

Coleopteres

*New and little know taxa of the genus Carabus
from Siberia and Far East Russia
(Coleoptera, Carabidae)*

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New and little known taxa of the genus *Carabus* from Siberia and Far East Russia (Coleoptera, Carabidae)

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Résumé.

Quatre *Carabus* rares de Sibérie sont examinés. *C. (M.) mongolorum* Csiki, 1927, considéré jadis comme sous-espèce ou synonyme de *C. (M.) chaudiroi* Gebler, 1847, est confirmé comme bonne espèce. *C. (A.) gaschkewitschi* Motschulsky, 1859 et *C. (A.) raddei* Morawitz, 1862 sont considérés comme deux espèces séparées. Trois sous-espèces nouvelles: *C. (M.) chaudiroi czadanicus* ssp. n., *C. (M.) mongolorum marusiki* ssp. n. et *C. (A.) raddei czarensis* ssp. n. sont décrites. Leurs relations et caractères distinctifs sont en discussion. *C. (A.) careniger victorianus* est proposé comme nom. n. pro *C. (A.) c. kusnetzovi* Shilenkov, 1996 (nec *C. kusnetzovi* Semenov, 1903).

Summary

Four rare Siberian *Carabus* species are investigated. *C. (M.) mongolorum* Csiki, 1927 which considered earlier as subspecies or synonym of *C. (M.) chaudiroi* Gebler, 1847 is confirmed as a good species. *C. (A.) gaschkewitschi* Motschulsky, 1859 and *C. (A.) raddei* Morawitz, 1862 are regarded as two separate species. Three new subspecies are described: *C. (M.) chaudiroi czadanicus* ssp. n., *C. (M.) mongolorum marusiki* ssp. n. and *C. (A.) raddei czarensis* ssp. n. The distinguishing characters and relationships are discussed. *C. (A.) careniger victorianus* is proposed as nom. n. pro *C. (A.) c. kusnetzovi* Shilenkov, 1996 (nec *C. kusnetzovi* Semenov, 1903).

Mots-clés: Coleoptera, Carabidae, *Carabus*, taxonomie, Altaï, Touva, Sibérie, Russie orientale.

The present paper is dedicated to specification of taxonomic positions of some little known species of the genus *Carabus* from Siberia. Last years I collected a lot of *Carabus* in this region. The materials which were collected during my expedition together with some other series and the study of the type specimens allow me to

specify the taxonomic status of some forms. As I see the distinct morphological differences make the species status of *C. mongolorum* Csiki, 1927, well grounded, still some features show its relations with *C. chaudiroides* Gebler, 1847. *C. mongolorum* Csiki was often wrongly considered as a synonym of *C. odoratus melleus* Lapouge, 1909 (Shilenkov, 1994; Kryzhanovskij *et al.*, 1995; Shilenkov, 1996). These two taxa are very different morphologically, in some parts of their areas occur sympatrically and their separate status is quite doubtless. Such an erroneous interpretation of these taxa was probably caused by the insufficient amount of the serial materials from the Siberian mountains in old collections. V. G. Shilenkov (1996) wrongly regarded *C. chaudiroides* Gebler as a subspecies of *C. odoratus* Motschulsky, probably because he did not see the lectotype (Paris). In fact this species is very peculiar morphologically and so is a very good species, being more related to *C. mongolorum* by aedeagus shape and endophallus structure. The taxonomic positions of another two Siberian *Carabus*: *C. gaschkewitschi* Motschulsky, 1859, and *C. raddei* Morawitz, 1862, look quite independent. Breuning, 1932, wrongly considered *C. gaschkewitschi* Motschulsky as a synonym of *C. hummeli tristiculus* Kraatz, 1878. Usually *C. raddei* Morawitz was wrongly defined as a synonym of *C. gaschkewitschi* Motschulsky. This species is distributed very far from the area of *C. gaschkewitschi* and rather peculiar morphologically, so in fact *C. raddei* is a separate good species.

Acknowledgments. - I wish to express my hearty gratitude to Dr. Thierry Deuve (Paris) for providing with an opportunity to study the type specimens of *C. chaudiroides* Gebler and *C. mongolorum* Csiki; to Dr. Nikolay B. Nikitsky (Moscow) for the type specimen of *C. gaschkewitschi* Motschulsky; to Dr. Mikhail L. Danilevsky (Moscow), who kindly loaned materials for studies and to Mr. Petr Smrz (Czech Budejovice), who collected many *Carabus* forms during his expeditions to Siberia in 1994, and submitted all his materials for studies. My special thanks to Prof. Dr. O. L. Kryzhanovskij (Saint-Petersburg) for his most valuable consultations.

1. *Carabus (Morphocarabus) chaudiroides chaudiroides* Gebler, 1847 (Figs 1, 12).

chaudiroides Gebler, 1847: 287.

? *mongolorum*: Breuning, 1932: 278.

chaudiroides: Deuve, 1991: 47.

chaudiroides: Deuve, 1994: 106.

chaudiroides: Brezina, 1994: 19.

odoratus chaudiroides: Shilenkov, 1996: 32, 59.

