



Aquatic Beetles (Coleoptera: Helophoridae) from Bingöl Province in Turkey

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Abstract

In this study, it has been evaluated the specimens of the Helophoridae collected from Bingöl province. The specimens have been taken from shallow areas of the various running water, springs, streams, ponds and hot springs, between May 2003-October 2004. Totally, 20 taxa have been determined and their current distribution in Turkey are given.

Keywords: Helophoridae, Faunistic, Bingöl, Turkey.

Bingöl İlinin Sucul Kınkanatlıları (Coleoptera: Helophoridae)

Özet

Bu çalışmada, Bingöl ilinden toplanan Helophoridae türleri değerlendirilmiştir. Örnekler Mayıs 2003-Ekim 2004 tarihleri arasında çeşitli akarsu, kaynak, dere, birikinti ve sıcak su gözelerinin sığ kesimlerinden toplanmıştır. Toplamda 20 takson tespit edilmiş ve tespit edilen bu taksonların Türkiye'deki güncel dağılımları verilmiştir.

Anahtar kelimeler: Helophoridae, Faunistik, Bingöl, Türkiye.

Introduction

The Helophoridae is a large family consisting of a single subfamily only of a single genus, *Helophorus*. This genus comprises more than 190 species, represented in 3 major zoogeographical regions (Palearctic, Nearctic and Ethiopian) (Angus, 1970,1988, 1992, 1998; Hansen, 1987, 1999, 2004; Hebauer, 1994).

Materials and Methods

The samples were collected by means of a sieve and net with 1 mm pores from shallow areas of various springs, streams, brackish water ponds and wet habitats near the water in Bingöl province between May 2003 and October 2004. The beetles were killed using ethyl acetate or 70% alcohol solution. Aedeagophores were dissected out under a stereo microscope and cleared in 10% KOH solution for 1-2 h. Voucher specimens have been deposited in the Zoological Museum, Atatürk University, Erzurum, Turkey. Collection and identification of all samples were made by myself.

Results

Family: Helophoridae Leach, 1815

Genus: *Helophorus* Fabricius, 1775

Subgenus: *Helophorus* Fabricius, 1775

***Helophorus (Helophorus) syriacus* Kuwert, 1885**

Material examined: Bingöl: Ağaçeli, 25.VI.2003, 1 ♂; Direkli, 28.VI.2003, 3 ♂♂, 1 ♀; Kılçadır, 26.VI.2003, 4 ♂♂; Kuruca, 28.VI.2003, 5 ♂♂, 2 ♀♀; 30.VI.2004, 5 ♂♂, 7 ♀♀; Sudüğünü, 15.V.2003, 1 ♂, 1 ♀; Yolçatı, 28.VI.2003, 1 ♀. **Adaklı:** Kızıyaylası, 15.V.2003, 1 ♂. **Yedisu:** Kabayel, 24.VI.2003, 5 ♂♂, 3 ♀♀; Karapolat, 24.VI.2003, 1 ♂; Yeşilgöl, 13.V.2003, 1 ♂.

Distribution in Turkey

Adana, Antakya, Amanos mountains, Balıkesir, Bingöl, Çorum, Denizli, Diyarbakır, Erzincan, Elazığ, Gaziantep, İzmir, Kastamonu, Mardin, Muş, Samsun, Tokat (Darılmaz and İncekara, 2011; Topkara and Balık, 2010; Mart et al., 2014).

***Helophorus (Helophorus) liguricus* Angus, 1970**

Material examined: Bingöl: Balıklıçay, 15.V.2003, 1 ♂; Çavuşlar, 25.VI.2003, 1 ♂♂; Gürpınar, 26.VI.2003, 1 ♂; Sudüğünü, 15.V.2003, 1

♂, 2 ♀♀. **Karlıova:** Sertmekaya, 14.V.2003, 2 ♂♂, 7 ♀♀.

Distribution in Turkey: Ankara, Bitlis, Bingöl, , Erzincan Erzurum Kayseri, Muş, Tokat (Darılmaz and İncekara, 2011; Taşar, 2011; Polat, 2014).

