

## New Species of the Tenebrionid Beetle Genus *Cylindronotus* Fald. (Coleoptera, Tenebrionidae) from the North Caucasus

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**Abstract**—Two new species of the genus *Cylindronotus* Fald. from the North Caucasus are described: *C. dombaicus* sp. n. from Karachai-Cherkess Republic and *C. alanicus* sp. n. from North Ossetia. A new subgenus, *Caucasonotus* subgen. n. (type species *Cylindronotus dombaicus* sp. n.), is erected to include the two new species in addition to *C. diteras* All. and *C. adriani* Rtt.

The paper presents descriptions of two new species of the genus *Cylindronotus*: *C. dombaicus* sp. n. and *C. alanicus* sp. n. from Karachai-Cherkess Republic and North Ossetia. The species are placed in the new subgenus *Caucasonotus* subgen. n., in addition to *C. alanicus* Rtt. and *C. diteras* All. previously assigned by Reitter (1922) to the subgenus *Nalassus*. The holotypes and part of paratypes are deposited at the Zoological Institute, Russian Academy of Sciences, St. Petersburg; the rest of types, in the Zoological Museum, Faculty of Zoology, Rostov State University, Rostov-on-Don.

### GENUS *CYLINDRONOTUS* FALD.

Subgenus *CAUCASONOTUS* Nabozhenko, subgen. n.

Type species *C. dombaicus* sp. n.

**Description.** Eyes small, widely separate and very weakly convex (in dorsal view). Lateral margins of pronotum flattened along entire length or, at least, at posterior and anterior angles. Anterior pronotal angles acute, often widely rounded, noticeably protruding forward. All antennal segments rounded in cross-section, except slightly compressed 9–11th. First visible sternite of male abdomen with spot of long coarse hairs. Surface of sternite under the spot strongly shining, with sparser punctation; punctures large and elongate. Aedeagus compressed and keel-shaped produced apically.

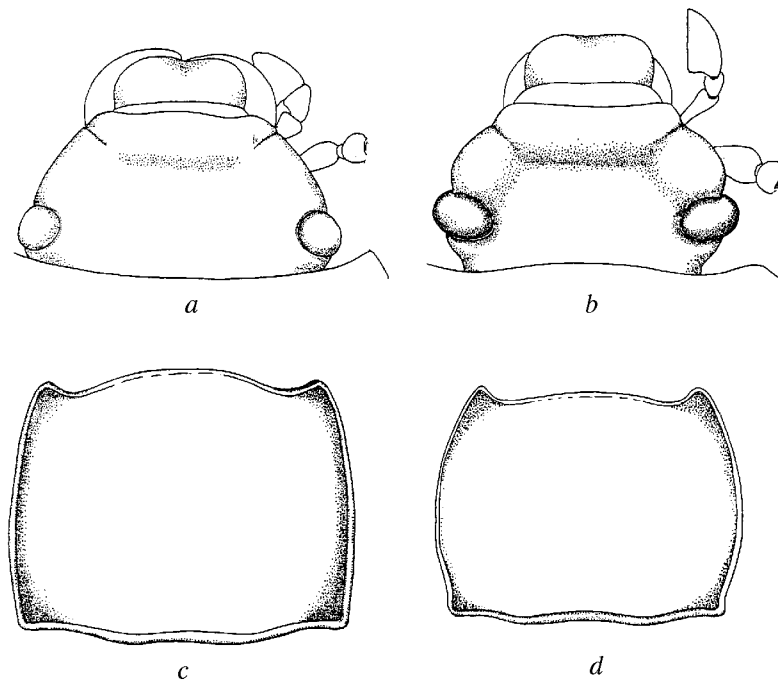
**Differential diagnosis.** This subgenus belongs to the group of subgenera with apically compressed aedeagus (Fig. 2). In the Caucasus, this group is also represented by the subgenera *Nalassus* and *Helopocerodes*. The subgenus *Caucasonotus* is most closely

related to *Nalassus*; clearly differing from this and all other subgenera in the not convex and widely separated eyes (Fig. 1a) and punctation of the first visible sternite of male abdomen under the hairy spot; from *Nalassus*, it additionally differs in the protruding anterior angles of pronotum. Along with the species described here, the subgenus *Caucasonotus* also includes *C. adriani* Rtt. and *C. diteras* All. previously placed in *Nalassus* by Reitter (1922). All known species of the subgenus *Caucasonotus* occur in the alpine and subalpine belts, being distributed within the Caucasus; whereas species of *Nalassus* are mainly European forest inhabitants, with the only species, *C. (Nalassus) brevicollis* Kryn., occurring in foothills of the W Caucasus.

