

Record of the Second Species of the East Asian Seed-Beetle Genus *Megabruchidius* Borowiec (Coleoptera, Bruchidae) in the *Gleditsia* Seeds in Krasnodar and Stavropol Territories, Russia

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Abstract—*Megabruchidius dorsalis* (Fåhraeus), an introduced Eastern Asian seed beetle, was reared from *Gleditsia triacanthos* pods collected in Krasnodar and Stavropol territories in October 2013. The species has become established in several European countries since 1989 and is for the first time recorded from Russia.

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In the course of the study of the East Asian seed beetle *Megabruchidius tonkineus* (Pic, 1914) distribution in the Northwestern Caucasus new records of this species were made. The species was first found in Krasnodar in 2005 (Korotyayev, 2011; Korotyayev et al., 2011).

Megabruchidius tonkineus (Pic, 1914) (Fig. 1)

Material. Russia. Krasnodar Territory: 84 km E of Krasnodar, Ladozhskaya Village, windbreak along road, 18.X.2013. **Stavropol Territory:** western border in Novoaleksandrovsk Distr. along Novoaleksandrovsk–Kropotkin road, windbreak, 18.X.2013. [In the original Russian text, the month was erroneously given as “XI.”—Author].

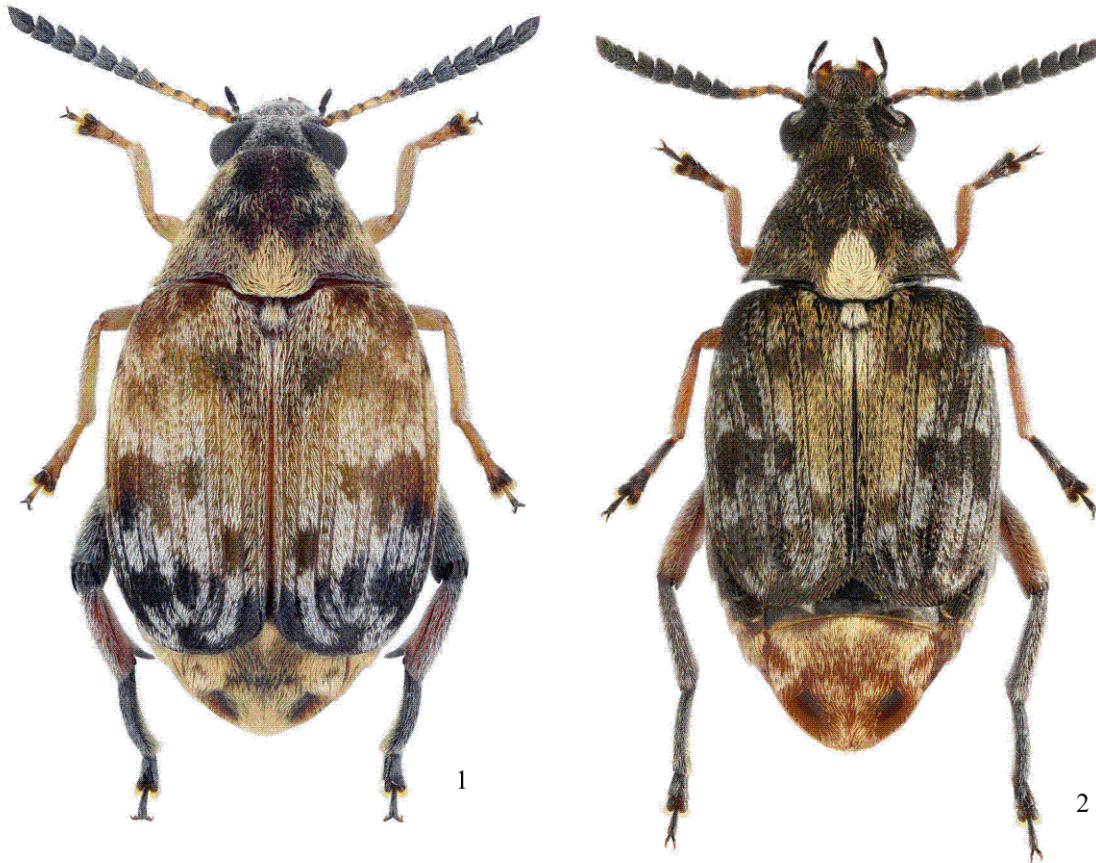
In December 2013, another species, *M. dorsalis* (Fåhraeus, 1839), was reared together with *M. tonkineus* from the *Gleditsia* pods collected in both the localities. The individuals of *M. dorsalis* were significantly more abundant in the reared material than those of *M. tonkineus*. In particular, 32 individuals of *M. dorsalis* and only 7 individuals of *M. tonkineus* were reared from the pods collected at the western border of Stavropol Territory.