Helophorus (Helophorus) aquaticus (Linnaeus,1758)

Material examined: Bingöl: Gürpınar, 26.VI.2003, 1 ♂♂, 3 ♀♀; Hardal, 15.V. 2003, 3 ♂♂ ; Balıklıçay, 15.V.2003, 1 ♂; Sinsor pass, 7.X.2003, 2 ♂♂, 46 ♀♀; Kuruca, 16. V.2003, 1♂, 1 ♀; 28.VI.2003, 17 ♂♂, 30 ♀♀; Sancak,15.V.2003, 9 ♂♂, 15♀♀; 30.VI.2004, 6 ♂♂, 10 ♀♀; Uzundere plateau, 27.VI.2003, 12 ♂♂, 25 ♀♀. **Adaklı:** Akbinek, 16.V.2003, 3 ♂♂, 8 ♀♀; Dardere, 27.VI.2003, 9 ♂♂, 15 ♀♀; Doluçay, 27.VI.2003, 4 ♂♂, 13 ♀♀; Dolutekne, 27.VI.2003, 17 ♂♂, 30 ♀♀; Hasbağlar, 15.V. 2003, 1 ♂, 3 ♀♀; Kızıyaylası, 15.V.2003, 7 ♂♂, 8 ♀♀; Sütlüce plateau, 27.VI.2003, 16 ♂♂, 28 ♀♀. **Karlıova:** Boncukgöze, 9.X.2004, 1 ♂, 3 ♀♀; Kale, 14.V.2003, 21 ♂♂, 13 ♀♀; Toklular, 6.X.2003, 2 ♂♂, 4 ♀♀; 14.V.2003, 2 ♂♂, 10 ♀♀; Yoncalık, 17.V.2003, 10 ♂♂, 17 ♀♀. **Solhan:** Buğlan pass, 25.VI.2003, 21 ♂♂, 10 ♀♀. **Yedisu:** Düz, 24.VI.2003, 4 ♂♂, 15 ♀♀; Eskibalta, 24.VI.2003, 2 ♂♂, 5 ♀♀; Geldi plateau, 13.V.2003, 1 ♂♂, 3 ♀♀; Kabayel, 24.VI.2003, 3 ♂♂, 2 ♀♀; Karapolat, 24.VI.2003, 2 ♂♂, 5 ♀♀; Kaşıklı, 13.V.2003, 4 ♂♂, 10 ♀♀; Yeşilgöl, 13.V.2003, 23 ♂♂, 30 ♀♀.

Distribution in Turkey: Adana, Aksaray, Ankara, Bayburt, Bilecik, Bingöl, Bitlis, Bursa, Bolu, Çorum, Diyarbakır, Erzincan, Erzurum, Elazığ; Hakkâri, Giresun, Gümüşhane, Isparta, İçel, İstanbul, Kars, Kastamonu, Kayseri, Kırklareli, Mardin, Muş, Ordu, Sakarya, Samsun, Sinop, Sırnak, Van (Darılmaz and İncekara, 2011; Mart et al., 2014).

Subgenus: Empleurus Hope, 1838

Helophorus (Empleurus) nubilus Fabricius, 1776

Material examined: Bingöl: Balıklıçay plateau, 15.V.2003, 1 ♂, 1♀; İçpınar, 25.IV. 2004, 2 ♂♂, 2 ♀♀; Sancak, 15.V.2003, 4 ♂♂, 4 ♀♀. **Adaklı:** Bağlarpınarı, 16.V.2003, 1 ♂, 2 ♀♀; Hasbağlar, 15.V.2003, 1 ♂, 3 ♀♀; Kızıyaylası, 15.V.2003, 2 ♂♂, 3 ♀♀; Köklü, 10.X.2004, 3 ♂♂, 2♀♀. **Kiği:** 16.V.2003, 1 ♂, 1 ♀. **Solhan:** Buğlan pass, 25. VI.2003, 1 ♂, 5 ♀♀. **Yayladere:** Koruklu, 16.V.2003, 2 ♂♂, 3 ♀♀. **Yedisu:** Kaşıklı, 13.5.2003, 1 ♂, 1 ♀; Yeşilgöl, 13.V.2003, 1 ♂, 1 ♀.

