

# TWO NEW SPECIES OF THE TRIBE HELOPINI (COLEOPTERA: TENEBRIONIDAE) FROM ARTVIN PROVINCE, TURKEY

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**Abstract.**— *Cylindrinotus tchorokhicus* sp. nov. and *Probaticus (Pelorinus) banaszkieviczae* sp. nov. are described from northeastern Turkey (Artvin Province). The first species is similar to *C. constrictus* (Seidlitz, 1896), but differs from it by flattened lateral sides of pronotum, strongly thickened outer margins and base of pronotum, more shining body and structure of aedeagus. The new species of *Probaticus* Vauloger, 1900 is close to *P. corrugatus* (Seidlitz, 1896), but differs from it by the structure and punctuation of pronotum and propleura, structure of elytra and genitalia of male, and pubescence on anal sternite.



**Key words.**— Coleoptera, Tenebrionidae, *Cylindrinotus*, *Probaticus*, new species, North Eastern Turkey.

## INTRODUCTION

Two new species from different genera of the tribe Helopini are described in this paper. The genus *Cylindrinotus* Faldermann, 1837 includes more than 10 species, distributed in Transcaucasia, northern Iran, Turkey and Syria. The greatest diversity of the genus is in eastern Anatolia. The genus can be divided into 2 species groups, which differ by the structure of genitalia of males and the degree of sexual dimorphism. The first group includes some species living in alpine landscapes (*C. constrictus*, *C. gibbicollis*, *C. erivanus*, *C. funestoides*). Species of the second group inhabit forests (*C. batesi*) or meadow biotopes in mountain steppes (*C. nitidus*, *C. femoratus*, *C. acutangulus*, *C. gibbosus*). *C. tchorokhicus* sp. n., described from the alpine zone, thus included in the first group, is close related to the widespread alpine species *C. constrictus* found in the provinces of Sivas, Erzincan, Gümüşane and Bayburt (Turkey).

The genus *Probaticus* Seidlitz, 1896 includes more than 15 species belonging to the subgenus *Pelorinus* Vauloger, 1900 and 1 species from the nominative subgenus (Nabozhenko and Löbl, 2008). For the most part, Turkish species of the subgenus *Pelorinus* belong to the *P. tenebricosus* group of species. *P. banaszkieviczae* sp. n. also belongs to this group and is distributed in the most northeastern part of Anatolia.

## MATERIALS

This study is based on material collected by the author and on material from the following collections:

- HNHM – Hungarian Natural History Museum Budapest, Hungary);
- ZIN – Zoological Institute, Russian Academy of Sciences (St.-Petersburg, Russia);
- CT – private collection of V. Tichý (Třeboň, Czech Republic).

## TAXONOMY

*Cylindrinotus tchorokhicus* sp. nov.

(Figs 1–5)

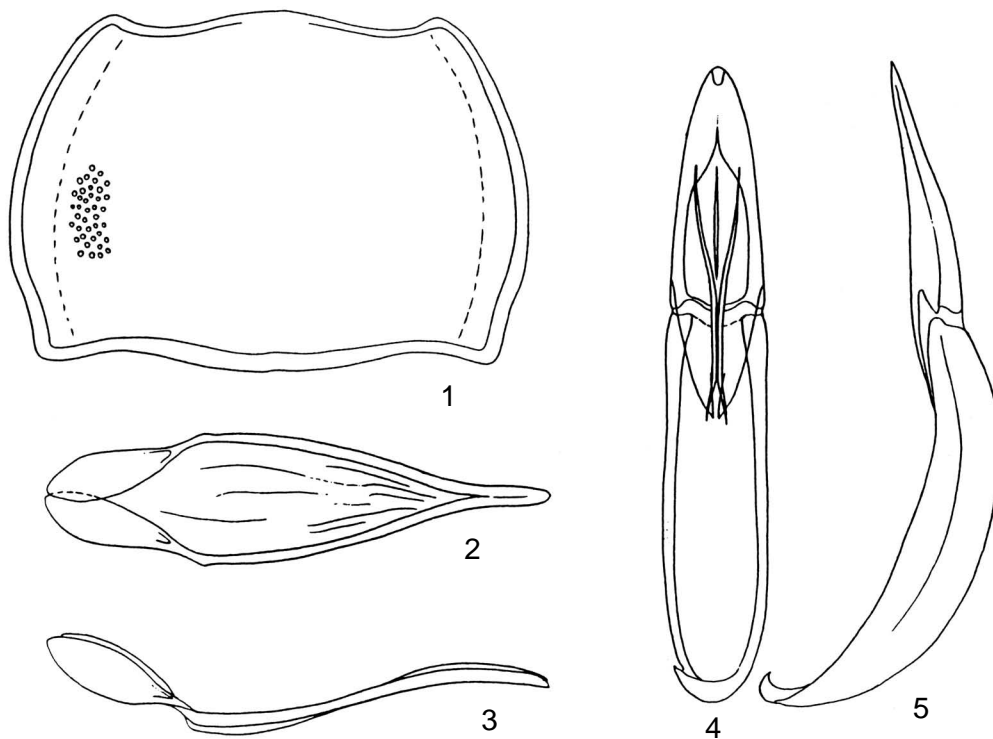
**Diagnosis.** *Cylindrinotus tchorokhicus* sp. nov. is similar to *C. constrictus* (Seidlitz, 1896), from which it differs by the flattened lateral sides of pronotum, strongly thickened outer margins and base of pronotum, more shining body and structure of aedeagus. From other similar species (*C. gibbicollis* Faldermann, 1837 and *C. erivanus* (Reitter, 1902)) the new species differs by the structure of protibia, which gradually widened to apex (fore tarsi of *C. gibbicollis* and *C. erivanus* have wide emargination in base, apical  $\frac{2}{3}$  of tibiae strongly widened and parallel to apex).

