

New and little known species of the tribe Helopini (Insecta: Coleoptera: Tenebrionidae) from Iran

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Abstract

Two new species of darkling beetles of the genus *Nalassus* are described: *N.* (s. str.) *farsistanus* sp. n. (Iran: Fars Province) and *N.* (*Helopondrus*) *striatissimus* sp. n. (Iran: Mazandaran Province). New faunistic records of little known species of the tribe Helopini (genera *Nalassus* Mulsant, 1854, *Catomus* Allard, 1876, *Hedyphanes* Fischer von Waldheim, 1820) from Iran are added. New and exact localities for *Hedyphanes ocellaris* Reitter, 1914 and *H. zarudnyi* Medvedev, 1976 are listed for the first time after descriptions.

Zusammenfassung

Zwei neue Arten von Schwarzkäfern der Gattung *Nalassus* werden beschrieben: *N.* (s. str.) *farsistanus* sp. n. (Iran: Fars Province) und *N.* (*Helopondrus*) *striatissimus* sp. n. (Iran: Mazandaran Province). Neue Fundangaben von wenig bekannten Arten des Tribus Helopini (Gattungen *Nalassus* Mulsant, 1854, *Catomus* Allard, 1876, *Hedyphanes* Fischer von Waldheim, 1820) aus dem Iran werden beigelegt. Neue Funde mit genauen Angaben werden erstmals seit ihren Beschreibungen für *Hedyphanes ocellaris* Reitter, 1914 und *H. zarudnyi* Medvedev, 1976 mitgeteilt.

Key words: Coleoptera, Tenebrionidae, Helopini, Iran, new species, faunistic records

Introduction

Darkling beetles of the tribe Helopini Latreille, 1802 are still poorly studied in Iran. Except for the old revisions of ALLARD (1876, 1877), SEIDLITZ (1896), and REITTER (1922) only one faunistic review on Tenebrionidae was published in the 20th century by KÜHNELT (1957) who has given little information about some species of Iranian Helopini. Later, MEDVEDEV (1976, 1978) described some species of *Hedyphanes* Fischer von Waldheim, 1820 and the subgenus *Pelorinus* Vauloger, 1900 (genus *Euboeus* Boieldieu, 1865). The

most intensive study started in the 21st century with descriptions and new faunistic records of genera *Nalassus* Mulsant, 1854, *Reitterohelops* Skopin, 1960, *Armeno-helops* Nabozhenko, 2002, *Zophohelops* Reitter, 1902 *Eustenomacidius* Nabozhenko, 2006, *Cylindrinotus* Faldermann, 1837, and *Odocnemis* Allard, 1876 of the subtribe Cylindrinotina (NABOZHENKO 2006a, 2008, 2009, 2010, 2014, 2015c, MEDVEDEV 2008, GRIMM 2015, NABOZHENKO & KESKIN 2013, 2016, NABOZHENKO et al. 2016, 2017a) and *Hedyphanes*, *Catomus* Allard, 1876, *Adelphinus* Fairmaire et Coquerel, 1866, and *Euboeus* (*Pelorinus*) of the subtribe Helopina (NABOZHENKO 2005, 2015, 2018, NABOZHENKO et al. 2017b).

Within the subtribe Helopina Iranian species of the genus *Euboeus* need revision. Below two new species of the genus *Nalassus* from Zagros and Elburs mountains are described and new data on further Helopini from Iran is presented.

Acronyms of depositories:

CRG – Collection Dr Roland Grimm, Neuenbürg
NME – Naturkundemuseum Erfurt
SMNS – Staatliches Museum für Naturkunde Stuttgart

Taxonomy and Faunistic

Helopini Latreille, 1802
Cylindrinotina Español, 1956

Nalassus (s. str.) *faldermanni* (Faldermann, 1837)

Material. Iran/Mazandaran, vic. Lashak, 36°23'18"N, 51°38'12"E, 1600–1700 m, 6.V.2010, leg. D. Frenzel, 1 ex. (CRG), 3 ex. (NME). – Iran/Mazandaran, Kolijak, alpine meadow pasture, 1400 m, 36°26'06"N, 51°43'58"E, 5.V.2012, leg. D. Frenzel, 1 ex. (CRG), 1 ex. (NME), – Iran/Mazandaran, mountainslope, vic. Kolijak, 1840 m, 38°28'18"N, 51°40'14"E, 5.V.2010, leg. D. Frenzel, 1 ex. (CRG). – Iran/Mazandaran, vic.