Distribution in Turkey: Adana, Ağrı, Amanos mountains, Ankara, Bayburt, Bingöl, Bitlis, Erzincan, Erzurum, Elazığ, Giresun, Gümüşhane, Hakkâri,

Isparta, İçel, İstanbul, İzmir, Kırklareli, Konya, Muğla, Muş, Ordu, Sakarya, Sırnak, Tokat, Van, Zonguldak (Darılmaz and İncekara, 2011; Mart et al., 2014).

Subgenus: Eutrichelophorus Sharp, 1915

Helophorus (Eutrichelophorus) micans Falderman, 1835

Material examined: Bingöl: Aktoprak, 7.XI.2003, 1 ♂, 5 ♀♀; Bingöl-Genç road 5. km., 7.XI.2003, 1 ♂, 4 ♀♀; Çavuşlar, 25.VI.2003, 1 ♂, 4 ♀♀; Ekinyolu, 25.IV.2004, 3 ♂♂, 8 ♀♀; 10.X.2004, 12 ♂♂, 8 ♀♀; Garip, 26.VI.2003, 1 ♂; Ilıcalar, 14.V.2003, 1 ♂, 3 ♀♀; Kuruca pass, 28.VI.2003, 1 ♂, 2 ♀♀. **Adaklı:** Akbinek,14.V.2003, 2 ♂♂, 3 ♀♀; Bağlarpınarı, 16.V.2003, 7 ♂♂, 5 ♀♀. **Solhan:** Düz, 26.VI.2003, 1 ♂, 2 ♀♀. **Yedisu:** Yeşilgöl, 13.V.2003, 1 ♂, 6 ♀♀.

Distribution in Turkey: Adana, Ağrı, Aksaray, Bayburt, Bingöl, Hatay, Balıkesir, Burdur, Çanakkale, Çorum, Diyarbakır, Erzincan, Erzurum, Elazığ, Giresun, İçel, İzmir, Kayseri, Muş, Samsun, Tokat, Trabzon, Tuz Lake, Van Lake (Darılmaz and İncekara, 2011; Mart et al., 2014).

Subgenus: Atracthelophorus Kuwert, 1886

Helophorus (Atracthelophorus) brevipalpis Bedel, 1881

Material examined: Bingöl: Ağaçeli, 25.VI.2003, 3 ♂♂, 6 ♀♀; Bingöl-Genç road 5. km., 7.X.2003, 1 ♂; Bingöl-Muş road 7. km., 25.VI.2003, 3 ♂♂, 5 ♀♀; Çayağzı stream, 26.VI.2003, 9 ♂♂, 15 ♀♀; 7.X.2003, 10 ♂♂, 13 ♀♀; Garip, 26.VI.2003, 2 ♂♂, 4 ♀♀. **Genç:** Evciler, 26.VI.2003, 1 ♂, 3 ♀♀. **Karlıova:** Çatak, 6.IX.2003, 1 ♂, 1 ♀; Kale, 14.V.2003, 2 ♂♂, 2 ♀♀; Kantarkaya, 6.IX.2003, 3 ♂♂, 3 ♀♀; Sertmekaya, 6. X. 2003, 1♂; Toklular, 14.V.2003, 2 ♂♂, 3 ♀♀. **Solhan:** Dilektepe, 25.VI.2003, 6 ♂♂, 10 ♀♀; Düz, 26.VI.2003, 5 ♂♂, 3 ♀♀; Yüzenada, 25.VI.2003, 4 ♂♂, 7 ♀♀.

Distribution in Turkey: Ağrı, Aksaray, Ankara, Antalya, Artvin, Bayburt, Bitlis, Bingöl, Bursa, Çorum, Erzurum, Erzincan, Giresun, Gümüşhane, İstanbul, İzmir, Kahramanmaraş, Kastamonu, Kayseri; Kırklareli, Muğla, Muş, Niğde, Ordu, Samsun, Sakarya, Sinop, Van, Trabzon, Tuz Gölü, Zonguldak (Darılmaz and İncekara 2011; Topkara and Balık, 2010; Polat, 2014).

