

ON THE SUBGENUS *EURYSUNIUS* REITTER OF TURKEY IV.  
A NEW SPECIES FROM SOUTHWESTERN ANATOLIA  
WITH A KEY TO SPECIES (COLEOPTERA:  
STAPHYLINIDAE, PAEDERINAE, *ASTENUS*)

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*Astenus (Eurysunius) goeki* sp. n. from Antalya province, in southwestern Anatolia is described, illustrated, and distinguished from related consubgenera. A total of 15 species is known so far from Turkey. A key to all the species of *Eurysunius* in this country is provided.

Key words: Coleoptera, Staphylinidae, Paederinae, *Astenus*, *Eurysunius*, *Tetramorium*, Turkey, new species, key to species.

## INTRODUCTION

*Eurysunius*, subgenus of *Astenus* Dejean was established by REITTER (1909) and currently includes 59 described species from the Palaearctic region. They are distributed mainly in the Mediterranean countries (SCHÜLKE & SMETANA 2015). There are 14 species present in Turkey, 13 of them are endemic to this country (ASSING 2002, 2007, 2010, 2011, 2013, 2015, ANLAŞ 2014, 2015, 2016).

The nests of ants (Hymenoptera: Formicidae) provide a suitable habitat for a wide range of beetles. Staphylinidae represent one of the most speciose families of the order Coleoptera, which inhabit ant nests commonly known as myrmecophiles (DONISTHORPE 1927, HÖLLDOBLER & WILSON 1990). The genus *Tetramorium* Mayr, 1855 (Formicidae: Myrmicinae) is one of the biggest ant genera, comprising more than 430 species in the world (BOLTON 1995). According to ASSING (2002, 2003, 2007) *Eurysunius* species are most probably associated with ants of the genus *Tetramorium*, at least some of them facultatively. According to my observations, this is true for all my recorded *Euryunius* species, which were collected in nests of *Tetramorium* species in Turkey.

The aim of the paper is to describe a new species of *Eurysunius* from Turkey and to provide a key to the 15 species comprising currently the subgenus in Turkey.

## MATERIAL AND METHODS

The present paper is based on material collected during a recent field study in the southwestern Anatolia, in late summer 2015. The reference specimens in this study are deposited in the collection of the Alaşehir Zoological Museum, Manisa (AZMM) of the Celal Bayar University. Primary and secondary sexual characters of the species described herein are termed following 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.

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. The length of the median lobe of the aedeagus was measured from the apex of the ventral process to the base of the capsule.

## TAXONOMY

### ***Astenus (Eurysunius) goeki* sp. n.**

(Figs 1–6)

Type material – Holotype: TURKEY: ♂ “TR – Antalya province, Finike, Alacadağ, 1810 m, 36°26'12"N, 30°02'22"E, 20.VIII.2015, leg. Yağmur & Örgel / Holotypus ♂ *Astenus (Eurysunius) goeki* sp. n. det. S. Anlaş 2016" (AZMM). Paratypes: TURKEY: 1 ♀, same data as holotype (AZMM); 2 ♂, 1 ♀, Antalya province, Finike, Alacadağ, 1620 m, 36°26'10"N, 30°02'25"E, 19.III.2016, leg. Anlaş & Yağmur.