TYPE LOCALITY: The locality mentioned on the label of type specimen is "Siberie, Altai", but in the original description Gebler (1847) wrote "Sehr selten im Kusnezkschen Gebirge; häufiger am Flusse Kan Ostsibiriens". Now Kuznetzky Alatau Mts do not belong to Altai mountain system, and Kan river (Krasnoirsk reg.) is also very far from Altai Mts, so the definition of type locality needs further studies. Now typical *C. chaudiroides* is known by two type specimens only.

TYPE MATERIAL: Two specimens from Gebler's collection; **LECTOTYPE**, male, "Siberie, Altai" (designated by Th. Deuve, 1991); male, (**PARALECTOTYPE**); both in the National Museum of Natural History (Paris).

Description of lectotype. - Length 22,8 mm.

Head and pronotum blackish bronze, elytrae dark bronze; margins of pronotum and elytrae bronze; lower surface of body, mandibles and legs blackish brown.

Head normal; frontal furrows not deep; forehead with sparse and coarse punctures; labrum slightly wider than clypeus, strongly notched; mentum tooth is very short, much shorter than lateral lobes; submentum with two setiferous pores.

Pronotum transverse, 1,50 times wider than long and 2,07 times wider than head, broadest in the middle. Sides of pronotum narrowly margined anteriorly, before hind angles broadly margined and slightly bent upwards; lobes of hind angles evenly rounded; disk of pronotum with sparse punctures and wrinkles.

Elytrae oblong-oval, 1,55 times longer than wide and 1,38 times as wide as pronotum, widest post middle. Primary elytral interspaces a little more developed, interrupted into the links of medium length; secondary and tertiary about equally developed, partially integral, posteriorly partially interrupted into the short and long links. Primary foveae big and deep. Striae coarsely punctured. Sides of elytrae broadly margined.

Metepisterna smooth, longer than its width. Abdominal sternites smooth, lateral sides of sternites finely rugous. Legs are of normal length.

Aedeagus (Fig. 12).

2. *Carabus (Morphocarabus) chaudiroides czadanicus* ssp. n. (Figs 2, 3, 13, 20, 24).

HOLOTYPE: male, W. Tuva, Chadan, 28-30.VI.1994, P. Smrz leg. **PARATYPES:** 3 males, 3 females, same date and same locality, P. Smrz leg. The holotype is preserved in the collection of the Darwin Museum (Moscow). Paratypes in the collection of Mr. Petr Smrz (Czech Budejovice).

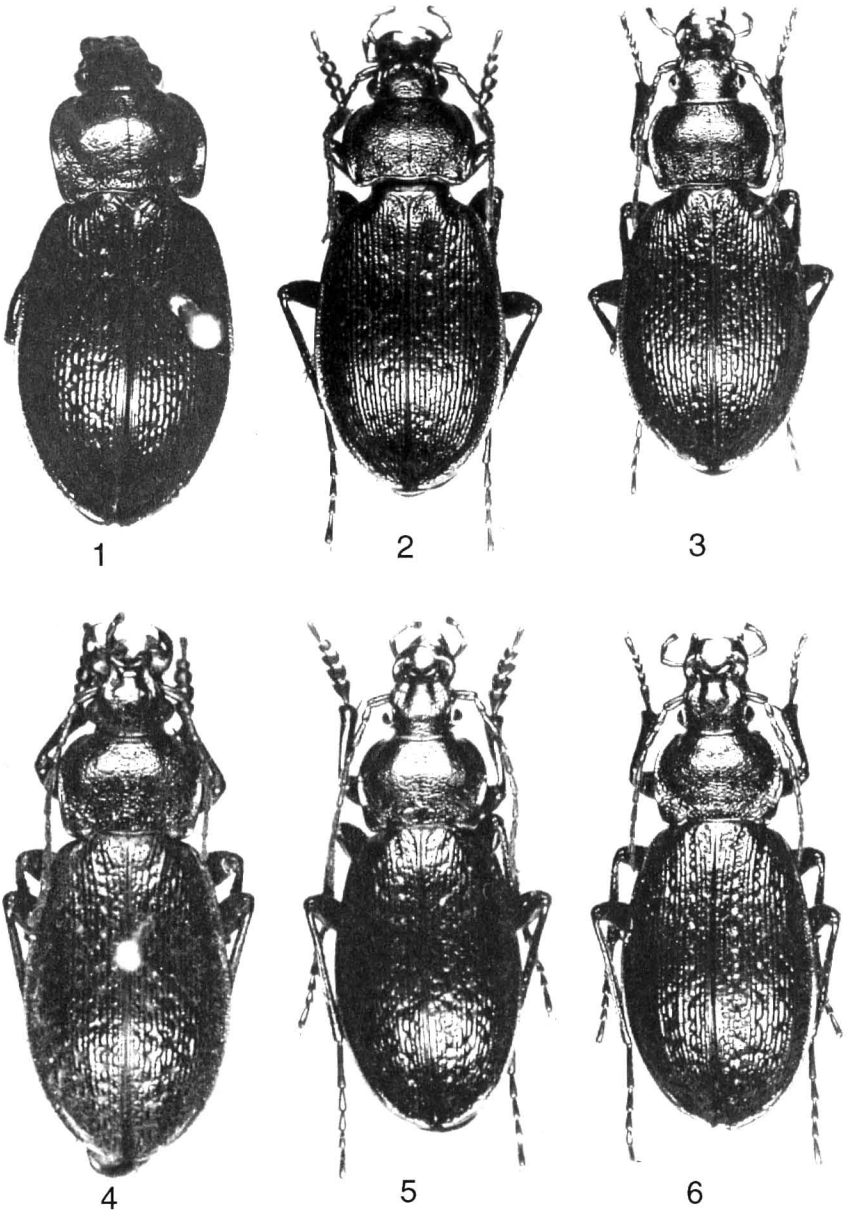
Description. - Length 19,0-21,8 mm in males and 22,5-24,2 mm in females.

