New species and new records of darkling beetles of the tribe Helopini (Coleoptera: Tenebrionidae) from the Western Palaearctic

Новые виды и новые находки жуков-чернотелок трибы Helopini (Coleoptera: Tenebrionidae) из Западной Палеартики

© M.V. Nabozhenko1, 2, R. Grimm3
© M.V. Набоженко1, 2, Р. Гримм3

1 Precaspian Institute of Biological Resources of the Daghestan Federal Research Centre of the Russian Academy of Sciences, M. Gadzhiev str., 45, Makhachkala, Republic of Dagestan 367000 Russia. E-mail: nalassus@mail.ru
2 Dagestan State University, M. Gadzhiev str., 43a, Makhachkala, Republic of Dagestan 367000 Russia
3 Unterer Sägerweg, 74, Neuenbürg 75305 Germany. E-mail: grimm.tenebrio@t-online.de

Abstract. New localities and data on distribution of darkling beetles of the tribe Helopini are presented. In total, 46 species from 12 genera (Adelphinus Fairmaire et Coquerel, 1866, Catomus Allard, 1876, Euboeus Boieldieu, 1865 (Pelorinus Vauloger, 1900), Helops Fabricius, 1775, Raiboscelis Allard, 1876, Entomogonus Solier, 1848, Hedyphanes Fischer von Waldheim, 1820, Nałassus Mulsant, 1854, Eustenomacidius Nabozhenko, 2006, Zophohelops Reitter, 1902, Cylindrinotus Faldermann, 1837, Odocnemis Allard, 1876) are reviewed. A brief review of taxonomic works for each genus is given. The following new taxa are described: Adelphinus (s. str.) baehri sp. n. from Morocco (differs from all congeneres by the presence of erect black spine-like setae on elytra), Euboeus (Pelorinus) kopetzii sp. n. from Western Turkey (belongs to the obesus species-group, differs from all similar species with wrinkled prothoroxema by the dorsally dark-blue body, and the structure of the aedeagus), Zophohelops (s. str.) staveni sp. n. from Eastern Turkey (similar to Z. montanatolicus Nabozhenko et Keskin, 2014, from which it differs by the coarsely and densely punctured pronotum, coarsely wrinkled prothoroxema with sparse punctures, absence of hair brush at middle of male abdominal ventrite 1 and not beaded abdominal ventrite 5). The following new combination is proposed: Euboeus (Pelorinus) globicollis (Seidlitz, 1896), comb. n. (transferred from Probaticus Seidlitz, 1896). Hedyphanes koltzei Heyden, 1892 is recorded for Kazakhstan for the first time. The distribution of Entomogonus saphyrinus (Allard, 1876) and Entomogonus duchoni Reitter, 1903 is corrected, both species occur only in Turkey. The species Catomus fulvipes (Reiche et Saucly, 1857) is distributed in Syria and Israel, but not in Turkey.

Key words: Coleoptera, Tenebrionidae, Helopini, Mediterranean, Middle East, Middle Asia, new taxa.

Ключевые слова: Coleoptera, Tenebrionidae, Helopini, Средиземноморье, Ближний Восток, Средняя Азия, новые таксоны.

1 Прикаспийский институт биологических ресурсов – обособленное подразделение Федерального государственного бюджетного учреждения науки Дагестанского федерального исследовательского центра Российской академии наук, ул. М. Гаджиева, 45, Махачкала, Республика Дагестан 367000 Россия
2 Дагестанский государственный университет, ул. М. Гаджиева, 43а, Махачкала, Республика Дагестан 367000 Россия
3 Нижний Сагервег, 74, Ноенбург 75305 Германия

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The tribe Helopini is widespread in the Northern Hemisphere. The greatest taxonomic diversity of this group is in the Western Palaearctic, especially in the Mediterranean, Iran and Middle Asia, where 38 genera (84% of all genera) are present [Nabozhenko, 2018a]. Western Palaearctic Helopini were poorly studied until now. Many genera from North Africa, the Balkans and the Middle East need revision, especially Euboeus Boieldieu, 1865, Odocnemis Allard, 1876, Catomus Allard, 1876 and Ectromopsis Antoine, 1949.

Below we add a significant contribution to the knowledge of Helopini from Europe, North Africa, Anatolia, Iran and Middle Asia based on material from several European museums and private collections.

**Material**

The material studied is deposited in the following collections:

- NME – Naturkundemuseum Erfurt (Germany);
- SMNS – Staatliches Museum für Naturkunde Stuttgart (Germany);
- CRG – Private collection of Dr Roland Grimm (Neuenbürg, Germany);
- CSB – Private collection of Stanislav Bečvar (Prague, Czech Republic);
- CMN - Private collection of Dr Maxim Nabozhenko (Rostov-on-Don, Russia).

The system of the tribe and the order of genera are given according to Nabozhenko [2019].

**Subtribe Helopina**

*Genus Adelphinus* Faunmaire et Coquerel, 1866


Reitter’s characters for two subgenera *Adelphinus* s. str. and *Adelphinus* were based only on two species of the genus. The nominotypical subgenus differs from *Adelphinus* by the very thickened male antennomere 1 and bare dorsal side of body. After the description of *A. rotundicollis* the character of sexual dimorphism in antennomere 1 for the nominotypical subgenus must be excluded. Below we describe *Adelphinus baehri* sp. n. from Morocco, which formally must be included in the Asian subgenus *Adelphinus* based on pubescent elytra with strong setae at apex, but in this case the disjunction between Asian and African species will be very wide and the African exclave of *Adelphinops* will be located among *Adelphinus* s. str., which is doubtful. On the other hand African and Asian species may be monophyletic lineages after molecular genetic analysis. As a result we tentatively include our new species in the nominotypical subgenus.

