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New species of *Sunius* from the Western Mediterranean (Coleoptera: Staphylinidae, Paederinae)

V. ASSING

A b s t r a c t : *Sunius cazorlae* sp. n. (Spain: Sierra de Cazorla), *S. segurae* sp. n. (Spain: Sierra de Segura), *S. fultus* sp. n. (Morocco: Taza), and *S. meybohmi* sp. n. (northern Portugal) are described and distinguished from similar congeners. Their male sexual characters are illustrated.

K e y w o r d s : Coleoptera, Staphylinidae, Paederinae, *Sunius*, Palaearctic region, Spain, Portugal, Morocco, taxonomy, new species

Introduction

In the Western Palaearctic region, the genus *Sunius* CURTIS is represented by some 60 species, many of them microphthalmous, short-winged, and more or less endemic (ASSING 2001, COIFFAIT 1984). A recent systematic revision of the Turkish *Sunius* species has demonstrated that our current knowledge of the genus is far from complete and that numerous undescribed species may be still be discovered in the future, even in Europe (ASSING 2001). It is, therefore, not surprising that, among staphylinid material collected in the Western Mediterranean, four undescribed *Sunius* species were found, two from Spain, one from Portugal, and one from Morocco.

Material, measurements, and abbreviations

The material examined is deposited in the following collections:

cAss author's private collection
cFel private collection B. Feldmann, Münster
cSch private collection M. Schülke, Berlin
cWun..... private collection P. Wunderle, Mönchengladbach

The following abbreviations are used for the measurements, which are given in mm:

HL: head length from anterior margin of clypeus to neck; HW: head width; PW: maximal width of pronotum; PL: length of pronotum along median line; EL: length of elytra from apex of scutellum to hind margin; AL: length of aedeagus from apex of ventral process to base; TL: total length.

***Sunius fultus* sp. n. (Figs. 1-8)**

H o l o t y p e ♂: MOROCCO - Taza, 5 km S Sebt-des-Beni-Frassèn, 6.II.2003, 34°19N, 04°22W, leg. W. Starke / Holotypus ♂ *Sunius fultus* sp. n. det. V. Assing 2003 (cAss). **P a r a - t y p e s**: 1♂, 3♀♀: MOROCCO (Taza), ca. 5 km S Sebt-des-Beni-Frassen (30 km NW Taza), 34.20N/004.22W (fallow land/fields with damming wetness, clay, und. stones, 6.II.2003, D.W.Wrase (06) (cAss, cFel, cSch).

D e s c r i p t i o n: Measurements (in mm) and ratios (range; n=4): HL: 0.39 - 0.44; HW: 0.38 - 0.41; PW: 0.36 - 0.39; PL: 0.39 - 0.42; EL: 0.27 - 0.29; AL: 0.38; TL: 2.7 - 3.2; HL/HW: 1.04 - 1.12; HW/PW: 1.04 - 1.08; PL/PW: 1.07 - 1.09; EL/PL: 0.68 - 0.70.

Small species; facies as in Fig. 1. Coloration of body almost uniformly rufo-testaceous; legs testaceous.

Head weakly oblong (see ratio HL/HW and Fig. 2). Eyes clearly less than half the length of temples in dorsal view; puncturation moderately sparse, interstices in central dorsal area on average 1 - 2 times as wide as diameter of punctures; microsculpture absent.

Pronotum slightly narrower than head and weakly oblong (see ratios HW/PW and PL/PW); puncturation much denser than that of head; microsculpture absent.

Elytra distinctly shorter than and approximately as wide as pronotum (see ratio EL/PL); puncturation rather ill-defined, much denser and finer than that of head and pronotum. Hind wings completely reduced.

Abdomen with extremely fine and rather dense puncturation and with distinct microsculpture; at segment VI slightly wider than forebody (Fig. 1); posterior margin of tergite VII without palisade fringe.

♂: sternite VII posteriorly weakly concave, otherwise unmodified (Fig. 3); sternite VIII with relatively deep posterior incision, in the middle with distinctive process furnished with short stout setae and projecting obliquely caudad (Figs. 4-5); aedeagus as in Figs. 6-8, with row of approximately 4 strongly sclerotized spines in internal sac.

E t y m o l o g y: The name (Lat., past participle of fulcire: to support) refers to the possible function of the distinctive process of the male sternite VIII.

