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REVIEW OF UKRAINIAN SPECIES OF THE GENUS *MELIBOEUS* (COLEOPTERA, BUPRESTIDAE, AGRILINAE)

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Review of Ukrainian Species of the Genus *Meliboeus* (Coleoptera, Buprestidae, Agrilinae). Prokhorov A. V. — Five Ukrainian species of the genus *Meliboeus* are reviewed and keyed and the data on their distribution in the Palaearctic Region and Ukraine, examined material and larval host plants are given. A poorly known species *Meliboeus morawitzi* (Semenov, 1905) is redescribed.

Key words: Coleoptera, Buprestidae, *Meliboeus*, fauna, Ukraine.

Обзор видов рода *Meliboeus* (Coleoptera, Buprestidae, Agrilinae) фауны Украины. Прохоров А. В. — Рассмотрены 5 видов рода *Meliboeus* фауны Украины, представлена определительная таблица видов, даны сведения об изученном материале, распространении в пределах Палеарктики и в природно-географических зонах Украины, кормовых связях личинок. Переописан *M. morawitzi* (Semenov, 1905).

Ключевые слова: Coleoptera, Buprestidae, *Meliboeus*, фауна, Украина.

The genus *Meliboeus* Deyrolle, 1864 includes 227 species widespread in the Palaearctic, Afrotropical and Oriental Regions (Bellamy, 2008). Compared to other regions, the diversity of *Meliboeus* in Europe is poor: at most 17 species are known to occur here (Kubáň, 2006).

The Catalogue of Palaearctic Coleoptera (Kubáň, 2006) contains five species of the genus as known to occur in Ukraine: *M. (Meliboeoides) parvulus ponticus* Obenberger, 1924, *M. (s. str.) fulgidicollis* (P. H. Lucas, 1846), *M. (s. str.) graminis graminis* (Panzer, 1799), *M. (s. str.) morawitzi* (Semenov, 1905) и *M. (s. str.) subulatus* (Morawitz, 1861). The presence of those species in Ukraine (except *M. fulgidicollis*) has been confirmed by the material considered in this paper. Nevertheless, *M. morawitzi* has not been ever included in any keys to buprestid beetles occurring in Europe or adjacent territories (Jakobson, 1927; Richter, 1944, 1948; Richter, Alexeev, 1965). This rare species was found in Kherson Region (the Black Sea Biosphere Reserve) and in Donetsk and Lugansk Regions of Ukraine. Originally Semenov-Tian-Shanskij (1905) mentioned this species for the first time without a detailed description and only noted the acute and protruding hindcorners of the pronotum and a larger size, as compared to *M. subulatus*. For this reason, a detailed redescription of *M. morawitzi* is provided below.

To identify the species of the genus, such features as the details of the structure and shape of the head, pronotum, scutellum, anal tergite and male genitalia are used. In this study, additional taxonomic characters (the shape of lateral edge of pronotum at hindcorner as well as the patterns / position of submarginal carinae and the shape of antennal segments) of the three closely related species (*Meliboeus graminis*, *M. morawitzi* and *M. subulatus*), collected in different regions of Ukraine are found. These features are found to be the least variable, in contrast to, for instance, the shape of scutellum and anal tergite.

The abbreviations are used in the list of material as follows: BSBR — Black Sea Biosphere Reserve; DBG — Donetsk Botanical Garden; DBR — Danube Biosphere Reserve; DNU — Donetsk National University; ColS — collection of A. M. Sumarokov; KES — Kharkiv Entomological Society; KNM — Kharkiv National Museum; KNPU — Kharkiv National Pedagogical University (material collected by S. I. Medvedev and J. P. Maksimova); KNR — Kaniv Natural Reserve; LNR — Lugansk Natural Reserve; NNP — National Nature Park; NSU — Nizhyn State University; SC — Southern Coast of Crimea; SIZK — Schmalhausen Institute of Zoology, Kyiv; USNR — Ukrainian Steppe Natural Reserve.

Data on distribution and synonymy are given after the Catalogue of Palaearctic Coleoptera (Kubáň, 2006), with some corrections. Only the papers considering distribution of *Meliboeus* species in Ukraine, catalogues and manuals are mentioned in the list of references; original descriptions referred in the catalogues are not listed.

Meliboeus (Meliboeoides) parvulus ponticus Obenberger, 1924 (fig. 1, 1)

Obenberger, 1924: 33; Kubáň, 2006: 413; Bellamy, 2008: 1862. — *amethystinus* auct. (nec Olivier, 1790; misidentification): Théry, 1942: 121 (*Meliboeoides amethystinus* ab. *ponticus*); Janicki, 2007: 40; — *violaceus* auct. (nec Kiesenwetter, 1857; misidentification): Niehuis, 1989: 131 (ssp. *ponticus*); Janicki, 2007: 40; — *parvulus* Küster (identification without indication of subspecies name): Janicki, 2007: 40.