Helophorus (Atracthelophorus) daedalus d'Orchymont, 1932

Material examined: Bingöl: Ağaçeli, 25.VI.2003, 10 ♂♂, 13 ♀♀; Balıklıçay, 15.V.2003, 1 ♂, 5 ♀♀; Büyüktekören, 26.VI.2003, 16 ♂♂, 4 ♀♀; Çavuşlar, 25.VI. 2003, 4 ♂♂, 4 ♀♀; Çayağzı, 7.X.2003,

2 ♂♂, 5 ♀♀; Çiçekdere, 15.V.2003, 10 ♂♂, 2 ♀♀; Çeltiksuyu, 26.VI.2003, 1 ♂, 3 ♀♀; Çevrimpinarı, 28.VI.2003, 7 ♂♂, 5 ♀♀; Dişbudak, 26.VI.2003, 2 ♂♂, 5 ♀♀; Direkli, 28.VI.2003, 1 ♂, 2 ♀♀; Gürpınar, 26. VI. 2003, 2 ♂♂, ♀♀; Hardal, 15.V.2003, 17 ♂♂, 10 ♀♀; Köklü, 25.IV.2004, 7 ♂♂, 5 ♀♀; Kuruca pass, 28.VI.2003, 15 ♂♂, 30 ♀♀; Sancak, 15.V.2003, 4 ♂♂, 10 ♀♀; Sudüğünü, 15.V. 2003, 3 ♂♂, 4 ♀♀; 21.VIII.2003, 5 ♂♂, 6 ♀♀; Yolçatı, 28.VI.2003, 2 ♂♂, 3 ♀♀; 27.VII.2004, 3 ♂♂, 2 ♀♀. **Adaklı:** Akbinek, 16.V.2003, 1 ♂, 3 ♀♀; Doğanakaya, 27.VI. 2003, 13 ♂♂, 10 ♀♀; Dolutekne, 27.VI.2003, 2 ♂♂, 3 ♀♀; Kızıyaylası, 15.V.2003, 7 ♂♂, 10 ♀♀; Kozlu, 27.VI.2003, 10 ♂♂, 20 ♀♀. **Genç:** Çaytepe, 26.VI.2003, 11 ♂♂, 8 ♀♀; Evciler, 26.VI.2003, 3 ♂♂, 4 ♀♀. **Karlıova:** Kalencik, 24.VIII.2003, 1 ♂, 5 ♀♀; Kızılçubuk, 20.VIII.2003, 1 ♂♂, 3 ♀♀; Sudurağı, 17.IX.2004, 6 ♂♂, 5 ♀♀. **Kiği:** Kiği-Yayladere road 10. km., 16.V.2003, 1 ♂, 3 ♀♀. **Solhan:** Buğlan pass, 25.VI.2003, 13 ♂♂, 20 ♀♀; Dilektepe, 25.VI.2003, 9 ♂♂, 12 ♀♀; Murat, 25.VI.2003, 3 ♂♂, 8 ♀♀; Oymapınar, 25.VI.2003, 7 ♂♂, 5 ♀♀. **Yedisu:** Düşengi, 24.VI.2003, 2 ♂♂, 3 ♀♀; Düz, 26.VI.2003, 8 ♂♂, 11 ♀♀; Eskibalta, 24.VI. 2003, 6 ♂♂, 11 ♀♀; Gelinpertek, 24.VI.2003, 1 ♂, 3 ♀♀; Karapolat, 24.VI.2003, 2 ♂♂, 5 ♀♀; Sehertepe, 28.VI.2003, 3 ♂♂, 3 ♀♀; Üçevler, 24.VI.2003, 1 ♂, 2 ♀♀.

Distribution in Turkey: Ankara, Bayburt, Bingöl, Bitlis, Bolu, Çorum, Diyarbakır, Erzincan, Erzurum, Elazığ, Giresun, Gümüşhane, Hakkâri, İzmir, Kayseri, Muş, Ordu, Samsun, Şırnak, Tokat, Van (Darılmaz and İncekara, 2011; Topkara and Balık, 2010; Mart et al., 2014).