Takir, 1600 m, 36°11'33"N, 52°04'29"E, 7.V.2010, leg. D. Frenzel, 1 ex. (CRG), 4 ex. (NME). – Iran/Teheran, Karaj, University of Agriculture, 35°47'58"N, 51°00'02"E, 1360 m, 29.IV.–12.V.2012, leg. D. Frenzel, 2 ex. (GRG), 5 ex. (NME). – Iran/Teheran, Karaj, University of Agriculture, 35°47'N, 51°00'E, 1360 m, 24.V.2008, leg. J. Weipert, 1 ex (NME). – Iran/Mazandaran, vic. Takir, 36°11'33"N, 52°04'29"E, 1600 m, 7.V.2010, leg. A. Weigel, 1. ex (NME), – Iran/Mazandaran, 15 km E Baladeh, vic. Valashid, 36°12'13"N, 51°52'31"E, 1480 m, 7.V.2010, leg. A. Weigel, 2 ex (CRG), 1 ex. (NME). – Iran/Mazandaran, Mankaleh Wildlife Reserve, 36°50'N, 53°45'E, 12.–14. V.2001, leg. E. Heiss, 4 ex. (CRG). – Iran/Teheran, S-Elburz, Agasht, 1600–1700 m, 27.V.2008, 36°00'20"N, 50°52'84"E, leg. D. Frenzel, 1 ex. (CRG), – Iran/Qazvin, SW- Elburz, Kordak, Kordar-River, 1000 m, 36°10'N, 50°49'E, 28.V.2018, leg. D. Frenzel, 1 ex. (CRG). – Iran/Teheran, Karaj, University of Agriculture, 1360 m 35°47'N, 51°00'25"E, 25.V.–8. VI.2008, leg. D. Frenzel, 1 ex. (CRG). – Iran/Mazandaran, Abe Garn, Mt. Damavand, 15.–16.VI.2005, leg. R. Novak, 1 ex. (CRG).

Distribution. South of the European part of Russia (north to Volgograd and Novocherkassk), the Caucasus, Eastern Turkey, Northern Iran, Turkmenistan (Kopetdag) (ABDURAKMANOV & NABOZHENKO 2011, KESKIN et al. 2017).

Nalassus (s. str.) *farsistanus* sp. n.

(Fig. 1)

Material (SMNS). Holotype ♀ with labels: “Iran, Fars, Eqlit (Erlit) W Gard. Timur Gun 2700-2900 m, 31.5.2004, A. Hofmann, J.U. Meineke, G. Tremevan”. Correct name of the type locality is Eqlid or Eqlidabad: 30°51'41.42"N, 52°41'05.79"E. Holotype have only 6 left and 7 right antennomeres, has not left pro- and right mesotarsi and left hind leg.

Description. Body brown, moderately shining, robust, wide, weakly convex. Anterior margin of frontoclypeus straight. Head widest at eye level. Eyes large, convex. Ratio of head on eye level to interocular space 1.7. Genae strongly convergent to frontoclypeus, its outer margin rounded in basal half and straight in anterior half. Lateral margins of head with barely visible emargination between genae and frontoclypeus. Punctuation of head coarse and dense (puncture diameter near 1.5

times as long as interpuncture distance). Gula very narrow in apical half, with widely emarginate lateral margins. Ventral side of head with longitudinal impression before gula. Mandibles densely pubescent by long erected setae. Antennae evenly pubescent by recumbent hairs. Pronotum trapezoidal, widest behind middle, strongly transverse (1.6 times as wide as long), 1.8 times as wide as head. Lateral margins weakly evenly rounded, anterior margin widely emarginate, base bisinuate, with rounded protruding middle part. All margins (except for anterior margin at middle) narrowly beaded. Disc weakly convex, with oblique impressions at base on sides of the middle; lateral sides widely flattened in basal 2/3 and narrowly flattened in anterior third. Punctuation of disc as on head. Anterior angles straight, widely rounded, projected, posterior angles obtuse, narrowly rounded. Outer sides of prothoracic hypomera flattened; surface of hypomera longitudinally wrinkled. Prosternal process not convex.

