

See discussions, stats, and author profiles for this publication at:  
<https://www.researchgate.net/publication/263297505>

# Two new species the genus Trichocellus from the Tien Shan (Coleoptera: Carabidae)

ARTICLE · JANUARY 1993

---

CITATIONS

2

---

READS

14

## 2 AUTHORS:



[Ilya Igorevitsh Kabak](#)

Russian Academy of Agricultu...

35 PUBLICATIONS 72 CITATIONS

SEE PROFILE



[Boris M. Kataev](#)

Russian Academy of Sciences

118 PUBLICATIONS 171 CITATIONS

SEE PROFILE

## Two new species of the genus *Trichocellus* from the Tien Shan (Coleoptera: Carabidae)

I.I. Kabak & B.M. Kataev

Kabak, I.I. & Kataev, B.M. 1994. Two new species of the genus *Trichocellus* from the Tien Shan (Coleoptera: Carabidae). *Zoosystematica Rossica*, 2(2), 1993: 293-296.

*Trichocellus (Cardiostenus) medvedevi* sp. n. from the Central and Inner Tien Shan, and *T. (s. str.) stenothorax* sp. n. from Kungey Alatau are described.

I.I. Kabak, Zoological Institute, Kazakh Academy of Sciences, Akademgorodok, Alma-Ata 480032, Kazakhstan Republic.

B.M. Kataev, Zoological Institute, Russian Academy of Sciences, Universitetskaya nab. 1, St. Petersburg 199034, Russia.

Holotypes and some of the paratypes are kept in the Zoological Institute, Russian Academy of Sciences (St. Petersburg), the rest of the paratypes in the Zoological Institute, Kazakh Academy of Sciences (Alma-Ata) and in the Zoological Institute, Ukrainian Academy of Sciences (Kiev).

Measurements were taken as follows: body length from anterior margin of clypeus to elytral apex, head width across eyes, length of pronotum along its median line, elytral length from basal edge in scutellar region to apex of sutural angle, and width of pronotum and of elytra at their broadest place.

*Trichocellus (Cardiostenus) medvedevi* sp. n. (Figs 1-4, 11-18)

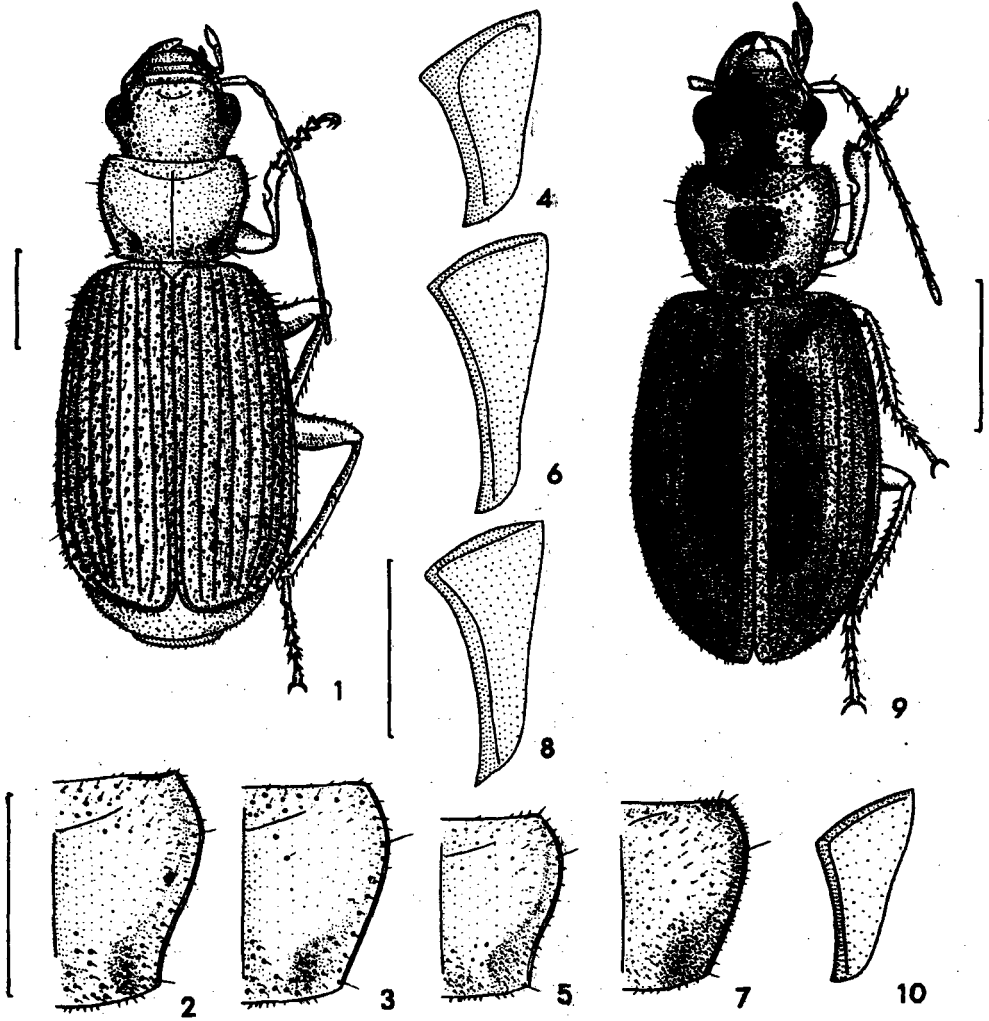
*Holotype*. ♂, Kirghizia, Central Tien Shan, southern slope of western portion of Sary-Dzhaz Mountain Range, eastern slope of Tez Pass, 3800 m, 24.VII.1991 (I. Kabak).

