



Three new species of the subgenus *Cryobius* Chaudoir, 1838 (Coleoptera: Carabidae, *Pterostichus* Bonelli, 1810) from the Russian Far East

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Abstract

Three new species of *Pterostichus* subgenus *Cryobius* Chaudoir, 1838, are described from the southern Russian Far East: *P. (C.) storozhenkoi* **sp. nov.** from Mount Tardoki-Yani in the northern Sikhote-Alin, *P. (C.) kirilli* **sp. nov.**, and *P. (C.) badzhaliensis* **sp. nov.** from the Badzhal Ridge in the northern Amur region; all are petrophiles inhabiting rocky highlands. A catalogue of seven petrophilous species of *Cryobius* from the Russian Far East is provided.

Key words: ground beetles, descriptions, petrophilic lifestyle, catalogue

Introduction

The subgenus *Cryobius* Chaudoir, 1838 of the genus *Pterostichus* Bonelli, 1810 unites more than 130 species from the arctic, subarctic and boreal regions of the Palearctic (115 species) and Nearctic (23 species) (Bousquet 2012, 2017), which mainly inhabit tundra and mountain landscapes. From the Russian Far East, 34 species are recorded, of which two are represented by two subspecies each, with 19 of them being described from the Far East. However, the Far Eastern fauna of *Cryobius* has been studied very unsatisfactorily. The complex taxonomy and the lack of modern revisions of this group of *Pterostichus* Bonelli, 1810 have led to the fact that the main taxonomic works on the subgenus are still the monographs of B. Poppius (1906) and G.E. Ball (1966), and the few more recent publications mostly describe new species (Tanaka 1958; Erjiomin 1990, 1998; Budarin 1995; Berlov & Berlov 1996; Lafer & Kuznetsov 1996; Sundukov 2013). In this paper, we describe three petrophilous *Cryobius* species from the southern Russian Far East, inhabiting rocky landscapes of the Amur highlands. Without taking into account the new species, in the Palearctic the petrophilous group to 8 species included: *P. negligens* (Sturm, 1824) (two subspecies in Central Europe), *P. planus* (J.R. Sahlberg, 1885) (Alaska and possibly the northern Russian Far East), *P. homalonotus* (Tschitschérine, 1894) (Mongolia), *P. kaninensis* Poppius, 1906 (two subspecies from northern Eurasia), *P. longipes* Poppius, 1906 (northeastern Eurasia), *P. sojot* Shilenkov, 2000 (four subspecies from the Eastern Sayan and Transbaikalia), *P. taskylensis* Shilenkov, 2000 (Sayan) and *P. glukhomanka* Sundukov, 2013 (middle Sikhote-Alin) (Shilenkov 2000a,b; Sundukov 2013; Bousquet 2017). They all share a slender and apterous body, long and slender legs, these being probable adaptations to living in rocky habitats in zonal or mountain tundra.

Materials and methods

Standard methods were applied for treating the material. Genitalia were placed in glycerol. External characters and genitalia were studied with the use of MBS-1 stereomicroscope. Pictures were taken using a Canon EOS 5D Mark III camera with a Canon MP-E 65 mm objective lens and a Canon EOS 60D.

The abbreviations in the text are as follows:

EL—greatest length of elytra measured from scutellum to apex of elytra;

EW—greatest width of elytra;

HL—length of head, measured along median line from anterior margin of clypeus to posterior margin of temples;

HW—greatest width of head across eyes;

L—length of body from apex anterior margin of clypeus to apex of elytra;

Ls—the sum of HL, PLm and EL;

PA—width of pronotal apex measured between anterior angles;

PB—width of pronotal base measured between posterior angles;

PLm—length of pronotum, measured along median line;

PLt—length of pronotum from apex of anterior angle to apex of posterior angle;

PW—greatest width of pronotum;

M—arithmetic mean [All measurements are in mm.].

The type material is deposited in the Bioresource Collection of the Federal Scientific Centre of East Asia Terrestrial Biodiversity of the Far East Branch of the Russian Academy of Sciences (reg. number 2797657).

Systematics

Pterostichus (Cryobius) storozhenkoi Sundukov, sp. nov.

(Figs 1–5)

Type locality. RUSSIA, Khabarovsk Krai, Sikhote-Alin Mts, Tardoki-Yani Mt., 48.901837 N, 138.075219 E.

