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**NEW TAXA OF THE GENUS *CARABUS* FROM NORTHERN EUROPEAN RUSSIA (COLEOPTERA: CARABIDAE)**

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**Abstract** - Two new subspecies, *Carabus (Morphocarabus) henningi peczoricus* ssp. n. and *Carabus (Carabulus) ermaki laetensis* ssp. n., are described from the Republic of Komi (northern European Russia). Diagnostic data are given.

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

**Izvleček** NOVA TAKSONA RODU *CARABUS* S SEVERA EVROPSKE RUSIJE (COLEOPTERA: CARABIDAE)

Opisani sta dve novi podvrsti, *Carabus (Morphocarabus) henningi peczoricus* ssp. n. in *Carabus (Carabulus) ermaki laetensis* ssp. n. iz Republike Komi (sever evropske Rusije). Navedeni so razločevalni znaki.

**KLJUČNE BESEDE:** Coleoptera, Carabidae, *Carabus*, nove podvrste, Rusija.

*Carabus (Morphocarabus) henningi peczoricus* ssp. n. (Figs 1,2,5,9)

**Holotype:** male, Republic Komi, Kosiyu River mouth (Pechora River basin), 21.VII.1980 (Zoological Institute of the Russian Academy of Sciences, Sankt-Petersburg).

**2 paratypes:** female, same data and same locality; male, Republic Komi, Usa, Lek-Rogovaia River mouth (Pechora River basin), 24.VII.1980 (Timiryazev's State Museum of Biology, Moscow).

**Description:** Body length in males 21.3-22 mm (including mandibles), width 7,8-8 mm; body length in females 22.2 mm, width 8.2 mm.

Head black, pronotum and elytrae bronze or greenish-bronze, with distinct lustre; margins of pronotum and elytrae green; ventral surface of the body, palpi, mandibles, tarsi and femurs blackish brown; tibiae, claws and four basal antennal joints reddish brown.

Head not thickened, ratio width of pronotum/width of head 2.34; eyes strongly convex; mandibles relatively short and broad, evenly curved, apex sharply pointed; retinaculum of right and left mandibles triangular, slightly prominent; surface of mandibles smooth. Frontal furrows shallow, long, inside with sparse and coarse punctures and wrinkles. Frons, vertex and neck coarsely punctured, laterally with coarse wrinkles. Labrum much wider than clypeus, moderately notched, with two lateral setae. Antennae protruding beyond the base of pronotum by 4 apical joints; palpi slightly dilated; penultimate joint of the maxillary palpi longer than the last joint; penultimate joint of the labial palpi with two setae. Mentum tooth slightly longer than lateral lobes; submentum with two setae and few transverse deep wrinkles.

Prothorax transverse, broadest at about middle; ratio width/length 1.46. Pronotum moderately convex with dense coarse punctuation. Median longitudinal line distinct; basal foveae relatively deep, internally with coarse punctures and wrinkles. Sides of pronotum broadly margined and bent upwards posteriorly; lobes of hind angles short, evenly rounded. Lateral margin with four to five setae: one at about middle, two or three before middle and one near hind angle.

Elytrae oval, widest behind middle; shoulders slightly prominent; sides of elytrae broadly margined. Ratio length/width 1.55; ratio width of elytrae/width of pronotum 1.46. Primary elytral interspaces a little more developed, interrupted into short links; secondary and tertiary about equally developed, partially integral, partially interrupted into long links; sometimes all elytral interspaces conjugated transversely. Primary foveolae distinct, deep; striae coarsely punctured.

Metepisternum and abdominal sternites smooth, metepisternum longer than wide; sternal sulci absent.

Legs relatively long; femora of fore legs slightly dilated, fore male tarsi with four dilated segments bearing hairy pads.

Aedeagus (Fig.5) evenly curved near base, in distal part nearly straight, apical lamella narrow; endophallic structure is characteristic for the species (Fig.9).

**Differential diagnosis:** The new subspecies differs from *C. henningi oviformis* Beheim and Breuning, 1943 (described from "Kantaika" Central Siberia: south-west from Norilsk), which is widely distributed in the north of western and central Siberia, by the following characters: mentum tooth longer than lateral lobes (in *C. h. oviformis* mentum tooth shorter or equal to lateral lobes), elytral sculpture smoother, secondary and tertiary elytral interspaces integral or interrupted into long links (in *C. h. oviformis* all elytral interspaces interrupted into short links); apical lamella of aedeagus longer and narrower (Figs 5,6). From *C. henningi uralicus* Born, 1922, which is distributed in the southern Ural mountains, the new subspecies differs by elytral sculpture (secondary and tertiary elytral interspaces longer, primary elytral foveolae deeper and more distinct). Four basal antennal joints of the new subspecies are reddish brown, but black in *C. h. uralicus*; mentum tooth longer; apical lamella of aedeagus longer and narrower (Figs 5,7). In general, body of the new subspecies is shorter.