Scutellum with transverse depression near apex. Elytra oval (1.46 times as long as wide), widest at middle, 2.17 times as wide as head, 1.18 times as wide and 2.76 times as long as pronotum. Striae consist of deep furrows; interstriae weakly convex, densely and coarsely punctured (puncture diameter subequal to interpuncture distance); interstriae 3–7 much widely than other ones (4–5 punctures in transverse section). Eight interstria connected with elytral margin, dorsal epipleural carina not reaching apex. Epipleura weakly depressed in base. Wings reduced, reaching ¾ of elytral length, the most veins also reduced. Mesoventrite without V-shaped depression and middle line, disorderly wrinkled. Mesepisterna, mesepimera, metepisterna and metaventrite with fine sparse punctuation.

Abdominal ventrites 1–3 with coarse, dense punctuation in basal 2/3 and fine, sparse punctuation on other surface. Abdominal ventrite 5 not beaded at apex.

Legs. Protrochanters with 4 long and several short setae; meso- and metatrochanters with 2 long setae. Pro- and metatibiae straight, mesotibia bent.

Body length 10.4 mm, width 4.6 mm.

Etymology. The name is derived from Fars Province of Iran.

Differential diagnosis. *Nalassus farsistanus* sp. n. is similar to European species *N. dryadophilus* Mulsant, 1854, *N. dermestoides* Illiger, 1798, *N. brevicollis* Steven in Krinicky, 1832, *N. graecus* Seidlitz, 1896, and

N. laevioctostriatus Goeze, 1777 in the robust body, but differs from all these taxa by the dense long erected hairs on outer sides of mandibles, narrow acute gula with widely emarginate margins, clear longitudinal impression before the gula and bent mesotibiae.

***Nalassus* (s. str.) *zaratustrai* Nabozhenko, 2006**

Material. 1 ♀: S Iran, Fars Province, vic. Qalat village, 29°48'13"N, 52°19'11"E, 2000–2150 m, 28.IV.2010, leg. A. Weigel (NME). – 1 ♀: S Iran, Fars Province, vic. Dash-e Arzhan, oak nature reserve, 29°34'02"N, 51°56'44"E, 2100–2300 m, 29.IV.2010, leg. Weigel (NME). – 1 ♂: S Iran, Fars Prov., vic. Dash-e Arzhan, 29°34'02"N, 51°56'44", 2100–2300 m, *Quercus-Pistacea* nat. reserve, 29.IV.2010, leg. D. Frenzel (NME). – 1 ♂: Iran, Kerman Province, Kerman S, Mahan, 29°58'17.0"N, 57°17'52.4"E, 2190 m, 29.05.2014, leg. P. Schnitter (NME).

Distribution. Iran: Fars Province (NABOZHENKO 2006a).