Type material. **Holotype**, ♂ with labels: “Sikhote-Alin, Tardoki-Yani Ridge, rocky placers, 19.VI.1980, leg. A. Plutenko / 1600–1700 m, western exposure slope” (in Russian); “HOLOTYPUS *Pterostichus (Cryobius) storozhenkoi* sp. n. det. Yu. Sundukov 2025” [FEB]. **Paratypes**, ♀, “Sikhote-Alin, Tardoki-Yani Ridge, rocky placers, 19.VI.1980, leg. A. Plutenko / 1600–1700 m, western exposure slope” (in Russian), “PARATYPUS *Pterostichus (Cryobius) storozhenkoi* sp. n. det. Yu. Sundukov 2025” [FEB]; 3♀, “Sikhote-Alin, Tardoki-Yani Ridge, tundra, 1925 m, 24.VI.1980, leg. A. Plutenko (in Russian); “PARATYPUS *Pterostichus (Cryobius) storozhenkoi* sp. n. det. Yu. Sundukov 2025” [FEB].

Description. Body slightly convex. Length 7.10–7.45 mm, width 2.35–2.51 mm.

Body black; antennae, palps, mandibles and legs brownish-red, femora are often darkened.

Dorsal side of head almost smooth, with very weak isodiametric meshes on the occiput; pronotum almost glossy, with uneven areas of very weak transverse meshes; elytra with superficial short transverse meshes, more distinct in females.

Measurements: HW 1.25–1.40 (M 1.32); HL 0.88–0.93 (M 0.90); PA 1.25–1.33 (M 1.28); PW 1.80–1.95 (M 1.88); PB 1.21–1.33 (M 1.30); PLt 1.64–1.71 (M 1.68); PLm 1.55–1.65 (M 1.60); EW 2.35–2.51 (M 2.42); EL 3.80–4.35 (M 4.09); Ls 6.34–6.94 (M 6.67); L 7.10–7.45 (M 7.34).

Head small, convex, rather short, HW/HL 1.39–1.51 (M 1.47). Eyes relatively large, hemispherical. Temples short, about 1/3 longitudinal diameter of eye. Frontal grooves short, moderately deep, widely groove-shaped, weakly diverging backwards, starting from anterior supraorbital seta, distinct on clypeus. Frontoclypeal suture thin, distinct. Clypeus trapezoidal with slightly concave anterior margin and single seta on each side. Labrum transverse, with 6 setae along anterior margin. Mandibles short, strong. Tooth of mentum short, a third as long as lateral lobes, concave at apex. Antennae rather thick, moderately long, in males and females they extend beyond the base of pronotum by 2.5 apical segments.

Pronotum elongate-cordate, rather large (PW/HW 1.36–1.50, M 1.43; EW/PW 1.25–1.32, M 1.28), slightly wider than long (PW/PLt 1.07–1.15, M 1.12), with maximum width in anterior third. Anterior margin barely concave, anterior angles barely protruding, widely rounded at apex. Sides moderately convex in front, before posterior angles moderately concave or almost rectilinear. Base rectilinear and narrow (PW/PB 1.41–1.48, M 1.44; PB/PA 0.95–1.06, M 1.01). Posterior angles acute, pointed at apex, slightly projecting laterally. Disc moderately convex up to narrow lateral margin, slightly flattened middle. Median line thin, distinct. Anterior transverse impression weak.

