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To the knowledge of weevils of the genus *Brachycerus* Olivier, 1789 (Coleoptera: Curculionidae: Brachycerinae) from Lebanon

К познанию жуков-долгоносиков рода *Brachycerus* Olivier, 1789 (Coleoptera: Curculionidae: Brachycerinae) Ливана

© Yu.G. Arzanov¹, D.G. Kasatkin²

© Ю.Г. Арзанов¹, Д.Г. Касаткин²

¹Rostov Branch of the Russian Entomological Society, Rostov-on-Don, Russia. E-mail: arz99@mail.ru

²Rostov Branch of FSI "VNIICR", 20th line, 43/16, Rostov-on-Don 344018 Russia. E-mail: dorcadion@yandex.ru

¹Ростовское отделение Русского энтомологического общества, Ростов-на-Дону, Россия

²Ростовский филиал ФГБУ «ВНИИКР», 20-я линия, 43/16, Ростов-на-Дону 344018 Россия

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Ключевые слова: Coleoptera, Curculionidae, *Brachycerus*, фауна Ливана.

Abstract. The list of species of the genus *Brachycerus* Olivier, 1789 fauna of Lebanon (Coleoptera: Curculionidae) is presented for the first time along with new data about the fauna of this genus in the Middle East in general. Additional data on the morphology of *B. hermoniacus* Friedman et Sagiv, 2010 are provided.

Резюме. Впервые приведен список видов рода *Brachycerus* Olivier, 1789 (Coleoptera: Curculionidae) фауны Ливана. Уточнены некоторые сведения по фауне рода на Ближнем Востоке. Представлены дополнительные данные по морфологии *B. hermoniacus* Friedman et Sagiv, 2010.

The Mediterranean species of the genus *Brachycerus* Olivier, 1789 have been intensively studied in the last 15 years. After the works of Zumpt [1937a, b], important data were added to the fauna of *Brachycerus* of the European part of Russia and the Caucasus [Arzanov, 2005], Israel [Friedman, Sagiv, 2010], Turkey [Arzanov, Friedman, 2012] and Syria [Arzanov, 2011].

A short expedition of the Russian entomologists to Lebanon [Kakunin, 2018] brought interesting additional material for the knowledge of *Brachycerus* in the Middle East. Below we present results of this expedition.

All material is deposited in private collections of Yu.G. Arzanov (Rostov-on-Don, Russia) and A.S. Zubov (Moscow, Russia).

Brachycerus junix Lichtenstein, 1796
(Figs 1, 8)

Material. 1♀, Lebanon, near Jezzine, 30°31'5.91"N / 35°34'54.98"E, 12–13.05.2018 (D.G. Kasatkin); 3♀, Lebanon, near Sowfar vill., 13.05.2018 (A.S. Zubov).

Notes. Friedman and Sagiv [2010] indicated that *B. junix* and *B. aegyptiacus* are conspecific, but suggested to use the younger name *B. aegyptiacus* Olivier, 1807 for this species because of the ambiguity associated with the older name. Alonzo-Zarazaga et al. [2017: 110] listed both

names, while here we explain below in the discussion why *B. junix* is the current valid name for this species.

Distribution. Italy, Croatia, Greece, Turkey, Cyprus, Syria, Lebanon, Israel, Jordan, Egypt.

Brachycerus argillaceus Reiche et Saulcy, 1858
(Fig. 2, 7)

Material. 1♀, Lebanon, Shouf, 1 km N Fraidis, 33°42'26.32"N / 35°42'21.83"E, 10–11.05.2018 (D.G. Kasatkin); 1♀, Lebanon, Bcharre, Horsh Ehdhen Reserve, 15–17.05.2018 (A.S. Zubov); 1♀, Lebanon, Bekaa, Kornet-el-Jamal Mt., 34°13'3.69"N / 36°4'3.64"E, 2500 m, 25.05.2018 (D.G. Kasatkin).

