

Two new taxa of the genus *Trechus* Clairville (Coleoptera, Carabidae) from southern Kyrgyzstan

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A new species and a new subspecies of the genus *Trechus* were collected by the junior author in Turkestan mountain ridge in 1997. Both these taxa are described below.

The morphometric characters used here follow those of Belousov & Kabak (1991, 1998). A total of 25 mesures was made for each specimen. To provide an exact information concerning the elytral chetotaxy, the formula of umbilicate series is employed in addition to the discal formula (Belousov & Kabak, 1998). The number of genital preparations is given in parentheses after the number of specimens studied. The ratios concerning antennomeres and eyes are rounded to 0.05.

Abbreviations used in the text:

IBK = Institute of Biology of the National Academy of Sciences of Kyrgyzstan, Bishkek

IZK = Institute of Zoology, Almaty

MPU = Moscow Pedagogical University

ZISP = Zoological Institute of Russian Academy of Sciences, St. Petersburg

cAG = collection of A. Gitzen, Neuhofen

cAK = collection of A. Koval, St. Petersburg

cBK = authors' collection, St. Petersburg.

The *adustus* species-group

Trechus meissonnieri Belousov et Kabak, sp.n. (Fig. 1)

Description. Large-sized species, fore-body rather narrow, hind-body wide and ovate, dorsum moderately depressed. Length 3.85-4.27 (4.03) mm.

Color of upper-side variable: from dark testaceous to dark brownish, usually reddish brown. Appendages, pronotum, elytral suture and margins slightly lightened as compared with head and elytra, the latter sometimes pitchy black.

Head medium-sized, 1.19-1.31 (1.24) times narrower than pronotum. Eyes flat or barely conically projecting, medium-sized, 0.95-1.25 (1.10) times as long as antennomere 3. Antennae filiform, long, only 1.08-1.17 (1.12) times shorter than elytra length; third antennomere 2.25-2.75 (2.45) times as long as wide.

Pronotum relatively flat, 1.30-1.44 (1.36) times as wide as long; 1.19-1.31 (1.26) times as wide as pronotum base i.e. slightly constricted posteriad. Lateral sides weakly and widely rounded throughout, without distinct incision before hind angles; latter obtusangular, rounded at apices. Anterior angles slightly salient. Base of pronotum broad, 1.04-1.18 (1.11) times as wide as anterior margin. Basal margin moderately oblique laterally and rectilinear or weakly concave medially. Anterior margin rectilinear. Marginal gutter of pronotum relatively broad, clearly widened posteriorly, its borders slightly curved upward. Basal transverse impression very superficial; basal foveae of medium size. Basal surface smooth. Median line not reaching anterior margin of pronotum.

Elytra subquadrate, with prominent shoulders, 1.50-1.68 (1.59) times as wide as pronotum, 1.86-2.07 (1.97) times as wide as head and 1.38-1.52 (1.45) times as long as wide. Marginal gutter average, narrowed toward base and apex, less wide than that of pronotum in posterior portion. Elytral striae superficial, vaguely punctured, two internal striae continuous, others usually shortened, although even stria 5 partly visible in basal portion. Internal striae distinct on apical slope of elytra. Intervals rather flat. Apical striola more or less parallel to elytral suture, connected to stria 5 anteriorly. All discal pores, including subapical one, usual in position; discal formula 16-26(20), 49-59(55), 90-94(92); formula of umbilicate series 9, 15, 20, 25, 60, 66, 81, 88. Apical triangle almost equilateral, apical pore equidistant from suture and exterior pore.

Microsculpture well-developed, comprised of isodiametric meshes on head, partly evanescent on front, superficial irregular transverse meshes on pronotum and clearly engraved, strongly transverse meshes on elytra. Micropunctuation and pubescence of elytra and pronotum distinct.

Aedeagus (Fig. 1) step-like bent just near basal portion, moderately depressed sagittally, basal

orifice deeply emarginated. Apical lamella clearly-defined, triangle, narrow, pointed at apex in dorsal view and curved upward, convex ventrally in lateral view. Sagittal lobe small but distinct. Endophallus armature well-developed, consisting of two usual plates, of which the lower one larger, with widely truncated apical portion.

Variability. The population from the right bank of Uriam River possesses the paler color of dorsum, the pronotum more transverse and the eyes more strongly projecting.