Material. Donetsk Region: Slavyansk district, env. Svyatogorsk, NNP “Svyati Hory”, 49°02'N 37°34'E, 27.05.2002, 1 ex. (V. Nazarenko); Konstantinovka district, env. Kramatorsk, vill. Belenkoe, 48°45'N 37°37'E, 13.06.2010, 1 ex. (M. Sergeev); Odessa Region: Pershotravneve district, env. vill. Bylyary, 31.05.1970, 1 ex. (V. Dolin); Berezovka district, env. Berezovka, 47°12'N 30°54'E, 10.07.2001, 1 ex. (V. Trach); Nikolayev Region: Berezanka district, env. vill. Tashino, 46°54'N 31°7'E, 10–14.06.2010, 5 ex. (V. Nazarenko) (SIZK); Kherson Region: Gola Prystan district, BSBR: “Solenoozerny”, 46°27'N 31°57'E, 12.07.1985, 1 ex. (N. Polchaninova, I. Lezhenina) (KES); same locality, 9.07.1985, 1 ex. (N. Polchaninova, I. Lezhenina); same locality, 8.08.1986, motley grass, 1 ex. (V. Gramma); 7.06.2005, 1 ex.; “Ivano-Rybalchansky”, 46°27'N 32°02'E, 5.06.2005, 1 ex.

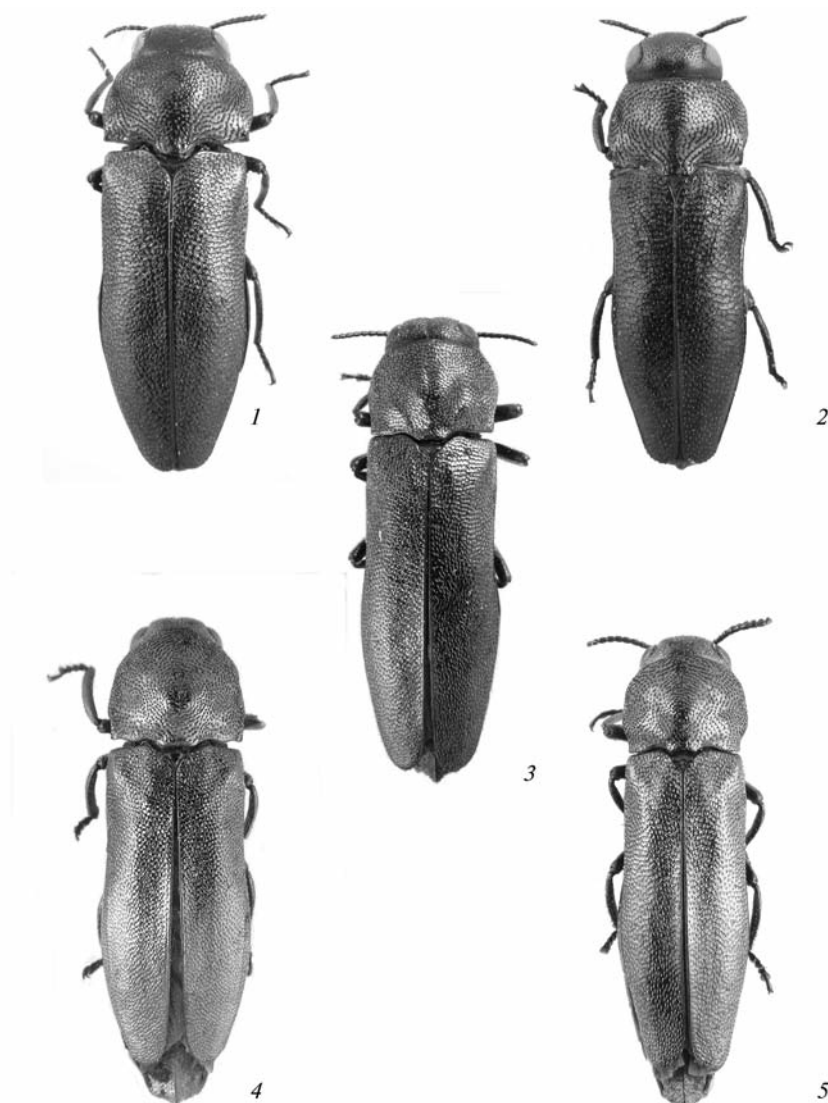


Fig. 1. Adult *Meliboeus*, habitus: 1 — *M. (Meliboeoides) parvulus ponticus*; 2 — *M. (s. str.) fulgidicollis*; 3 — *M. (s. str.) graminis graminis*, male; 4 — *M. (s. str.) morawitzi*, female; 5 — *M. (s. str.) subulatus*, male.

Рис. 1. Имаго *Meliboeus*, внешний вид: 1 — *M. (Meliboeoides) parvulus ponticus*; 2 — *M. (s. str.) fulgidicollis*; 3 — *M. (s. str.) graminis graminis*, самец; 4 — *M. (s. str.) morawitzi*, самка; 5 — *M. (s. str.) subulatus*, самец.

(I. Pavlusenko); same locality, 19.06.2005, 2 ex. (S. Simutnik); same locality, 12–15.06.2007, 1 ex. (M. Sergeev); Crimea: env. Simferopol, vill. Fontany, 44°53'N 34°04'E, 16.05.2010, 1 ♀ (V. Nazarenko); SC, Feodosiya district, vill. Kurortnoe, 44°54'N 35°11'E, 11.07.2006, on *Eryngium*, 1 ex. (R. Gerasimov) (SIZK).

Distribution. Europe: south of European Russia, Romania, Ukraine.

Larval host plants. *Carlina* (Théry, 1942); *Eryngium* (Janicki, 2007).

Distribution in Ukraine. Known only from the steppe zone and Crimean Mountains.

