

A New Hypogean Species of the Subfamily Paederinae (Coleoptera: Staphylinidae) from Bulgaria

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Abstract: *Lathrobium deltshevi* sp. n. from the Mecha Dupka Cave in Bulgaria is described, and its diagnostic characters are illustrated.

Keywords: Coleoptera, Staphylinidae, Paederinae, *Lathrobium*, Bulgaria, new species, hypogean species

Many species of the family Staphylinidae could be found in caves, but the cave staphylinid fauna is still poorly studied and very few troglobitic and hypogean staphylinid beetles are known (BORDONI, OROMI 1998; OUTERELO *et al.* 1998; STEVANOVIĆ *et al.* 2008). According to BERON (2007), 27 species of the family Staphylinidae are known from Bulgarian caves up to now. Amongst them, *Quedius troglophilus* COIFFAIT, 1969 and *Q. gueorguievi* COIFFAIT, 1967 (Staphylininae) are endemic from caves.

According to recent contributions, about 45 species of microphthalmous and anophthalmous *Lathrobium* Gravenhorst, 1802 are known from the Western Palaearctic region (ASSING, SCHÜLKE 2000; STEVANOVIĆ *et al.* 2008). In Bulgaria, the genus *Lathrobium* is represented by 14 species, four of them occurring only in Bulgaria. Two of them, *L. leonhardi* BREIT, 1912 and *L. confine* JANÁK, 2005, are microphthalmous species (JANÁK 2005; STEVANOVIĆ *et al.* 2008).

Material and Methods

The specimen referred to in this study is deposited in National Museum of Natural History, Sofia, Bulgaria (NMNHS). The primary and secondary sexual characters of the species described herein are termed following COIFFAIT (1982) and ASSING, SCHÜLKE 2000. The morphological studies were conducted using a Stemi 2000-C microscope (Zeiss Germany). For the photographs, a digital camera (Zeiss Axiocam ERC5s) was used. The following abbreviations are used for the measurements, which are given in mm:

AL: length of antenna; AW: maximal width of abdomen; EL: length of elytra from apex of scutellum to

posterior margin at suture; EW: width of elytra; HL: head length from anterior margin of clypeus to posterior margin of head; HW: head width (including eyes); ML: length of aedeagus from apex of ventral process to base; PL: length of pronotum along median line; PW: maximal width of pronotum; TaL: length of metatarsus; TiL: length of metatibia; TL: total body length.

Results

Lathrobium deltshevi sp. n. (Figs. 1-8)

Type material. Holotype: BULGARIA: ♂, “BU. Mecha Dupka cave, Bov vill., W Stara Planina, 935 m, 15.II.2014, leg. C. Deltshev, B. Petrov & M. Todorov / Holotypus ♂, *Lathrobium deltshevi* sp. n. det. S. Anlaş 2014” (NMNHS).

Description. Measurements (in mm) and ratios (n=1): AL: 1.66; HL: 0.80; HW: 0.75; PW: 0.69; PL: 0.96; EL: 0.68; EW: 0.73; AW: 0.82; TL: 5.3; ML: 1.32; HL/HW: 1.07; PW/HW: 0.92; PW/PL: 0.72; EL/PL: 0.71; EW/PW: 1.06; AW/EW: 1.12.

Habitus as in Fig. 1. Coloration: body unicoloured reddish brown, appendages somewhat lighter than body.

Head oblong (see measurements, ratio HL/HW and Fig. 1); eyes completely reduced, without ommatidia (Fig. 3); integument with distinct microreticulation; punctation relatively coarse and moderately dense in lateral areas, sparser in median dorsal area, interstices on average slightly wider than diameter of punctures in lateral areas and distinctly wider in median dorsal area. Antenna long (Fig. 2), all antennomeres longer than wide; in particular the antennomeres II-III clearly longer.