Types. Holotype – ♂ (ZISP): Turkestan Mt. Ridge, right bank of Ashat River, right tributary of Laili-Mazar River, Liailiak Basin, 3100 m, 27.07.1997 (I. Kabak leg.).

Paratypes: 103(5)♂, 55♀ (ZISP, IBK, IZK, MPU, cBK, cAK, cAG), collected together with holotype. – 30(5)♂, 15♀ Turkestan Mt. Ridge, right bank of Uriam River, Liailiak Basin, 3300-3400 m, under rocks, 29.07.1997 (I. Kabak leg.). – 1(1)♂, 2(1)♀ (cBK) Turkestan Mt. Ridge, source of Ashat River, left bank (right tributary of Laili-Mazar River, Liailiak Basin), 3400 m, 27.07.1997 (I. Kabak leg.). – 6(3)♂, 5(2)♀ (ZISP, IBK, cBK) Turkestan Mt. Ridge, left bank of Uriam River near pass to Ashat River, Liailiak Basin, 3800 m, 28.07.1997 (I. Kabak leg.). – 3(3)♂, 7(2)♀ (cBK) Turkestan Mt. Ridge, right bank of Ashat River near pass to Uriam River, Liailiak Basin, 4100 m, 28.07.1997 (I. Kabak leg.). – 3(3)♂, 3♀ (cBK) Turkestan Mt. Ridge, Liailiak Basin, left tributary of Karasu River, upper course of Ak-Metshet' River, 3300 m, 29.07.1997 (I. Kabak leg.). – 6(5)♂, 6(2)♀ (cBK) Turkestan Mt. Ridge, right tributary of Ak-Suu River, upper course of Liailiak River, 3200-3300 m, 30.07.1997 (I. Kabak leg.). 36 specimens measured.

Notes. In the aedeagus shape (the large and "high" aedeagus tube, the curvature just at the basal portion and the straight attenuated apical part with narrow triangle lamella in dorsal view), the new species is most similar to *T. latiplatus* (Belousov & Kabak, 1998), *T. pamirensis* (Belousov & Kabak, 1996) and *T. turkestanicus* (Belousov & Kabak, 1991). From two latter species, *T. meissonnieri* sp. n. differs by the base of pronotum oblique on sides (clearly emarginated in *T. pamirensis* and widely rounded in *T. turkestanicus*) and by more strongly sclerotized endophallus armature. Within the above species, *T. latiplatus* seems to be most closely related to the new species. This view is supported by both the external characters (color and pronotum shape) and the endophallus armature (wide and well sclerotized plates). Nevertheless, *T. meissonnieri* sp. n. is readily distinguished by considerably smaller size of the lower plate with simple, not incised apical margin (Fig. 1, vs. Belousov & Kabak, 1998, Fig. 2). In addition, the new species is smaller (average body length 4.03 mm vs. 4.37 mm in *T. latiplatus*), possesses narrower elytra (average ratio "elytra width/head width" 1.98 vs. 2.06 in *T. latiplatus*), shorter antennae and larger eyes.

Distribution. Known from upper course of Liailiak River in Turkestan mountain ridge between Ashat and Ak-Suu valleys (Kyrgyzstan). This species neighbors upon *T. isfanensis lailakensis* ssp. n. and *T. latiplatus* in the West as well as upon *T. orthapicalis* and *T. sogdianus* (Belousov & Kabak, 1998) in the East and North-East respectively.

Habitats. Species occurring in the alpine zone at elevations 3100-4100 m a.s.l.

Trechus isfanensis lailakensis Belousov et Kabak, ssp.n. (Fig. 2)