**Adelphinus (s. str.) baehri** sp. n.

(Color plate 5: 1; Color plate 6: 7–10)


**Description.** Body length 8.4 mm, width 2.8 mm. Body moderately shiny, ventrally black, head and pronotum black, elytra dark brown, legs light brown, antennomere 1 yellow brown, antenommere 2 brown, other antennomeres black, maxillary palpomere 1 light brown, palpomeres 2–3 brown, eyes reddish. Anterior margin of head deeply emarginated, with strongly projected angles. Genae strongly elevated, epistome strongly depressed. Lateral margin of head with groove short emargination between genae and epistome. Lateral margin of genae weakly rounded, directed strongly obliquely to anterior margin. Epistomal-labral membrane very long, subequal to labral length. Mandibles acute, with far located inner (ventral) tooth. Apical maxillary palpomeres longitudinal, triangular, narrow. Head widest at eye level, eyes dorsally round, moderately convex. Pubescence of head and pronotum dense and dense, points, round about 1.5 times wider than interpunctural distance. Head ventrally with smooth transverse wrinkles, gula with acute apex, not reaching submentum. Antennae comparatively short, with only three apical antennomeres extending beyond base of pronotum; antennomere 1 simple, slightly wider than weakly longitudinal antennomere 2, antennomere 11 rhombus-like, with shortly sinuated inner margin.

Protonotum nearly rectangular, weakly transverse (1.28 times as wide as long), widest at middle, 1.41 times as wide as head. Margins of pronotum weakly rounded, base straight at middle. Angles of pronotum weakly obtuse, narrowly rounded at apex. Disc weakly convex, with groove-like impression along lateral margin. Punctuation of disc coarse and dense as on head. All margins of pronotum finely beaded, only anterior margin with bead interrupted in middle. Prothoracic hypomera and prosternum with sparse coarse punctuation and smoothened wrinkles. Prothoracic hypomera very narrow, flattened near outer margin. Prosternal process not convex and not projected.

Elytra strongly elongate (1.94 times as long as wide), almost parallel, lateral margins weakly widely emarginated in basal half, 1.36 times as wide and 3.4 times as long as pronotum, 1.93 times as wide as head; elytral base 1.25 times as wide as pronotal base. Intersutiae convex, with coriaceous microsculpture, covered with fine and short suberect light setae, additionally with longer erect strong black setae in apical third. Lateral deflected margin of elytra clearly visible for their entire length. Punctures in sutriae merged in grooves. Epipleura not impressed in base, but impressed in apical third, smooth, reaching sutural elytral angle. Ventral side covered with grey subrecluent hairs. Metepisterna coarsely punctured. Metaventrêtite convex, with sparse rasp-like punctuation. Abdominal ventrites with fine dense punctuation, ventrite 5 not beaded along margin; intersegmental membranes between ventrites 3–5 strongly impressed.

Legs long, slender. Femora reddish brown, with rasp-like punctuation and suberect setae on inner side. Tibiae narrow along whole length, straight, only mesotibiae slightly bent. Protarsi widened, cordiform, weakly longitudinal.

**Comparative diagnosis.** This new species differs from all known *Adelphinus* by the presence of erect strong black...
spine-like setae on apical third of elytra (Color plate 6: 7), together with suberect fine and short pubescence.

**Etymology.** The species is named in the memory of Dr Martin Baehr (10.03.1943–17.04.2019), collector of the holotype and renowned German specialist on Carabidae from Munich. He always and selflessly helped many colleagues as the curator of the collection of beetles in Zoologische Staatsammlung München.

**Genus Catomus Allard, 1876**

Central Asian, Caucasian and partly Middle Eastern species were revised by Nabozhenko and co-authors [Nabozhenko, 2006a, 2015a; Nabozhenko et al., 2012; Nabozhenko, Ando, 2018; Nabozhenko, Tichý, 2019]. Mediterranean species were reviewed by Allard [1876, 1877], Seidlitz [1896] and Reitter [1922], by Vauloger [1900], Koch [1935], Antoine [1949] and Nabozhenko [2015b] for North Africa, Ardoïn [1958] for France, Español and Viñolas [1986] for Spain. Additional data on Spanish *Catomus* were added by Castro Tovar [2015].

The genus is widely distributed from the Western Mediterranean to China. North African and Middle East species need revision.

*Catomus seidlitzi* (Gebien, 1911)

**Material.** 1♂ (CRG), Israel, desert S Arad, Mizpe Zohar, 2.04.1997 (leg. H. Sparmberg).

**Distribution.** Israel.

*Catomus fulvipes* (Reiche et Saulcy, 1857)

(Color plate 5: 2, 3)

**Material.** 1♂, 1♀ (CRG), Syria, pass SW Nebek [Al-Nabek], 1200–1400 m, 14.04.1978 (leg. W. Heinzi); 1♂ (CSB), Syria, Damascus env., 10 km N Duma, 29.03.1993 (leg. S. Bečvar).

**Notes.** Types of *C. fulvipes* were not found and are probably lost. This little known species was described from Nablus (Palestine) and it is broadly interpreted by different authors. Reitter [1922] listed it for “Syrien”, but we don’t know which real species he re-described under the name “Catomus fulvipes”. Kaszab [1968] erroneously recorded it from Turkey (Gaziantep and Mardin provinces), where similar undescribed taxa are distributed. Reiche and Saulcy [1857] made a very clear and quality description, mentioned that the species has very shiny lacquered body, weakly longitudinal male pronotum, convex interstriae and striae merged in furrows. Specimens listed above distinctly refer to the Palestinian species *C. fulvipes*.

