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## New darkling beetles of the tribe Helopini (Coleoptera: Tenebrionidae) from Iran

## Новые жуки-чернотелки трибы Helopini (Coleoptera: Tenebrionidae) из Ирана

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**Key words:** Coleoptera, Tenebrionidae, *Nalassus*, *Zophohelops*, new species, new subgenus, Iran.

**Ключевые слова:** Coleoptera, Tenebrionidae, *Nalassus*, *Zophohelops*, новые виды, новый подрод, Иран.

**Abstract.** Two new species of darkling beetles are described from Northwestern Iran: *Nalassus* (*Helopondrus*) *rejseki* sp. n. from West and East Azerbaijan Provinces and *Zophohelops iranensis* sp. n. from Ardabil Province. The first species differs from other *Helopondrus* Reitter, 1922 by strongly widened 1–4 pro- and mesotarsomers of male and structure of median lobe baculi of male. *Zophohelops iranensis* sp. n. is the first representative of the genus in Iran. This species differs from other species of *Zophohelops* Reitter, 1902 by the structure of male aedeagus (dorso-ventrally flattened apical piece and very narrow median lobe baculi) and it is included in the new monotypic subgenus *Zophondrus* subgen. n.

**Резюме.** В статье описывается 2 новых вида чернотелок из Ирана: *Nalassus* (*Helopondrus*) *rejseki* sp. n. из провинций Западный и Восточный Азербайджан и *Zophohelops iranensis* sp. n. из провинции Ардабиль. Первый вид отличается от остальных видов подрода *Helopondrus* Reitter, 1922 сильно расширенными 1–4 про- и мезотарзомерами самца и строением бакулей пениса. *Zophohelops iranensis* sp. n. – первый представитель рода в Иране. Этот вид отличается от остальных видов *Zophohelops* Reitter, 1902 строением аedeгуса (дорсо-вентрально уплощенные парамеры и очень тонкие бакули пениса) и включен в новый монотипический подрод *Zophondrus* subgen. n.

### Introduction

Fauna of Iran includes representatives of 10 genera of the tribe Helopini. Genera *Nalassus* Mulsant, 1854, *Probatiscus* Seidlitz, 1896, *Hedyphanes* Fischer von Waldheim, 1820, *Catomus* Allard, 1876 are most diverse and widespread. Others genera (*Odocnemis* Allard, 1876, *Armenohelops* Nabozhenko, 2002, *Eustenomacidius* Nabozhenko, 2006, *Reitterohelops* Skopin, 1860, *Cylindrinotus* Faldermann, 1837, *Helops* Fabricius, 1775) are represented by single species distributed in peripheral regions of Iran [Bogachev, 1949; Medvedev, 2008; Nabozhenko, 2009; Nabozhenko, Keskin, 2013].

The genus *Nalassus* with 9 species from 2 subgenera is the most studied in Iran. Earlier reviews of the subgenera *Helopondrus* Reitter, 1922 [Reitter, 1922; Nabozhenko, 2010] and *Helopocerodes* Reitter, 1922 [Nabozhenko,

2006] were made. Representatives of the first subgenus are widespread in Talysh, Elburs and Kopet Dag (Gilan, Mazandaran, Golestan, Chorasani Provinces). Another species from this subgenus is described from Northwestern Iran (West Azerbaijan and East Azerbaijan Provinces).

Species of the genus *Zophohelops* Reitter, 1902 are widespread in Tien Shan, 2 species are described from Armenia, Nakhchivan (Azerbaijan) and Southeastern Turkey, 1 species is known from Southern Tajikistan [Medvedev, 1987; Nabozhenko, 2001, 2008; Nabozhenko, Keskin, 2014]. Recently we have suggested that wide disjunction of the range of *Zophohelops* is related with poorly studied tenebrionid fauna of Iran [Nabozhenko, 2013]. This suggestion is confirmed and here we describe a new species of this genus from high mountain region of Northern Iran. This species has all characters of the genus: temples without grooves anteriorly, epipleura not reaching elytral apex, 8<sup>th</sup> elytral interval not convex and connecting with other intervals apically. Unlike the other known species of the genus, a new *Zophohelops* has dorsoventrally flattened parameres that allows to include it in the separate subgenus *Zophondrus* subgen. n. Parameres of other species of the genus are transformed apically to laterally flattened keel [Nabozhenko, 2008; Nabozhenko, Keskin, 2014].