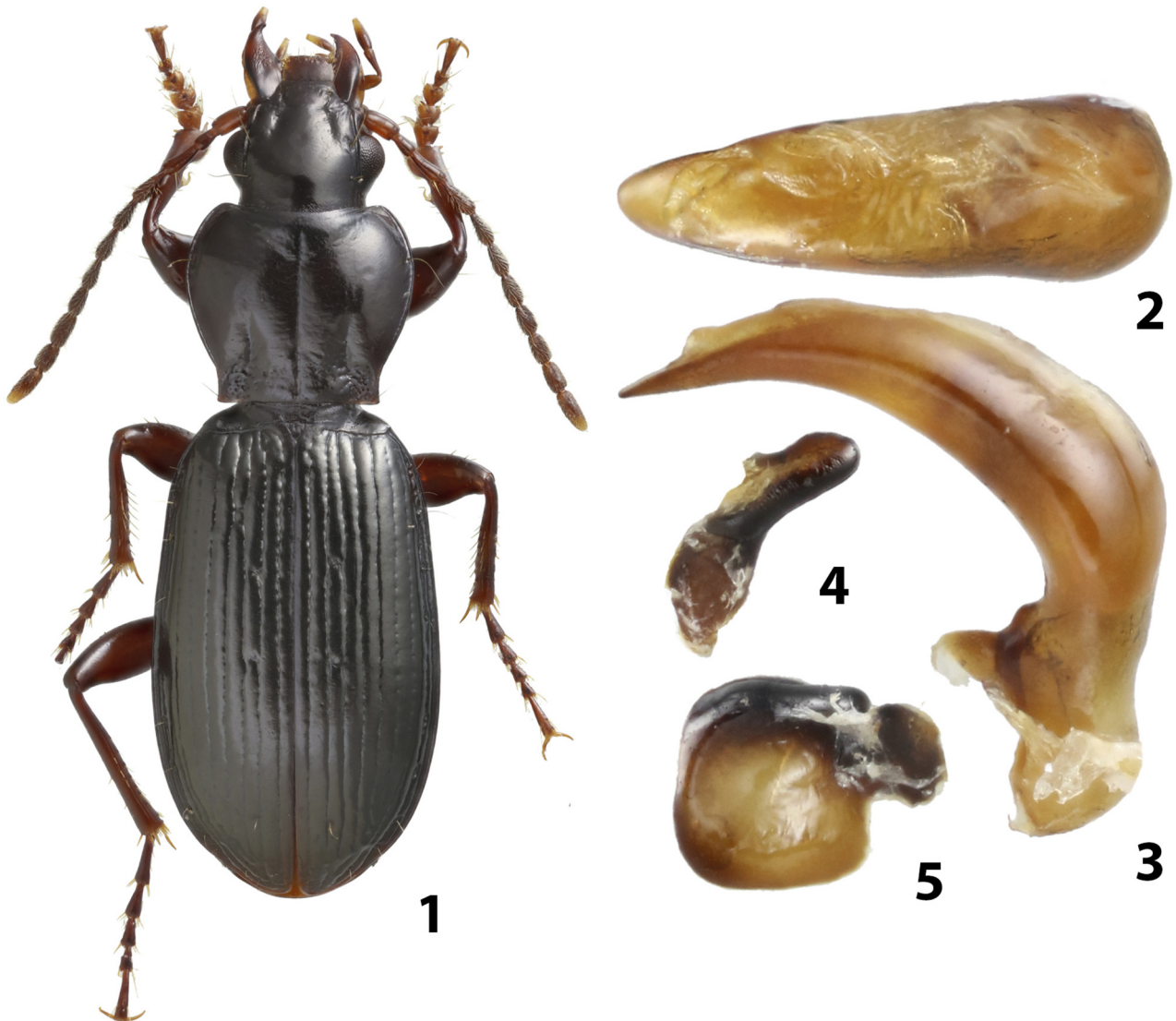
Two basal foveae on each side, inner deep, parallel or slightly arcuate, running on about basal third, outer short, rounded, completely fused to inner ones. Punctuation present only in basal foveae. Two setae on each side: in front of maximum width and in posterior angles.

Elytra moderately convex, long (EL/EW 1.62–1.73, M 1.69; EL/PLt 2.32–2.54, M 2.43) and narrow, slightly elliptic to subovate, widest two thirds from base. Disc convex, weakly convex in middle. Humeri broadly rounded, not protruding, with small tooth; basal ridge weakly concave. Striae complete, straight, moderately deep, finely punctate. Intervals 1–5 moderately convex, outer ones flattened. Parascutellar striole indistinct or absent. Parascutellar setigerous pores absent. 3rd interval with 3 large discal pores: anterior usually near 3rd stria (rarely at middle of interval or at 2nd stria), intermediate and posterior proximate to 2nd stria. Umbilical seta series consisting of 9–10 setae: 5–6 in humeral group and 4 at apex. Preapical notches very weak. Apterous.

Legs moderately long, relatively slender. Middle and hind femora with 2 setae along posterior margin. Hind coxae with 3–4 setae. Trochanters with 1 seta. Metepisternum short: 1.10–1.15 times longer along outer margin than width along anterior margin. Tarsomere 5 with thin ventral setae in apical half.

Pro-, meso-, metepisternum, mesoventrite/mesosternum and sides of 1st and 2nd visible abdominal sternites sparsely punctate. Intercoxal process of prosternum not bordered, rounded at apex. Anal sternite in male with 2 setae at apex, in female—with 4 setae.

Aedeagus (Figs 2–5). Median lobe thickened in basal part, moderately curved ventrally in basal part and weakly before apex. Apical lamella short, narrowed towards apex; its length about 3 times less than diameter of aedeagus in basal part.