**Variability.** The specimens from Al-Nabek are wholly dark-brown, male with pronotum not beaded laterally, eyes (in lateral view) a little narrower. The male from Duma has a reddish brown pronotum, very finely beaded lateral margins of pronotum and eyes a little wider.

**Distribution.** South Western Syria and Israel (at least Palestine).

**Genus Euboeus Boieldieu, 1865**

Subgenus Pelorinus Vauloger, 1900


Species of the subgenus occur in the Mediterranean region, Eastern Europe, Western Kazakhstan (Uralsk), Transcaucasia, Iran and Turkmenistan (Kopet Dag).

**Euboeus (Pelorinus) globicollis** (Seidlitz, 1896), *comb. n.*

All species of *Probaticus* Seidlitz, 1896 were transferred to the genus *Euboeus* after the synonymy *Euboeus = Probaticus* [Nabozhenko et al., 2017]. We overlooked this species in our small review [Nabozhenko et al., 2017], but Francesco Vitali (Musée national d’histoire naturelle de Luxembourg) kindly pointed to our misstep. As a result, this species is also transferred from *Probaticus* to the genus *Euboeus*. Seidlitz [1896: 707] described this species in the genus *Helops* Fabricius, 1775 based on one male and one female from Cyprus and indicated “Mus. Vienn” as depository. The first author studied all Helopini in the collection of NMW, but didn’t find types of “Helops globicollis”, which are probably lost.

**Euboeus (Pelorinus) subrugosus** (Duftschmid, 1812)

**Material.** 1♂ (CRG), Greece, Kavala, 05.1988 (leg. F. Wrase); 1♀ (SMNS), Russia, Volgograd Region, Elton salt lake env., 18–23.05.2001 (leg. V. Karalius, J. Miatleuski).

**Distribution.** Widely distributed species from Balkan and Eastern Europe to Western Kazakhstan (Uralsk).

**Euboeus (Pelorinus) tenebricosus** s. str. (Brullé, 1832)

**Material.** 1♂ (SMNS), Greece, Peloponnesse, Ermanthos Mts., Kalenzi, 11.05.2015 (leg. M. Egger).

**Notes.** This species is very broadly interpreted since Seidlitz [1896] and Reitter [1922]. Actually, *E. tenebricosus* is distributed on Naxos Island (type locality) and Peloponnese. Reitter [1922] erroneously interpreted actual *E. tenebricosus* as *E. lacertosus* (Küster, 1845).

**Distribution.** Greece (Peloponnesse, Naxos Island).

**Euboeus (Pelorinus) myops** (Allard, 1876)

**Material.** 1♂ (SMNS), Turkey, Muş Prov., Bağlan pass, 1640 m, 21.04–11.05.2014 (leg. C. Reuter).

**Distribution.** Eastern Anatolia (Tunceli, Muş, Bitlis, Van provinces).

**Euboeus (Pelorinus) dorsalis** (Allard, 1877)

**Material.** 1♂ (SMNS), Turkey, Ankara Prov., pass between Akdoğan and Kızılcahamam, 1100 m, 5.04.1977 (leg. W. Heinzi).

**Distribution.** The species is widely distributed in Western Anatolia.

**Variability.** This species is variable in different localities, but males from all populations have absolutely identical genitalia. Typical males of *E. dorsalis* have a bare head, rounded and not projected anterior angles of pronotum, not flattened lateral pronotal sides, elytra
without coriaceous microsculpture and strongly widened transverse pro- and mesotarsi. Specimens (males) from Eskişehir Province have setated (with recumbent goldenish setae) head, acute and weakly projected anterior angles and narrower longitudinal pro- and mesotarsi. The specimen mentioned above from Ankara Province has a bare head, the pronotum weakly flattened on sides with acute moderately projected angles, elytra with coriaceous microsculpture and strongly widened tarsi.

_Euboeus (Pelorinus) oliverae_ (Seidltitz, 1896)

**Material.** 1♂ (CRG), Spain, Lugo Prov., Sierra de Ancares, Fieró de Abaixo, 1500 m, 9.07.1996 (leg. D.W. Wrase); 1♂ (CRG), 2♀ (NME, CRG), Spain, Cáceres Prov., Extremadura, NE Flavencia, vicinity of Piornal, 40°10’30”N / 05°49’04”W, 900–1200 m, 5.04.2007 (leg. J. Weipert).

**Distribution.** Western Spain, Portugal.

_Euboeus (Pelorinus) kopetzi_ sp. n.

(Color plate 5: 4; Color plate 6: 11–16)


**Description.** Body length 13.8, width 5.7 mm. Body dorsally dark-blue, weakly shiny, ventrally dark-brown, shiny. Anterior margin of head straight, epistome weakly depressed. Eyes large, convex, narrow (lateral view), oblique, head at eye level 1.9 times as wide as interocular space of frons. Punctuation of head coarse and dense, punctures round, merged. Head ventrally with very dense and coarse punctuation of round punctures, gula with acute apex, reaching submentum. Antennae long, with four apical antennomeres extending beyond base of pronotum, antennomere 11 asymmetric.

