

Additional Notes on the Genus *Bledius* Leach, 1819 (Staphylinidae: Oxytelinae) Fauna of Turkey

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ABSTRACT

In this study, total of 70 specimens of the genus *Bledius* Leach, 1819 (Staphylinidae: Oxytelinae) were collected from different regions of Turkey between 2006 and 2020. As a result of the study, 10 species were determined from the study areas in Turkey. Among them, *Bledius (Astycops) opacus* (Block, 1799), *B. (Bargus) secessus* Bondroit, 1912 and *B. (Elbius) diota* (Schiodte, 1866) are recorded for the first time from Turkey. In addition, *B. (Astycops) subterraneus* Erichson, 1839 from Aegean Region, *B. (Hesperophilus) cribricollis* Heer, 1839 from Eastern Black Sea Region, *B. (Pucerus) verres* Erichson, 1840 from Aegean Region and Southeastern Anatolia Region, *B. (s.str.) spectabilis* Kraatz, 1858 from Central Anatolian Region and *B. (s.str.) unicornis* (Germar, 1825) from Aegean Region are recorded for the first time.

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Türkiye *Bledius* Leach, 1819 (Staphylinidae: Oxytelinae) Faunası Üzerine Ek Notlar

ÖZET

Bu çalışmada, 2006-2020 yılları arasında Türkiye'nin farklı bölgelerinden *Bledius* Leach, 1819 (Staphylinidae: Oxytelinae) cinsine ait toplam 70 örnek toplanmıştır. Çalışma sonucunda Türkiye'deki çalışma alanlarından 10 tür tespit edildi. Bunlardan *Bledius (Astycops) opacus* (Block, 1799), *B. (Bargus) secessus* Bondroit, 1912 ve *B. (Elbius) diota* (Schiodte, 1866) Türkiye'den ilk kez kaydedildi. Ayrıca, Ege Bölgesi'nden *B. (Astycops) subterraneus* Erichson, 1839 Doğu Karadeniz Bölgesi'nden *B. (Hesperophilus) cribricollis* Heer, 1839 Ege Bölgesi ve Güneydoğu Anadolu Bölgesi'nden *B. (Pucerus) verres* Erichson, 1840 *B. (s.str.) spectabilis* Kraatz, 1858 Orta Anadolu Bölgesi'nden ve Ege Bölgesi'nden *B. (s.str.) unicornis* (Germar, 1825) ilk kez kayıt altına alınmıştır.

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INTRODUCTION

The genus *Bledius* Leach, 1819 (Staphylinidae: Oxytelinae) comprises 449 species all over the world (Newton, 2019). In the Palearctic region, this genus is represented by 192 species and subspecies in 11 subgenera, with 18 of them listed as incertae sedis. Also, four species are known as nomina dubia (Schülke and Smetana, 2015). Anlaş, (2009: updated) recorded 22 species and subspecies belonging to this genus from Turkey. These species belong to nine subgenera: the nominal subgenus (five species); *Astycops* Thomson, 1859 (one species); *Bargus* Schiodte, 1866; (two species); *Belidus* Mulsant & Rey, 1878 (one species); *Elbidus* Mulsant & Rey, 1878 (three species);

Euceratobledius Znojko, 1929 (three species) *Hesperophilus* Stephens, 1829 (four species); *Pucerus* Mulsant & Rey, 1878 (two species) and, *Teratobledius* Adam, 2001 (one species).

Bledius species can be found in dung, seashores, salt marshes, sandy, clayey places, decaying plants, and nests in ants. They are mostly found in dung and decaying organic matters. However, they are localized according to their habitats and generally only occur to the limited suitable habitats (Tottenham, 1954; Makranczy, 2006). But, it has been reported that the larvae of some *Bledius* species also feed on algae and diatom (Paulian, 1941).

The present paper is to supplement the knowledge of the Turkey *Bledius* fauna based on the material of different localities of Turkey.

MATERIAL and METHODS

Field trips were conducted from different regions of Turkey between 2006 and 2020. The specimens in the study were collected using aspirator (under the stone), sifter, and lighter traps. The material referred to in this study was deposited in the Alaşehir Zoological Museum Manisa (AZMM). Classification and nomenclature were made according to Schülke and Smetana (2015).

RESULTS

As a result of the examination of the material total of 10 species belonging to *Bledius* were determined maintained in the collection of AZMM. Among of which, *Bledius (Bargus) secessus* Bondroit, 1912, *Bledius (Astycops) opacus* (Block, 1799), and *Bledius (Elbius) diota* (Schjødte, 1866) are the first records for the Turkish *Bledius* Fauna. Moreover, first records have been given for many regions and provinces of Turkey.