FIGURES 1–5. *Pterostichus (Cryobius) storozhenkoi* Sundukov **sp. nov.**, holotype, male; 1—habitus, dorsal view; 2—median lobe of aedeagus, dorsal view; 3—median lobe of aedeagus, right lateral view; 4—right paramere; 5—left paramere.

Etymology. The name is given in honor of the well-known Russian entomologist and hero of the day Sergey Yurievich Storozhenko.

Distribution. Known only from the type locality.

Habitat. Inhabits high-mountain rocky tundra.

Differential diagnosis. *Pterostichus storozhenkoi* sp. nov. is closest to *P. glukhomanka* Sundukov, 2013, which is widespread in the highlands of the Middle Sikhote-Alin. The new species differs from the latter in its smaller body size, the presence of only three (vs. 4–5) discal pores in the third interval of the elytra, punctate episterna, mesothorax, and lateral margins of the first and second visible sternites of the abdomen (in *P. glukhomanka* the entire lower side is impunctate), as well as by larger eyes and indistinctly punctate striae of the elytra.

***Pterostichus (Cryobius) kirilli* Sundukov, sp. nov.**

(Figs 6–10)

Type locality. RUSSIA, Khabarovsky Krai, Badzhal Ridge, source of the Omot-Makit River, 50.505559 N, 134.273428 E.

Type material. Holotype. ♂ with labels: “Khabarovsky Krai, Badzhal Ridge, source of the Omot-Makit River, 1800–2100 m, 7–19.VII.1997, leg. Yu. Sundukov (in Russian); “HOLOTYPUS *Pterostichus (Cryobius) kirilli* sp. n. det. Yu. Sundukov 2025” [FEB]. **Paratypes**, 5♂, 5♀, “Khabarovsky Krai, Badzhal Ridge, source of the Omot-Makit River, 1800–2100 m, 7–19.VII.1997, leg. Yu. Sundukov (in Russian); “PARATYPUS *Pterostichus (Cryobius) kirilli* sp. n. det. Yu. Sundukov 2025” [FEB].

Description. Body slightly convex. Length 7.00–7.70 mm, width 2.35–2.65 mm.

Black; protarsi, palps, mandibles and partially antennae reddish.

Dorsal side of head almost smooth, with very weak isodiametric meshes on the occiput; pronotum almost glossy, with areas of very weak transverse meshes; elytra with weak short transverse meshes, more distinct in females.

Measurements: HW 1.33–1.40 (M 1.36); HL 0.90–0.95 (M 0.94); PA 1.28–1.38 (M 1.33); PW 1.78–1.93 (M 1.87); PB 1.30–1.43 (M 1.36); PLt 1.50–1.75 (M 1.64); PLm 1.43–1.65 (M 1.54); EW 2.35–2.65 (M 2.54); EL 3.80–4.38 (M 4.14); Ls 6.20–7.00 (M 6.73); L 7.00–7.70 (M 7.49).

Head small, convex, rather short, HW/HL 1.42–1.47, M 1.45. Eyes small, convex. Temples rather long, more than 1/2 longitudinal diameter of eye. Frontal grooves short, moderately deep, widely groove-shaped, almost parallel, starting from anterior supraorbital seta, indistinct on clypeus. Frontoclypeal suture thin, distinct or weak. Clypeus trapezoidal, with slightly concave anterior margin and single seta on each side. Labrum transverse, with 6 setae along anterior margin. Mandibles short, strong. Tooth of mentum short, a half as long as lateral lobes, wide, truncated-concave at apex. Antennae relatively thin, moderately long, in males they extend beyond the base of pronotum by 3 apical segments, in females—by 2.5 segments.

Pronotum cordate or slightly elongate-cordate, relatively small (PW/HW 1.34–1.40, M 1.37; EW/PW 1.32–1.40, M 1.36), slightly wider than long (PW/PLt 1.08–1.18, M 1.14), with maximum width 3/5 from base. Anterior margin barely concave, anterior angles barely protruding, rounded at apex. Sides rather strongly or moderately convex, moderately or slightly concave before posterior angles. Base narrow (PW/PB 1.32–1.43, M 1.38; PB/PA 1.02–1.04, M 1.02), rectilinear or very slightly concave. Posterior angles acute, pointed at apex. Disc slightly or moderately convex to narrow lateral edges. Median line thin, distinct. Anterior transverse impression distinct, deep. Two basal foveae on each side: inner deep, wide, parallel or slightly arcuate, running on about basal 1/2–2/5, outer small, separated from inner by thin, slightly raised keel. Puncturation present only in basal foveae. Two setae on each side: in front of maximum width and in posterior angles (holotype has two anterior setae on left side of pronotum).