Pronotum weakly cordiform, transverse (1.3 times as wide as long), widest before middle, 1.48 times as wide as head. Lateral margins weakly rounded, near base weakly emarginated. Anterior margin widely emarginated, base weakly bisinuate. Anterior angles acute, projected, narrowly rounded at apex, posterior angles weakly obtuse, with distinct apex. All margins beaded, base more widely beaded. Disc of pronotum moderately convex, lateral sides narrowly flattened. Punctuation of disc coarse and dense (puncture diameter about 1.5 times wider than interpunctual distance), punctures round, merged on sides. Prothoracic hypomera flattened on margins, with irregular wrinkles. Prosternal process weakly convex.

Pterothorax. Elytra elongate (1.5 times as long as wide), 1.32 times as wide and 2.6 times as long as pronotum, 1.96 times as wide as head. Interstriae flat (weakly convex only near apex), with moderately coarse, not dense punctuation (puncture diameter subequal to or a little wider than interstrial distance) and sparse transverse wrinkles. Striae deep, often interrupted. Mesepisterna wrinkled near margin, smooth at middle and with coarse separated punctures near base. Metepisterna and metaventrite with finer dense punctuation. Metaventrite with distinct sharp V-shaped impression at middle.

Abdominal ventrites with coarse and dense, not merged punctuation.

Legs slender, long, tibiae straight. Pro- and mesotarsi weakly widened, not wider than tibiae at apex. Ratio of length: width of protarsomeres 1–4 = 1.4 : 1.1, 1.1 : 1, 0.9 : 0.9, 0.6 : 0.6.

**Comparative diagnosis.** The new species is most similar to the Balkan – Anatolian _E. obesus_ (Frivaldszky von Frivald, 1835) and Anatolian _E. granicollis_ (Seidltitz, 1896) by the wrinkled hypomera and the structure of aedeagus, and externally also similar to _E. bodemeyeri_ (Reitter, 1900) and _E. corrugatus_ (Seidltitz, 1896).

From the first species it differs in the following characters: body blue dorsally, pronotum wider before middle, gula reaching submentum, metaventrite with V-shaped impression, head and abdominal ventrites without recumbent pubescence of goldenish setae, narrower male protarsi and shape of apical piece of aedeagus. The new species differs from _E. granicollis_ (Seidltitz, 1896) by the blue dorsum, flattened lateral sides of pronotum and prohypomera without microgranules. _Euboeus kopetzi_ sp. n. differs from _E. bodemeyeri_ by the dorsally blue body, gula reaching submentum, not pubescent metaventrite and abdominal ventrites, wrinkled prothoracic hypomera (_E. bodemeyeri_ has coarsely puncturated prohypomera) and the structure of aedeagus. _Euboeus corrugatus_ also has the gula reaching the submentum, but distinctly differs from _E. kopetzi_ sp. n. by the black body, strongly convex pronotum, punctate prohypomera, densely pubescent metaventrite and abdominal ventrites, finely and sparsely puncturated interstriae without transverse wrinkles and structure of aedeagus.

**Etymology.** The species is named in honour of Andreas Kopetz (Erfurt-Kerspleben, Germany), the collector of the holotype.

**Genus Helops Fabricius, 1775**

The genus was completely revised by Reitter [1922]. Additional works on the taxonomy of _Helops_ were published later: Antoine [1949] for Morocco, Ardoin [1958] for France, Aliquò et al. [2007] for Italy, Abdurakhmanov and Nabozhenko [2011] for the Caucasus and Iran, Nabozhenko and Keskin [2017] for Turkey. Some taxa were described by Pica [1984] from Greece and Grimm [1991] from Cyprus. The genus is distributed in Central and Southern Europe, North Africa (Atlas), the Middle East, the Caucasus and North Iran (forests around the Caspian Sea).

_Helops punctatissimus_ Nabozhenko et Keskin, 2017

**Material.** 1♂ (CRG), Turkey, vicinity of Tatvan, 1200 m, 04.1986 (leg. L.R. Kenney); 2♂, 2♀ (SMNS), Turkey, Van Province, Reşadiye, 1–17.06.2007 (leg. C. Reuter); 1♂ (SMNS), Turkey, 32 km W Bingöl, Kursucu pass, 1800 m, 20.04–11.05.2014 (leg. C. Reuter).

**Note.** The species was described on the basis of one male [Nabozhenko, Keskin, 2017]. Female differs by more robust body, elytra visibly wider and more convex than in male.

**Distribution.** South Eastern Anatolia (Bingöl, Bitlis, Van provinces).

**Genus Raiboscelis Allard, 1876**

The genus was revised by Reitter [1922] but he confused the taxonomy of this group because he divided it based on the erroneous character of completely beaded and not (or incompletely) beaded abdominal ventrite 5. In fact, all _Raiboscelis_ have the ventrite 5 completely beaded. In addition, many unclear taxa and forms were described and the group needs revision. Species of _Raiboscelis_ occur in Italy, Greece, Western Turkey, Cyprus and countries of the Levantine region.
Raiboscelis azureus (Brullé, 1832)

Material. 1♀ (SMNS), Greece, Morea [Peloponnesse], Akrokorinth, 3.06.1976 (leg. K. Bernhauer).

Distribution. Greece, Italy (Sicily). The specimen mentioned above belongs to the black form, listed by Reitter [1922] as "v. tumidicollis Küst.".

Raiboscelis syriacus (Reiche, 1861)


Note. Reitter [1922] indicated the pronotum as finely and sparsely puncturate, but this species has the pronotum very densely and coarsely punctured by elongate punctures, also mentioned by Reiche [1861] in the original description.

Distribution. Southern Turkey, Syria, Lebanon. This species was listed only for Turkey and Syria [Reitter, 1922; Nabozhenko, Löbl, 2008], but Reiche [1861: 6] indicated Beirut "Habitat Berytam versus Syriae" in the original description.