Head, pronotum and elytrae black or blackish bronze. Lower surface of body, palps, antennae and legs black; shanks, claws and the first four segments of antennae apically are reddish brown.

Head normal; frontal furrows short, not deep, forehead coarsely wrinkled with sparse coarse punctures; antennae protruding beyond the base of pronotum in males by four apical segments, in females by three apical segments. Labrum slightly wider than clypeus. The last but one segment of the maxillary palpi equal to the last segment; the last but one segment of the labial palpi with two seta. The mentum tooth equal or slightly shorter than lateral lobes. Submentum with two setiferous pores.

Pronotum transverse, 1,47 times as wide as long and 2,22 times wider than head, the broadest in the middle; with two setiferous pores at about the middle and two pores near hind angles. Sides of pronotum broadly margined; lobes of hind angles evenly rounded. Disk of pronotum rugose, with coarse punctures, flattened.

Elytrae oblong-oval, 1,46 times longer than its width and 1,43 times as wide as pronotum, the widest post middle, shoulders moderately prominent. Sculpture of elytrae:



Figs. 1-6: *Carabus* (general view). 1, *C. c. chaudoiri* Gebler, male (Lectotype). - 2, *C. c. czadanicus* ssp. n., male (Holotype). - 3, *C. c. czadanicus* ssp. n., female (Paratype). - 4, *C. m. mongolorum* Csiki, male (Lectotype). - 5, *C. m. marusiki* ssp. n., male (Holotype). - 6, *C. m. marusiki* ssp. n., female (Paratype).

primary elytral interspaces slightly broader, interrupted by rather deep and coarse foveae into the short links; secondary and tertiary about equally developed, integral, rarely partially interrupted into the long and short links. Striae coarsely punctured. Sides of elytrae broadly margined.

Metepisterna and abdominal sternites smooth, metepisterna slightly longer than its width. Legs are of normal length; fore male tarsi with four dilated segments.

Aedeagus (Fig. 13), endophallus (Figs 20, 24).

Discussion. - The new subspecies differs from nominotypical subspecies by: more dark coloration; the mentum tooth much longer; pronotum flattened with more coarse sculpture and more rounded sides; elytrae broader (elytrae 1,46 time longer than wide, while in nominotypical subspecies in 1,55), elytral sculpture more coarse; shanks redish brown; apical lamella of aedeagus more bended downwards (Figs 12, 13).

3. *Carabus (Morphocarabus) mongolorum mongolorum* Csiki, 1927, sp. rest. (Figs 4, 14).

neglectus Lapouge, 1913: 16 (nec Kraatz, 1887).

mongolorum Csiki, 1927: 241

mongolorum: Breuning, 1932: 278.

chaudoiri mongolorum: Deuve, 1991: 47.

chaudoiri mongolorum: Deuve, 1994: 106.

chaudoiri: Brezina, 1994: 134.

odoratus melleus: Shilenkov, 1994: 66.

odoratus melleus: Kryzhanovskij *et al.*, 1995: 39.

odoratus melleus: Shilenkov, 1996: 58.