Elytra moderately convex, elongated-oval (EL/EW 1.60–1.68, M 1.63; EL/PLt 2.44–2.61, M 2.52), widest two thirds from base. Disc uniformly, moderately or weakly convex. Humeri broadly rounded, not protruding, with small tooth; basal ridge rectilinear or weakly concave. Striae complete, straight, moderately deep, indistinctly punctate. Intervals 1–5 moderately convex, outer ones flattened. Parascutellar striole absent or barely indicated by weak stroke at apex of 2nd interval. Parascutellar setigerous pores present—at base of stria 2 or in 2nd interval. 3rd interval with 2 small discal pores in apical half of elytron, located at 2nd stria; anterior pores absent. Umbilical seta series consisting of 10–11 setae: 6 in humeral group and 4–5 at apex. Preapical notches very weak. Apterous.

Legs long and slender. Middle and hind femora with 2 setae along posterior margin. Hind coxae with 3 setae.

Trochanters with 1 seta. Metepisternum short: 1.10–1.15 times longer along outer margin than width along anterior margin. Tarsomere 5 with thin ventral setae in apical half.

Pro-, meso-, metepisternum, mesoventrite/mesosternum and sides of 1st and 2nd visible abdominal sternites finely punctate. Intercostal process of prosternum not bordered, slightly pointed at apex. Anal sternite in male with 2 setae at apex, in female—with 4 setae.

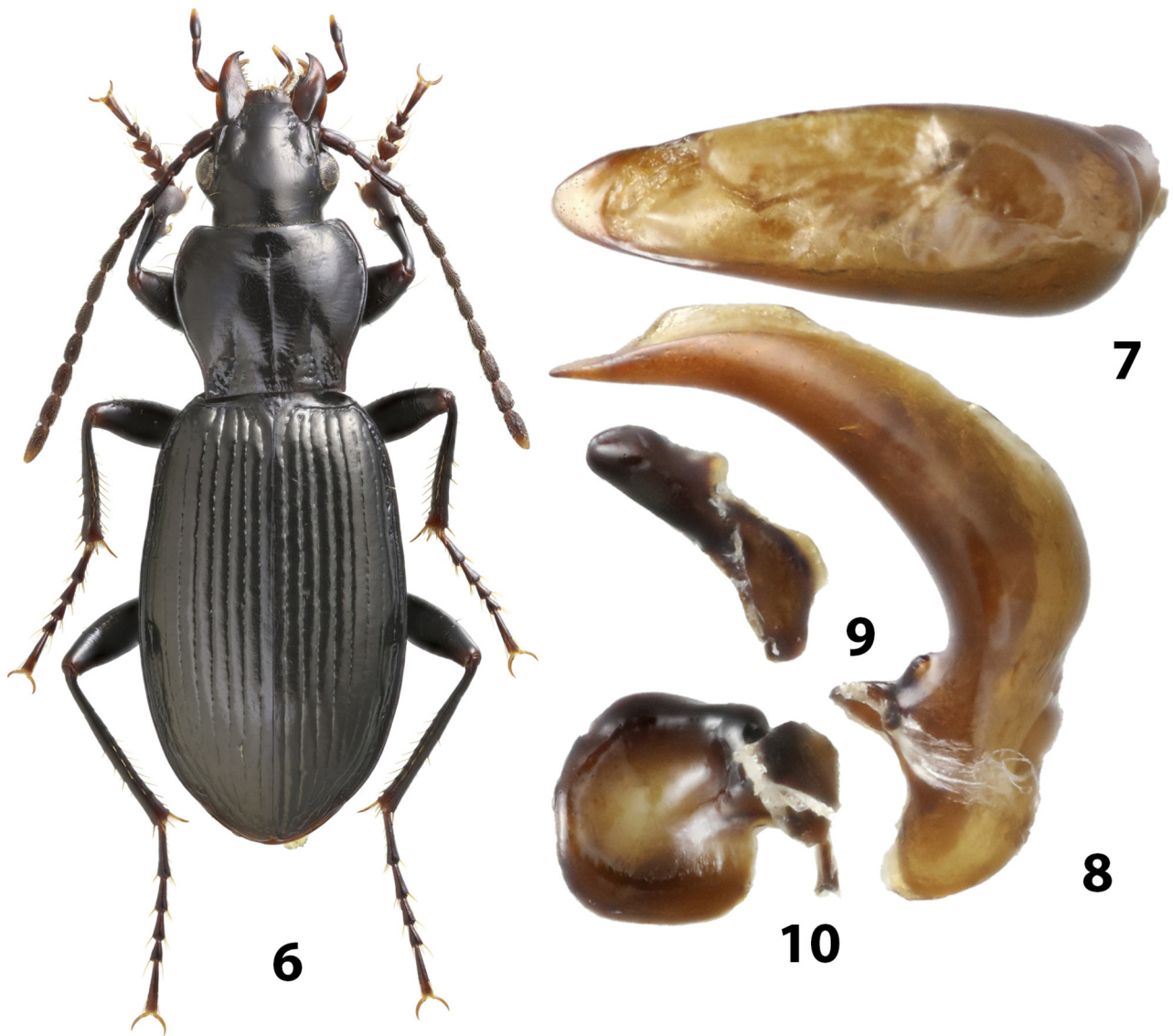
Aedeagus (Figs 7–10). Median lobe rather slender, moderately curved ventrally in basal part and weakly before apex. Apical lamella short, with rounded apex; its length about 3 times less than diameter of aedeagus in basal part.