Genus Entomogonus Solier, 1848

The genus was completely revised by Reitter [1922]. Further contributions to the taxonomy of the genus were summarized by Nabozhenko et al. [2018]. In addition, a new species from Jordan was described [Nabozhenko, Tichý, 2019].

Entomogonus (s. str.) angulicollis angulicollis
(Mulsant et Wachanru, 1853)

Material. 1♂, 1♀ (NME), Turkey, Osmanye Prov., Toprakkale / Issus, 80 m, 7.04.1978 (leg. W. Heinz).

Distribution. Turkey and Syria. Multiple subspecies described by Reitter [1922] need revision.

Entomogonus (Delonurops) saphyrinus (Allard, 1876)

Material. 1♂ (SMNS), "Akchehir Anatol. c"; 1♀ (SMNS), Turkey, Ankara Prov., 10 km SE Serêfêköchên, Tuz Gölü, 300 m, 10.04.1979 (leg. N. Kinzelbach); 1♂ (SMNS), Turkey, Ankara Prov., 10 km S Polatlı, Yenişehirite Büyük, 990 m, 9.05.1987 (leg. P.M. Giachino); 1♀ (CRG), Turkey, Gölbasi reservoir, 23.05.1983 (leg. H. Freude); 1♀ (CRG), Turkey, Aksaray Prov., 20 km E Aksaray, Karawanserî, 38°29'13"N / 34°12'10.2"E, 1196 m, 30.04.2006 (leg. P. Schnitter).

Distribution. Central Anatolia, subdeserts. This species is known only from Turkey. Records for Syria and Iraq [Nabozhenko, Löbl, 2008] are not supported by material, but the closely related taxon E. amri Nabozhenko et Tichý, 2019 occurs in Central Syria and Jordan.

Entomogonus (Delonurops) duchoni Reitter, 1903

Material. 1♂ (SMNS), Turkey, Karamanmaraş Prov., NW Marasi, pass S Goksun, 12.06.1973 (leg. K. Bernhauer).

Distribution. The species is known only in Turkey (not east of Elazığ Province). Data on Syria [Nabozhenko, Löbl, 2008] “Hochsyrien: Akbes, Zeitoon” are based on the work of Reitter [1922], but now these localities are in Turkey. Data on Iraq are erroneous.

Genus Hedyphanes Fischer von Waldheim, 1820

The genus was completely revised in a series of works by Nabozhenko and co-authors [Nabozhenko, 2005, 2013, 2018b; Abdurakhmanov, Nabozhenko, 2011; Nabozhenko, Lilig, 2013; Nabozhenko, Grimm, 2018]. Species of Hedyphanes are distributed from Western Anatolia and Egypt to Kyrgyzstan and Afghanistan, with highest diversity in Iran.

Hedyphanes seidlitzi seidlitzi Reitter, 1914

Material. 1♂ (CRG), Turkmenistan, Kopet Dag, 43 km SE Ashgabad, Sherlova cordon, 700–800 m, 12–17.04.1990 (leg. A. Napolov); 1♂ (CRG), Turkmenistan, Kopet Dag Natural Reserve, NN Germab, 800 m, 19.04.1990 (leg. D. Telnov); 1♂ (CRG), Turkmenistan, 55 km S Ashgabad, Germab env., 1000 m, 20–21.04.1990 (leg. A. Napolov).

Distribution. Turkmenistan (Kopet Dag), Iran (North Khorasan).

Hedyphanes koltszei Heyden, 1892

Material. 1♂ (CRG), Kazakhstan, Almaty Prov., Zharrent Distr., Koktaly, 300 m, 6.07.1996 (leg. V. Lukhtanov).

Distribution. Kyrgyzstan, Kazakhstan (the first record for the country).

Hedyphanes bodemeyeri Reitter, 1914

Material. 1♂, 2♀ (SMNS), Iran, Kordestan Prov., Zage-ya-Bala, 2000 m, 13.05.2002 (leg. G. Sama).

Distribution. Western Iran.

Hedyphanes laticollis Fischer von Waldheim in Ménétriés, 1832

Material. 1♂ (SMNS), Iran, Azerbaijan e Sarqi Prov., 27 km W Nir, 1750 m, 20.05.2002 (leg. G. Sama).

Distribution. Azerbaijan and North Iran.

Subtribe Cylindrinotina
Genus Nalassus Mulsant, 1854

The genus was revised by Reitter [1922]. Many regional taxonomic and faunistic papers are known on European Nalassus, among which some important taxonomic revisions were made by Kaszab [1938] on Hungary, Ardoin [1958] on France, Espanol [1961] on Spain and Aliquò et al. [2007] on Italy. An iconographic review of Nalassus of Middle Europe (with some errors) was published by Névák [2007]. Middle Asian species of the genus were studied by Medvedev [1987b]. East European, Caucasian, Turkish, Iranian, East Asian and American Nalassus were revised by Nabozhenko and co-authors [Nabozhenko, 2001b, 2006b, 2008a, 2010; Abdurakhmanov, Nabozhenko, 2011; Nabozhenko et al., 2016; Keskin et al., 2017a; Nabozhenko, Ando, 2018; Nabozhenko, Grimm, 2018].

The genus is widely distributed in the Holarctic, has the range divided into four exclaves [Nabozhenko, Ando, 2018]: Western Palaearctic (from Western Europe and North Africa to Iran), East Kazakhstan (from Balkhash Lake and Moyunkum Desert to Tarbagatay), Pacific Asia and North America.
Nalassus (s. str.) ecoffeti (Küster, 1850)

Material. 1♂ (CRG), France, Ardèche (Valence), Lamastre, 3.05.2005 (leg. T. Struyve); 1♂ (CRG), France, Hérault Department, deciduous forest in Mauroul, 43°34′14″N / 02°52′39″E, 560 m, 35.05.2014 (leg. W. Apfel).

