

A New Species of the Blister-Beetle Genus *Meloe* L. (Coleoptera, Meloidae) from Tajikistan

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Abstract—A new species, *Meloe* (*Meloe*) *kulabensis* sp. n., is described from southwestern Tajikistan (Kulob, = Kulyab). The new species is characterized by rather slender legs with an almost straight middle tibia, comparatively long and narrow tarsi, the 1st segment of the hind tarsus almost 5 times as long as wide, a comparatively large transverse eye diameter (the distance between the eyes are 3 times the transverse eye diameter), a free (not merging) punctuation, and a peculiar structure of the male genitalia. Similarly to *Meloe ovalicollis* Reitt., the new species bears a narrow brush of short and not dense hairs on the ventral surface of the 1st–4th segments of the fore tarsus. *Meloe ovalicollis* is recorded for the first time for Kazakhstan and Tajikistan.

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The fauna of the genus *Meloe* Linnaeus, 1758 of Middle Asia has been insufficiently studied. Many species are known in the literature only from descriptions and catalogs, including the *Catalogue of the Palearctic Meloidae* (Bologna, 2008). The descriptions in old publications are usually incomplete, which troubles diagnostics of the species. In the present paper, the data on the diagnostic characters and distribution of the little-known species *Meloe* (s. str.) *ovalicollis* Reitter, 1908 are supplemented, and *Meloe kulabensis* sp. n., closely related to this species, is described from southwestern Tajikistan. The type material of the new species is deposited in the collection of the Zoological Institute, Russian Academy of Sciences (St. Petersburg, ZIN).

Meloe (s. str.) *kulabensis* Shapovalov, sp. n.
(Figs. 1, 2, 4, 9, 11, 13, 16, 18)

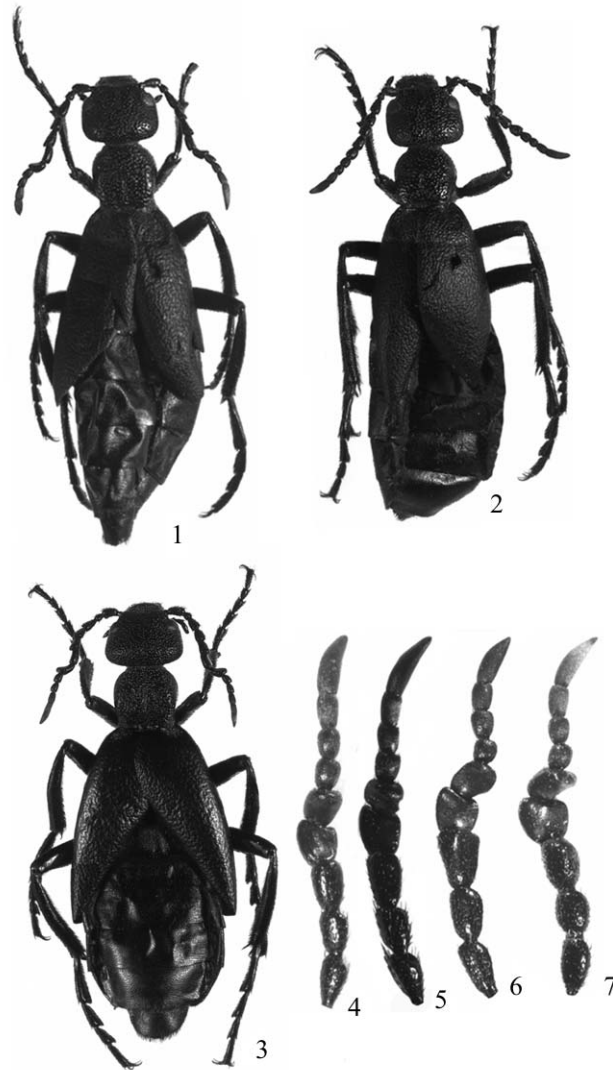
Material. Holotype, ♂: “[Tajikistan,] E Bukhara near Kulyab. Regel 4.V. [18]84.” (ZIN). Paratypes: 6 ♂, 9 ♀, as holotype; 1 ♀, “E Bukhara. Regel [18]84.” (ZIN).

Description. Holotype, male. Body length from outer margin of closed mandibles to apex of abdomen 17.6 mm, to elytral apex 12.5 mm; width of head 2.9 mm, width of pronotum 2.2 mm.

