

**A NEW ENDEMIC REPRESENTATIVE OF THE GENUS *RASCIODUVALIUS*
S. B. ČURČIĆ, BRAJKOVIĆ, MITIĆ & B. P. M. ČURČIĆ FROM MT. ZLATIBOR,
WESTERN SERBIA (TRECHINI, CARABIDAE, COLEOPTERA)**

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Abstract - A new species of cavernicolous and endemic trechine ground beetles, *Rascioduvalius zlatiborensis* n. sp., is described and diagnosed in the present paper. Also, all important taxonomic features are considered and illustrated. The type specimens of the new species were collected from the Markova (= Ršumska) Pećina Cave, village of Gornji Ljubiš, Mt. Zlatibor, Western Serbia.

The new species and its congeners belong to a separate phyletic lineage of Tertiary age. All members of *Rascioduvalius* S. B. Čurčić, Brajković, Mitić & B. P. M. Čurčić are distributed in Western Serbia only, where they have gone through intense differentiation and radiation due to evolution of the karstic relief.

Key words: *Rascioduvalius*, *Rascioduvalius zlatiborensis*, trechines, Carabidae, new species, cave fauna, Serbia

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INTRODUCTION

The trechine genus *Rascioduvalius* S. B. Čurčić, Brajković, Mitić & B. P. M. Čurčić was recently described from Western Serbia (Čurčić *et al.* 2003). Until the present time, this genus comprised only two species from Mts. Zlatibor and Murtenica, Western Serbia (Jeannel, 1923; Žanel and Stanković, 1924; Jeannel, 1928; Čurčić *et al.* 2003), respectively. These species of *Rascioduvalius* are as follows: *R. cvijici* (Jeannel) - from an endogean habitat, village of Gornja Bela Reka, Mt. Murtenica; and *R. stopicensis* (Jeannel) - from the Stopića Pećina Cave, village of Rožanstvo, Mt. Zlatibor (Čurčić *et al.* 2003).

In a small sample of trechine carabids collected during 2004 from the Markova (= Ršumska) Pećina Cave, village of Gornji Ljubiš, Mt. Zlatibor, Western Serbia, a new species, *Rascioduvalius zlatiborensis* n. sp., is here-in established and diagnosed, based on the study of two type females. The type-specimens (holotype and paratype females) are deposited in the collection of the Center for Biospeleology of Southeast Europe (Belgrade, Serbia and Montenegro).

SYSTEMATIC PART
CARABIDAE LATREILLE

RASCIODUVALIUS ZLATIBORENSIS S. B. ČURČIĆ,
M. M. BRAJKOVIĆ & B. P. M. ČURČIĆ,
NEW SPECIES
(Figs. 1-3)

Type-locality. - From the Markova (= Ršumska) Pećina Cave (found in pitfall traps), village of Gornji Ljubiš, Mt. Zlatibor, Western Serbia, 18 September 2004 (holotype female), collected by B. M. Mitić & M. O. Mitić; 4 August 2004 (paratype female), collected by S. B. Čurčić & N. B. Čurčić.

Etymology. - After Mt. Zlatibor, its *terra typica*.

Diagnosis. - From *Rascioduvalius cvijici* (Jeannel) and *R. stopicensis* (Jeannel), this new species is easily distinguished by smaller size, different body shape, different shape of the head, different form of the eyes, number of the ommatidia, antennal size and ratios of certain antennomeres, different shape of the pronotum, different shape of the elytra, shape of the shoulders, intensity of

the strial depression, position of the first pair of elytral discal setae, shape of the gonosternite, form the female genitalia, and the distance separating them (Jeannel, 1923; Jeannel, 1928; Čurčić *et al.* 2003) (Figs. 1-3).

Description. - Middle-sized. Total body length (without mandibles): 4.87 mm. Body elongate, tegument glabrous (Fig. 1). Body color from yellowish- to reddish-brown. Head and pronotum each with polygonal microsculptures.

Head voluminous and rounded, widening basally (Fig. 1). Frontal furrows complete and deep, especially anteriorly. Cheeks rounded, covered with tiny hairs. Eyes

small, flat, reduced, lenticular, composed of 6-9 depigmented ommatidia (Fig. 2). Eyes with darkened border. An arcuated preocular furrow present. Head with two pairs of supraorbital setae. Mentum tooth bifid. Antennae moderately elongate, reaching between one third and one half of the elytra length. Antennomere II shorter than antennomere IV. Antennal articles VIII and IX oval, more than twice as long as wide (Fig. 1).