Etymology. The name given after famous Russian entomologist Kirill Vladimirovich Makarov.

Distribution. Known only from the type locality.

Habitat. The beetles live in the alpine zone: on rocky watersheds and northern slopes, as well as among stones at streamheads. They live together with *P. badzhaliensis* sp. nov.

Differential diagnosis. *Pterostichus kirilli* sp. nov. is closest to the arctic-boreal *P. longipes* Poppius, 1906, different in the predominantly red or blackish-red coloration of the body appendages, the sides of the pronotum rectilinear and short before the posterior angles, longer and narrower meshes of the elytral microsculpture, impunctate striae, and the absence of parascutellar setigerous pores of the elytra in the Far Eastern specimens.



FIGURES 6–10. *Pterostichus (Cryobius) kirilli* Sundukov sp. nov., holotype, male; 6—habitus, dorsal view; 7—median lobe of aedeagus, dorsal view; 8—median lobe of aedeagus, right lateral view; 9—right paramere; 10—left paramere.

***Pterostichus (Cryobius) badzhaliensis* Sundukov, sp. nov.**

(Figs 11–15)

Type locality. RUSSIA, Khabarovsky Krai, Badzhal Ridge, source of the Omot-Makit River, 50.505559 N, 134.273428 E.

Type material. **Holotype**, ♂ with labels: “Khabarovsky Krai, Badzhal Ridge, source of the Omot-Makit River, 1800–2100 m, 7–19.VII.1997, leg. Yu. Sundukov (in Russian); “HOLOTYPUS *Pterostichus (Cryobius) badzhaliensis* sp. n. det. Yu. Sundukov 2025” [FEB]. **Paratypes**, 5♀, “Khabarovsky Krai, Badzhal Ridge, source of the Omot-Makit River, 1800–2100 m, 7–19.VII.1997, leg. Yu. Sundukov (in Russian); “PARATYPUS *Pterostichus (Cryobius) badzhaliensis* sp. n. det. Yu. Sundukov 2025” [FEB].

Description. Body slightly convex. Length 8.80–9.15 mm, width 2.90–3.10 mm.

Body black; antennae, palps, major of mandibles and labrum (entirely or on sides) brownish-red; legs entirely brownish-red or reddish-black.

Dorsal microsculpture of head very unclear isodiametric or indistinct; pronotum almost smooth, with areas of very weak transverse meshes over the entire surface; elytra with microsculpture from very narrow and long meshes.

Measurements: HW 1.40–1.55 (M 1.49); HL 1.10–1.13 (M 1.11); PA 1.38–1.50 (M 1.43); PW 2.13–2.28 (M 2.18); PB 1.40–1.58 (M 1.48); PLt 1.88–2.08 (M 1.98); PLm 1.58–1.98 (M 1.80); EW 2.90–3.10 (M 3.03); EL 4.63–4.90 (M 4.76); Ls 7.63–8.08 (M 7.85); L 8.80–9.15 (M 9.00).

