

## A new species of the genus *Adelphinus* Fairmaire et Coquerel, 1866 (Coleoptera: Tenebrionidae) from Iran

### Новый вид рода *Adelphinus* Fairmaire et Coquerel, 1866 (Coleoptera: Tenebrionidae) из Ирана

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**Ключевые слова:** Coleoptera, Tenebrionidae, Helopini, *Adelphinus*, новый вид, Иран.

**Abstract.** A new species *Adelphinus* (*Adelphinops*) *dmitrii* sp. n. is described from Iran (Fars Province). The species differs from close *A. ordubadensis* Reitter, 1890 (it is distributed in Armenia, Azerbaijan and Georgia) and *A. afghanicus* Kaszab, 1960 (it is distributed in Afghanistan) in the black body, two transverse depression near basal bead of pronotum, elytral interstriae with sparse granules, process of abdominal ventrite 1 between metacoxae with deep transverse depression. Key to species of the subgenus *Adelphinops* Reitter, 1922 is given.

**Резюме.** Описан новый вид *Adelphinus* (*Adelphinops*) *dmitrii* sp. n. из Ирана (провинция Фарс). Этот вид отличается от близких *A. ordubadensis* Reitter, 1890 (распространен в Армении, Азербайджане и Грузии) и *A. afghanicus* Kaszab, 1960 (распространен в Афганистане) черным телом, двумя поперечными вдавлениями возле базального окаймления переднеспинки, наличием мелких зернышек на междурядьях надкрылий, сильным поперечным вдавлением отростка 1-го абдоминального вентрита между задними тазиками. Дана определительная таблица видов подрода *Adelphinops* Reitter, 1922

*Adelphinus* Fairmaire et Coquerel, 1866 is a small Western Palaearctic genus with species distributed in northern Africa, Transcaucasia and Afghanistan. Species of the genus *Adelphinus* are the flying moderate in size beetles (8–12 mm), which inhabit deserts and subdeserts. The genus belongs to the subtribe Helopina of the tribe Helopini and includes 2 subgenera [Reitter, 1922]. Three species of nominotypical subgenus are known from Northern Africa (Tunis, Algeria, Morocco), two species of the subgenus *Adelphinops* Reitter, 1922 have small ranges in Transcaucasia and Afghanistan [Reitter, 1890, 1922; Kaszab, 1960; Nabozhenko, Löbl, 2008; Abdurakhmanov, Nabozhenko, 2011]. The first species *A. (Adelphinops) ordubadensis* Reitter, 1890 is distributed in Armenia (Yerevan, Irvezh District, Kotayk Province) [Kalashyan, 2010] and Azerbaijan (Mingechevir; Nakhichevan Autonomous Republic: Ordubad) and Georgia (Eldari) [Dzhambazishvili, 2000]. The second species, *A. (Adelphinops) afghanicus* Kaszab, 1960 is

