

## New data about ‘nalassoid’ genera from south-eastern Anatolia with description of a new species of *Zophohelops* (Coleoptera: Tenebrionidae)

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**Abstract.** *Zophohelops montanatolicus* sp. nov. (Coleoptera: Tenebrionidae: Helopini: Cyldrinitina), the first representative of this genus in Turkey, is described from south-eastern Anatolia. It is the second species known in the western part of the disjunct distribution range of the genus *Zophohelops* Reitter, 1902 (South Armenia and Hakkari Mountains; the eastern part covers Tien Shan Mts. and southern Tajikistan). New data about the distribution of *Helopocerodes* Reitter, 1922, the subgenus of the genus *Nalassus* Mulsant, 1854, in south-eastern Anatolia are given.

**Key words.** Coleoptera, Tenebrionidae, *Nalassus*, *Zophohelops*, distribution, new species, Turkey, Palaearctic Region

### Introduction

The ‘nalassoid’ lineage of the tribe Helopini (*Nalassus* genus-group of the subtribe Cyldrinitina) includes genera with weakly sclerotized aedeagus, simple structure of female genital tubes (spermatheca without short processes, short, not branched, with short gland) and their larvae are characterized by 8 marginal and 2 discal setae on dorsal side of labrum (NABOZHENKO 2005, NABOZHENKO & GURGENIDZE 2006, PURCHART & NABOZHENKO 2012).

The ‘nalassoid’ genera were represented in Turkey by *Nalassus* Mulsant, 1854, *Xanthomus* Mulsant, 1854 and *Pseudoprobaticus* Nabozhenko, 2001. However, the genus *Nalassus* with many species known from Turkey (NABOZHENKO 2001a, 2008a, 2011; KESKIN & NABOZHENKO 2010) needs a revision. *Pseudoprobaticus* is represented by a single species widespread in north-western Anatolia (NABOZHENKO 2001b, 2008b, 2013). One species of the genus *Xanthomus* with unclear status is found on the coast of the Aegean Sea (KESKIN & FERRER 2006). In the least explored part of Turkey, the south-eastern Anatolia, only several species of *Nalassus* have been recorded recently (NABOZHENKO 2001a, 2011).

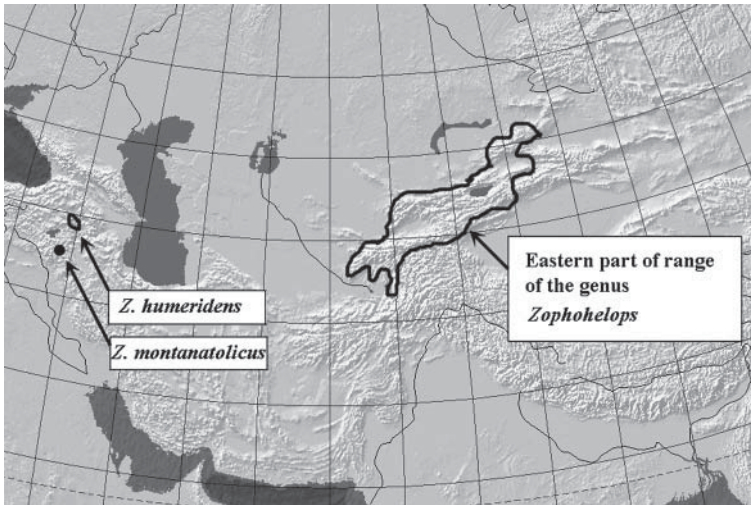


Fig. 1. Distribution of the genus *Zophohelops* Reitter, 1902

In 2010–2013, new material was collected during collecting trips to Van, Bitlis and Hakkari Provinces of Turkey. These specimens expanded our knowledge about Helopini of this extensive mountain region. The 'nalassoid' genus *Zophohelops* Reitter, 1902 was found in Turkey for the first time, while new records were made for the subgenus *Helopocerodes* of *Nalassus*. *Zophohelops* has a disjunct distribution range (Fig. 1) with 27 species widespread in Tien Shan Mts. (MEDVEDEV 1987, NABOZHENKO & LÖBL 2008, NABOZHENKO 2008c), one species described from southern Tajikistan (NABOZHENKO 2001b) and one species, *Z. humeridens* (Reitter, 1902), known from the alpine zone of southern Armenia (SEIDLITZ 1896; REITTER 1902, 1922; NABOZHENKO 2001b, 2004; ABDURAKHMANOV & NABOZHENKO 2011; LÖBL et al. 2013).

The new species, *Z. montanatolicus* sp. nov., as well as *Z. humeridens* inhabits wet meadows of the alpine zone. The new species was found under small stones lying on short grass. It is noteworthy that this species was found in habitats without lichens. Probably, unlike most species of the tribe Helopini, it does not feed on lichens. Phytophagy among Helopini is so far known for the xerophilous genera *Hedyphanes* Fischer von Waldheim, 1820, *Adelphinus* Fairmaire et Coquerel, 1866, and *Ectromopsis* Antoine, 1949 (NABOZHENKO 2007).