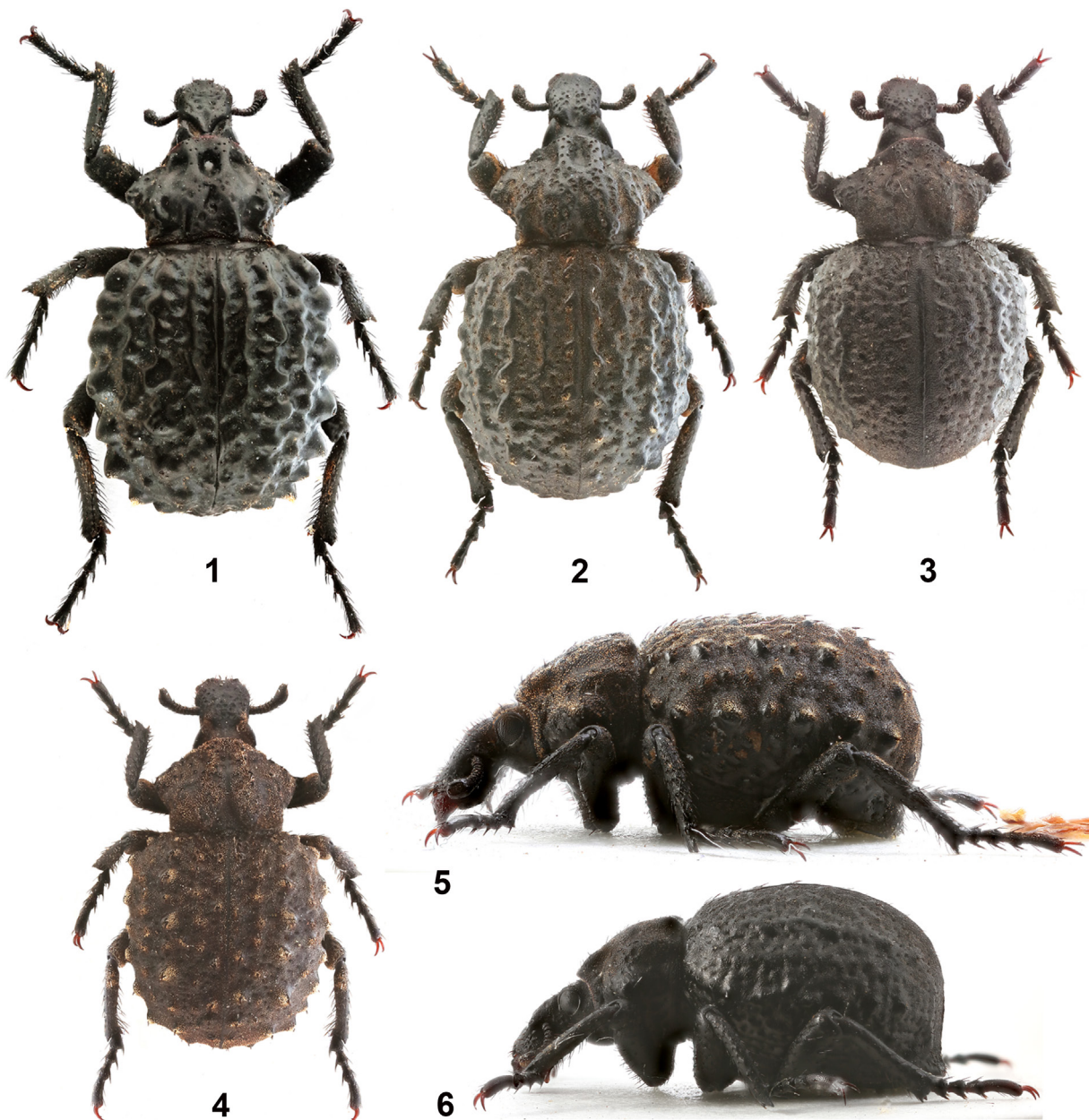
Notes. Compared to the specimens from Israel, the Lebanese specimens have wider frons and visibly more narrow supraorbital ridge.

Distribution. Greece, Turkey, Cyprus, Syria, Lebanon, Israel, Jordan.

Brachycerus hermoniacus Friedman et Sagiv, 2010
(Figs 3–7)

Material. 4♂, 1♀, Lebanon, Bekaa, Kornet-el-Jamal Mt., 34°13'3.69"N / 36°4'3.64"E, 2500 m, 25.05.2018 (D.G. Kasatkin); 1♀, Shouf, 1 km N Fraidis, 33°42'26.32"N / 35°42'21.83"E, 10–11.05.2018 (D.G. Kasatkin).