***Nalassus* (*Helopondrus*) *cambyses* (Seidlitz, 1896)**

Material. Iran/Mazandaran, Kandovan tunnel, (northside), 2670 m, 36°09'57"N, 51°19'18"E, 1.V.2010, leg. D. Frenzel, 2 ex. (CRG), 6 ex. (NME). – Iran/Tehran, C-Elburz, alpine meadow, below saddle, 2720–3000 m, 36°02'32"N, 51°25'96"E, 26.V.2008, leg. D. Frenzel, 1 ex. (NME). – Iran/Mazandaran, C-Elburz, Kandovan, saddle, 36°09'10"N, 51°18'99"E, 3000 m, 31.V.2008, leg. D. Frenzel, 1 ex. (CRG), 2 ex. (NME). – Iran/Mazandaran, vic. Takir, 1600 m, 36°11'33"N, 52°04'29"E, 7.V.2010, leg. D. Frenzel, 1 ex. (NME). – Iran/Tehran, C-Elburz, Damavand Mt., Gosfand Sava, 2450–2600 m, 29.V.2008, leg. D. Frenzel, 1 ex. (NME). – Iran/Tehran, Elburz, Tajnsh N Kandovan-Pass, 36°09'35.3"N, 51°17'50.5"E, 2850 m, 10.VI.2014, leg. A. Weigel, 2 ex. (CRG), 8 ex. (NME). – Iran/Tehran, Elburz Mts., Tajrin N, Kandovan Pass, alpine meadow/brook side, 2850 m, 36°69'35.3"E, 51°17'50.5"E, 10.VI.2014, leg. P. Schnitter, 4 ex. (CRG), 13 ex. (NME). – Iran/Tehran, Zentral Elburz, Damavand Mt., Gofand Sava, Larijan, 35°52'N, 52°07'E, 2500–2800 m, 29.V.2008, leg. J. Weipert, 1 ex. (NME). – Iran/Tehran, Karaj, University of Culture, 51°00'N, 35°47'N, 1360 m, 30.IV.2010, leg. A. Weigel, 1 ex. (CRG), 3 ex. (NME).

Distribution. Northern Iran (Elburz, Kopetdag) (NABOZHENKO 2010).

***Nalassus* (*Helopondrus*) *lineatus* (Allard, 1877)**

Material. Iran/Mazandaran, N-Elburz, SW Now Shahr, 36°35'20"N, 51°34'05"E, 500 m, primary forest, leg. D. Frenzel, 2 ex. (CRG), 1 ex. (NME). – Iran/Mazandaran, N-Elburz, Koliyak, 36°28'38"N, 51°39'88"E; 1630 m, 4.VI.2008, leg. D. Frenzel, 1 ex. (CRG). – Iran/Mazandaran, vic. Now Shar, Kheirud Forest, 36°36'35"N, 51°34'10"E, 40–200m, 3.–4.V.2010, leg. D. Frenzel, 1 ex. (CRG), 3 ex. (NME). – Iran/Mazandaran, S Now Shahr, Kheirud Kenar Forest, 400–900 m, 36°34'24"N, 51°35'24"E, 4.V.2012, leg. D. Frenzel, 1 ex. (NME). – Iran/Mazandaran, 40 km S Tavir, 660 m, meadow beside road, 36°25'12"N, 51°16'53"E, 1.V.2010, leg. D. Frenzel, 1 ex. (CRG), 1 ex. (NME). – Iran/Mazandaran, Nur city, National Reserve, 8 m, 36°34'51"N, 52°02'56"E, 4.V.2010, leg. D. Frenzel, 1 ex. (CRG), 1 ex. (NME). – Iran/Mazandaran, Kandovan tunnel, (northside), 2670 m, 36°09'57"N, 51°10'16"E, 1.V.2010, leg. D. Frenzel, 1 ex. (NME). – Iran/Mazandaran, 31°28'18"N, 51°40'18"E, Koliyak env., mountain slope, 1840 m, 5.V.2010, leg. J. Weipert, 1 ex. (GRG), 2 ex. (NME). – Iran/Mazandaran, vic. Koliyak, 1600–1850 m, 36°28'28"N, 51°39'35"E, 4.–5.V.2010, leg. D. Frenzel, 1 ex. (NME). – Iran/Mazandaran, 5 km W Mesen, 3200–3450 m, vic. saddle, 36°15'N, 51°26'E, 2.V.2010, leg. D. Frenzel, 1 ex. (NME). – Iran/Mazandaran, mountain slope, vic. Koliyak, 1840 m, 36°28'18"N, 51°40'14"E, 5.V.2010, leg. D. Frenzel, 1 ex. (NME). – Iran/Mazandaran, S Now Share, Keirud Kenar Forest, 400–900 m, 36°34'24"N, 51°35'24"E, 4.V.2012, leg. J. Weipert, 1 ex. (CRG), 1 ex. (NME). – Iran/Mazandaran, 8 km NNE Kord-Koy, 2001, leg. G. Müller, 1 ex. (CRG). – Iran/Mazandaran, 60 km SSE Sari, 2200 m, 2001, leg. G. Müller, 1 ex. (CRG). – Iran/Mazandaran, vic. Now Shar, Kheirud Kenar Forest (entry area), 36°36'35"N, 51°34'10"E, 40–200 m, 3.V.2010, leg. A. Weigel, 5 ex. (CRG), 19 ex. (NME). – Iran/Mazandaran, vic. Koliyak, mountain slope, 36°28'48"N, 51°40'14"E, 1840 m, 5.V.2010, leg. A. Weigel, 4 ex. (NME). – Mazandaran, 40 km S Tavir, meadow beside road, 36°25'12"N, 51°16'53"E, 1.V.2010, 660 m, leg. A. Weigel, 1 ex. (CRG), 1 ex. (NME). – Iran/Mazandaran, National Reserve, 8 m, 38°34'51"N, 52°02'56"E, 4.V.2010, leg. A. Weigel, 1 ex. (NME). – Iran/Khorasan, Golestan Forest, 40 km NE Minudast, 10.–12.VI.2015, leg. R. Novak, 1 ex. (CRG).