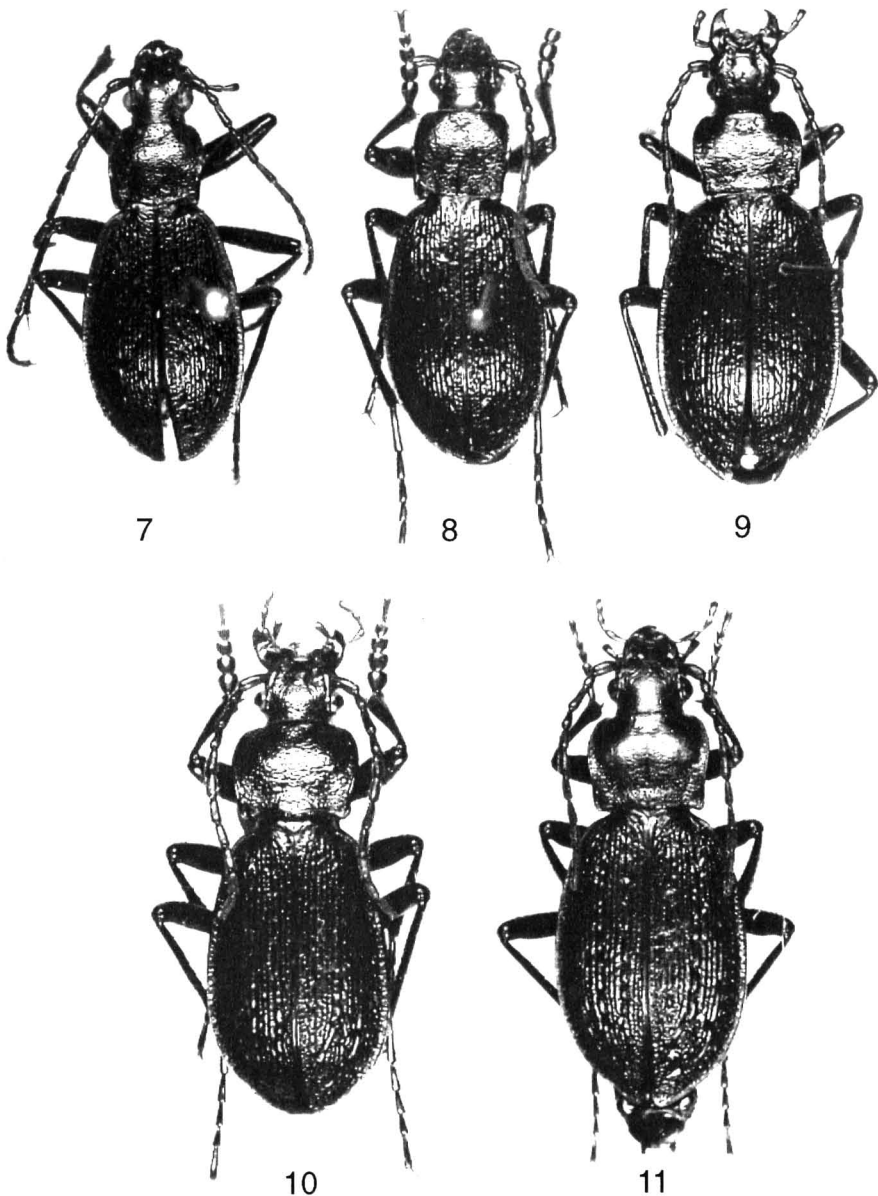
TYPE LOCALITY: Described from Tunkun (present name is Tunkinskie Goltsy Mt Range, between Big Saján Mt Range and Baikal Lake in West Buryatia).

TYPE MATERIAL: male, with 6 labels: "Lectotypus", "Tunkun, Saján", "*Amorphocarabus neglectus* 2 males 2 females", "*Carabus neglectus* mihi Types", "Muséum Paris Coll. G. Vacher de Lapouge", "*C. neglectus* hom. *mongolorum* 1913, p.16" (National Museum of Natural History, Paris).

Remark. - Described by Lapouge (1913) as *C. neglectus* (nec Kraatz, 1887). Csiki (1927) changed the name *C. neglectus* in *C. mongolorum*. The typical *C. mongolorum* seems to be a very rare form, not found by modern collectors. In the collection of the Darwin Museum (Moscow) is preserved one old specimen (male) with label "N. Mongolie", which is identical with the lectotype.

Description of lectotype. - Length 20,0 mm.

Head, pronotum and elytrae blackish bronze; lower surface of body, palps, mandibles, antennae and legs brown.



Figs. 7-11: *Carabus* (general view). - 7, *C. gaschkewitschi* Motschulsky, male (Lectotype). - 8, *C. gaschkewitschi* Motschulsky, male (From Bureinsky Mt Range). - 9, *C. r. raddei* Morawitz, female (Topotype). - 10, *C. r. czarensis* ssp. n., male (Holotype). - 11, *C. r. czarensis* ssp. n., female (Paratype).

Head normal, eyes convex, frontal furrows deep, forehead with coarse punctures; antennae protruding beyond the base of pronotum by four apical segments. Labrum wider than clypeus. The tooth of mentum pointed, slightly shorter than lateral lobes. Submentum with two setiferous pores.

Pronotum transverse, 1,47 times as wide as long and 2,16 times wider than head, the broadest in the middle. Sides of pronotum narrowly margined; lobes of hind angles short. Disk of pronotum rugose with coarse punctures.

Elytrae oblong-oval, 1,55 times longer than its width and 1,42 times as wide as pronotum, the widest post middle. All elytral interspaces about equally developed; primary in upper part slightly more convex. Primary and secondary elytral interspaces interrupted into the short links; tertiary partially integral. Primary foveae big. Striae coarsely punctured.

Metepisterna finely rugose, longer than its width. Abdominal sternites smooth. Legs are of normal length; fore tarsi with four dilated segments.

Aedeagus (Fig. 14).

Discussion. - *C. mongolorum* differs from *C. chaudoiri* by following characters: forehead with more coarse punctures, frontal furrows deeper, pronotum narrower with shorter lobes of hind angles, disk of pronotum with more coarse wrinkles and punctures, sides of pronotum more narrowly margined; all elytral interspaces about equally developed, primary interspaces interrupted into shorter links; apical lamella of aedeagus longer (Figs 12, 14).

