A NEW TROGLOBITIC GROUND-BEETLE, *DUALIUS (NEODOUALIUS) STARIVLAHI* (COLEOPTERA: CARABIDAE : TRECHINI), FROM SOUTHWESTERN SERBIA

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Abstract - A new troglobitic ground-beetle, *Duali*us (*Neodu*vali*us*) *st*arivla*hi* n. sp. has been described from the Hadži-Prodano*va* Pečina Cave, nr. Ivanjica, in south-western Serbia. This new taxon belongs to a separate phyletic lineage, which is much more older than either the representatives of 'D. (N.) cvijici' Jeannel-group or those belonging to 'D. (N.) borei' Pretner-group.

This species is endemic to SW Serbia, and it probably belongs to relicts of the Tertiary origin.

Altogether sixteen species and a single subspecies of the genus *Duali*us Delarouzée (subgenus *Neodu*vali*us* J. Müller) are presently known. Of these, only *D. (N.) cvijici cvijici* Jeannel, and *D. (N.) cvijici stopice*nsis Jeannel have been established in Serbia (C a - s a l e and L a n c y r i c 1983; N o n c i l l e r 1983; D r o v e n i k and Pe*ks* 1994). Interestingly, this whole subgenus is still inadequately studied (Pret*ner* 1963; D rove*ni*k and Pe*ks* 1994).

In a small lot of carabid beetles, collected in the Hadži-Prodanowa Pećina Cave, nr. Ivanjica, SW Serbia (Fig. 1), we found two specimens (a male and a female) which belong to *Duali*us (*Neodu*vali*us*). A thorough investigation has clearly shown that both specimens pertain to a new species, previously unknown to science. Therefore, this contribution is devoted to the complete study of the newly-established taxon.

CARABIDAE (TRECHINI)

*DUALIUS (NEODOUALIUS) STARIVLAHI*, new species

(Figs. 1-7)

*Diagnosis*. - This new species differs from all other *Duali*us (*Neodu*vali*us*) representatives by a number of characters, such as: reduced eyes (eye-spots), medium size (5-6 *mm*), presence of 4 marginal setae on clypeus, frontal furrows completely developed, elytron with both shoulders angular (the third stria with 4 or 5 pores; Fig. 2), and the shape of the male genitalia (Figs. 3-6).

**Type material**. - One holotype male, and one allotype female, from the Hadži-Prodanova Pećina Cave, v. Rašičići, near Ivanjica, cca 650 m a. s. l.; collected by S. B. Ćurčić, V.T. Tomić, S. E. Makarov and B. P. M. Ćurčić. The holotype male is in the collection of the National Museum of Natural History in Sofia, and the allotype female in the collection of the Institute of Zoology, Faculty of Biology, University of Belgrade, Belgrade.

*Description*. - Total body length (with mandibles): 5.70 *mm* (holotype male) and 5.50 *mm* (allotype female); maximum body width: 2.00 *mm* (holotype) and 1.90 *mm* (allotype). Flagellar glabrous, slightly pigmented in holotype, and almost unpigmented in allotype; in fact, body colour varies from yellowish to reddish. Head, pronotum and elytra each with a distinct reticulation (visible at magnification of more than 40 times).

Head subconceived, with an impunctate disc. Head length to width ratios: 1.48 (holotype) and 1.45 (alloctype). Frontal furrows completed. Antennae long, exceeding first third of elytra. Eyes small, spot-like, facets completely reduced. Temporae strongly projected, almost four times longer than the length of eye-spots. Mentum tooth unique (not bifurcate), moderately protruded forwards.

Pronotum cordate, flat, widest at its anterior area (part), its sides converging posteriorly. Anterior margin slightly concave, longer than the posterior and straight margin. Pronotum width to head width ratios: 1.18 (holotype) and 1.17 (allotype); pronotum width to length ratios: 1.25 (holotype) and 1.26 (allotype); pronotum base width to pronotum apex width ratios: 0.84 (holotype) and 0.87 (allotype). Disc smooth, midline deep. Basal foveae deep, strongly impressed, and nonpunctate. Posterior angles straight and sharply pointed.

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Male genitalia different from these in all other species of the subgenus (Figs. 3-6). Laterally, median lobe of aedeagus long, strongly arcuate in the basal third of its ventral side, and forming an angle of 90°. Apex acute and straight, median part of the same breadth, basal bulb massive and extensive (Fig. 3). Dorsally, median lobe with apical orifice distinctly anopic, long, narrowing backwards, and slightly bent to the left (Fig. 4). Parameres long, narrowing towards apex, each of them with four distal setae (Fig. 5). Copulatory piece: internal sac small and excised frontally (Fig. 6).