Oxytelinae Fleming, 1821

Tribüs Blediini Ádám, 2001

Bledius (Astycops) opacus (Block, 1799)

Material examined: **Trabzon:** 2♂♂, 2♀♀, 06.VI.2006, Maçka, Sümele road, leg. Anlaş (Figure 1).

Distribution in Turkey: New record for Turkey.

Distribution in the world: *B. opacus* is widely distributed in Europe and also known from Algeria, Eastern and Western Siberia, Iran, Mongolia and Yunnan (China) (Schülke & Smetana, 2015).

Bionomics: The specimens have been found at an altitude of 600 m near the forest under the stone.

Bledius (Astycops) subterraneus Erichson, 1839

Material examined: **Aydın:** 2♂♂, 16.VI.2013, Koçarlı, Mersinbeleni, 37°40'23"N, 27°41'25"E, 770 m, leg. Yağmur & Örgel. **Manisa:** 1♂, 1♀, 08.IV.2008, Soma, 39°20'07"N, 27°40'34"E, 256 m, leg. Anlaş.

Distribution in Turkey: Rize, Trabzon (Assing, 2007, 2009). This species is recorded from Aegean Region for the first time.

Distribution in the world: *B. subterraneus* is widely distributed in Europe and known from Siberia and Turkey (Schülke & Smetana, 2015).

Bionomics: The specimens were collected by sifting the leaf litter of shrubs and trees at altitudes of 256 and 700 m.

Bledius (Bargus) secessus Bondroit, 1912

Material examined: **Muğla:** 7♂♂, 10♀♀, 21.V.2015, Dalaman, 36°53'37"N, 28°53'25"E, leg. Örgel & Altın (Figure 1).

Distribution in Turkey: New record for Turkey.

Distribution in World: According to Schülke and Smetana (2015), *B. secessus* is known from Croatia, Czech Republic, Italy and Germany in the Palaearctic Region.

Bionomics: The specimens have been found at an altitude of 100 m in the dried creek under the stone.

Bledius (Elbidus) diota Schjødte, 1866

Material examined: **Afyonkarahisar:** 3♂♂, 1♀, 31.V.2014, Dazkırı, Acıgöl, 37°51'30"N, 29°52'59"E, leg. Örgel & Altın (Figure 1).

Distribution in Turkey: New record for Turkey.

Distribution in the world: *B. diota* occurs in Belgium, Denmark, Estonia, Finland, Great Britain, Germany, Romania, Sweden, Algeria and Egypt in the Palaearctic Region, also in the Afrotropical Region (Schülke & Smetana, 2015).

Bionomics: The specimens have been found at an altitude of 841 m in the near seasonal creek under the stone.

Bledius (Euceratobledius) furcatus (Olivier, 1811)

Material examined: **Afyonkarahisar:** 4♂♂, 31.V.2014, Dazkırı, Acıgöl, 37°48'12"N, 29°43'21"E, leg. Örgel & Altın. **Aydın:** 1♂, 15.V.2013, Söke, light trap. **İzmir:** 1♂, 01.VIII.2013, Seferihisar, light trap.

Distribution in Turkey: Ankara, Aydın, Balıkesir, Diyarbakır, İzmir, Manisa (Anlaş, 2009; Anlaş & Rose, 2009; Kılıç & Yoldaş, 2012; Özgen et al., 2010; Scheerpeltz, 1961a; Varlı et al., 2018).

Distribution in the world: *B. furcatus* is widespread in Europe, North Africa, Cyprus, Iran, Kazakhstan, Syria, Turkey in the Palearctic region. It is also known from the Afrotropical Region (Schülke & Smetana, 2015).

Bionomics: The specimens were collected by light trap and near the lake under the stone.

Bledius (Hesperophilus) cribricollis Heer, 1839

Material examined: **Giresun:** 1♂, 27.IV.2013, Tirebolu, Kuşkaya, leg. Örgel. **Ordu:** 1♂, 14.VI.2020, Aybastı, Uzundere, 40°35'36"N, 37°24'56"E, 897 m, leg. Örgel & Kacar; 1♀, 14.VI.2020, Ulubey, Ohtamış waterfall, 40°48'43"N, 37° 39'38"E, 436 m, leg. Örgel & Kacar.

Distribution in Turkey: Amasya, Balıkesir (Anlaş, 2009; Heyden, 1890). This species is recorded from Eastern Black Sea Region for the first time.

Distribution in the world: According to Schülke and Smetana (2015), *B. cribricollis* is known from Europe, Algeria, Morocco, Tunisia, Iraq, Mongolia and Turkey in the Palaearctic Region.