Note. Janicki (2007) erroneously refers to this species under four different names: *M. amethystinus*, *M. parvulus*, *M. robustus* and *M. violaceus*.

***Meliboeus (Meliboeus) fulgidicollis* (P. H. Lucas, 1846) (fig. 1, 2)**

Lucas, 1846: 153 (*Coraebus*); Bílý, 1977: 34; 1989: 73; 1999: 31 (larva); 2002: 64 (biology); Gobbi, 1986: 234 (host plants); Kubáň, 2006: 414 (*Meliboeus*); Janicki, 2007: 40 (*Nalanda*); Bellamy, 2008: 1850 (*Meliboeus*). — *aeneicollis* Villers, 1789: 340 (*Buprestis*); Jakobson, 1913: 795; Théry, 1930: 417; 1942: 125; Richter, 1944: 163; 1948: 393 (*Nalanda*); — *villersii* E. Saunders, 1870: 34 (*Coraebus*); Richter, Alexeev, 1965: 296; — *bodemeyeri* Kerremans, 1911: 634.

Material from Ukraine unavailable or absent.

Distribution. Europe: Albania, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, France, Greece, Hungary, Italy, Macedonia, Centre and South of European Russia, Slovakia, Spain, Switzerland, Turkey, Ukraine, Yugoslavia; North Africa: Algeria, Morocco, Tunisia; Asia: Azerbaijan, Kazakhstan, Syria, Turkey.

Larval host plants. *Castanea sativa*, *Quercus cerris*, *Q. coccifera*, *Q. ilex*, *Q. petraea*, *Q. pubescens*, *Q. robur*, *Q. suber* (Bílý, 2002); *Salix* (Gigli, 1999).

Distribution in Ukraine. According to Richter (1944), this species occurs in the south-west of Ukraine (including Kyiv Region); the material allowing to confirm this record is unavailable or absent; Janicki (2007) lists this species for the forest zone of Ukraine based on literature data alone.

***Meliboeus (Meliboeus) graminis graminis* (Panzer, 1799) (fig. 1, 3)**

Panzer, 1799: 8 (*Buprestis*); Reitter, 1911: 192 (*Coraebus*); Jakobson, 1913: 795; 1927: 178 (*Coroebus*); Théry, 1930: 398; 1942: 125; Richter, 1944: 163; 1948: 392; Richter, Alexeev, 1965: 296; Bílý, 1977: 34; 1989: 72; 1999: 33 (larva); 2002: 63 (biology); Gobbi, 1986: 233 (host plants); Alexeev 1988: 6 (larva); Janicki, 2003: 241; Kubáň, 2006: 414; Janicki, 2007: 40; Bellamy, 2008: 1853. — *helichrysi* Abeille de Perrin, 1904: 282 (*Coraebus*); Théry, 1942: 126.

Material. Cherkasy Region: Kaniv district, KNR, 49°43'N 31°12'E, 07.2004, 1 ex. (S. Simutnik); Donetsk Region: Telmanovo district, vill. Granitnoe, 47°26'N 37°51'E, 5.06.2010, 1 ex. (M. Sergeev); Volodarske district: USNR, “Kamyani Mohyly”, 47°18'N 37°05'E, 16.07.2001, mowing on gully slopes, 1 ♂ (A. Maltseva); same locality, 16–17.07.2001, 8 ex. (T. Pisarenko); same locality, 2.07.2001, 7 ex. (V. Martynov); env. Volodarske, 47°12'N 37°18'E, 3.07.1999, 2 ex., 9.07.2001, 3 ex.; vill. Fedorovka, 47°12'N 37°07'E, 30.05.2000, 7 ex.; forestry “Volodarske”, 47°09'N 37°18'E, 26–28.05.2000, 2 ex. (M. Sergeev); Pershotravneve district, env. forestry “Azovskaya dacha”, 47°08'N 37°20'E, 8.07.2001, 2 ex. (unknown collector); Novoazovsk district, Novoazovsk, 47°06'N 38°05'E, 30.05.2010, 1 ex. (M. Sergeev); Zaporizhya Region: Melitopol, 46°50'N 35°21'E, 2.07.2001, 1 ex. (V. Nazarenko); Dnipropetrovsk Region: Krivoy Rog, 47°54'N 33°23'E, 27.05.1990, 1 ex. (E. Lapin); Odessa Region: Kiliya district, DBR, Zhebriyanskaya ridge, 45°30'N 29°37'E, 20.06.1995, 11 ex. (V. Ermolenko); 25 km NW Odessa, vill. Ilyinka, 46°41'N 30°38'E, 23.05.–14.06.1999, 1 ex. (A. Gontarenko); Crimea: SC, Feodosiya district, vill. Kurortnoe, 44°54'N 35°11'E, 28.06.2006, on *Artemisia*, 2 ex. (R. Gerasimov) (SIZK).

Distribution. Europe: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, France, Greece, Hungary, Italy, Moldavia, Romania, Central and Southern European Russia, Slovenia, Spain, Switzerland, Turkey, Ukraine; North Africa: Tunisia; Asia: Armenia, Azerbaijan, Syria, Turkey.

Larval host plants. *Artemisia absinthium*, *A. campestris*, *Centaurea jacea* (Bílý, 2002).

Distribution in Ukraine. Species occurs in the Wood-and-Steppe, Steppe and Crimean Mountains; according to Janicki (2007) widespread in all natural geographic zones of Ukraine.