*Paratypes* (106 specimens). 13 ♂, 3 ♀, same data as the holotype; 43 ♂, 31 ♀, eastern slope of Kuylyu Mountain Range, the upper reaches of Kichi-Taldy-Suu River, 3800 m, 13.VII.1993 (I. Kabak); 1 ♀, southern portion of Kuylyu Mountain Range, right tributary of Terekty River, 3000 m, 24.VII.1993 (I. Kabak). 2 ♂, Inylchek Mountain Range, Maydaadyr, 3500-3600 m, 6.VII.1992 (I. Kabak); 2 ♂, 1 ♀, env. Tashkaroo, 3800 m, 12.VII.1986 (Odnosum); 10 ♂, Inner Tien Shan, 10 km from mouth of Malyi Naryn River, near margin of scree, 3400-3600 m, 18.VII.1990 (G. Medvedev).

*Description*. Body length 5.0-6.3 mm, width 2.0-2.5 mm (in holotype, 5.8 and 2.4 mm, respectively).

Unicolorous, dark brown, shining, only elytra sometimes slightly paler along the suture and at base; palpi, antennae and legs brownish yellow, in some specimens tibiae infuscated apically.

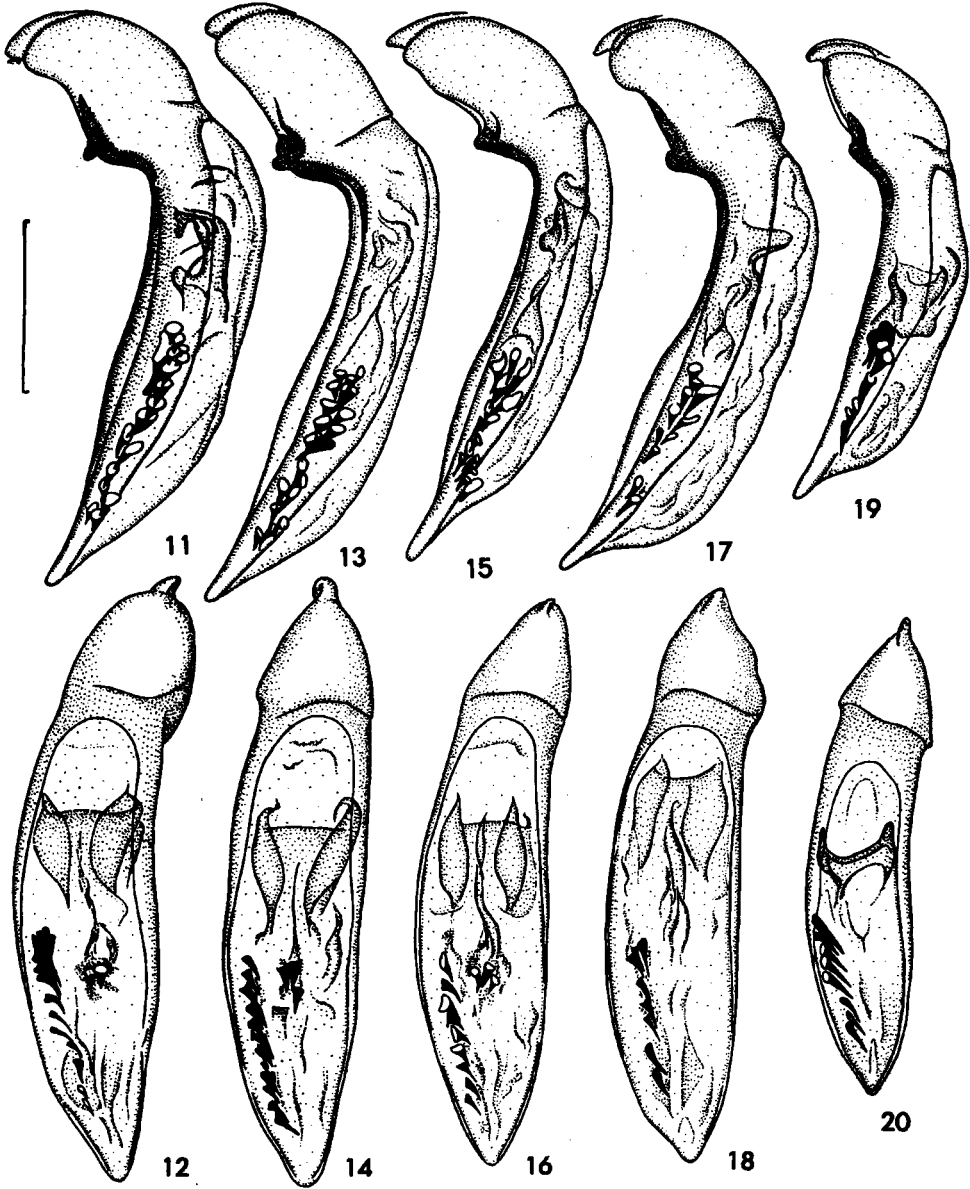
Head large, 0.87-0.94 (mean 0.90) times as wide as pronotum, its upper surface with sparse, rather coarse punctures and short yellow pubescence mainly on margins. Eyes moderately convex. Antennae long, extending to one third of elytra, their middle segments approximately 2.6-2.8 times longer than wide. Pronotum (Figs 2,3) comparatively small, moderately convex, 1.26-1.41 (mean 1.34) times wider than long, widest in the anterior third, notably narrowed to the base, anterior margin almost straight or weakly concave; anterior angles not protruding, obtuse or rectangular; sides rounded anteriorly, straight or rather strongly sinuated before obtuse hind angles, which are sharp or slightly rounded at tip; base oblique laterally; lateral flattened areas either distinct, strongly widened to the base and fused there with somewhat deep basal foveae, or practically absent; dorsum mainly on margins with distinct sparse punctation bearing short yellow hairs, central part of disc usually free of punctures. Elytra rather flat, slightly depressed along the suture at basal half; comparatively long, in males 1.47-1.66 (mean 1.57) times longer than wide and 3.17-3.53 (mean 3.33) times as long as pronotum [in females these indices are 1.53-1.63 (mean