4. *Carabus (Morphocarabus) mongolorum marusiki* ssp. n. (Figs. 5, 6, 15, 19, 25).

HOLOTYPE: male, S-E Tuva, Sangilen Mts, valley of the Kargy river, 50°31'N 97°01'E, 1600m, 4.VII.1996, D. Obydov *leg.* 43 PARATYPES: males, females, same locality, 1.VII.1996, Yu. Marusik *leg.*; 1 male, 4 females, same locality, 4.VII.1996, D. Obydov *leg.*; 3 males, 2 females, S-E Tuva, Sangilen Mts, valley of the Kargy river, 50°34'N 97°04'E, 1500m, 2-4.VII.1996, D. Obydov *leg.*; 14 males, 12 females, S-E Tuva, Sangilen Mts, upper part of Kargy river, 50°24'N 96°41'E, 2300m, 28.VI-4.VII.1996, D. Obydov *leg.*; 1 male, S-E Tuva, Sangilen Mts, valley of the Balyktyk-Khem river, 50°17'N 96°39'E, 2100m, 26.VI-4.VII.1996, D. Obydov *leg.*; 2 females, S-E Tuva, near Balyktyk-Khem Pass, 50°17'N 96°23'E, 2300m, 27.VI-5.VII.1996, D. Obydov *leg.*; 2 females, S-E Tuva, near Balyktyk-Khem Pass, 50°15'N 96°19'E, 2600m, 27.VI-5.VII.1996, D. Obydov *leg.* The holotype is preserved in the collection of the Darwin Museum (Moscow), in the Zoological Institute of Russian Academy of Sciences (St Petersburg), in the National Museum of Natural History (Paris), in the Field Museum of Natural History (Chicago) and in the collection of Dr. Mikhail Danilevsky (Moscow).

Description. - Length 18,5-22,0 mm in males and 19,5-24,0 mm in females.

Head and pronotum blackish bronze; elytrae bronze, blackish bronze, green, greenish bronze, rarely black, with metallic lustre. The margins of pronotum and elytrae bronze, green, greenish bronze or blackish bronze. Lower surface of body black or blackish brown. Palps, antennae and legs black; mandibles, shanks, claws and the first four segments of antennae (apically) are red or redish brown; rarely shanks are black.

Head normal, eyes convex, frontal furrows nearly straight and parallel, forehead coarsely wrinkled; antennae moderately long, protruding beyond the base of pronotum in males by four apical segments, in females by three apical segments. Labrum wider than clypeus, strongly notched. The last but one segment of the maxillary palpi equal to the last segment; the last but one segment of the labial palpi with two seta. The tooth of mentum triangular, shorter than lateral lobes. Submentum with four setiferous pores.

Pronotum transverse, 1,54 times wider across than lengthwise and 2,32 times wider than head, the broadest in the middle; with two setiferous pores at about the middle and two pores near hind angles. Sides of pronotum narrowly margined and slightly bent upwards; lobes of hind angles short, evenly rounded. Disk of pronotum rugose, with coarse punctures, flattened.

Elytrae oblong-oval, 1,42 times longer than its width and 1,32 times as wide as pronotum, the widest post middle, shoulders moderately prominent. Primary elytral interspaces a little more developed, interrupted into the short links; secondary and tertiary about equally developed, secondary interspaces interrupted into the long links, tertiary integral. Primary foveae big and deep. Striae coarsely punctured. Sides of elytrae broadly margined.

Metepisterna finely rugose, longer than its width. Abdominal sternites smooth, abdominal furrows are absent. Legs are of normal length; fore male tarsi with four dilated segments.

Aedeagus (Fig. 15), endophallus (Figs 19, 25).

Discussion. - The new subspecies differs from nominotypical subspecies by following features: mentum tooth more obtuse and short, submentum with two pairs of setiferous pores; pronotum with more rounded sides; primary elytral interspaces more developed, tertiary integral; aedeagus more incurved near basis, apical lamella of aedeagus more narrow and shorter (Figs 14, 15). The new subspecies differs from *C. c. chaudoiri* Gebler and *C. c. czadanicus* ssp. n. by the shape of pronotum, elytral sculpture, shape of aedeagus (Figs 12, 13, 15) and endophallus structure (Figs 19, 20, 24, 25).

Name derivation. - It is a pleasure for me to dedicate this species to Dr. Yuriy Marusik (Magadan), who collected the first two specimens.

Biotope. - The species inhabits mountain larch forests, mountain tundra and forest-tundra at the altitudes from 1500 to 2600 m above the sea level. In some parts of the area the new subspecies occurs sympatrically with other *Morphocarabus*: *C. (M.) henningi* Fischer and *C. (M.) odoratus* Motschulsky.

5. *Carabus (Aulonocarabus) gaschkewitschi* Motschulsky, 1859 (Figs 7, 8, 16, 21).