Body, antennae, mouthparts, and legs black with metallic dark blue tint; head, pronotum, and antennae with violet tint in places; mandibles black in apical part, reddish brown in basal part; apical part of

clypeus without metallic luster, yellowish brown. Elytra glabrous; pronotum dorsally and head with hardly visible short hairs; body ventrally, legs, and antennae with short brownish black hairs slightly longer at apex of clypeus and on mouthparts (on mandibles, only at base).

Head flat, nearly as long as wide: its length (from posterior margin to posterior margin of clypeus) to width ratio 1.16; frons with fine median furrow. Posterior margin of head straight; temples parallel, forming right angle with posterior margin; posterior angles rounded. Clypeus transverse, angularly projecting posteriorly at base, paler in apical third, transparent, without distinct punctuation and pubescence. Labrum transverse, with widely rounded sides. Mandible strong, obtused at apex, with small tooth in middle of inner margin. Eyes twice as long as wide, flat, with shallow emargination of inner edge; distance between eyes 0.6 times width of head behind eyes, 3 times diameter of eye, and 1.6 times length of eye; distance from posterior margin of eye to that of head 1.2 times length of eye. Narrow part of gena (lora) seen between paramandibular fold of epicranium and outer margin of eye. Ultimate segment of maxillary palpus elongate, 2.1 times as long as wide. Antenna with 7th segment curved outwards; 5–7th segments widened; length ratio of antennal segments 1 : 0.5 : 0.96 : 0.77 : 0.96 : 0.96 : 0.83 : 0.48 : 0.51 : 0.64 : 1.38; their width ratio 1 : 0.85 : 1.14 : 1.21 : 1.42 : 1.71 : 1.57 : 0.92 : 0.85 : 0.92 : 0.92; length to width ratio 2.2 : 1.25 : 1.87 : 1.41 : 1.5 : 1.25 : 1.18 : 1.15 : 1.33 : 1.53 : 3.3.



Figs. 1–7. *Meloe* L.: (1–3) general view; (4–7) 3rd–11th antennal segments of male, lateral view [(1) *M. kulabensis* sp. n., male, holotype; (2) *M. kulabensis* sp. n., female, paratype; (3, 5) *M. ovalicollis* Reitt. (Syr-Darya Karatau); (4) *M. kulabensis* sp. n. (paratype); (6) *M. violaceus* Marsh. (Leningrad Prov.); (7) *M. proscarabaeus* L. (Orenburg Prov.)].

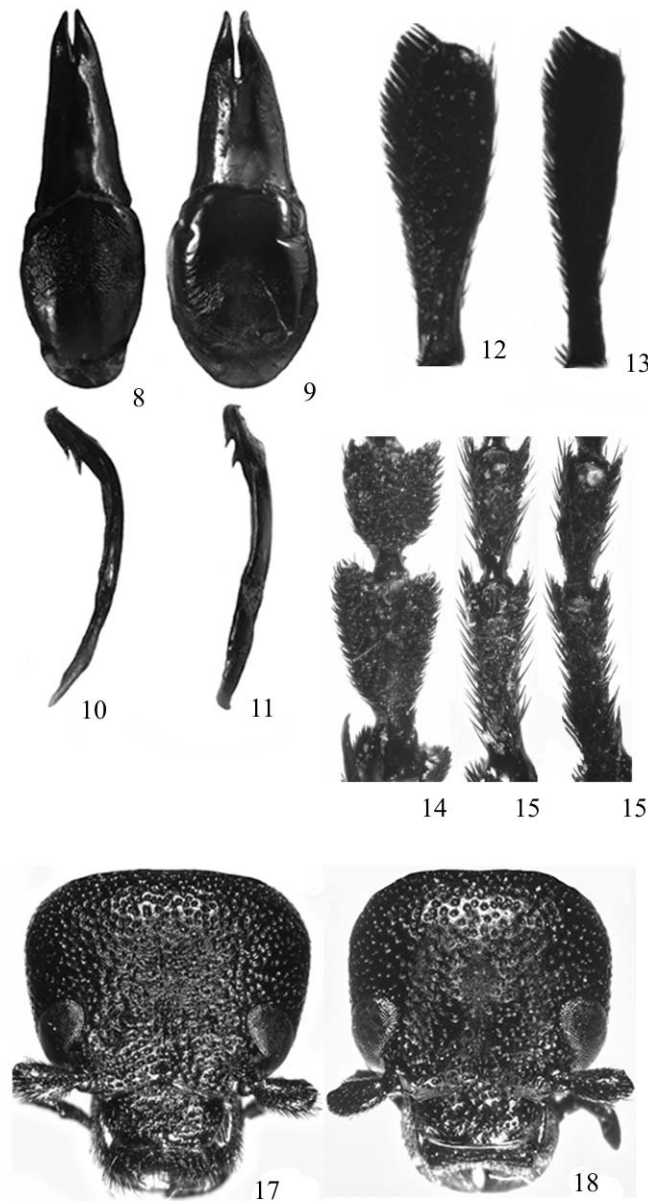
Punctures on head and pronotum deep but not merging and forming no wrinkles, slightly smaller on head than on pronotum.