Notes. The description of this species, in our opinion, was based on the worn out specimens (tubercles and scales). As a result, the morphological description of *B. hermoniacus* in the paper of Friedman and Sagiv [2010] was not complete. Within the pool of the Middle East species, according to the original description, *B. hermoniacus* is closest to *B. orbipennis* Reiche et Saulcy, 1858. It differs from the latter in the eyes not protruding above frons in lateral view and in the straight anterior margin of the pronotum [Friedman, Sagiv, 2010]. In fact, both these species are similar only in the rounded shape of the elytra. They are different in many other characters. Therefore, we corrected the description of *B. hermoniacus* by the additional taxonomic characters that allow to distinguish this species among others in the fauna of the Middle East.



Figs 1–6. *Brachycerus* spp. from Lebanon.

1 – *B. junix* Olivier, 1807, female, habitus, 2 – *B. argillaceus* Reiche et Saulcy, 1858, female, habitus; 3–6 – *B. hermoniacus* Friedman et Sagin, 2010: 3 – female, habitus; 4 – male, habitus, 5 – male, lateral view; 6 – female, lateral view.

Рис. 1–6. *Brachycerus* spp. из Ливана.

1 – *B. junix* Olivier, 1807, самка, внешний вид; 2 – *B. argillaceus* Reiche et Saulcy, 1858, самка, внешний вид; 3–6 – *B. hermoniacus* Friedman et Sagin, 2010: 3 – самка, внешний вид; 4 – самец, внешний вид; 5 – самец, вид сбоку; 6 – самка, вид сбоку.

Additions to the original comparison. *Brachycerus hermoniacus* differs from all Middle East species of the genus in large isolated tubercles on the subsutural elytral interval and similar to the North African *B. normandi* Desbrochers des Loges, 1898 [Colonnelli et al., 2016; Alonzo-Zarazaga et al., 2017].

Redescription. Dorsal side of rostrum flat, parallel-sided, narrowed from antennal base to apex. Frons without medial carina, with only slight impression, continuing from preorbital groove; preorbital groove extended to half of longitudinal diameter of eye; eye protruding above frons (lateral view). Eyes flat. Supraorbital

ridge not expressed. Dorsal side of rostrum with sparse round, weakly impressed punctures; each puncture with small setose tubercle at middle. Epistome horseshoe-shaped, elevated, weakly projected beyond anterior margin of rostrum.

Pronotum with medial carinae widely spaced in posterior half and closer together in anterior half; carinae merged into common surface in middle part, not extending beyond contours of pronotum; lateral carinae weakly smoothed. Lateral tooth more or less obtuse, anterior from middle of pronotum. Dorsal surface of pronotum with large sparse fovea and fine punctation, covered with dense goldish dusty scales.



Figs 7–8. Habitats of *Brachycerus* in Lebanon.

7 – Bekaa, Kornet-el-Jamal Mt., habitat of *B. hermoniacus* Friedman et Sagin, 2010 and *B. argillaceus* Reiche et Saulcy, 1858; 8 – near Jezzine, habitat of *B. junix* Olivier, 1807.

Рис. 7–8. Местообитания *Brachycerus* в Ливане.

7 – Бекаа, г. Корнет-эль-Джабал, местообитание *B. hermoniacus* Friedman et Sagin, 2010 и *B. argillaceus* Reiche et Saulcy, 1858; 8 – окрестности Джеззина, местообитание *B. junix* Olivier, 1807.

Elytra spherical; subsutural interval with isolated tubercles (intertubercle space 2–3 times as wide as tubercle diameter); medial carina with line of large tubercles; lateral carina also consisting of large tubercles, located on elevated surface and extending beyond contours of elytra. Dorsal surface with fine punctures and goldish dust-shaped scales, tubercles with foveae with short setae.

Sexual dimorphism well-developed. Males are more slender and have distinct elytral isolated tubercles on subsutural interval. Females are slightly larger than males, with more rounded elytral lateral sides, and their dorsal surface visibly smoothed and without sharp convex tubercles on the subsutural interval.

Distribution. Mountain areas in Israel and Lebanon (ridges Antilebanon and Lebanon). The species is recorded for Lebanon for the first time.

Biology. The beetles were collected in alpine zone, on rocky areas and under stones.