## Material and methods

The material was collected by the authors and their friends, and is deposited in the following institutes, museums and private collections:

MNRR Maxim Nabozhenko, Rostov-on-Don, Russia;

ZDEU Zoological Department of Ege University, İzmir-Bornova, Turkey;

ZIN Zoological Institute, Russian Academy of Sciences, Saint-Petersburg, Russia.

## Results

### Genus *Zophohelops* Reitter, 1902

#### *Zophohelops montanatolicus* sp. nov.

(Figs 2–9)

**Type material.** HOLOTYPE: ♂ (ZDEU) and PARATYPES (ZIN: 4 ♂♂ 3 ♀♀; ZDEU: 1 ♂ 2 ♀♀ (dry specimens), 3 ♂♂ 4 ♀♀ (in ethanol)); **TURKEY: HAKKARI PROVINCE:** ‘Berçelan Yayla, 3.06.2013, 2800 m, N37°38’11.6” / E43°45’20.2” (Leg. M.V. & S.V. Nabozhenko, B. Keskin, A. Pektaş).

**Description.** Body length 6–8 mm, width 3–3.3 mm.

**Male.** Body robust, dark brown, elytra almost black; pronotum and head shining, elytra dull. Head widest at level of eyes. Ratio of head width at level of eyes to distance between eyes 1.37. Eyes small, weakly convex, widely spaced. Anterior margin of clypeus straight, with weakly projected angles. Outer margin of head between genae and clypeus weakly sinuate. Head with moderately coarse and dense punctation (puncture diameters equal or little wider than distance between them). Surface of head with short recumbent hairs. Temple groove absent. Antennae short, antennomeres 10–11 extending beyond base of pronotum when directed backwards, antennomeres 8–11 more widened than others.

Pronotum transverse (1.3 times as wide as long), widest in middle, rectangular, 1.75 times as wide as head. Lateral margins and base of pronotum weakly rounded, anterior margin almost straight. Anterior angles of pronotum rounded, weakly obtuse. Disc moderately convex with narrowly flattened margins. Lateral and basal bead of pronotum thickened, anterior margin with narrow bead interrupted in middle. Punctation moderately coarse, not dense (puncture diameters 2–3 times lower than distance between them); punctures slightly elongated on sides of disc. Prothoracic hypomeron with very fine longitudinal wrinkles, outer margin distinctly flattened. Prosternal process very weakly convex, with small tubercle in apical part.

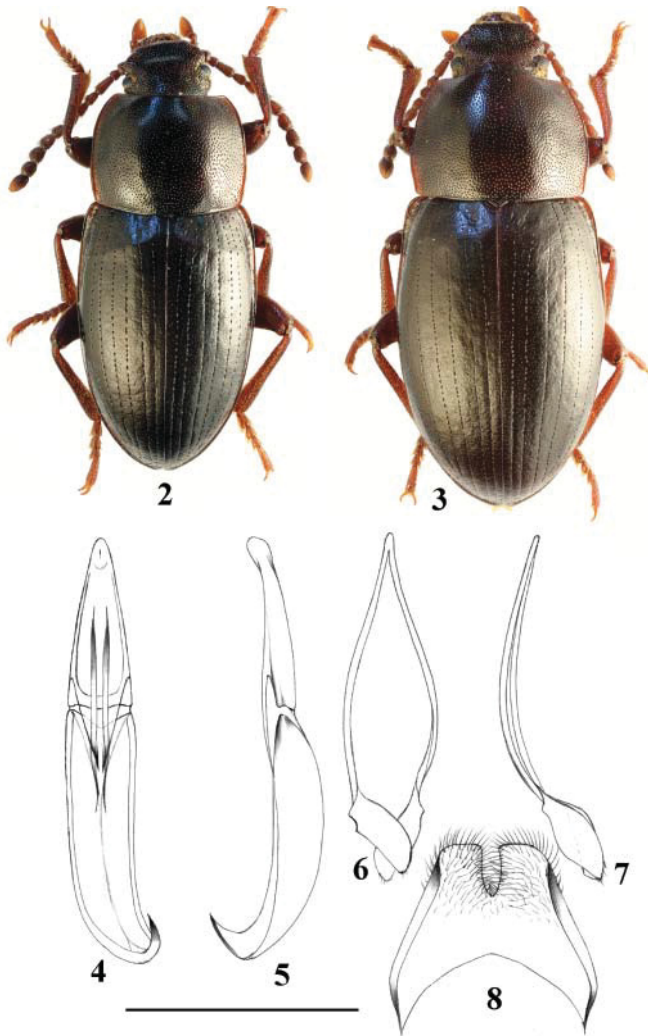
Elytra distinctly convex, moderately broad (1.4 times as wide as long), widest before middle, 1.14 times as wide and 2.17× as long as pronotum, 2× as wide as head. Punctures in striae oval, not connected in grooves; elytral intervals flat, with fine and sparse punctation. Intervals 1 and 9 connected at apex. Epipleural carina very wide, especially at base, completely visible dorsally, almost reaching elytral apex. Epipleura broad, depressed from base to half of length, almost reaching sutural angle.

