

**ADDITIONAL NOTES ON AQUATIC COLEOPTERA
FAUNA OF TURKEY WITH A NEW RECORD
(HELOPHORIDAE, HYDROPHILIDAE)**

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ABSTRACT: In this study, 31 aquatic beetle specimens collected from the provinces Denizli, Aydın, Isparta and Antalya in south-west Mediterranean region of Turkey, between 2000–2002 have been established faunistically. It has been determined that they belong to 13 species of 7 genera of 2 families. 7 of these examined species are new records for south-west Mediterranean region and *Helophorus* (s.str.) *grandis* Illiger, 1798 is a new record for Turkey.

KEY WORDS: Coleoptera, Helophoridae, Hydrophilidae, fauna, new record, Turkey.

A total of 34 genera of aquatic Hydrophilidae are known from the Palaearctic and Oriental regions. So far, 15 genera and 77 species of Hydrophilidae have been recorded from Turkey (Gentili & Chiesa, 1975; Lenistea, 1978; Gentili, 1979, 2000; Henegouwen, 1986; Hansen, 1987; Hebauer, 1993, 1994; Ribera et al., 1997; Schödl, 1997, 1998; Cuppen & Van Maanen, 1998; İncekara et al., 2003a, 2003b, 2004a, 2005a, 2005b; Mart et al., 2003; Hansen, 2004; Hebauer & Ryndevich, 2005; Darılmaz & Kiyak, 2006).

The Helophoridae is also a large family comprising of a single subfamily containing a single genus, *Helophorus* Fabricius. This genus includes about 190 species (Angus, 1984, 1985, 1988, 1992; Smetana, 1985). 51 species have been recorded belonging to the six subgenera in Turkey, previously (Lenistea, 1978; Angus, 1984, 1985, 1988, 1992; Hebauer, 1994; Mart & Erman, 2001; Hansen, 2004; İncekara et al. 2004b, 2005b, 2005c, 2005d; Darılmaz & Kiyak, 2006). With this study, one new record was added to the Turkish Helophoridae fauna.

METHODS

All samples were collected from south-west Mediterranean region in the years 2000–2002. The samples were collected from spring water areas, with either a sieve, ladle or water-net having a 1 mm mesh size. The beetles were killed with 70% alcohol and in the laboratory cleaned of

debris with a small paintbrush. The aedeagophore was dissected under a stereo-microscope and left in 10% KOH solution for about 1–2 hours. Materials have been deposited in the Zoological Museum of Gazi University (=ZMGU), Ankara, Turkey.

Family Helophoridae

Helophorus (Helophorus) grandis Illiger 1798

Materials: Antalya: 1 male, Korkuteli, the stream flow to Korkuteli dam, 37°05'N 30°08'E, 1074 m, 22.04.2001. **Remarks:** *Helophorus grandis* Illiger 1798 is here recorded from Turkey for the first time. *H. grandis* is a west and central European species, occurring throughout Britain and Ireland, France except the Mediterranean part, the northern half of Spain, Germany, Switzerland, Denmark, southern Sweden, south west Finland, Norway, Latvia, Estonia, Lithuania, Poland and in Russia north east to Syktivkar and south to about Moscow. Outside Europe *H. grandis* occurs in the Atlas Mountains of Morocco and it has also been introduced to eastern North America (Smetana, 1985; Angus, 1992).

Helophorus (Helophorus) syriacus Kuwert, 1885

Materials: Denizli: 1 female, Buldan, Süleymanlı lake, 38°03'N 28°46'E, 1175 m, 19.05.2001. **Distribution in Turkey:** Adana, Antakya, Diyarbakır, Mardin, Amanos Mountains (Gavur Mountains) (Angus, 1988, 1992; Mart & Erman, 2001). **Remarks:** New for south-west Anatolia.

Helophorus (Rhopalohelophorus) griseus Herbst, 1793

Materials: Aydın: 2 females, Söke, Sarıkemer, Büyük Menderes, 37°32'N 27°22'E, 21 m, 20.05.2001. **Distribution in Turkey:** Bolu, Bursa, Edirne, Erzincan, Erzurum, Gümüşhane, İstanbul, Kayseri (Angus 1988; Mart & Erman, 2001; İncekara et al., 2004b). **Remarks:** New for south-west Anatolia.

Helophorus (Rhopalohelophorus) discrepans Rey, 1885

Materials: Antalya: 1 male, Kaş, Gömbe, Girdev lake, 36°40'N 29°40'E, 1815 m, 24.06.2000. **Distribution in Turkey:** Ankara, Ardahan, Artvin, Bolu, Erzincan, Erzurum, Hakkâri, Kayseri, Van (Angus, 1988, 1992; Mart & Erman, 2001; İncekara et al., 2004b). **Remarks:** New for south-west Anatolia.