Head small, convex, short (HW/HL 1.27–1.41; M 1.34). Eyes small, moderately convex or flattened. Temples rather long, slightly shorter or equal longitudinal diameter of eye. Frontal grooves short, deep, rather wide, parallel, starting from anterior supraorbital seta, indistinct on clypeus in holotype, distinct in paratypes. Frontoclypeal suture thin, distinct. Clypeus trapezoidal, with slightly concave or straight anterior margin; with one seta on each side. Labrum transverse, with 6 setae along anterior margin (inner four proximate). Mandibles rather large and wide, about as long as head from frontoclypeal suture to posterior margin of temple. Tooth of mentum short, about a third as long lateral lobes, concave at apex. Antennae rather thin, long, extended by 4.5–5 or 4 apical segments beyond the base of pronotum in male and female, respectively.

Pronotum elongate-cordate, rather large (PW/HW 1.37–1.55; M 1.46; EW/PW 1.36–1.42; M 1.39), slightly wider than long (PW/PLt 1.09–1.13; M 1.10), with maximum width before middle. Anterior margin very slightly concave, anterior angles slightly protruding, rounded at apex. Sides rather strongly or moderately convex, before posterior angles widely concave or long-rectilinear. Base narrow (PW/PB 1.38–1.54; M 1.48; PB/PA 1.00–1.11; M 1.04), almost rectilinear. Posterior angles acute, pointed at apex, drawn back and to the side. Disc moderately convex to narrow lateral margin, slightly flattened middle. Median line thin, distinct. Anterior transverse impression weak. Two basal foveae on each side, inner deep, slightly arcuate, striate at bottom, running on about basal 2/5, outer indistinct, completely fused to inner ones. Puncturation present only in basal foveae. Two setae on each side: anterior seta significantly in front of maximum width (1/5 distance from anterior to posterior angle) and posterior in posterior angle.

Elytra moderately convex, oblong-oval or weakly ovate, moderate long (EL/EW 1.50–1.61; M 1.57; EL/PLt 2.34–2.48; M 2.41), with maximum width of 3/5 from base. Disc uniformly convex. Humeri strongly rounded, not protruding, with distinct tooth; basal ridge rectilinear. Striae complete, straight, moderately deep, impunctate. Intervals 1–6 weakly convex, outer ones flattened. Parascutellar striole absent. Parascutellar setigerous pores absent. Third interval with 3 small setigerous discal pores: anterior at 3rd stria, 2nd at 2nd stria, posterior at either 2nd or 3rd, but 4 setae present on left elytron in holotype and on right in one paratype. Umbilical seta series consisting of 10–13 setae: 6–7 in humeral group and 4–6 at apex. Preapical notches very weak. Apterus.

Legs long and slender. Middle and hind femora with 2 setae along posterior margin. Hind coxae with 3 setae. Trochanters with 1 seta. Metepisternum short: 1.2–1.3 times as long at outer margin than wide at anterior margin. Tarsomere 5 with thin ventral setae in apical half.

Pro-, meso-, metepisternum and mesoventrite/mesosternum rather densely punctate. Intercostal process of prosternum not bordered, rounded at apex. Anal sternite of male with 2 setae at apex, in female—with 4 setae.

Aedeagus (Figs 12–15). Median lobe thick, short, slightly curved ventrally. Apical lamella very short, slightly curved to the right, broadly rounded at apex; its length about 4 times less than diameter of aedeagus in basal part.

Etymology. Toponymic, refers to the Badzhal Range, as the type locality of the new species.



FIGURES 11–15. *Pterostichus (Cryobius) badzhaliensis* Sundukov **sp. nov.**, holotype, male; 11—habitus, dorsal view; 12—median lobe of aedeagus, dorsal view; 13—median lobe of aedeagus, right lateral view; 14—right paramere, 15—left paramere.

Distribution. Known only from the type locality.

Habitat. The beetles live syntopically with *P. kirilli* sp. nov. in the alpine zone: on rocky watersheds and northern slopes, as well as among stones at streamheads.

Differential diagnosis. In our opinion, *P. badzhaliensis* sp. nov. is close to *P. negligens*, *P. homalonotus*, *P. kaninensis* and *P. sojot*, which are widespread in the mountains of Europe, Mongolia and South Siberia. Morphologically, the new species is closest to *P. sojot khulugaicus* Shilenkov, 2000, described from the Tunkinskie Goltsy Mountains (Eastern Sayan), but the latter is characterized by the absence of humeral teeth, shorter antennae, and different median lobe structure. The closest geographically *P. sojot suvorovi* Shilenkov, 2000 (mountains of South Transbaikalia) differs from the new species in its completely reddish-brown legs, shorter antennae, and different median lobe structure. Of the Far Eastern species, *P. badzhaliensis* sp. nov. is most closely related to the arctic-boreal *P. kaninensis kurnakovi* Ball, 1966. The latter differs from the new species by a smaller body (Ls = 6.1–6.4 vs. 7.6–8.1), shorter antennae (extending beyond the base of the pronotum by four apical segments in males and by three in females), mandibles (shorter than the head), the elytra with parascutellar setigerous pores, a longer and slender penis. From all other Far Eastern petrophilous *Cryobius* species, *P. badzhaliensis* sp. nov. differs by its long mandibles, short and robust median lobe, and by larger body.

