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REVIEW OF THE SHORT-WINGED MOLD BEETLES (COLEOPTERA, STAPHYLINIDAE, PSELAPHINAE) OF THE CRIMEA (UKRAINE)

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Review of the Short-Winged Mold Beetles (Coleoptera, Staphylinidae, Pselaphinae) of the Crimea (Ukraine). Krivosheyev R. E. — Twenty species of the Pselaphinae (Coleoptera, Staphylinidae) are recorded for the first time from Crimean Peninsula. *Bryaxis moczarskii* (Winkler, 1911) is redescribed and illustrated for the first time after its original description. *Brachygluta guillemardi* (Saulcy, 1876), *Bryaxis longulus* (Kiesenwetter, 1849) and *Claviger colchicus* Motschulsky, 1837 are recorded for the first time from Ukraine. In total, 34 species of ten genera and one unrecognizable nominal species are recorded from Crimea.

Key words: Coleoptera, Staphylinidae, Pselaphinae, Crimea, Ukraine.

Обзор жуков-ощупников (Coleoptera, Staphylinidae, Pselaphinae) Крыма (Украина). Кривошеев Р. Е. — Впервые для Крымского полуострова указаны 20 видов ощупников. Приведено иллюстрированное переписание *Bryaxis moczarskii* (Winkler, 1911). *Brachygluta guillemardi* (Saulcy, 1876), *Bryaxis longulus* (Kiesenwetter, 1849) и *Claviger colchicus* Motschulsky, 1837 отмечены впервые в фауне Украины. В целом из Крыма приведены 34 вида из 10 родов и один не подлежащий идентификации номинальный вид.

Ключевые слова: Coleoptera, Staphylinidae, Pselaphinae, Крым, Украина.

Introduction

The subfamily Pselaphinae included 70 species known hitherto from Ukraine and only 11 from Crimean Peninsula. In Ukraine, the pselaphines were subject to special studies only in Lviv, Ternopil, Kyiv and Transcarpathian Regions. All other territories were covered by a few publications representing mainly check-lists or local records; there are no records of pselaphines at all from many regions of Ukraine. Many descriptions and keys were incomplete, and most papers about Ukrainian pselaphines written a time ago (Nowicki, 1873, Lindemann, 1875; Weise, 1875; Cherkunov, 1889; omnicki, 1913; Jacobson, 1910; Roubal, 1930; Kryzhanovsky, 1965), except one recent paper on transcarpathian beetles.

However, there are only 4 publications about Crimean pselaphines, including descriptions of *Bryaxis moczarskii* Winkler, 1911, and with *Euplectus frater* Besuchet, 1964 and *Tychus anatolicus* Besuchet, 1964. The other two papers are the brief reviews of the beetles from the south of Ukraine (with 3 species of pselaphines, *Brachygluta furcata* (Motschulsky, 1835), *B. foveola* (C. G. Thomson, 1859), *B. helferi* (Schmidt-Goebel, 1836) recorded by Blinsein (1989) and the list of Pselaphidae from Russia and former USSR countries (Kurbatov, 2007), with additional 6 species known to Crimea. One nominal species, *Batrissus tauricus* Motschulsky, 1851, is unrecognizable: its type material is missing and original description is incomplete and uncertain. Thus, 11 species had been recorded by far from Crimean Peninsula before this study.

Crimean Peninsula represents diverse types of landscapes, from alkali soils and dry steppes of its northern part to the mountain beech forests of Crimean Mountains and Mediterranean bush thickets. Such variety of biotopes suggests possible existence of quite diverse fauna, either common with Caucasian or Mediterranean regions or endemic to Crimea.

Material and methods

Specimens were collected by sifting from decaying leaf litter of the beech and oak forest floor under logs and near the large stones, killed in ethanol and then mounted. Dissections were made in water after

maceration in KOH. Genitalia were placed in microvials with glycerin and pinned underneath the specimens. Also a number of specimens deposited in the State Nature Museum of V. M. Karazin National University of Kharkiv collection, collection of V. Lazorko at the Schmalhausen Institute of Zoology, or provided by S. A. Kurbatov from Moscow State University, were examined. Pictures were taken with Leica M165C binocular microscope. The specimens are deposited in the collections of I. I. Schmalhausen Institute of Zoology, Kyiv (SIZK), National Scientific Natural History Museum, Kyiv (NSNM), Museum of Nature of V. M. Karazin National University of Kharkiv (MNKK), Donetsk National University (DNU), Zoological Museum, University of Moscow (ZMUM) and Museum of Geneva.