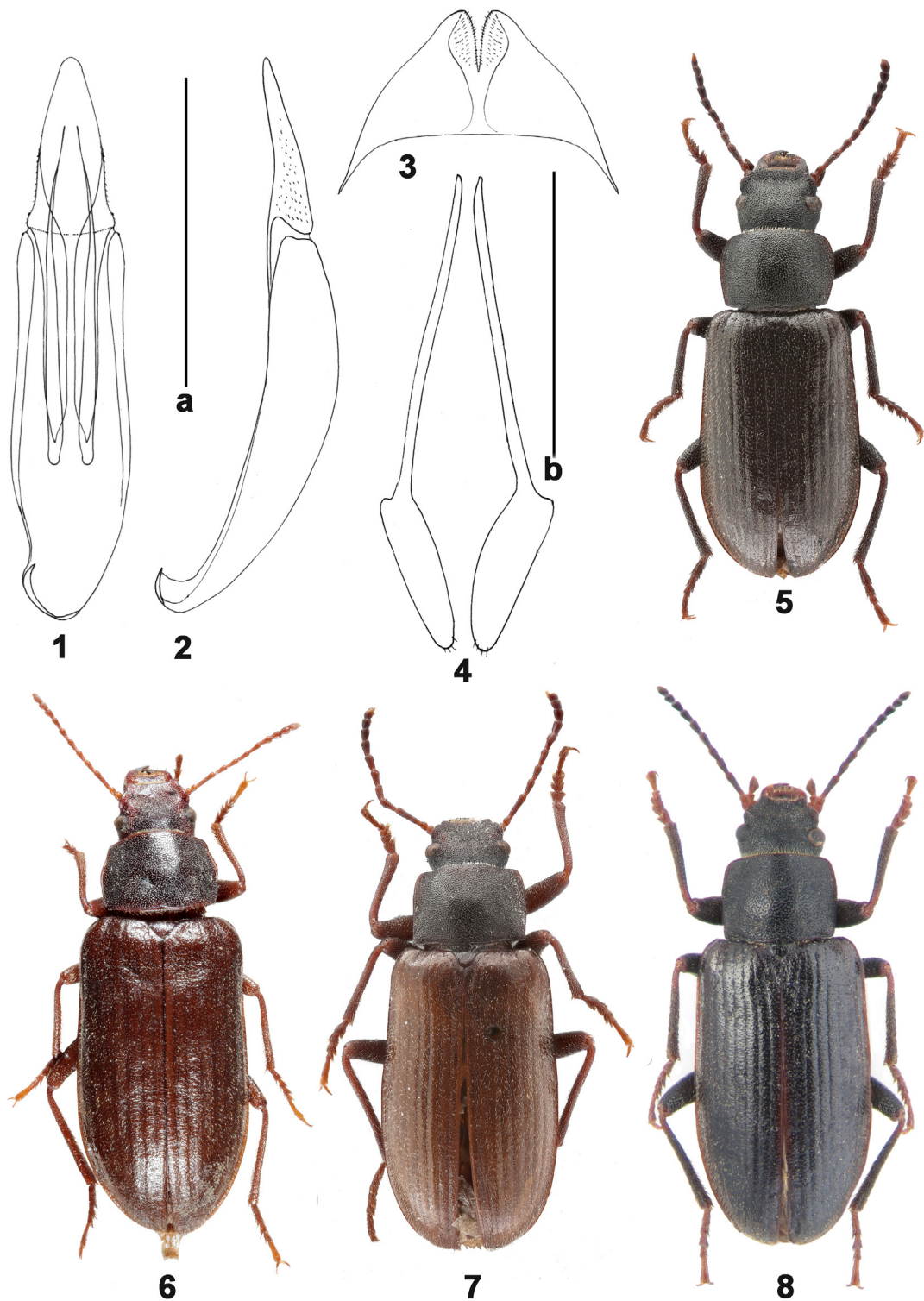
known only from the holotype from Afghanistan (labels of the holotype “J. Klapperich, Darufulun b. Kabul, 1800 m, 11.6.53, Afghanistan” and “Holotypus, 1960, ♀, *Adelphinus afghanicus* Kaszab”) [Kaszab, 1960]. Species of this subgenus differ from nominotypical African species in the short, scarcely extending beyond pronotum antennae, not thickened scapus, monochrome elytra with rasp-shaped interstria. Species of *Adelphinus* were unknown from Iran, although the record of *Adelphinus ordubadensis* distributed in border regions of Azerbaijan is quite possible. A new species of the subgenus *Adelphinops* from southwestern Iran (Fars Province) is described below. This record greatly widened the range of the genus.

#### *Adelphinus (Adelphinops) dmitrii* sp. n. (Figs 1–5)

**Material.** Holotype, ♂: Iran, Fars Prov., Sarvestan env., 7–8.05.2007 (leg. A. Klimenko). Holotype will be deposited in Zoological Institute of Russian Academy of Sciences (St. Petersburg, Russia).

**Description.** Male. Body slender, black, antennae and tarsi dark brown. Anterior margin of frontoclypeus almost straight, with projected angles. Head widest at eye level. Eyes moderately convex, widely separated. Head width 1.45 times wide of interocular space. Genae strongly regularly rounded. Lateral margin of head with obtuse emargination between genae and frontoclypeus. Frontoclypeus strongly depressed, genae slightly elevated. Punctuation of head coarse and dense, punctures round, often merged. Gula acute triangular, almost reaching anterior margin of vertex. Mentum longitudinal, with very weak middle ridge. Vertex rugosity punctated. Antennae short, with only 2 apical antennomeres extending beyond base of pronotum. Antennomeres shortened from 2<sup>nd</sup> to 11<sup>th</sup>; antennomeres 8–11 flattened; antennomere 10 with subequal length and width; antennomere 11 1.37 times as long as wide.

Pronotum transverse (1.5 times as wide as long), rectangular shape, widest little before middle, 1.3 times as wide as head. Lateral margins weakly rounded, anterior margin weakly widely emarginated, base weakly rounded. Angles widely rounded, anterior angles right, posterior angles weakly obtuse. Lateral margins and base distinctly beaded, anterior margin not beaded in middle. Disc of pronotum regularly weakly convex, with very narrowly flattened lateral sides and 2 transverse depression near basal bead. Punctuation coarse and dense, as on head. Prothoracic hypomera narrowly flattened on outer margins, with dense rugose punctation. Prosternal process not convex.



Figs 1–7. Species of the subgenus *Adelphinops* of the genus *Adelphinus*.  
 1–5 – *A. dmitrii* sp. n., holotype; 6 – *A. afghanicus*, holotype; 7 – *A. ordubadensis* (bicolour form, Eldari, Georgia); 8 – *A. ordubadensis* (monochrome form, Armenia, Goravan sands; photograph by K. Makarov and G. Karagyan from Kalashayn [2010]). 1 – aedeagus ventrally; 2 – aedeagus laterally; 3 – male inner sternite VIII; 4 – male gastral spicula. Scale bars 1 mm (a – for Figs 1, 2; b – for Figs 3, 4).