*Carabus (Carabulus) ermaki laetensis* ssp. n. (Figs 3,4,8).

**Holotype:** male, Republic Komi, Usa, Lek-Rogovaia River mouth (Pechora River basin), 24.VII.1980 (Zoological Institute of the Russian Academy of Sciences, Sankt-Petersburg).

**3 paratypes:** female, Republic Komi, Kosiyu River mouth (Pechora River basin), 21.VII.1980 (author's collection); female, Republic Komi, Rogovaia, 29.VII.1980 (Timiryazev's State Museum of Biology, Moscow); male, Pechora River mouth, Kuia River, 2.VIII.06, Zhuravsky (Zoological Institute of the Russian Academy of Sciences, Sankt-Petersburg).

**Description:** Body length in males 18.8 - 20.5 mm (including mandibles), width 6.0 - 7.2 mm; body length in females 20.8 - 21.0 mm, width 7.2 - 7.4 mm.

Head black with bronze or green lustre; pronotum green or bronze with green margin, elytrae green, sometimes with blue lustre, primary elytral interspaces black. Mandibles, palpi and antennae reddish brown; legs and ventral surface brown or blackish-brown.

Head slightly thickened, ratio width of pronotum/width of head 1.93; eyes strongly convex; mandibles moderately elongated, slightly incurved; terebral tooth of the right mandible unidentate, prominent; retinaculum of the right and left mandibles slightly prominent; surface of mandibles smooth. Frontal furrows interfluent, internally with coarse wrinkles and punctures.

Frons, vertex and neck coarsely punctured, frons with coarse wrinkles. Labrum slightly wider than clypeus, moderately notched, with two lateral setae. Antennae protruding beyond the base of pronotum by 4 apical joints; palpi moderately dilated; penultimate joint of the labial palpi with 3-4 setae. Mentum tooth broad, longer than lateral lobes; submentum with transverse wrinkles, without setiferous pores.

Prothorax transverse, broadest at about middle; ratio width/length 1.41. Pronotum with coarse wrinkles and punctures. Median longitudinal line indistinct; basal foveae oval, shallow, inside nearly smooth. Sides of pronotum broadly margined, with its mar-

gin broader and bent upwards posteriorly; lobes of hind angles short, slightly bent downwards. Lateral margin with 2 setiferous pores: one at about middle and the other near hind angle.

Elytrae oval or short-oval, strongly convex, widest at about middle; shoulders slightly prominent; sides of elytrae broadly margined. Ratio length/width 1.52; ratio width of elytrae/width of pronotum 1.52. Primary elytral interspaces integral, keel-shaped, secondary finely rugged; tertiary reduced; striae very wide, coarse, transversely rugose.

Metepisternum smooth, longer than wide. Abdominal sternites smooth; sternal sulci absent. Legs of normal length; fore male tarsi with four dilated segments bearing hairy pads.

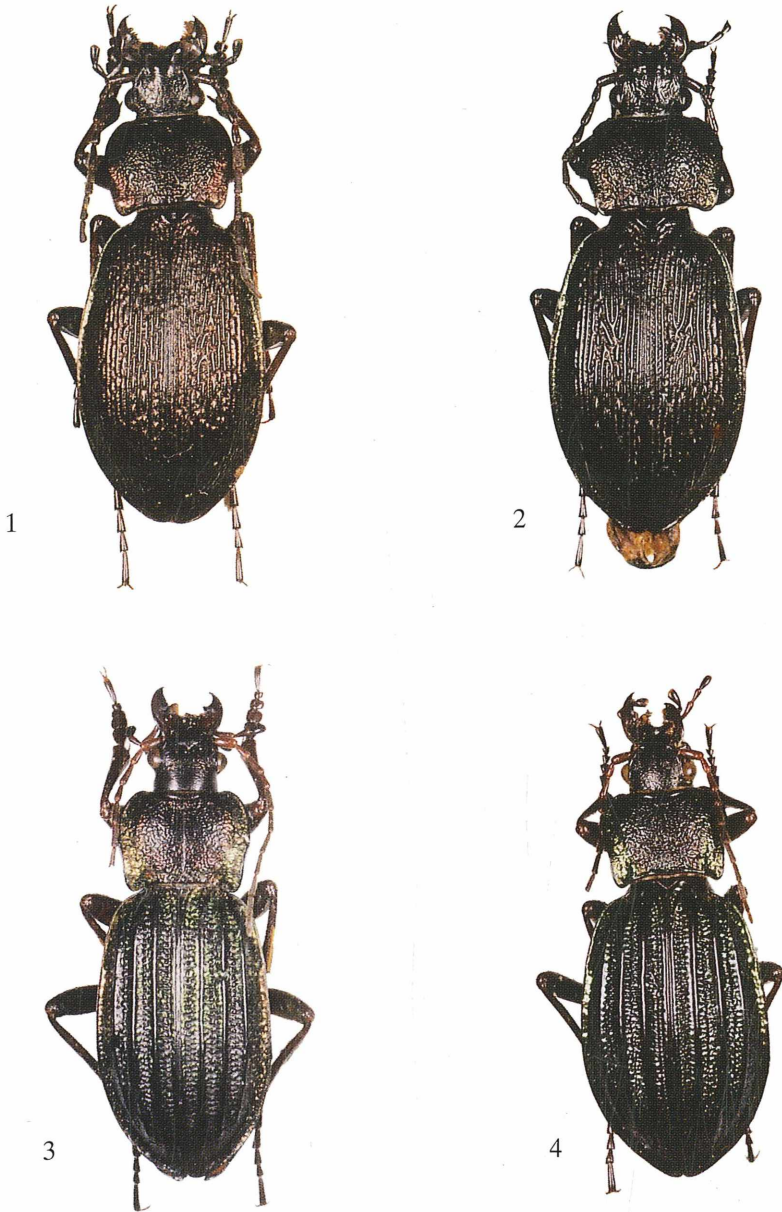
Aedeagus shape (Fig. 8) and endophallic structure is characteristic for the species.