Fig. 1. The situation of the type-locality of Duvalius (Neoduvalius) starvlahi n. sp., from the Hadži-Prodanova Pećina Cave (marked with an asterisk), nr. Ivanjica, southwestern Serbia. Abbreviations: SB = Serbia, MTG = Montenegro.

Prosternum, mesosternum, metasternum, and episterna almost two times as long as wide.

Legs long and slender. Protibia with dense pubescence on its anterior margin and with a deep interior furrow. Male protarsi I and II dilated, protarsus I considerably broader than the following podomere. Mesotibia longer than mesofemur, metatibia shorter than metafemur. Mesotibia almost straight, metatibia slightly S-curved. Metatrophanter kidney-shaped, round-ed at its apex. Metatarsus I longer than metatarsi II, III and V, but shorter than metatarsi II - IV.

Elytra elongate and apically rounded, coalesced along suture; shoulders prominent, forming obtuse angles. Scutellar striae present, outer striae more reduced than the inner ones (1 - 4). Elytra width to pronotum width ratios: 1.67 (holotype) and 1.59 (allotype). Elytra base width to pronotum base width ratios: 1.90 (holotype) and 1.88 (allotype). Elytra length to width ratios: 1.57 (holotype) and 1.60 (allotype).

Ventral body surface smooth and glabrous.

Urite (abdominal segment IX) subtriangular, longer than aedeagus (Fig. 7).

Fig. 2. Duvalius (Neoduvalius) starvlahi n. sp., allotype female. Scale line in mm.

Chaetotaxy: Head with 3 + 3 anterior pores on labrum, 2 + 2 marginal setae on clypeus, with two pairs of supraorbital pores (first pair of pores situated slightly after the eye level); submentum with 8 setae. Pronotum with 1+1 lateral, and 1+1 laterobasal pores, the latter being situated slightly before posterior angles. Elytra with a single scutellar pore on each side; inter-
stria III with 4 + 4 pores in holotype male, and with 4 + 5 pores in allotype female; it also includes preapical pores, being closer to the suture than to the apex border; 1 + 1 small apical setae in front of the end of second striae. Umbilicate row (or series) with 4 humeral + 2 middle + 3 apical pores. Distance between humeral and middle pore groups almost twice as long as humeral series. Each abdominal sternum (including sternum VII) with a single pair of setae.

also thinks that *D. (N.) starivlahi* n. sp. "belongs to a distinct group of species", although "the shape of lamella copulatrix and the aedeagus shape are the same as in (the subgenus) *Neoduvalius*." Therefore, the other two species groups of *Duvalius* are: "cvijici" and "bolci" group(s).

It is clear that *D. (N.) starivlahi* n. sp. is endemic to SW Serbia, probably representing an ancient form of the Tertiary origin. Within the frame of *Duvalius* (*Neoduvalius*), the distribution area of this new species occupies the easternmost part of the range of the subgenus.  

**Cohabitants** - The type-locality of *D. (N.) starivlahi* n. sp. is also inhabited by a carabid *Laemostenus Pristonychus* sp. (ex group terricola), by two dipo- pods: *Brachydesmus (Brachydesmus) herzegovinensis herzegovinensis* Verhoeoff and *Apolibeca lendenfeldii miraculosa* Attems, and by a springtail species *Pseudosinella Ivanjicae* Ćurčić & Lučić.

**Etymology** - This species has been named after the mountains of Stari Vlah in SW Serbia, where its type-locality is found.

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НОВА ТРОГЛОБИОНТНА КАРАБИДА, *DUVALIUS (NEODUVALIUS) STARIVLAJI* (COLEOPTERA: CARABIDAE: TRECHINI) ИЗ ЈУГОЗАПАДНЕ СРБИЈЕ

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У Хаџи-Продановој пећини, у близини Ивањице, у југозападној Србији, пронађена је и описана нова врста троглобионтних карабида, *Duvalius (Neoduvalius) starivlahi* sp. Овај таксон припада посебној филетичкој линији, која је много старија како од представника "D. (N.) crijici" Jeannel-групе врста, тако и од "D. (N.) bolei" Pretner-групе врста.

Ова нова врста је ендемична за пећине југозападне Србије, а вероватно припада реликтној фауни терцијарног порекла.