Рис. 1–7. Виды подрода *Adelphinops* рода *Adelphinus*.

1–5 – *A. dmitrii* sp. n., голотип; 6 – *A. afghanicus*, голотип; 7 – *A. ordubadensis* (двухцветная форма, Эльдари, Грузия); 8 – *A. ordubadensis* (одноцветная форма, Армения, Гораванские пески; фотография К. Макарова и Г. Карагяна из Kalashayn [2010]). 1 – эдеагус вентрально; 2 – эдеагус латерально; 3 – VIII внутренний стернит самца; 4 – гастральная спикула самца. Масштабные линейки 1 мм (а – для рисунков 1, 2; б – для рисунков 3, 4).

Elytra almost parallel, elongate (1.6 times as long as wide), widest after middle, 1.8 times as wide as head, 1.4 times as wide and 3.3 times as long as pronotum. Strial punctures connected in very fine but distinct furrows. Interstriae weakly convex, with small sparse granules, regularly covered with suberect short hairs. Epipleura slightly depressed, with fine sparse punctation and wrinkles, almost reaching sutural angles of elytra, ending before the apex. Epipleural carina completely visible dorsally.

Ventral side (excluding epipleura) completely covered with short recumbent pubescence. Metaventricle and metepisterna with fine and sparse rasp-shaped punctation. Abdominal ventrites with very fine dense punctation, ventrite 5 not beaded apically; process of abdominal ventrite 1 between metacoxae with deep transverse depression.

Trochanters with several moderately long hairs and one longer sensillum. Tibiae straight, with subrecumbent hairs on inner side. Pro- and mesotarsi widened, protarsomeres 2 and 3 transverse, mesotarsomeres longitudinal.

Body length 8.5 mm, width 3.3 mm.

Female unknown.

**Differential diagnosis.** Differences from two other species of the subgenus *Adelphinops* are given in the key.

**Etymology.** The species is named in memory of Dmitriy Matishov (5.09.1966–20.08.2015), the head of Institute of Aride Zones of Southern Scientific Centre RAS (Rostov-on-Don, Russia).

#### Key to species of the subgenus *Adelphinops* of the genus *Adelphinus*

- 1(2). Body black. Pronotum with two transverse depression near basal bead. Elytral interstriae with sparse granules. Process of abdominal ventrite 1 between metacoxae with deep transverse depression ..... *A. dmitrii* sp. n. (Figs 1–5)
- 2(1). Body brown, monochrome, or with light elytra and dark pronotum and head. Pronotum without transverse depressions near basal bead. Elytral interstriae with sparse rasp shaped punctures. Process of abdominal ventrite 1 between metacoxae with not deep round depression.
- 3(4). Body monochrome, brown. Strial punctures very little, almost invisible, elongate, not merged in furrows ..... *A. afghanicus* (Fig. 6)

- 4(3). Body bicolor, with light brown elytra and dark brown pronotum and head or monochrome dark brown. Strial punctures little but distinct visible, round, merged in fine furrows ..... *A. ordubadensis* (Figs 7, 8)

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## References

- Abdurakhmanov G.M., Nabozhenko M.V. 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).
- Dzhambazishvili M.Ya. 2000. Catalogue of darkling beetles (Coleoptera, Tenebrionidae) of Georgia. *Trudy Instituta Zoologii*. 20: 185–193 (in Russian).
- Kalashyan M. 2010. *Adelphinus ordubadensis* Reitter, 1890. In: The Red Book of Animals of the Republic of Armenia: Invertebrates and Vertebrates. Yerevan: Zangak-97: 101.
- Kaszab Z. 1960. Die Tenebrioniden Afghanistans, auf Grund der Ergebnisse der Sammelreise des Herrn J. Klapperich in den Jahren 1952/53 (Col.). 1. Fortsetzung und Schluss. *Entomologische Arbeiten aus dem Museum G. Frey*. 11: 1–179.
- Nabozhenko M.V., Löbl I. 2008. Tribe Helopini. In: Catalogue of Palaearctic Coleoptera. Vol. 5. Tenebrionoidea. (I. Löbl, A. Smetana eds). Stenstrup: Apollo books: 241–257.
- Reitter E. 1890. Neue Coleopteren aus Europa, den angrenzenden Ländern und Sibirien, mit Bemerkungen über bekannte Arten. Neunter Theil. *Deutsche Entomologische Zeitschrift*. 1890: 145–164.
- Reitter E. 1922. Bestimmungstabelle der palaearktischen Helopinae (Col. Tenebrionidae). *Wiener Entomologische Zeitung*. 39: 1–44, 113–171.