



Original article (Orijinal araştırma)

***Leptobium thracicum* sp. n. (Coleoptera: Staphylinidae: Paederinae)
from Thrace Region of Turkey and additional records for the genus¹**

Türkiye'nin Trakya Bölgesi'nden *Leptobium thracicum* sp. n. türü (Coleoptera: Staphylinidae: Paederinae) ve bu cinse ait ek kayıtlar

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Abstract

The genus *Leptobium* Casey, 1905 (Coleoptera: Staphylinidae: Paederinae) is represented in the Palearctic Region by 73 species and two subspecies. As a result of field survey in the north and southern Turkey between 2008 and 2021, a new species of the genus *Leptobium* is described and illustrated from Tekirdağ Province (Ganos Mountains, northwestern Turkey), and distinguished from related congeners: *Leptobium thracicum* sp. n. Additional records of five species of *Leptobium* from Turkey are presented. The genus is now represented in Turkey by 20 species with 15 of them endemic.

Keywords: Fauna, *Leptobium*, new species, Paederinae, Turkey

Öz

Leptobium Casey (Coleoptera: Staphylinidae: Paederinae) cinsi Palearktik Bölgede 73 tür ve iki alttür ile temsil edilen bir cinistir. Bu yayında, kuzey ve güney Türkiye'de 2008-2021 yılları arasında yapılan arazi çalışmaları sonucunda, *Leptobium* Casey cinsinden *Leptobium thracicum* sp. n. türü kuzeybatı Türkiye'de bulunan Tekirdağ İli'nden (Ganos Dağları) tanımlanarak şekillendirilmiş ve yakın türlerden farklılıkları gösterilmiştir. Ayrıca, Türkiye'deki beş *Leptobium* türüne ait faunistik kayıtlar sunulmuştur. Böylece, bu cins şu anda Türkiye'de 20 türle temsil edilmekte olup bunların 15'i bu ülkeye endemiktir.

Anahtar sözcükler: Fauna, *Leptobium*, yeni tür, Paederinae, Türkiye

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Introduction

According to recent contributions, the genus *Leptobium* Casey, 1905 (Coleoptera: Staphylinidae: Paederinae) currently includes 73 species and two subspecies from the Palearctic region (Schülke & Smetana, 2015; Anlaş, 2017; Assing, 2017; Anlaş & Gusarov, 2020; Anlaş & Örgel, 2020). The vast majority of the species are known from the Mediterranean region. Regarding its *Leptobium* fauna, Turkey is the most diverse territory in the Mediterranean region. In 2017, this genus was represented in Turkey by 17 species and 12 of which are endemic to Turkey (Anlaş, 2017). Since then, three additional species have been described from Turkey, and *Leptobium tauricum* Gusarov, 1988 was removed from the list of Turkish *Leptobium* (Anlaş & Gusarov, 2020; Anlaş & Örgel, 2020).

In this paper, a new species is described from Thrace, in northwestern Turkey, and some new and additional faunistic records for the genus are reported from Anatolia. The genus is now represented in Turkey by 20 species of which 15 are endemic.

Materials and Methods

The study examined material collected between 2008 and 2021 in the north and southern Turkey. These specimens were collected using aspirator and sifter methods. Morphological examination was made with a Stemi 508 microscope (Zeiss, Oberkochen, Germany). Zeiss AxioCam ERC5s digital camera was used for photographs of the habitus and the aedeagus of the new species. All of the photographs were edited using Helicon Focus 6.0 (Kharkiv, Ukraine) and Corel Draw X7 software (Ottawa, Canada). Nomenclature of the terminalia and the style of the description follows Assing (2005).

Head length was measured from the anterior margin of the frons to the posterior margin of the head, pronotum length along the median line and elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra. The length of the median lobe of the aedeagus was measured from the apex of the ventral process to the base of the capsule. The material examined is deposited in Alaşehir Zoological Museum, Manisa, Turkey (AZMM).

RESULTS

Faunistic Records

Leptobium assingi Bordoni, 1994

Material. Gaziantep: Islahiye, Kabaklar, 37°01'56" N, 36°33'44" E, 840 m, 22.III.2008, ♂, 2♀♀, leg. Yağmur.