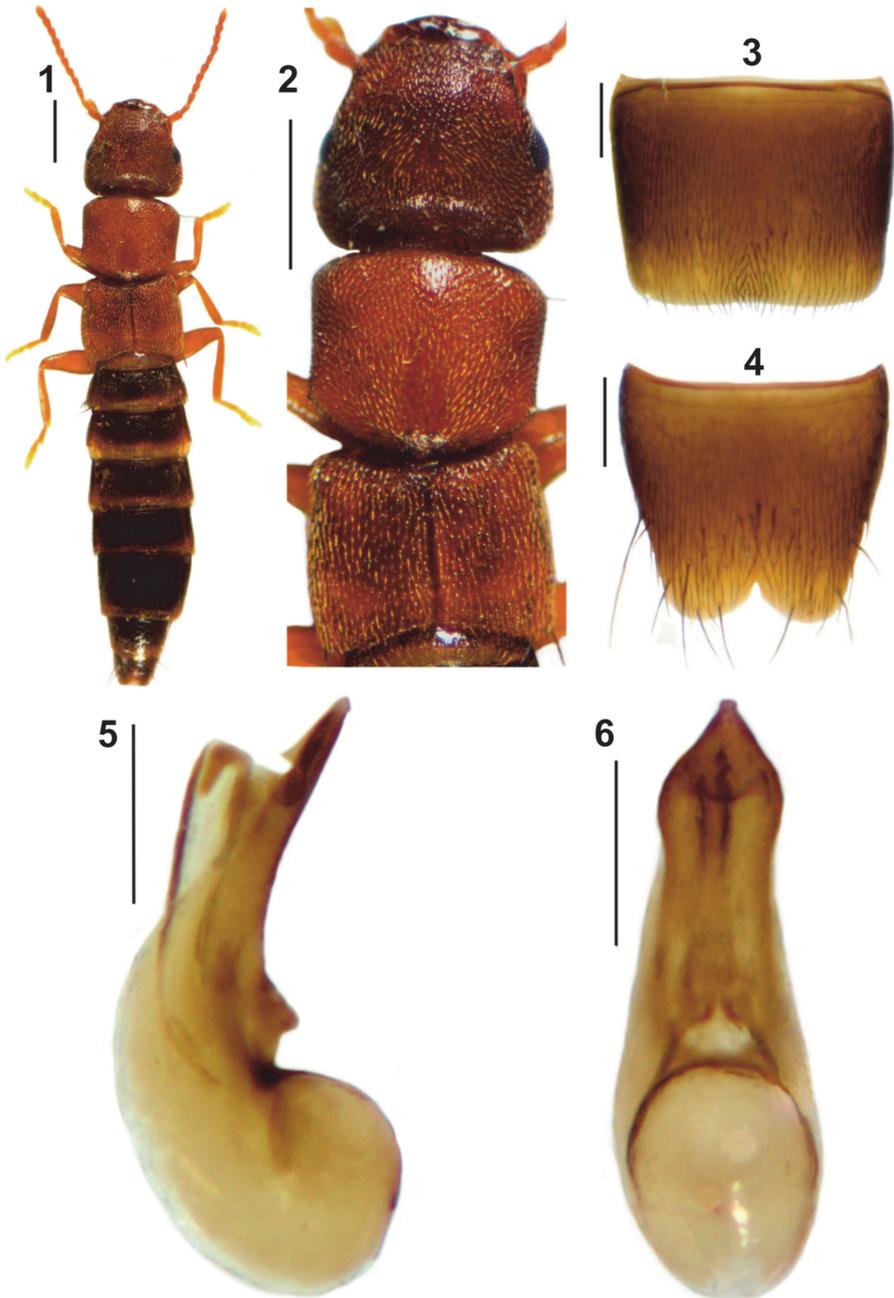
Etymology – The specific epithet honors Prof. Dr. Ali Gök, Isparta, a specialist on Chrysomelidae, who has carried out important entomological researches in Turkey.

Description – Habitus as in Figure 1. Body 4.5–4.7 mm long. Coloration: head reddish brown, pronotum and elytra reddish, with the posterior area slightly lighter; abdomen blackish brown with the narrow posterior margins of the tergites and the apex somewhat paler, legs and antennae reddish.

Head transverse, 1.22 times as wide as long (Figs 1–2); dorsal surface convex, with very dense, average size, granulate but rather shallow punctures; interstices reduced to narrow ridges; pubescence short and reddish yellow. Eyes relatively small, in dorsal view distinctly shorter than postocular region. Antennae moderately slender, 1.1 mm long, antennomere III approximately 2.2 times as long as wide; antennomeres V–X oblong (Fig. 1).

Pronotum transverse, approximately 1.20 times as wide as long (Figs 1–2); slightly wider than head; widest at anterior angles, narrowed posteriorly; anterior and posterior angles each with a long setae of little more than half the length of the lateral margin of the pronotum; posterior margin convex; dorsal surface with pronounced impressions; microsculpture barely noticeable; punctuation similar to that of head, but denser, not granulate, surface somewhat more shiny than that of head; pubescence of similar length as that of head, but less fine and more conspicuous.

Elytra distinctly transverse and short (Figs 1–2), about 1.70 times as wide as long and approximately 0.70 times as long as pronotum; microsculpture absent; punctuation dense and distinctly granulate, interstices on average approximately as wide as diameter



**Figs 1–6.** Details of *Astenus (Eurysunius) goeki* sp. n.: 1 = habitus, 2 = forebody, 3 = male sternite VII, 4 = male sternite VIII, 5 = aedeagus, lateral view, 6 = aedeagus, ventral view. Scale bars: 0.5 mm for Figs (1–2) and 0.2 mm for Figs 3–6

of punctures; pubescence reddish yellow, more distinct than that of head and pronotum; posterior margin of each elytron with 5–6 long black setae. Hind wings totally reduced.

Abdomen approximately as wide as combined width of elytra (Fig. 1), widest at segment V, segments III–VI transverse, tergites III–V slightly more than twice as wide as long; punctation very dense and very fine; interstices with distinct fine microsculpture; pubescence brown; posterior margin of tergite VII with palisade fringe.