Notes and distribution. The species occurs in France. Two subspecies (N. ecoffeti temperei and N. ecoffeti schaferi) were described by Ardoin [1958], but F. Soldati and L. Soldati [2001] synonymized both taxa after the study of large series. Our specimen from Ardèche valley corresponds to the aberration schaferi.

Nalassus (s. str.) faldermanni (Faldermann, 1851)

Material. 1♂, 1♀ (CRG), Turkey, Düzce Prov., Güzeldere pass, E part, 2400 m, 8.05.1989 (leg. W. Heinz); 1♂ (SMNS), Azerbaijan, Shamakhi, 1800 m, 4.04.2000 (leg. M. Pejcha); 3♂ (SMNS), Iran, Azerbaijan e Garbi Prov., 40 km S Orumiyeh, 1400 m, 15.05.2002 (leg. G. Sama); 1♂ (SMNS), Iran, Alborz Prov., 10 km N Gachsar, 19.04.2003 (leg. G. Sama); 1♂, 3♀ (SMNS), Armenia, Sevan Lake, Artsvanist to Vardenis, 1900 m, 11–12.07.2015 (leg. W. Heinz).

Notes and distribution. This widely distributed species consists of several different populations with identical male aedeagus: 1) small brown cylindrical specimens with small eyes, more thickened male antennae and the pronotum with margins very narrowly flattened in basal third, occurs in Armenia and Turkey (Van: Erek Dağ), beetles inhabit stones, feed on epilithic lichens; this population was described as Cylindrinotus (Helopoderodes) eligius Reitter, 1922 (synonymized by Nabozhenko [2001b]); 2) small to large brown specimens with large eyes, less thickened male antennae and wider completely flattened sides of pronotal disc; the most widespread population, distributed from south of European Russia (Rostov Region) and Eastern Anatolia to Turkmenistan (Kopet-Dag), beetles inhabit many species of trees and shrubs, feed on lichen Xanthoria parietina Linnaeus (Kopet-Dag), beetles inhabit stones, feed on epilithic lichens; this population was recently recorded for Bulgaria [Nabozhenko, 2006].

Distribution. Iran (Elburz, forests to 1500 m).

Nalassus (Helopondrus) cambyses (Seidlitz, 1896)

Material. 1♂ (SMNS), Iran, W Mazandaran, Hasan Keif, 19–21.04.1999 (leg. J. Rejeki); 2♂, 5♀ (SMNS), Mazandaran Prov., Elburz, Kandovan pass, 36°09′10″N / 51°18′99″E, 3000 m, 31.05.2008 (leg. A. Skale).

Distribution. Iran (Elburz, alpine meadows from 2300 to 3200 m).

Nalassus (Helopondrus) rejeki Nabozhenko, 2014

Material. 1♂ (SMNS), Iran, Zanjan Prov., Tah-i-Suleyman, 2200–2300 m, 3.05.2014 (leg. W. Heinz); 1♂, 2♀ (CMN), West Azerbaijan Prov., S of Piranshahr, 36°36′31″N / 45°08′21″E, 20–22.05.2015 (leg. D. Kasatkin, S. Kukanin).


Genus Eustenomacridius Nabozhenko, 2006

The genus was revised by Nabozhenko [2006a]. Later, one additional species of the subgenus Cauccasohelops Nabozhenko, 2006 was described from Eastern Anatolia [Keskin et al., 2017b].

Eustenomacridius (s. str.) turcmenicus (G.S. Medvedev, 1964)


Distribution. Turkmenistan (Kopet Dag) [Nabozhenko, 2006a].

Genus Zophohelops Reitter, 1902

Middle Asian species were studied by Reitter [1902, 1922], Skopin [1964, 1966], Medvedev [1987a] and Nabozhenko [2001a, 2008b]. Middle East species of the genus were described by Nabozhenko and co-authors [Nabozhenko, Keskin, 2014; Nabozhenko, 2014].

Species of the genus are widely distributed in Tien-Shan (one species is also known from South Tajikistan), western exclave of the generic range includes three species (one from each country) from Iran (the subgenus Zophondrus Nabozhenko, 2014), South Western Transcaucasia and Turkey.

Zophohelops (s. str.) tiro (Reitter, 1902)

Material. 5♂, 3♀ (CRG), Uzbekistan, Chimgan, 2000 m, 6.05.1978 (leg. Kr. Pospilii); 1♂ (CRG), Uzbekistan, Chimgan,12.05.1989 (leg. H. Sparmberg).
Figs 1–6. Helopini from the Mediterranean region, habitus.
1 – *Adelphinus baehri* sp. n., male, holotype; 2 – *Catomus fulvipes*, male, Syria, Al-Nabeck; 3 – the same, female; 4 – *Euboeus* (*Pelorinus*) *kopetzi* sp. n., male, holotype; 5 – *Zophohelops staveni* sp. n., male, holotype; 6 – the same, female, paratype.