Megabruchidius dorsalis (Fåhraeus, 1839) (Fig. 2)

A color photograph of *M. tonkineus* was published in the first report on a record of this species

(Korotyayev, 2011). *Megabruchidius dorsalis* is similar to *M. tonkineus* in size and in the majority of the characters, including the presence of longitudinal depressions on the pygidium in the female and of a hairy spot on the 1st abdominal ventrite of the male, but it clearly differs in the absence of a long tooth at the apex of the hind tibia in both sexes and also in the mainly black elytra (cf. Fig. 1 and Fig. 2).

Among the other seed beetles in the Ciscaucasia, only *Bruchus pisorum* (L.) is similar in size to the species of the genus *Megabruchidius*, but *M. tonkineus* and *M. dorsalis* clearly differ from this and the other species of the genus *Bruchus* L. in lacking an angular projection or a tooth on the sides of the pronotum and large tooth on the hind femur and also in the secondary sex characters in the structure of the abdomen mentioned above. Small (less than 3 mm long) individuals of the *Megabruchidius* species which emerge when the second larva develops in a *Gleditsia* seed can be misidentified as representatives of the genus *Acanthoscelides* Schilsky due to the presence of an apical tooth on the hind femur (at its posterior margin) [smaller than that in *Acanthoscelides obtectus* (Say) but about as long as that in *A. pallidipennis* (Motsch.) common in the Ciscaucasia on *Amorpha fruticosa*]. The *Megabruchidius* species are also similar to the small American *A. pallidipennis* in the presence of a round hairy spot on the 1st abdominal ventrite of the male, which emphasizes once again the difficulty of differentiation of the genera of the subtribe Acan-



Figs. 1, 2. *Megabruchidius tonkineus* (Pic) (1) and *M. dorsalis* (Fåhræus) (2).

thoscelidina Bridwell, 1946, noted by Borowiec (1987)]. In addition to the (usually) large body size, *Megabruchidius tonkineus* differs from the species of *Acanthoscelides* introduced to Europe in a much longer, and *M. dorsalis*, in a distinctly shorter (not longer than the neighboring teeth) tooth on the apex of the hind tibia and also in the presence of longitudinal depressions on the female pygidium.

Examination of the material reared from the *Gleditsia* pods collected in Krasnodar in October 2014 has shown that all the 147 specimens belong to *M. tonkineus*. In April 2014, a small sample of the previous year's pods of *Gleditsia* was taken near the eastern border of Krasnodar Territory northwards of Temizhbekskaya Vill., but no seed beetle was reared from the pods.

Record of the second species of the genus *Megabruchidius* is of interest since it gives an opportunity for comparative examination of the expansion of two alien species developing on the same plant and co-occurring in its fruits. This consortium of *Gleditsia* is

also of interest as both the seed-beetle species belong to an East Asian genus, and their host plant is introduced from North America. In Eastern Asia, two East Asian species of the genus *Gleditsia*, *G. japonica* and *G. sinensis*, are recorded as *M. dorsalis* hosts (Lukjanovich and Ter-Minassian, 1957 : 33).

A brief note on the genus *Megabruchidius* and a survey of the first records of its representatives from various countries were recently published by the author (Korotyayev, 2011). A specimen of *M. dorsalis* with a small printed label "Caucas. septen." probably made in the XIX century was found in the collection of the Zoological Institute, Russian Academy of Sciences, St. Petersburg, which may mean that introductions of this species might have occurred a very long time ago. The phenology of *M. dorsalis* and *M. tonkineus* in nature has not been studied; in Krasnodar, I have failed to find the beetles on *Gleditsia* flowers or on the nearby ornamental flowers within both the period of flush of flowering and the period of development of the fruits in hot mid-summer of 2014.

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