

The Subgenus *Eurysunius* Reitter, 1909 (Coleoptera: Staphylinidae: Paederinae: *Astenus* Dejean, 1833) in Turkey: A New Species from Central Anatolia*

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Abstract: *Astenus (Eurysunius) melendizicus* sp. n. from Melendiz Mountain, Niğde Province, Central Anatolia is described, illustrated and distinguished from related species. Totally, 16 species of this subgenus are known from Turkey. Additional records are reported for three species from Mediterranean countries: *Astenus (Eurysunius) gusarovi* Anlaş, 2015 from Turkey, *A. (Eurysunius) trisetulosus* Coiffait, 1971 from Spain and *A. (Eurysunius) beirensis* Coiffait, 1973 from Portugal. The distribution of the species of the subgenus *Eurysunius* in Turkey is mapped.

Key words: *Astenus (Eurysunius) melendizicus* sp. n., Melendiz Mountain, Turkey, Portugal, Spain, new species.

Introduction

According to the Catalogue of Palaearctic Coleoptera (Schülke & Smetana 2015) and the recent studies by Assing (2015) and Anlaş (2015, 2016, 2017), the subgenus *Eurysunius* Reitter, 1909 of the genus *Astenus* Dejean, 1833 is represented in the Western Palaearctic by 59 species; only one species is known from Japan and South Korea (Eastern Palaearctic). The highest diversity is found in the Mediterranean countries, especially in Turkey. Our knowledge of the Turkish fauna of *Eurysunius* is certainly still far from being complete. Within three years, seven new species of the subgenus *Eurysunius* were discovered in Turkey and the number of species of this subgenus in the fauna of the country increased to 15.

In the present study, a new species is described from Turkey and additional records are reported for three species from Mediterranean countries. The distribution of *Astenus (Eurysunius)* spp. in Turkey is mapped.

Materials and Methods

The description of the new species was based on specimens collected during a recent field study in central Anatolia in the late spring 2016. The terminology of the primary and secondary sexual characters of the species described herein follows COIFFAIT (1984) and ASSING (2002). The morphological studies were conducted using a Stemi 2000-C microscope (Zeiss, Germany) combined with a digital camera (Zeiss AxioCam ERC5s) for the photographs. The map (Fig. 1) was generated using the online mapping tool (Maptool) of Seaturtle.org (2002).

Head length was measured from the anterior margin of the frons to the posterior margin of the head. Length of pronotum was measured along the median line. Elytral length was measured at the suture from the apex of the scutellum to the posterior margin of the elytra. Length of the median lobe of the aedeagus was measured from the apex of the ventral process to the base of the capsule.

*The present article is the fifth contribution of the author to the knowledge of *Astenus (Eurysunius)* spp. in Turkey.

