

Zeitschrift: Entomologica Basiliensia
Herausgeber: Naturhistorisches Museum Basel, Entomologische Sammlungen
Band: 13 (1989)

Artikel: On new carabids of the genus Carabus L. (Coleoptera, Carabidae) from the Causasus
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DOI: <https://doi.org/10.5169/seals-980565>

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Entomologica Basiliensia	13	19–24	1989	ISSN 0253-2484
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On new carabids of the genus *Carabus* L. (Coleoptera, Carabidae) from the Caucasus

by A.S. Zamotajlov

Abstract: Two new subspecies of genus *Carabus* from the Caucasus – *C. (Archiplectes) kratkyi dauti* n.ssp. from the Western Caucasus and *C. (Lipaster) stjernvalli bogatshevi* n.ssp. from South Georgia – are described. Notes on some other species are given.

Key words: Coleoptera Carabidae – UdSSR – *Carabus* – new subspecies – taxonomy.

During the work on the collections of the Zoological Institute Academy of Sciences (Leningrad) two undescribed subspecies of genus *Carabus* from the Caucasus were found. Their descriptions and brief notes on some caucasian species of the genus are given here. I would like to express my sincere gratitude to Dr. I.A. Belousov for supplying me with materials and to Dr. O.L. Kryzhanovskij for his kind guidance rendered in the course of the study.

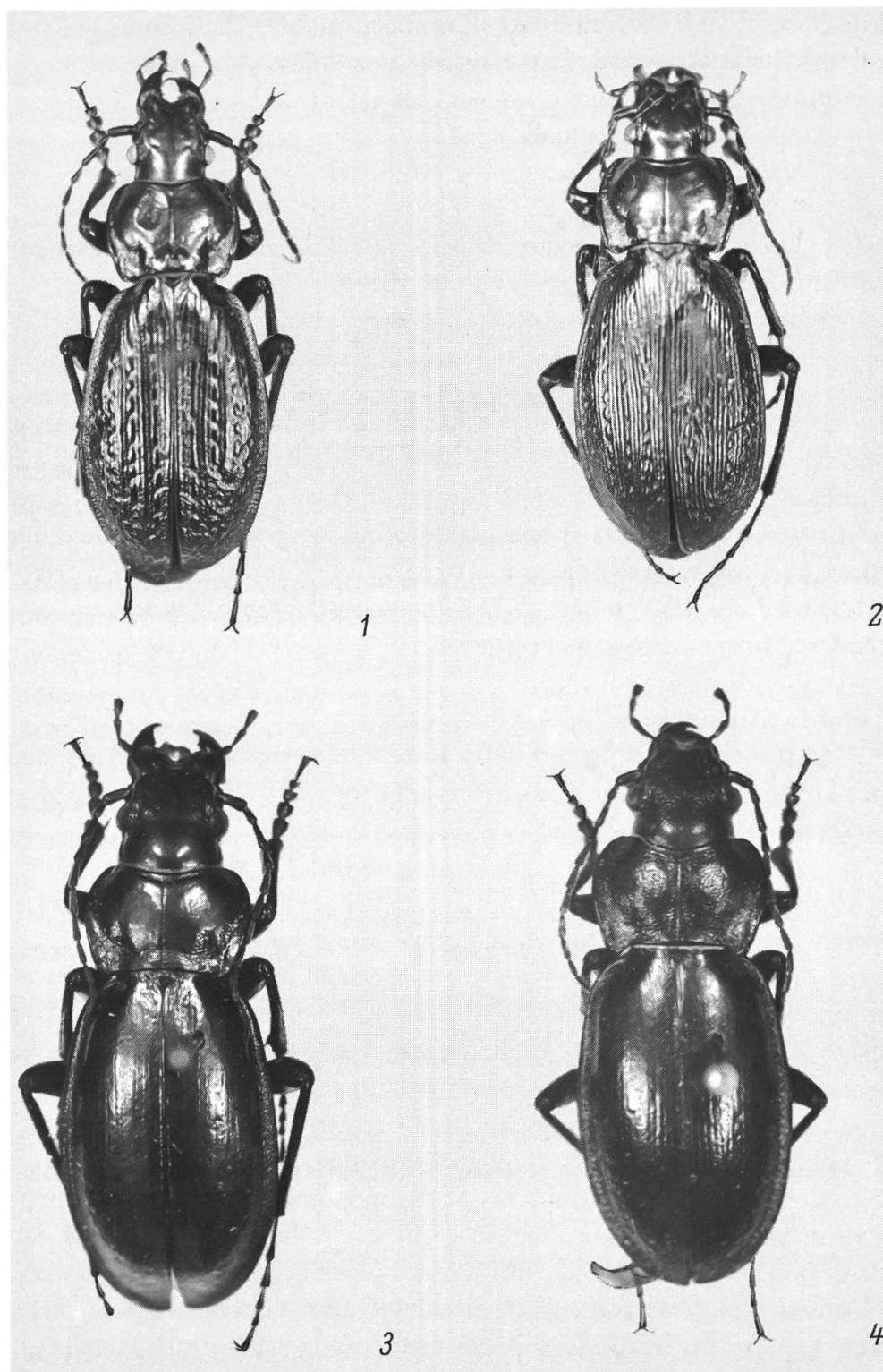
***Carabus (Archiplectes) kratkyi dauti* n. ssp.** Figs 2, 7.

