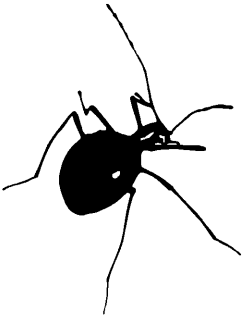

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A NEW SPECIES OF THE GENUS *CARABUS* FROM SOUTH-WESTERN TUVA (COLEOPTERA: CARABIDAE)

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Abstract *Carabus (Morphocarabus) juliae* sp. nov. from south-western Tuva is described and figured. Diagnostic data are given. The male genital structure of closely related species *Carabus (Morphocarabus) michailovi* Kabak, 1992, not previously figured, is illustrated.

KEY WORDS: Coleoptera, Carabidae, *Carabus*, new species, south-western Tuva.

Izvleček – NOVA VRSTA RODU *CARABUS* IZ JUGOZAHODNE TUVE (COLEOPTERA: CARABIDAE)

Opisan je *Carabus (Morphocarabus) juliae* sp. nov. iz jugozahodne Tuve. Navedeni so določevalni znaki. Prvič je prikazana struktura genitalij samca sorodne vrste *Carabus (Morphocarabus) michailovi* Kabak, 1992.

KLJUČNE BESEDE: Coleoptera, Carabidae, *Carabus*, nova vrsta, jugozahodna Tuva.

During the international expedition of the Ministry of Ecology of Tuva Republic in 2000, the beetles of the genus *Carabus* were collected in the mountain tundra near the glacier Mungun-Taiga (50°16' N, 90°07' E). The collected specimens are rather peculiar morphologically and should be considered as a new species. The description is given below.

Carabus (Morphocarabus) juliae sp. nov.

Description: Body length in males 17.0-19.4 mm (including mandibles), width 6.0-8.0 mm; body length in females 19.0-22.0 mm, width 7.6-8.2 mm.

Head not thickened, ratio width of pronotum/width of head 2.03; eyes strongly convex; mandibles relatively long and broad, evenly curved and sharply pointed at the apex; retinaculum of right and left mandibles bidentate, strongly prominent; surface of mandibles smooth. Frontal furrows deep and long, inside smooth, sometimes posteriorly with a few shallow punctures. Frons smooth, vertex and neck with sparse shallow punctures, laterally vertex and neck sometimes with a few coarse wrinkles. Labrum slightly wider than clypeus, strongly notched, with two, rarely without lateral setae. Antenna protruding beyond the base of pronotum by three apical joints; palpi slightly dilated; penultimate joint of the maxillary palpi equal to last joint; penultimate joint of the labial palpi with two setae. Mentum tooth shorter than lateral lobes; submentum with two or four setae.

Prothorax transverse, broadest at about middle; ratio width/length 1.83. Pronotum convex with sparse shallow punctuation, laterally with coarse punctures, posteriorly with coarse wrinkles; rarely pronotum laterally and posteriorly coarsely wrinkled. Median longitudinal line distinct; basal foveae deep, inside coarsely wrinkled. Sides of pronotum broadly margined, slightly bent upwards; lobes of hind angles short, evenly rounded, slightly bent downwards. Lateral margin with two setae: one seta at about middle and one seta near hind angle.

Elytrae oblong-oval, widest at about middle or behind middle; shoulders slightly prominent; sides of elytrae broadly margined. Ratio length/width 1.60; ratio width of elytrae/width of pronotum 1.38. All elytral interspaces about equally developed, slightly convex, integral; sometimes laterally interrupted into short links, which conjugate transversely. Primary foveoles indistinct, sometimes well-marked, but not deep; striae coarsely punctured.