Bionomics: The specimens have been found in at altitudes of 836 and 897 m near the waterfall in decay leaf material.



Figure 1. Distributions of *Bledius (Astycops) opacus* Block (square), *Bledius (Bargus) secessus* Bondroit (triangle), and *Bledius (Elbidus) diota* Schiødte (Circles) in Turkey.

Şekil 1. *Bledius (Astycops) opacus* Block (kare), *Bledius (Bargus) secessus* Bondroit (üçgen) ve *Bledius (Elbidus) diota* Schiødte (Yuvarlak) türlerinin Türkiye'deki yayılışları.

***Bledius (Pucerus) verres* Erichson, 1840**

Material examined: **Aydın:** 1♂, 3♀♀, 10.VIII.2010, Çine, 37°30'45"N, 28°06'36"E, leg. Anlaş. **Manisa:** 4♂♂, 4♀♀, 11.X.2013, Alaşehir, Kiraz-Alaşehir road, 38°13'35"N, 28°33'39"E, sifted, leg. Yağmur & Örgel. **Tunceli:** 5♂♂, 5♀♀, 14.IX.2007, Çemişgezek, Orman road, 39°04'06"N, 38°54'18"E, 948 m, leg. Anlaş. **Siirt:** 1♂, 1♀, 16.V.2011, Bostansuyu valley, 37°52'43"N, 42°02'33"E, 507 m, leg. Yağmur.

Distribution in Turkey: Adana and Tunceli (Anlaş, 2009; Anlaş & Rose, 2009). This species is recorded from Aegean and Southeastern Anatolia Region for the first time.

Distribution in the world: According to Schülke and Smetana (2015), *B. verres* is known from Eastern and Southern Europe, North Africa, Middle East, South and Middle Asia, Cyprus, Iran, Turkey in the Palaearctic Region and in addition to the Afrotropical and Oriental Region.

Bionomics: The specimens were collected by sifting the leaf litter of shrubs and trees at altitudes of 507 and 948 m.

***Bledius (s.str.) spectabilis* Kraatz, 1858**

Material examined: **Konya:** 2♂♂, 1♀, 05.III.2018, Cihanbeyli, Böllük lake, 38°30'49"N, 32°54'00"E, 988 m, leg. Örgel & Yaman; 1♀, 25.II.2019, Cihanbeyli, Böllük lake, 38°31'00"N, 32°58'52"E, 994 m, leg. Örgel & Yaman.

Distribution in Turkey: Adana, Afyonkarahisar, İstanbul (Anlaş, 2009; Scheerpeltz, 1961b; Schülke,

2009). This species is recorded from Central Anatolian Region for the first time.

Distribution in the world: According to Schülke and Smetana (2015), *B. spectabilis* is known from Europe, Tunisia, Middle East and Asia, Mongolia, Turkey and Western Siberia.

Bionomics: The specimens have been found in at altitudes 988 and 994 m near the lake under the stone.

***Bledius (s.str.) tricornis* (Herbst, 1784)**

Material examined: **Denizli:** 1♂, 11.IV.2015, Tavas, 37°39'36"N, 28°52'06"E, 1131 m, leg. Örgel & Altın.

Distribution in Turkey: *B. tricornis* was known from Turkey, without precise locality record (Anlaş, 2009). Thus, the above record is the first precise locality record for Turkey.

Distribution in the world: This species is widely distributed in Europe and known from Algeria, Morocco, Afghanistan, Japan, China, Mongolia, Middle Asia, Iran, Syria, and Western Siberia (Schülke & Smetana, 2015).

Bionomics: The specimen has found in a nearby forest at an altitude of 1131 m under the stone.

***Bledius (s.str.) unicornis* (Germar, 1825)**

Material examined: **İzmir:** 1♂, 01.VIII.2013, Seferihisar, light trap. **Konya:** 2♂♂, 17.IV.2015, Meke Lake, leg. Yağmur.

Distribution in Turkey: Adana, Tunceli (Anlaş, 2009; Anlaş & Deveci, 2011). This species is recorded from Aegean Region for the first time.

Distribution in the world: *B. unicornis* occurs in Europe, North Afrika, Middle Asia, Middle East,

Cyprus, Saudi Arabia, and Turkey in the Palaearctic Region. It is also known from the Afrotropical Region (Schülke & Smetana, 2015).

Bionomics: The specimens have been found in the light trap and near a lake in under stone.

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Statement of Conflict of Interest

Author has declared no conflict of interest.

Author's Contributions

The contribution of the authors is equal.

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