***Euplectus validus* Besuchet, 1958**

Besuchet, 1974: 318; Löbl, 2009: 6.

Material. Big Canyon Reserve, under the maple bark, 6.05.1999, 1 ex. (Drogvalenko) (MNKK). First record from the Crimea.

Remarks. *E. validus* can be easily differentiated from other species of the genus *Euplectus* by having only two fossae on the elytra instead of four in other species.

Distribution in Europe. Italy, Switzerland (Loebl, 2004).

***Euplectus duponti* Aubé, 1833**

Besuchet, 1974: 319; Löbl, Besuchet, 2004: 284; Löbl, 2009: 4.

Material. Yalta Highland Forest Reserve, near Yalta, under the bark of dead pine tree, 10.09.1999, 1 ex. (Drogvalenko) (MNKK). First record from Crimea.

Distribution in Europe. West, South-West and Central Europe (Loebl, 2004).

***Euplectus frater* Besuchet, 1964**

Besuchet, 1964: 415; 1974: 322; Löbl, Besuchet, 2004: 284; Löbl, 2009: 4.

Material. The holotype was found in "Iaila-Dagh" (Winkler), and one of the paratypes was collected in "Baidar-Thor" (Knirsch) (Besuchet, 1974).

Distribution in Europe. Ukraine, South and South-East Europe (Loebl, 2004).

***Batrisodes venustus* (Reichenbach, 1816)**

Besuchet, 1974: 332; Löbl, Besuchet, 2004: 278; Löbl, 2009: 12.

Material. Yalta Highland Forest Reserve, near the Uchan-Su waterfall, under the bark of pine tree log, 16.05.2000, 2 ex. (Yunakov) (MNKK).

Distribution in Europe. The whole Europe, except the South (Loebl, 2004). First record from Crimea.

***Batrisodes hubenthali* Reitter, 1913**

Besuchet, 1974: 332; Löbl, Besuchet, 2004: 277; Löbl, 2009: 12.

Material. South slope of Ai-Petri Yaila, vicinity of Uchan-Su waterfall, under pine tree bark, 17.05.2001, 2 ex. (Drogvalenko); Alushta District, vicinity of Izobilnoe Village, oak and beech forest, under the oak bark, 9.05.2001, 1 ex. (Nadein) (MNKK). First record from Crimea.

Distribution in Europe. Central, North Europe, some countries of Balkan Peninsula, Italy, Ukraine (Loebl, 2004).

***Batrisodes adnexus* (Hampe, 1863)**

Besuchet, 1974: 332; Löbl, Besuchet, 2004: 277; Löbl, 2009: 10.

Material. Alushta District, vicinity of Izobilnoe Village, oak and beech forest, in the oak timber, 9.05.2001, 1 ex. (Nadein) (MNKK). First record from Crimea.

Distribution in Europe. The whole Europe except Scandinavia, Greece, Spain, Great Britain and Baltic (Loebl, 2004).

Batrisodes oculatus (Aubé, 1833)

Besuchet, 1974: 333; Löbl, Besuchet, 2004: 277; Löbl, 2009: 12.

Material. Vicinity of Sevastopol, under stone, with ants, 5.09.1920, 1 ♂, 1 ♀ (Kizeritsky) (ZMUM). First record from Crimea.

Distribution in Europe. Mainly in the West of Europe, some of the Balcan countries, and Finland, but present in Ukraine (Loebl, 2004).

Brachygluta retowskii (Simon, 1883)

Jakobson, 1910: 578; Besuchet, 1974: 353; Löbl, Besuchet, 2004: 298; Löbl, 2009: 14.

Material. 10 km SE Eupatoria, Pribrezhnaya station, 4–6.05.1998, 1 ex. (Gorbunov) (MNKK); Saki, on boggy places in the coast, 17.09.1954, 5 ex. (Bogachev) (MNKK).