Helophorus (Atracthelophorus) abeillei Guillebeau, 1896

Material examined: Bingöl: Balıklıçay plateau, 15. V. 2003, 2 ♂♂, 4 ♀♀; Direkli, 28.VI.2003, 1 ♂, 4 ♀♀; Hardal, 15. V. 2003, 5 ♂♂, 8 ♀♀; Uzundere plateau, 27.VI. 2003, 23 ♂♂, 35 ♀♀; Sancak, 15.V.2003, 4 ♂♂, 13 ♀♀. **Adaklı:** Dardere, 27.VI.2003, 14 ♂♂, 30 ♀♀; Doğanakaya, 27.VI.2003, 1 ♂; Dolutekne, 27.VI.2003, 1 ♂♂, 4 ♀♀; Kızıyaylası, 15.V.2003, 16 ♂♂, 24 ♀♀; Sütlüce plateau, 27.VI.2003, 19 ♂♂, 13 ♀♀. **Karlıova:** Çiftlik, 9.X.2004, 1 ♂, 5 ♀♀; Kale, 14.V.2003, 1 ♂, 5 ♀♀; Kızılçubuk, 24.VI.2003, 1 ♂, 3 ♀♀; Toklular, 6.X.2003, 4 ♂♂, 9 ♀♀; Yoncalık, 17.V.2003, 3 ♂♂, 1 ♀♀. **Solhan:** Buğlan pass, 25.VI. 2003, 4 ♂♂, 7 ♀♀. **Yayladere:** Doğucak, 28.VI.2003, 2 ♂♂, 3 ♀♀; Gülümce, 28. VI. 2003, 1 ♂, 1 ♀; 25.VI.2003, 2 ♂♂, 3 ♀♀. **Yedisu:** Eskibalta,

24.VI.2003, 1 ♂, 3 ♀♀; Kabayel, 24.VI. 2003, 2 ♂♂, 6 ♀♀; Kaşıklı, 13.V.2003, 2 ♂♂, 7 ♀♀; Yeşilgöl, 13.V. 2003, 4 ♂♂, 6 ♀♀.

Distribution in Turkey: Adana, Ağrı, Antalya, Bayburt, Bingöl, Bitlis, Erzincan, Erzurum, Elazığ, Gümüşhane, Hakkâri, Muş, Kayseri, Van (Darılmaz and İncekara, 2011; Mart et al., 2014; Polat, 2014).

Helophorus (Atracthelophorus) lewisi Angus, 1985

Material examined: Bingöl: Gürpınar, 26.VI.2003, 2 ♂♂, 5 ♀♀; Kuruca pass, 15.V. 2003, 2 ♂♂, 6 ♀♀; Sancak, 15.V.2003, 2 ♂♂, 1 ♀. **Adaklı:** Akbinek, 16.V.2003, 1 ♂, 3 ♀♀; Bağlarpınarı, 16.V.2003, 8 ♂♂, 6 ♀♀; Hasbağlar, 15.V.2003, 2 ♂♂, 2 ♀♀. **Karlıova:** Karlıova-Bingöl road 20. km., 14.V.2003, 3 ♂♂, 7 ♀♀. **Solhan:** Buğlan pass, 25.VI.2003, 1 ♂, 4 ♀♀. **Yedisu:** Kaşıklı, 13.V.2003, 1 ♂.

Distribution in Turkey: Bayburt, Bingöl, Bitlis, Çorum, Diyarbakır, Erzincan, Elazığ, Giresun, Gümüşhane, Hatay, Kastamonu, Kayseri, Muş, Ordu, Samsun, Şırnak, Tokat (Darılmaz and İncekara, 2011; Topkara and Balık, 2010; Mart et al., 2014).

Subgenus: Rhopalhelophorus Kuwert, 1886

Helophorus (Rhopalhelophorus) nanus Sturm, 1836

Material examined: Yedisu: Kabayel, 24.VI.2003, 1 ♂.

Distribution in Turkey: Bolu, Erzincan, Gümüşhane, Hakkâri, Kayseri, Ordu, Tokat, Van (Darılmaz and İncekara 2011; Taşar, 2011; Polat 2014).