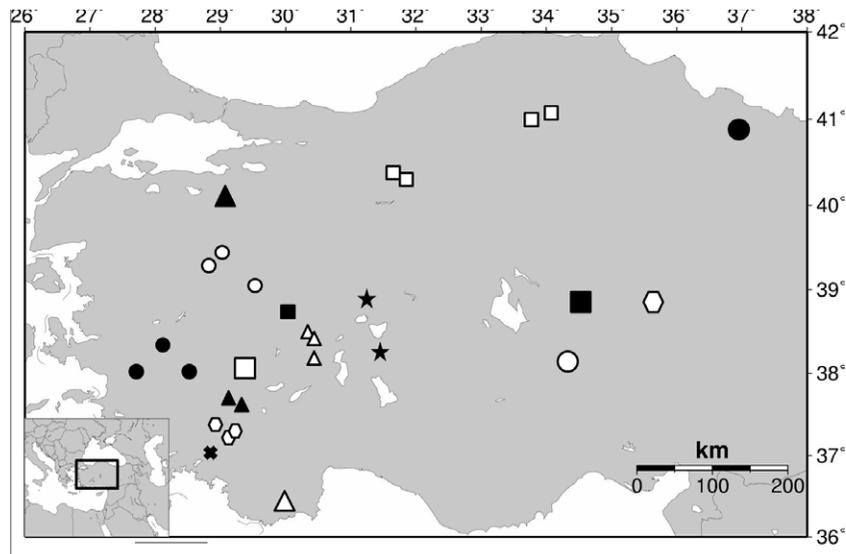


Fig. 1. Distribution of *Astenus (Eurysunius)* species in Turkey: *A. bicoloratus* ASSING, 2002 (large filled circle), *A. brachati* ASSING, 2011 (large filled triangle), *A. goeki* ANLAŞ, 2017 (large open triangle), *A. gusarovi* ANLAŞ, 2015 (large open square), *A. honazicus* ANLAŞ, 2015 (small filled triangles), *A. ilgazi* ANLAŞ, 2016 (small filled squares), *A. kociani* ASSING, 2015 (large filled square), *A. kumlutasi* ANLAŞ, 2015 (small open circles), *A. melendizicus* sp. n. (large open circle), *A. occiduus* ASSING, 2007 (small hexagons), *A. orgeli* ANLAŞ, 2015 (small filled circles), *A. paphlagonicus* ASSING, 2002 (small open squares), *A. rhodicus* ASSING, 2013 (cross), *A. sandiklicus* ANLAŞ, 2014 (small open triangles), *A. sexsetosus* ASSING, 2002 (large hexagon), *A. sultanicus* ASSING, 2010 (stars).

The material referred to in this study is stored in the following collections: AZMM – Alaşehir Zoological Museum, Manisa, Turkey (S. Anlaş); HNHM – Hungarian Natural History Museum, Budapest, Hungary (G. Makranczy, O. Merkl); NHMO – Natural History Museum, Oslo, Norway (V. Gusarov).

Results

Description of a new species

Astenus (Eurysunius) melendizicus sp. n.

(Fig. 2A–G)

Type material: Holotype: Turkey: ♂ “TR – Niğde Province, Çiftlik, Kitreli, Melendiz Mountain, 2510 m a.s.l., 38°07’13”N, 34°22’01”E, 31.05.2016, leg. Anlaş, Örgel & Yaman / Holotypus ♂ *Astenus (Eurysunius) melendizicus* sp. n. det. S. Anlaş 2016” (AZMM). Paratypes: Turkey: 3♂, 4♀, same data as holotype (AZMM, NHMO).

Etymology: The name is derived from the Melendiz Mountain, where the type locality is situated.

Description: Habitus as in Fig. 2A. Body 4.4–4.9 mm long. Coloration: head blackish or dark brown; pronotum reddish; elytra reddish-yellow, with slightly infusate portion near scutellum; abdomen blackish or blackish-brown, with narrow posterior margins of tergites and somewhat paler apex;

legs and antennae reddish.

Head strongly transverse, 1.25–1.30 times as wide as long (Fig. 2A–B); dorsal surface convex; punctuation coarse, dense and areolate. Interstices reduced to narrow ridges; pubescence short and yellowish. Eyes relatively small, in dorsal view distinctly shorter than postocular region. Each lateral margin of head with long black seta and posterior margin of head with six long black setae. Antennae slender, 1.02–1.05 mm long; antennomere III approximately 2.2 times as long as wide; antennomeres V–X oblong.

Pronotum transverse; approximately 1.15–1.20 times as wide as long; slightly narrower than head (Fig. 2A–B); widest at anterior angles, narrowed posteriorly. Anterior and posterior margin of pronotum with six long black setae; anterior and posterior angles each with long setae of little more than half length of lateral margin of pronotum; posterior margin convex. Dorsal surface with pronounced impressions; microsculpture absent or barely noticeable; punctuation similar to that of head but slightly sparser. Surface somewhat shinier than that of head; pubescence of similar length as that of head but less fine and yellowish-brown.

Elytra distinctly transverse and short (Fig. 2A–B), about 1.70 times as wide as long and approximately 0.70–0.75 times as long as pronotum. Microsculpture absent; punctuation dense and