Distribution. Russia (Caucasian part of Krasnodar Region), Abkhazia (coastal part), Western Georgia, Azerbaijan (Talysh), Northern Iran (forests around the Caspian Sea) (NABOZHENKO 2010, ABDURAKHMANOV & NABOZHENKO 2011).

Nalassus (Helopondrus) striatissimus sp. n.
(Figs 2–7)

Material. Holotype, ♂ (NME) and one paratype ♂ (Zoological institute RAS, St Petersburg, Russia) with labels: “N-Iran, Pr. Mazandaran vic Takir, 1600 m, 36.11.33N, 52.04.29E, 7.V.2010, leg. D. Frenzel”. – Paratype, ♂: “N-IRAN, Pr. Mazandaran 15 km E Baladeh, vic. Valashid, 36°12'13"N, 52°52'31"E, 1980 m, 07.V.2010, leg. A. Weigel #26”. – Paratype, ♀ (NME): “N-Iran: Pr. Mazandaran 40 km S Tavar, meadow beside road, 36°26'12"N, 51°16'53"E, 660 m, 01.V.2010 leg. A. Weigel (#40) ”.

Description. Male. Body slender, brown or red-brown, shine, ventrally pubescent. Anterior margin of frontoclypeus straight. Head widest at eye level. Eyes small, convex. Ratio of head on eye level to interocular space 1.5. Genae strongly convergent to frontoclypeus, its outer margin anlage-shaped in basal third and straight in anterior 2/3. Lateral margins of head without emargination between genae and frontoclypeus. Head pubescent with long (rarely short) recumbent hairs. Punctuation of head coarse and dense (puncture diameter 1.5–2 times as long as interpuncture distance). Gula simple, with rounded lateral margins. Mandibles with simple recumbent short setation. Antennae short, barely extended beyond base of pronotum by first antennomere. Ratio of length/width of antennomeres 2–11: 0.5/0.6, 1.2/0.6, 0.9/0.6, 1/0.6, 1/0.6, 1.1/0.6, 1.1/0.8, 1.1/0.8, 1.2/0.9, 1.5/0.9. Pronotum weakly transverse (1.2 times as wide as long), widest at middle, 1.5 times as wide as head. Lateral margins weakly evenly rounded, sometimes barely emarginate near base, anterior margin straight, base weakly rounded at middle. All margins narrowly beaded. Disc moderately evenly convex, with barely visible impressions at base on sides of the middle. Punctuation of disc as on head, punctures weakly elongate on side and sparser in middle (puncture diameter 2 times less than interpuncture space). Anterior and posterior angles obtuse, narrowly rounded. Outer sides of prothoracic hypomera not flattened; surface of hypomera longitu-

dinally wrinkled and sparsely pubescent. Prosternal process not convex.