Habitus (Fig. 2). Length 20.7 mm. Black, elytra, pronotum and head bronze. In its habitus close to other forms of *felicitanus*-group after GOTTWALD (1985).

Pronotum moderately transverse, 1.46 times as wide as long. Elytra 1.61 times as long as wide, primary, secondary and tertiary intervals somewhat equally developed, sculpture rather uniform. Apical part of penis (Figs 7, 8) of the nose – like from in dorsal view, slender, narrowed to apex more or less gradually, inner sac armature consists of two massive copulatory pieces, broadened to apex, very similar to nominative subspecies.

Holotype: ♂, Western Caucasus, canyon of riv. Daut, VIII 1974, G. Bakhtadze leg., in coll. Zoological Institute Acad. Sci., Leningrad.

C. kratkyi Ganglb. inhabits, corresponding numerous examined specimens, the mountain ranges Abishira – Akhuba and Alous. It was described on the materials of Sievers collection, originated from the Northern Caucasus and collected by H. Kratky, GANGLBAUER (1891). I saw 3 specimens from the collection of Zoological Institute Acad. Sci., Leningrad, bearing labels “Kuban, Kratky, 1888”; “ex coll. H. Sievers” and “*Plectes Kratkyi*”, that may be judged to be topotypes. Designation as types by GOTTWALD (1985) of the materials from Naturhistorisches



Figs 1–4: *Carabus*, general view. 1, *C. kratkyi kratkyi* Ganglb. from Abishira-Akhuba. 2, *C. kratkyi dauti* n.ssp., holotype. 3, *C. stjernvalli latisi* Breun. et Ruspoli from Artvin. 4, *C. stjernvalli bogatshevi* n.ssp., paratype.

Museum, Wien, collected by Rost, is unacceptable. The finding in Daut enlarges greatly the area of the species to south-east.

From all known species and subspecies of *felicitanus* – group differs in more slender and gradually narrowed apical part of penis in dorsal view (Figs 5–8). From *C. kratkyi kratkyi* Ganglb. (Fig. 1) may be easily distinguished also by well developed, elevated tertiary intervals of elytra; in general view the mostly close to some specimens of *C. felicitanus* Reitt.

Type specimen was collected together with *C. edithae kabardensis* Kurn.

C. felicitanus Reitt., *C. kratkyi* Ganglb. and *C. edithae* Reitt. compose well separated natural group of subgenus *Archiplectes*. In this connection it is reasonable to erect group, including the latter species and species of *felicitanus* – group after Gottwald. The position of *C. edithae* Reitt. in *reitteri*- group seems to be unfit. Examinations of vast materials from the North – Western Caucasus (more then 500 specimens were studied from environs of mts. Dzhuga, Bamback and Pshekish from the altitudes 1800–2400 m) revealed, that *C. felicitanus* Reitt. possess considerable populational polymorphism. At the same time, it includes very diverse alticolate ecological races. Specimens from the mossy forests and subalpine placor parcels are larger and more robust, while petrophilous ones – smaller and more slender. *C. felicitanus porcellus* Kurn. and *C. felicitanus* Reitt. are also in similar relations, so they are only ecological (not geographical) forms, i.e. *C. felicitanus porcellus* Kurn., 1972 = *C. felicitanus felicitanus* Reitt., 1893, n.syn. The highest populational densities of *C. felicitanus* Reitt. were observed at altitudes 2000–2200 m.

***Carabus (Lipaster) stjernvalli bogatshevi* n. ssp.**

Figs 4, 9.

