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THE GROUND-BEETLES OF THE GENUS *ANTHRACUS* (COLEOPTERA, CARABIDAE) OF UKRAINE

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The Ground Beetles of the Genus *Anthracus* (Coleoptera, Carabidae) of Ukraine. Putchkov A. V., Nitochko M. I. — The data of geographical distribution of 3 species of the genus *Anthracus* Motschulsky, 1850 in Ukraine are presented. The short geographical and ecological data and a key of *Anthracus* are given.

Key word: Coleoptera, Carabidae, *Anthracus*, Ukraine, distribution, ecology, key.

Обзор жукелиц рода *Anthracus* (Coleoptera, Carabidae) фауны Украины. Пучков А. В., Ниточко М. И. — Приведены сведения о встречаемости трёх видов рода *Anthracus* Motschulsky, 1850 в Украине. Кратко обсуждены особенности их распространения и экологии, а также представлена таблица для определения видов.

Ключевые слова: Coleoptera, Carabidae, *Anthracus*, Украина, распространение, экология, определитель.

The species of the genus *Anthracus* Motschulsky, 1850 (= *Balius* Schiødte, 1861) are the relatively small ground beetles (3.0–5.2 mm) of the tribe Harpalini, subtribe Stenolophina. From all related genera of the subtribe, *Anthracus* differs by the sharp of posterior angles of pronotum, dorsal surface without pubescence and antennae long. The genus contains 15 species from the Palaearctic Region (five from Europe) (Yaeger, Kataev, 2003). Fragmentary data of distribution and ecology of 1–2 species of *Anthracus* in Ukraine are presented in separate publications only (Petrusenko, 1969; Petrusenko, 1973; Kryzhanovsky, 1983; Eidelberg et al., 1988; Kirichenko, 1998; Kirichenko, Kravchenko, 2004; Kryzhanovskij et al., 1995; Rizun, 2003; Putchkov, 2012).

According to own investigations, studying of some beetle's collections and literature, the genus *Anthracus* comprises three species in Ukraine — *Anthracus consputus* (Duftschmid, 1812), *A. longicornis* (Schaum, 1857) and *A. transversalis* (Schaum, 1862). All species (adults and larvae) are hygrophilous and zoophytophagous. The data about life cycles and ecology are very poorly. The generation of this species is annual according to our own observations and of the some literature data (Desender, 1986; Rizun, 2003). Apparently the adults are hibernated predominantly (Lindroth, 1992). Below brief summary information on the taxonomy, geographical distribution, bionomics and ecology of 3 species found in Ukraine are given. The key for determination is based both on its own and published data (Jaeger, 2011).

Anthracus consputus (Duftschmid, 1812)

Carabus consputus Duftschmid, 1812: 148.

Distribution. Westpalaearctic species: North Africa (known from Morocco), almost all Europe, all Caucasus, Minor and Central Asia, Kazakhstan, south of West Siberia (Yaeger, Kataev, 2003). In Ukraine occurs almost everywhere, except high mountains (Putchkov, 2012).

Ecological data. Meadow-swamp species. Hygrophilous, stratobiont. In the Forest and Forest-Steppe zones it was founded on hygrophytes meadows, near basins (usually

stagnant reservoirs — lakes, swamps), on clay moist soil near the water. Prefers blackout and wetlands under the vegetation and litter. The species often was founded in deciduous forests, where prefer humid places in ravines and near lakes (Shatskyi National Park, Volyn Region). In the extreme south of Ukraine (Kherson Region, Black Sea Biosphere Reserve) *A. consputus* is common species on slightly saline humid areas, along the shores of estuaries lakes and wood plantations in the flooded areas. In the south-east part of Ukraine the species is marked more in floodplains (Lugansk Region, Ukrainian Steppe Reserve, Lugansko-Stanichnyi District, floodplain of the Severskyi Donetsk River). In the Crimea it preferred habitats near the water (banks of the rivers, streams, lakes and the sea coast), where it was not rare in the sediments (Petrusenko, Petrusenko, 1973). In the Carpathians, *A. consputus* is registered sometimes in beech forests (Rizun, 2003). Beetles are met from early May to late August, but more often in July. In western part of Ukraine (Volyn region, Turiysk city env.) the adults fled into the light massively (10–15 specimens per hour). The general beetles occur during the second half of July and early August. Occasionally the species was found in some agrocenoses: on the potato fields in Transcarpathian Lowland (Koval, 2009), maize and alfalfa fields in the steppe zone and in the shelter belts in humid microhabitats (Sumarokov, 2009).

Anthracus longicornis (Schaum, 1857)

Stenolophus longicornis Schaum, 1857: 145.

Distribution. South, Middle and East Europe (south regions), Asia Minor, West Kazakhstan (Yaeger, Kataev, 2003), South Tadjikistan (one specimen from “Tigrovaya Balka” Reserve is preserved in collection of V. Michailov, Kharkov). In Ukraine known from Transcarpathien lowland, hills of West Macroslopes of Carpathien (Rizun, 2003), but more often occurs in south regions of Ukraine (Putchkov, 2012), especially often in the Black Sea Biosphere Reserve and in plains of Crimea (own data).

Ecological data. Littoral swamp mesohygrophilous species. In Kherson Region (all places of the Black Sea Biosphere Reserve) the beetles often found under sediments, in grooves on wet soil, salt marshes, along the shores of lakes and estuaries. In the south-western part of Ukraine the species was collected in humid forest habitats too (Odessa city env., Luzanovsky forest, ending of May). In the Crimea it is common in wetlands, occurring both near the basins and along the rivers, streams and lakes, as well as the meadowlands and along the seacoast (Petrusenko, Petrusenko, 1973). The beetles are recorded from early May to mid-July (but usually at ending of May-beginning of June).