**Description.** Body black, robust, moderately shining, legs and antennae dark fuscous. Head widest at level of eyes. Ratio of head width at eyes to distance between eyes – 1.4. Anterior margin of clypeus straight. Outer margin of head between gena and clypeus with obtuse emargination. Temples parallel or very weakly rounded, without constriction, covered with very fine and short pubescence. Head weakly, transversely depressed between clypeus and frons. Punctuation of head coarse and dense (diameter of

punctures 1.5–2 times as long as distance among punctures). Antennae long, 4 apical antennomeres extending beyond base of pronotum. Ratio of length to width of antennomeres 2–11: 1.5, 2.7, 2, 1.85, 1.85, 1.85, 2, 1.4, 1.4, 1.4. 3<sup>rd</sup> antennal segment 1.7 times as long as 2<sup>nd</sup> and 1.3 times as long as 4<sup>th</sup>.

Pronotum strongly transverse (1.5–1.6 times as wide as long), widest before middle, base visibly widest than anterior margin. Ratio of width of pronotum near base/in middle/near anterior angles as follows: 8/8.5/5. Lateral margins gently rounded, at basal  $\frac{1}{4}$  very weakly emarginated; base bisinuately emarginated; anterior margin moderately bisinuate. Outer margins very widely bordered, border of anterior margin interrupted at middle. Disc of pronotum widely and strongly flattened laterally. Punctuation moderately coarse, less dense in middle of disc, more coarse and dense on sides (diameter of punctures more than distance among punctures). Propleura widely flattened on outer margins, with smooth longitudinal rugae. Prosternal process projected as obtuse conelike process.

Elytra wide. Punctures in striae connected in very narrow grooves. Intervals flattened, finely punctured, without rugae or rugose microsculpture. Dorsal side of epipleura (lateral margin of elytra) very wide and depressed. Humeral angles projected anteriorly. Epipleura wide, weakly depressed at base.



Figures 1–5. *Cylindrinotus tchorokhicus* sp. nov., structures of male: (1) pronotum; (2) gastral spicula, ventral view; (3) gastral spicula, lateral view; (4) aedeagus, ventral view; (5) aedeagus, lateral view.

Abdominal sternites smooth, finely punctured, sides with longitudinal rugae. Anal sternite completely margined apically.

Tibiae straight, fore tibiae gradually widened to apex, proximal area with 3–4 dentate processes. Pro, meso tarsi broadened, ventrally with dense setal brush.

Female. Body more robust, pronotum more transverse (1.7 times as wide as long), proximal area of pro- and mesotibiae without dentate processes, fore tarsi not broadened.

Body length: 8.5–10 mm.

**Type material.** Holotype, male, with labels: “Turchia vill. Artvin. Yalznizçam geçidi. m 2650 16.VI 1969, leg. P. Brignoli”, “*Cylindronotus* aff. *femoratus* Fald., det. Kaszab” (HNHM); 2 paratypes (males): with same labels, but other date “8.VII.1971” (1 paratype in HNHM, 1 paratype in ZIN); 1 paratype (male) with labels: “Yalznizçam gec. m. 2650 Artvin 13.VI.69”, “Turchia, leg. Osella”, “*Cylindronotus* aff. *femoratus* Fald. det. Kaszab” (HNHM); 1 paratype (female) with labels: “Savsat gec. 2450 m. 6.VII.71 Artvin”, “Turchia. leg. Osella”, “*Cylindronotus* aff. *femoratus* Fald. det. Kaszab” (HNHM); 1 paratype (male) with labels: “Yalznizçam-Pass südl. Artvin 2700 m. 31.VII.1965”, “Anatolia or. Korge & Heinz leg.”, “*Cylindronotus* sp. aff. *funestoides* Rtt. det Kaszab” (HNHM); 1 paratype (female) with labels: “Turchia. vil. Artvin Savsat, 2450 m, 6.VII.1971, P. Brignoli leg.”, “*Cylindronotus* aff. *femoratus* Fald. det. Kaszab” (HNHM); 1 paratype (female) with goldish round and cyrillic labels: “Tshorokh, 1896”, “coll. G. Sivers”, “*Cylindronotus diteras major* m. nov. subsp. Typ. A. Bogačev” (ZIN).