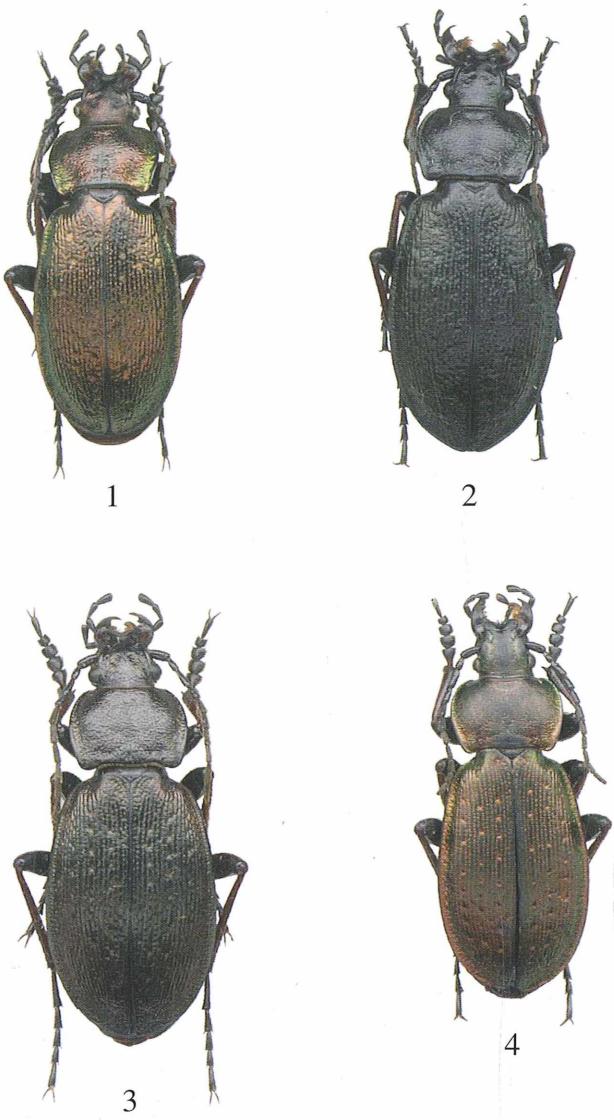
Ventral body surface smooth, metepisternum with a few shallow punctures, longer than its width; sides of abdomen slightly wrinkled and also with a few punctures; last abdominal segment bearing up to 6 setae on the apex, fourth and fifth segments with two setae, rarely without setae; sternal sulci absent.

Legs of normal length; femurs of fore legs slightly dilated, male fore tarsi with four dilated segments bearing hairy pads.

Aedeagus (Fig.5) evenly curved, apical lamella relatively narrow, slightly bent downwards.

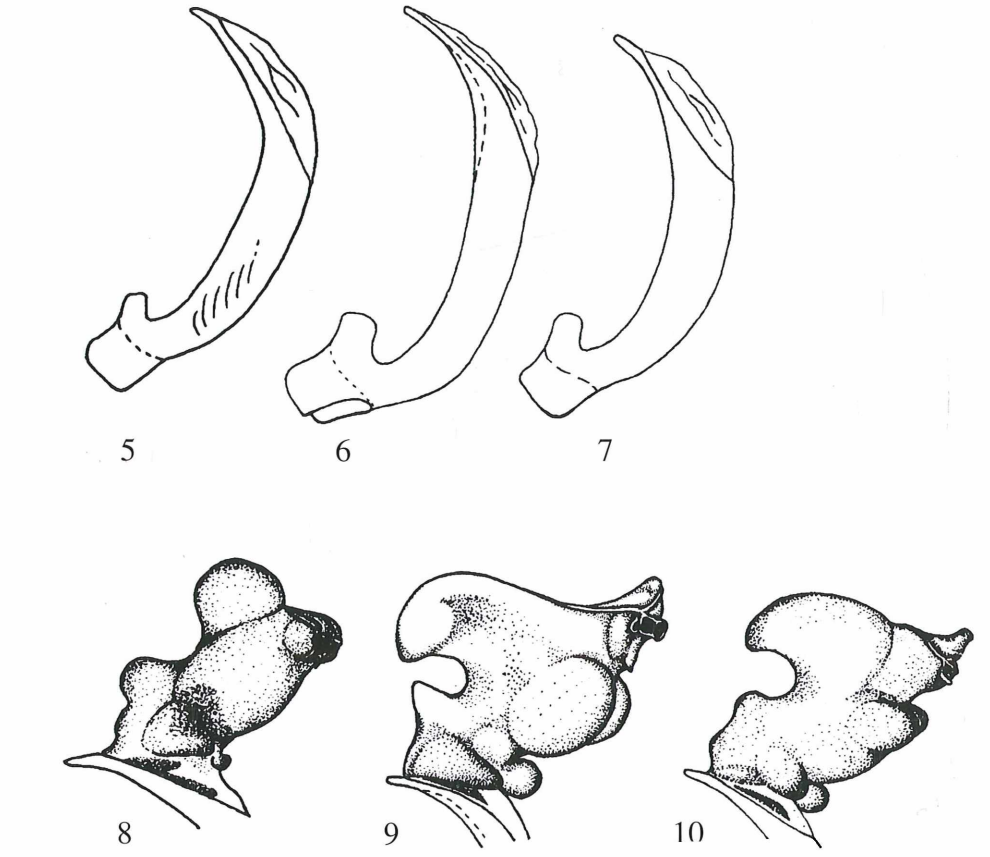
Endophallus (Fig.8): basal ventral lobe slightly convex; ventral apical lobe unilobate, relatively small, convex, slightly bent upwards; dorsal apical lobe small, slightly convex; dorsal lateral lobe small; median lateral lobe reduced; right basal lateral lobe broad, convex; left basal lateral lobe very small; ligulum slightly prominent; aggonoporius consists of two small symmetric plates.