Figs 1-10. *Trichocellus*. 1-4, *T. medvedevi* sp. n. (Tez Pass); 5,6, *T. parvicollis* (syntype); 7,8, *T. cymindiformis* (Dzhambul); 9,10, *T. stenothorax* sp. n. (holotype). 1,9, general view; 2,3,5,7, pronotum; 4,6,8,10, left metepisternum. Scales: 1 mm (Figs 1-3, 5, 7, 9, 10), 0.5 mm (Figs 4, 6, 8).

1.58) and 3.14-3.56 (mean 3.38), respectively], slightly widened posteriorly and weakly rounded at sides; their maximum width in apical quarter or slightly before it; sutural angles rounded at tip; striae not deep, impunctate, interrupted close to lateral margins of elytra; intervals flat, with rather coarse punctures arranged in 1 or 2 irregular rows; all punctures bearing short inclined yellow hairs; the posterior group of marginal row consists of 8 setigerous pores; 3rd interval with 2-4 discal pores usually near 3rd stria; sometimes 5th interval

also with 1 or a few discal pores. Microsculpture on upper surface consisting of isodiametric meshes developed only on labrum, lateral areas of head behind eyes and on the very margins of pronotum and elytra. Metepisterna (Fig. 4) notably narrowed posteriorly, comparatively short, their length along inner margin not much greater than width along anterior margin. Wings absent. Legs comparatively long and slender. Fore tarsi of male weakly dilated: 2nd segment slightly longer than wide, 3rd slightly wider than long; 4 dilated segments carry two



Figs 11-20. *Trichocellus*, penis. 11-18, *T. medvedevi* sp. n. (11,12, Tez Pass; 13,14, Tashkaroo; 15-18, Malyi Naryn); 19,20, *T. cymindiformis* (Dzhambul). Scale: 0.5 mm.

rows of scale-like adhesive hairs underneath.

Penis (Figs 11-18) comparatively broad, rounded at sides, rather strongly curved just behind basal bulb; the latter has a large costa on dorsal side near basal orifice; apical portion of penis very short, narrowed to a point and slightly curved ventrally; armature of internal

sac represented by latero-apical group of spines on left side of penis and by a few spines in its central part; weakly sclerotized basal folding structure covered with microscopic oval scales.