C o m p a r a t i v e n o t e s: Based on the similar morphology of the aedeagus, *S. fultus* is closely related to *S. atlasicus* (COIFFAIT) from the Moyen Atlas, from which the new species is distinguished by the different male secondary sexual characters (in *S. atlasicus*, the ♂ sternite VII has a tubercle and the ♂ sternite VIII has no process), as well as the apically rounded (in *S. atlasicus* acute) and longer ventral process of the aedeagus. The male primary and secondary sexual characters of *S. fultus* are strikingly similar to those of *S. aculeatus* ASSING from southern Anatolia. The nature of these similarities suggests that they are synapomorphic and that *S. fultus* and *S. aculeatus* are at least very closely related, which would mean that this species group has a remarkably disjunct distribution.

D i s t r i b u t i o n a n d b i o n o m i c s: The species is probably endemic in (the southern parts of) the Rif range in northern Morocco. The types were found under stones in fallow land.

***Sunius cazorlae* sp. n. (Figs. 9-14)**

H o l o t y p e ♂: Südsanien, Sierra Cazorla, Puerto de Tiscar, 176.5.1975, leg. Dr. H. Fülischer / Holotypus ♂ *Sunius cazorlae* sp. n. det. V. Assing 2003 (cAss).

Description: Measurements (in mm) and ratios (holotype): HL: 0.44; HW: 0.39; PW: 0.38; PL: 0.42; EL: 0.29; AL: 0.47; TL: 2.6; HL/HW: 1.12; HW/PW: 1.04; PL/PW: 1.12; EL/PL: 0.70.

Small species; facies as in Fig. 9. Whole body yellowish brown, with the anterior abdominal segments indistinctly infusate.

Head weakly oblong (see ratio HL/HW and Fig. 10). Eyes moderately large, slightly more than half the length of temples in dorsal view; puncturation rather sparse, interstices in central dorsal area on average 1.5 - 2 times as wide as diameter of punctures; microsculpture absent.

Pronotum slightly narrower than head and weakly oblong (see ratios HW/PW and PL/PW); puncturation denser than that of head; microsculpture absent.

Elytra distinctly shorter than and approximately as wide as pronotum (see ratio EL/PL); puncturation shallower and less well-defined than that of head and pronotum. Hind wings completely reduced.

Abdomen with fine and moderately dense puncturation; at segment VI wider than forebody; posterior margin of tergite VII without palisade fringe.

♂: sternite VII posteriorly with almost semicircular median projection (Fig. 11); posterior margin of sternite VIII relatively deeply incised in the middle, otherwise unmodified (Fig. 12); aedeagus as in Figs. 13-14, with pronounced dorsal plate and a ventral process with a pair of pronounced subapical tooth-like projections.

Etymology: The name (noun, genitive) is derived from the Sierra de Cazorla, where the type locality is situated.

Comparative notes: Owing to the general external similarity of *Sunius* species, a reliable identification is possible only based on the male sexual characters. The new species is characterized especially by the distinctive modifications of the ♂ sternite VII and by the morphology of the aedeagus. The latter somewhat resembles that of *S. nevadensis* (COIFFAIT), but has a distinctly longer and in ventral view much narrower ventral process, a dorsal subapical tooth of the ventral process, a more pronounced dorsal plate, and different internal structures.

Distribution: The type locality, Puerto de Tiscar, is situated in the south of the Sierra de Cazorla, approximately at 38°47'N, 3°01'W.

Sunius segurae sp. n. (Figs. 15-20)

Holotype ♂: E - No. 5; Andalusia, Sierra de Segura, 15 km S Pontones, 1580m, 38°04'23N, 02°41'19W, 7.IV.2003, leg. Wunderle / Holotypus ♂ *Sunius segurae* sp. n. det. V. Assing 2003 (cAss). **Paratypes**: 1♂, 4♀♀: same data as holotype, leg. Assing, Wunderle (cAss, cWun).

Description: Measurements (in mm) and ratios (range; n=4): HL: 0.41 - 0.44; HW: 0.39 - 0.44; PW: 0.36 - 0.41; PL: 0.41 - 0.44; EL: 0.29 - 0.31; AL: 0.38; TL: 2.6 - 3.5; HL/HW: 1.00 - 1.04; HW/PW: 1.04 - 1.08; PL/PW: 1.07 - 1.13; EL/PL: 0.69 - 0.76.

