Cercyon* (s. str.) *circumcinctus* Reitter, 1889d**

Material examined: A17, 24.06.2013, 1 ex.; A19, 18.08.2013, 4 ex.

Subgenus: *Paracycreon* d'Orchymont, 1942

***Cercyon* (P.) *laminatus* Sharp, 1873**

Material examined: A11, 20.06.2013, 1 ex.; A17, 24.06.2013, 2 ex.

South-eastern Anatolian region has nine provinces (Adıyaman, Batman, Diyarbakır, Gaziantep, Kilis, Mardin, Siirt, Şanlıurfa and Şırnak). This region was not studied in detail before, only a few reports were published (Angus, 1988, 1992; Gentili, 1988, 1991, 2000).

To the best of our knowledge, there is not any study on the species of Helophoridae and Hydrochidae families in Adıyaman province. Four species (*Enochrus affinis*, *Enochrus coarctatus*, *Laccobius gracilis* and *Laccobius hindukuschi*) of Hydrophilidae family were reported in Adıyaman province before (Darilmaz and İncekara, 2011; Taşar, 2014). Nonetheless, *Laccobius obscuratus orchymonti* Gentili, 1976 and *Sphaeridium scarabaeoides* (Linnaeus, 1758) were reported in Adıyaman province (Darilmaz and İncekara, 2011), none of the specimens of these species was found at the research area in the current study.

It was observed that different varieties of aquatic coleoptera placed in the habitats of the east and west sides of the research area. The most abundant habitats on account of species varieties were determined in the west side of the province having 900 meters altitude at Gölbaşı Lakes and their environment. It was indicated that 36 aquatic coleoptera (*Helophorus micans*, *Helophorus brevipalpis brevipalpis*, *Helophorus daedalus*, *Helophorus hiliaris*, *Hydrochus elongatus*, *Hydrochus flavipennis*, *Anacaena globulus*, *Anacaena limbata*, *Anacaena rufipes*, *Paracymus chalceolus*, *Berosus affinis*, *Berosus byzantinus*, *Chasmogenus livornicus*, *Cymbiodyta marginella*, *Enochrus melanocephalus*, *Enochrus bicolor*, *Enochrus halophilus*, *Enochrus ochropterus*, *Enochrus politus*, *Enochrus quadripunctatus*, *Enochrus affinis*, *Helochares lividus*, *Helochares obscurus*, *Hydrobius fuscipes*, *Limnoxenus niger*, *Hydrochara dichroma*, *Brownephilus major*, *Hydrophilus piceus*, *Laccobius bipunctatus*, *Laccobius hindukuschi*, *Laccobius sipylus*, *Laccobius syriacus*, *Laccobius gracilis*, *Coelostoma orbiculare*, *Cercyon circumcinctus*, *Cercyon laminatus*) species were hosted by this area. The east side of the research area, containing Kahta, Sincik and Gerger districts, have different altitudes about 550-1227 m. It was indicated that the habitats placed in the east side of the research area had 10 more aquatic coleoptera species (*Helophorus aquaticus*, *Helophorus grandis*, *Helophorus syriacus*, *Chaetarthria seminulum*, *Enochrus calabricus*, *Laccobius hauserianus*, *Laccobius obscuratus aegaeus*, *Laccobius sinuatus*, *Laccobius alternus*, *Laccobius quaesitus*) than the west side.

It was reported that Hydrophiloidea superfamily had 153 taxa (Coleoptera: Helophoridae; 49, Hydrochidae; 7 and Hydrophilidae; 97) in Turkey (Darilmaz and İncekara, 2011). After publication of this checklist, 7 more species (*Berosus asiaticus*, *Berosus dentalis*, *Berosus guttalis*, *Enochrus affinis*, *Enochrus calabricus*,

Helophorus occidentalis, *Helophorus yammounensis*), were recorded firstly from Turkey (İncekara et al., 2011; Taşar et al., 2012; Taşar, 2014; Polat et al., 2015). For this reason, the number of the species of Hydrophiloidea superfamily (including Helophoridae, Hydrochidae and Hydrophilidae families) were raised to 160 taxa. In the current study, 46 taxa were identified in the research area as follows: 7 taxa of Helophoridae, 2 taxa of Hydrochidae and 37 taxa of Hydrophilidae families. Consequently, this study presents new distributional data for Turkish Hydrophiloidea fauna. More studies are needed to establish the overall distribution of Turkish Hydrophiloidea fauna.

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