

A NEW SUBSPECIES OF *CARABUS (CARABULUS) OBOVATUS*  
FISCHER VON WALDHEIM, 1828  
FROM KUZNETSK ALATAU  
(Coleoptera, Carabidae)

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**Résumé.** Dans cet article une nouvelle sous-espèce de *Carabus (Carabulus) obovatus*: *Carabus (Carabulus) obovatus taizhensis* ssp. n. de Kuznetzk Alatau. Ses caractères distinctifs sont énoncés.

**Abstract.** A new subspecies of *Carabus (Carabulus) obovatus*: *Carabus (Carabulus) obovatus taizhensis* ssp. n. is described from Kuznetzk Alatau. Diagnostic data are given.

**Key words:** Coleoptera, Carabidae, *Carabus (Carabulus) obovatus*, new subspecies, Siberia, Kuznetzk Alatau.

## Introduction

*Carabus (Carabulus) obovatus* has been described without indication of locality. According to my material the specimens from Novokuznetsk (Kuznetsk) environs are mostly close to lectotype, so Novokuznetsk is the most probable the type locality of the taxon. Kuznetsk (= Novokuznetsk) was also accepted as type locality of *C. obovatus* by V. Motschulsky (1844) and F. Gebler (1847).

*Carabus (Carabulus) obovatus obovatus* Fischer von Waldheim, 1828 is distributed in eastern part of Novosibirsk District, Novokuznetsk and Kemerovo Districts. *Carabus (Carabulus) obovatus pseudoleachi* Obydov, 1999 is distributed in Central Altai (up to now only one population from northern bank of Teletzkoe Lake is known). The species occurs in plains and foothills mountains forests of various types and in mixed and larch mountain forests.

In 2002 in central part of Kuznetzk Alatau near Khakassia border, at the altitude 1250-1650 m. were collected nine specimens (6 males and 3 females) of *Carabus (Carabulus) obovatus*. The collected specimens is rather peculiar morphologically and is distributed very far from the area of *Carabus (Carabulus) obovatus obovatus*, probably not linked by intermediate populations with nominotypical subspecies and are represented by separate subspecies.

The descriptions of *Carabus (Carabulus) obovatus taizhensis* ssp. n. is given below.

## Description

*Carabus (Carabulus) obovatus taizhensis* ssp. n. (Figs 1,2).

**Description:** Body length in males is 17.5 - 18.2 mm (including mandibles), width 6.2 - 6.5 mm; body length in female is 18.0 - 18.5 mm, width 6.8 - 7.0 mm.

Head thickened, ratio width of pronotum/width of head 1.67; eyes strongly convex; mandibles moderately elongate, slightly incurved; terebral tooth of the right mandible unidentate, strongly prominent; retinaculum of the right and left mandibles slightly prominent; surface of mandibles smooth. Frontal furrows shallow, inside smooth. Frons nearly smooth, vertex and neck coarsely punctured. Labrum slightly wider than clypeus, strongly notched, without lateral setae. Antennae long, protruding beyond the base of pronotum by 5 apical segments; palpi moderately dilated; penultimate

segment of the maxillary palpi equal to the last segment; penultimate segment of the labial palpi with 5 setae. Mentum tooth relatively broad, triangular, longer than lateral lobes; submentum without setiferous pores.

Prothorax transverse, slightly cordiform, broadest at about middle; ratio width/length 1.61. Pronotum with coarse punctures and wrinkles, its punctuation more rough and dense than in *C. obovatus obovatus* and *C. obovatus pseudoleachi*. Median longitudinal line distinct; basal foveae oval, deep, inside nearly smooth. Sides of pronotum broadly margined, its margin broader and bent upwards posteriorly; lobes of hind angles triangular, long, slightly bent downwards. Lateral margin with 2-3 setiferous pores: one pore at about middle and one or two pores near hind angle.

Elytrae oval, strongly convex, widest at about middle; shoulders slightly prominent; sides of elytrae broadly margined. Ratio length/width 1.69; ratio width of elytrae/width of pronotum 1.44. Elytral sculpture very rough, triploid, homodynamous; all elytral interspaces strongly convex, about equally developed, interrupted into short and rather long links. Primary foveoles indistinct; striae coarsely punctured.

Metepisterna 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.

Aedeagus (Fig. 3) evenly curved, apical lamella more dilated than in *C. obovatus obovatus*, but less dilated than in *C. obovatus pseudoleachi*; endophallus (Fig. 4): median lateral lobe less prominent than in *C. obovatus obovatus*, ostium lobe reduced, right basal lateral lobe moderately convex.

Head black with bronze lustre; pronotum and elytrae dark bronze or bronze, margin of pronotum and elytrae bright, green. Mandibles, palpi, antennae, legs and ventral body surface black, tibiae, sometimes black brown, four basal antennae segments reddish brown.

