

THREE NEW TAXA OF THE GENUS *CARABUS* (COLEOPTERA, CARABIDAE) FROM SIBERIA

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ABSTRACT: Three new taxa of the genus *Carabus*: *Carabus (Carabulus) leachi semiensis* ssp. n.; *Carabus (Diocarabus) slovtzovi sainakensis* ssp. n. and *Carabus (Aulonocarabus) truncaticollis tungusensis* ssp. n. are described from Siberia. Diagnostic data are given.

KEY WORDS: Coleoptera, Carabidae, *Carabus*, new subspecies, Siberia.

DESCRIPTION

***Carabus (Carabulus) leachi semiensis* ssp. n.** (Fig.1).

Holotype: male with label: "E. Kazakhstan, Semei (Semipalatinsk) env., 12-26.VII.1992, V. Sinyaev leg."

Paratypes: 3 males, 2 females, same data and same locality.

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

Description. Body length in males is 19.5-20.0 mm (including mandibles), width 7.5-7.6 mm; body length in females is 20.0-20.6 mm, width 7.7-7.9 mm.

Head slightly thickened, ratio width of pronotum/width of head 1.80; eyes slightly convex; mandibles relatively long, narrow, slightly curved; terebral tooth of the right mandible one-dentate strongly prominent; terebral tooth of left mandible small, slightly prominent; retinaculum of the left mandible indistinct, retinaculum of the right mandible triangular strongly prominent; surface of mandibles smooth. Frontal furrows very shallow, inside smooth. Frons smooth; vertex and neck with sparse coarse punctures. Labrum wider than clypeus, strongly notched, with 2 lateral setae. Antenna protruding beyond the base of pronotum by 4 apical segments; palpi moderately dilated; penultimate segment of the maxillary palpi equal to the last segment; penultimate segment of the labial palpi with 7 setae. Mentum tooth broad triangular, much longer than lateral lobes; submentum without setiferous pores.

Prothorax transverse, slightly convex, broadest at about middle; ratio width/length 1.87. Pronotum with sparse coarse punctures, posteriorly with few coarse wrinkles; pronotal sculpture less rough laterally, pronotum nearly smooth on disk. Median longitudinal line distinct; basal foveae deep, inside coarsely-wrinkled. Sides of pronotum narrowly margined, its margin slightly broader posteriorly; lobes of hind angles long, triangular, strongly bent downwards. Lateral margin with 2 setiferous pores: one pore at about middle and one pore near hind angle.

Elytrae oval, slightly convex, widest at about middle; shoulders prominent; sides of elytrae narrowly margined. Ratio length/width 1.50; ratio width of elytrae/width of pronotum 1.36. Elytral sculpture triploid; all elytral interspaces slightly convex, interrupted into short and long links, sometimes secondary and tertiary elytral interspaces partially integral. Primary foveoles distinct; 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 the species.

Coloration dark bronze, sometimes nearly black; margin of pronotum red, margin of elytra red, reddish-bronze, green or black; sometimes elytra with green lustre; primary elytral foveoles sometimes green. Mandibles, palpi, antenna, legs and ventral body surface black.

Differential diagnosis. The new subspecies differs from *Carabus (Carabus) leachi leachi* Fischer von Waldheim, 1824 by the following features: palpi less dilated; sculpture of head less rough (frons smooth, vertex and neck with sparse coarse punctures; in *Carabus leachi leachi* frons, vertex and neck completely coarsely-punctured with coarse wrinkles); pronotum less convex with less rough sculpture, lobes of hind angles more bent downwards; elytrae less convex, elytral sculpture absolutely different (all elytral interspaces slightly convex, interrupted into short and long links, sometimes secondary and tertiary elytral interspaces partially integral, primary foveoles distinct; in *Carabus leachi leachi* elytrae more convex, all elytral interspaces about equally developed, interrupted into short links, primary foveoles indistinct); sternal sulci absent (in *Carabus leachi leachi* sternal sulci very shallow and short but well marked); coloration darker.

Distribution. Eastern Kazakhstan, Semei City environs (old name is Semipalatinsk). Up to now only one population is known.

Habitat. The beetles were collected in the pine forest.

***Carabus (Diocarabus) slovtzovi sainakensis* ssp. n.** (Fig.2).

Holotype: male with label: "Tuva, Akademika Obrucheva Mt Ridge, 2100 m, N52°00' E95°34', Sainak Pass, 2.VII.1998, D. Obydov leg."

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

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

Description. Body length in males is 12.5-14.0 mm (including mandibles), width 5.3-5.9 mm; body length in female is 13.6 mm, width 5.6 mm.

Head not thickened, ratio width of pronotum/width of head 1.43; eyes strongly convex; mandibles short, slightly curved; terebral tooth of the right and left mandibles bi-dentate strongly prominent; retinaculum of the left mandible small, retinaculum of the right mandible triangular strongly prominent; surface of mandibles smooth. Frontal furrows shallow, inside with few coarse wrinkles. Frons, vertex and neck with coarse punctures, laterally head with coarse wrinkles.

Labrum wider than clypeus, slightly notched, without lateral setae. Antenna long, protruding beyond the base of pronotum by 5 apical segments; palpi moderately dilated; penultimate segment of the maxillary palpi shorter than the last segment; penultimate segment of the labial palpi with 2 setae. Mentum tooth narrow triangular, equal to lateral lobes; submentum with 2 setae.

Prothorax transverse, convex, broadest at about middle; ratio width/length 1.46. Pronotum with dense coarse punctures. Median longitudinal line indistinct; basal foveae shallow, inside coarsely-punctured. Sides of pronotum narrowly margined; lobes of hind angles evenly rounded, slightly bent downwards. Lateral margin with 2-3 setae: one or two setae at about middle and one setae near hind angle.

