On the genus *Sunius* Curtis, 1829 of Turkey I. Two new micropterous species from central western Turkey (Coleoptera: Staphylinidae, Paederinae)

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1. Introduction

According to recent contributions, 116 species of *Sunius* Curtis, 1829 are known in the Palearctic region (Smetana, 2004; Assing, 2008, 2010, 2011a, 2011b). The vast majority of the species and subspecies (105 species and 2 subspecies) of *Sunius* occur in the West Palearctic region (Assing, 2011a), where the highest diversity is found in the Mediterranean region, and especially in Turkey. Twenty-seven species were known from Turkey (Assing, 2001, 2003, 2005a, 2005b, 2005c, 2006, 2011b; Anlaş, 2009) prior to the present study, with 23 species known only from Turkey. The distributions of the Turkish species of the *S. seminiger* group, which exclusively includes micropterous and locally endemic species, are confined to western and southern Anatolia (Assing, 2008, 2011b). Based on the literature, the two new species seem to be part of the *seminiger* species group, which is very diverse in Turkey.

The Staphylinidae of Turkey, particularly the Paederinae of the Aegean region, are still poorly investigated. To resolve this deficiency of information, a research project on the diversity and biogeography of the Paederinae was established in the Aegean region of Turkey. These research activities yielded the first new data on the Turkish species of the genus *Sunius*, which are published in the article at hand.

2. Materials and methods

The present paper is based on material collected during recent field studies in central western Anatolia conducted by EA Yağmur, S Örgel, and the author. The voucher and type specimens for the records from Turkey are preserved in the collection of the Alaşehir Zoological Museum, Manisa (cAZMM), of Celal Bayar University.

Primary and secondary sexual characters of the species described herein are described following the terminology of Coiffait (1984) and Assing (2008). The morphological studies were conducted using a Stemi 2000-C microscope (Zeiss, Germany). Specimens were measured at 100× magnification using the stereoscopic microscope with an eyepiece linear micrometer. A digital camera (Zeiss Axiocam ERC5s) was used for the photographs. Illustrations were made using the U-DA drawing attachment of an Olympus BX50 transmitted light microscope.

Aedeagi were illustrated at 200× magnification.

Measurements and ratios include both sexes and the maximum range of variation in body size and form. The head length was measured from the anterior margin of the frons to the posterior margin of the head; the length of the pronotum was measured along the median line; the 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.

3. Results and discussion

*Sunius cokelezensis* sp. nov. (Figure 1)

**Type material.** Holotype: ♂ TR – Denizli Province, Çal, Çökelez Mountain, 1575 m, 38°02′48″N, 29°22′11″E, 15.IV.2014, leg. Örgel/Holotypus ♂ *Sunius cokelezensis* sp. nov. det. S. Anlaş 2014 (cAZMM).
Description. Small species, 2.3 mm. Habitus as in Figure 1A. Coloration: forebody uniformly reddish-brown, with the head and posterior area of elytra darker; abdomen dark brown, with the paratergites paler brown; legs yellowish-brown; antennae reddish-brown.

Head (Figures 1A and 1B) oblong, approximately 1.15 times as long as wide; punctation coarse, well defined, and relatively sparse, in lateral area slightly denser than in mediodorsal area; interstices without microsculpture; eyes small, weakly projecting from lateral outline of head, postocular region in dorsal view approximately 3 times as long as eyes. Antennae not slender and long, approximately 0.80 mm long.

Pronotum (Figures 1A and 1B) approximately 0.90 times as wide as head, and about 1.10 times as long as wide; widest at anterior angles, distinctly narrowed posteriorly, microsculpture almost absent; punctation dense, except for the impunctate median line, and about as coarse as that of head.

Elytra (Figures 1A and 1B) approximately as wide and at suture about 0.75 times as long as pronotum, humeral angles marked; punctation ill defined, much finer and shallower than that of pronotum; interstices without distinct microsculpture. Hind wings completely reduced.

Abdomen (Figure 1A) about 1.20 times as wide as elytra, widest at segments VI–VII; punctuation relatively
dense and fine; interstices with microsculpture; pubescence blackish; posterior margin of tergite VII without palisade fringe.

♂: Sternite VII without modified pubescence; posterior margin very weakly concave medially (Figure 1C), sternite VIII without modified pubescence and without tubercle, posterior incision small and not very deep (Figure 1D); aedeagus (Figures 1E–1G) approximately 0.41 mm long, weakly sclerotized, apical part of the ventral process in lateral view broad but apex acute, ending sharply; internal sac in lateral view with short black structure, in ventral view with two shaped knobs, but without sclerotized spines in both lateral and ventral views.

**Comparative notes.** The species is distinguished from all its congeners by the completely different shape of the ventral process of the aedeagus. For illustrations of the male sexual characters of these species, see the figures by Assing (2001, 2003, 2005a, 2005b, 2005c, 2006, 2011b).

Based on the similarly derived morphology of the male primary and secondary sexual characters, *S. cokelezensis* is closely related to *S. sandiklicus* sp. nov. The new species is distinguished from *S. sultanicus* by the smaller body, different coloration (*S. sultanicus*: head reddish to dark brown; pronotum reddish to reddish-brown; elytra reddish; abdomen dark brown; legs and antennae reddish-yellow), more oblong pronotum, slightly more concave in the middle posterior margin of male sternite VII, slightly smaller posterior incision of male sternite VIII, and different shape of aedeagus (*S. sultanicus*: ventral process very slender and acute, especially in lateral view. *S. cokelezensis*: ventral process in lateral view broad but apex acute, ending sharply, in ventral view with two shaped knobs).