Distribution. *Leptobium assingi* is distributed in Antalya, Gaziantep, Hatay, Kahramanmaraş and Osmaniye Provinces in southern Anatolia (Assing, 2005, 2017; Anlaş, 2017).

Leptobium bicarinatum Assing, 2005

Material. Gaziantep: Oğuzeli, Çaybaşı 2 km S, 37°00'16" N, 37°31'03" E, 808 m, 15.IV- 23.VIII.2017, ♂, ♀, leg. Yağmur, pitfall traps.

Distribution. This species is known from northern Syria and from Gaziantep, Hatay, Kilis Provinces in southern Turkey (Assing, 2005; Anlaş, 2012, 2017).

Leptobium carinatum Assing, 2005

Material. Antalya: Kaş, Yeşilköy, Fırnaz Bay, 36°15'16" N, 29°22'01" E, 120 m, 26.II.2015, ♂, leg. Kunt, Elmalı, 36°34'37" N, 29°55'49" E, 1070 m, 12.III.2016, ♀, leg. Kunt.

Distribution. *Leptobium carinatum* is known from Antalya and Muğla Provinces in southwestern Turkey (Assing, 2005, 2017; Anlaş, 2017).

***Leptobium gracile* (Gravenhorst, 1802)**

Material Amasya: Taşova, Borabay Gölü 9 km E, 40°49'48" N, 36°04'42" E, 1700 m, 17.VI.2020, ♂, 2♀♀, leg. Örgel & Kacar; Hamamözü, Yemişen 1 km N, 40°45'50" N, 35°08'11" E, 1300 m, 27.IV.2021, 2♀♀, leg. Anlaş, Kacar & Çelik; Hamamözü, Tekçam 1 km NE, 40°42'50" N, 35°06'12" E, 1562 m, 27.IV.2021, ♂, leg. Anlaş, Kacar & Çelik; Hamamözü, Tekçam 1 km SE, 40°42'50" N, 35°06'12" E, 1562 m, 27.IV.2021, 2♂♂, 6♀♀, leg. Anlaş, Kacar & Çelik. Bartın: Ulus, Uluyayla, 41°32'24" N, 32°48'16" E, 1000 m, 07.IV.2021, 2♂♂, 3♀♀, leg. Örgel, Kacar & Çelik. Bilecik: Bozhöyük, Cihangazi 4 km E, 39°44'17" N, 29°52'32" E, 1376 m, 03.IV.2021, ♂, 3♀♀, leg. Örgel, Kacar & Çelik. Bolu: Mudurnu, Abant Gölü 1 km N, 40°35'30" N, 31°16'40" E, 1430 m, 04.IV.2021, 2♂♂, ♀, leg. Örgel, Kacar & Çelik; Mudurnu, Karapınarkavağı 2 km SW, 40°32'19" N, 31°07'57" E, 1300 m, 04.IV.2021, ♂, leg. Örgel, Kacar & Çelik. Bursa: Mustafakemalpaşa, Çakallar 3 km W, 39°47'07" N, 28°29'35" E, 710 m, 22.III.2021, 2♂♂, leg. Örgel & Kacar; Gemlik, Şükriye 1 km NW, 40°20'24" N, 29°16'01" E, 570 m, 20.III.2021, ♂, ♀, leg. Örgel & Kacar; Keles, Gelemiş 2 km NW, 39°52'51" N, 29°17'05" E, 375 m, 21.III.2021, 5♂♂, 8♀♀, leg. Örgel & Kacar. Çorum: Osmancık, Danişment 3 km S, 41°04'36" N, 34°55'48" E, 1490 m, 01.V.2021, 3♂♂, 3♀♀, leg. Örgel, Kacar & Çelik; Osmancık, Danişment 3 km E, 41°04'37" N, 34°56'04" E, 1461 m, 01.V.2021, ♂, leg. Örgel, Kacar & Çelik. Karabük: Keltepe Kayak Merkezi, 41°30'30" N, 32°27'59" E, 1474 m, 06.IV.2021, 2♂♂, 5♀♀, leg. Örgel, Kacar & Çelik, Eskipazar, Sallar 1 km SW, 40°57'41" N, 32°45'44" E, 1277 m, 06.IV.2021, 11♂♂, 13♀♀, leg. Örgel, Kacar & Çelik. Kastamonu: Tosya, Kilkuyu, 40°56'17" N, 34°13'40" E, 1660 m, 10.IV.2017, 3♂♂, 2♀♀, leg. Örgel & Yaman; Tosya, Kayaönü 6 km NE, 40°55'54" N, 34°12'16" E, 1665 m, 08.V.2021, ♀, leg. Örgel, Kacar & Çelik. Sinop: Sinop Üniversitesi, Fen-Edebiyat Fakültesi Kampüsü, 07.II.2014, 2♂♂, leg. Koç. Tekirdağ: Malkara, Karacahalil, 40°48'09" N, 26°56'51" E, 185 m, 11.IV.2021, 11♂♂, 10♀♀, leg. Örgel, Kacar & Çelik; Şarköy, Güzelköy 5 km SE, 40°46'26" N, 27°15'41" E, 658 m, 12.IV.2021, ♂, 4♀♀, leg. Örgel, Kacar & Çelik, Şarköy, Güzelköy 4 km S, 40°46'43" N, 27°17'43" E, 754 m, 04.VI.2021, ♂, ♀, leg. Kacar & Çelik. Zonguldak: Ayvatlar 2 km SW, 41°17'54" N, 31°49'19" E, 364 m, 08.IV.2021, ♂, 2♀♀, leg. Örgel, Kacar & Çelik.

