

**A NEW SUBSPECIES OF
CARABUS (TOMOCARABUS) OPACULUS PUTZEYS, 1875
(COLEOPTERA, CARABIDAE) FROM ITURUP
ISLAND (SOUTH KURIL ISLANDS)**

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ABSTRACT: A new subspecies of *Carabus (Tomocarabus) opaculus*: *Carabus (Tomocarabus) opaculus sladkovi* ssp. n. is described from Iturup Island (South Kuril Islands). Diagnostic data are given. *Carabus (Trachycarabus) sibiricus fossulatus* Dejean, 1826 is restored and downgraded to subspecific status.

KEY WORDS: Coleoptera, Carabidae, *Carabus (Tomocarabus) opaculus sladkovi* ssp. n., *Carabus (Trachycarabus) sibiricus fossulatus* Dejean, 1826, ssp. rest., stat. n., Iturup Island, South Kuril Islands, South European Russia, north Ukraine.

DESCRIPTION

***Carabus (Tomocarabus) opaculus sladkovi* ssp. n.**

(Figs 1, 2)

Holotype: male with label: "South Kuril Islands: Iturup Island, Barinskiy Volcano, 16.VII.1976, A. Sladkov leg."

Paratypes: 2 males, 1 female, same data and same locality.

The holotype and the paratypes are preserved in the collection of the State Museum of Biology (Moscow, Russia).

Body length in males is 16.4-17.5 mm (including mandibles), width 6.2-6.4 mm; body length in female is 20.0 mm, width 7.7 mm.

Head not thickened, ratio width of pronotum/width of head 1.79; eyes strongly convex; mandibles short, slightly incurved; terebral tooth of the right and left mandibles uni-dentate, moderately prominent; retinaculum of the right and left mandibles scarcely prominent; surface of mandibles smooth. Frontal furrows long and shallow, inside with sparse coarse wrinkles. Frons, vertex and neck coarsely wrinkled with sparse punctures. Labrum not wider than clypeus, slightly notched, without lateral setae. Antennae protruding beyond the base of pronotum by 4-5 apical segments; palpi moderately dilated; penultimate segment of the maxillary palpi equal to the last segment; penultimate segment of the labial palpi

with 2 setae. Mentum tooth narrow, shorter than lateral lobes; submentum with 2 setiferous pores.

Prothorax transverse, slightly cordiform, broadest at about middle; ratio width/length 1.26. Pronotum with coarse punctures and wrinkles, its punctuation more rough and dense on disk. Median longitudinal line distinct; basal foveae oval, not deep, inside with sparse wrinkles. Sides of pronotum narrowly margined; lobes of hind angles short, evenly rounded, slightly bent downwards. Lateral margin with 2 setiferous pores: one pore at about middle and one pore near hind angle.

Elytrae oval, moderately convex, widest at about middle; shoulders strongly prominent; sides of elytrae narrowly margined. Ratio length/width 1.60; ratio width of elytrae/width of pronotum 1.52. Elytral sculpture pentaploid, heterodynamous; primary elytral interspaces relatively convex, interrupted into relatively long links. Primary foveoles indistinct; striae coarsely punctured.

Metepisternum smooth, slightly longer than its width. Abdominal sternites smooth; sternal sulci absent.

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

Shape of aedeagus and endophallic structure in general is characteristic for species.

Coloration black with strong lustre, male antennae reddish-brown.

Discussion

The new subspecies differs from *Carabus opaculus opaculus* Putzeys, 1875 by following features: head slightly broader; frons, vertex and neck with more rough sculpture; pronotum less cordiform, broader and more convex, sculpture of pronotum more rough; lobes of hind angles shorter and broader; elytrae narrower and more convex; primary elytral interspaces more developed, interrupted into longer links. Body with strong lustre (in *Carabus opaculus opaculus* body dim, very rare with weak lustre); male antennae of the new subspecies are reddish-brown.

Distribution: Up to now only one population from Iturup Island (South Kuril Islands) is known.

Habitat: The beetles were collected on the grasses slopes of Barinskiy Volcano.

Dedication: It is a great pleasure to name this new subspecies in honour of Prof. Dr. Alexey M. Sladkov, who collected the type specimens.

Carabus (Trachycarabus) sibiricus fossulatus Dejean, 1826

ssp. rest., stat. n.

(Fig. 3)

Carabus fossulatus Dejean, 1826: 489 ("Sibérie"); 1830: 7; Tab. 61. Fig. 3.

Carabus bosphoranus var. *fossulatus*: Reitter, 1896: 179 (part.).

Carabus (in sp., sectio *Trachycarabus*) *haeres*: Jakobson, 1905: 248 (part.).

Carabus (in sp., sectio *Trachycarabus*) *haeres* var. *fossulatus*: Jakobson, 1905: 248 (part.).

Carabus (sectio *Trachycarabus*) *haeres*: Csiki, 1927: 273 (part.).

Carabus (sectio *Trachycarabus*) *haeres* ab. *fossulatus*: Csiki, 1927: 273 (part.).

Carabus (sectio *Trachycarabus*) *sibiricus haeres*: Breuning, 1932: 482 (part.).

Carabus (Morphocarabus) sibiricus haeres: Deuve, 1994: 110 (part.); 2004 : 154 (part.).

Carabus (Trachycarabus) haeres: Kryzhanovskij et al., 1995: 40 (part.); Kleinfeld et Schütze, 1999: 12 (part.).

Carabus (Trachycarabus) sibiricus haeres: Březina, 1994: 22 (part.); 1999: 22 (part.); Obydov, 2002 : 353 (part.).

