

European and Caucasian species of *Megasternum* Mulsant, 1844 (Coleoptera: Hydrophilidae)

SERGEY K. RYNDEVICH^{1,*}, ALEXANDER G. SHATROVSKIY² & OLEG R. ALEKSANDROWICZ³ & MIKALAI H. KAZULKA⁴

¹Baranavichy State University, 21, Voykava stl. Baranavichy 225404, Brest reg., Belarus

 ryndevichsk@mail.ru;  <https://orcid.org/0000-0001-6699-9062>

²Department of Zoology & Anthropology, National Museum of Natural History and Science, University of Lisbon, Rua da Escola Politécnica 56/58, 1250-102 Lisbon, Portugal

 ashatrovskiy@ukr.net;  <https://orcid.org/0000-0001-8903-7819>

³Institut of Biology, Pomeranian University in Shupsk, Arciszewski str. 22b, 76-200 Shupsk, Poland

 oleg.aleksandrowicz@upsl.edu.pl;  <https://orcid.org/0000-0000-8176-0674>

⁴Scientific and Practical Center of the National Academy of Sciences of Belarus for Biological Resources, 27 Akademicheskaya str., Minsk, 220072, Belarus

 kazulka.mikalai@gmail.com;  <https://orcid.org/0009-0000-3888-839X>

*Corresponding author

Abstract

Revised data on the distribution of European and Caucasian species of *Megasternum* Mulsant, 1844 are given: *M. concinnum* Marsham, 1802, *M. immaculatum* Stephens, 1829, *M. caucasicum* Kuwert, 1890 **stat. rev.** and *M. prometheus* Shatrovskiy, 1990. For *M. caucasicum*, the status of valid species has been restored. Redescriptions of the species are given. Lectotypes of *M. concinnum*, *M. immaculatum* and *M. caucasicum* are designated here: Diagnostic characters of all species are illustrated by photographs. The ecological features and distribution of species are presented. New finds for regional faunas are recorded: *M. immaculatum* (for Belarus, Italy, and European part of Russia), *M. caucasicum* (for Russia), *M. concinnum* (for Morocco and Nepal).

Key words: Coleoptera, Hydrophilidae, *Megasternum*, taxonomy, distribution, Europe, Caucasus

Introduction

Megasternum Mulsant, 1844 is the type-genus of the tribe Megasternini Mulsant, 1844 and nominative subtribe. The tribe belongs to the subfamily Sphaeridiinae of the family Hydrophilidae.

Species of the genus *Megasternum* are sapro- or coprobionts and very small hairless terrestrial beetles that occurred in decaying plant matter, rotten mushrooms, carrion, and mammal excrements. Some species are found in bird nests and rodent burrows (Smetana, 1978, 1988; Hansen, 1987; Shatrovskiy, 1990; Ryndevich, 2004; Ryndevich & Lundyshev, 2005; Lundyshev & Ryndevich, 2010; Ryndevich *et al.*, 2021). The imago feeds on various decaying organic remains. Larvae are carnivorous and prey on the larvae of Diptera and other invertebrates. The *Megasternum* larva was originally described from soil samples in permanent pasture in Ireland (Phillips, 1923).

Previously, six species distributed in the Palearctic and Nearctic have been recognized for the world's fauna (Short & Fikáček, 2011; Fikáček *et al.*, 2015).

The name of the type species has undergone a complex history. For a long time the species was called *Megasternum boletophagum*. However, J. Balfour-Browne (1939) discovered that the specimen under the name *Dermestes boletophagus* stored in the Marsham's collection at the NHMUK is *Cercyon tristis* (Illiger, 1801), so a replacement became necessary, and this was tackled 35 years later (Smetana, 1974). Smetana had not studied the type specimens. The name of the first of the junior synonyms, *D. obscurus* Marsham, 1802, he proposed as valid to save the status of the genus name. But later it was realised that Marsham's *D. obscurus* is a primary homonym of *D.*