

© 2018 O. G. SHATROVSKIY

FIRST RECORD OF *HELOPHORUS VILLOSUS* DÜFTSCHMID, 1805 (COLEOPTERA: HYDROPHYLOIDEA: HELOPHORIDAE) IN UKRAINE

Шатровський, О. Г. Перша згадка *Helophorus villosus* Dufschmid, 1805 (Coleoptera: Hydrophylidae: Helophoridae) в Україні. *Вісник Харків. ентомол. т-ва*. 2018. Т. XXVI, вип. 2. С. 5–7.

Helophorus villosus Dufschmid, 1805, до цього відомий із Центральної Європи, уперше знайдений в Україні (Одеська область). Наведено опис виду, відомості про екологію і загальне поширення. Пропонується включити *H. villosus* до Червоної Книги України. 1 рис., 9 назв.

Ключові слова: *Helophorus villosus*, Центральна Європа, Україна, Червона Книга.

Шатровский, А. Г. Первое упоминание *Helophorus villosus* Dufschmid, 1805 (Coleoptera: Hydrophylidae: Helophoridae) в Украине. *Изв. Харьк. энтомол. о-ва*. 2018. Т. XXVI, вып. 2. С. 5–7.

Helophorus villosus Dufschmid, 1805, до сих пор известный из Центральной Европы, впервые найден в Украине (Одесская область). Приводятся описание вида, сведения об экологии и общем распространении. Предлагается включить *H. villosus* в Красную Книгу Украины. 1 рис., 9 назв.

Ключевые слова: *Helophorus villosus*, Центральная Европа, Украина, Красная Книга.

Shatrovskiy, O. G. First record of *Helophorus villosus* Dufschmid, 1805 (Coleoptera: Hydrophylidae: Helophoridae) in Ukraine. *The Kharkov Entomol. Soc. Gaz.* 2018. Vol. XXVI, iss. 2. P. 5–7.

Helophorus villosus Dufschmid, 1805, known formerly from Central Europe, has been recorded for the first time from Ukraine (Odessa Region). A description of the species and data on its ecology and geographic distribution are given. *H. villosus* is proposed to be included in the Red Book of Ukraine. 1 fig., 9 refs.

Keywords: *Helophorus villosus*, Central Europe, Ukraine, Red Book.

Introduction. *Helophorus villosus* Dufschmid, 1805 has previously been known only from Central Europe (Przewoźny, 2019). Given its infrequent occurrences, it was included in the Lists of Rare Species and/or in the Red Books of European countries.

Thus, it was referred to as endangered species for East Bavaria in Germany (Hebauer et al., 2003) and as critically endangered in the Red List of Czech Republic (Trávníček, Fikáček, Boukal, 2005).

The author found some specimens of *H. villosus* in material from the Odessa Region, which are the first records from Ukraine.

Materials and methods. Two specimens of *H. villosus* are collected by Maria Grandova (Ukrainian Scientific Centre of Ecology of the Sea, Odessa), specialist on aquatic Heteroptera from Odessa.

One specimen is in collection of Vsevolod Zakharenko, probably collected in a hydrobiological expedition organized by the Department of Zoology of the Kharkiv Zooveterinary Institute, headed by Prof. Yefim Lukin.

Both collectors used common hydrobiological hand-net.

A specimen from the collection of the Zoological Institute of Russian Academy of Sciences in Saint Petersburg, collected by Franz Hebauer and determined by Robert Angus (Hebauer, 1983), was used for making photo of male genitalia (Fig. 1f).

The specimens were examined under a MBS-9 microscope.

Images of genital structures were made using Levenhuk D320L microscope with C310T NG Digital Camera.

Body images were made using Canon 6D camera with MP-E65 object-glass.

All images were edited with Helicon Focus Pro v. 5.3.11.3 software and Adobe Photoshop CC 2017 v. 18.0.0.53.

Results and discussions. *Helophorus villosus* is a very distinctive species. It is recognized by yellow pronotum of a characteristic form (Fig. 1b) and specific combination of other characters (see below).

Family HELOPHORIDAE Leach, 1815

Genus *Helophorus* Fabricius, 1775

Subgenus *Rhopalohelophorus* Kuwert, 1886

= *Atractohelophorus* Kuwert, 1886

Valid subgeneric name *Rhopalohelophorus* in the modern interpretation is used for both subgenera described by Kuwert: *Rhopalohelophorus* and *Atractohelophorus*. The latter name is considered now as a synonym of valid name.

R. B. Angus, a leading researcher on the Genus *Helophorus*, now applies the name *Atractohelophorus* for a group of species from the genus *Helophorus* (Angus, Jia, Chen, 2014; Angus, Ryndevich, Zhang, 2017) ‘with symmetrical apical segments of the maxillary palpi and the elytral flanks broadly visible from below’ (Angus, Jia, Chen, 2014). Similarly, a large group *Rhopalohelophorus* (subgenus *sensu* Kuwert *et auctt.*) is characterized by asymmetrical apical segments of the maxillary palpi; the width of elytral flanks in this group is variable. By its characters, *H. villosus* (Fig. 1a) belongs to this group.