Type locality: The species has been described from "Sibérie", without more precise indication of locality. *Carabus sibiricus fossulatus* surely absent in Siberia. So, most probably, the original indication of type locality "Sibérie" is wrong. Holotype of *Carabus fossulatus* is preserved in the Muséum national d'Histoire naturelle (Paris). According to my materials the specimens from south European Russia (Kursk Region) are mostly close to the holotype, so I consider this area as the type locality of taxon.

Diagnosis: Body length 21.5-26.0 mm. Sculpture of frons, vertex and neck rough with dense coarse punctures and coarse wrinkles; palpi slightly dilated; pronotum convex with coarse sculpture; elytrae convex, oval with very big and deep primary elytral foveoles; sternal sulci deep. Coloration black with weak luster.

Discussion

Carabus sibiricus fossulatus Dejean, 1826 usually is considered as synonym of *Carabus sibiricus haeres* Fischer von Waldheim, 1824 by many authors. *Carabus sibiricus haeres* (Fig. 4) has been described from European Russia, Ryazan. This species is distributed in European Russia: Ryazan, Tula and Moscow Regions. The species has been found in the Moscow Region recently in 2002 and specified for Serebryano-Prudsky area, in the vicinities of Lishnyagi Village (Nikitsky, 2003).

Carabus sibiricus haeres strongly differs from *Carabus sibiricus fossulatus* by much more rough sculpture of the head and pronotum and totally different elytral sculpture. Elytral sculpture of *Carabus sibiricus fossulatus* very rough with very big and deep primary elytral foveoles, while in *Carabus sibiricus haeres* elytral sculpture relatively smooth with small, often indistinct primary elytral foveoles.

Besides that the area of *Carabus sibiricus fossulatus* is situated much more to the south: approximately forming a triangle Kursk-Belgorod-Kharkov.

Distribution: South European Russia (Kursk env., Belgorod env.) and north Ukraine (Kharkov env.).

Habitat: The subspecies inhabits mixed kolki forests.

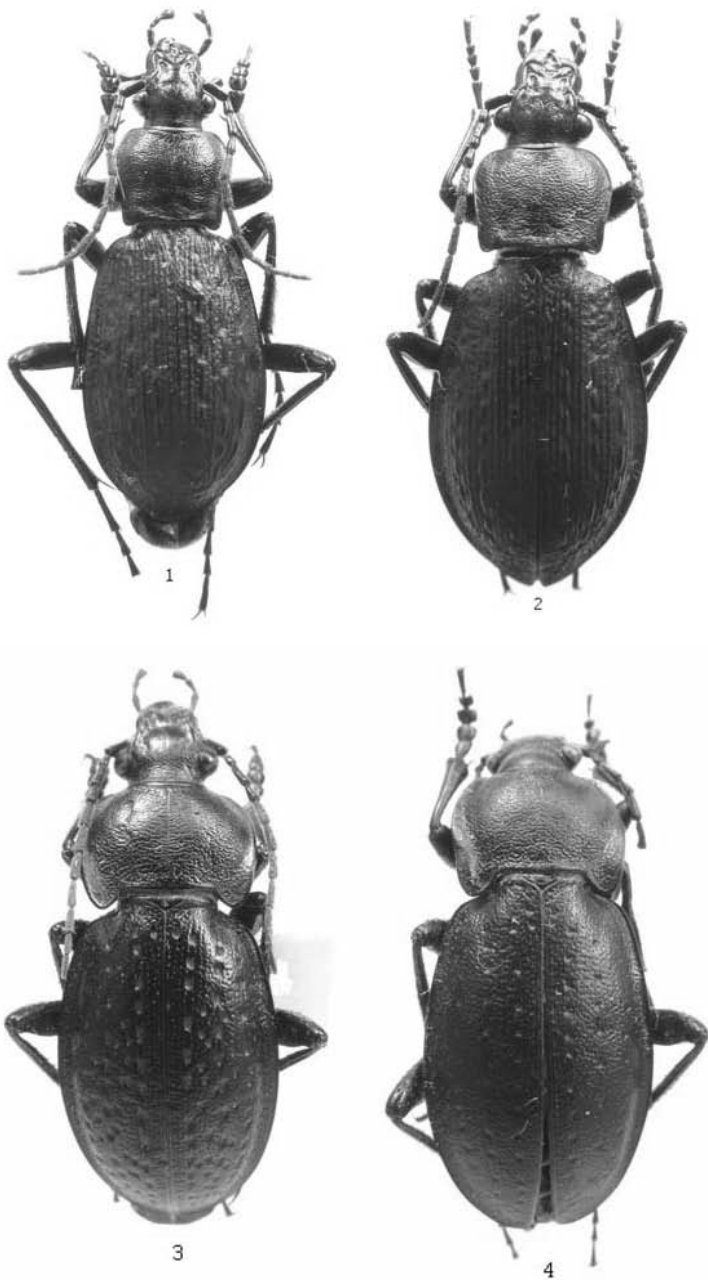
Remark: *C. (Trachycarabus) bosporanus* Fischer von Waldheim 1824, distributing in mountain steppes of Crimea and Caucasus, *C. (Trachycarabus) errans* Fischer von Waldheim 1824 from steppes of the southern Ukraine and foothills of Caucasus and *C. (Trachycarabus) rybinskii* Reitter, 1896 from western Ukraine, which are considered by some authors as subspecies of *C. (Trachycarabus) sibiricus* are rather peculiar morphologically and are considered as a separate species.

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Figures 1. *Carabus opaculus sladkovi* ssp. n. (Holotype). 2. *Carabus opaculus sladkovi* ssp. n. (Paratype). 3. *Carabus sibiricus fossulatus* (Kursk Region). 4. *Carabus sibiricus haeres* (Moscow Region).