Distribution. *Leptobium gracile* is known from Canary Islands to Central Asia (Assing, 2005; Schülke & Smetana, 2015; Anlaş, 2017).

***Leptobium mutabile* Assing, 2005**

Material. Antalya: Kaş, Yeşilköy, Fırmaz Bay, 36°15'16" N, 29°22'01" E, 120 m, 26.II.2015, ♂, leg. Kunt, Kumluca, Sarnıçtepe, 11.III.2016, ♂, leg. Kunt.

Distribution. *Leptobium mutabile* is confined to Antalya Province of southwestern Anatolia (Assing, 2005; Anlaş, 2017).

Description of a new species

***Leptobium thracicum* sp. n. (Figures 1a-f)**

Type material.

Holotype: Turkey, ♂, TR. Tekirdağ, Şarköy, Uçmakdere 3 km SE 40°48'55" N, 27°20'43" E, 662 m, 04.VI.2021, leg. Kacar & Çelik; Holotypus ♂, *Leptobium thracicum* sp. n. det. S. Anlaş & S. Örgel 2021 (AZMM).

Paratypes: 5♂♂, 5♀♀, same data as holotype (AZMM).

Description. Habitus as in Figure 1a. Forebody as in Figure 1b. Body 6.4-6.6 mm long. Coloration: head, pronotum, and abdominal segments III-VI black; elytra and abdominal segments VIII-X rufous, tergite VII distinctly bicoloured, with black anterior and rufous posterior portions; appendages reddish yellow; antennae reddish and legs yellowish brown.