Body bronze, dark bronze, dark copper, copper, copper-bronze, brown or black, sometimes with poor bronze, copper or green lustre; primary elytral foveoles rarely



Figs. 1-4: 1, *Carabus juliae* sp. n. (holotype); 2, *Carabus juliae* sp. n. (paratype); 3, *Carabus chaudoiri czadanicus* Obydov, 1997 (holotype); 4, *Carabus michailovi* Kabak, 1992.

green or bronze; pronotal and elytral margin sometimes copper, bronze, bronze-green, brass, dark blue, copper-red, copper-green, dark green or green; mandibles, tibiae, coxae, claws and four basal antennal joints (apically) reddish brown; ventral body surface black, rarely blackish brown.



Figs 5-10: Male genital structure of *Carabus juliae* sp. n. (5, 8), *Carabus chaudoiri zaikai* Obydov, 1999 (6, 9) and *Carabus michailovi* Kabak, 1992 (7, 10). 5, 6, 7: aedeagus (lateral view); 8, 9, 10: endophallus in complete extension (lateral view).

Remark: Probably will seem that in fig.8 endophallus is not shown in complete extension. However, form of endophallus is identical in all investigated males and precisely as illustrated in fig.8.

Differential diagnosis: The new species is no doubt related to *Carabus chaudoiri* Gebler, 1847 (Fig.3), but clearly differs from it by more convex pronotum, less rough sculpture of head and pronotum, less convex, integral, equally developed elytral interspaces (at *Carabus chaudoiri* primary elytral interspaces more developed, interrupted into relatively short links; secondary and tertiary about equally developed, interrupted into short and long links), often bright coloration of the body and the male genital struc-

ture: at *Carabus chaudoiri* aedeagus (Fig.6) strongly curved at the base, in distal part nearly straight, apical lamella very narrow, not bent downwards; endophallus (Fig.9) with strongly convex basal ventral and ventral apical lobes, dorsal lateral lobe bigger, strongly convex, median lateral lobe not reduced, left basal lateral lobe much bigger and more convex. From *Carabus michailovi* Kabak, 1992 (Fig.4) the new species differs by pronotal and elytral sculpture and the male genital structure (Figs 7, 10).

Type material: Holotype male, labeled: "Russia, Tuva Republic, Mungun-Taiga, Khindiktig-Khol Lake, 2400 m, 22.-29.VI.2000, M. Beladič leg."; 26 paratypes: 14 males, 12 females, same date and same locality.

The holotype is preserved in the collection of the State Museum of Biology (Moscow); paratypes in the collection of the State Museum of Biology (Moscow) and in the collection of Milan Beladič (Bratislava).

Distribution: Up to now known only from the type locality.

Dedication

It is a very great pleasure to name this new species in honour of Miss Yulia Kalinkina, who assisted in my work.

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