Distribution in Europe. Ukraine, South of Russia, Moldova, Romania, Hungary, Slovakia and Austria (Loebl, 2004). Recorded from Crimea by Jakobson (1910).

Brachygluta foveola (C. G. Thomson, 1859)

Blinstein, 1989: 61; Löbl, Besuchet, 2004: 297.

No material from Crimea was available in this study.

Distribution in Europe. Ukraine, South of Russia, Great Britain, South of Europe (Loebl, 2004).

Brachygluta xanthoptera Reichenbach, 1816

Besuchet, 1974: 354; Löbl, Besuchet, 2004: 299; Löbl, 2009: 14.

Material. "Taur.", 1 ex. (Hochhuth) (NSNM).

Distribution in Europe. West, South and South-West of Europe, Ukraine (Loebl, 2004). First record from Crimea.

Brachygluta helferi (Schmidt-Goebel, 1836)

Besuchet, 1974: 355; Blinstein, 1989: 59; Löbl, Besuchet, 2004: 298; Löbl, 2009: 12.

No material from Crimea was available in this study.

Distribution in Europe. Almost whole Europe (Loebl, 2004).

Brachygluta guillemardi (Saulcy, 1876)

Besuchet, 1974: 354; Löbl, Besuchet, 2004: 297; Löbl, 2009: 12.

Material. "Yalta 81", 1 ex. (NSNM).

Distribution in Europe. Slovenia, Croatia, Serbia, Bosnia, Italy, Spain, France and Switzerland (Loebl, 2004). First record from Ukraine and Crimea.

Brachygluta klimski Holdhaus, 1902

Besuchet, 1974: 355; Löbl, Besuchet, 2004: 298; Löbl, 2009: 14.

Material. Simpheropol, Anatra, 28.02.2001, 69 ex. (Mosyakin) (SIZK).

Distribution in Europe. Great Britain, Germany, Switzerland, Austria, Slovenia, Italy (Loebl, 2004). First record from Crimea.

Brachygluta furcata (Motschulsky, 1835)

Blinstein, 1989: 61; Löbl, Besuchet, 2004: 297.

No material from Crimea was available in this study.

Distribution in Europe. Ukraine, Italy, Greece, Albania, Macedonia, South of Russia (Loebl, 2004).

Brachygluta simplicior Raffray, 1904

Besuchet, 1974: 356; Löbl, Besuchet, 2004: 299; Löbl, 2009: 14.

Material. Simpheropol, Anatra, 28.02.2001, 1 ex. (Mosyakin) (SIZK).

Distribution in Europe. South and West of Europe (Alonso-Zarazaga, 2004). First record from Crimea.

Brachygluta sinuata (Aubé, 1833)

Besuchet, 1974: 356; Löbl, Besuchet, 2004: 299; Löbl, 2009: 14.

Material. "Simpheropol, Dzhamman", 21.04.1951, 2 ex. (no collector) (MNKK).

Distribution in Europe. Almost the whole Europe (Loebl, 2004). First record from Crimea.

Brachygluta haematica (Reichenbach, 1816)

Löbl, Besuchet, 2004: 297; Löbl, 2009: 12.

Material. Simpheropol Province, Tauric District, Dzhamman, 2 ex. (Kakhovsky) (MNKK).

Distribution in Europe. Most part of Europe except Finland, Baltic and Spain (Loebl, 2004). First record from Crimea.

Brachygluta nodosa (Motschulsky, 1835)

Löbl, Besuchet, 2004: 298.

Material. Crimea, Bilohorsky District, near Topolevki Village, at a stream, in a rotten poplar, 31.07.1979, 1 ex. (Kurbatov, ZMUM).

Distribution in Europe. Azerbaijan, Armenia, Georgia, South of Russia, Ukraine (Crimea) (Loebl, 2004).

Reichenbachia juncorum Leach, 1817

Besuchet, 1974: 356; Löbl, Besuchet, 2004: 300; Löbl, 2009: 14.

Material. "Taur.", 1 ex. (Hochhuth) (NSNM).