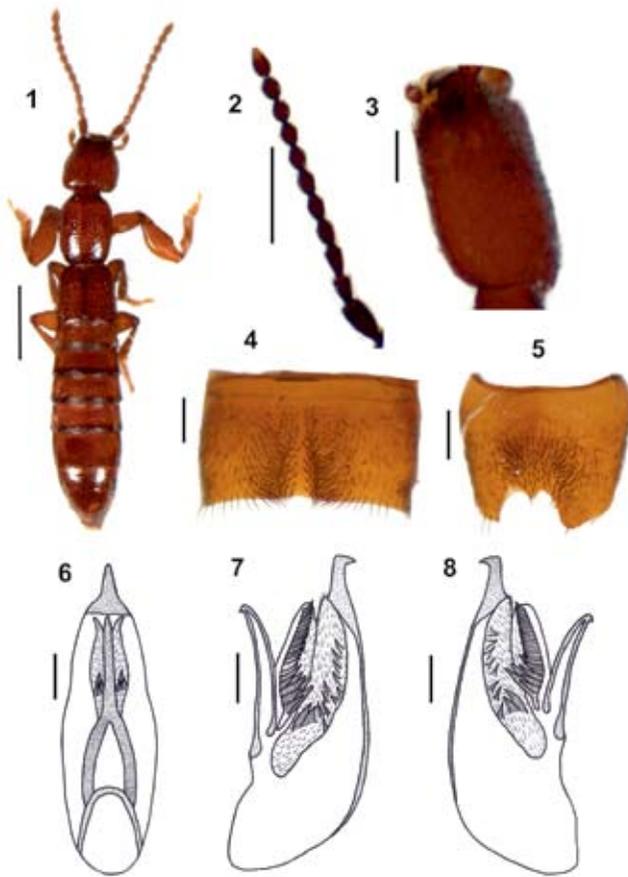


Fig. 1-8. Details of *Lathrobium deltshevi* sp. n. (1-8) 1– habitus; 2– antenna; 3– head in lateral view; 4– sternite VII of male; 5– sternite VIII of male; 6– aedeagus in ventral view; 7 and 8– aedeagus in lateral view; Scale-bars: 1.0 mm (Fig. 1); 0.5 mm (Fig. 2); 0.2 mm (Figs. 3-5 and 6-8).

Pronotum broadest at anterior margin and narrower than head (see ratio PW/HW and Fig. 1), and distinctly oblong (see ratio PW/PL and Fig. 1); puncturation of pronotum similar to that of head but with larger punctation; surface without indistinct traces of microsculpture.

Elytra distinctly shorter and wider than pronotum, distinctly widened posteriad (see ratios EL/PL

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and EW/PW, Fig. 1); punctation rather sparse, shallow, and ill-defined; without distinct microsculpture; hind wings reduced.

Abdomen wider than elytra (see ratio AW/EW and Fig. 1), widest at segment VI and VII; all tergites with fine microreticulation; puncturation fine and relatively sparse; posterior margin of tergite VII without palisade fringe.

Male: posterior margin of sternite VII slightly concave, median impression bearing short, thick and black setae (Fig. 4); sternite VIII with rather broad, deep, and asymmetrically M-shaped posterior excision (Fig. 5), in median area with a cluster of modified setae. Ventral process of aedeagus short in lateral view, with hooked apex; operculum laterally not flattened, its apex extends beyond the apex of the ventral process. Internal sac with two areas covered by spines: the first, from left, in lateral view, with series of 25 stout and steadily spines; the second, from right, in lateral view, scattered spines (Figs 6-8).

Comparative notes. The new species is an anophthalmous representative of the genus from Bulgaria. The geographically closest microphthalmost or anophthalmous congeners are *L. leonhardi* BREIT, 1912 and *L. confine* JANÁK, 2005 from Bulgaria. The new species could be distinguished from them by the distinctive morphology of the aedeagus both ventral and lateral view, and by the different shape of the excision at the posterior margin of the male sternite VIII. For illustrations of the genitalia of these species see JANÁK (2005).

Etymology. The species is dedicated to Dr. Christo Deltshev (araneologist), Sofia, who collected this new species.

Distribution and bionomics. The specimen was collected under a stone in the Mecha Dupka cave, Bov village, Western Stara Planina at an altitude of 935 m a.s.l.

Acknowledgements: I am grateful to Rostislav Bekchiev (Sofia) for providing me with specimens of the new species.

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Received: 30.01.2015

Accepted: 28.05.2015