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Description of the male of *Apholeuonus absoloni* (Coleoptera: Leiodidae: Leptodirini) from Bosnia

Popis samce druhu *Apholeuonus absoloni* (Coleoptera: Leiodidae: Leptodirini) z Bosny

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Abstract. The male of *Apholeuonus absoloni* Giachino et Guéorguiev, 1995 is described for the first time. Diagnostic characters including the aedeagal morphology are illustrated, and distributional notes on the species are presented. Supplementary morphometric data of an additional female specimen are given.

The description of *Apholeuonus absoloni* was based solely on three females from Bosnia (Giachino & Guéorguiev 1995: 208) and the male remained unknown until now. Among undetermined material of cave-dwelling Leiodidae kept in the junior author's collection we found two *Apholeuonus* Reitter, 1889 specimens of both sexes, which correspond to the original description of *A. absoloni*. In the present paper, the description of the male of *A. absoloni* is provided.

Nomenclature used here follows Newton & Thayer (1992).

Apholeuonus absoloni Giachino et Guéorguiev, 1995

Material examined. 1 ♂ (from the same locality as the type material), labelled: "Bärenhöhle Lanice, Hrz." [=Herzegowina, correctly N Bosnia] [printed, without date and collector's name]; 1 ♀, the same data. Both specimens are deposited in coll. R. Udržal (Pardubice).

Male. Similar to female, different only in the following characters: body smaller and more slender (colour darker, reddish brown. Pronotum slightly narrower, almost parallel-sided posteriorly; base distinctly emarginate. Elytra shorter, widest somewhat behind the midlength, less rounded at the apex. Mesosternal carina broader, markedly dilated, with obtuse, moderately recurved tooth. Protarsi five-segmented, slightly dilated. Metatibiae straight, slightly bent in proximal part.

Body length 6.96 mm (for further morphological details see Table 1).

Head sculpture finely, obliquely reticulate; with fine, sparse punctures; semilustrous. Antenna (Fig. 2) slightly exceeding anterior 0.75 of elytral length; ratio of antennomere lengths I-XI as follows: 4.20 : 11.86 : 8.39 : 8.58 : 9.67 : 7.85 : 10.40 : 5.84 : 10.77 : 10.95 : 11.50. Pronotum widest at basal third, 1.3 times as wide as long; posterior angles subrectangular. Pronotal sculpture fine, densely reticulate. Elytra relatively convex, rather smooth, apically acuminate (Fig. 1). Sculpture of elytra consisting of shallow, oval cells separated by 1.33-1.36 times their diameter, with basal microreticulation. Mesosternal carina as in Fig. 3. Aedeagus (Figs 6, 7) 1.08 mm long. Phallobase robust, strongly enlarged dorsally and slightly narrowed laterally. Median lobe of aedeagus truncate, gradually tapered to apex in dorsal view and moderately arcuate in lateral view. Endophallus

bilobed, basally with Y-shaped copulatory piece and two lateral sclerites situated medially. Parameres long, reaching aedeagal apex; apically enlarged, with 3 setae (Fig. 8).

Female. The female specimen examined is extremely large (see Table 1) but agrees well in all morphological characters with the description of *A. absoloni* (see Figs 4, 5, and Giachino & Guéorguiev 1995).

Table 1. *Apholeuonus absoloni*. The comparison of selected morphometrical characters.
Tabulka 1. *Apholeuonus absoloni*. Srovnání vybraných morfometrických znaků.

	♂	♀
Measurements (in mm)		
Body length*)	6.96	7.27
Length of antenna (LA)	5.48	4.89
Medial length of pronotum**) (mLPN)	1.24	1.33
Maximum pronotal length***)	1.30	1.39
Maximum pronotal width	1.62	1.76
Length of elytra (LE)	4.32	4.70
Maximum width of elytra	3.00	3.27
Ratios		
Antennal ratio index****)	0.98	0.80
Length ratio of antennomeres IX to VIII	1.84	1.54
Medial length of pronotum/width ratio	0.80	0.79
Elytra length/width ratio	1.44	1.44