Legs short, tibiae straight, densely pubescent on inner side. Protarsi not widened, tarsomeres 2 and 3 transverse. All trochanters with dense brush of short hairs.

Ventral side of body with short setation. Abdominal ventrites with fine punctation, ventrite 1 with small hair brush in middle, ventrite 5 beaded at apex.

**Female.** Body more robust, antennae shorter, pronotum widest behind middle, abdominal ventrite 1 without hair brush in middle.

**Differential diagnosis.** The new species is closely related to *Zophohelops protzenkoi* Skopin, 1964 (Tien Shan: Chatkal Range) which also has widened and dorsally visible epipleural carina and hair brush on the first abdominal ventrite. *Zophohelops montanatolicus* sp. nov. differs from *Z. protzenkoi* in robust body of male, pro- and mesotarsi of male not widened, shorter antennae and pronotum not sinuate at base. The new species also differs from *Zophohelops humeridens* (Reitter, 1902) in dark brown body with dull elytra (*Z. humeridens* has strongly



Figs 2–8. *Zophohelops montanatolicus* sp. nov. 2 – male; 3 – female; 4 – aedeagus, ventral view; 5 – same, lateral view; 6–7 – gastral spicula (6 – ventral view, 7 – lateral view); 8 – sternite VIII of male.

shining, lacquered body), pubescent head, presence of hair spot on the first abdominal ventrite of male, absence of protruded humeral angles in male, and dorsally visible epipleural carina in female.

**Etymology.** The name *montanatolicus* is formed from two words: *montanus* and *anatolicus*. Adjective.

**Habitat.** The species was found in high mountain alpine plateau under very small stones without lichens, in areas with very dense and short grass.



Fig. 9. Distribution of the genus *Zophohelops* and the subgenus *Helopocerodes* (*Nalassus*) in south-eastern Anatolia. Black circle – *N. faldermanni* (Faldermann, 1837); white circle – *N. kaszabi* Nabozhenko, 2001; square – *Z. montanaticus* sp. nov.

### Genus *Nalassus* Mulsant, 1854

This genus is represented in south-eastern Anatolia by 4 species (NABOZHENKO 2001a, 2011; KESKIN & NABOZHENKO 2010). Two species of the subgenus *Helopondrus* Reitter, 1922, *N. szalokii* Nabozhenko, 2011 and *N. schmalfussi* Nabozhenko, 2011, were revised by NABOZHENKO (2001a). New data about two species of the subgenus *Helopocerodes* Reitter, 1922 are presented below.

#### *Nalassus (Helopocerodes) kaszabi* Nabozhenko, 2001

**Material examined.** TURKEY: VAN PROVINCE: S Başkale, N 38°01'57.9"E 44°00'11.0", 6.–7.vi.2013, 2400 m a.s.l., M. V. and S. V. Nabozhenko, B. Keskin, A. Pektaş leg., 2 ♀♀ in ethanol (ZDEU).

**Distribution and habitat.** This species was described based on a single female from Ispiriz Dağ, 2750 m a.s.l. Additional two females were found in the same mountain ridge on stones with lichens at night (9 p.m.).

#### *Nalassus (Helopocerodes) faldermanni* (Faldermann, 1837)

**Material examined.** TURKEY: BITLIS PROVINCE: near Tatvan, N 38°28'59"E 42°19'39", 1750 m a.s.l., 24.v.2010, I. V. Shokhin leg., 8 specimens (ZIN, MNRR). VAN PROVINCE: Ereğdağ, N 38°25'53.1"E 43°29'03.6", 2077–2600 m

a.s.l., 1.vi.2013, M. V. and S. V. Nabozhenko, B. Keskin, A. Pektaş leg., 15 ♂♂ 10 ♀♀ (dry material), 18 ♂♂ 14 ♀♀ (in ethanol) (ZDEU), 19 ♂♂ 14 ♀♀ (dry material) (ZIN, MNRR).

**Distribution and habitat.** This species is widespread in eastern Anatolia (Fig. 9) and was recorded by NABOZHENKO (2001a) for Kars Province (Kağızman), and by KESKIN & NABOZHENKO (2010) for Van Province (Erçek Lake and Van Kale Castle). The species was found in Van Province in April on poplar (*Populus* sp.) and under stones. Additional material suggests that the western limit of distribution of *N. faldermanni* is Tatvan, and the southern limit in Anatolia is Erek Dağ.

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