*Geographical variation.* The specimens from the Inner Tien Shan are usually scarcely smaller

than those from the Central Tien Shan (body length: 5.0-5.5 and 5.4-6.3 mm, respectively) and have comparatively shorter elytra [in males ratio between length of elytra and length of pronotum: 3.17-3.32 (mean 3.24) and 3.30-3.53 (mean 3.42), respectively]. Besides, in specimens from Inner Tien Shan the apical portion of penis wider and the central spines in internal sac sometimes absent (Fig. 18).

*Distribution.* Central and Inner Tien Shan.

*Ecological note.* The species inhabits alpine meadows at about 3400-3800 m, usually plots with sparse grass vegetation.

*Comparison.* *T. medvedevi* sp. n. belongs to the subgenus *Cardiostenus* Tschitscherine, the representatives of which are characterized by comparatively large head, small, more or less cordiform pronotum with distinct hind angles, and by the presence of several discal pores on 3rd interval of elytra. New species is the largest within this subgenus. It is most closely related to *T. cymindiformis* Reitter from Southern Kazakhstan and to *T. parvicollis* Tschitscherine, described from two females known so far from the former Transcaspian Province (Turkmenistan). From both species it is easily distinguished by the unicolorous dark body, much shorter metepisterna (Figs 4, 6, 8), clearly longer antennal segments and by the absence of wings. In addition, in *T. cymindiformis* the pronotum practically always has punctures on its central portion, hind angles of pronotum usually more obtuse and sides less sinuate posteriorly (Fig. 7); penis of *T. cymindiformis* less curved and probably always without central group of spines (Figs 19-20). In *T. parvicollis* the punctuation of the pronotum and of the elytra much finer than in *T. medvedevi* sp. n. and sides of pronotum more strongly sinuate before the sharper hind angles (Fig. 5). *T. microderus* Solsky, also belonging to *Cardiostenus*, evidently differs from the new species in bicolorous body, very small size (3.4-4.5 mm), shorter antennal segments, and penis without costa on basal bulb and spines in internal sac.

*Etymology.* The species is named after G.S. Medvedev who collected it in the Inner Tien Shan.

*Trichocellus* (s. str.) *stenothorax* sp. n.  
(Figs 9, 10)

*Holotype.* ♀, Kirghizia, western portion of Kungey Alatau, Boom Gorge, Chilibili River, 19.V.1990 (I. Kabak).

*Description.* Female. Body length 4.1, width

3.3 mm. Shining. Head black, but labrum, mandibles and two round maculae behind the eyes rufo-ferruginous; pronotum brownish yellow with dark oval macula in central portion; besides, anterior margin up to anterior transverse impression and base between basal foveae distinctly infuscated; elytra brownish yellow, each with dark brown longitudinal macula in the middle portion along pale suture; basal portion of epipleura slightly infuscated; underside black; palpi and legs pale; antennae very weakly infuscated beginning from 2nd segment.

Thickset, convex. Upper surface throughout with rather coarse punctures and short yellow hairs. Head comparatively large, 0.80 times as wide as pronotum. Punctuation sparser on vertex. Eyes moderately convex. Antennae not long, only slightly extending over the base of elytra, their middle segments approximately 1.6-1.8 times longer than wide. Pronotum comparatively large and long, moderately convex, 1.23 times wider than long, narrowed to the base, widest before the middle, its sides slightly sinuate before very obtuse hind angles; anterior margin straight, with a few somewhat long hairs near non-protruding, obtuse anterior angles; hind margin strongly oblique laterally; lateral flattened areas absent, basal foveae small, oval; punctures on disc to the right and to the left from median line sparser and finer. Elytra rather convex, oval, 1.46 times longer than wide and 2.88 times as long as pronotum, their maximum width just behind the middle; sutural angles rounded at tip; striae not deep, impunctate, interrupted close to lateral margins of elytra; intervals flat, each with setigerous punctures arranged in two irregular rows; 3rd interval in apical third with one discal pore near 2nd stria; the posterior group of marginal row consisting of 6 setigerous pores. Upper surface of head, disc of pronotum and of elytra without microsculpture; distinct isodiametric meshes present only on labrum and on apex of elytra. Metepisterna (Fig. 10) narrow, comparatively short, their length along inner margin only a bit over their width along anterior margin. Wings fully developed, longer than elytra.

*Comparison.* Distinct from all other species known to us by comparatively longer and narrower pronotum combined with rather short and convex elytra.

Received 22 February 1993