The study is based on the examination of adult beetles from the following museums:

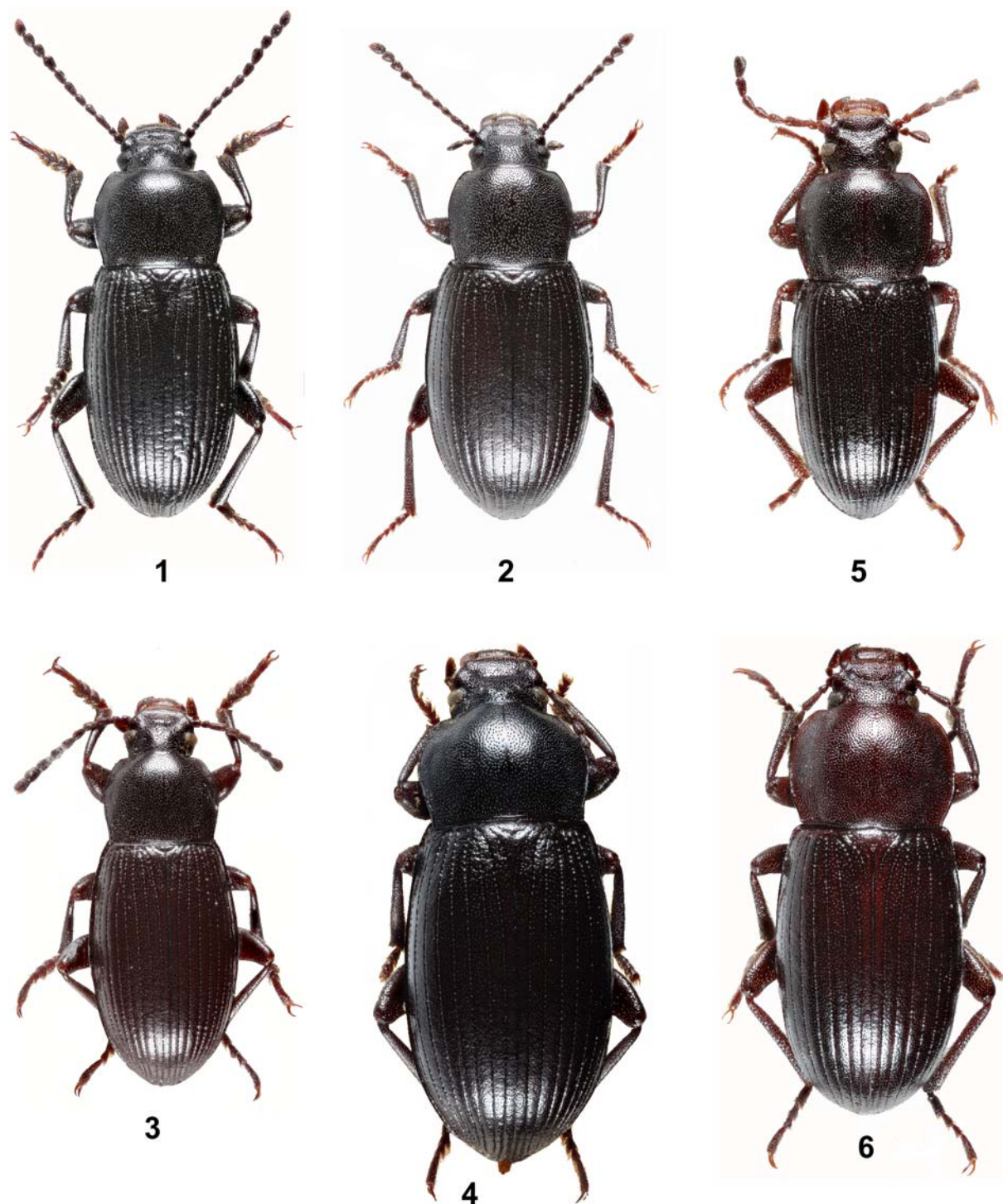
NMP – Národní Museum, Prague;

SNMS – Staatliches Museum für Naturkunde, Stuttgart.

*Nalassus* (*Helopondrus*) *rejseki* sp. n.  
(Figs 1–4, 7–10, 15)

**Material.** Holotype, ♂ (NMP): Iran, Azerbaijan-e Sharqi Prov. [East Azerbaijan Province], Gol Tappeh (stream, at light), 37°14.0'N / 46°24.9'E, 1650 m, 9–10.05.2006 (leg. Jiří Hájek, Pavel Chvoika). Paratypes, 1♂, 1♀ (NMP) with the same label; 1♂, 1♀ (SMNS): Iran, S Azarbayjan [West Azerbaijan Province], Takht-E-Soleimān [36°36'N / 47°12'E], 2500 m, 8.05.2000 (leg. J. Rejsek).