Anthracus transversalis (Schaum, 1862)

Stenolophus transversalis Schaum, 1862: 111.

Distribution. Middle and South Europe (partly the south of Balkan Peninsula and Italy) (Yaeger, Kataev, 2003). Known from the south-west part of Moldova and south of the European part of Russia — Krasnodar Region, Taman (Kryzhanovskij et al., 1995). In Ukraine one specimen was recorded from south of Odessa Region (own data).

Ecological data. Littoral meso-hygrophilous species, which occurs very rarely and locally near the beach of different water basins. It was found in June in floodplain of Danube river (Odessa Reg., Kiliya city env., ending of May).

The Key of the Adult Beetles of the Genus *Anthracus* of Ukraine

- 1 (2). Smaller species: 3.1–4.3 mm. Elytral intervals 3 with 1 setiferous puncture behind middle only. Head large and wide, at 0.87–0.94 times as wide as pronotum. Posterior angles of pronotum almost obtused, rounded on apex (fig. 1). Antennae very long, at 3.2–3.6 times as long as pronotum. Striae of elytra delicate. Head brown, mouthparts reddish or yellow-brown; pronotum (except lighter narrow lateral margin) dark brown or reddish brown, sometimes with indistinct dark macula on the disk. Elytra with

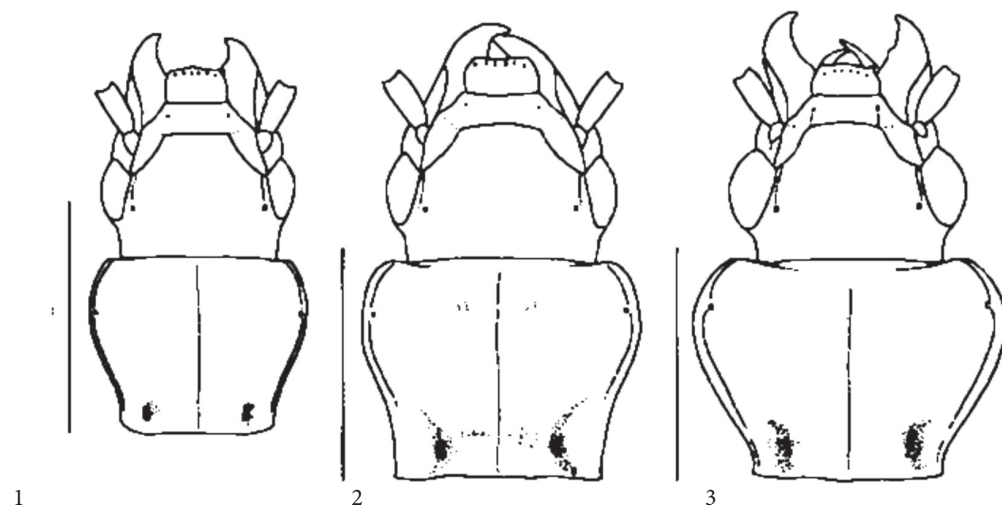


Fig. 1–3. Head and pronotum of *Anthracus* (after Jaeger, 2011): 1 — *A. londicornis*; 2 — *A. transversalis*; 3 — *A. consputus*.

Fig. 1–3. Голова и пронотум *Anthracus* (по: Jaeger, 2011): 1 — *A. londicornis*; 2 — *A. transversalis*; 3 — *A. consputus*.

- large brown macula in apical two-thirds part (but shoulders, suture and narrow lateral margin of elytra — yellowish). Legs and antennae pale brown or reddish, the later often slightly infuscated from antennomere 3. Ventral surface of body dark brown, but abdominal sternites sometimes pale-reddish in the middle. 1. *A. londicornis* (Schaum, 1857).
- 2 (1). Larger species: 3.8–5.2 mm. Elytral intervals 3 with 3–5 setiferous puncture behind middle. Head smaller and distinctly at 0.75–0.89 times as narrow as pronotum (fig. 2, 3). Posterior angles of pronotum almost right, acuted on apex. Antennae distinctly shorter, at 2.6–3.2 times as long as pronotum.
- 3 (4). Pronotum with sides already faintly sinuate or almost parallel in posterior third. Pronotum at 1.32–1.39 times as wide as pronotum on base, which almost equal to anterior margin (fig. 2). Width of pronotum at 1.3 times more length. Eyes weakly convex. Antennomere 2 slightly shorter antennomere 3. 3.9–5.2 mm. Head and pronotum reddish brown, mouthparts pale-reddish. Elytra with large indistinct darkened macula. Legs and antennae yellowish, the later often slightly infuscated from antennomere 3. Ventral surface of body yellowish brown, ventral side of head and prosternum sometimes slightly darkened. 2. *A. transversalis* (Schaum, 1862).
- 4 (3). Pronotum with very rounded sides, distinctly narrowed posteriorly, only with a short sinuation before posterior angles (fig. 3). Pronotum at 1.41–1.68 times as wide as of pronotum on base, which distinctly narrower than anterior margin. Width of pronotum at 1.36–1.43 times more as length. Eyes distinctly convex. Antennomere 2 at 1.5 or more times as short as antennomere 3. 3.8–5.1 mm. Head black, mouthparts reddish; antennomeres 1–2 reddish; pronotum from yellow-reddish to reddish-brown, disk usually darkened; elytra pale-reddish or yellow-brown with dark brown elongate macula, varying in size. Ventral surface of body almost dark brown to almost black, but abdominal sternites often pale-reddish on the middle. Anterior tarsus of males not widened. Legs yellow. 3. *A. consputus* (Duftschmid, 1812).

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