Elytrae oblong-oval, convex, widest at about middle; shoulders prominent; sides of elytrae narrowly margined. Ratio length/width 1.65; ratio width of elytrae/width of pronotum 1.43. Elytral sculpture triploid, rough; all elytral interspaces about equally developed, interrupted into short links, sometimes conjugated transversely. Primary foveoles deep, distinct, sometimes partially indistinct; do not form accurate lines, as at other subspecies of *Carabus slovtzovi*. Striae coarsely punctured.

Metepisternum with few punctures, not 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 the species.

Coloration black; mandibles, four basal antenna segments (apically), femurs, tibiae and claws reddish-brown; ventral body surface black.

Differential diagnosis. The new subspecies differs from *Carabus (Diocarabus) slovtzovi slovtzovi* Mannerheim, 1849 by the following features: pronotum narrower, with shorter hind angles; antenna longer, protruding beyond the base of pronotum by 5 apical segments (in *Carabus slovtzovi slovtzovi* – by 3-4 apical segments); elytra narrower, elytral sculpture more rough, primary foveoles sometimes partially indistinct; do not form accurate lines, as in *Carabus slovtzovi slovtzovi*; coloration usually black. The new subspecies differs from *Carabus (Diocarabus) slovtzovi rasae* Obydov, 2000 (taxon has been described from south-eastern Tuva, Sangilen Mt Ridge, 2300-2600 m) by smaller body size (in *Carabus slovtzovi rasae* body size is 15-17 mm); narrower pronotum and elytra; more rough elytral sculpture with primary foveoles do not form accurate lines and black coloration.

Distribution. Up to now only one population from Tuva (central part of Akademika Obrucheva Mt Ridge, Sainak Pass, 2100 m) is known.

Habitat. The beetles were collected in the mountain tundra.

***Carabus (Aulonocarabus) truncaticollis tungusensis* ssp. n. (Fig.3).**

Holotype: female with label: "Evenk Autonomous Region, N. Tunguska Riv., Tura Vil. env., 12.VII.1979"

Papatypes: female, same data and same locality.

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

Description. Body length is 16.5-16.7 mm (including mandibles), width 7.2-7.5 mm.

Head not thickened, ratio width of pronotum/width of head 1.66; eyes strongly convex; mandibles short, slightly curved. Frontal furrows relatively deep and long, inside nearly smooth. Frons smooth, vertex and neck with sparse coarse punctures. Labrum slightly wider than clypeus, slightly notched, without lateral setae. Antenna protruding beyond the base of pronotum by 4 apical segments; palpi slightly dilated; penultimate segment of the maxillary palpi longer than the last segment; penultimate segment of the labial palpi with 2 setae. Mentum tooth narrow triangular, shorter than lateral lobes; submentum with 2 setae.

Prothorax transverse, convex, broadest at about middle; ratio width/length 1.35. Pronotum with dense coarse punctures. Median longitudinal line distinct; basal foveae big triangular, inside coarsely-punctured. Sides of pronotum narrowly margined; lobes of hind angles evenly rounded. Lateral margin with 2 setae: one setae at about middle and one setae near hind angle.

Elytrae oval, convex, widest at about middle; shoulders prominent; sides of elytrae narrowly margined. Ratio length/width 1.62; ratio width of elytrae/width of pronotum 1.53. Elytral sculpture pentaploid, strongly similar elytral sculpture of nominotypical subspecies.

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

Legs of normal length.

Coloration bronze or dark bronze; mandibles, palpi, antenna, tibiae and ventral body surface black; femurs and claws brown.

Differential diagnosis. The new subspecies differs from all other subspecies of *Carabus (Aulonocarabus) truncaticollis* Eschscholtz, 1833, described from northern Siberia by one-color bronze pronotum and elytra and elytral sculpture, which a strongly similar elytral sculpture of nominotypical subspecies. Nominotypical subspecies is distributed in Alaska and Islands of Bering Sea.

Distribution. Northern Krasnoyarsk Region. Evenk Autonomous Region, North Tunguska River Valley.

Habitat. The beetles were collected in the tundra area.

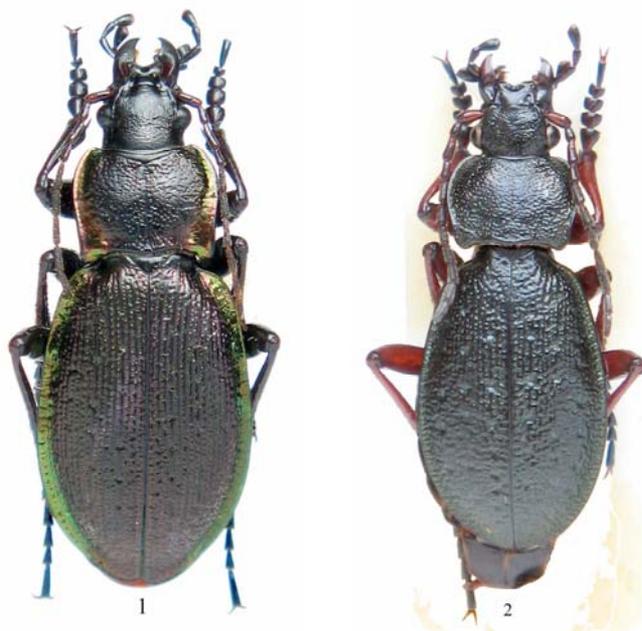
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Figures 1. *Carabus (Carabulus) leachi semiensis* ssp. n. (Holotype). 2. *Carabus (Diocarabus) slotzovi sainakensis* ssp. n. (Holotype). 3. *Carabus (Aulonocarabus) truncaticollis tungusensis* ssp. n. (Holotype).