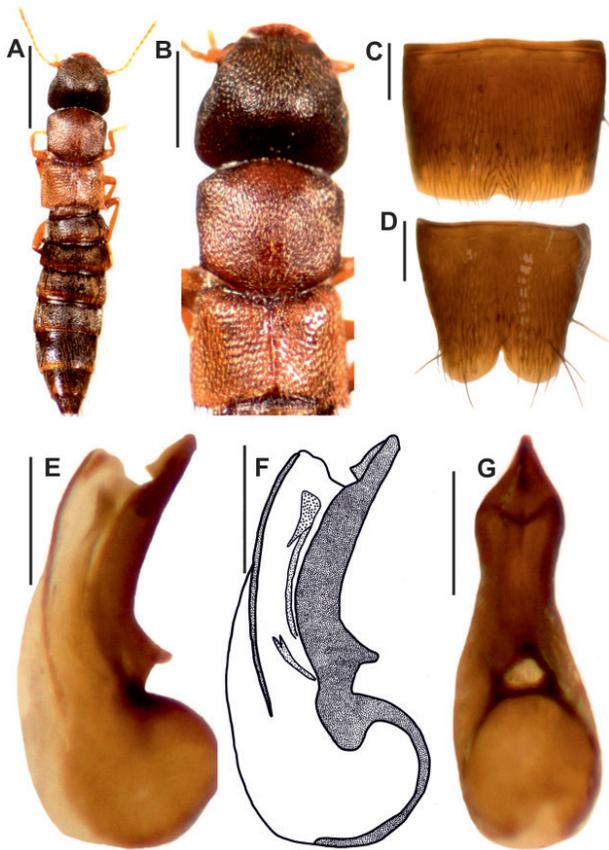


Fig. 2. Details of *Astenus (Eurysunius) melendizicus* sp. n. A – habitus; B – forebody; C – male sternite VII; D – male sternite VIII; E, F – aedeagus, lateral view; G – aedeagus, ventral view. Scale bars: A, 1 mm; B, 0.5 mm; C–G, 0.2 mm.

granulose; interstices on average approximately as wide as diameter of punctures. Pubescence reddish-yellow, more distinct than that of head and pronotum; posterior margin of each elytron with eight long black setae. Hind wings totally reduced.

Abdomen slightly narrower than elytra (Fig. 2A), widest at segment V; segments III–VI transverse; tergites III–V slightly more than twice as wide as long. Punctuation very dense and very fine; interstices with distinct fine microsculpture. Pubescence brown; posterior margin of tergite VII with narrow rudiment of a palisade fringe.

Male: Posterior median area of sternite VII slightly depressed, with some modified dark and short setae; posterior margin concave (Fig. 2C). Sternite VIII deeply and acutely incised posteriorly; pubescence unmodified (Fig. 2D). Aedeagus approximately 0.65 mm long, as in Fig. 2E–G.

Differential diagnosis: The species is distinguished from all other members of the subgenus *Eurysunius* by the male sexual characters, especially by the shape of the ventral process of the

aedeagus having a distinct protruding shape and stouter in lateral view. This unique aedeagal shape of the new species is particularly clear in lateral view. In addition, the new species differs from both species known from central Anatolia (*A. sexsetosus* Assing, 2002 and *A. kociani* Assing, 2015) by the presence of two (vs. three) long setae on the lateral margins of the pronotum and by the different coloration. Head, pronotum and abdomen of *A. sexsetosus* (Kayseri Province) is blackish brown, elytra are yellow, with a more or less infuscate portion near the scutellum, the anterior margin and the anterior part of the lateral margin (Assing 2002). The head and the pronotum of *A. kociani* (Nevşehir Province) are blackish, the elytra are dark yellowish-brown, with an infuscate portion near the scutellum; the abdomen is blackish, with reddish-brown posterior margins of segments VI–VIII (Assing 2015). For descriptions and illustrations of these species in central Anatolia, see the figures presented by Assing (2002, 2015).

Distribution and bionomics: The new species was collected from only one locality from the volcanic Melendiz Mountain in central Anatolia, in grassland at an altitude of about 2500 m. The specimens were found in the nests of *Tetramorium* sp. (Hymenoptera: Formicidae: Myrmicinae).

New records of known species

Astenus (Eurysunius) gusarovi Anlaş, 2015

Material: Turkey: 2♂, 1♀, 23.03.2016, Denizli Province, Çal, Büyük Çökelez Mountain, 38°01'30"N, 29°21'42"E, 1408 m a.s.l., leg. Anlaş, Örgel & Yaman (AZMM).

Distribution: This recently described species was already known from Çökelez Mountains, Denizli Province of central western Turkey (Anlaş 2015). The present record from the surroundings of Çökelez Mountains supplements the data of its distribution.

Astenus (Eurysunius) trisetulosus Coiffait, 1971

Material: Spain: 1♂, Andalusia, 1883 (HNHM).

Distribution: This species was known only from the type locality (Andalucía, Cádiz Province, Guadiaro River) in Spain (COIFFAIT 1971). The specimen examined here is the first additional material recorded after the original description.

Astenus (Eurysunius) beirensis Coiffait, 1973

Material: Portugal: 1♂, 22.05.1994, Granja, Rio Zêzere, 1500 m a.s.l. (HNHM).

Distribution: This species was previously known only from northern Portugal (COIFFAIT 1984).

Discussion

The present description of a new species and the new records of three known species are in agreement with the previous suggestions that the major part of the diversity of the species of the subgenus *Eurysunius* Reitter, 1909 of the genus *Astenus* Dejean, 1833 is in the Mediterranean countries (SCHÜLKE & SMETANA 2015, ASSING 2015, ANLAŞ

2015, 2016, 2017). Additional studies may reveal much higher species diversity of this subgenus in the Mediterranean region.

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