

**Orijinal araştırma (Original article)**

**A new species of *Astenus (Eurysunius)* Dejean, 1833 from Turkey  
(Coleoptera: Staphylinidae, Paederinae)<sup>1</sup>**

Türkiye'den yeni bir *Astenus (Eurysunius)* Dejean, 1833 türü  
(Coleoptera: Staphylinidae: Paederinae)

**Sinan ANLAŞ<sup>2\*</sup>**

**Summary**

*Astenus (Eurysunius) sandiklicus* sp. n. from Anatolia, Turkey, is described, illustrated and distinguished from related congeners. The distributions of Turkish *Eurysunius* species were mapped.

**Key words:** Paederinae, *Astenus*, *Eurysunius*, Turkey, new species.

**Özet**

*Astenus (Eurysunius) sandiklicus* sp. n. türü Türkiye'den tanımlanmış, şekillendirilmiş ve benzer türlerden farklılıkları gösterilmiştir. Ayrıca Türkiye'deki *Eurysunius* altcinsine bağlı türlerin yayılış haritası sunulmuştur.

**Anahtar sözcükler:** Paederinae, *Astenus*, *Eurysunius*, Türkiye, yeni tür.

<sup>1</sup> This study was supported by the Scientific and Technological Research Council of Turkey (TUBITAK, project no. 112T907).

<sup>2</sup> Celal Bayar University, Alaşehir Vocational School, TR-45600, Alaşehir, Manisa, Turkey.

\* Sorumlu yazar (Corresponding author) e-mail: sinan.anlas@gmail.com

Alınış (Received): 04.03.2014

Kabul edilmiş (Accepted): 11.07.2014

## Introduction

According to recent contributions in the subgenus *Eurysunius* is represented by 48 species in the Palaearctic region, six of which occur in Turkey (Assing, 2002, 2003, 2007, 2010, 2011; Smetana, 2004; Anlaş, 2009). All of these species are endemic in Turkey. It has been considered that none of these species had been known in Turkey before the year 2002. It seems most likely that the diversity of *Eurysunius* species in Turkey is far greater than presently known.

Marking the history of study of this subgenus is a constant dearth of specimens. The subgenus *Eurysunius* seems to be not common staphylinids in nature, all the species of the subgenus are brachypterous, several species are represented only by their respective holotypes, and no museums had a chance to amass a large series of material. According to Assing (2002, 2003, 2007) all species of *Eurysunius* may be associated with ants of the genus *Tetramorium* Mayr (Hymenoptera, Formicidae, Myrmicinae).

In this study, a new species of the subgenus *Eurysunius* is reported, including this report, a total of seven species is now known from Turkey.

## Material and Methods

The referred material was collected from Alaşehir Zoological Museum, Manisa (AZMM). The following abbreviations were used for the measurements, which are given in mm:

Length of antenna (AL), maximal width of abdomen (AW), length of elytra from apex of scutellum to posterior margin (EL), combined width of elytra (EW), head length from anterior margin of clypeus to posterior margin of head (HL), head width (including eyes) (HW), length of aedeagus from apex of ventral process to base (ML), length of pronotum along median line (PL), maximal width of pronotum (PW), length of metatarsus (TaL), length of metatibia (TiL), total body length (TL).

## Results

### *Astenus* (*Eurysunius*) *sandiklicus* sp. n. (Fig. 1)

Type Material Holotype: TURKEY: ♂ "TR – Afyonkarahisar province, Sandıklı Dağları, 1937 m, 38°28'25"N, 30°23'19"E, 20.VI.2013, leg. Yağmur & Örgel / Holotypus ♂ *Astenus sandiklicus* sp. n. det. S. Anlaş 2014" (cAZM). Paratypes: TURKEY: 2 ♂♂, same data as holotype (cAZM).

**Etymology.** The specific epithet (adjective) is derived from the name of Sandıklı Mountain where the type locality is situated.

**Description.** Measurements (in mm) and ratios (range, arithmetic mean; n=3): AL:0.90–0.94; HL:0.57–0.59; HW:0.70–0.74; PW:0.66–0.71; PL:0.55–0.59; EL:0.39–0.44; EW:0.68–0.74; AW:0.70–0.78; TiL:0.48–0.50; TaL: 0.29–0.30; ML: 0.62–0.64 (n=3); TL:4.1–4.2; HL/HW: 0.80–0.81; PW/HW: 0.94–0.96; PW/PL: 1.20; EL/PL: 0.71–0.75; EW/PW: 1.03–1.04; AW/EW: 1.03–1.05; TiL/TaL: 1.65–1.67.

**Habitus** as in Fig. 1A. Body length 4.1–4.2 mm. Coloration: head, pronotum and elytra reddish brown, abdomen blackish brown with the narrow posterior margins of the tergites and the apex somewhat paler, antennae rufous, legs reddish brown, with the femora slightly darker.