Conclusion

With three species described, petrobiotic *Cryobius* amounts to seven species in the Russian Far East. A catalogue of these species is provided below.

Pterostichus (Cryobius) badzhaliensis Sundukov, sp. nov.

Pterostichus (Cryobius) badzhaliensis Sundukov, sp. nov. Type locality: Source of the Omot-Makit River, 1800–2100 m, Badzhhal Range, Khabarovskiy Krai, Russian Far East.

Distribution. East Asian species: Russia, Khabarovskiy Krai, highlands of the Badzhhal Range.

Pterostichus (Cryobius) glukhomanka Sundukov, 2013

Pterostichus (Cryobius) glukhomanka Sundukov, 2013: 36–38, 137, figs 40, 41. Type locality: Glukhomanka Mt., 1350–1450 m, Sikhote-Alin Mts., Primorsky Krai, Russian Far East.

Distribution. East Asian species: Russia, Primorsky Krai, Sikhote-Alin, highlands of the Dal'niy Range.

Records. Primorsky Krai (Sundukov 2013, 2019, 2023; Sundukov & Makarov 2021).

Pterostichus (Cryobius) kaninensis kurnakovi Ball, 1966

Pterostichus (Cryobius) kaninensis kurnakovi Ball, 1966: 62–63, figs 32, 143. Type locality: Omsuhtschan River, Kolyma District, Magadan Oblast, Russian Far East.

Distribution. Arcto-boreal East Palaearctic subspecies of the trans-Palaearctic species: Russia, Chukotka (including Wrangel Island), Magadan Oblast.

Records. Chukotka (Khruleva 1987; Sundukov & Makarov 2019), Magadan Region (Ball 1962, 1966; Budarin 1985).

Pterostichus (Cryobius) kirilli Sundukov, sp. nov.

Pterostichus (Cryobius) kirilli Sundukov, sp. nov. Type locality: Source of the Omot-Makit River, 1800–2100 m, Badzhhal Range, Khabarovskiy Krai, Russian Far East.

Distribution. East Asian species: Russia, Khabarovskiy Krai, highlands of the Badzhhal Range.

Pterostichus (Cryobius) longipes Poppius, 1906

Pterostichus (Cryobius) longipes Poppius, 1906: 20, 146–148. Type locality: “Olenek-Tal: Tundra bei Tyrija. Lena Tal: zwischen Shigansk und Bulun; Bulkur, ca 71° 50' n. Br.” (original citation), Olenek River, Bulun on the Aldan River, Zhigansk on the Lena River, all of Yakutia, Russia.

Distribution. Arcto-boreal East Palaearctic species: tundra from the Taimyr Peninsula and the Putorana Plateau in the west to north-eastern Yakutia and the Suntar-Khayata Range in the east, south to the mountains of northern Khabarovskiy Krai.

Records. Magadan Oblast (Kryzhanovskij *et al.* 1995; Sundukov 2019), Khabarovskiy Krai (Kryzhanovskij *et al.* 1995).

***Pterostichus (Cryobius) planus* (J.R. Sahlberg, 1885)**

Feronia (Pseudocryobius) plana J.R. Sahlberg, 1885: 50–51; 1887: 50–51. Type locality: Port Clarence, Alaska, USA.

Feronia (Cryobius) blaisdelli Van Dyke, 1943: 24–25. Type locality: “Nome, Alaska” (original citation), USA.

Distribution. Described and reliably known from only a few locations on Seward Peninsula, Alaska (Ball 1963, 1966).

Records. Both from Chukotka (Kryzhanovskij *et al.* 1995) and Magadan Oblast (Budarin 1985), Russia, require verification.

***Pterostichus (Cryobius) storozhenkoi* Sundukov, sp. nov.**

Pterostichus (Cryobius) storozhenkoi Sundukov, sp. nov. Type locality: Tardoki-Yani Range, 1600–1700 m, Northern Sikhote-Alin, Russian Far East.

Distribution. East Asian species: Russia, Khabarovsk Krai, Northern Sikhote-Alin, highlands of the Tardoki-Yani Range.

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