Elytra elongate, narrow (1.9 times as long as wide), widest at middle, with weakly rounded sides, 1.7 times as wide as head, 1.16 times as wide and 2.66 times as long as pronotum. Striae very deep, consist of deep large round punctures, connecting by furrows; interstriae narrow and strongly convex, sparsely punctured (1–2 punctures in transverse section), pubescent at apex or completely sparsely pubescent by short erected hairs. Eight interstriae connected with elytral margin, dorsal epipleural carina not reaching apex. Epipleura not depressed in base. Wings reduced, very small, the most veins also reduced. Mesoventrite with weak V-shaped depression and without middle line, disorderly coarsely wrinkled. Mesepisterna, mesepimera, metepisterna and metaventrite with coarse and sparse puncturation.

Abdominal ventrites 1–3 with coarse and dense puncturation, 1st ventrite with more dense and long hairs in middle (but without distinct dense hair brush). Abdominal ventrite 5 not beaded at apex.

Legs short. Protrochanters with sparse hair brush; meso- and metatrochanters with 1 long seta. All femora with dense subrecumbent pubescence on inner side near trochanters. Tibiae straight. Protarsi not widened. Genitalia typical for the subgenus *Helopondrus* Reitter, 1922 (with dorso-ventrally flattened apical piece) and does not differ from other Iranian species of *Helopondrus* in general.

Body length 7.5 mm, width 2.5–2.6 mm.

Female. Body more robust, dark-brown, legs, antennae and maxillae reddish. Elytral margins more rounded; interstriae strongly convex and narrow only in apical quarter, other elytral surface with weakly convex and wider interstriae (3 punctures in transverse section). Elytra with sparse short erected hairs near suture angles. Body length 6.5 mm, width 2.6 mm.

Etymology. The Latin name *striatissimus* draws attention to very deep striae.

Differential diagnosis. *Nalassus striatissimus* sp. n. is externally similar to *N. cambyses* Seidlitz, 1896 by the subparallel and narrow body but differs from this and other Iranian species of the subgenus *Helopondrus* in the very deep and wide elytral striae and pubescent interstriae, pubescence abdominal ventrites, and absence of hair brush at middle of male abdominal ventrite 1.

Helopina Latreille, 1802

Catomus (s. str.) *karakalensis* G. Medvedev, 1964

Material. 1 ♂: N Iran, Mazandaran Province, 40 km S Tavar, meadow beside road, 36°26'12"N, 51°16'53"E, 660 m, 1.V.2010, leg. A. Weigel (NME).

Distribution. Iran: Mazandaran, North Khorasan provinces, Southern Turkmenistan (NABOZHENKO 2006b, 2015a).

Hedyphanes bodemeyeri Reitter, 1914

Material. 1 ♀: Iran, Isfahan Prov., Quamsar, 2070 m, dry valley, 33°44'58"N, 51°24'12"E, 12.V.2012 (NME).

Distribution. Iran: Zanjan, Luristan, Kerman, Fars and Isfahan provinces (NABOZHENKO 2018).

Hedyphanes ocularis Reitter, 1914

Material. 2 ♂♂: Iran, Chaharmahal and Bakhtiari Province, Chadegan, E Abadchi, dry valley with spring, 2100 m, 32°45'58"N, 50°45'01"E, 11.v.2012, leg. D. Frenzel (NME).

Note to distribution. This species is known by holotype (male) described from Schirabad (REITTER 1914) and from Louristan, Dorud (NABOZHENKO 2018). Now at least 15 towns and villages with name "Shirabad" are known in Iran. KÜHNELT (1957) specified that "Shirabad" is located near the Iranian border, that does not bring clarity. So, the locality in Chaharmahal and Bakhtiari Province is the second clear record of this species.