## Discussion

The new subspecies differs from nominotypical subspecies by following features: antennae longer, protruding beyond the base of pronotum by 5 apical segments (at *C. obovatus obovatus* by 4 apical segments); punctuation of pronotum more rough and dense, lobes of hind angles longer and narrower; elytrae more convex; elytral sculpture much more rough; apical lamella of aedeagus dilated (at nominotypical subspecies apical lamella of aedeagus not dilated, evenly rounded). From *C. obovatus pseudoleachi* the new subspecies differs by more rough and dense punctuation of pronotum; much more rough, homodynamous elytral sculpture (at *C. obovatus pseudoleachi* primary elytral interspaces a little more developed, interrupted into rather long links; secondary and tertiary interspaces about equally developed, interrupted into short links); apical lamella of aedeagus less dilated; body longer (17.5 - 18.5 mm, at *C. obovatus pseudoleachi* body length is 14.8 - 16.8 mm).

**Distribution:** Central part of Kuznetzk Alatau Mt Ridge, at the altitude up 1250 to 1650 m. Up to now only one population is known.

**Habitat:** The beetles were collected in the mountain tundra, mountain forest tundra and mixed mountain forest. Probably it is very rare subspecies.

**Material examined. Holotype:** male with label: "Russia, Kuznetskiy Alatau, Taizhe-Su River, 1250-1650 m, 53°55'N 89°10'E, near Khakassia border, 25.VI-30.VII.2002, V. Siniaev et V. Murzin leg."; Papatypes: 5 males, 3 females, same data and same locality.

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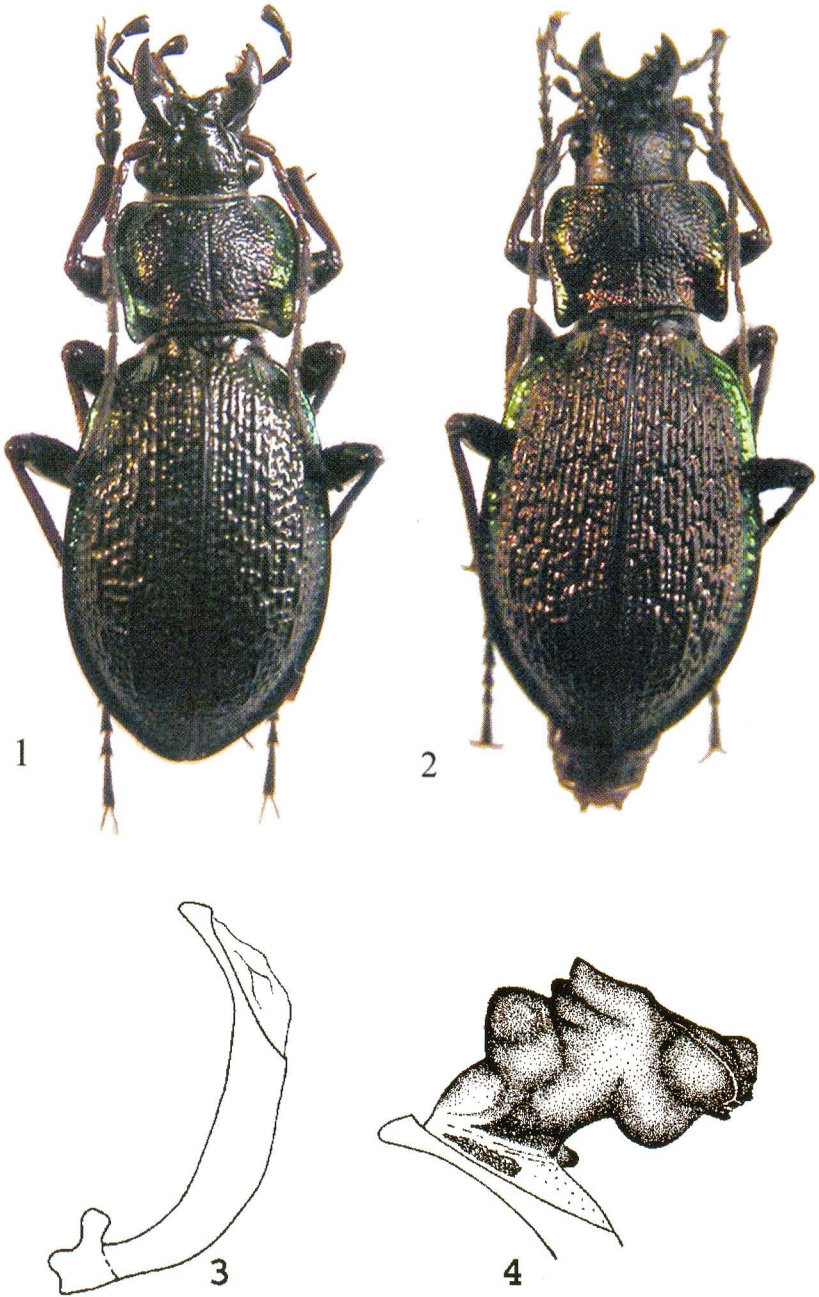


Fig.1. *Carabus obovatus taizhensis* ssp. n. (Holotype).

Fig.2. *Carabus obovatus taizhensis* ssp. n. (Paratype).

Figs 3-4. Male genital structure: 3. aedeagus (lateral view); 4. endophallus in complete extension (lateral view).