Small species; facies as in Fig. 15. Bicoloured: forebody yellowish brown, legs testaceous, abdomen dark brown to blackish, with the apical segments slightly lighter.

Head as wide as long or weakly oblong (see ratio HL/HW and Fig. 16). Eyes approximately half the length of temples in dorsal view; puncturation sparse, interstices in central dorsal area on average 2 - 3 times as wide as diameter of punctures or even wider; microsculpture absent.

Pronotum slightly narrower than head and weakly oblong (see ratios HW/PW and PL/PW); puncturation much denser than that of head; microsculpture absent.

Elytra distinctly shorter than and approximately as wide as pronotum (see ratio EL/PL); puncturation much denser and finer than that of head and pronotum. Hind wings completely reduced.

Abdomen with extremely fine and rather dense puncturation and with distinct microsculpture; at segment VI distinctly wider than forebody (Fig. 15); posterior margin of tergite VII without palisade fringe.

♂: sternite VII posteriorly indistinctly concave, otherwise unmodified; sternite VIII with moderately deep posterior incision, with weak elevation and slightly denser pubescence a short distance anterior to the incision (Fig. 17); aedeagus as in Figs. 18-20, with row of strongly sclerotized spines in internal sac.

E t y m o l o g y : The name (noun, genitive) is derived from the Sierra de Segura, where the type locality is situated.

C o m p a r a t i v e n o t e s : The aedeagus is somewhat similar to that of *S. nevadensis* (COIFFAIT), but has a longer and, in ventral view, much more slender ventral process, and different internal structures. From *S. cazorlae*, *S. segurae* is distinguished by the darker abdomen, the absence of a median projection at the posterior margin of the male sternite VII, and by the different shape and internal structures of the aedeagus.

D i s t r i b u t i o n a n d b i o n o m i c s : The species is probably endemic to the Sierra de Segura. The types were found under stones and sifted from grass roots in the transitional area between a meadow and a pine forest at an altitude of 1580 m, together with undescribed species of *Geostiba* THOMSON, *Paraleptusa* PEYERIMHOFF, and *Astenus* DEJEAN. For an illustration of the type locality see ASSING (2003).

***Sunius meybohmi* sp. n. (Figs. 21-26)**

H o l o t y p e ♂: P - Serra de Montezinho, Montezinho, 1069m, 18, under stones, 41°56'13N, 6°45'31W, 21.III.2002, Meybohm / Holotypus ♂ *Sunius meybohmi* sp. n. det. V. Assing 2003 (cAss). **P a r a t y p e s**: 1♂, 2♀♀: P - Serra da Estrela, No. 9, NW Manteigas, 1207m, under stones, arable land, 40°25'23N, 7°31'24W, 19.III.2002, leg. Lompe (cAss); 1♂: Lusitania (Guarda), Nabainhos, 8-16-XI-1997, P. Poot (cWun).

D e s c r i p t i o n: Measurements (in mm) and ratios (range; n=5): HL: 0.53 - 0.57; HW: 0.50 - 0.54; PW: 0.51 - 0.59; PL: 0.54 - 0.60; EL: 0.51 - 0.59; AL: 0.54 - 0.56; TL: 3.4 - 3.7; HL/HW: 1.04 - 1.09; HW/PW: 0.91 - 0.99; PL/PW: 1.03 - 1.07; EL/PL: 0.89 - 0.98.

Relatively large species (see measurements). Facies as in Fig. 21. Head and pronotum dark brown to blackish; pronotum ferrugineous; elytra ferrugineous or infuscate to various degrees; antennae ferrugineous; legs testaceous.

Head weakly oblong (see ratio HL/HW and Fig. 22). Eyes rather large, approximately 0.6 - 0.7 times the length of temples in dorsal view; puncturation sparse, interstices in central dorsal area on average at least twice as wide as diameter of punctures; microsculpture absent or very indistinct.

Pronotum slightly wider than head and indistinctly oblong (see ratios HW/PW and PL/PW); puncturation much denser than that of head; microsculpture absent.

Elytra almost as long as and distinctly wider than pronotum (see ratio EL/PL and Fig.