Meliboeus (Meliboeus) morawitzi (Semenov, 1905) (fig. 1, 4)

Semenov, 1905: 132 (*Coraeus*); Jakobson, 1913: 795; Kubáň, 2006: 414; Bellamy, 2008: 1858.
— *proximus* Obenberger, 1916: 269; — *turkestanicus* Obenberger, 1924: 33.

Material. Lugansk Region: Stanichno-Luganske district: env. Kondrashevskaya Novaya, 48°40'N 39°25'E, 21.08.2001, 1 ex. (M. Sergeev); LNR, "Pridontsivska Poyma", 48°40'N 39°24'E, 26.07.2001, 1 ex., 27.07.2001, Tolovatoe Lake, 2 ex. (A. Maltseva); same locality, 22.08.2001, 1 ex.; Donetsk Region: Yasinovataya district, vill. Vasilyevka, 48°10'N 37°58'E, 17.07.2010, 1 ex. (M. Sergeev); Volodarske district: USNR, "Kamyani Mohyly", 47°18'N 37°05'E, 17.07.2006, 1 ex. (A. Maltseva); same locality, 17–23.07.2009, 1 ex. (M. Sergeev); Starobeshevo district, env. Starobeshevo, 47°46'N 38°01'E, 12.07.2007, 1 ♂, 1 ♀, 16.07.2007, 2 ex. (A. Maltseva); Kherson Region: Gola Prystan district, BSBR: "Ivano-Rybalchansky", 46°27'N 32°02'E, 19.06.2005, 1 ex. (S. Simutnik); same locality, 12–15.06.2007, 1 ex. (M. Sergeev); same locality, 29.07.2010, 1 ex. (A. Nuzhna); "Solenoozerny", 46°27'N 31°57'E, 15–18.06.2007, 3 ex. (M. Sergeev); same locality, 10–16.07.2007, 25 ex. (A. Prokhorov) (SIZK); Dzharylgach Isl., 46°01'N 32°55'E, 3.06.1950, 1 ex. (S. Medvedev) (KNPU).

Redescription. Strongly elongate, 3.4–3.6 times as long as pronotum at base; shiny, golden-bronze, pronotum often yellowish, elytra greenish, sometimes with blue tint. Dorsally and ventrally more or less evenly covered with short, shiny, white ciliate scales.

Head dorsally between eyes more or less convex. Eyes widely oval, their lower margin descend below upper margin of antennal pits, but not reaching lower margin of anten-

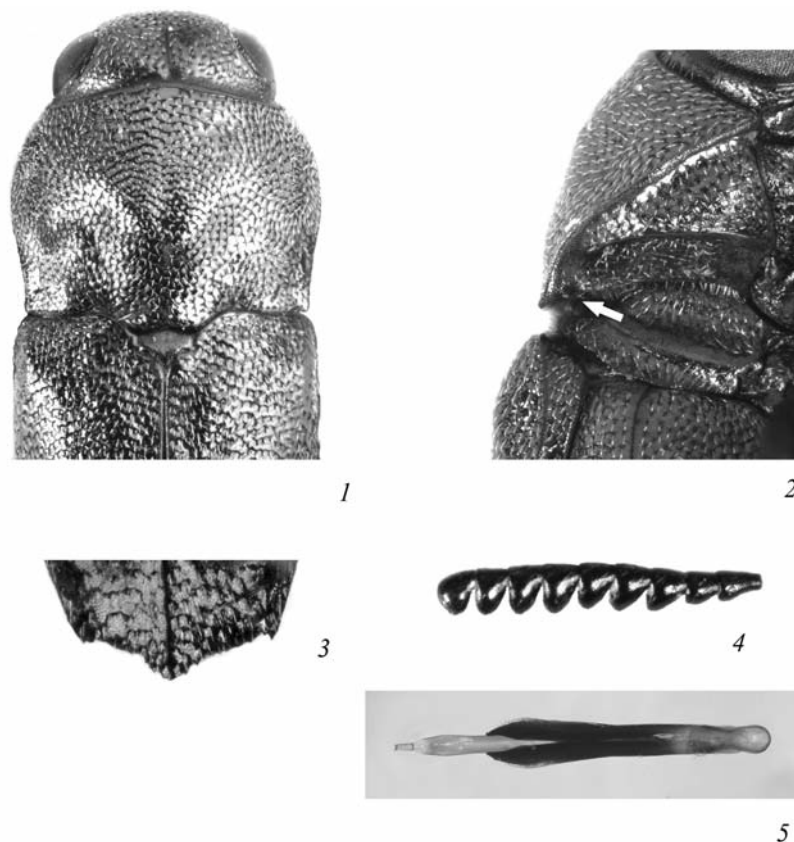


Fig. 2. *Meliboeus* (s. str.) *graminis graminis*: 1 — dorsal view of pronotum; 2 — lateral view of pronotum; 3 — anal tergite; 4 — antenna; 5 — aedeagus. Arrow shows posterior angle of pronotum.