Head transverse (see measurements, ratio HL/HW and Figs. 1A, F); dorsal surface convex with very dense, coarse, and areolate punctation; interstices reduced to narrow ridges; pubescence short and yellowish. Eyes relatively small, distinctly shorter than postocular region in dorsal view. Antennae moderately slender, approximately 0.95 mm long; antennomere III approximately 2.2 times as long as broad; antennomeres V–X oblong (Fig. 1H).



Figure 1. Details of *Astenus (Eurysunius) sandiklicus* sp. n. A—habitus; B—male tergite VIII; C—male sternite VIII; D and E— aedeagus, lateral view; F— forebody; G— aedeagus, ventral view; H— antenna. Scale bars: 1.0 mm (A and F); 0.2 mm (B-E and G-H).

Pronotum weakly transverse (see ratio PW/PL and Figs. 1A, F), 1.10 times as wide as long and approximately 0.86 times as wide as head (see ratio PW/HW, Figs. 1A, F); widest at anterior angles, distinctly narrowed posteriorly; anterior and posterior angles each with long seta of little more than half the length of lateral margin of pronotum; posterior margin convex; dorsal surface without pronounced impressions; microsculpture almost absent; puncturation similar to that of head, but slightly sparser, surface somewhat more shiny than that of head; pubescence of similar length as that of head, but less fine and more conspicuous.

Elytra of transversely rectangular shape and short, 0.78 times as long, and 1.19 times as wide as pronotum (see ratios EW/PW, EL/PL and Figs. 1A, F); microsculpture absent; punctation very dense and

distinctly granulate, interstices narrower than diameter of punctures; pubescence yellowish, more distinct than that of head and pronotum. Hind wings reduced.

Abdomen slightly wider than elytra (see ratio AW/EW and Figs. 1A), widest at segment V, segments III–VI moderately transverse, tergites III–V approximately twice as wide as long; punctation very dense and very fine; interstices with distinct fine microsculpture; pubescence yellowish brown; posterior margin of tergite VII with palisade fringe.

♂: sternite VII unmodified, its posterior margin weakly concave; posterior margin of tergite VIII convex (Fig. 1B); posterior margin of sternite VIII with deep and acute incision (Fig. 1C); aedeagus as in Figs. 1D, E and G.

♀: unknown.

Comparative notes: The species is distinguished from all its congeners by the male sexual characters, especially by the morphology of the aedeagus. In addition, the new species differs from all six species in Turkey, *A. bicoloratus* Assing, 2002 (Ordu); *A. brachati* Assing, 2011 (Bursa); *A. occiduus* Assing, 2007 (Aydın, Denizli, İzmir); *A. paphlagonicus* Assing, 2002 (Kastamonu, Bolu); *A. sexsetosus* Assing, 2002 (Kayseri); and *A. sultanicus* Assing, 2010 (Konya) (Assing 2002, 2007, 2010, 2011) by a different coloration:

*Astenus sandiklicus* sp. n.: head, pronotum and elytra reddish brown, abdomen blackish brown with the narrow posterior margins of the tergites and the apex somewhat paler; *A. bicoloratus* Assing, 2002: head and pronotum dark brown, anterior 2/3 of elytra blackish, posterior 1/3 of elytra yellow abdomen blackish with the posterior margins of the anterior tergites and the apex lighter (Assing, 2002); *A. brachati* Assing, 2011: body blackish, with posterior margins of elytra narrowly yellowish (Assing, 2011); *A. occiduus* Assing, 2007: forebody blackish, with the posterior 1/4–1/3 of elytra yellow, abdomen blackish with the narrow posterior margins of the tergites and the apex somewhat paler (Assing, 2007); *A. paphlagonicus* Assing, 2002: head, pronotum, and anterior half of elytra dark brown, posterior half of elytra yellow abdomen dark brown with the posterior margins of the tergites and the apex slightly lighter (Assing, 2002); *A. sexsetosus* Assing, 2002: head, pronotum, and abdomen -except for the lighter posterior tergal margins- blackish brown, elytra yellow, with the area near scutellum, the anterior margin, and the anterior part of the lateral margin more or less infuscate (Assing, 2002); *A. sultanicus* Assing, 2010: head, pronotum, and abdomen blackish, with the posterior margins of the abdominal segments narrowly reddish; elytra yellowish, with the anterior margin and the scutellar area narrowly, diffusely, and weakly infuscate (Assing, 2010).

For description, illustrations of the habitus and genitalia of above species see Assing (2002, 2007, 2010, 2011). The distributions of Turkish *Eurysunius* species in map (Fig. 2).