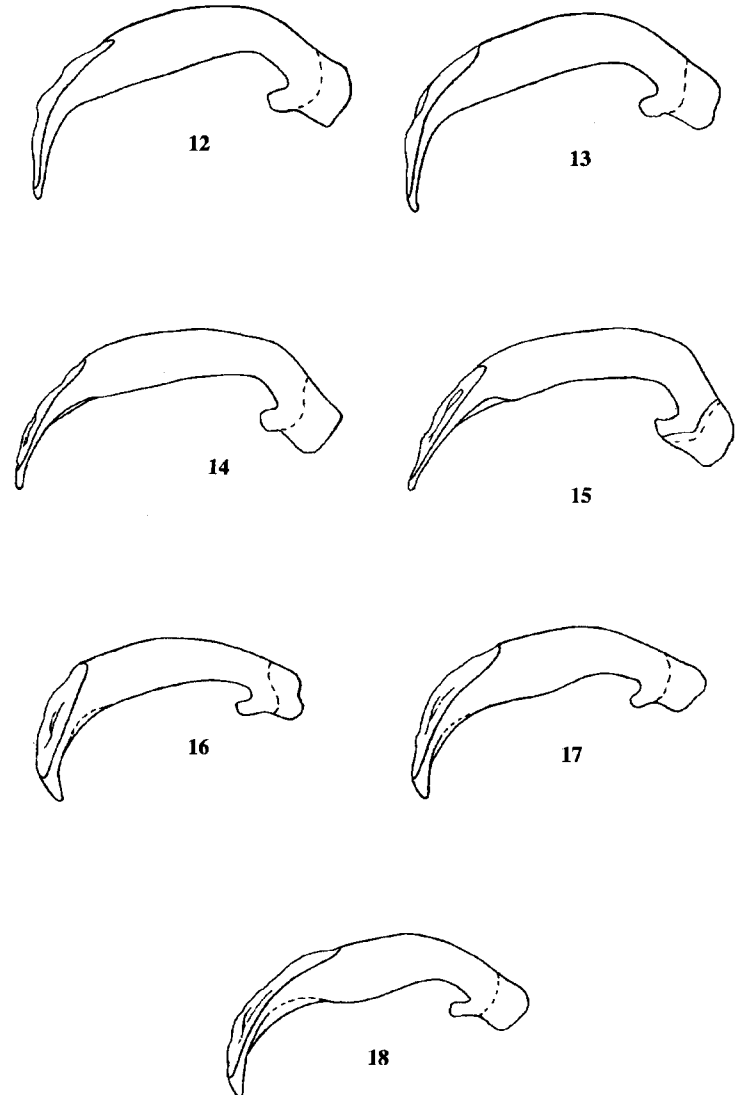
gaschkewitschi Motschulsky, 1859: 489.

gaschkewitschi: Kryzhanovskij, 1968: 178.

hummeli tristriculus: Breuning, 1932: 270, 274.

gaschkewitschi: Deuve, 1991: 49.

gaschkewitschi: Deuve, 1994: 152.



Figs. 12-18: *Carabus*, aedeagus (lateral view). - 12, *C. c. chaudoiri* Gebler (Lectotype). - 13, *C. c. czadanicus* ssp. n. (Holotype). - 14, *C. m. mongolorum* Csiki (Lectotype). - 15, *C. m. marusiki* ssp. n. (Holotype). - 16, *C. gaschkewitschi* Motschulsky (From Bureinsky Mt Range). - 17, *C. r. raddei* Morawitz (From Barguzin Mt Range). - 18, *C. r. czarensis* ssp. n. (Holotype).

gaschkewitschi: Brezina, 1994: 34.
gaschkewitschi: Shilenkov, 1994: 68.
gaschkewitschi: Kryzhanovskij *et al.*, 1995: 43.
gaschkewitschi: Shilenkov, 1996: 31, 39.

TYPE LOCALITY: Described from "fl. Amur", without more precise indication of locality. Most probably the type locality is situated near the central part of Bureinsky Mt Range, where the taxon was found by modern collectors. All new materials from these areas are quite similar with type specimens.

TYPE MATERIAL: LECTOTYPE, male, "fl. Amur." (designated by O. L. Kryzhanovskij, 1968); PARALECTOTYPES, 5 specimens in bad condition (elytrae only), one of these specimens is *C. obovatus* Fisch. (Zoological Museum of Moscow University, Moscow).

Description of lectotype. - Length 16,2 mm.

Head and pronotum black, elytrae blackish bronze, primary foveae with golden lustre; the margins of elytrae green. Lower surface of body, legs, palps, antennae and mandibles are blackish brown.

Head normal, eyes convex; forehead with coarse punctures, frontal furrows not deep, antennae long, protruding beyond the base of pronotum by five apical segments. The tooth of mentum pointed, shorter than lateral lobes. Submentum with two pairs of setiferous pores.

Pronotum weakly transverse, nearly square, 1,11 times wider as long and 1,76 times wider than head, the broadest before the middle; with two pairs of setiferous pores. Sides of pronotum narrowly margined; lobes of hind angles triangular, slightly bent downwards.