Рис. 1–6. Helopini из Средиземноморья, внешний вид.
1 – *Adelphinus baehri* sp. n., самец, голотип; 2 – *Catomus fulvipes*, самец, Сирия, Эль-Небек; 3 – то же, самка; 4 – *Euboeus* (*Pelorinus*) *kopetzi* sp. n., самец, голотип; 5 – *Zophohelops staveni* sp. n., самец, голотип; 6 – то же, самка, паратип.
Figs 7–20. Helopini from the Mediterranean region, details of structure.
7–10 – *Adelphinus baehri* sp. n., male; 11–16 – *Euboeus* (*Pelorinus*) *kopetzi* sp. n., male; 17–20 – *Zophohelops staveni* sp. n., male. 7 – setation of elytra; 8, 11, 17 – aedeagus ventrally; 9, 12, 18 – aedeagus laterally; 10, 13 – median lobe of aedeagus; 14, 20 – spiculum gastrale, ventrally; 15 – plate of spicula gastrale, laterally; 16, 19 – male inner sternite VIII. Scale bars – 1 mm.

Рис. 7–20. Helopini из Средиземноморья, детали строения.
7–10 – *Adelphinus baehri* sp. n., самец; 11–16 – *Euboeus* (*Pelorinus*) *kopetzi* sp. n., самец; 17–20 – *Zophohelops staveni* sp. n., самец. 7 – щетинки на надкрыльях; 8, 11, 17 – эдеагус вентрально; 9, 12, 18 – эдеагус, вид сбоку; 10, 13 – медиальная доля эдеагуса; 14, 20 – гастральная спикула вентрально; 15 – лопасти гастральной спикулы, вид сбоку; 16, 19 – VIII внутренний стернит самца. Масштабные линейки – 1 мм.
Distribution. Uzbekistan (Chatkal, Pskem and Ugam ranges).

Zophohelops (s. str.) staveni sp. n.
(Color plate 5: 5, 6; Color plate 6: 17–20)


Description. Body length 7–8.5 mm, width 2.9–3.5 mm. Body dark brown, dull, robust. Anterior margin of head weakly widely emarginated. Head widest at eye level. Eyes small, convex, strongly transverse (lateral view). Head on eye level 1.4 times as wide as interocular space of frons. Lateral margin of genae evenly moderately rounded, lateral margin of head shortly sinuated between genae and epistome. Punctuation of head irregular: frons with very dense and coarse flat-bottomed round punctures (puncture diameter 2 times as wide as interpunctural distance), epistome and genae dorsally with fine and sparser punctuation. Temples parallel. Gula with rounded margins, not reaching submentum. Head ventrally with very coarse and dense wrinkles. Apical maxillary palpomeres weakly secundiform, not transverse. Antennae short, antennomeres not thickened in male and female, with 2 apical antennomeres extending beyond base of pronotum.

Pronotum almost square (1.2 times as wide as long in the holotype), widest a little before middle or at middle, 1.5 times as wide as head (holotype). Anterior margin straight or weakly rounded. Lateral margins and base weakly rounded, rarely base weakly sinuated at middle. Anterior and posterior margins weakly obtuse, not projected, distinct. Anterior margin not beaded, lateral margins and base finely beaded. Disc strongly convex, with the same punctuation as on head, but finer and sparser at middle (puncture diameter 1.5–2 times as short as interpunctural distance), with unpuncturated middle line. Prosternum very coarsely and densely puncturated. Prothoracic hypomera with coarse and dense punctures on sides and fine and sparse puncturation, more shiny and distinctly punctured near base and at apex. Interstriae flat, with fine sparse punctuation, more shiny and distinctly punctured near base and at middle, matt (shagreen) and indistinctly punctured on sides and at apex. Epipleura impressed along the entire length, reach sutural angle, but very narrow at apex.

Metaventrite coarsely wrinkled, mesepimera and metepisterna with dense and moderately coarse punctuation, mesepisterna with coarser and sparser punctures. Metaventrite with coarse and sparse punctures on sides and fine and sparse punctuation. Abdominal venrites finely and sparsely punctured (puncture diameter 2–3 times as short as interpunctural distance), ventrite 5 not beaded at apex; ventrite 1 without hair brush at middle. Trochanters with sparse brush of suberect reddish hairs and single long seta. Femora with dense recumbent reddish pubescence in basal half. Tibiae straight, male and female tarsi not widened.

Comparative diagnosis. The species in similar to Z. montanatolicus Nabozhenko et Keskin, 2014 (Turkey, Hakkary Province) from which it differs in the coarsely and densely puncturated pronotum, coarsely wrinkled prohypomera with sparse punctures (Z. montanatolicus has finely wrinkled prohypomera), absence of hair brush at middle of male abdominal venrite 1 and not beaded abdominal venrite 5.

Etymology. The genus is named in the memory of German specialist on Carabidae from Lengede, collector of the type series Klaus Staven (1939–2004).

Genus Cylindrinotus Faldermann, 1837

The genus was completely revised by Nabozhenko [2015c]. Most species of this group inhabit high mountain alpine meadows in Turkey, Transcaucasia and North Iran.

Cylindrinotus femoratus (Faldermann, 1837)

Material. 1♂ (SMNS), “UGSS – Armenia Little Caucasus 4 – 5 June 1989”; 1♀ (CRG), Armenia, Garni-Gohi, 40°03′N / 44°15′E, 1700 m, 7.06.2003 (leg. Yokoi); 1♂ (CRG), Armenia, ca. 5 km NW Gori, 2000 m, 39°31′48.6″/46°09′04″E, 9.05.2017 (leg. H. Grimm).

Distribution. Turkey, Armenia, Azerbaijan, North Iran.