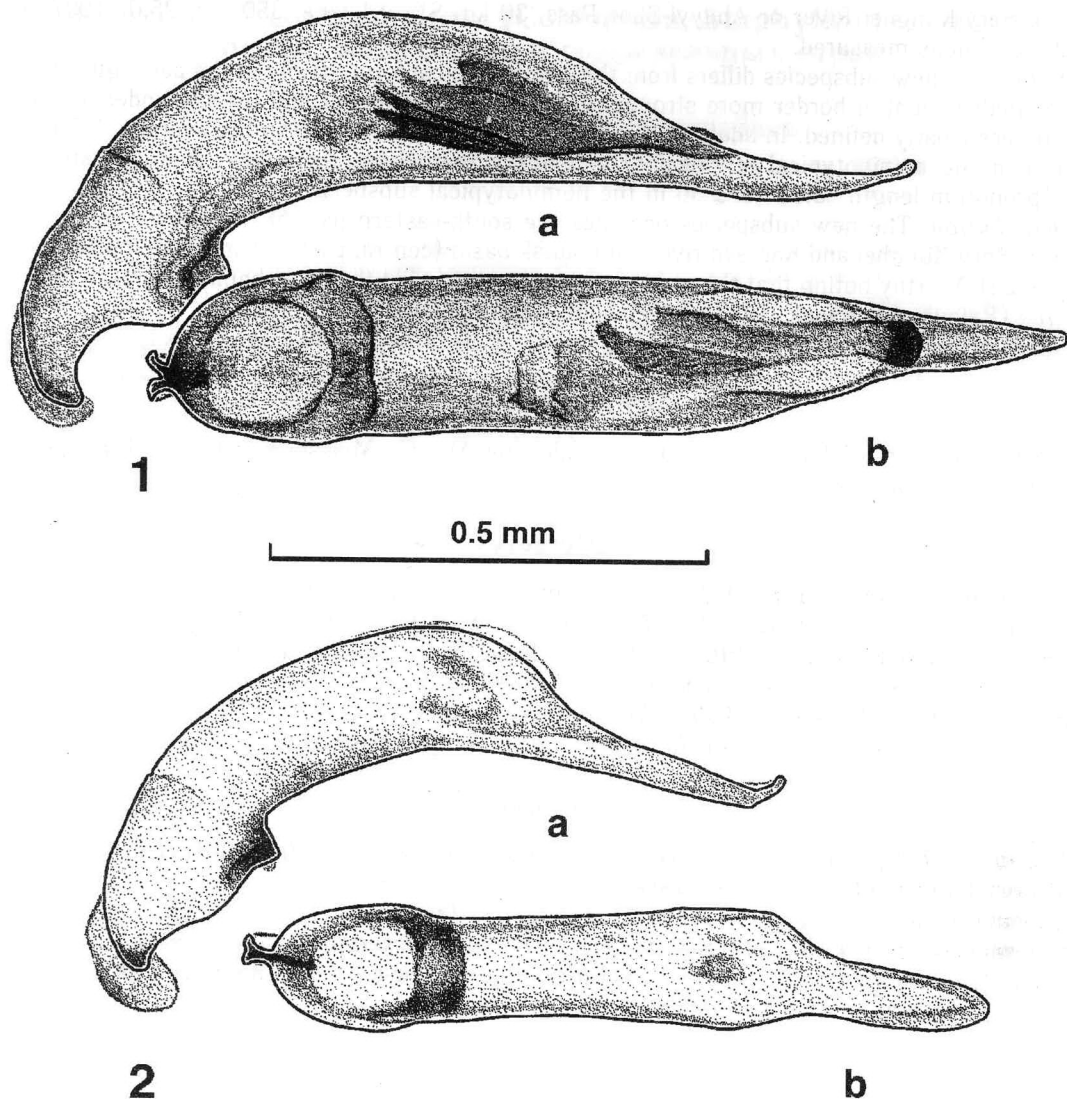
Trechus isfanensis Belousov & Kabak 1998, Klapalekiana, 34: 3, Fig. 3 (loc. typ.- Aktash Mts).

Description. Body length 3.47-3.95 (3.76) mm. Brownish, tinged with amber reddish; pronotum as well as suture, margins and often base of elytra lighter; head and especially elytra darker, sometimes the latter pitchy black. Legs and antennae always monochromously yellowish.

Head medium-sized, 1.17-1.26 (1.21) times narrower than pronotum. Frontal furrows subangulate, approached to each other in middle. Eyes somewhat projecting, medium-sized, 1.0-1.25 (1.10) times as long as antennomere 3. Temples almost flat. Antennae filiform, long, only 1.0-1.09 (1.05) times shorter than elytral length; third antennomere 2.20-2.70 (2.45) times as long as wide.

