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DESCRIPTON OF MORDELLISTENA *PARVULIFORMIS* LARVA (COLEOPTERA, MORDELLIDAE)

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Описание личинки жука-горбатки *Mordellistena parvuliformis* (Coleoptera, Mordellidae). Односум В. К., Литвин О. — Впервые описана взрослая личинка жука-горбатки *Mordellistena parvuliformis* Stschegoleva-Barovskaja, 1930.

Ключевые слова: Coleoptera, Mordellidae, *Mordellistena parvuliformis,* личинка, *Helianthus annuus.*

Description of *Mordellistena parvuliformis* Larva (Coleoptera, Mordellidae). Odnosum V. K., Litvin O. P.— A senior instar larva of *Mordellistena parvuliformis* Stschegoleva-Barovskaja, 1930 beetle is described.

Key words: Coleoptera, Mordellidae, *Mordellistena parvuliformis,* larva, *Helianthus annuus.*

A mordellid beetle *Mordellistena parvuliformis* was described by T. I. Stschegoleva-Barovskaja (1930) based on males from the South of Ukraine. She considered its larvae as mass pests of the sunflower. V. N. Stschegolev (1949) also mentioned *M. parvuliformis* larvae damaging sunflower stems, but noted that the degree of influence of damage they cause in growth and productivity of this plant had not been experimentally evaluated. G. V. Dmitriev (1935) recorded *M. parvuliformis* as a mass pests on hemp fields in the Cis-Volga part of Samara (Kuybyshev) Region of Russia, where the ratio of plants infested by mordellid larvae did not exceed 15–20%, but reached 55% in 1932. Its economical importance was evaluated as "unclear and possibly insignificant". V. K. Odnosum (2006) redescribed a male of this species based on type material and described a female for the first time.

Surprisingly, in 2006 and 2007 workers of the Institute of Plant Protection of the Agricultural Academy of Sciences of Ukraine discovered large planted areas of sunflower infested by larvae of beetles of the genus *Mordellistena* Costa, 1854. According to their data, extensiveness of infestation virtually was 100%, with 70 to 100 larvae in each stem. We identified the pest as *M. parvuliformis*, which is widespread in agrobiocenoses in the South of Ukraine and European Russia.

According to our preliminary observations, the damage these beetle larvae cause is evaluated as insignificant, hardly having any influence into physiological processes: high intensiveness of infestation is observed in the end of sunflower vegetation period. However, mordellids can have more negative influence because of possible transfer of fungal and viral diseases by adults that requires further studies. The most efficient measure to control this pest is the deep autumnal plowing of soil with the remainders of dry stems of sunflower.

Before now, identification was not possible without rearing adult beetles, as larvae were not described. Below, we provide a description of larva for the first time.

Mordellistena parvuliformis Stschegoleva-Barovskaja, 1930

Material. Numerous larvae from *Helianthus annuus* L. stems (partly brought up to adults): Ukraine, Mykolaiv and Kherson Regions, July to August 2006–2007. Identified adults and larvae in the collection of I. I. Schmalhausen Institute of Zoology, Kyiv.