Elytrae oblong-oval, flattened, 1,46 times longer than its width and 1,71 times as wide as pronotum, the widest behind the middle. Sculpture of elytrae; primary elytral interspaces a little more developed, interrupted into the short and long links; secondary and tertiary about equally developed, interrupted into the short links and sometimes interflowing transverse; tertiary interspaces partially divided longitudinally. Primary foveae big. Sides of elytrae broadly margined.

Metepisterna and abdominal sternites smooth. Legs long, fore tarsi with 4 dilated segments.

Aedeagus (Fig. 16), endophallus (Fig. 21).

6. *Carabus (Aulonocarabus) raddei raddei* Morawitz, 1862, (Figs 9, 17, 22)

raddei Morawitz, 1862: 195.
raddei: Breuning, 1932: 270, 274.
gaschkewitschi: Kryzhanovskij, 1968: 178.
gaschkewitschi: Deuve, 1991: 49 (sensu Kryzhanovskij, 1968).
gaschkewitschi: Deuve, 1994: 152.
gaschkewitschi: Brezina, 1994: 147.
gaschkewitschi: Shilenkov, 1994: 68.
gaschkewitschi raddei: Kryzhanovskij *et al.*, 1995: 43.
gaschkewitschi raddei: Shilenkov, 1996: 31.

TYPE LOCALITY: "Sohondo" in Chita region. I could not find the type, but I have studied specimen from the type locality, which is fitting well to the original description. My specimens from the South-Western Barguzin Mt Range are conspecific with the topotype and could be attributed to typical *C. raddei* Mor.

MATERIAL: female, "Chita Dist., Sokhondinsky Reserve, 13.8.1982" (TOPOTYPE); 2 males, 2 females, "Barguzinsky Reserve, Sosnovka River, 20.6.1989, T. Ananina leg." (Darwin Museum, Moscow).

Description of topotype. - Length 19,6 mm.

Head and pronotum black, elytrae blackish brown; lower surface of body, legs, palps, antennae and mandibles are blackish brown.

Head normal; forehead with sparse and coarse wrinkles, frontal furrows deep, antennae protruding beyond the base of pronotum by four apical segments. The tooth of mentum pointed, equal to lateral lobes. Submentum with two pairs of setiferous pores.

Pronotum transverse, 1,30 times wider as long and 1,77 times wider than head, the broadest before the middle; with two pairs of setiferous pores. Sides of pronotum narrowly margined; lobes of hind angles short, slightly bent downwards.

Elytrae oblong-oval, flattened, 1,54 times longer than its width and 1,73 times as wide as pronotum, the widest behind the middle. Sculpture of elytrae; primary elytral interspaces a little more developed, interrupted into the links of medium length; secondary and tertiary about equally developed, partially interrupted into the long links, partially integral and sometimes interflowing transverse. Primary foveae big, not deep. Sides of elytrae broadly margined.

Metepisterna and abdominal sternites smooth; legs long.

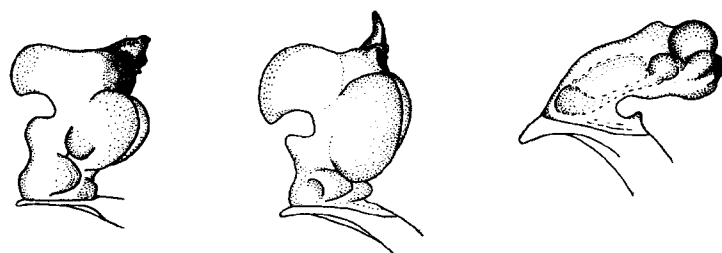
Discussion. - *C. raddei* differs from *C. gaschkewitschi* by following characters: coloration darker; body longer, pronotum and elytrae broader; forehead more smooth, frontal furrows deeper; mentum tooth equal to lateral lobes, while at *C. gaschkewitschi* mentum tooth is shorter than lateral lobes. Besides this two species differs by shape of aedeagus (Figs 16, 17) and endophallus structure (Figs 21, 22).

7. *Carabus (Aulonocarabus) raddei czarensis* ssp. n. (Figs 10, 11, 18, 23).

Holotype: male, Siberia, Chita reg., Kodarsky Mt Range, Chara riv., 16-25.VII.1996, A. Brinev leg. PARATYPES: 3 males, 6 females, same date and same locality, A. Brinev leg. The holotype is preserved in the collection of the Darwin Museum (Moscow). Paratypes in the collection of Dr. Mikhail Danilevsky (Moscow) and in the collection of Mr. Alexei Klimenko (Tver).

Description. - Length 16,2-17,5 mm in males and 18,0-19,5 mm in females.

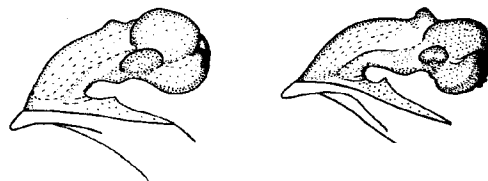
Head, pronotum and elytrae black, blackish bronze or greenish black. The margins of elytrae green, bluish green or black. Lower surface of body brown or blackish brown. Palps, antennae and legs black; mandibles, claws and the first four segments of antennae (in upper part) are brown.