Distribution in Europe. North, Central and West (Loebl, 2004). First record from Crimea.

Rybaxis longicornis (Leach, 1817)

Besuchet, 1974: 351; Löbl, Besuchet, 2004: 300; Löbl, 2009: 14.

Material. "Taur.", 2 ex. (Hochhuth) (NSNM).

Distribution in Europe. Most of Europe except Norway and Baltic (Loebl, 2004). First record from Crimea.

***Bryaxis kruegeri* (Machulka, 1932)**

Besuchet, 1974: 342; Löbl, Besuchet, 2004: 306; Löbl, 2009: 18.

Material. Nikitskaya Yaila, comb, in litter, 13.04.2001, 1 ♂ (Yeremenko) (MNKK).

Distribution in Europe. Italy, Switzerland, Austria, Croatia (Loebl, 2004). First record from Crimea.

***Bryaxis cateniger* Krauss, 1899**

Besuchet, 1974: 342; Löbl, Besuchet, 2004: 304; Löbl, 2009: 16.

Material. Bilohorsky District, slope of mt. Karabi-Yaila, Su-At tract, beech forest, in a beech hole, 44°50'46" N, 34°28'27" E, 29.07.2012, 2 ♂ (Krivosheyev) (SIZK); SW of Perevalnoe Village, Yegerlyk-Su, Dolgorukovskaya Yaila, 18.06.2002, 2 ♂, 1 ♀; N-W Yalta, N slope of mt. Mogabi, h = 500 m, mixed forest, in litter, 23.05.2001, 1 ♂ (Yunakov) (NMKK).

Distribution in Europe. Italy, Austria, Slovenia (Alonso-Zarazaga, 2004). First record from Crimea.

***Bryaxis longulus* (Kiesenwetter, 1849)**

Besuchet, 1974: 342; Löbl, Besuchet, 2004: 307; Löbl, 2009: 18.

Material. Zybino, Bilohorsky District, gardens, 9.05.1951, 2 ♂ (Bogachev) (MNKK).

Distribution in Europe. Italy, Austria, Slovenia, Croatia (Loebl, 2004). First record from Ukraine and Crimea.

***Bryaxis bulbifer* (Reichenbach, 1816)**

Besuchet, 1974: 348; Löbl, Besuchet, 2004: 304; Löbl, 2009: 16.

Material. Yalta Highland Forest Nature Reserve, vicinity of Yalta, on lake bank, 8.05.1999, 8 ♂, 6 ♀ (Yunakov) (MNKK); Simpheropol District, 2 km N of Privolnoe, at the foot of Mt. Demerdzhi, slopes with beech and oak forest, in leaf litter near and under oak and beech logs along Kurliuk-Su River, 44°48'18" N, 34°20'33" E, 5–7.11.2012, 1 ♂ (Krivosheyev) (SIZK).

Distribution in Europe. All Europe, except Greece, Romania and Portugal (Loebl, 2004). First record from Crimea.

***Bryaxis moczarskii* (Winkler, 1911) (fig. 1, 2)**

Winkler, 1911: 7; Löbl, Besuchet, 2004: 307.

Material. Simpheropol Region, 2 km N of Privolnoe, at the foot of Mt. Demerdzhi, slopes with beech and oak forest, in leaf litter near and under oak and beech logs along Kurliuk-Su River, 44°48'18" N, 34°20'33" E, 5–7.11.2012, 5 ♂, 3 ♀ (Krivosheyev) (SIZK); Alushta Region, mt. Demerdzhi slope, Khapkhal Ravine, beech forest, under beeches near Ulu-Uzen' River, along the forest trail, sifted from forest litter, 44°48.2'N 34°26.5'E, 2–3.05.2011, 3 ♂, 1 ♀ (Krivosheyev) (SIZK); Burulcha tract, h = 978 m, beech forest, in litter, 23.06.2002, 1 ♂; Su-At River, h = 820 m, slope of the mountain, in litter, 23.06.2002, 1 ♂; Chatyr-Dag, near the Bim-Bash-Koba cave, beech forest, in litter, 21.06.2002, 8 ♂, 6 ♀ (Yunakov); Great Canyon Reserve: beech forest, under the stone, 4.05.1999, 1 ♂ (Drogvalenko); idem, under the stone in mice holes, 6.05.1999, 2 ♂; idem, Tea House tract, beech forest, in litter, 22.05.2000, 4 ♂; Yalta Mountain-Forest Reserve, near Yalta, on the lake bank, 8.05.1999, 2 ♀ (Yunakov); Perevalnoe, near Yegerlyk-Su River, h = 600 m, beech forest, in litter, 21.06.2002, 1 ♂ (Drogvalenko) (MNKK).