Pronotum flat, elongate, 0.7–0.8 times as wide as head, as long as wide in apical part, 1.2 times as wide at apex than as base, with widely rounded anterior angles. Basal part of pronotum with shallow median depression not reaching base of pronotum and projecting slightly beyond its middle. Prosternum transverse, with widely triangular, obtuse process. Mesoventrite transverse, with median depression on apical triangular projection.

Legs relatively slender. Hind coxa rather long. Middle tibia nearly straight; fore and middle tibiae with

weakly and regularly curved outer margins. Outer spur of hind tibia thick, spoon-like widened in apical part. Tarsi rather long and narrow; fore tarsus 1.65 times as long as pronotum; 1st segment of hind tarsus attenuate at base. Length ratio of segments of fore tarsus 1 : 0.6 : 0.47 : 0.41 : 0.72, their width ratio 1 : 1 : 0.9 : 0.81 : 0.9, length to width ratio 4 : 2.5 : 2.3 : 2.2 : 3.5. Fore and middle tarsi 1.2 times as long as corresponding tibiae; hind tarsus 1.4 times as long as tibia. Undersides of tarsal segments each with narrow and sparse hairy brush marginate with long setiform hairs.

Elytra weakly convex, with fine and delicate wrinkles; intervals between wrinkles weakly convex, without distinct punctation and with dense microsculp-



Figs. 8–18. *Meloe* L.: (8, 9) parameres, dorsal view; (10, 11) aedeagus lateral view; (12, 13) 1st segment of hind tarsus, lateral view; (14–16) 1st and 2nd segments of fore tarsus, ventral view; (17, 18) head, front view [(8, 10, 12, 15, 17) *M. ovalicollis* Reitt. (Syr-Darya Karatau); (9, 11, 13, 16, 18) *M. kulabensis* sp. n. (paratype); (14) *M. proscarabaeus* L. (Orenburg Prov.)].

ture. Abdominal tergites with sparse delicate punctures and with ill-defined wrinkles; ventrites with slightly denser and deeper punctures; posterior margin of ventrite VII with shallow rounded emargination bearing laterally brushes of erect hairs.

Male genitalia as in Figs. 9, 11. Parameres and phallobase relatively wide; lobes elongate and slightly diverging apically; punctation of phallobase delicate, finely wrinkled.

Variability. In males, body length from outer margin of closed mandibles to apex of abdomen 14.5–20.3 mm, to elytral apex 10.6–14.1 mm; width of pronotum 2.0–2.7 mm; width of head 2.4–3.8 mm; fore tarsus 1.6–1.75 times as long as pronotum. In females, body length from outer margin of closed mandibles to apex of abdomen 19–25 mm, to elytral apex 12.1–17.3 mm; width of pronotum 2.4–3.5 mm; width of head 3.0–4.4 mm; fore tarsus 1.4–1.55 times as long as pronotum.

Eyes in males and females equal in size; distance from posterior margin of eye to posterior margin of head 1.2–1.45 times length of eye; eyes 1.8–2 times as long as wide. 5–7th antennal segments of males widened to various extent: 5th segment 1.35–1.53 times, 6th 1.7–2 times, and 7th 1.57–1.7 times as wide as 1st segment. In females, 5–7th antennal segments slightly widened.

Some punctures on pronotum occasionally merged, forming smoothed indistinct wrinkles; longitudinal depression in basal part of pronotum always pronounced but distinct to varying extent.

Fore tarsus 1.2–1.3 times as long as fore tibia in males and females. In males, fore tarsus 1.6–1.75 times as long as pronotum; in females, fore tarsus slightly shorter, 1.4–1.55 times as long as pronotum, length of tarsus proportional to that of tibia; in both sexes, fore tarsus 1.2 times as long as tibia. Length and width ratios of segments of fore tarsus similar in males and females; average length ratio of segments of fore tarsus 1 : 0.6 : 0.5 : 0.4 : 0.75, their width ratio 1 : 1 : 0.9 : 0.8 : 0.8, length and width ratio 4 : 2 : 2 : 2 : 3.5.