Distribution and bionomics: The new species was collected in only one locality from the Sandıklı Mountain, Afyonkarahisar province, in grassland at an altitude of 2000 m. It was found in a nest of *Tetramorium* sp. (Hymenoptera: Formicidae: Myrmicinae), which confirms previous observations suggesting that myrmecophilous *Eurysunius* are exclusively associated with *Tetramorium*. This species is most probably endemic to Sandıklı Mountain.

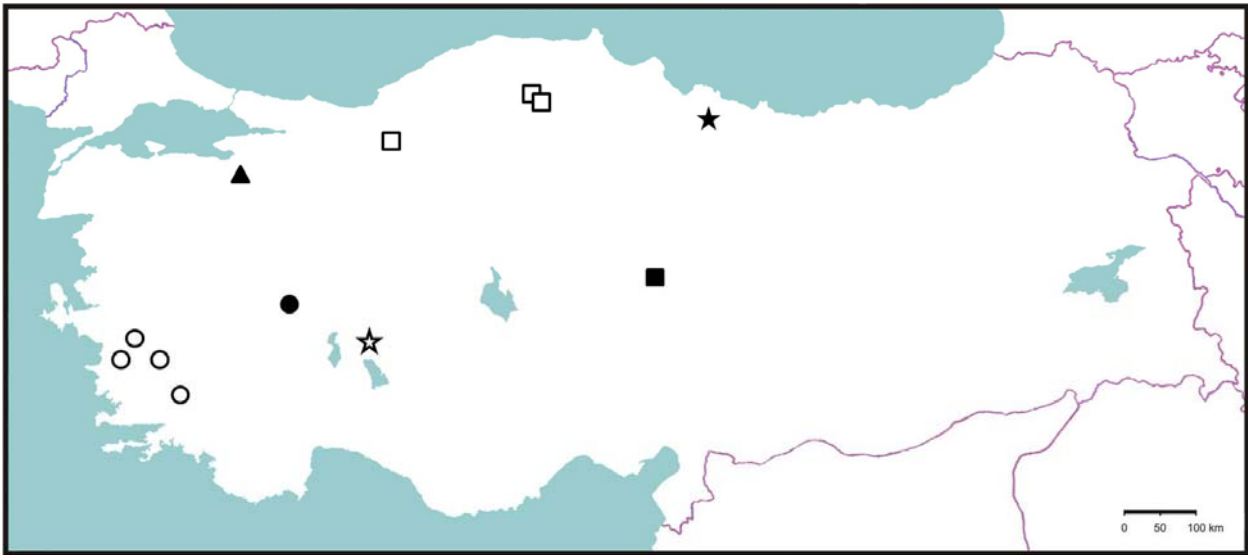


Figure 2. Distribution of *Astenus (Eurysunius)* species in Turkey: *A. bicoloratus* Assing, 2002 (filled star); *A. brachati* Assing, 2011 (triangle); *A. occiduus* Assing, 2007 (open circles); *A. paphlagonicus* Assing, 2002 (open squares); *A. sexsetosus* Assing, 2002 (filled square); *A. sultanicus* Assing, 2010 (open star); *A. sandiklicus* sp. n. (filled circle).

## Acknowledgements

I am most grateful to my colleagues for making their staphylinid collections available to me. This study was supported by the Scientific and Technological Research Council of Turkey (TUBITAK, project no. 112T907).

## References

- Anlaş, S., 2009. Distributional checklist of the Staphylinidae (Coleoptera) of Turkey, with new and additional records. *Linzer biologische Beiträge*, 41 (1): 215–342.
- Assing, V., 2002. On the Turkish and Caucasian species of *Eurysunius*, subgenus of *Astenus* Dejean, with an appendix on *A. breuili* Jarrige (Coleoptera: Staphylinidae, Paederinae). *Linzer biologische Beiträge*, 34 (1): 265–274.
- Assing, V., 2003. New species and records of *Eurysunius*, subgenus of *Astenus* Dejean, from the Iberian Peninsula (Coleoptera). *Linzer biologische Beiträge*, 35 (2): 693–700.
- Assing, V., 2007. New species and additional records of Staphylinidae from Turkey V (Coleoptera). *Stuttgarter Beiträge zur Naturkunde Serie A (Biologie)*, 700: 1-64.
- Assing, V., 2010. On the Staphylinidae of Turkey. VII. Five new species and additional records (Coleoptera: Staphylinidae). *Koleopterologische Rundschau*, 80: 71-102.
- Assing, V., 2011. On the Staphylinidae of Turkey VIII. Eleven new species, two new synonymies, a new combination, and additional records (Coleoptera: Staphylinidae). *Koleopterologische Rundschau*, 81: 179-227.
- Smetana, A., 2004. Subfamily Paederinae. In Löbl, I. & A. Smetana (eds), *Catalogue of Palaearctic Coleoptera. Volume 2. Hydrophiloidea, Histeroidea, Staphylinoidea*. Apollo Books, Stenstrup: 579-624.