22); puncturation much denser and finer than that of head and pronotum. Hind wings apparently present.

Abdomen with extremely fine and dense puncturation and with microsculpture; at segment VI as wide as or slightly narrower than elytra (Fig. 21); tergite VII with palisade fringe.

♂: posterior margin of sternite VII almost truncate and with long black setae; sternite VIII with moderately deep posterior incision, otherwise unmodified (Fig. 23); aedeagus as in Figs. 24-26.

E t y m o l o g y : The species is dedicated to Heinrich Meybohm (Stelle), who collected the holotype and who has discovered numerous other undescribed Staphylinidae while collecting Scydmaenidae in the Mediterranean.

C o m p a r a t i v e n o t e s : *Sunius meyhohmi* is allied and similar to *S. bicolor* (OLIVIER), *S. propinquus* (BRISOUT), *S. italicus* (COIFFAIT), and related species. It is reliably distinguished from them only by the male sexual characters, especially the morphology of the ventral process of the aedeagus.

D i s t r i b u t i o n a n d b i o n o m i c s : The species is currently known only from three localities in northern Portugal. However, its external morphology (large eyes, long wings) suggests that it may be more widespread in the Iberian Peninsula. The types were found under stones in arable land at intermediate elevations.

Acknowledgements

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Zusammenfassung

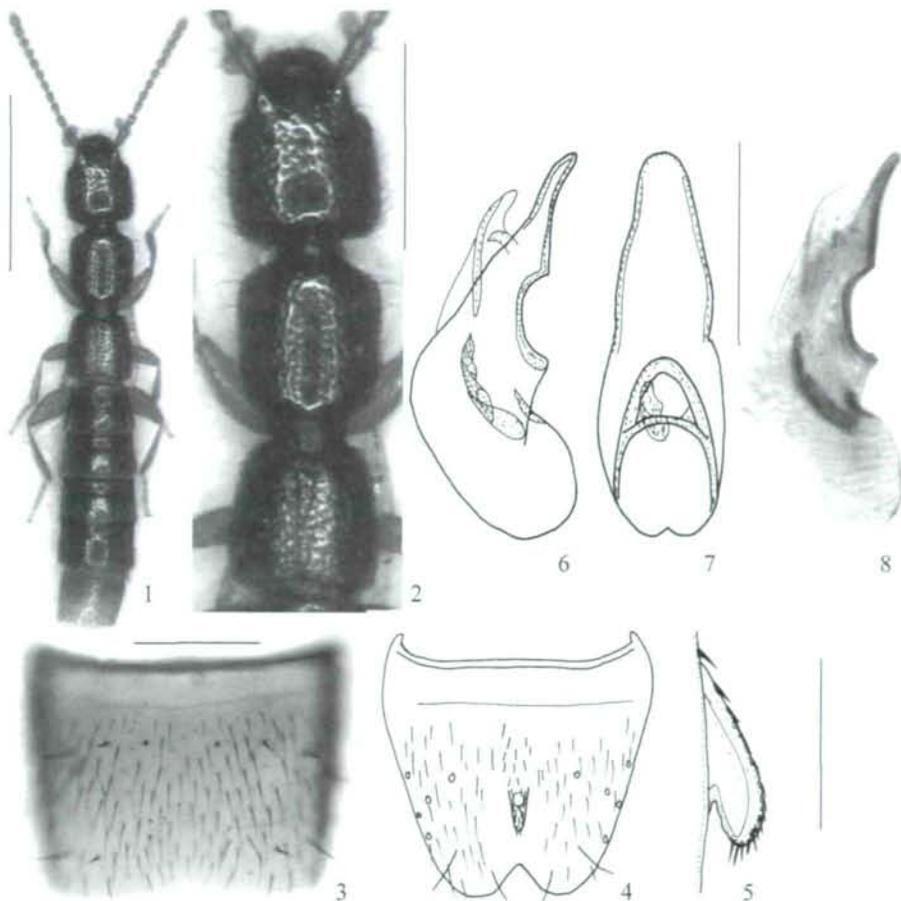
Sunius cazorlae sp. n. (Spanien: Sierra de Cazorla), *S. segurae* sp. n. (Spanien: Sierra de Segura), *S. fultus* sp. n. (Marokko: Taza) und *S. meyhohmi* sp. n. (nördliches Portugal) werden beschrieben und von ähnlichen Arten der Gattung unterschieden. Der Habitus und die primären und sekundären Sexualmerkmale der Männchen werden jeweils abgebildet.

