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SHORT COMMUNICATIONS

Contribution to the Knowledge of *Anthonomus rubi* (Coleoptera, Curculionidae) from Asian Part of Russia and Adjacent Territories

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Abstract—Examination of material on two closely related species, *Anthonomus rubi* (Herbst) and *A. terreus* Gyllenhal, has shown the latter to be a subspecies of the former. *A. rubi rubi* is distributed over the western part of the range (Europe, the Caucasus, the Urals, SE Western Siberia), while *A. rubi terreus* is characteristic of its eastern part (SE Western Siberia, E and SE Kazakhstan, Eastern Siberia, the Far East, Mongolia, and N and E China).

In the studies of the Siberian weevil fauna, I met difficulties in identifying some of the commonest and widespread species. Among such cases was determination of the status of *Anthonomus rubi* (Herbst, 1795) and *A. terreus* Gyllenhal, 1836, previously considered (Ter-Minassian, 1936; Dieckmann, 1968, 1988) to be different species. They were differentiated by the presence of pale bands on the elytra in *A. terreus* and their lack in *A. rubi*. Also, the former species was usually associated with *Rosa*, and the latter, with *Rubus* and *Fragaria* (Ter-Minassian, 1936; Lukjanovitsh and Ter-Minassian, 1955; Opanasenko, 1972; Arnoldi *et al.*, 1974).

I have examined extensive material from European Russia, the Urals, Siberia, the Far East, and Mongolia. It was found that these species exhibit no morphological distinctions, have absolutely identical genitalia, but never occur in the same locality. Their trophic relations are almost the same. *A. rubi* was also recorded from *Rosa*, and *A. terreus*, found by me on *Rubus* and *Fragaria*. The data indicate that these are two subspecies of one species. *Anthonomus rubi rubi* (Herbst) is distributed in Europe, the Caucasus, Western Siberia (except its SE part), and Middle Asia; *Anthonomus rubi terreus* Gyllenhal, in SE Western Siberia, Eastern Siberia, the Far East, and Mongolia (Fig. 1). The boundary between the ranges of these subspecies runs across the eastern part of Tomsk and Novosibirsk Provinces and Altai Territory, where specimens with bands varying from distinct to inconspicuous have been collected. In his revision of western Palaearctic species of Anthonomini, Dieckmann (1968) synonymized with *A. terreus* the species *A. rosarum* Daniel, 1898 occurring in N Italy and, according to his data, also having bands on elytra. The systematic position of this taxon remains, however, disputable till examination of material on this form.

The distribution of *Anthonomus rubi* in Asian Russia, Kazakhstan, and Mongolia is shown in Fig. 1. In addition to my own material, I used data from the following papers: (Egorov, 1976 : 32—Primorskii Terr.: Vladivostok; Korotyaev, 1976: 50—Kamchatka: Klyuchevskoye, Kamaki, Shchapino, Elizovo, Kozyrevsk, Krapivnaya, Petropavlovsk; Krivolutskaya *et al.*, 1978: 97— Kuril Islands, Kunashir: Sernovodsk; caldera of Golovnin Volcano; Iturup: Kurilsk, Burevestnik; Matesova *et al.*, 1962: 53—Semipalatinsk Prov., Urdzhar Distr.; 135—mountains and foothills of Zailiiskii Ala Tau; Ter-Minassian, 1936: 175—Saur Range, Temir-Su Canyon, SE of Zaisansk; Zaili Ala Tau, Dzhasyl-Kul; 180—Altai: Chernovaya on Bukhtarma River, SE Kazakhstan: Kapal; Minusinsk, Vladivostok; Voss, 1966: 324—Mongolia, Central Aimak: Ulan-Bator, Zaisan in Bogdo ula; 12 km SE of Ulan-Bator, Nucht in Bogdo ula; Dieckmann, 1968: 463—Altai: Altaisk; 467—Kazakhstan: Marka-Kul; Siberia: Minusinsk, Tunguska near Irkutsk, Verkhne-Udinsk, Krasnoyarsk, Ongudai, Biysk, Berezovka, Vladivostok, Mongolia: Central Aimak near Ulan-Bator).