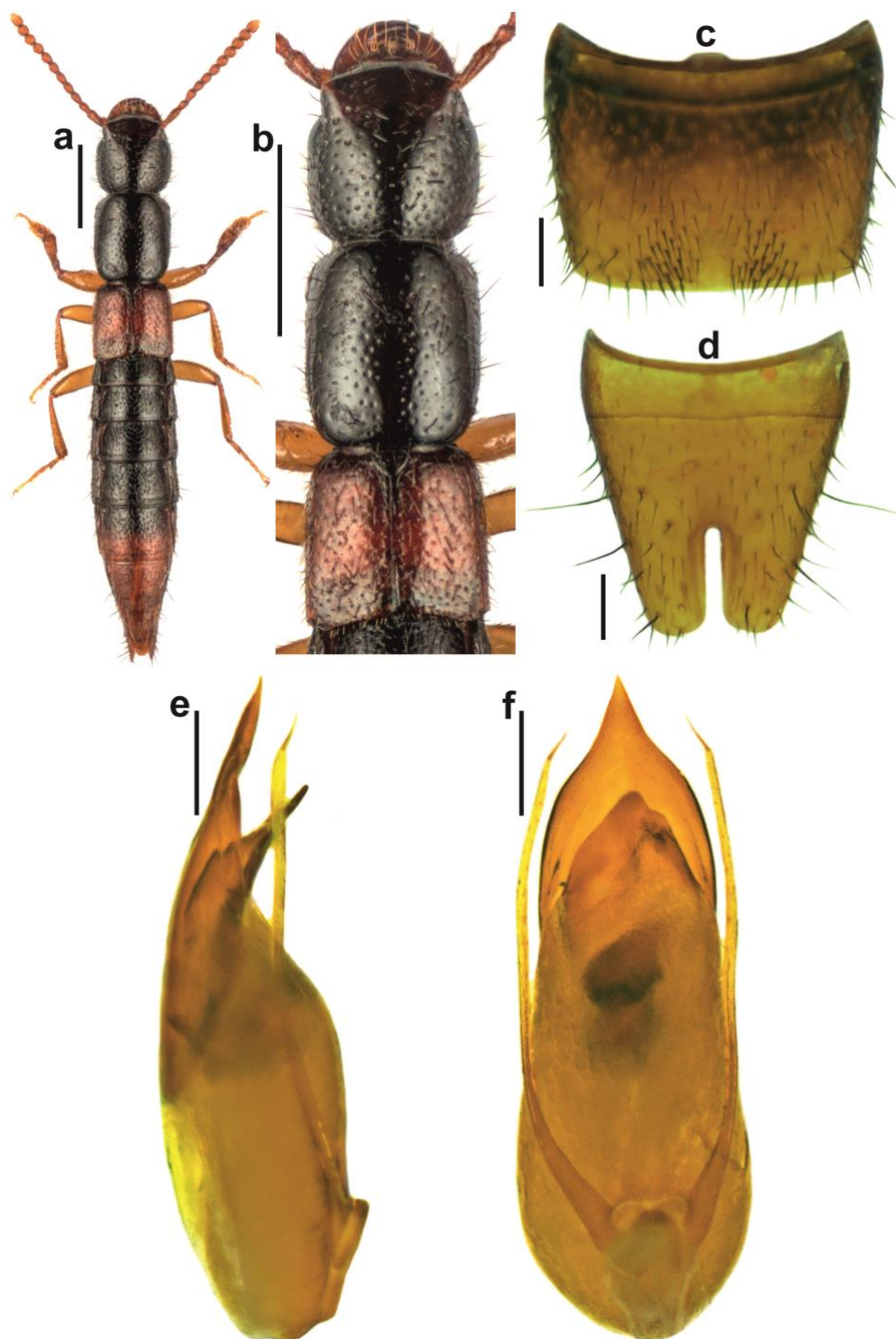


Figure 1. *Leptobium thracicum* sp. n. a) habitus; b) forebody; c) male sternite VII; d) male sternite VIII; e) aedeagus in lateral view; and f) aedeagus in ventral view. Scale bars: 1 mm (a-b) and 0.2 mm (c-f).

Head weakly oblong, 1.05-1.10 times as long as wide (Figures 1a-b); eyes average size (Figure 1a), weakly projecting from lateral outline of head, approximately half the length of postocular region in dorsal view; punctuation coarse and sparse, irregularly spaced, slightly denser and finer in lateral than that in central dorsal areas; interstices between punctures on dorsal surface about 2-2.5 times as wide as nearest puncture; microsculpture absent; pubescence black and sparse. Antennae approximately 1.6-1.7 mm long; antennomere III distinctly longer than II, approximately 1.5 times as long as II, antennomeres IV-VI longer than wide, antennomeres VII-X about as wide as long; antennomere XI almost twice as long as wide.

Pronotum oblong, approximately 1.3 times as long as wide and as wide as head (Figures 1a-b); lateral margins subparallel in dorsal view; dorsal surface without distinct impressions; punctuation similar to that of head, but sparser; microsculpture absent; pubescence blackish and sparse.