### *Cylindronotus (Caucasonotus) dombaicus* Nabozhenko, sp. n.

**Material.** Holotype: ♂. Karachai-Cherkess Republic, Mt. Semenov-Bashi (W of Dombai), 2800 m, 21.VI.1997 (M.V. Nabozhenko). Paratypes: 10 ♂, 23 ♀, same locality, 21.VI.1997 (M.V. Nabozhenko), D.A. Dubovikov); 2 ♂, 1 ♀, Musat Cheri Mt. Range, 25.VI.1997 (M.V. Nabozhenko); 1 ♀, near Lake Tur'ye (Dzhuguturlukel), 20.VI.1997 (M.V. Nabozhenko).

**Description. Male.** Body black, dull. Head widest at the level of eyes. Outer margin of clypeus very weakly arcuate. Genae before eyes gently rounded, protruding. Lateral margin of head with hardly noticeable emargination between apex of genal angle and outer angles of clypeus. Eyes weakly convex. Ratio of head width to distance between eyes 1.33. Temples roundly converging to neck constriction. Head punc-



**Fig. 1.** *Cylindronotus* Fald.: (a, b) head; (c, d) pronotum. (a) *C. diteras* All.; (b) *C. brevicollis* Kryn.; (c) *C. dombaicus* sp. n.; (d) *C. alanicus* sp. n.

tation coarse and dense, punctures often merged (especially on sides). Antennae widening to apex, extending as far as elytral base. Second antennal segment slightly elongate (1.3);<sup>1</sup> 3rd strongly elongate (2.5), 1.8 times as long as 2nd and 1.4 times, as 4th; 4–6th segments elongate (1.5); 7–9th slightly elongate (1.2–1.3); 10th rounded, as long as wide; 11th elongate (1.6), with blunt conical apex. All antennal segments covered with pale hairs denser on apical segments. Pronotum transverse (length 1.3 times width) [definitely 1.3 times as wide as long.—Ed.]; widest before the middle; weakly rounded laterally; narrowly flattened at posterior and anterior angles and, often, also along lateral margin. Pronotal sides not emarginate before posterior angles, weakly arcuate or linearly converging to base. Posterior pronotal angles well defined, slightly obtuse; anterior angles acute, widely rounded, and extending as far as posterior eye margin. Pronotum emarginate anteriorly, less deeply so at base; base weakly emarginate; sides and base with wide distinct, anterior margin, with very narrow margination. Pronotal disc uniformly strongly convex, glabrous, coarsely and rather densely punctate (intervals between punctures subequal to puncture diame-

ter). Propleura coarsely rugose. Elytra oblong (1.5 times as long as wide). Elytral intervals flattened; striae narrow but distinct, with punctures merged into a single entire row. Surface of intervals with fine regular punctation (3–4 punctures across interval) and small but deep transverse rugae. Elytral epipleura with deep longitudinal and transverse rugae and deep basal depression. Body ventrally glabrous; mesepisterna with dense coarse punctation; metepisterna weakly punctate, shining. Abdominal sternites with moderately dense punctation; laterally, punctures elongate, often fused. First visible sternite with V-shaped spot of dense golden-rufous hairs; surface under the spot shining, with large elongate punctures. Fore tarsus rather narrow; its 2nd–4th segments cordate, weakly transverse; 2nd and 3rd segments 0.8 times as wide as long; 4th 0.9 times as wide as long; 5th 2.8 times as long as wide. Middle and hind tarsi narrow. Body length 8 mm.

**Male genitalia.** Aedeagal apex keel-shaped, produced. The keel obtuse-angled (in lateral view), sharply and linearly turning into apex. Sides of genitalia sparsely punctate (Fig. 2b).

**Female.** Usually larger than male. Antennae slightly narrower and shorter. Pronotum occasionally with two noticeable admedian depression. First visible abdominal sternite without hairy spot.