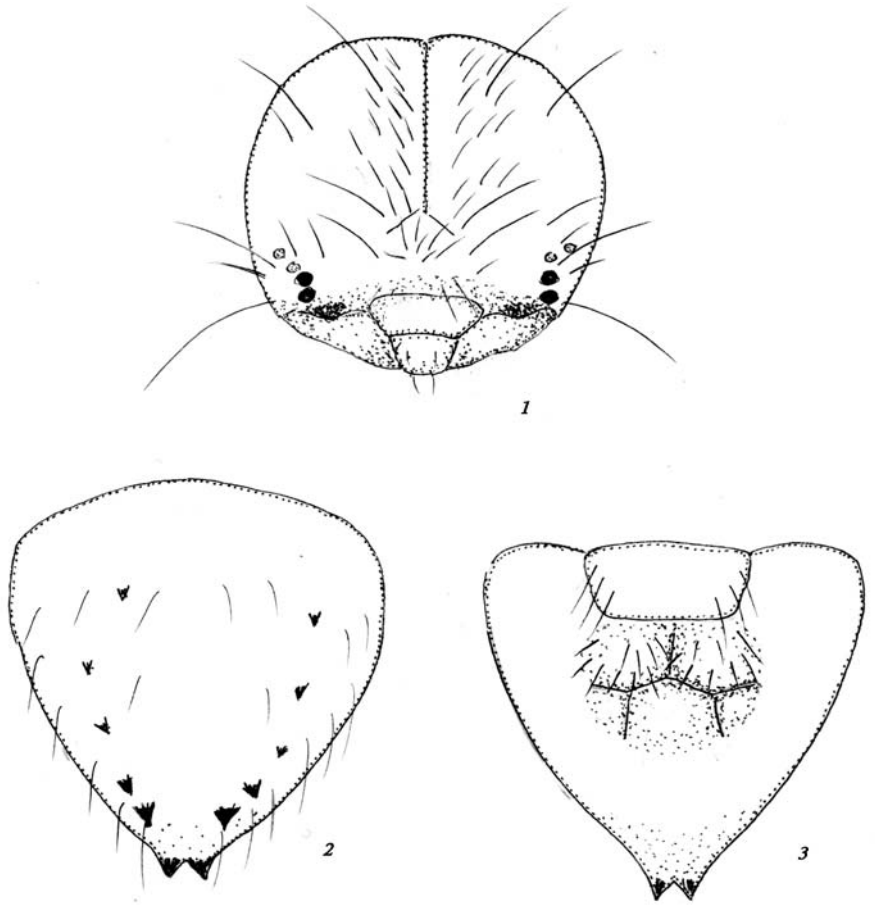

Рис. 1. *Mordellistena parvuliformis,* личинка: *1* — голова; *2* — *9*-й брюшной сегмент, дорсально; *3* — 9-й брюшной сегмент, вентрально.

Fig. 1. *Mordellistena parvuliformis,* larva: *1* — head; *2* — abdominal segment 9 (dorsal view); *3* — same (ventral view).

Description. Larvae of senior instars yellowish white slightly S-shaped sinuate, sparsely yellowish setulose.

Body 7.1–9.5 mm long, 5.1–5.2 times as long as wide. Head (fig. 1, *1*), head capsule up to 0.7 wide. Epistome all light brown, with darkened lateral processes. Secondary chaetotaxy of each head hemispheres consists of 12–15 anterior vertical, 1–2 posterior vertical and 3–5 genal setae. Frons with 4–7 setae at bases of frontal sutures. Eyes represented by pair of large black and 2 small additional poorly pigmented eyespots at each side of head. Additional eyespots closely ally to main at dorsal side. Mandible single-tipped, with moderately small medial tooth on medial margin. Prementum with 2 lateral setae. Joints of legs moderately shortened. Abdominal tergites without moving calluses. Abdominal segment 9 over all dorsal surface light without sclerotized fields, with widely convex base and conspicuously arcuate convex lateral sides стороны (fig. 1, 2). Apical one-quarter of abdomen with 2–3 pairs of smaller and variously sclerotized above pair of dorsal strongly sclerotized teeth; in some specimens 15–17 smaller teeth often forming almost closed circle. Abdominal sternite 9 (fig. 1, *3*) twice as wide as long, bearing 4–6 lateral setae. Preanal tubercles with 8–10 setae each.

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Dmitriev G. V. [Insects that damage hemp in the right-bank part of Kuybyshevskiy Kray // Zashchita Rasteniy] — 1935. — **5.** — P. 134–136. — Russian : *Дмитриев Г. В.* Насекомые, вредящие конопле в правобережье Куйбышевского края // Защита растений.

Odnosum V. K. Mordellid beetles of the Mordellistena parvula group (Coleoptera, Mordellidae) in the fauna of Ukraine // Vestnik zoologii. — 2006. — **40**, N 4. — P. 311–319. — Russian : *Односум В. К.* Жуки-горбатки группы Mordellistena parvula (Coleoptera, Mordellidae) фауны Украины // Вестн. зоологии.

Stschegolev V. N. [Plant protection from the damage by insects and other pests Voscow and Leningrad: Gosudarstvennoe izdatelstvo selskokhozyaystvennoy literatury.] — 1949. — 508 p. — Russian : *Щеголев В. Н.* Защита растений от повреждений насекомыми и другими вредителями. — М. ; Л. : Гос. изд-во сельхоз. лит.

Stschegoleva-Barovskaja T. I. [Two new species of Mordellidae from the Pontic steppes (Coleoptera) // Russkoe entomologicheskoe obozrenie] — 1930. — **24**, N 1–2. — P. 56–58. — Russian : *Щеголева-Баровская Т. И.* Два новых вида Mordellidae из причерноморских степей (Coleoptera) // Русск. энтомол. обозр.