Helophorus (Rhopalhelophorus) pallidipennis Mulsant & Wachanru, 1852

Material examined: Bingöl: Balıklıçay, 15.V.2003, 2 ♂♂, 2 ♀♀; İçpınar, 24.V.2004, 2 ♂♂; Sudüğünü, 15.V.2003, 29 ♂♂, 31 ♀♀. **Adaklı:** Akbinek, 16.V.2003, 1 ♂, 3 ♀♀; Hasbağlar, 15.V.2003, 2 ♂♂, 4 ♀♀. **Karlıova:** Karlıova-Bingöl road 20.km, 14.V. 2003, 1 ♂; Toklular, 14.V.2003, 2 ♂♂, 5 ♀♀. **Solhan:** Buğlan pass, 25.VI.2003, 1 ♂, 4 ♀♀.

Distribution in Turkey: Adana, Ankara, Bingöl, Bitlis, Çanakkale, Diyarbakır, Erzincan, Erzurum, İçel, İzmir, Karaman, Kayseri, Muş, Şırnak, Van (Darılmaz and İncekara, 2011; Taşar, 2011; Mart et al., 2014).

Helophorus (Rhopalhelophorus) frater d'Orchymont, 1926

Material examined: Bingöl: Balıklıçay plateau, 15.V.2003, 2 ♂♂, 6 ♀♀; Bingöl-Muş road 7. km., 25.VI.2003, 13 ♂♂, 15 ♀♀. **Adaklı:** Hasbağlar,

15.V.2003, 2 ♂♂, 2 ♀♀. **Solhan:** Murat, 25.VI.2003, 1 ♂, 2 ♀♀. **Yayladere:** Saritosun, 27.VI.2003, 6 ♂♂, 9 ♀♀; **Yedisu:** Kabayel, 26.VI.2003, 3 ♂♂, 9 ♀♀; Kaşıklı, 13.V.2003, 1 ♂, 3 ♀♀.

Distribution in Turkey: Bayburt, Bingöl, Erzincan, Erzurum, Elazığ, Giresun, Gümüşhane, İzmir, Kayseri, Muş, Samsun, Tokat, Van (Darılmaz and İncekara, 2011; Mart et. al., 2014).

Helophorus (Rhopalhelophorus) fulgidicollis Motschulsky, 1860

Material examined: **Adaklı:** Doluçay, 27.VI.2003, 1 ♂.

Distribution in Turkey: Bingöl, Erzincan, Erzurum, Zonguldak (Topkara and Balık, 2010; Darılmaz and İncekara, 2011)

Helophorus (Rhopalhelophorus) hilaris Sharp, 1916

Material examined: **Bingöl:** Çavuşlar, 25.VI.2003, 1 ♂, 3 ♀♀; Elmalı, 24.VI.2003, 1 ♂. **Genç:** Evciler, 26.VI.2003, 1 ♂, 1 ♀. **Yedisu:** Kabayel, 26.VI.2003, 1 ♂, 2 ♀♀; Kaşıklı, 13.V.2003, 1 ♂.

Distribution in Turkey: Ağrı, Bayburt, Bingöl, Bitlis, Diyarbakır, Erzincan, Erzurum, Elazığ, Giresun, Gümüşhane, Hakkâri, Kayseri, Mardin, Muş, Ordu, Samsun, Tokat, Şırnak, Van (Darılmaz and İncekara, 2011; Mart et al., 2014)

Helophorus (Rhopalhelophorus) lapponicus Thomson, 1854

Material examined: **Bingöl:** Sudüğünü, 15.V.2003, 4 ♂♂, 5 ♀♀. **Karlıova:** Boncukgöze, 9.X.2004, 1 ♂; Karlıova-Bingöl road 20. km., 14.V.2003, 3 ♂♂, 7 ♀♀.