Discussion

There is no revision of the genus *Brachycerus* of Lebanon. According to the Palaeartic catalogue of Curculionidae [Alonzo-Zarazaga et al., 2017] 13 species

Table 1. Distribution of species of the genus *Brachycerus* in the Middle East.
Таблица 1. Распределение видов рода *Brachycerus* по странам ближнего Востока.

Species Вид	Syria Сирия	Lebanon Ливан	Israel Израиль	Jordan Иордания	Iraq Ирак
<i>argillaceus</i> Reiche et Saulcy, 1858	–	▲	●	–	–
<i>cinereus</i> Olivier, 1807	●	? ●	? ●	–	–
<i>cribrarius</i> Olivier, 1807	●	? ●	? ●	–	–
<i>foveicollis</i> Gyllenhal, 1833	●	–	–	–	–
<i>foveifrons</i> Bedel, 1874	●	–	? ●	–	–
<i>groneri</i> Friedman et Sagiv, 2011	–	–	●	–	–
<i>hermoniacus</i> Friedman et Sagiv, 2011	–	▲	●	–	–
<i>junix</i> Lichtenstein, 1796 <i>aegyptiacus</i> Olivier, 1807	●	▲	●	–	–
<i>orbipennis</i> Reiche et Saulcy, 1858	●	–	●	–	–
<i>skoupyi</i> Arzanov, 2011	●	–	–	–	–
<i>spinicollis</i> Bedel, 1874	–	? ▲	●	–	–
<i>wizeni</i> Friedman et Sagiv, 2011	–	–	●	–	–
Total / Bcero	7 (?1)	6 (?3)	10 (?3)	–	–

Note. ● – data according to Alonzo-Zarazaga et al. [2017]; ▲ – additions and clarifications to the fauna of Lebanon; ? – doubtful data for the fauna of Lebanon.

Примечание. ● – данные по [Alonzo-Zarazaga et al., 2017]; ▲ – дополнения и уточнения по фауне Ливана; ? – недостоверные данные по фауне Ливана.

are listed in total for the fauna of Middle East, where 11 species are recorded in Israel, 8 species occur in Syria and Lebanon. There is no any data for Iraq and Jordan (Table 1). In Alonzo-Zarazaga et al. [2017] the region LB (Lybia), which should be in the section N (North Africa), is erroneously listed in the section A (Asia). As a result, it was difficult to trace distributions of some species. Based on the data for at least some species such as *B. cinereus* Olivier, 1807, *B. cribrarius* Olivier, 1807 and *B. junix* Lichtenstein, 1796, we think that the mistake was that LB must be read as LE (Lebanon).

Unfortunately, the mentioned catalogue does not take into account the data of Friedman and Sagiv [2010], who critically analyzed the fauna of *Brachycerus* of Israel and some adjacent countries after the study of the type specimens. Thus, the following data in Alonzo-Zarazaga et al. [2017] need corrections and additions at least for the Middle East:

1. Friedman and Sagiv [2010] indicated that *B. junix* and *B. aegyptiacus* are conspecific, but the oldest name *Brachycerus junix* Lichtenstein, 1796, conserved by Kerzhner [1994] based on the erroneous data is nomen dubium. It is because the types of *B. junix* are lost and the type locality (“Siberia”) is ambiguous since the entire genus *Brachycerus* is not distributed in Siberia. They suggested to use the junior name *B. aegyptiacus* Olivier, 1807 with the clear lectotype and type locality. However, according to the articles 75.5 or 75.6 of International Code of Zoological Nomenclature [1999] the name *Brachycerus junix* Lichtenstein, 1796 cannot be rejected without approval from the International Committee of the Zoological Nomenclature. For the time being the valid name for this species is *Brachycerus junix* Lichtenstein, 1796 while *Brachycerus aegyptiacus* Olivier, 1807 is its junior synonym.

2. Two species, *B. cinereus* and *B. cribrarius* are known from the Middle East from several old specimens without

distinct geographic localities [Friedman, Sagiv, 2010]. Since their distribution in Lebanon had not been proven in further studies it should be considered doubtful.

3. Although *Brachycerus spinicollis* was not found in Lebanon, it can be expected there because it is widely distributed in the Middle East.

Therefore currently three species of the genus *Brachycerus*, *B. aegyptiacus*, *B. argillaceus* and *B. hermoniacus* are reliably known for the fauna of Lebanon, while *B. spinicollis* is likely to occur there as well but pending some records.

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