Pronotum small, wider than long, subcordate, broader than head, narrowing toward its base (Fig. 1). Anterior pronotal margin concave. Anterior angles prominent and rounded. Lateral pronotal margins rounded anteriorly and somewhat concave posteriorly. Pronotum widest in its foremost fifth. Posterior angles prominent, sharply point-

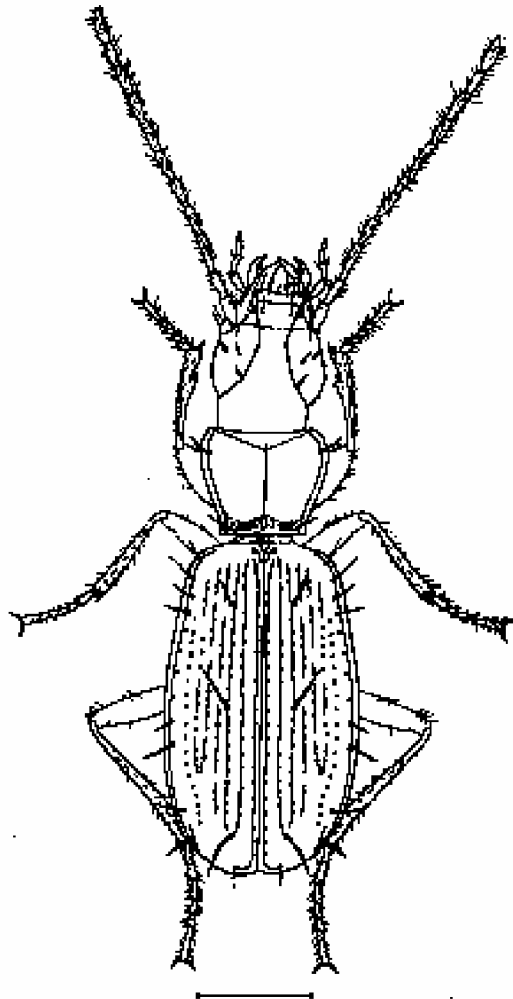
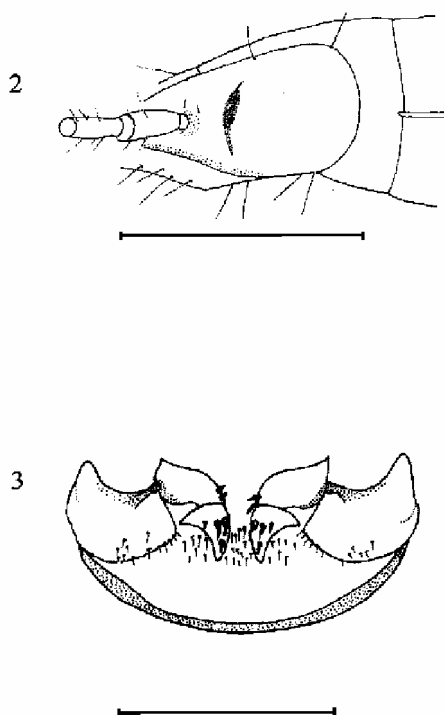


Fig. 1. *Rascioduvalius zlatiborensis* n. sp., from the Markova (= Ršumska) Pećina Cave, village of Gornji Ljubiš, Mt. Zlatibor, Western Serbia. Holotype female, habitus. Scale line = 1.00 mm.



Figs. 2-3. *Rascioduvalius zlatiborensis* n. sp., from the Markova (= Ršumska) Pećina Cave, village of Gornji Ljubiš, Mt. Zlatibor, Western Serbia. 2 - holotype female, head (lateral view); 3 - paratype female, genitalia. Scale lines = 0.50 mm.

ed. Posterior pronotal margin straight. Pronotum with two pairs of pronotal setae. Pronotal disc convex, with a median furrow and with no micropubescence. Marginal furrows narrow, deep, and equally wide along their whole length. Basal fossettes wide and deep. Pronotal basal surface concave and rough.

Elytra elongated, ovoid, 1.60-1.70 times as long as wide (Fig. 1). Shoulders rounded, with a sharp edge each. Elytra inconspicuously impressed in their first third or somewhat before that position (from the lateral sides), widest slightly below the mid-elytra level. Elytral apex rounded. Marginal furrows wide and deep, especially in their posthumeral parts. Elytral disc slightly convex. Surface of elytra without micropubescence. First three inner striae developed, well-depressed. Outer striae present in the form of rows of points. The first row is almost complete, while other rows are incomplete. Inner interstitial spaces convex. Elytra with two discal setae on each elytron. The first pair of discal setae situated on both fourth interstriae, at the level of about the anterior fifth of elytral length. The second pair of discal setae situated on third striae, just after the mid-elytral level. Each humerus

with four setae positioned characteristically for the genus (Ćurčić *et al.* 2003).