Рис. 2. *Meliboeus* (s. str.) *graminis graminis*: 1 — пронотум сверху; 2 — пронотум сбоку; 3 — анальный тергит; 4 — усик; 5 — эдеагус. Стрелкой показан задний угол пронотума.

nal pits. Antenna longer than distance to dorsal margin of eye, nearly 1.7 times as long as height of eye. Clypeus transverse, not deeply, but widely arcuately emarginated, separated from frons slight transverse depression with small transverse grooves. Frons rather flattened, in upper 1/3 convex as well as vertex; longitudinal medial groove narrow, in central part of frons barely distinct. Frons with indistinct S-curved lateral margins; distance between eyes at base of frons somewhat bigger than at top. Sculpture of frons (especially at lateral sides) consisting of vertical arcuate grooves and distinct depressed punctations on edges of grooves. Central part of frons with slender shagreened area of irregular shape sometimes interrupted by depressed points. Vertex 1.75–1.9 times as wide as eye, with spirally twisted grooves composed by separate dots. Pronotum slightly transverse, 1.25 times as wide as long, with rounded lateral margins, maximally expanded at middle or closer to base, stronger narrowed to forecorners and emarginate before hindcorners (fig. 3, 1). Anterior margin strongly arcuate; posterior margin bi-emarginated with wave edge line running from hindcorner to medial lobe. Medial lobe slightly notched, almost straight, occupying approximately 1/4 of pronotum width. Medial elevation of pronotum displaced to posterior edge (fig. 3, 2); medial longitudinal depression especially distinct in middle part of pronotum, not reaching anterior margin; depression below elevation not developed. Well developed depression extending from medial elevation to lateral sides and slightly forward, not reaching anterior margin of pronotum. Sculpture of pronotum consisting of concentric wave grooves with depressed points as on head; grooves surrounding and covering medial elevation and little knolls on either side of elevation at posterior margin of pronotum. Hindcorners of pronotum acute (dorsal view). Marginal carina in anterior 3/4 arcuately descending to forecorner, strongly emarginate before hindcorners, so that their lower edges are folded down, forming distinct shagreened thickening (lateral view) and well visible ridge, running down from hindcorner (fig. 3, 2; 5, 3). Submarginal carina (ventral view) sharply running under curve of marginal cari-

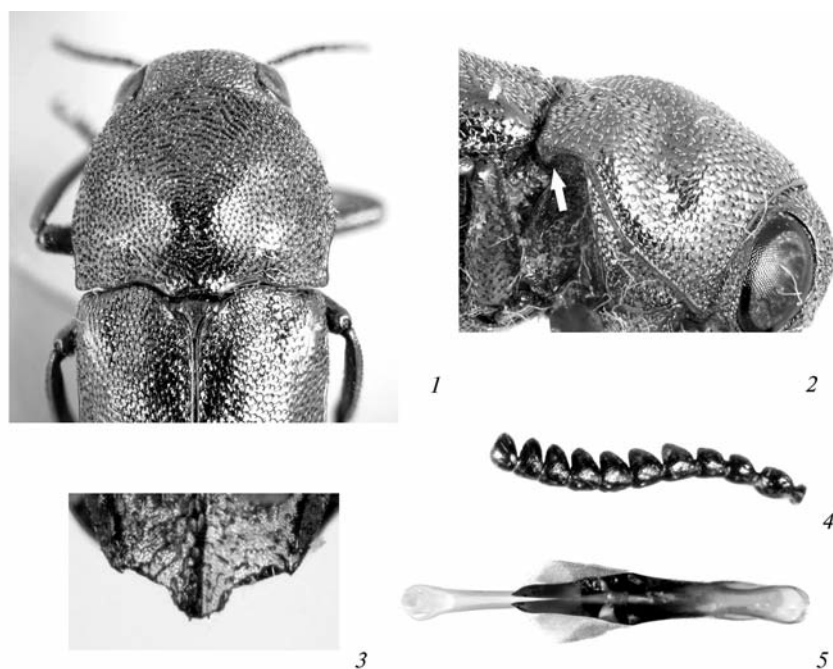


Fig. 3. *Meliboeus* (s. str.) *morawitzi*: 1 — dorsal view of pronotum; 2 — lateral view of pronotum; 3 — anal tergite; 4 — antenna; 5 — aedeagus. Arrow shows posterior angle of pronotum.

Рис. 3. *Meliboeus* (s. str.) *morawitzi*: 1 — пронотум сверху; 2 — пронотум сбоку; 3 — анальный тергит; 4 — усик; 5 — эдеагус. Стрелкой показан задний угол пронотума.

na and disappearing before reaching lateral and posterior edges of pronotum. Scutellum usually depressed, very shiny, basal part with thickened hindcorners; medial process of scutellum wide triangular with rather extended apex. Elytra 2.4–2.5 times as long as wide at humeri, in anterior one-third weakly rectilinearly narrowed or parallel, posterior of midlength section slightly dilated, then arcuately narrowed to evenly rounded and finely dentate apices. Relief of elytra consisting of fine sinuous wrinkles, forming tiled structure. Sutural depressions flat and very weak, more distinctive in middle part of elytra. Anal tergite strongly protruding beyond elytral apices, with smoothed longitudinal medial carina and triangular margin with two emarginations; lateral corners of anal tergite barely visible, middle corner bluntly rounded; its lateral and middle corners variously expressed, especially in males (fig. 3, 3). Ventral surface transversely striate, on sternites strongly smoothed and shining; sculpture of prothorax consists of large flat punctation, before posterior process roughly wrinkled. Mentonniere (collar of prothorax) widely interrupted at middle; interval between its lateral lobes as wide as or slightly narrower than posterior process of prothorax. Prothorax anteriorly of posterior process roughly wrinkled. Posterior process of prothorax almost parallel-sided and cuneiformly narrowed apex, longitudinally convex, with sculpture consisting of large flat punctations. Abdomen with rows of fine punctations and indistinct sinuous grooves. Anal sternite transverse, with widely rounded apex.