♂ – sternite VII in posterior median area slightly depressed and with some modified dark and short setae, posterior margin weakly concave (Fig. 3); sternite VIII deeply and acutely incised posteriorly, pubescence unmodified (Fig. 4); aedeagus approximately 0.65 mm long and as in Figures 5–6.

Comparative notes – The species is distinguished from all its consubgenera by the male sexual characters, especially by the ventral process of the aedeagus, which is of different shape, particularly in lateral view. In addition, the new species differs from all species in the western Anatolia by a different coloration (see key to the Turkish *Eurysunius* species below).

Distribution and bionomics – The new species was collected from the Alacadağ, in southwest of Antalya province, in grassland at altitudes of 1620 and 1810 m. They were found in the nests of *Tetramorium* sp., which supports past observations suggesting that this subgenus is associated with these ants.

#### KEY TO THE TURKISH SPECIES OF THE SUBGENUS *EURYSUNIUS*

The keys to Turkish *Eurysunius* species in ASSING (2002, 2007, 2010, 2011, 2013, 2015) and ANLAŞ (2014, 2015, 2016) are modified as follows:

1. Lateral margins of pronotum with one seta at anterior angle; elytra with yellow coloration confined to posterior third. Northern Anatolia: Ordu  
*A. bicoloratus* Assing, 2002
- Lateral margins of pronotum with more than one seta 2
2. Lateral margins of pronotum with two setae at anterior and posterior angles 3
- Lateral margins of pronotum with three setae; one at anterior angle, one at anterior third, and one at posterior angle 14
3. Pronotum approximately as wide as long 4
- Pronotum transverse 6
4. Elytra uniformly yellowish or with yellow coloration confined to posterior half; legs and antennae yellowish red. Northern Anatolia: Bolu, Kastamonu  
*A. papflagonicus* Assing, 2002

- Elytra narrowly yellowish; legs and antennae reddish or reddish brown 5
5. Posterior 1/6–1/5 of the elytra yellowish; antennomeres IV–X approximately as long as broad to weakly transverse. Greece: Rhodes; South-western Anatolia: Muğla *A. rhodicus* Assing, 2013
- Posterior 1/8 of the elytra yellowish antennomeres; IV–X nearly 1.5 times as long as broad. Central-northwestern Anatolia: Bursa (Uludağ) *A. brachati* Assing, 2011
6. Pronotum wider than head 7
- Pronotum narrower than head 8
7. Pronotum distinctly (approximately 1.20 times) wider than head. Central-western Anatolia: Afyonkarahisar, Konya *A. sultanicus* Assing, 2010
- Pronotum slightly (approximately 1.05 times) wider than head. Western Anatolia: Denizli (Gölgeli Mountains) *A. occiduus* Assing, 2007
8. Head and pronotum blackish or dark brown 9
- Head and pronotum reddish or reddish brown 11
9. Forebody completely blackish. Central-western Anatolia: Uşak and Kütahya *A. kumlutasi* Anlaş, 2015
- Forebody not completely blackish 10
10. Forebody blackish, with posterior 1/3 of elytra reddish. Western Anatolia: Aydın, İzmir *A. orgeli* Anlaş, 2015
- Forebody blackish or dark brown, posterior half of elytra reddish-yellow. Central-western Anatolia: Afyonkarahisar (Ahır Mountains) *A. ilgazi* Anlaş, 2016
11. Dorsal surface of pronotum without pronounced impressions; head, pronotum and elytra completely reddish brown. Central-western Anatolia: Afyonkarahisar (Sandıklı Mountains) *A. sandiklicus* Anlaş, 2014
- Dorsal surface of pronotum with pronounced impressions; head, pronotum and elytra not completely reddish brown 12
12. Head darker than pronotum and elytra; head reddish brown, pronotum and elytra reddish, with the posterior area slightly lighter. Southwestern Anatolia: Antalya *A. goeki* sp. n.
- Head not darker than pronotum and elytra 13

13. Head and pronotum reddish brown, elytra yellowish brown, with area near scutellum, anterior margin, and anterior part of lateral margin infusate, abdomen dark brown. Western Anatolia: Denizli (Çökelez Mountains) *A. gusarovi* Anlaş, 2015
- Head, pronotum and abdomen reddish brown, more than anterior half of elytra dark brown, with posterior area reddish yellow. Western Anatolia: Denizli (Honaz Mountain) *A. honazicus* Anlaş, 2015
14. Head broader than pronotum; legs and antennae yellowish brown; eyes distinctly shorter than postocular region. Central Anatolia: Kayseri *A. sexsetosus* Assing, 2002
- Head approximately as broad as pronotum; legs and antennae reddish or blackish-brown, Eyes nearly as long as postocular region. Central Anatolia: Nevşehir *A. kociani* Assing, 2015

\*

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