Legs short and thin (Fig. 1). Fore tibiae pubescent apically, with a longitudinal median fissure. The first pro-tarsal article longer than wide in females.

Gonosternite wide, prominently rounded posteriorly.

The appearance of the female genitalia is presented in Fig. 3. Gonocoxites IX relatively small, thickened, curved, basally totally or partly jointed with massive and rounded gonosubcoxites IX. Female paired genital structures somewhat separated.

Male unknown.

DISCUSSION

The new ground beetle species belongs to the genus *Rascioduvalius*, which includes two additional species from Western Serbia. *Rascioduvalius zlatiborensis* n. sp. clearly differs from its other congeners (*R. cvijici* and *R. stopicensis*) in many important respects, such as: smaller size (4.87 mm *vs.* 4.27-5.50 mm *vs.* 5.20 mm); less elongated body; different shape of the head (rounded proximally *vs.* rounded submedially *vs.* rounded medially); different form of the eyes (lenticular *vs.* elliptic *vs.* unknown); number of ommatidia (6-9 *vs.* 9-11 *vs.* unknown); shorter antennae; ratios of certain antennomeres (antennomeres VIII and IX more than twice as long as wide *vs.* antennomeres VIII and IX more than twice as long as wide *vs.* antennomeres VIII and IX three times as long as wide); different shape of the pronotum (subcordate, widest in its foremost fifth *vs.* subcordate, widest in its foremost fourth *vs.* narrower and more elongated, with the lateral margins less rounded anteriorly than in other analyzed species); shape of the elytra (ovoid *vs.* subparallel *vs.* almost oval, more convex laterally than in other species); shape of the shoulders (rounded *vs.* prominent and angular *vs.* rounded); intensity of the striae depression (well-depressed *vs.* superficially depressed *vs.* deeply depressed); position of the first pair of elytral discal setae (situated at a level of the foremost fifth of elytral length *vs.* situated at a level slightly before the foremost fourth of elytral length *vs.* unknown); shape of the gonosternite (wide, prominently rounded posteriorly *vs.* narrow, almost straight posteriorly *vs.* unknown); form of the female genitalia (gonocoxites IX relatively small, thickened, totally or partly jointed with massive

and rounded gonosubcoxites IX *vs.* gonocoxites IX moderately elongated, thin, partly jointed with elongated gonosubcoxites IX *vs.* unknown); and the distance separating them (female paired genital structures somewhat separated *vs.* female paired genital structures close to each other *vs.* unknown) (Jeannel, 1923; Jeannel, 1928; Ćurčić *et al.* 2003; present study).

Furthermore, *Rascioduvalius zlatiborensis* n. sp. is the second known cavernicolous species of the genus (besides the species *Rascioduvalius stopicensis*).

It is clear that *R. zlatiborensis* n. sp. (as well as the other representatives of the genus) is endemic to some mountain ranges in Western Serbia, probably representing an ancient form of Tertiary origin. This new species and its congeners belong to an old distinct phyletic lineage, which differs from all other related groups of species.

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О НОВОМ ЕНДЕМИЧНОМ ПРЕДСТАВНИКУ РОДА *RASCIODUVALIUS* С. Б. ЋУРЧИЋ, БРАЈКОВИЋ, МИТИЋ & Б. П. М. ЋУРЧИЋ (TRECHINI, CARABIDAE, COLEOPTERA) СА ПЛАНИНЕ ЗЛАТИБОР, ЗАПАДНА СРБИЈА

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Нова врста пећинских и ендемичних карабида трехина, *Rascioduvalius zlatiborensis* n. sp., заснована је на основу материјала прикупљеног у Марковој пећини у селу Горњи Љубић на Златибору, западна Србија; наведени таксон је прецизно описан и дијагностикован. Том приликом пажљиво су анализирана сва његова таксономска својства са високим информативним садржајем, а у раду су презентоване и одговарајуће илустрације.

Новоописани таксон и његови блиски сродници припадају јединственој филетичкој серији терцијарне старости и порекла. Истиче се да су сви припадници рода *Rascioduvalius* С. В. Ćurčić, Brajković, Mitić & В. Р. М. Ćurčić распрострањени једино у западној Србији, где је комплекс врста *rascioduvalijusa* у међувремену подлегао интензивној дивергентној диференцијацији у условима генезе крашког рељефа.