

A New Record of *Leistus terminatus* (Panzer, 1793) from Turkey (Coleoptera: Carabidae)

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ABSTRACT

Leistus terminatus (Panzer, 1793) is recorded for the first time from Turkey. A single specimen was collected from Kovada Lake National Park (Isparta, Turkey). The new record extends the known distribution of this species through Southeastern Europe including Turkey. Information about its distribution, habitat and some morphological properties are given.

Key words: Carabidae, *Leistus terminatus*, new record, Turkey, distribution.

INTRODUCTION

The genus *Leistus* is a member of the subfamily Nebriinae in the ground beetles (Carabidae) and is in the tribe Nebriini Laporte, 1834 which was established by Frölich in 1799 (Farkač, 2005). The genus *Leistus* includes 189 species and 21 subspecies which are mainly distributed in Palearctic area. The genus comprises 15 species in Turkey as shown by previous studies (Avgın, 2007; Farkač and Wrase, 2010).

During a faunistic survey on the ground beetles in Turkey carried out in 2014, one specimen belonging to the genus *Leistus* was collected. Examination of this specimen revealed that it was *Leistus terminatus* (Panzer, 1793). As far as we know, *L. terminatus* had not been reported in Turkey up to now. The purpose of this study is to briefly describe *L. terminatus* and provide new distributional data about the species.

MATERIAL AND METHODS

This study is based on single male specimen collected from Kovada Lake National Park (Isparta, Turkey) in 2014. Sample was collected by pitfall trap. Pitfall traps are plastic buckets that have a size of 13 cm in diameter and 14 cm in depth. Traps are filled two-thirds with a water-vinegar solution. 10 pitfall traps are placed within 50 meters apart on a line as a sampling design. The sample specimen was photographed using a Canon EOS 60D digital camera attached to the Olympus SZX12 stereomicroscope. The specimen is deposited in the Department of Biology, Faculty of Arts and Science, Süleyman Demirel University, Isparta, Turkey.

RESULTS

Leistus terminatus (Panzer, 1793) (Fig. 1)

Material examined. TURKEY: Kovada Lake National Park (37°36'29.79" N, 30°53'7.86), elevation: 989 m, 1♂, July 12, 2014, leg I. Yaman.

Description

Total body length: 7.1 mm. (Fig. 1)

Head: Almost black-brown; mouth parts are mid brown, first four antennomeres light brown, the remaining parts brownish. The first segment of the antenna 2X as long as the second, the third segment 1.8X as long as second, antennal segment ratios: (10:5:9:6:13:10:11:10:10:8:8). The base of the mandible thick, tapering sharply to the apex. Mandible with scarce setae.

Pronotum: Mid brown. Sides of pronotum only slightly sinuate in front of obtuse hind angles and rounded apically. Apical and basal parts of pronotum wide-toothed, lateral parts narrow-toothed. The width of the pronotum 1.6X wider than the length.

Scutellum: Mid brown; triangular; asetose.

Elytra: Apical part of elytra and abdomen mid brown to dark brown. Sides of elytra strongly widened behind the non-toothed shoulders. Terminal parts of elytra becomes darker brown. Regular punctate striae parallel to elytral suture. Wing development, macropterous.

Legs: Femur, tibia and tarsal segments pale yellow; femur with few setae, tibia and tarsal segments setose.

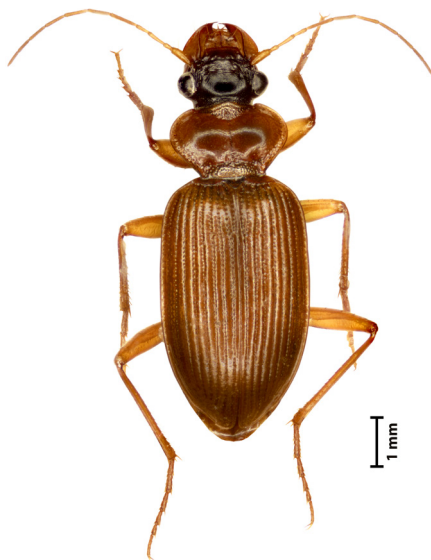


Fig. 1. Habitus of *Leistus terminatus* (Panzer, 1793)

Distribution

Leistus terminatus is widely distributed in the Palearctic region. This species is distributed in Europe in Belgium, Byelorussia, Czech Republic, Denmark, Finland, France, Great Britain, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Macedonia, Netherlands, Norway, Poland, Romania, Russia, Slovakia, Slovenia, Sweden, Switzerland, Ukraine; in Asia in East and West Siberia, Kyrgyzstan and Mongolia (Löbl and Smetana, 2003; Farkač, 2005). According to above information, Turkey is the most southern area of the distribution of the *L. terminatus*.

Habitat

Leistus terminatus was collected from a forested habitat. The area is quite moist, rocky and *Quercus coccifera* is the most abundant maquis plant species in the area. The soil has a clay structure in the area where the specimen was collected and the topsoil is covered with a dense litter layer.

DISCUSSION

A check-list of the Nebriini fauna of Turkey was published by Avgın (2007). According to that study, Turkish Nebriini fauna included 13 species in the genus *Leistus*; *L. spinibarbis* (Fabricius), *L. montanus* Stephens, *L. parvicollis* Chaudoir, *L. noeskei* Bänninger, *L. hermonis* Piochard de la Brûlerie, *L. rufomarginatus* (Duftschmid), *L. fulvibarbis* Dejean, *L. caucasicus* Chaudoir, *L. fulvus* Chaudoir, *L. chaudoiri* Perrault, *L. femoralis* Chaudoir, *L. ovitensis* Perrault, *L. ledouxii* Perrault. In addition, Farkač and Wrase described two new species from Turkey in 2010, *L. schuelkei* and *L. trabzonicus*.

The above-mentioned literatures shows that Turkish *Leistus* fauna included a total of 15 species until now. With the present study adding the new record of *L. terminatus*, the *Leistus* fauna of Turkey currently is 16 species.

According to previous studies, *L. terminatus* is widely distributed in Europe. On the other hand, the species may actually be established in Turkey, but not collected until now. However, further studies are needed to investigate the exact range of this species.

In this study, the specimen was collected on summer season. Previous studies show that *L. terminatus* shows a peak of activity in the middle of the summer (Niemelä *et al.*, 1989). This species lives in forests, mostly in lowlands, more scarcely coniferous, deciduous or mixed forests and stated as the species of shaded and humid places (Shilenkov, 1999). This specimen was collected from a humid area which is covered by dense deciduous species. The habitat preference of the species show similarities to published literature.

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