**Description.** Male. Body slender, black, rare dark brown, dull. Anterior margin of clypeus straight. Head widest at level of eyes. Eyes moderately large and convex. Ratio of head width at level of eyes to distance between eyes 1.6. Outer margin of head between genae and clypeus without sinuation. Genae weakly rounded. Head with moderately coarse and dense punctation

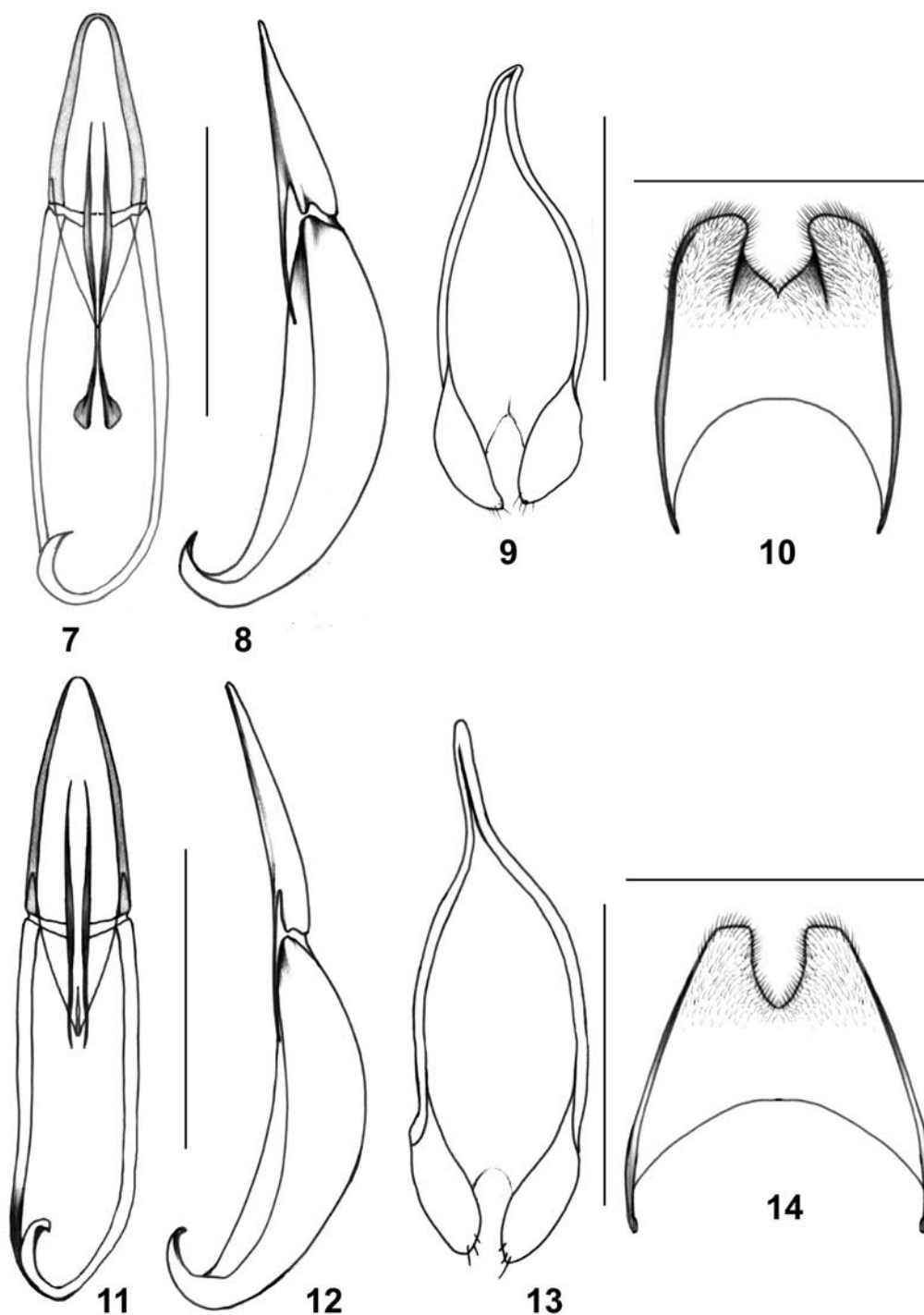


Figs 1–6. *Nalassus rejseki* sp. n. and *Zophohelops iranensis* sp. n., habitus.