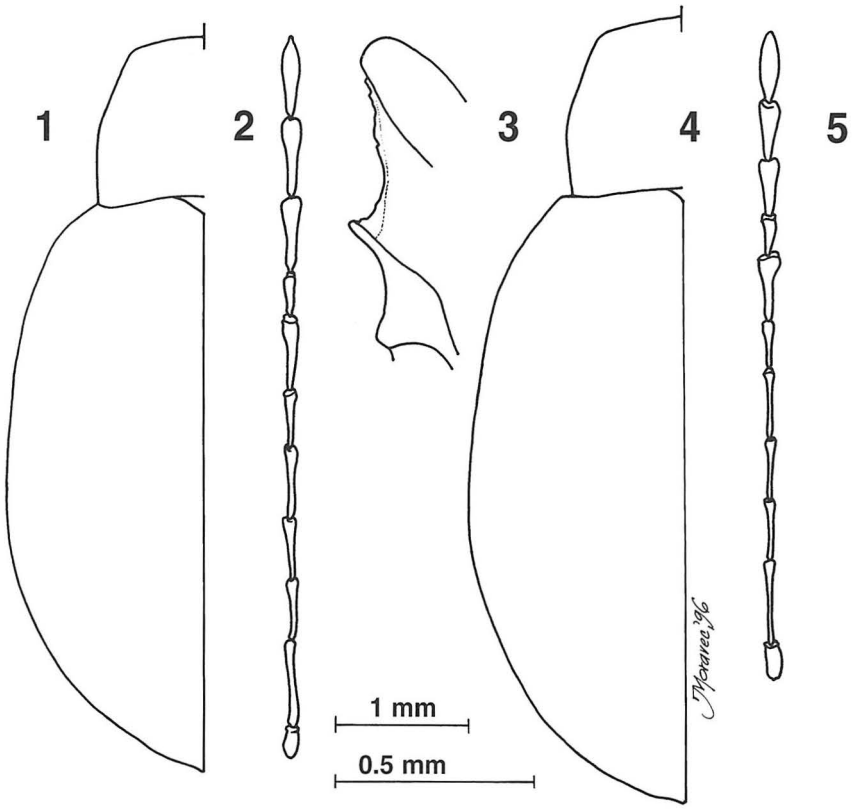
*) measured from apex of mandibles to apex of elytra, **) distance measured in the middle of anterior margin and posterior margin of pronotum, ***) distance measured from anterior angles to posterior angles of pronotum, ****) Index of relative antennal lengths (Ia = LA/mLPN + LE; see Giachino & Guéorguiev 1995).

*) měřeno od špice kusadel po špici krovek, **) vzdálenost měřená uprostřed předního a zadního okraje štítu, ***) vzdálenost měřená od předního rohu štítu k zadnímu rohu štítu, ****) Index relativních délek tykadel (Ia = délka tykadel/střední délka štítu + délka krovek; viz. Giachino & Guéorguiev 1995).

Differential diagnosis. *Apholeuonus absoloni* is similar to *A. longicollis* Reitter, 1904 and *A. leonhardi* Giachino et Guéorguiev, 1995 by the shape of aedeagus, by the endophallic structure and by the position of apical setae of parameres. It resembles *A. insignis* Giachino et Guéorguiev, 1995 (only two females are known) by its external morphology (i.e., more prolonged apex of elytra). On the contrary, *A. absoloni* differs from them by the shape of the mesosternal carina, by the less sinuous pronotal margins and, especially, by the rectangular posterior pronotal angles (obtuse, more prominent laterally in *A. leonhardi* and *A. insignis*, see Figs 1 and 4).

Moreover, *A. longicollis, A. leonhardi* and *A. insignis* are clearly geographically isolated from *A. absoloni* and the continuous distribution of the other taxa of the genus (see Giachino & Guéorguiev 1995: 213, Fig. 144).

Discussion. The specimens of *A. absoloni* examined here (see "Material") bear the same collecting labels as the holotype (♀): "Bärenhöhle" [=Bear Cave, Mečkina jama Cave], which is deposited in the collection of the Museo Regionale di Scienze Naturali, Torino (P. M. Giachino). According to the unpublished Absolon's hand-writing manuscripts "Biospeologica balcanica" (cf. Pretner 1976) preserved at the Archives of the Moravian Museum, Brno (Dr K. Valoch, pers. comm.), three specimens (1 ♂, 2 ♀♀) were taken during the second trip to Bosnia in October 1908 (see Absolon 1916a: 250, Absolon 1916b: 598, Absolon 1943: 202, Absolon 1958: 14-16; cf. Guéorguiev 1990: 237-238). The type locality being in the vicinity of Travnik and was cited



Figs 1-5. *Apholeuonus absoloni* Giachino et Guéorguiev. 1 - left outline of body in male dorsally; 2 - left antenna in male dorsally; 3 - mesosternal carina in male laterally; 4 - left outline of body in female dorsally; 5 - right antenna in female dorsally. Scale bar 0.5 mm for Fig. 3, 1 mm for Figs 1-2, 4-5.
Obr. 1-5. *Apholeuonus absoloni* Giachino et Guéorguiev. 1 - levý obrys těla samce shora; 2 - levé tykadlo samce shora; 3 - kýl mesosterna samce z boku; 4 - levý obrys těla samice shora; 5 - pravé tykadlo samice shora. Měřítko 0,5 mm pro obr. 3, 1 mm pro obr. 1-2, 4-5.