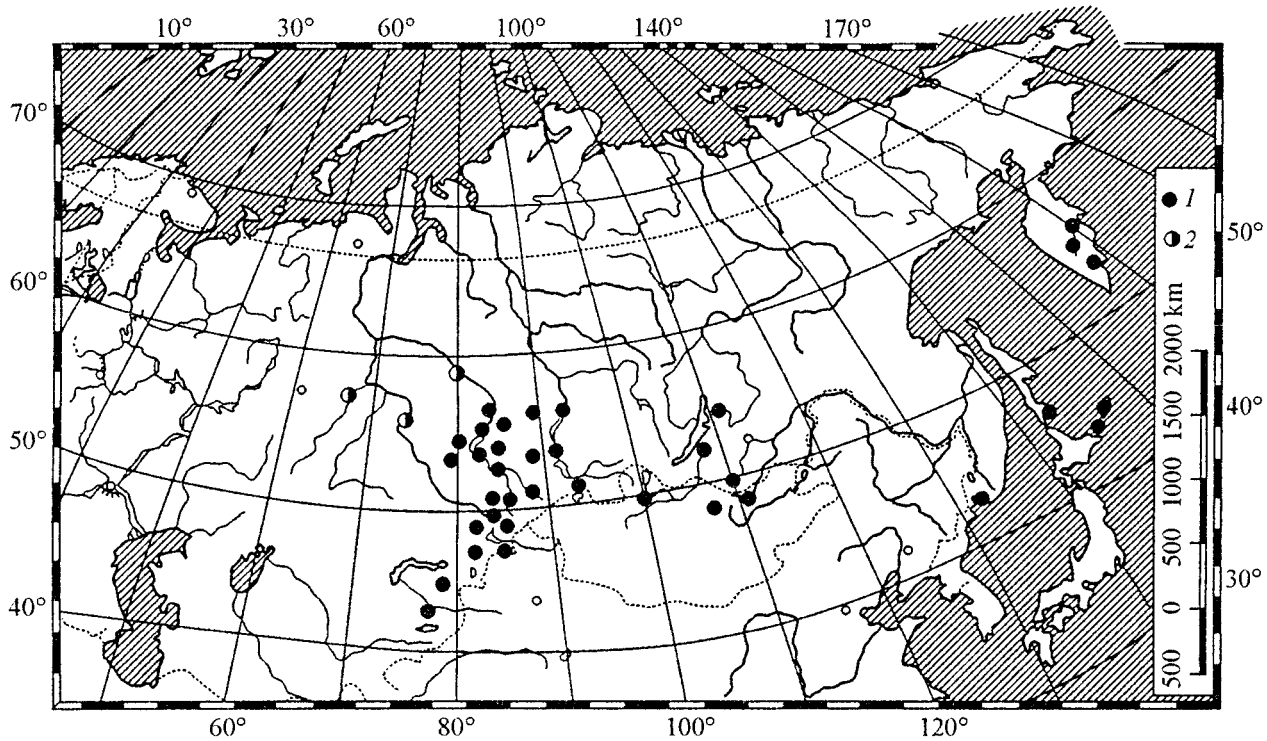

Fig. 1. Distribution of *Anthonomus rubi* (Herbst) in Asian Russia and adjacent territories: *1—Anthonomus rubi terreus* Gyllenhal, *2—Anthonomus rubi rubi* (Herbst).