Comparative notes. *Meloe kulabensis* sp. n. is most similar to *M. ovalicollis* Reitter, 1908 (Reitter, 1908 : 246; type locality—Kirghizia, Lake Issyk Kul). The species corresponding to the description of *M. ovalicollis* (Fig. 3) is known to the author from the following collection material: **Kirghizia.** (1) “Naryn [...] 10/VII. [19] 04,” (2) “Herz.” 1 ♀ (ZIN). **Kazakhstan.** *South Kazakhstan Prov.*, Syr-Darya Karatau Mt. Range, Karatau State Nature Reserve, 32 km W of Sholakkorgan (= Chulakkurgan) Vill., 43°47'3.75"N, 68°46'41.24"E, ~ 1010 m a.s.l., 11–12.V.2014 (A.M. Shapovalov), 2 ♂, 1 ♀ (ZIN); Semirech'e (Krasnov), 1 ♂ (ZIN). **Tajikistan.** *Gorno-Badakhshan Autonomous Region*, Darvaz Mt. Range, Sagirbat mine, 3.VII.1983 (V.N. Prasolov), 1 ♂ (ZIN); *Dzhirgital'skii District*, northern slope of Peter the Great Mt. Range in tenvirons of Mingbulak kishlak, 16–17.V.2011 (A.S. Zubov), 1 ♀ (A.S. Zubov's collection, Kishinev). The species is recorded for the first time for Kazakhstan and Tajikistan.

On the Syr-Darya Karatau Mt. Range, *M. ovalicollis* was found at a height slightly exceeding 1000 m a.s.l., in the belt of mountain steppes. The beetles occurred in mesophytic meadow biotopes near a mountain river together with *M. proscarabaeus* L. In the lower parts of the Syr-Darya Karatau, in the belt of foothill de-

serts, *M. proscarabaeus* was also found in mesophytic biotopes, in particular, in the Bayaldyr River valley at heights of 600–800 m a.s.l.; however, *M. ovalicollis* was not found there. This means that *M. ovalicollis*, having the Turkestan range, does not descent below the steppe belt.

Meloe kulabensis sp. n. and *M. ovalicollis* are similar to *M. proscarabaeus* in the equal lengths of the male 5th and 6th antennal segments; while in the males of *M. violaceus* Marsh., the 5th antennal segment is longer than the 6th. However, in *M. proscarabaeus*, as well as in *M. violaceus*, the tarsi are wider, the undersides of segments of the fore and middle tarsi each bear a well-developed wide hairy brush without long setae along its margins (Fig. 14). In *M. kulabensis* sp. n. and *M. ovalicollis*, the tarsi are narrower; the undersides of the tarsal segments each bear a narrow sparse hairy brush marginate with long setiform hairs (Figs. 15, 16). The two latter species are also characterized by the presence of a more or less distinct median depression in the basal part of the pronotum, relatively weakly widened 5–7th antennal segments of the males (Figs. 4, 5), and finely wrinkled elytra. At the same time, these species clearly differ in a number of characters. In *M. ovalicollis*, the legs are rather thick; the middle tibia is curved along the outer margin; the tarsi are shorter and wider: the fore tarsus is 1.25–1.4 and 1.25–1.35 times as long as the pronotum in males and females, respectively; the 1st segment of the hind tarsus is thickened beyond its basal 1/5 (Fig. 12, lateral view), and its length is 3.3 times its maximum width; the eyes are narrower; the width of the frons between eyes is 3.6 times the eye diameter (Fig. 17); the pronotum is covered with large punctures partly merged in wrinkles; the parameres and phallobase are relatively narrow, conically narrowed apically; the phallobase is covered with rather coarse wrinkles (Fig. 8; the genitalia of 4 specimens were examined). In *M. kulabensis* sp. n., the legs are rather slender; the middle tibia is nearly straight; the tarsi are longer and more slender: the fore tarsus is 1.6–1.75 and 1.4–1.55 times as long as the pronotum in males and females, respectively; the 1st segment of the hind tarsus widens almost behind its basal 2/3 (Fig. 13, lateral view), its length being nearly 5 times its maximum width; the eyes are wider (Fig. 18); the width of the frons between eyes is 3 times the eye diameter; the punctuation of the pronotum is distinct but shallower, the punctures do not merge into wrinkles; the parameres and phallobase are

relatively wide; the lobes are elongate and slightly diverge apically; the punctation of the phallobase is delicate and finely wrinkled (Fig. 9; the genitalia of 7 specimens were examined).

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