Redescription. Male. Body light brown, unicolour, body length 2.2 mm, maximum width of elytron 0.8 mm (fig. 1, *I*). Head 1.3 times as long as wide, almost smooth and shining, slightly narrowed anteriorly. Frons with narrow, elongate excavation between antennal tubercles; excavation almost reaching middle of head, bordered with two lateral carinae. Median longitudinal occipital carina well defined. Eye well visible dorsally, composed of 12 facets, vertexal foveae well defined, in line of eyes. Maxillary palp long, segment I pedunculate, segment II very small, both non-granulated by sight, segment III 0.3 mm, not very long, twice as short as head, densely punctate and covered with short setae. Antenna short, slightly exceeding base of



Fig. 1. *Bryaxis moczarskii*: 1 — habitus (dorsal view); 2 — the first three antennal segments; 3 — pronotum and elytra, dorsal view.

Рис. 1. *Bryaxis moczarskii*: 1 — общий вид сверху; 2 — три первых сегмента антенн; 3 — переднеспинка и надкрылья, сверху.

elytron, scape 1.3 times as long as wide and 2 times as long as pedicel; pedicel almost as long as wide, subspherical, antennomere III twice as long as wide, antennomere IV 1.5 times as long as wide, antennomeres V–VIII subequal in length, IX–X subspherical, terminal segment 1.9 times as long as wide, acute at apex. Scape rounded rectangular, with well defined trapezium-like secretory nodule at inner side, ending with small disk; pedicel oval, with small carina (fig. 1, 2). Pronotum gibbous, smooth, glossy, covered with long, sparse setae, about as long as head and 1.25 times as wide

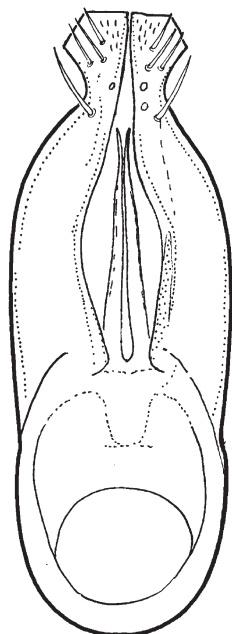


Fig. 2. *Bryaxis moczarskii*, aedeagus.

Рис. 2. *Bryaxis moczarskii*, эдеагус.

as long (fig. 1, 3). Elytra on at suture about 1.75 times as long as pronotum, thinly punctated, also covered with long setae (fig. 1, 3). Legs massive, all femora with noticeable tubercle close to apex, tibia I with large dent in its last third, tibia II simple, thin, tibia III with shallow deepening in apical third, with small dent on apex (fig. 1, 1). Aedeagus elongate, not very solid, thin. Inner sack oval, middle-sized, vanes narrow, 1.25 times as long as inner sack, narrow in their last $\frac{1}{4}$ and extended to triangular top, with several small and 3 large setae per vane. Parameres simple, non-ramose, rodlike, pointed to apex, slender (fig. 2). Female with simple femora and tibiae, elongate and simple scape twice as long as wide, oval and simple pedicel without carina.

Distribution in Europe. Ukraine (Crimea) (Loebl, 2004).

Tychus anatolicus Besuchet, 1964

Besuchet, 1964: 429; Löbl, Besuchet, 2004: 318

Material. South Krimea, Angarsky pass, 15.08.1976, 1 ♂, 8 ♀ (Nikitsky) (ZMUM); idem, 1 ♂ (Belov) (ZMUM); idem, 1 ♀ (Nikitsky) (ZMUM).