Body length 5.2–7.8 mm, width 1.5–2.3 mm.

Male: more slender; anal sternite more emarginate at edges of medial corner than in female (medial carina is more protruding at apex) (fig. 3, 3). Aedeagus as in fig. 3, 5.

Female: more robust; pronotum more convex, anal tergite weaker emarginate (or not emarginate at all), medial carina is less protruding in apex than in male.

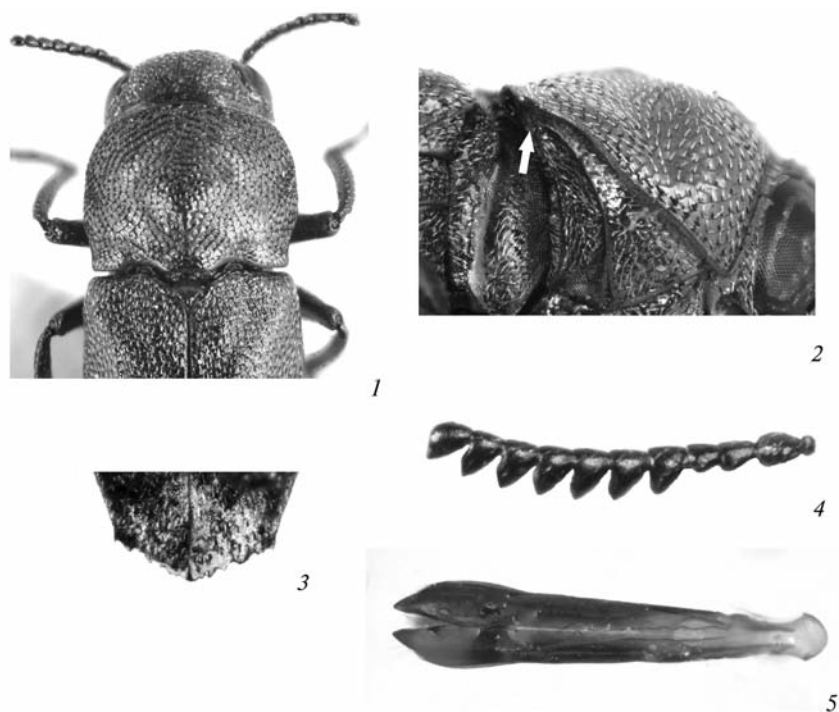


Fig. 4. *Meliboeus* (s. str.) *subulatus*: 1 — dorsal view of pronotum; 2 — lateral view of pronotum; 3 — anal tergite; 4 — antenna; 5 — aedeagus. Arrow shows posterior angle of pronotum.

Рис. 4. *Meliboeus* (s. str.) *subulatus*: 1 — пронотум сверху; 2 — пронотум сбоку; 3 — анальный тергит; 4 — усик; 5 — эдеагус. Стрелкой показан задний угол пронотума.

Distribution. Europe: Bulgaria, Greece, Hungary, Centre and South of European Russia, Slovakia, Ukraine; Asia: Kazakhstan, Kyrgyzstan, Turkey, Russia (West Siberia).

Distribution in Ukraine. Only in the Steppe zone.

Larval host plants. Probably *Artemisia* sp.

Note. Rare and local species, a moderately large population was found only in Black Sea Biosphere Reserve (“Solenoозerny”); the beetles were captured on *Artemisia* plants.

***Meliboeus (Meliboeus) subulatus* (Morawitz, 1861) (fig. 1, 5)**

Morawitz, 1861: 284 (*Coraeus*); Semenov, 1905: 132 (*Coraeus*); Jakobson, 1913: 795 (*subulata*); Richter, 1944: 163; 1948: 393; Richter, Alexeev, 1965: 296; Volkovitch, 1977: 24; 1986: 95; Bilý, 1989: 72; 1999: 31 (larva); 2002: 64 (biology); Kubaň, 2006: 415; Janicki, 2007: 40; Bellamy, 2008: 1867.

— *graminioides* Abeille de Perrin, 1896: 281 (*Coraeus*); Semenov, 1905: 131 (*Coraeus*); Alexeev, 1988: 5 (larva); — *eriwanensis* Obenberger, 1935: 18; — *hungaricus* Kaszab, 1940: 112.