**Etymology.** The specific epithet is derived from the name of Çökelez Mountain, where the type locality is situated.

**Distribution and bionomics.** The new species was collected in only one locality from Çökelez Mountain, Denizli Province, in grassland at an elevation of 1575 m a.s.l. This species is most probably endemic to Çökelez Mountain in Denizli Province.

*Suntius sandiklicus* sp. nov. (Figure 2)

**Type material.** Holotype: TR – Afyonkarahisar Province, Sandıklı Mountains, Çakmaktepe Pass, 1880 m a.s.l., 38°28′23″N, 30°23′19″E, 04.VI.2014, leg. Yağmur & Örgel/Holotypus ♂ *Suntius sandiklicus* sp. nov. det. S. Anlaş 2014 (cAZMM); Paratypes: TURKEY: ♂ 1♂, 1♀, same data as holotype (cAZMM); ♂ 1♂, Sandıklı Mountains, 1940 m a.s.l., 38°28′25″N, 30°23′19″E, 20.VI.2013, leg. Yağmur & Örgel (cAZMM); ♂ 1♂, Sandıklı Mountains, 1782 m a.s.l., 38°28′03″N, 30°22′58″E, 17.V.2014, leg. Örgel (cAZMM); ♂ 1♂, 1♀, Sandıklı Mountains, 2148 m a.s.l., 5 km N of Başören, 38°24′28″N, 30°25′17″E, 17.V.2014, leg. Yağmur & Örgel; 2♀♀, Sandıklı Mountains, 1805 m a.s.l., 38°25′47″N, 30°24′43″E, 18.V.2014, leg. Yağmur & Örgel.

**Description.** Small species; 2.9–3.1 mm. Habitus as in Figure 2A. Coloration: head reddish-brown; pronotum reddish; elytra reddish-brown, with posterior area of elytra yellowish-brown; abdomen dark brown; with the paratergites paler brown; legs yellowish-brown; antennae reddish-brown.

Head (Figures 2A and 2B) weakly oblong, approximately 1.10 times as long as wide; punctuation distinct and well defined, not very dense, somewhat sparser in median dorsal portion; interstices clearly wider than diameter of punctures; eyes small, weakly projecting from lateral outline of head; postocular region in dorsal view more than twice as long as eyes. Antennae moderately slender and 0.74–0.78 mm long.

Pronotum (Figures 2A and 2B) weakly oblong, approximately 1.08 times as long as wide, and very slightly narrower than head; microsculpture absent; punctuation denser than that of head and coarse; widely impunctate median line.

Elytra (Figures 2A and 2B) short and narrow, approximately 0.70–0.75 times as long as pronotum; humeral angles weakly marked; punctuation dense, rather fine, and weakly defined; microsculpture absent or indistinct. Hind wings completely reduced.

Abdomen (Figure 2A) about 1.15 times as wide as elytra; punctuation fine and moderately dense; interstices with microsculpture; pubescence dark brown; posterior margin of tergite VII without palisade fringe.

♂: Sternite VII without modified pubescence; posterior margin medially very weakly concave (Figure 2C), sternite VIII posteriorly with relatively broad emargination, but not very deep (Figure 2D), without additional modifications; aedeagus (Figures 2E–2G) approximately 0.45 mm long, weakly sclerotized, ventral process slender, acute, and slightly curved, especially in lateral view, internal sac in lateral view with long black structure, in ventral view with two shaped knobs, but without sclerotized spines in both lateral and ventral views.

**Comparative notes.** The species is distinguished from all its congeners by the completely different shape of the ventral process of the aedeagus. For illustrations of the male sexual characters of these species, see the figures by Assing (2001, 2003, 2005a, 2005b, 2005c, 2006, 2011b). The similarly derived morphology of the male sexual characters suggests that *S. sandiklicus* is most closely related to *S. sultanicus* and *S. cokelezensis*. However, interspecific variation of the shape of the ventral process is generally weakly pronounced in the genus. This species is readily separated from *S. sultanicus* by the apical portion of the ventral process being very slightly curved in lateral view,
and by the longer black structure in the internal sac. The new species is additionally separated from *S. sultanicus* by different coloration (*S. sultanicus*: head reddish to dark brown; pronotum reddish to reddish-brown; elytra reddish; abdomen dark brown; legs and antennae reddish-yellow. *S. sandiklicus*: head reddish-brown; pronotum reddish; elytra reddish-brown, with posterior area of elytra yellowish-brown; abdomen dark brown, with the paratergites paler brown; legs yellowish-brown; antennae reddish-brown). *S. sandiklicus* sp. nov. is distinguished from *S. cokelezensis* by the different coloration, relatively broad emargination of male sternite VIII, and by aedeagus with ventral process slender, acute, and slightly curved in lateral view.

**Etymology.** The specific epithet is derived from the name of the Sandıklı Mountains, where the type locality is situated.

**Distribution and bionomics.** The new species was collected from four localities from the Sandıklı Mountains in Afyonkarahisar Province, where it is probably endemic.

![Figure 2. Details of *Surius sandiklicus* sp. nov. A- Habitus; B- forebody; C- male sternite VII; D- male sternite VIII; E and F- aedeagus in lateral view; G- aedeagus in ventral view. Scale bars: 0.5 mm (A and B); 0.2 mm (C and D); 0.1 mm (E–G).](image-url)
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References