Distribution in Europe. Ukraine, Romania, Greece (Loebl, 2004).

Tychus laminiger Besuchet, 1969

Besuchet, 1969: 409; Löbl, Besuchet, 2004: 319.

Material. South Crimea, Nikita Botanical Garden, soil samples, 21.10.1968, 1 ♂ (Arnoldi) (ZMUM).

Distribution in Europe. Ukraine, Greece (Loebl, 2004).

Tychus niger (Paykull, 1800)

Jacobson, 1910: 583; Besuchet, 1974: 350; Löbl, Besuchet, 2004: 320; Löbl, 2009: 22.

Material. Crimea, vicinity of Perevalnoe vil., 16.10.1988, 1 ♂ (Nesterov, SIZK).

Distribution in Europe. Almost all Europe, except Spain, Portugal, Belarus and Russia (Loebl, 2004).

Tychus tauricus Motschulsky, 1851

Motschulsky, 1851: 488; Besuchet, Sabella 1999: 243; Löbl, Besuchet, 2004: 281 (*Tychus*).

Material. Absent in Motschulsky collection in the Zoological Museum, University of Moscow.

Remarks. Identity of the species is uncertain: original description is poor. According to Besuchet, Sabella (1999), it was often considered a synonym of *T. dichrous* Schmidt-Goebel, 1836, which is considered a synonym of *T. niger*. Formal synonymization possibly needs designation of the neotype for *Tychus tauricus* Motschulsky, 1851.

Distribution in Europe. Ukraine (Loebl, 2004).

Pselaphus heisei (Herbst, 1792)

Besuchet, 1974: 358; Löbl, Besuchet, 2004: 327; Löbl, 2009: 24.

Material. Crimea, near Perevalnoe Village, 15.10.1981, 1 ex. (Nesterov) (SIZK); Simpheropol, Salgirka, park, 5.04.1957, 1 ex. (Bogachev) (SIZK).

Distribution in Europe. Almost all Europe, except Italy, Portugal and Greece (Loebl, 2004). First record from Crimea.

Ctenistes palpalis (Reichenbach, 1816)

Besuchet, 1974: 360; Löbl, Besuchet, 2004: 322; Löbl, 2009: 24.

Material. Simpheropol District, Dubki, 24.09.1909, 1 ex. (Kakhovsky) (MNKK); "Taur.", 7 ex. (Hochhuth) (NSNM); Simpheropol, dry limestone slopes, 26.10.1956, 1 ex. (Bogachev) (SIZK).

Distribution in Europe. All Europe, except North, Great Britain and Poland (Loebl, 2004). First record from Crimea.

Claviger colchicus Motschulsky, 1837 (fig. 3)

Löbl, Besuchet, 2004: 281.

Material. Chatyr-Dag, S slope, h = 1200, under a stone, 14.05.2006, 3 ex. (V. Martynov) (DNU); Karabi-Yaila, under a stone, 8.05.2006, 1 ex. (Gorbunov) (MNKK).

Distribution in Europe. Azerbaijan, Armenia, Georgia, South of Russia (Loebl, 2004). First record from Crimea and Ukraine.



Fig. 3. *Claviger colchicus*: 1, 2 — habitus (dorsal view).

Рис. 3. *Claviger colchicus*: 1, 2 — общий вид сверху.

Species incertae sedis

Batrisus tauricus Motschulsky, 1851

Motschulsky, 1851: 488; Löbl, Besuchet, 2004: 281.

Material. Type specimens are missing; the original description is incomplete, and this species is unrecognizable.

Distribution in Europe. Ukraine (Crimea) (Motschulsky, 1851).

Conclusion

Thirty-four species of ten pselaphine genera known to occur in Crimean Peninsula are listed, including data on distribution and mention in the most important taxonomic works. Three of them, *Brachygluta guillemardi* (Saulcy, 1876), *Bryaxis longulus* (Kiesenwetter, 1849) and *Claviger colchicus* Motschulsky, 1837, are recorded for the first time from Ukraine, and 21 species from Crimea. Two species (*Bryaxis moczarskii* (Winkler, 1911) and *Claviger colchicus* Motschulsky, 1837) are illustrated for the first time.

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