***Helophorus (Rhopalohelophorus) longitarsis* Wollaston 1864**

Materials: Aydın: 2 males, 4 females, Akeniköy, 37°30'N 27°19'E, 60 m, 16.04.2000. **Distribution in Turkey:** Aksaray, Ankara, Burdur, Erzincan (Angus, 1988; Mart & Erman, 2001; İncekara et al., 2004a; Darılmaz & Kiyak, 2006). **Remarks:** New for south-west Anatolia.

Family Hydrophilidae***Berosus (Enoplurus) spinosus* (Steven, 1808)**

Materials: Denizli: 1 female, Çivril, Bucak, the west of Işıklı lake, 38°14'N 29°51'E, 838 m, 26.06.2001. **Distribution in Turkey:** Adana, Afyon, Aksaray, Ankara, Antalya, Aydın, Edirne, Elazığ, İçel, Kars, Kırşehir, Malatya, Van (Cuppen & Van Maanen, 1998; İncekara et al., 2003a; Darılmaz & Kiyak, 2006). **Remarks:** New for Denizli.

***Laccobius (Dimorpholaccobius) simulatrix* d'Orchymont, 1932**

Materials: Aydın: 1 male, 2 females, Söke, Sarkemer, Büyük Menderes, 37°32'N 27°22'E, 21 m, 20.05.2001. **Distribution in Turkey:** Ağrı, Aksaray, Ankara, Antalya, Artvin, Aydın, Balıkesir, Bayburt, Bitlis, Bolu, Bursa, Çanakkale, Çorum, Denizli, Edirne, Erzincan, Erzurum, Hakkâri, Isparta, İçel, İstanbul, İzmir, Kahramanmaraş, Kars, Kayseri, Kırklareli, Kırşehir, Manisa, Muğla, Niğde, Osmaniye, Samsun, Sivas, Trabzon, Van, (Gentili & Chiesa, 1975; Gentili, 2000; İncekara et al., 2003a; Mart et al., 2003; Darılmaz & Kiyak, 2006). **Remarks:** Known to Aydın.

***Laccobius (Dimorpholaccobius) sulcatulus* Reitter, 1909**

Materials: Antalya: 1 male, Korkuteli, Öküzgözü I Dam, 36°53'N 30°02'E, 1200 m, 22.04.2001. **Distribution in Turkey:** Amasya, Ankara, Antalya, Ardahan, Bayburt, Bitlis, Burdur, Diyarbakır, Erzincan, Erzurum, Gümüşhane, Kars, Konya, Manisa, Toros Mountains, Van (Gentili & Chiesa, 1975; Gentili, 1979; Gentili, 2000; İncekara et al., 2003a; Mart et al., 2003; Hansen, 2004). **Remarks:** Known to Antalya.

***Enochrus (Lumetus) bicolor* (Fabricius, 1792)**

Materials: Denizli: 1 male, 1 female, Çivril, near of the Beydilli village, Işıklı Lake, 38°15'N 29°55'E, 840 m, 20.06.2002. **Distribution in Turkey:** Aksaray, Ankara, Antalya, Erzincan, İçel, Kars, Kırşehir, Van (Lenistea, 1978; Hansen, 1987; Schödl, 1998; İncekara et al., 2003a, 2005a; Darılmaz & Kiyak, 2006). **Remarks:** New for Denizli.

***Enochrus (Lumetus) fuscipennis* (Thomson, 1884)**

Materials: Denizli; 4 females, Çivril, near of the Beydilli village, Işıklı Lake, 38°15'N 29°56'E, 850 m, 18.05.2001; Aydın: 4 females, Söke, Avşar, Azap Lake, 37°35'N 27°26'E, 37 m, 23.06.2001. **Distribution in Turkey:** Aksaray, Artvin, Erzincan, Erzurum, Rize (İncekara et al., 2005a, Darılmaz & Kiyak, 2006). **Remarks:** New for south-west Anatolia.

***Limnoxenus niger* (Gmelin, 1790)**

Materials: Aydın: 1 male, 1 female, Söke, Yeşilköy, Azap Lake, 37°34'N 27°26'E, 17 m, 23.06.2002. **Distribution in Turkey:** Without detailed locality (İncekara et al., 2003a). **Remarks:** Probably with a new record for south-west Anatolia of Turkey.

***Hydrochara caraboides* (Linnaeus, 1758)**

Materials: Isparta: 1 male, Senirkent, Gençali village, Eğirdir Lake, 38°14'N 30°45'E, 950 m, 21.06.2000. **Distribution in Turkey:** İzmir (İncekara et al., 2003a). **Remarks:** New for south-west Anatolia.

***Hydrophilus (Hydrophilus) piceus* (Linnaeus, 1758)**

Materials: Denizli; 1 male, 1 female, Çivril, near of the Beydilli village, Işıklı Lake, 38°11'N 30°03'E, 920 m, 22.06.2000. **Distribution in Turkey:** Erzurum (İncekara et al., 2003a). **Remarks:** New for south-west Anatolia.

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