Material. Kyiv Region: Kyiv: Hydropark, 50°26'N 30°34'E, 15.08.1993, floodplain meadow, 13 ex. (V. Ermolenko); left bank of Dnieper, Gorbachikha, 50°28'N 30°33'E, 25.07.2002, 2 ex., 20.08.2004, 3 ex. (V. Nazarenko); same locality, 27.07.2007, on *Tanacetum*, 1 ex. (A. Prokhorov); Trukhanov Isl., 50°27'N 30°32'E, 14.07.2002, 1 ex. (D. Kurinnyi); Redkino Lake (Ministerka), 50°32'N 30°28'E, 13.06.2003, 7 ex. (V. Nazarenko); Muromets Isl. on Dnieper River, Bobrovnya, 50°30'N 30°32'E, 28.05.2009, on *Tanacetum*, 1 ex., 9.06.2009, on *Tanacetum*, 1 ex., 2.07.2009, on *Tanacetum*, 3 ex., 9.07.2009, on *Tanacetum*, 7 ex. (A. Prokhorov); Cherkasy Region: Kaniv district, KNR, 49°43'N 31°12'E, 19.06.1947, 2 ex., 7.05.1949, 1 ex. (unknown collector); same locality, 07.2004, 2 ex. (S. Simutnik) (SIZK); Poltava Region: Mashevka district, env. vill. Malaya Nekhvoroshtcha, 49°13'N 34°43'E, 18.07.2008, 5 ex. (A. Sumarokov) (ColS); Kharkov Region: env. Kharkov, Merefa, 49°48'N 36°03'E, 21.06.1952, 1 ex. (unknown collector) (KNM); Lugansk Region: Kremennaya, 49°03'N 38°13'E, 9.07.2002, 10 ex. (unknown collector); Stanichno-Luganske district: Kondrashevskaya Novaya, 48°40'N 39°25'E, 21.08.2001, 2 ex., 17.06.2002, 2 ex. (T. Pisarenko); same locality, 18.06.2002, 1 ex. (unknown collector); LNR, “Pridontsivska Poyma”, 48°40'N 39°24'E, 2.07.2000, 1 ex. (V. Martynov); same locality, 26–27.07.2001, 10 ex. (A. Maltseva); same locality, 26.07.2001, 7 ex. (T. Pisarenko); same locality, 12.06.2003, 16 ex. (unknown collector); Sverdlovsk district, LNR, “Provalskiy Step”, 48°07'N 39°48'E, 29.06.2005, 2 ♂, 1 ♀ (A. Maltseva); Donetsk Region: Donetsk, 48°00'N 37°48'E, 10.06.2003, 3 ex. (unknown collector); Horlivka, Enakyivo Forestry, 48°14'N 38°09'E, 4–6.07.2000, on *Tanacetum*, 83 ex. (unknown collector); Slavyansk district, vill. Bogorodichne, 49°01'N 37°30'E, 13.07.2000, 1 ex., 28.06.2002, 2 ex. (unknown collector); same locality, 11.07.2001, 2 ex. (Pristinskaya); Artemivsk district: vill. Dronovka, 48°55'N 38°02'E, 5–9.07.1999, 6 ex. (Dikukha); same locality, 2–5.07.2000, 27 ex., 30.07.2000, 1 ex. (A. Maltseva); same locality, 4.07.2000, sandy steppe, 97 ex. (T. Trikhleb); same locality, 2–24.07.2003, 82 ex. (unknown collector); same locality, 25.06.2008, 1 ex. (M. Sergeev); vill. Ilyichevka, 48°53'N 37°54'E, 19.07.2003, 5 ex. (unknown collector); Novoazovsk district, USNR, “Khomutovskaya Steppe”, 47°16'N 38°14'E, 27.09.2002, 2 ex. (V. Fursov); Volodarske district: Volodarske, 47°12'N 37°18'E, 4.07.1999, 1 ex. (M. Sergeev); USNR, “Kamyani Mohyly”, 47°18'N 37°05'E, 16.07.2001, 3 ex., 17.07.2006, 1 ♀, 16.07.2007, 2 ♂, 1 ♀ (A. Maltseva); same locality, 16–18.07.2001, 18 ex. (T. Pisarenko); same locality, 17–23.07.2009, 2 ex. (M. Sergeev); Pershotravneve district, env. forestry “Azovskaya dacha”, 47°08'N 37°20'E, 8.07.2001, 3 ex. (unknown collector); Konstantinovka district, env. vill. Kleban-Byk, 48°25'N 37°45'E, 19.07.2008, 2 ex. (M. Sergeev); Zaporizhya Region: Kujbyshevo district, vill. Smirnov, 47°12'N 36°32'E, 4–6.08.2003, 7 ex. (unknown collector); Khortitsa Isl. on Dnieper River, 47°49'N 35°06'E, 8–13.07.2009, 3 ex. (S. Simutnik); Dnipropetrovsk Region: env. vill. Petropavlivka, 47°50'N 33°59'E, 6.07.2003, 2 ex. (D. Kurinnyi); Odessa Region: 40 km NW Odessa, env. vill. Maloe, 46°44'N 30°29'E, 29.06.2002, 1 ex. (V. Trach); Mikolayiv Region: Ochakiv district, BSBP, “Volyzhin Lis”, 46°31'N 31°43'E, 12.08.1987, on *Tanacetum*, 30 ex. (N. Polchaninova); Kherson Region: Hola Prystan district, BSBP: “Ivano-Rybalchansky”, 46°27'N 32°02'E, 19–22.06.2005, 6 ex. (S. Simutnik); same locality, 12–15.06.2007, 6 ex. (M. Sergeev) (SIZK); “Solenoозerny”, 46°27'N 31°57'E, 8.08.1986, saline, 1 ex. (V. Gramma) (KES); same locality, 21.07.2006, 4 ex. (A. Belov); same locality, 8–15.06.2007, 19 ex. (I. Pavlusenko) same locality, 11–16.07.2007, 15 ex. (A. Prokhorov); Crimea: Feodosiya district, vill. Kurortnoe, 44°54'N 35°11'E, 7–11.07.2006, on *Tanacetum*, 2 ex. (R. Gerasimov) (SIZK).