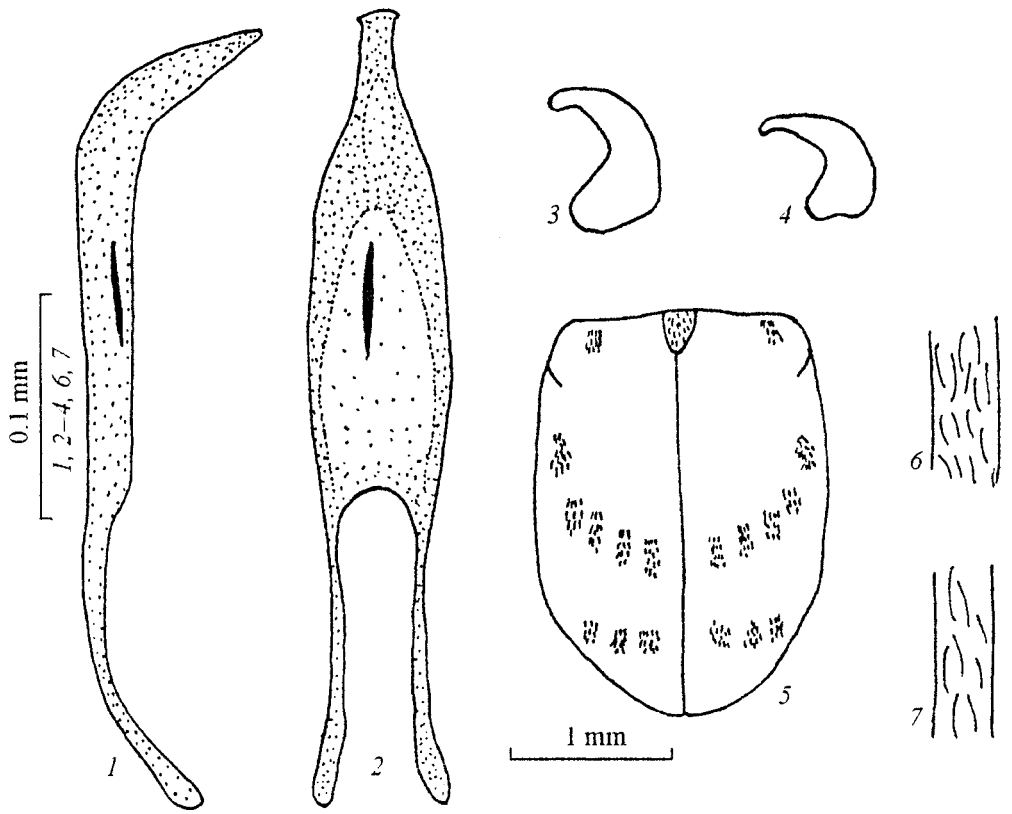

Fig. 2. *Anthonomus rubi* (Herbst): (*1*) penis, lateral view (Tuva); (*2*) penis, dorsal view; (*3*) spermatheca (Moscow Province); (*4*) spermatheca (Novosibirsk); (*5*) elytra (Novosibirsk); (*6*) elytral interval (Novosibirsk); (*7*) elytral interval (Crimea).

Anthonomus (s. str.) ***rubi*** (Herbst, 1795) (Fig. 2, *1–7*).

—*rubi rubi* (Herbst, 1795); = *ater* (Marsham, 1802); = *melanopterus* (Marsham, 1802); = *obscurus* Stephens, 1831; = ab. *leptopus* Gozis, 1881; = *gracilipes* Desbrochers, 1872.

—*rubi terreus* Gyllenhal, 1836, stat. n.; = *sibiricus* Desbrochers, 1868; = *terreus* var. *desbrochersi* Faust, 1890; = *terreus* var. *uniformis* Faust, 1890; = *rubi* var. *transiliensis* Ter-Minassian, 1936.

Material. (spms.). Tyumen Prov.: 2; Omsk Prov.: 4; Tomsk Prov.: 2; Novosibirsk Prov.: 65; Kemerovo Prov.: 7; Khakasia: 1; Altai Terr.: 3; Republic of Altai: 22; Eastern-Kazakhstan Prov.: 20; Krasnoyarsk Terr.: 1; Tuva: 18; Buryatia: 3; Chita Prov.: 4; Sakhalin Prov.: 1; Primorskii Terr.: 1; Mongolia: 7.