1–2 – *N. rejseki* sp. n. from East Azerbaijan Province of Iran; 3–4 – the same species, West Azerbaijan Province of Iran; 5, 6 – *Z. iranensis* sp. n. 1, 3, 5 – male; 2, 4, 6 – female.

Рис. 1–6. *Nalassus rejseki* sp. n. и *Zophohelops iranensis* sp. n., габитус.

1–2 – *N. rejseki* sp. n. из иранской провинции Восточный Азербайджан; 3–4 – тот же вид из иранской провинции Западный Азербайджан; 5, 6 – *Z. iranensis* sp. n. 1, 3, 5 – самец; 2, 4, 6 – самка.



Figs 7–14. Male genitalia and terminalia.

7–10 – *Nalassus rejseki* sp. n.; 11–14 – *Zophohelops iranensis* sp. n. 7, 11 – aedeagus, ventral view; 8, 12 – aedeagus, lateral view; 9, 13 – gastral spicula; 10, 14 – inner sternite VIII. Scale bar 1 mm.

Рис. 7–14. Гениталии и терминалии самца.

7–10 – *Nalassus rejseki* sp. n.; 11–14 – *Zophohelops iranensis* sp. n. 7, 11 – эдеагус вентрально; 8, 12 – эдеагус латерально; 9, 13 – гастральная спикула; 10, 14 – внутренний стернит VIII. Масштабная линейка 1 мм.

(puncture diameters subequal to distance between them), frons with sparser punctation. Temple grooves distinct. Antennae long, antennomeres 9–11 extending beyond base of pronotum when directed backwards, antennomeres 8–11 more widened than others.

Pronotum transverse (1.26–1.34 times as wide as long),

widest in middle, 1.55–1.6 times as wide as head. Lateral margins of pronotum weakly rounded, sinuate near base; base almost straight; anterior margin bisinuate. Anterior angles of pronotum weakly projected, right, narrowly rounded on apex. Posterior angles right, distinct. Lateral and basal bead of pronotum thickened, anterior margin with narrow bead interrupted in





Fig. 15. Distribution of *Nalassus rejseki* sp. n. (black circles) and *Zophohelops iranensis* sp. n. (white circle).

Рис. 15. Распространение *Nalassus rejseki* sp. n. (черные кружки) и *Zophohelops iranensis* sp. n. (белый кружок).

middle. Disc weakly regularly convex, sometimes with small depressions in base. Punctuation of disc moderately coarse, not dense: puncture diameters subequal to distance between them on sides and puncture diameters 2 times lower than distance between them in middle; punctures round, not elongated on sides. Middle longitudinal line without punctures visible. Prothoracic hypomeron with fine longitudinal wrinkles, outer margin not flattened. Prosternal process very weakly convex.

Elytra elongate oval (1.6 times as long as wide), widest in middle, 1.2–1.3 times as wide and 2.6 times as long as pronotum, 2 times as wide as head. Elytral intervals flat, punctures in striae elongate, connect in entire grooves. Eighth interval convex apically and merged with elytral margin. Intervals with sparse and fine punctuation, sometimes with transverse wrinkles. Epipleura not reaching elytral apex. Epipleural carina completely visible dorsally.

Abdominal ventrites with moderately coarse and dense punctuation. First and fifth ventrites with hair brush of light setae. Fifth ventrite completely rimmed on apex.

Tibiae straight, 1–4 pro- and mesotarsomers strongly widened. Ratio of width – length of 1–4 protarsomers: 1.2 : 1.5 : 1.75 : 1.5. Ratio of width of 1–4 protarsomers: 2.1 : 3.2 : 3 : 2.1. Ratio of width – length of 1–4 mesotarsomers: 1.15 : 1.5 : 1.8 : 1.3. Ratio of width of 1–4 mesotarsomers: 2.2 : 3.2 : 3 : 2.1.

Body length 8–10 mm, width 3.5–4.1.

Genitalia and terminalia. Apical piece dorso-ventrally flattened, 2 times as short as basal piece. Median lobe baculi narrow, broadened and rounded basally. Gastral spicula S-shaped laterally, with bent branches.