Distribution in Turkey: Ardahan, Bayburt, Erzincan, Erzurum, Gümüşhane, Kars, Muş, Ordu, Samsun, Tokat, Trabzon, Van (Darılmaz and İncekara, 2011; Taşar, 2011)

Helophorus (Rhopalhelophorus) paraminutus Angus, 1986

Material examined: **Bingöl:** Sudüğünü, 15.V.2003, 2 ♂♂. **Karlıova:** Çiftlik, 6.IX. 2003, 1 ♂.

Distribution in Turkey: Ağrı, Antalya, Bingöl, Erzincan, Elazığ, Muş, Van (Darılmaz and İncekara, 2011; Mart et al., 2014)

Helophorus (Rhopalhelophorus) longitarsis Wollaston, 1864

Material examined: **Bingöl:** Bingöl-Genç road 6. km., 26. VI. 2003, 1 ♂; Direkli, 28. VI.2003, 3 ♂♂, 5 ♀♀; Güveçli, 26.VI.2003, 5 ♂♂, 6 ♀♀; Yolçatı, 28.VI.2003, 1 ♂.

Distribution in Turkey: Aksaray, Ankara, Aydın, Burdur, Erzincan, Gümüşhane, Kayseri, Muş,

Ordu, Van (Darılmaz and İncekara, 2011; Polat,2014).

Helophorus (Rhopalhelophorus) discrepans Rey, 1885

Material examined: **Bingöl:** Ağaçeli, 25.VI.2003, 8 ♂♂, 4 ♀♀; Balıklıçay plateau, 15. V.2003, 7 ♂♂, 13 ♀♀; Bingöl-Muş road7. km., 25.VI.2003, 4 ♂♂, 5 ♀♀; Çavuşlar, 25. VI.2003, 8 ♂♂, 12 ♀♀; Çevrimpınarı, 28.VI.2003, 7 ♂♂, 4 ♀♀; Direkli, 28.VI. 2003, 10 ♂♂, 25 ♀♀; Gürpınar, 26.VI.2003, 4 ♂♂, 2 ♀♀; Köklü, 25.IV.2004, 2 ♂♂, 5 ♀♀; Sancak, 15.V.2003, 3 ♂♂, 4 ♀♀; Kuruca pass, 28.VI.2003, 20 ♂♂, 35 ♀♀; Sudüğünü, 15.V.2003, 10 ♂♂, 15 ♀♀; Uzundere plateau, 27.VI.2003, 12 ♂♂, 20 ♀♀; Yolçatı, 28.6.2003, 2 ♂♂, 5 ♀♀. **Adaklı:** Akbinek, 16.V.2003, 2 ♂♂, 3 ♀♀; 27.VI.2003, 8 ♂♂, 10 ♀♀; Danatepe, 27.VI.2003, 4 ♂♂, 8 ♀♀; Dardere, 27.VI.2003, 3 ♂♂, 2 ♀♀; Doğankaya, 27.VI.2003, 14 ♂♂, 23 ♀♀; Doluçay, 27.VI.2003, 19 ♂♂, 34 ♀♀; Dolutekne, 27.VI.2003, 10 ♂♂, 15 ♀♀; Hasbağlar, 15.V.2003, 4 ♂♂, 5 ♀♀. Kozlu mezarası, 27.VI.2003, 4 ♂♂, 2 ♀♀; Sütlüce plateau, 27.VI.2003, 8 ♂♂, 11 ♀♀.