Description. Body covered with fine pale hairs denser on metepimera, occasionally forming longitudinal stripes on pronotum and, in *A. rubi terreus*, oblique transverse bands on elytra (Fig. 2, *5–7*). Coloration from black to red-brown, sometimes combined.

Male. Rostrum long, weakly curved, 1.65–2.0 times as long as pronotum, 0.5–0.71 times as wide as fore femur, with two low carinae extending as far as antennal base and with one median shining carina running from the middle of rostrum apex, covered with fine elongate punctures separated by shining spaces. Antennal scrobes directed to eyes. Scape very long, 1.5–1.95 times as long as funicle. First funicular segment 2.3–3.0 times as wide as long [a mistake in the original text; actually, 2.3–3.0 times as long as wide—Ed.] and 1.4–1.6 times as long as 2nd. Antennal club 4-segmented, fusiform. Funicle and club with raised semi-erect hairs. Eyes protruding beyond head contour. Frons 1.09–1.25 times as wide as base of rostrum at eyes. Vertex with depression. Head finely punctate.

Pronotum campaniform, weakly transverse, 1.23–1.27 times as long as wide [actually, 1.23–1.27 times as wide as long—Ed.], with weak apical constriction. Disc densely punctate, shining. Scutellum triangular, longer than wide, protruding above elytra. Elytra ovate, their length 1.18–1.31 times maximum width. Humeri developed. Apical tubercles smoothed. Intervals punctate-rugose, 2.5–3.0 times as wide as striae. Striae deep, punctate; punctures not fused, excising intervals.

Procoxal cavities contiguous. Mesosternal intercoxal process flat. Mesosternum convex, 2.0–2.6 times as long as sternite I. Sternites I–IV of subequal length. Sternite I 1.64–1.76 times as long as sternite II. Abdomen slightly concave. Pygidium weakly convex.

Legs long. Fore coxa strongly elongate. Femora, especially fore one, slightly thickened, with acute tooth in apical third. Tibiae weakly curved, shallowly bisinuate on inner side, 0.66–0.83 times as long as femora, with apical spur on inner margin; outer margin apically rounded, obliquely beveled, with comb of setae. Teeth on middle and hind femora smaller than that on fore femur. Tarsi long; 1st segment 1.5–2.1 times as long as 2nd; 3rd deeply bilobed; 4th 1.13–1.33 times as long as 1st. Claws long, with tooth.

Aedeagus straight in anterior $^2/_3$, sharply curved in apical third, wide dorsally, smoothly narrowing to apical third, nearly parallel-sided at apex. Apex rounded. Armament of inner sac consisting of a single long spine (Fig. 2, *1, 2*).

Length 2.1–3.6 mm.

Female. Rostrum narrower, 2.23–2.34 times as long as pronotum. Femora more slender. Legs shorter. Teeth on femora weaker. Abdomen convex. Sternite VIII baculiform. Spermatheca as in Fig. 2, *3, 4*.

Length 2.6–3.4 mm.

Key to Subspecies of Anthonomus rubi (Herbst, 1795)

1. Elytra with two more or less distinct bands of pale hairs (Fig. 2, *5*); 1st band curved, lying in the middle; 2nd straight, behind the middle. Hairs on body denser and longer (Fig. 2, *6*). Body coloration usually paler. Length 2.1–3.6 mm .... *A. rubi terreus* Gyllenhal

—Elytra with short appressed hairs forming no bands. Hairs in intervals sparser (Fig. 2, *7*). Coloration usually darker. Length 2.3–3.3 mm .... *A. rubi rubi* (Herbst)

The material examined is deposited in the collection of the Siberian Zoological Museum, Institute of Animal Systematics and Ecology, Siberian Division, Russian Academy of Sciences, Novosibirsk.

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