References

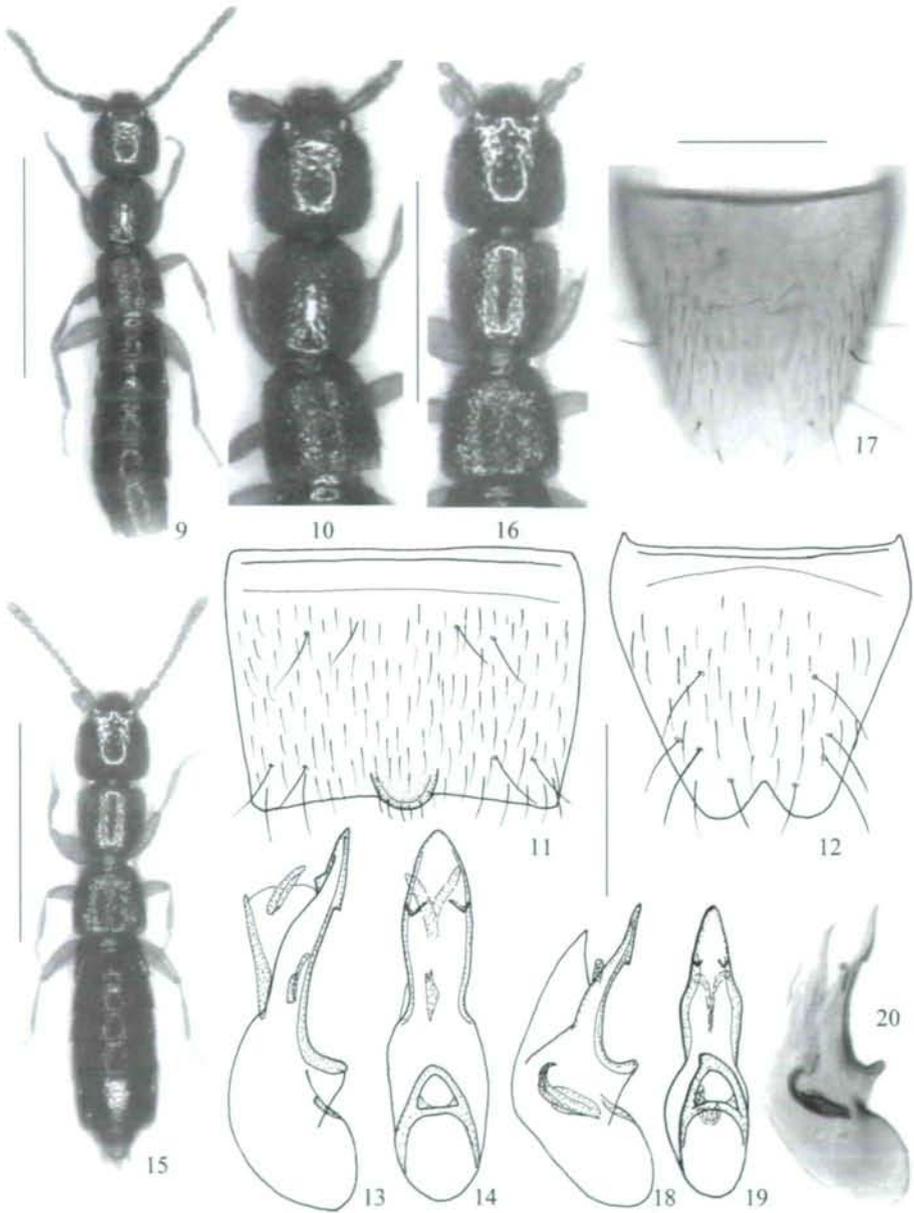
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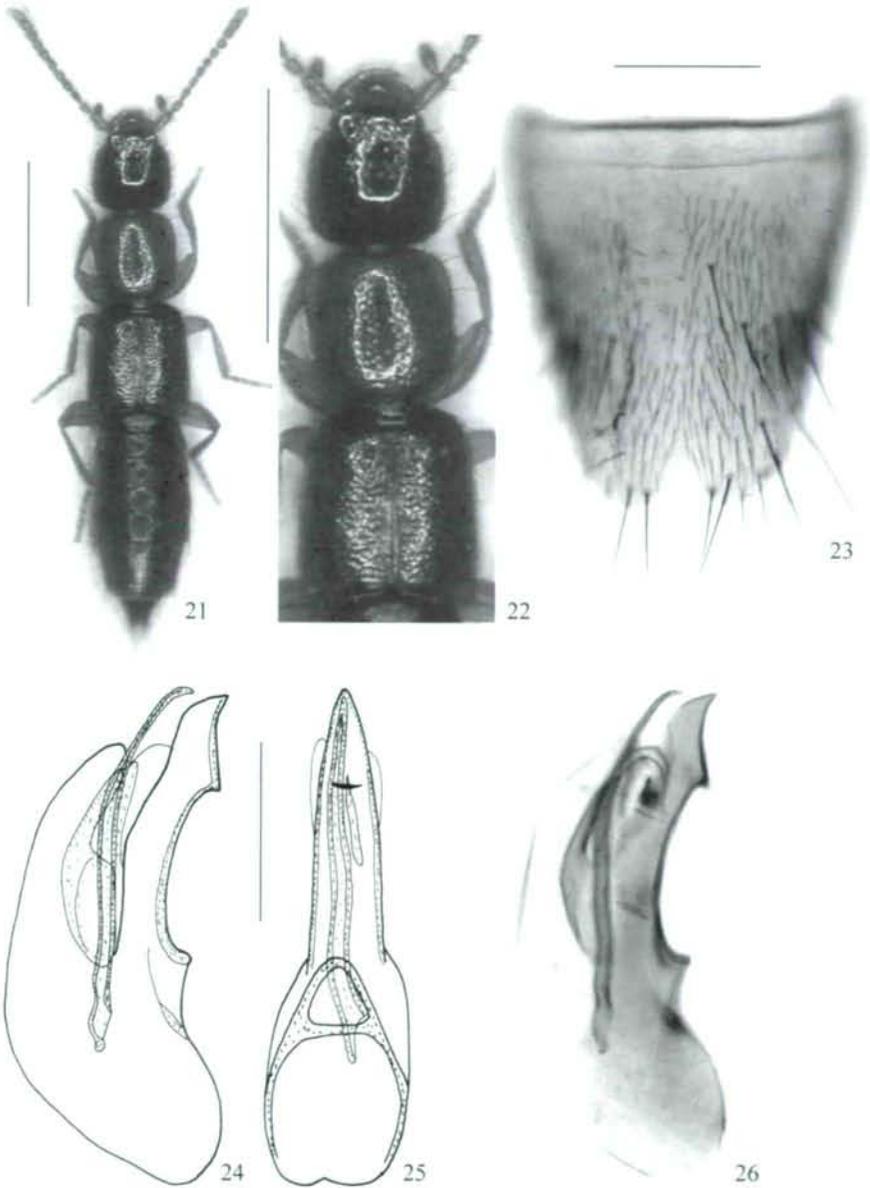
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Figs. 1-8: *Sunius fultus* sp. n. (holotype): 1 – facies; 2 – forebody; 3 – ♂ sternite VII; 4 – ♂ sternite VIII (long setae omitted); 5 – process of ♂ sternite VIII in lateral view; 6-8 – aedeagus in lateral and in ventral view. Scale bars: 1: 1.0 mm; 2: 0.5 mm; 3-4, 6-8: 0.2 mm; 5: 0.05 mm.



Figs. 9-20: *Sunius cazorlae* sp. n. (holotype) (9-14) and *Sunius segurae* sp. n. (holotype) (15-20): 9, 15 – facies; 10, 16 – forebody; 11 – ♂ sternite VII; 12, 17 – ♂ sternite VIII; 13-14, 18-20 – aedeagus in lateral and in ventral view. Scale bars: 9, 15: 1.0 mm; 10, 16: 0.5 mm; 11-14, 17-20: 0.2 mm.



Figs. 21-26: *Sunius meybohmi* sp. n.: 21 – facies; 22 – forebody; 23 – ♂ sternite VIII; 24-26 – aedeagus in lateral and in ventral view. Scale bars: 21, 22: 1.0 mm; 23-26: 0.2 mm.