<sup>1</sup> Numbers in parentheses give length to width ratio for antennal segments.

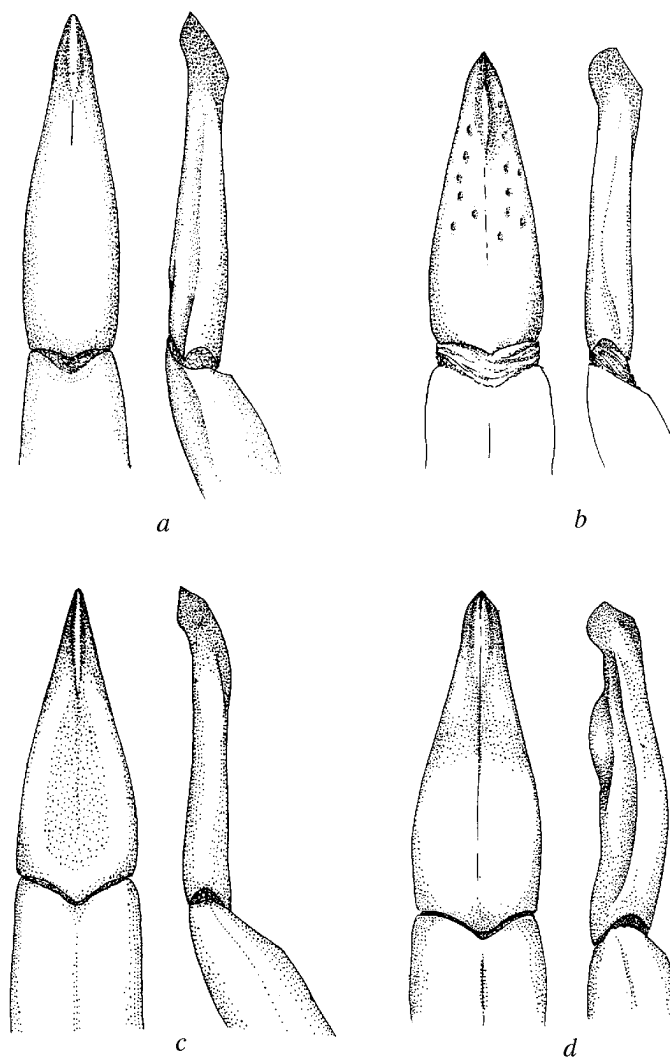


Fig. 2. *Cylindronotus* Fald., parameres, dorsal and lateral view: (a) *C. alanicus* sp. n.; (b) *C. dombaicus* sp. n.; (c) *C. diteras* All.; (d) *C. adriani* Rtt.

**Ecology.** Occurs in the alpine belt, usually on dry areas or in organic debris between stones.

**Comparative notes.** The species is similar to *Cylindronotus alanicus* sp. n.; differing from it in the sides of pronotum, not emarginate at base; presence of transverse rugae on the elytra; punctures in elytral striae, merged into entire rows; rounded genae; and presence of a hairy spot only on the first visible abdominal sternite, whereas *C. alanicus* sp. n. has such spots on the 1st and 2nd sternites.

*Cylindronotus (Caucasonotus) alanicus*  
Nabozhenko, sp. n.

**Material.** Holotype: ♂, North Ossetia, Mt. Khumaratkikhokh, 2–5.VII.1997 (D.G. Kasatkin). Paratypes: 2 ♂, 5 ♀, same locality, 2–5.VII.1997 (D.G. Kasat-

kin); 3 ♀, near Mt. Kariukhokh, 5.VII.1997 (D.G. Kasatkin); 2 ♂, 2 ♀, Nizhni Unal settl., 2–5.VII.1997 (M.V. Nabozhenko, I.V. Shokhin).