19

20

21



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23



24

25

Figs. 19-23: *Carabus*, endophallus in complete extension. 19, *C. m. marusiki* ssp. n. - 20, *C. c. czadanicus* ssp. n. - 21, *C. gaschkewitschi* Motschulsky, - 22, *C. r. raddei* Morawitz. - 23, *C. r. czarensis* ssp. n.

Figs. 24-25: *Carabus*, aggonoporus. - 24, *C. c. czadanicus* ssp. n. - 25, *C. m. marusiki* ssp. n.

Head normal, eyes convex, forehead rugose, with coarse punctures; antennae moderately long, protruding beyond the base of pronotum in males by five apical segments, in females by four apical segments. Labrum equal or slightly wider than clypeus. The last but one segment of the maxillary palpi equal to the last segment; the last but one segment of the labial palpi with two seta. The tooth of mentum pointed, equal or shorter than lateral lobes. Submentum with two setiferous pores.

Pronotum 1,41 times wider as long and 2,10 times wider than head, the broadest in the middle; with two setiferous pores at about the middle and two pores near hind angles. Sides of pronotum narrowly margined; lobes of hind angles short, evenly rounded. Disk of pronotum flattened, rugose, with sparse and coarse punctures.

Elytrae oblong-oval, flattened, 1,50 times longer than its width and 1,53 times as wide as pronotum, the widest behind the middle, shoulders slightly prominent. Sculpture of elytrae; primary elytral interspaces a little more developed, interrupted into the short links; secondary and tertiary about equally developed, partially interrupted into the short and long links and sometimes interflowing transverse. Primary foveae deep; striae coarsely punctured. Sides of elytrae broadly margined.

Metepisterna smooth, slightly longer than its width. Abdominal sternites smooth, lateral sides of sternites finely rugous. Legs long, fore male tarsi with four dilated segments. Aedeagus (Fig. 18), endophallus (Fig. 23).

Discussion. - The new subspecies differs from nominotypical subspecies by following features: mentum tooth shorter, submentum with one pair of setiferous pores; forehead and pronotum more coarse; pronotum broader; elytral sculpture more coarse. The new subspecies differs from *C. gaschkewitschi* by the shape of aedeagus (Figs 16,18) and endophallus structure (Figs 21, 23).

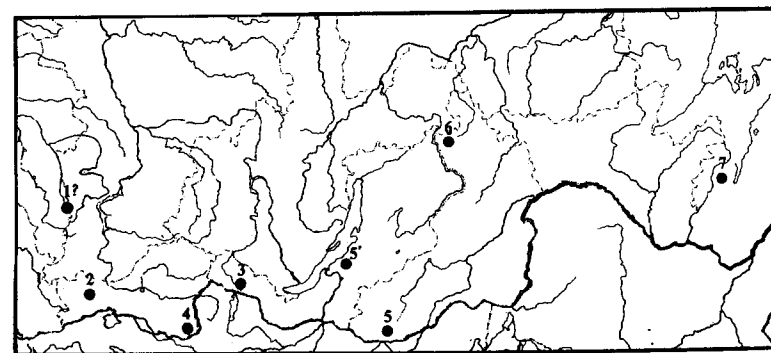


Fig. 26: The map of Siberia and Far East Russia. Distribution of the following taxa. - 1, *C. c. chaudoiri* (Kuznetsky Mt Range). - 2, *C. c. czadanicus* ssp.n. (W Tuva, Chadan). - 3, *C. m. mongolorum* (Tunkinskie Goltsy Mt Range). - 4, *C. m. marusiki* ssp. n. (S-E Tuva, Sangilen Mt Range). - 5, *C. r. raddei* (Sokhondinsky Res.). - 5', *C. r. raddei* Morawitz (Barguzin Mt Range). - 6, *C. r. czarensis* ssp. n. (Kodarsky Mt Range). - 7, *C. gaschkewitschi* (Bureinsky Mt Range).

Remark. - The last publication by Victor G. Shilenkov (1996), several times used in present paper, needs some important corrections:

1. *C. (Megodontus) schoenherri chakassicus* Obydov, 1995 was regarded by Shilenkov as an aberration of *C. schoenherri* s.str. with brown elytrae marginated by dark-blue. Such form is very typical for *C. schoenherri* s.str., but quite unknown in *C. sch. chakassicus*, which is characterised by very constant one-coloured dark blue elytrae.

2. *C. (Morphocarabus) jurgae* Obydov, 1995, was regarded by Shilenkov as a synonym of *C. (M.) shilenkovi* O. Berlov, 1989, but in fact it is a subspecies of *C. (M.) hummeli* Fischer, 1823 (Obydov, under press)

3. *C. (Aulonocarabus) careniger victorianus* nom. nov. pro *C. (A.) c. kusnetzovi* Shilenkov, 1996 (nec *C. kusnetzovi* Semenov, 1903). The introduction of such homonym (a subspecies described after a single male only) could be explained by the fact that in many modern publications Semenov's name was used in form "kusnetzowi", still in original description it was introduced with letter "v".

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