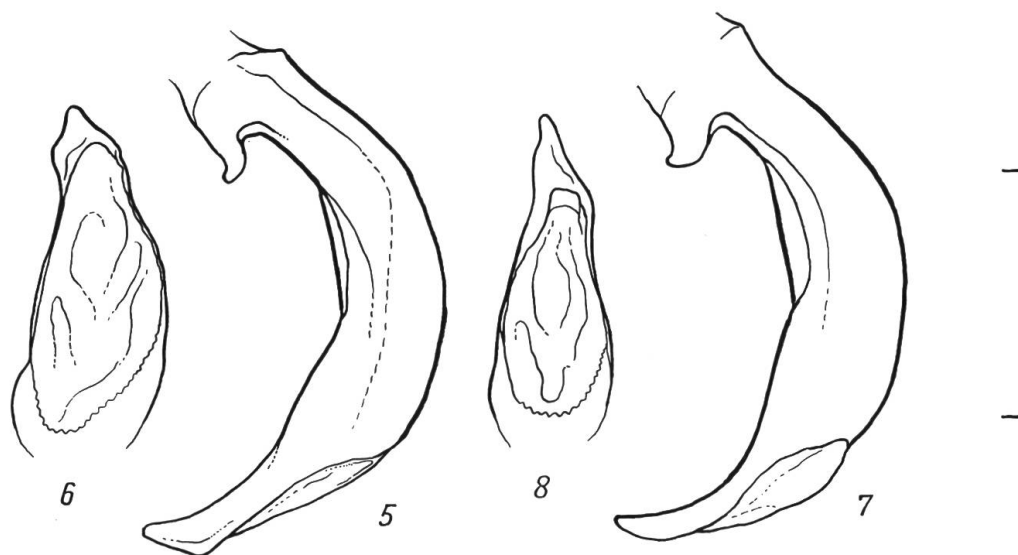
Habitus (Fig. 4). Length 21.3–27.3 mm. Black, elytra and pronotum blackish bronze, blackish green or dark violet.

Body robust, females with strongly thickened head. Frontal furrows shallow, frons distinctly, but fine rugose. Pronotum transverse, 1.38–1.55 times as wide as long, hind angles prominently protruded. Elytra ovate, 1.52–1.66 times as long as wide, all intervals more or less equally developed, interval 4 with 3–7 foveae, 8 with 4–11 foveae and 12 with 6–10 foveae, sometimes 7-th and 9-th intervals interrupted by 1–2 additional foveae. Sculpture of elytra of the females is more prominent. Penis (Figs 9, 10) moderately arcuate, somewhat sharply curved at the base in lateral view, prominently broadened at the middle, with

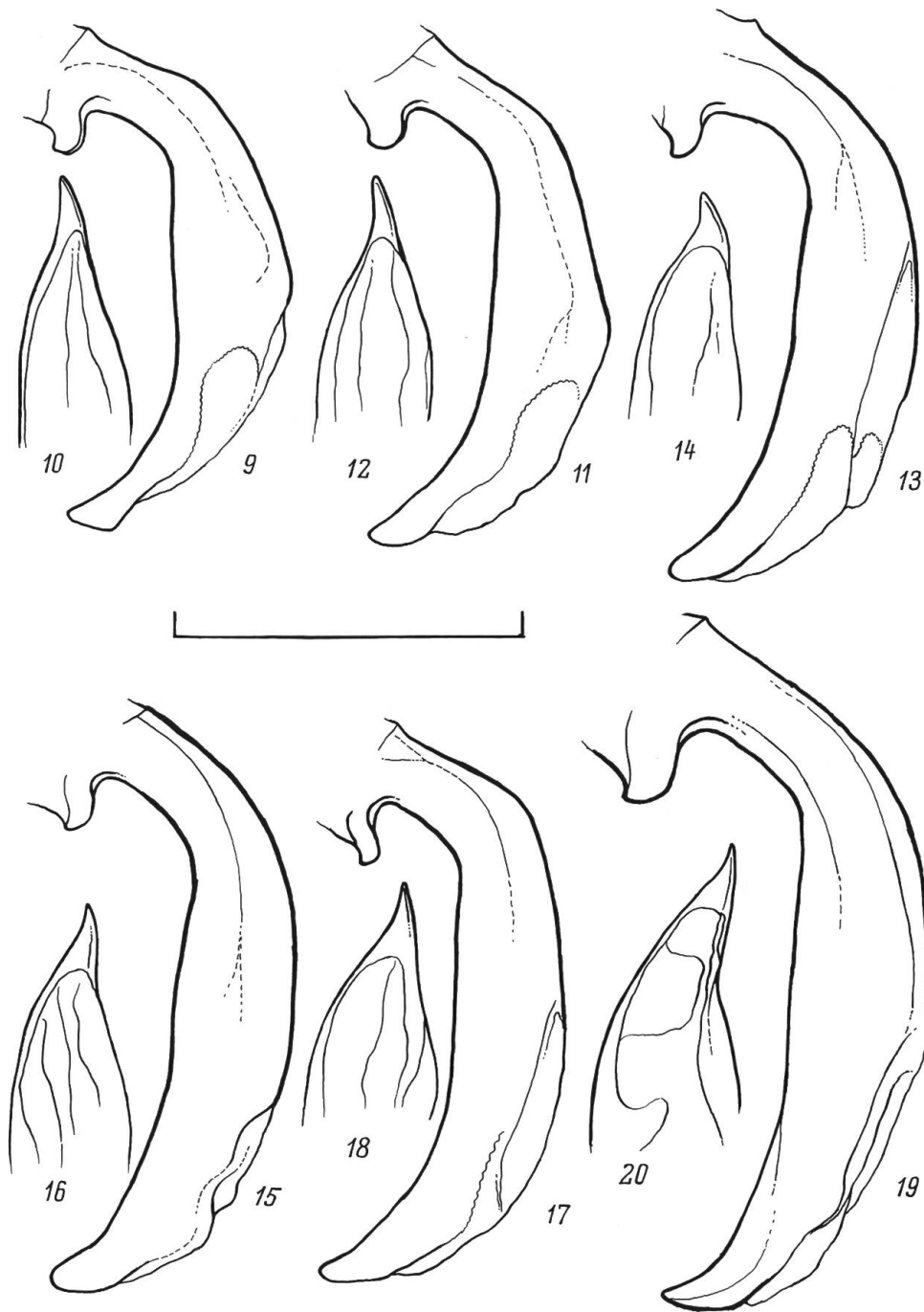
slender, strongly bent down apical part, apex of the chisel – like form in lateral view; inner sac armed typically for subgenus *Lipaster*.