Genç: Evciler, 26.VI.2003, 1 ♂, 3 ♀♀. **Karlıova:** Aktaş, 20.VIII.2003, 22 ♂♂, 35 ♀♀; Çatak, 6.IX.2003, 6 ♂♂, 5 ♀♀; Dört Yol, 9.X. 2004, 2 ♂♂, 5 ♀♀; Kale, 14.V.2003, 4 ♂♂, 23 ♀♀; Kantarkaya, 17.V.2003, 1 ♂, 6.IX.2003, 3 ♂♂, 2 ♀♀; Kızılcubuk, 24.VI.2003, 4 ♂♂, 8 ♀♀; 20.VIII.2003, 9 ♂♂, 12 ♀♀; Ortaköy, 20.VIII.2003, 4 ♂♂, 2 ♀♀; Yoncalık, 17.V.2003, 2 ♂♂, 5 ♀♀. **Kiği:** Kiği-Yayladere road 30. km., 27.VI.2003, 1 ♂, 2 ♀♀. **Solhan:** Arakonak, 25.VI.2003, 21 ♂♂, 14 ♀♀; Buğlan pass, 25.VI.2003, 9 ♂♂, 4 ♀♀; Dilektepe, 25.VI.2003, 12 ♂♂, 31 ♀♀; Düz, 26.VI.2003, 1 ♂, 3 ♀♀; Murat, 25.VI.2003, 5 ♂♂, 15 ♀♀; Oymapınar, 25.VI.2003, 4 ♂♂, 2 ♀♀; Yenibaşak, 25.VI.2003, 9 ♂♂, 12 ♀♀; Yüzenada, 25.VI.2003, 27 ♂♂, 33 ♀♀. **Yayladere:** Gülümce, 28. VI. 2003, 3 ♂♂, 3 ♀♀; 28.VI.2003, 2 ♂♂, 2 ♀♀; Saritosun, 27.VI.2003, 2 ♂♂, 9 ♀♀. **Yedisu:** Düşengi, 24.VI.2003, 9 ♂♂, 12 ♀♀; Eskibalta, 24.VI.2003, 3 ♂♂; Ekşipınar, 24.VI.2003, 7 ♂♂, 10 ♀♀; Geldi plateau, 13.V.2003, 1 ♂, 1 ♀; Kabayel, 24.VI.2003, 18 ♂♂, 40 ♀♀; Karapolat, 24. 6. 2003, 10 ♂♂, 25 ♀♀; Kaşıklı, 13.V.2003, 7 ♂♂, 3 ♀♀; Yeşilgöl, 13.V. 2003, 10 ♂♂, 26 ♀♀.

Distribution in Turkey: Ağrı, Artvin, Ankara, Antalya, Bayburt, Bingöl, Bitlis, Bolu, Çorum, Erzurum, Erzincan, Elazığ, Giresun, Gümüşhane, Hakkâri, Kayseri, Muş, Ordu, Tokat, Trabzon, Van, Yozgat (Darılmaz and İncekara, 2011; Mart et al., 2014).

Helophorus (Rhopalhelophorus) subarcuatus Rey, 1885

Material examined: Bingöl: Balıklıçay, 15.V.2003, 1 ♂, 4 ♀♀; Bingöl-Genç road 6.km, 26.VI.2003, 1 ♂, 3 ♀♀; Bingöl-Muş road 7. km., 25.VI.2003, 1 ♂, 2 ♀♀; Köklü, 25.VI.2003, 6 ♂♂, 8 ♀♀.

Adaklı: Hasbağlar, 15.V.2003, 1 ♂, 3 ♀♀. **Genç:** Evciler, 26.VI.2003, 10 ♂♂, 13 ♀♀. **Karlıova:** Çatak, 6.IX.2003, 7 ♂♂, 9 ♀♀. **Solhan:** Dilektepe, 25.VI.2003, 2 ♂♂, 3 ♀♀; Düz, 26.VI.2003, 3 ♂♂, 3 ♀♀; Murat, 25.VI.2003, 1 ♂, 3 ♀♀. **Yayladere:** Sarıtosun, 27.VI.2003, 1 ♂, 8 ♀♀. **Yedisu:** Eskibalta, 24.VI. 2003, 1 ♂; Kaşıklı, 13.V.2003, 4 ♂♂, 7 ♀♀.

Distribution in Turkey: Ağrı, Bingöl, Bitlis, Erzincan Erzurum, Tokat, Van (Darılmaz and İncekara, 2011; Taşar et al., 2012).

Helophorus (Rhopalhelophorus) obscurus Mulsant, 1844

Material examined: Bingöl: Köklü, 25.VI.2003, 3 ♂♂, 5 ♀♀.

Distribution in Turkey: Artvin, Bolu, Bursa, Çorum, Erzincan, Erzurum, Giresun, İstanbul, İzmir, Kırklareli, Ordu, Samsun, Sinop, Tokat, Trabzon (Darılmaz and İncekara 2011).

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