Distribution. Europe: Bulgaria, Hungary, Romania, Centre and South of European Russia, Slovakia, Ukraine; Asia: Armenia, Turkey.

Distribution in Ukraine. Polyssia (forest zone), Wood-and-Steppe, Steppe and Crimean Mountains.

Larval host plants. *Tanacetum* sp. (Alexeev, 1988); *Artemisia campestris* (Bilý, 2002).

Note. The most common species of the genus, especially in steppe zone; all beetles caught on tansy (*Tanacetum* sp.) and never on *Artemisia*.

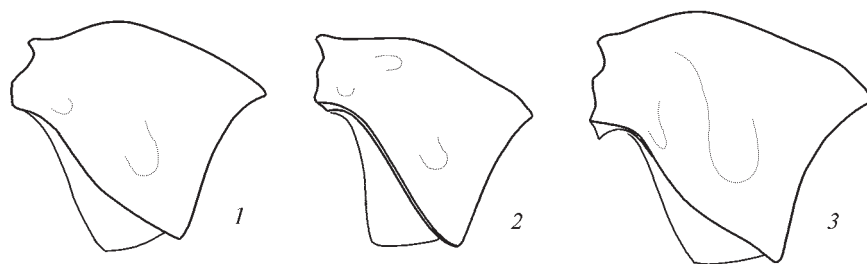


Fig. 5. Pronotum, lateral view: 1 — *Meliboeus* (s. str.) *subulatus*; 2 — *M.* (s. str.) *graminis graminis*; 3 — *M.* (s. str.) *morawitzi*.

Рис. 5. Пронотум, вид сбоку: 1 — *Meliboeus* (s. str.) *subulatus*; 2 — *M.* (s. str.) *graminis graminis*; 3 — *M.* (s. str.) *morawitzi*.

Key to Ukrainian species of the genus *Meliboeus*

Таблица для определения видов рода *Meliboeus*

1. Prothorax with abruptly truncated, narrow and deep gaps along lateral edges (antennae entirely hidden in these gaps). Body bicolorous: head and pronotum golden or golden green, elytra black-and-bronze (fig. 1, 2). 3–4 mm. *M. fulgidicollis* Lukas
- Prothorax without gaps along lateral edges (antennae partly hidden in gaps developed only on head under eyes). Body unicolorous: bronze, copper, bluish-green, blue or purple. 2
2. Body dorsally bluish-green, blue or purple, rarely almost black (fig. 1, 1).
..... *M. parvulus ponticus* Obenberger
- Body dorsally bronze, copper bronze or golden bronze 3
3. Marginal carina of pronotum weakly emarginate at hindcorner (lateral view). Submarginal carina reaching or almost reaching ridge running ventro-medially from hindcorner (lateral and ventral view). Scutellum neither depressed, nor brightly shining. Aedeagus with parameres not wide lobate. Adults smaller, 4.3–7.0 mm. 4
- Marginal carina of pronotum strongly emarginate at hindcorner (fig. 3, 2; 5, 3), its lower margin almost bent down thickened and forming strong ridge running ventro-medially from hindcorner (lateral and ventral view). Submarginal carina not reaching this ridge and disappearing under bend of lateral edge of pronotum. Scutellum depressed, strongly shiny. Aedeagus with strongly expanded lobes of parameres (fig. 3, 5). Golden bronze, sometimes with blue tint; pronotum often more golden than elytra (fig. 1, 4). Adults larger, 6.0–8.0 mm. *M. morawitzi* Semenov
4. Maximum width of pronotum at posterior third or at middle (fig. 4, 1), medial elevation of pronotum well developed (fig. 5, 1); sculpture rougher, grooves sharp, distinct. Submarginal carina well developed throughout its whole length, gradually approaching hindcorner (fig. 4, 2), and reaching ridge running ventro-medially from hindcorner (lateral and ventral view). Head indistinctly shagreened with rough grooves on vertex; depressed dots often fused. Apical corners of antennomeres 5–11 acute, 11th truncated or slightly emarginate at apex (fig. 4, 4). Scutellum with long medial dens. Anal tergite with rounded or straight edges at both sides of its midline (fig. 4, 3). Aedeagus wide with rather expanded lobes of parameres (fig. 4, 5). Brassy-bronze or copper, shiny, occasionally dark (fig. 1, 5). 4.5–7.0 mm.
..... *M. subulatus* Morawitz
- Maximum width of pronotum at anterior third (fig. 2, 1), medial elevation of pronotum weakly developed (fig. 5, 2); pronotum with fine sculpture, grooves not sharp. Submarginal carina (fig. 2, 2) before hindcorner poorly visible, oblate, disappearing just before reaching ridge running ventro-medially from hindcorner (lateral and ventral view). Head distinctly shagreened, especially in anterior part. Grooves on vertex not rough, depressed dots well separated. Apical corners of antennomeres 5–11 rounded, 11th almost rounded at apex (fig. 2, 4). Scutellum with short medial dens. Anal tergite with two emarginations and well developed dens at each side (fig. 2, 3). Aedeagus narrow with barely expanded lobes of parameres (fig. 2, 5). Bronze with steel sheen (fig. 1, 3). 4.3–6.0 mm. *M. graminis* Panzer

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