Female. Body more robust, antennae shorter, pro- and mesotarsomers not widened. Ratio of length – width of pronotum from 1.24 to 1.54. Body length 8.8–11 mm, width 3.5–4.5 mm.

Variability. Specimens from East Azerbaijan Province have black, more dull body; specimens from East Azerbaijan Province have some dark brown, some more shining body.

**Differential diagnosis.** The new species differs from all known representatives of *Helopondrus* by strongly widened male pro- and mesotarsi and not elongated punctures in sides of pronotum. Median lobe baculi of male aedeagus similar to those of *N. cambyses* (Seidlitz, 1896) which have gradually (not sharply) widened to base baculi.

**Etymology.** The species is named in honour of the collector Jiří Rejsek (Rožďalovice, Czech Republic).

### *Zophondrus* subgen. n.

Type species *Zophohelops iranensis* sp. n.

**Diagnosis.** Body slender, shining. Head with strongly depressed fronto-clypeal suture. Width of pronotum subequal to elytral width (elytra 1.08–1.1 times as wide as pronotum). Epipleural carina moderately wide, completely visible dorsally, without sinuation in basal 1/4. Male abdominal ventrites without hair brushes. Male genitalia: aedeagus strongly sclerotized; basal piece 1.45 times as long as apical piece; apical piece dorso-ventrally flattened; suture between parameres absent; median lobe baculi narrow and located close together.

**Notes.** The new subgenus differs from nominotypical subgenus by the structure of male aedeagus: dorso-ventrally flattened apical piece and very narrow median lobe baculi. Other *Zophohelops* have laterally flattened (on apex) apical piece with distinct suture between parameres and widened median lobe baculi.

**Etymology.** The name derives from names *Zophohelops* and *Helopondrus* and indicates similarity of type species on representatives of *Nalassus* (*Helopondrus*).

### *Zophohelops* (*Zophondrus*) *iranensis* sp. n. (Figs 5, 6, 11–15)

**Material.** Holotype, ♂ and 1 paratype, ♀ (SMNS): Iran, E Ardabil Province, Noorlake [Near Lake, 38°00'N / 48°33'E], 35 km SE Ardabil, 2500 m, 10–11.05.2000 (leg. J. Rejsek).

**Description.** Male. Body dark brown, shining, slender. Anterior margin of clypeus straight. Head widest at level of eyes. Eyes moderately large and convex. Ratio of head width at level of eyes to distance between eyes 1.4. Outer margin of head between genae and clypeus with short weak sinuation. Genae rounded near base and straight to clypeus. Head strongly depressed on fronto-clypeal suture. Head covered with short recumbent hairs ventrally, on vertex, around eyes and on clypeus. Punctuation of head moderately coarse and dense: puncture diameters subequal to distance between them on frons and 2 times as long as interpuncture distance on other surface. Antennae visibly widened to apex.

Pronotum massive, transverse (1.2 times as wide as long), 1.7 times as wide as head. Lateral margins moderately rounded, not sinuated. Anterior margin widely emarginated (another view than on Fig. 5). Base weakly rounded, shortly sinuated in middle. Anterior and posterior angles of pronotum distinct, narrowly rounded on apex. Lateral margins and base narrowly beaded, bead of base more thickened. Disc of pronotum convex, longitudinally depressed in middle of lateral sides and near base. Punctuation of disc dense and moderately coarse: puncture diameter subequal to distance between punctures. Middle longitudinal line without punctures present. Hypomera with longitudinal wrinkles and flattened outer margins. Prosternal process weakly convex.

Elytra convex, elongate (1.54 times as wide as long), widest in middle, 1.08 times as wide and 2 times as long as pronotum, 1.85 times as wide as head. Elytral intervals flat, with sparse and fine punctuation. Punctures in striae elongate, connect in grooves. Epipleura not reaching elytral apex, epipleural carina completely visible dorsally, not sinuated near base.

Abdominal ventrites without hair brushes, with fine and dense punctuation.

Tibiae straight, tarsi narrow, length of mesotarsi subequal to length of mesotibiae, other tarsi visible shorter than according tibiae.

Body length 9 mm, width 3.3 mm.

Female. Body more massive and robust. Pronotum more

transverse (1.38 times as wide as long). Epipleural carina narrower and dorsally not visible in middle. Body length 10.2 mm, width 4.3 mm.

**Differential diagnosis.** See notes to *Zophondrus* subgen. n.

**Etymology.** The name is translated from Latin as “from Iran”.

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