Hedyphanes zarudnyi Medvedev, 1976

Material (NME). 1 ♂: S Iran, Hormozgan Province, 27°41'06"N, 57°09'33"E, Ziyarat Ali, S, Hochebene und Bachlauf, 585 m, 5.III.2014, leg. J. Weipert. – 1 ♀: S Iran, Kerman Province, Dowlatabad, Ackerland mit Bewässerung, 1120 m, 28°18'23"N, 56°37'54"E, 13.III.2014, leg. D. Frenzel.

Notes. This species was described by two males from Iranian Baluchistan by MEDVEDEV (1976) Specimens from Kerman and Hormozgan differ by not convex and not wrinkled elytral interstriae, that can be only variability. Other characters of all known specimens of *Hedyphanes zarudnyi* are conspecific.

Distribution. Iran: Kerman, Hormozgan, Sistan and Baluchistan provinces.

Helops caeruleus talyshensis Bogatchev, 1949

Material. Iran/Gilan, 17 km SE Tutkabon, 36°50'N/49°40'E, 900 m, 10.VI.2014, leg. J. Halada, 1 ex. (CRG), 1 ex. (NME).

Distribution. The subspecies occurs in South Eastern Azerbaijan (Talysh) and Northern Iran (forests around the Caspian Sea).

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References

- ABDURAKHMANOV, G.M. & M.V. NABOZHENKO (2011): Keys and catalogue to darkling beetles (Coleoptera: Tenebrionidae s. str.) of the Caucasus and south of European part of Russia. – Moscow, KMK Scientific Press Ltd., 361 p. (In Russian).
- ALLARD, E. (1876): Révision des Helopides vrais de Lacordaire. – L'Abeille. Journal d'Entomologie **14**: 1–80.
- (1877): Révision des Helopides vrais. – Mitteilungen der Schweizerischen Entomologischen Gesellschaft **5**: 13–268.
- GRIMM, R. (2015): Tenebrionidae (Insecta: Coleoptera) from Iran. – VERNATE **34**: 299–318.
- KESKIN, B.; M. NABOZHENKO & N. ALPAGUT KESKIN (2017): Taxonomic review of the genera *Nalassus* Mulsant, 1854 and *Turkonalassus* gen. nov. of Turkey (Coleoptera: Tenebrionidae). – Annales zoologici **67**: 725–747.
- KÜHNELT, W. (1957): Ergebnisse der österreichischen Iran-Expedition 1949/50. Die Tenebrioniden Irans. – Sitzungsberichte der Österreichischen Akademie der Wissenschaften, Mathematisch-Naturwissenschaftliche Klasse **166**: 65–102.

