New Caucasian species of soldier-beetles
(Coleoptera: Cantharidae)

Новые виды кавказских жуков-мягкотелок
(Coleoptera: Cantharidae)

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Abstract. Three new species of soldier-beetles of the genera Rhagonycha Eschscholtz, 1830 and Malthodes Kiesenwetter, 1852, Rh. araratica sp.n., Rh. ritsaensis sp.n. and M. lozovyi sp.n., are described from Armenia and Abkhazia.

Резюме. Из Армении и Абхазии описываются три новых вида жуков-мягкотелок из родов Rhagonycha Eschscholtz, 1830 и Malthodes Kiesenwetter, 1852, Rh. araratica sp.n., Rh. ritsaensis sp.n. и M. lozovyi sp.n.

Introduction

An opportunity to study the Cantharidae material collected in the Caucasus recently allows adding new species to the genera Rhagonycha Eschscholtz, 1830 and Malthodes Kiesenwetter, 1852, which belong in the subfamilies Cantharinae and Malthininae, respectively. These two genera are among the most wide-spread and species-rich in the Palaearctic realm [Kazantsev, Branducci, 2007]. While the Caucasian species of the first of the two genera, Rhagonycha, have not been reviewed yet, species of the second genus, Malthodes, were recently studied [Wittmer, 1992]. Two of the three new taxa described below were collected during the 2021 entomological expedition to Abkhasia: in Ritsa Relic National Park and at the Hodzhal Mountain area; the third species was collected in Khosrov Reserve in Armenia. The number of species registered in the region is thus increased from 34 in Rhagonycha and 23 in Malthodes [Kazantsev, 2012] to 35 and 24.

Material and methods

The studied specimens were glued on cardboard mounting plates. For detailed examination they were relaxed in water; then the detached ultimate abdominal segments were treated for several hours in 10 % KOH at room temperature for easier genitalia extraction, then the extracted genitalia were placed in microvials with glycerin for photographing.

MSP–1 zoom stereoscopic dissecting microscope with x8–x80 magnification range was used. Photographs were taken with Canon EOS 6D camera and Canon MP–E 65 mm lens.

The following acronym is used in the paper: ICM — Insect Center, Moscow.

Taxonomy

Cantharidae Imhoff, 1856 (1815)
Cantharinae Imhoff, 1856 (1815)
Cantharini Imhoff, 1856 (1815)

Rhagonycha Eschscholtz, 1830

Rhagonycha araratica Kazantsev, sp.n.
Figs 1–2.

Material. Armenia: Holotype — ♂, Ararat Distr., Khosrov reserve, 3.VI.1987, O. Lukashuk leg. (ICM).

Description. Male. Dark brown; head, except cheeks, black; pronotal sides, elytra, except at humeri, lateral margins and apices, and trochanters testaceous.

Vertex matt, finely and densely rugulose. Eyes small, interocular distance ca. 1.8 times greater than eye diameter. Clypeus short, rounded anteriorly. Palps slender; ultimate palpomeres elongate, weakly secundiform, widest in distal half.

Pronotum transverse, ca. 1.2 times wider than long, almost parallel-sided, with weakly concave in anterior two thirds sides, almost straight basally and inconspicuously convex anteriorly. Scutellum relatively brad, gradually narrowing distally and rounded at apex.
Elytra long, ca. 2.9 times longer than wide at humeri, slightly widening distally, with traces of oblique longitudinal costae, finely punctate proximally and tuberculate distally; pubescence short and sub-erect.

Legs long, slender; tibiae and femoris straight, narrow; hind tibiae noticeably longer than hind femoris.

Aedeagus elongate, with relatively slender straight parameres; dorsal plate with triangular elongate apex and trapezoidal pre-apical part (Figs 1–2).

Female. Unknown.

Length: 6.0 mm. Width (humerally): 1.5 mm.

Etymology. The new species is named after the locality where the holotype was collected.

Diagnosis. *Rhagonycha araratica* sp.n. resembles *Rh. holzschuhi* Wittmer, 1972, known only from central Turkey, from which it can be distinguished by the smaller size, only 6 mm compared to 9.5 mm in *Rh. holzschuhi*, as well as by the trapezoidal apex of the dorsal plate and straight parameres.
of the aedeagus (Figs 1–2), compared to parallel-sided apex and curved parameres in *Rh. holzschuhii* (Wittmer, 1972).

**Remarks.** Antennomeres 3–11 in the unique holotype are missing.

**Rhagonycha ritsaensis** Kazantsev, sp.n.
Figs 3–4.

**Material.** Abkhazia: Holotype — ♀, Ritsa Relic NP, NHW Avadkhara Sm, subalpine (zone), 45.548° N 40.657° E, 1800–2000 m a.s.l., 9.VII.2021, S. Kazantsev leg. (ICM); paratype ♀, N Sulkhum, Bëyb Mts, Chëdym Mt., N slopes, 43°19′47″ N 41°04′39″ E, 1670–2000 m a.s.l., 7.VII.2012, A. Prosvirnov leg. (ICM).

**Description.** Male. Testaceous; head, except at clypeus, and antennae black; tarsi dark brown.

Vertex matt, finely and densely rugulose, with somewhat larger scarce tubercles. Eyes small, interocular distance ca. 2.3 times greater than eye diameter. Clypeus short, rounded anteriorly. Palps slender; ultimate palpomeres elongate, weakly securiform. Antennae long, filiform, attaining to elytral apices, filiform; antennomere 3 ca. 2.1 times longer than antennomere 2 and ca. 1.2 times shorter than antennomere 4; antennomeres 3–11 with relatively dense, short, semi-erect pubescence.

 Penisapical transverse, ca. 1.1 times wider than long, with noticeably concave sides, conspicuously convex distally and almost straight anteriorly. Scutellum transverse, slightly narrowing distally and rounded at apex.

Elytra long, ca. 3.1 times longer than wide at humeri, widening distally, without longitudinal costae, finely punctate proximally and roughly rugulose distally; pubescence short and decumbent.

Legs long, slender; tibiae and femoris straight, narrow; hind tibiae noticeably shorter than hind femoris. Aedeagus semi-oval, with robust parameres; dorsal plate with triangular transverse apex and trapezoidal pre-apical part; median lobe with spinous inner sac (Figs 3–4).

**Etymology.** The species is named after Dr. Alexander Lozovoy (Moscow) who greatly contributed to the success of the 2021 Abkhazia expedition.

**Diagnosis.** *Malthodes lozovoyi* sp.n. is close to *M. nymholmi* Wittmer, 1970, distributed from northern Caucasus to Turkey, but is easily separable by the abruptly bent and conspicuously narrowed in the middle distal sternite, as well as by the rounded distal margin of the ventral plate of the aedeagus and distinctly widened in dorsal view laterophyses (Figs 5–8).

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