**Etymology.** This new species is named after the Tchorokh (Çoruh) River in eastern Anatolia, Turkey.

***Probaticus (Pelorinus) banaszkieviczae* sp. n.**

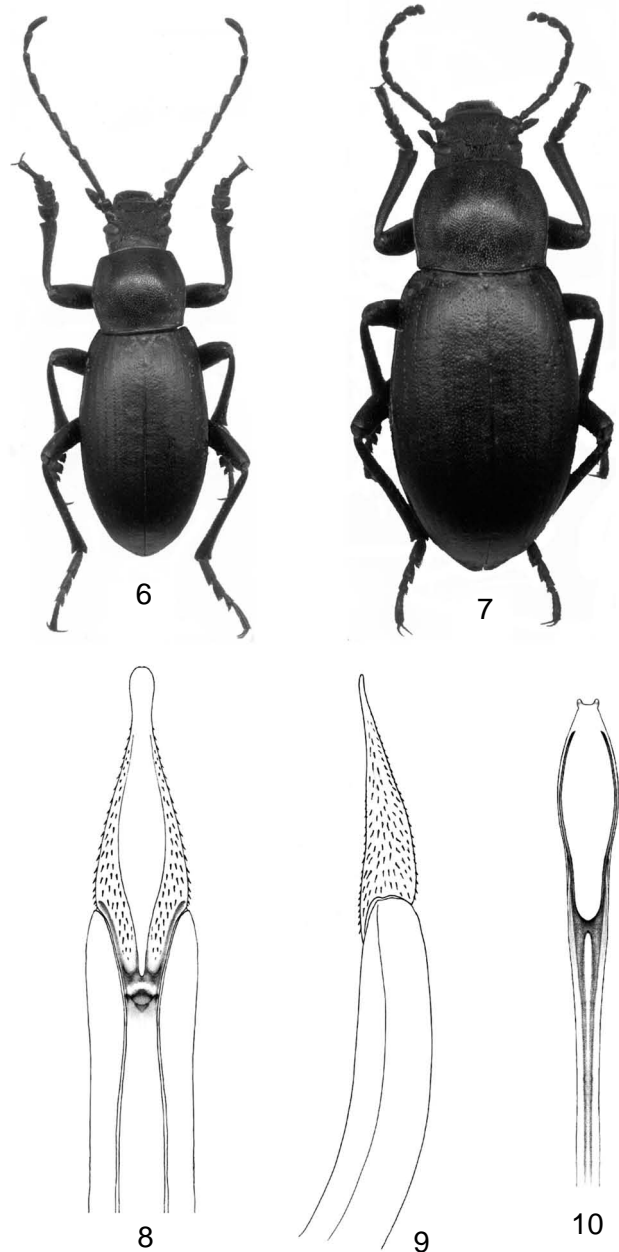
(Figs 6–10)

**Diagnosis.** *P. banaszkieviczae* sp. nov. is similar to *P. corrugatus* (Seidlitz, 1896) from Turkey and Syria by the structure of the pronotum (in both species, the disc is very convex), the elytra and rounded (not straight or acute) apex of the parameres. Differences are in Table 1.

**Description.** Male. Body slender, black. Elytra matte, head and pronotum weakly shining. Head widest at level of eyes. Eyes large, convex, strongly transverse, with ventral margins directed apically. Ratio of head width at eyes to distance between eyes – 1.84. Anterior margin of clypeus straight or weakly rounded. Genae strongly rounded, angle-shaped (not regularly rounded). Outer margin of head between gena and clypeus with obtuse emargination. Punctuation of head coarse and dense, punctures round, deep, often connected, diameter of punctures 3 times

distance among punctures. Head covered with short, reddish recumbent hairs. Antennae long, their 4 apical antennomeres extending beyond base of pronotum, reaching  $\frac{1}{3}$  basal length of elytra. Apical antennomere strongly elongated, banana-shaped. Length of antennomeres increases from 4<sup>th</sup> to 11<sup>th</sup>. 3<sup>rd</sup> antennomere 3.4 times as long as 2<sup>nd</sup> and 2.25 times as long as 4<sup>th</sup>. 11<sup>th</sup> antennomere 1.3 times as long as 10<sup>th</sup>.