**Description. Male.** Body dark fuscous, weakly shining; tibiae, antennae, and mouthparts dark rufous. Anterior margin of clypeus straight. Outer margins of genae before eyes linearly converging to clypeus. Lateral margin of head with small emargination between apex of genal angle and outer angle of clypeus. Eyes weakly convex. Ratio of head width at the level of eyes to distance between eyes 1.4. Temples roundly converging to neck constriction. Head punctuation rather dense; punctures not merged. Antennae widening to apex. Second antennal segment rounded (nearly as long as wide); 3rd strongly elongate (2.5), 2.3 times as long as 2nd and 1.4 times, as 4th; 4th elongate (2);

5–8th moderately elongate (1.5); 9th 1.4 times as long as wide; 10th weakly elongate (1.2); 11th elongate (1.5). All antennal segments covered with rufous hairs. Pronotum transverse (length 1.4 times width) [definitely, 1.4 times as wide as long—Ed.]; widest in the middle; its sides noticeably arcuate, emarginate at base; base weakly emarginate (Fig. 1d); anterior margin noticeably emarginate; margination on sides well defined, wider near middle and at base; margination of anterior margin medially hardly visible, smoothed. Pronotal disc evenly strongly convex, flattened only at posterior and anterior angles, glabrous, rather densely punctate (intervals between punctures equal to puncture diameter); punctures large, elongate on sides of disc. Propleura with rather small but distinct rugae. Elytra elongate (1.5 times as long as wide). Elytral intervals almost flat; striae consisting of rounded punctures not merged into entire rows. Surface of elytral intervals without transverse rugae, uniformly covered with fine punctation. Body ventrally glabrous, shining. Epipleura shining, rugose, with deep basal depression. Abdominal sternites with uniform punctation; laterally, often with fine rugae at bases. First and second visible sternites with spots of dark rufous hairs. Spot on 1st sternite large, V-shaped; that on 2nd sternite rather small, transverse. Surface of sternites under the spots shining, with large elongate punctures. Fore tarsus as in the preceding species. Body length 7.5 mm.

Male genitalia. Parameres weakly hastate, keel (in lateral view) with more acute apex.

**Female.** Differs from male in more strongly arcuate anterior margin of pronotum and abdominal sternites lacking hairy spots.

**Comparative notes.** The species is similar to the preceding one (*C. dombaicus* sp. n.); differing from it in the pronotal sides emarginate at base; genae linearly converging to clypeus; absence of transverse rugae on elytra; and elytral punctures not merged into entire striae. In addition, *C. alanicus* sp. n. has two hairy spots on the 1st and 2nd visible abdominal sternites.

*Key to Species of the Subgenus Caucasonotus  
subgen. n. of the Genus Cylindronotus*

1(2). Anterior angles of pronotum with acute apices, not rounded; lateral margination of pronotum wide at anterior angles, separated from disc by rather deep sulcus. Body widely oval, strongly

convex, and shining; 1st and 2nd visible sternites of male abdomen with V-shaped spots of long coarse hairs, surface under the spots slightly depressed. 6–8 mm. Caucasus, subalpine belt .....  
..... *C. diteras* All.

2(1) Anterior angles of pronotum rounded apically.

3(4) All segments of male antennae strongly thickened; 2nd–6th segments the thickest. Pronotum narrowly flattened along entire length of lateral margin. Body strongly elongate, parallel-sided; elytra not convex. Dark fuscous. 9–10 mm. Northern Abkhazia (Klukhor Pass) .....  
..... *C. adriani* Rtt.

4(3) Antennal segments in male not thickened, gradually widening to apex; 8–11 segments the thickest. Elytra convex, not parallel-sided.

5(6) Sides of pronotum not emarginate at base. Pronotal disc narrowly flattened along entire length of lateral margin (Fig. 1c). Punctation on pronotum coarse. Outer margins of genae gently rounded along entire length. Punctures in elytral striae fused into entire rows. Elytral intervals covered with distinct transverse rugae. First visible sternite of male abdomen with hairy spot. Black, dull. 7.5–9 mm. Karachai-Cherkess Republic .....  
..... *C. dombaicus* sp. n.

6(5) Outer lateral margins of pronotum shallowly but distinctly emarginate at base. Pronotal disc flattened at posterior and anterior angles (Fig. 1a). Outer margins of genae linearly converging to clypeus. Punctures in elytral striae not fused into entire rows. Elytral intervals without transverse rugae. First and second visible sternites of male abdomen with hairy spots. Dark fuscous, weakly shining. 7–9 mm. North Ossetia .....  
..... *C. alanicus* sp. n.

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