Elytra slightly wider than pronotum, approximately 1.05 times as wide as pronotum (Figures 1a-b) and shorter than pronotum, at suture about 0.75 times as long as pronotum; punctuation not granulate, finer and denser than that on pronotum and head; microsculpture absent; pubescence reddish, more distinct than that on head and pronotum. Hind wings reduced. Tarsi relatively long (Figure 1a).

Abdomen wider than elytra, approximately 1.1 times as wide as elytra (Figure 1a), widest at segment VI; punctuation moderately dense and fine; microsculpture present, composed of dense and fine transverse meshes and striae; pubescence moderately dense; posterior margin of tergite VII without palisade fringe.

♂: Sternite VII weakly modified, in posterior median area with cluster of sparse and darkened setae, without concave posterior margin and weakly depressed in posterior median area (Figure 1c); sternite VIII with posterior incision, not reaching middle of the sternite, slightly more than one third the length of sternite (Figure 1d); aedeagus approximately 1.25-1.30 mm long (Figures 1e-f).

♀: Sternite VII in posterior median area indistinctly concave, without modified pubescence and median impression; sternite VIII without posterior incision and modified pubescence.

Comparative notes. This new species is distinguished from all its congeners by the different morphology of the aedeagus, especially by the shape of the ventral process of the aedeagus. Based on the similar morphology of the male primary and secondary sexual characters, the new species is closely related to *Leptobium graecum* Gusarov, 1988, *Leptobium melanocephalum* (Reiche & Saulcy, 1856) and *L. assingi*. The new species is readily distinguished from these species as follows [For description and illustrations of *L. graecum*, *L. melanocephalum* and *L. assingi* see Gusarov (1988), Assing (2005), Anlaş (2017)].

Leptobium graecum is known from "Graecia" (without specified locality), and the Oros Elikonas in Voiotiai in southern Greece (Gusarov, 1988; Assing, 2005). The new species is distinguished from *L. graecum* by a longer antennomere III (in *L. graecum*, antennae with antennomere II as long as or slightly shorter than III), longer pronotum (in *L. graecum*, pronotum 1.15-1.18 times as long as wide), different shape of the male sternite VII (in *L. graecum*, sternite VII with broadly concave posterior margin, in posterior median area with small triangular depression without pubescence, on either side of this depression with a cluster of a few dark setae), and different morphology of the aedeagus, especially the differently shaped ventral process.

Leptobium melanocephalum is distributed in the surroundings of Athens in southern Greece (Assing, 2005). The new species is distinguished from *L. melanocephalum* by different coloration of body (in *L. melanocephalum*, head blackish brown to black, abdominal segments III-VI black, pronotum, elytra, and abdominal segments VII-X rufous, appendages yellowish brown), longer antennomere III (in *L. melanocephalum*, antennae with antennomere II as long as or only slightly shorter than III), different shape of the male sternite VII (in *L. melanocephalum*, sternite VII with broadly concave posterior margin, in posterior median area with small depressed area of triangular shape), and different morphology of the aedeagus.

Leptobium assingi is only known from southern Anatolia (Antalya, Gaziantep, Hatay, Kahramanmaraş, Osmaniye Provinces). The new species is distinguished from *L. assingi* by longer antennae (in *L. assingi*, antennae on average 1.1-1.3 mm long), longer antennomere III (in *L. assingi*, antennae with antennomere III approximately as long as II or slightly longer), slightly smaller eyes, sparser punctuation of whole body, slightly larger aedeagus (in *L. assingi*, aedeagus approximately 1 mm long), and differently shaped dorsal plate and ventral process of the aedeagus.

Etymology. The name is derived from Thrace in the northwestern Turkey, where the type locality is situated.

Distribution and bionomics. The new species was collected only from the type locality in southwestern slope of Ganos (Işıklar) Mountains, Tekirdağ Province, northwestern Turkey. Specimens were sifted from leaf litter under *Quercus petraea* (Mattuschka) Liebl. subsp. *iberica* (Steven ex Bieb.) Krassilin at an altitude of 662 m.

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