- MEDVEDEV, G.S. (1976): New species of darkling beetles (Coleoptera, Tenebrionidae) from Iran. – Entomologicheskoe Obozrenie **55**: 889–897 (in Russian).
- (1978): New species of darkling beetles of the tribe Helopini (Coleoptera, Tenebrionidae) from Middle Asia. – Proceedings of the Zoological Institute of the Russian Academy of Sciences **71**: 50–52.
- (2008): New and little-known tenebrionid beetles (Coleoptera: Tenebrionidae) from Iran. – Caucasian Entomological Bulletin **4**: 303–319.
- NABOZHENKO, M.V. (2005): New synonymy and new species of the genus *Hedyphanes* Fischer de Walheim, 1922 (Coleoptera, Tenebrionidae). – Acta zoologica Academiae Scientiarum Hungaricae **51**: 349–355.
- (2006a): Review of Iranian species of the subgenus *Helopoceros* Reitter, 1922, genus *Nalassus* Mulsant, 1854 (Coleoptera: Tenebrionidae). – Proceedings of Russian Entomological Society **77**: 245–249.
- (2006b): A revision of the genus *Catomus* Allard, 1876 and the allied genera (Coleoptera, Tenebrionidae) from the Caucasus, Middle Asia, and China. – Entomological Review **86**: 1024–1072.
- (2008): Review of the subgenus *Helopondrus* Reitter, 1922 of the genus *Nalassus* Mulsant, 1854 (Coleoptera: Tenebrionidae) of Turkey. – Russian Entomological Journal (2007) **16**: 453–456.
- (2009): A new species and new records of darkling beetles of the tribe Helopini (Coleoptera, Tenebrionidae) from Iran and Armenia. – Caucasian Entomological Bulletin **5**: 185–187.
- (2010): Contribution to the knowledge of the subgenus *Helopondrus* Reitter, 1922 of the genus *Nalassus* Mulsant, 1854 (Coleoptera: Tenebrionidae) of Iran. – Caucasian Entomological Bulletin **6**: 51–55.
- (2014): New darkling beetles of the tribe Helopini (Coleoptera: Tenebrionidae) from Iran. – Caucasian Entomological Bulletin **10**: 237–241.
- (2015a): Review of the genus *Catomus* Allard, 1876 (Coleoptera: Tenebrionidae) in Iran. – Zoology in the Middle East **61**: 64–68.
- (2015b): New species of the genus *Adelphinus* Fairmaire et Coquerel, 1866 (Coleoptera: Tenebrionidae) from Iran. – Caucasian Entomological Bulletin **11**: 363–365.
- (2015c): Review of the genus *Cylindrinotus* Faldermann, 1837 (Coleoptera: Tenebrionidae: Helopini). – The Coleopterists Bulletin **69** (mo4): 101–114.
- (2018): Review of the genus *Hedyphanes* Fischer von Waldheim, 1822 (Coleoptera: Tenebrionidae: Helopini) of Kazakhstan, Middle Asia, Iran and Afghanistan. – Entomological Review **98**: 487–495.
- NABOZHENKO, M.V. & B. KESKIN (2013): Disjunctive distribution of *Odocnemis protinus* (Reitter, 1900), the first representative of the genus (Coleoptera: Tenebrionidae: Helopini) in Iran. – The south of Russia: ecology, development **3**: 136–143.
- NABOZHENKO, M.V. & B. KESKIN (2016): Revision of the genus *Odocnemis* Allard, 1876 (Coleoptera: Tenebrionidae: Helopini) from Turkey, the Caucasus and Iran with observations on feeding habits. – Zootaxa **4202** (1): 1–97.
- NABOZHENKO, M.V.; B. KESKIN & N. ALPAGUT KESKIN (2016): Taxonomic review of the genus *Armenoheleps* Nabozhenko, 2002 (Coleoptera: Tenebrionidae) with additional support of the mitochondrial COI gene sequences. – Caucasian Entomological Bulletin **12**: 255–268.
- NABOZHENKO, M.V.; N. B. NIKITSKY & B. KESKIN (2017): Taxonomic review of the genus *Euboeus* s. str. Boieldieu, 1865 (= *Probatiscus* s. str. Seidlitz, 1896, syn. n.) (Coleoptera, Tenebrionidae). – Zootaxa **4358**: 494–506.
- REITTER, E. (1914): Sechs neue Arten der Coleopteren-Gattung *Hedyphanes* Fischer. – Berliner Entomologische Zeitschrift **58**: 184–189.
- (1922): Bestimmungs-Tabellen der europaischen Coleopteren. H. 92. Tenebrionidae. 16. Teil: Unterfamilie Helopina, I. – Wiener Entomologische Zeitung **39**: 1–44.
- SEIDLITZ, G. C. M. von. (1898): Tenebrionidae. – In: KIESENWETTER H. von. & G. C. M. von SEIDLITZ: Naturgeschichte der Insecten Deutschlands. Erste Abteilung Coleoptera. Fünfter Band. Erste Hälfte: 609–800 pp., Berlin, Nicolaische Verlags-Buchhandlung.

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Fig. 1-7. *Nalassus* spp. from Iran, habitus, details of structure.

1 - *N. (s. str.) farsistanus* sp. n., female, habitus; **2-7** - *N. (Helopondrus) striatissimus* sp. n. **2** - male, habitus; **3** - female, habitus; **4** - male, head; **5** - male, pubescence of pronotum; **6** - male, pubescence of left elytron in middle; **7** - pubescence of right elytron at apex.

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