Pronotum very weakly transverse (1.03–1.09 times as wide as long), widest at middle, 1.3–1.4 times as



Figures 6–10. *Probaticus banaszkieviczae* sp. nov.: (6) total view, male; (7) total view, female; (8) aedeagus, ventral view; (9) aedeagus, lateral view; (10) penis.

Table 1. Differences of *P. banaszkiwiczae* sp. nov. and *P. corrugatus* (Seidlitz, 1896)

<i>P. banaszkiwiczae</i> sp. nov.	<i>P. corrugatus</i> (Seidlitz, 1896)
Lateral sides of pronotum not flattened, only more gently sloping than very convex middle of disc	Lateral sides of pronotum flattened and weakly elevated
Propleura not flattened on sides, with longitudinal rugae on base and with confuse rugae in anterior part	Propleura flattened on sides, with very coarse, dense, often connected round punctures
Punctures in striae not deep	Punctures in striae deep
Anal sternite with short recumbent yellow hairs at base and long, strong, subrecumbent, dark-reddish hairs at apex	Anal sternite with dense, fine long light hairs throughout
Parameres narrowed in apical $\frac{1}{3}$ and widened on apex	Outer margins of parameres gradually narrowed to apex

wide as head. Lateral margins weakly or moderately rounded; anterior margin weakly rounded, rarely truncate; base weakly rounded. Anterior angles straight or weakly obtuse, narrowly rounded at apex; posterior angles obtuse, not rounded at apex. All margins bordered, only border of anterior margin smooth in middle. Disc of pronotum strongly convex, lateral sides more gently sloping, not flattened. Punctuation of disc coarse and dense (diameter of punctures 2–3 times as long as distance among punctures); punctures round on middle and margins and elongated on sides, often connected. Propleura not flattened at margins, with longitudinal rugae on base, with confuse rugae on anterior half; surface of propleura near coxae smooth.

Elytra oval-elongated (1.65–1.7 times as long as wide), visibly convex, with convex base, 2.5 times as long and 1.3–1.37 times as wide as pronotum. Lateral margins of elytra not emarginated in base. Intervals flat, 8<sup>th</sup> and 9<sup>th</sup> intervals connected apically. Inner margin of 8th interval uplifted apically. Intervals with fine, sparse punctures, often glabrous. Striae not depressed, punctures in striae not deep, elongated, as dotted-line.

Body ventrally covered with yellowish recumbent short hairs. Abdominal sternites with moderately coarse dense rasp-shaped punctures and narrow smooth rugae. Abdominal sternites pubescent with yellow recumbent short hairs. Anal sternite covered with long, strong, subrecumbent, dark-reddish hairs apically.

Tibiae straight, visibly widened to apex. Pro-, mesotarsi strongly widened, transverse. 1<sup>st</sup> segment of hind tarsi 1.3 times as short as 2<sup>nd</sup> and 3<sup>rd</sup> segments together.

Genital structures. Parameres (figs. 8, 9) narrowed in apical  $\frac{1}{3}$  and widened on apex, rounded apically. Penis widened and thickened in apical  $\frac{1}{3}$ , with 2 apical process, sclerites of parameres merged after thickened part (figs. 10).

Body length: 14–16 mm, width: 5–5.8 mm.

Female. Body more robust and massive. Antennae short, only 11<sup>th</sup> antennomere extending beyond base of pronotum. Apical antennomere very short (shorter than 10<sup>th</sup> antennomere), strongly asymmetrical. Pronotum more transverse than in male (1.16–1.23 times as wide as long). Elytra wider (1.5–1.55 times as long as wide), 1.37–1.4 times as wide and 2.5–2.6 times as long as pronotum.

**Type material.** Holotype, male: Turkey, prov. Artvin, Hatila valley, near F1st1kl1, 2.05.2007 (leg. M. V. Nabozhenko) (ZIN); Paratypes, 2 males and 2 females, with same labels deposited in ZIN. 1 paratype (male) in collection of V. Tichý: Turkey, prov. Artvin, Kavkasor, 3–4.06.2000 (leg. M. Mučka) (CT).

**Bionomics.** The new species was found at night on trunk of *Pinus* sp. in xerophitic biotope. The beetles feed on lichens.

**Etymology.** The species is named in memory of our colleague Małgorzata Banaszkiwicz.

## ACKNOWLEDGEMENTS

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