Cylindrinotus gibbicolli Faldermann, 1837

Material. 1♀, 1♂ (CRG), Turkey, Karu, Posof, Igdir–Çeqbi, 2350 m, 10.05.1990 (leg. K. Staven); 2♂, 1♀ (CRG), Turkey, Sazaz env., 6.06.1994, (leg. R. Sehnal); 1♂, 1♀ (CRG), Turkey, Ardahan Prov., Camliçatık, Doğelli, 1830 m, 29.07.2005 (leg. R. Sehnal); 1♀ (SMNS), Georgia, Tukmatakash pass, 2000–2100 m, N Paravani, 7–8.07.2013 (leg. W. Heinz); 1♂ (CRG), Georgia, Tukmatakash pass near Talsula, Pinus forest, N side of pass, 1800 m, 17–18.07.2017 (leg. W. Heinz); 1♂, 2♀ (SMNS), Armenia, Vayoz dzor Prov., Vardenis Mts., Selim pass, 2400 m, 25–26.06.2015 (leg. W. Heinz).

Distribution. Eastern Anatolia (Ardahan, Kars and İğdır provinces), South Georgia, Armenia.

Cylindrinotus gibbosus (Seidlitz, 1896)

Material. 1♂ (CRG), Turkey, Rize / Trabzon provinces, Ovit pass, 11.06.1994 (leg. R. Sehnal).


Cylindrinotus nitidus (Seidlitz, 1896)

Material. 1♂ (CRG), Turkey, Bitlis Prov., N Tatvan, Nemrut Dağı, 38°36′34.4″N / 42°15′26.5″E, 2336 m, 10.07.2005 (leg. Schnitter); 1♀ (SMNS), Turkey, Van Prov., Resadiye, 1–17.04.2007, 21.04–20.05.2014 (leg. C. Reuter); 1♂, 1♀ (SMNS), Turkey, Mur Prov., Buglan pass, 1640 m, 21.04–11.05.2014 (leg. C. Reuter).

Distribution. South Eastern Anatolia.

Cylindrinotus tchorokhicus Nabozhenko 2011


Distribution. Turkey (Arvin Province).

Genus Odocnemis Allard, 1876

The group (under the genera Helops Fabricius, 1775, Cylindrinotus and Omaleis Allard, 1876) was revised in old works of Seidlitz [1896] and Reitter [1922]. Later, Antoine [1949] made a review of the genus (under the name Steronax Allard, 1876) of Morocco; Español [1961] considered two Spanish species of this genus as Nallassus.
The eastern species from the European part of the former USSR, Near East and the Caucasus were revised by Nabozhenko [2001b], Keskin and Nabozhenko [2011], Nabozhenko and Keskin [2016]. Other species need revision.

The genus is distributed from Spain and Morocco to Western Kazakhstan and Northern Iran.

Odocnemis (s. str.) altimontana
Nabozhenko et Keskin, 2016

Material. 1♂ (CRG), Turkey, Antalya Prov., Irmasan pass, 1300–1500 m, 05.1987 (leg. Erose).

Distribution. Turkey (Antalya Province).

Odocnemis (s. str.) amanosica
Nabozhenko et Keskin, 2016

Material. 3♀ (CRG), Syria, Idlib Prov., between Salma and Slempehe, 35°37’N / 36°10’E, 1100 m, 6.05.2002 (leg. Barries, Dostal, Preiss); 1♂ (CRG), Syria, Idlib Prov., 10 km Slempehe, 35°34’45.6”N / 36°12’53.1”E, 1320 m, 8.05.2002 (leg. Barries, Dostal, Preiss).

Distribution. Turkey (Amanos Dağları), Syria (Latakya and Idlib provinces).

Odocnemis (s. str.) kakunini
Nabozhenko et Keskin, 2016

Material. 1♂ (SMNS), Iran, Lorestan Province, Razan, 55 km E Khorramabad, 2000 m, 11.05.2002 (leg. G. Sama).

Distribution. Western Iran (Kermanshah and Lorestan provinces).

Odocnemis (s. str.) punctata Allard, 1876


Distribution. Turkey, Syria, Lebanon, Israel.

Odocnemis (s. str.) tuberculata (Küster, 1851)

Material. 1♂ (CRG), Greece, Peloponnes, S Levidi, 26.04.1999 (leg. Wachtel); 1♂ (CRG), Greece, Peloponnes, Ilia Region, Erimanthos range, N Míhas, 900–1100 m, 6.05.1999 (leg. I. Wolf).

Distribution. Albania, Greece.

Odocnemis (s. str.) alcida Reitter, 1922


Distribution. Greece. This species was known only by the holotype (male) from “Grechenland”. The data presented above is the first distinct locality for O. alcida.

Odocnemis (s. str.) euritopica euritopica
Nabozhenko et Keskin, 2016

Material. 1♂ (CRG), 4♂, 1♀ (NME), Turkey, Denizli Prov., pass S Denizli (Kazikbeyli Geçidi), Kurtköy, 800–1200 m, 25.05.1978 (leg. W. Heinz).

Distribution. Western Anatolia.

Odocnemis (s. str.) allardi Nabozhenko et Keskin, 2016


Distribution. Eastern Anatolia, Armenia, Azarbaijan (Nakhichevan), North Iran.

Odocnemis (s. str.) exarata Germar, 1817

Material. 1♀ (NME), Croatia, Split Prov., Hvar Island, Stari Grad vicinity, 43°12’N / 16°38’E, 28.–30.06.2010 (leg. A. Weigel).

Distribution. Southern Europe from Croatia to Macedonia.

Odocnemis (Heloponotus) gracilis
(Fischer de Waldheim, 1823)

Material. 2♀ (SMNS), Russia, Crimea, Yalta, 1200 m, 20.04.2008 (leg. M. Koštál).

Distribution. Ukraine, Russia, Kazakhstan. Steppe zone from Crimea to Ural River.

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