Pronotum rather flat, 1.25-1.37 (1.31) times as wide as long; slightly constricted towards base, 1.21-1.35 (1.28) times as wide as the latter. Lateral sides widely rounded anteriorly, rectilinear posteriorly, slightly sinuate only just before hind angles; latter rounded. Anterior angles not salient. Base of pronotum of medium width, 1.01-1.16 (1.07) times as wide as anterior margin. Both basal and anterior margins rectilinear, the latter oblique on sides. Marginal bead relatively broad, distinctly dilated posteriorly. Basal transverse impression superficial and almost straight, only in basal foveae angulate. Basal surface feebly rugulose or smooth. Discal impression superficial or indistinct.

Elytra wide and ovate, moderately depressed, medium-sized, 1.48-1.66 (1.57) times as wide as pronotum, 1.79-2.00 (1.90) times as wide as head and 1.41-1.50 (1.46) times as long as wide. Shoulders oblique, lateral borders weakly convex in median portion, elytral apex obtuse and widely rounded



Figs. 1-2. *Trechus* spp., aedeagus (median lobe, a - lateral view, b - dorsal view). Scale 0.5 mm.

1 - *T. meissonnieri* sp. n.; 2 - *T. isfanensis lailakensis* ssp. n.

Marginal gutter of elytra rather wide, but throughout narrower than that of pronotum near base. Elytral striae superficial, striae 6-7 partly visible; punctures indistinct. Intervals flat. Apical striola short, straight and parallel to suture anteriorly. All discal pores, including subapical one, usual in position; discal formula 17-24(20),46-62(55),90-93(91); formula of umbilicate series 11,17,22,28,61,67,82,88. Apical pore variable in position: about twice as distant from suture as from exterior pore in population from Sary-Kunghei and about in the middle in population from the type locality.

Microsculpture distinct throughout, comprised of isodiametric meshes on head, irregular transverse meshes on pronotum and transverse lines or strongly transverse meshes on elytra.

Aedeagus (Fig. 2), arched, subcylindrical in basal part, with straight attenuated apical portion. Endophallus armature extraordinarily feebly sclerotized, looking like vague spot and oblique line in dorsal view.

Holotype: ♂ (ZISP), Turkestan Mt. Range, source of Karasan River, left trib. of Liailiak River, 3 km W of Tshetyndy River, 2900 m, rocks, 26.07.1997 (Kabak I.I.)

Paratypes: 6(3) ♂, 5(2) ♀ (ZISP, IBK, IZK, cBK), collected together with holotype. - 3(3) ♂, 8(2) ♀ (cBK, cAG) Turkestan Mt. Range, source of Sary-Kunghei River, left bank, nr Abdyvi-Shor Pass, 30 km SE of Isfana, 3000-3100 m, 24.07.1997 (Kabak I.I.). - 2(2) ♂, 4(2) ♀ (cBK) Turkestan Mt. Range,

source of Sary-Kunghei River nr Abdyvi-Shor Pass, 30 km SE of Isfana, 3500 m, 25.07.1997 (Kabak I.I.); 29 specimens measured.

Notes. The new subspecies differs from the nominotypical form mainly in the aedeagus structure: its tube smaller, ventral border more strongly concave, lamella longer and usually wider, endophalus armature less clearly defined. In addition, the new subspecies is smaller (on the average, 3.76 mm vs. 4.07 mm in the nominotypical subspecies) and has longer elytra (in males, average ratio "elytra length/pronotum length" 3.05 vs. 2.96 in the nominotypical subspecies).

Distribution. The new subspecies occupies the south-eastern part of the known species range: sources of Sary-Kunghei and Karasan rivers in Liailiak basin (central part of Turkestan mountain ridge, Kyrgyzstan). Worthy noting that this subspecies was collected in the same bank of Karasan river as *T. latiplatus* (Belousov & Kabak, 1998), only about 3 km eastward.

Habitats. Species was found in the alpine zone at elevations 2900-3500 m a.s.l.

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Резюме

Белусов И.А., Кабак И.И. Two new taxa of the genus *Trechus* Clairville (Coleoptera, Carabidae) from southern Kyrgyzstan

Описаны новый вид и новый подви́д жужелиц рода *Trechus* Clairville из бассейна реки Ляйляк на Туркестанском хребте (Южный Кыргызстан): *Trechus meissonnieri* sp. n. (верхнее течение реки Ляйляк) и *T. isfanensis lailakensis* ssp. n. (истоки рек Сары-Кунгей и Карасан). Оба описанных таксона принадлежат к группе *T. adustus*.