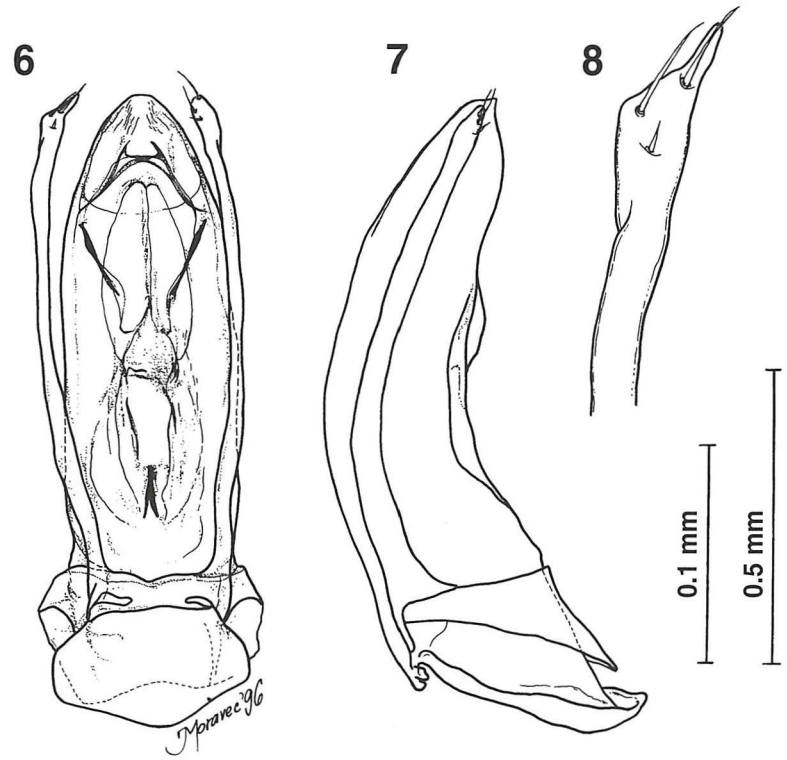
(e.g., Loc. no. 5b "Höhle bei Travnik", Loc. no. 7b "Kleine Höhle bei Travnik" and/or "Kleine Spalten an der Šumečquelle bei Travnik" - see Absolon 1913: 14, Willmann 1941: 21, 58, 76).

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Figs 6-8. *Apholeuonus absoloni* Giachino et Guéorguiev. 6 - aedeagus dorsally; 7 - ditto, laterally; 8 - apex of left paramere dorsally. Scale bar 0.1 mm for Fig. 8, 0.5 mm for Figs 6-7.
Obr. 6-8. *Apholeuonus absoloni* Giachino et Guéorguiev. 6 - aedeagus shora; 7 - aedeagus z boku; 8 - apikální část levé paramery shora. Měřítko 0,1 mm pro obr. 8, 0,5 mm pro obr. 6-7.

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SOUHRN

Na základě studia materiálu ve sbírce R. Udržala (Pardubice) poprvé uveřejňujeme popis samce *Apholeuonus absoloni* Giachino et Guéorguiev, 1995 (Coleoptera: Leiodidae: Leptodirini) z Bosny. Druh byl doposud znám pouze z typové série obsahující tři samice. Zároveň doplňujeme některé morfometrické údaje dalšího exempláře samice *A. absoloni*.

Podle znaků na genitáliích, zejména ve tvaru apikální části aedeagu, polohou terminálních set na paramerách a strukturou skleritů vnitřního vaku je *A. absoloni* podobný *A. longicollis* Reitter, 1904 a *A. leonhardi* Giachino et Guéorguiev, 1995. Vnějším habitem (např. více protáhlou špicí krovek) se *A. absoloni* podobá *A. insignis* Giachino et Guéorguiev, 1995 (samec dosud neznám). Od těchto tří druhů se *A. absoloni* liší tvarem mesosternálního kýlu, méně klenutými okraji štítu a jeho zadními rohy (obr. 1, 4).

Podle Absolonova nepublikovaného rukopisného katalogu „Biospeologica balcanica" (uložen v Archivu Moravského zemského muzea v Brně) byly tři exempláře *A. absoloni* (1 ♂, 2 ♀♀) sbírány Dr. K. Absolonem na jeho druhé balkánské cestě do Bosny v říjnu 1908.