**Remark:** Originally the species had been described from "Altai", without more precise indication of locality, based on two specimens from Gebler's collection. However, *C. ermaki* is absent from the Altai Mts., so the published locality is wrong. The population from the Western Sayan Mts. is nearest to Altai (often West Sayans was referred to as Altai by old authors). Thus, the West Sayan Mts. could be regarded as the type locality of the taxon.

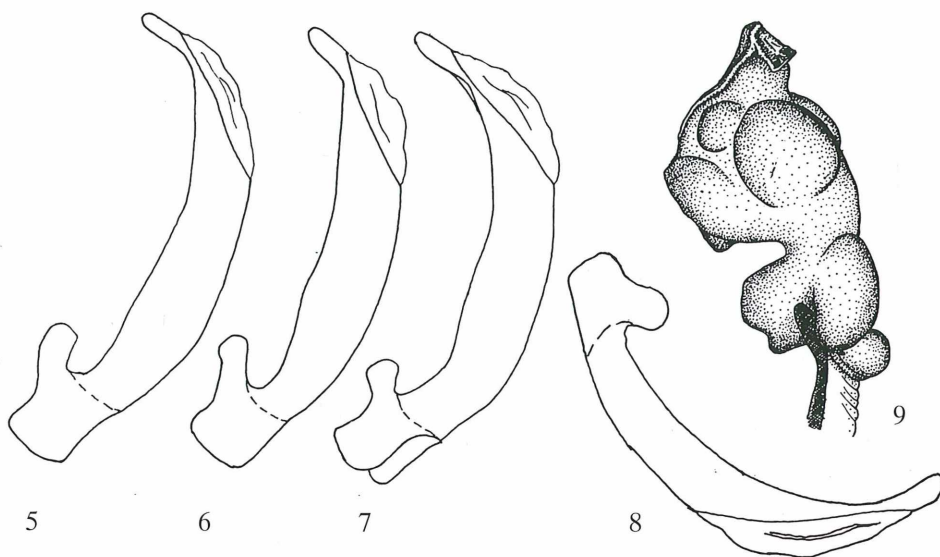
In Siberia, the species is distributed from about the Malyi Yamal Peninsula to the east as far as the mouth of the Lena river and Baikal lake environs: mouth of river Ob, mouth of Yenisei River, tundra areas to the West of the Lena River, Baikal Lake environs (Listvyanka), Western Sayan mountains (Krasnoyarsk env., Divnogorsk env., Oiskoe lake env., Tanzybei env.). In Siberia the species shows little geographic variability.

**Differential diagnosis:** The new subspecies differs from the nominate subspecies by the following features: pronotum broader and more flattened, with shorter hind angles; elytrae broader, elytral striae much wider and coarser; primary elytral interspaces less prominent; fourth segment of the male tarsi less dilated; body longer and more robust; coloration dimmer.

**Remark:** The population from Pechora River basin is the most western population of the species. It is isolated by the Ural mountains from the main area of *C. ermaki*.



**Figs 1-4:** *Carabus* (general view): 1. *C. henningi peczoricus* ssp. n. (HT); 2. *C. henningi peczoricus* ssp. n. (PT); 3. *C. ermaki laetensis* ssp. n. (HT); 4. *C. ermaki laetensis* ssp. n. (PT).



**Figs 5-8:** *Carabus*, aedeagus (lateral view): 5. *C. henningi peczoricus* ssp. n.; 6. *C. henningi oviformis*; 7. *C. henningi uralicus*; 8. *C. ermaki laetensis* ssp. n.

**Fig. 9:** Endophallus in complete extension of *C. henningi peczoricus* ssp. n. (lateral view).

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