Holotype: ♂, Transcaucasus, mt. Tshareli near Borzhomi, 2100 m, 30 VII 1929, A. Bogačev leg., in coll. Zoological Institute Acad. Sci., Leningrad. Paratypes: 9 ♂, 17 ♀, idem, in coll. Zoological Institute Acad. Sci., Leningrad, in the author's coll. and in coll. Natural History Museum, Basel.

From all other forms of *C. stjernvalli* Mannh. from the Soviet Transcaucasus differs in its more robust body, more transverse pronotum and rather prominent sculpture of elytra (with the exception of *C. stjernvalli humboldti* Fald. and close forms and some populations from the western Caucasus, which also possess so sharp sculpture, though, they are always more slender). From *C. gordius* Reitt., which also occurs in South Georgia, it can be easily distinguished by less course rugosity of the fronce, sharply protruded hind angles of pronotum and presence of the metallic lustre on pronotum and elytra; from *C. osellai* Breun. et Ruspoli – by smaller size and many other characters. Melanistic forms, similar to *raddeanus* Schauf. and *boschniaki* Fald. and small alpine forms, such as *bartholomaei* Motsch., absolutely absent. The new subspecies is nearest in its habitus to *C. stjernvalli latisi* Breun. et Ruspoli (1974) (Fig. 3), but somewhat smaller and more robust. In the form of penis clearly differs from all other *Lipaster* (Figs 9–20) and occupies



Figs 5–8: *Carabus*, penis. 5, *C. kratkyi kratkyi* Ganglb., “Kuban, Kratky, 1888”, left lateral view. 6, idem, apex. 7, *C. kratkyi dauti* n.ssp., holotype, left lateral view. 8, idem, apex. Scale: 3 mm.



Figs 9–20: *Carabus*, penis. 9, *C. stjernvalli bogatshevi* n. ssp., paratype, left lateral view. 10, idem, apex. 11, *C. stjernvalli* Mnnh. from Borzhomi, left lateral view. 12, idem, apex. 13, *C. stjernvallii stjernvallii* Mnnh. from Armenia, Gukasjan, left lateral view. 14, idem, apex. 15, *C. stjernvalli latisi* Breun. et Ruspoli from Artvin, left lateral view. 16, idem, apex. 17, *C. gordius* Reitt. from Caucasus, left lateral view. 18, idem apex. 19, *C. osellai* Breun. et Ruspoli from East Anatolia, Borçka, left lateral view. 20, idem, apex. Scale: 5 mm.

according to its isolated position. For me is known also a specimen from mt. Zkhra-Zkharo very similar to specimens from mt. Tshareli, however, as it is female, it is impossible to establish its real status. I know the specimens from environs of Borzhomi, which seems to occupy intermediate position between *C. stjernvalli bogatshevi* n.ssp. and nominative subspecies as in habitus, so in the form of penis (Figs 11, 12). Though I prefer to describe the new taxon as subspecies, its taxonomic status and also status of other forms of *Lipaster* needs closer definition.

Type specimens were collected at subalpine meadow together with *C. calleyi pseudoprasinus* Lapouge.

The subspecies is named after its collector, Dr. A. V. Bogačev.

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