Helophorus villosus Dűtschmid, 1805 (Fig. 1a-f)

= *Helophorus zoppae* Ganglbauer, 1901, = *Helophorus zoppae* var. *pinkeri* Ganglbauer, 1904

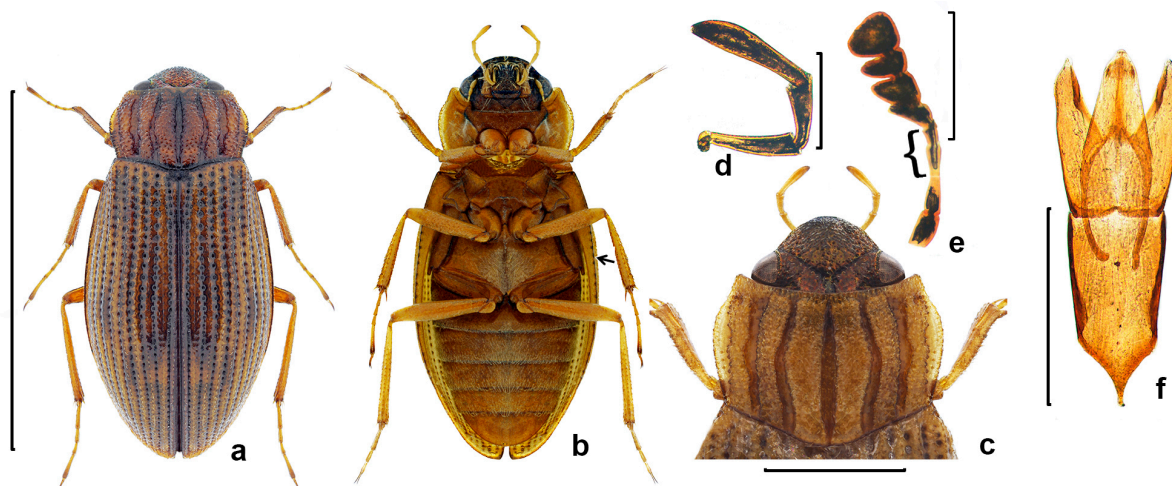


Fig. 1. *Helophorus villosus*: a–b — general appearance (a — dorsal, b — ventral), scale bar 5 mm; c — head and pronotum, scale bar 1 mm; d — maxillary palp, scale bar 0.25 mm; e — antenna, scale bar 0.25 mm; f — aedeagophore, scale bar 0.5 mm.

Description (Angus, 1992). Length: 4.5–6.2 mm. Head: strongly granulate, pitchy, generally bronzed (sometimes shining golden), the Y-groove very deep, its stem expanded anteriorly. Palpi very elongate. Antennae 8-segmented (Fig. 1c)¹. Pronotum yellowish brown to orange, shape and sculpture characteristic. Elytra: pale brown, strongly striate, interstices 2, 4, and 6 generally somewhat raised above the others. Flanks clearly visible from below, opposite the metasternum about half as wide as the epipleurs (Fig. 1d, shown by arrow). Legs: conspicuously long.

Material. Ukraine, Odessa Region, near Troitskoye village, Tylihul River, near a highway E95 (Odessa–Kiev); N: 47°36'11", E: 30°18'30"; 22.03.2013 (M. Grandova) — 2 ♀♀. [Ukraine], “№ 26, Д. пп. 48 (probably, test 48), Heloph. – 1” — 1 ♀, [1947–1963] (V. Zakharenko). All specimens are deposited in the Museum of Nature of Vasyl Karazin Kharkiv National University.

One specimen from Bavaria was used for a photo of aedeagophore (Fig. 1f): Germania, Bavaria, Deggendorf, 08.04.1981 (F. Hebauer) — 1 ♂ (Hebauer, 1983) — Zoological Institute of Russian Academy of Sciences (Saint Petersburg).

Distribution. South of Germany (Baden-Württemberg and Bayern States), Austria, Czech Republic (Trávníček, Fikáček, Boukal, 2005), Slovakia, Hungary (Csabai, Szél, 1999), Romania, Ukraine (Odessa Region).

¹ On the section of antennal stem, marked with a curly bracket (Fig. 1e), there are 2 segments only (in case of 9-segmented antennae, there are 3 segments).

Ecology. This species occurs in well warmed-up spring pools and ponds (Hebauer, 1983, 1985). In favorable years, the density of local populations can reach 100 individuals per square meter (Hebauer, 1985). In the collections of the period after the drying of temporary ponds (in summer) did not occur, sometimes for several years. It is absent in the material collected in summer after the drying of temporary ponds.

Conclusions. *Helophorus villosus* is recorded from Ukraine for the first time. Probably, it is distributed towards the south of steppe, but occurs over a short period in spring. Based on the information on rare and endangered species in neighboring countries, the author proposes to include *H. villosus* in the Red Book of Ukraine.

Acknowledgements. The author is thankful to Maria Grandova for providing collected material, and to Alexander Slutskiy (Kharkiv Entomological Society) for the images to this article.

REFERENCES

- Angus, R. B. 1992. *Süßwasserfauna von Mitteleuropa. Bd. 20/10-2: Insecta: Coleoptera: Hydrophilidae: Helophorinae.* Gustav Fischer Verlag, Stuttgart. ISBN 9783437306433.
- Angus, R. B., Jia, F.-L., Chen, Z.-N. 2014. A review of the *Helophorus frater-praeanus* group of species, with description of a new species and additional faunal records of *Helophorus* Fabricius from China and Bhutan (Coleoptera: Helophoridae). *Koleopterologische Rundschau*, **84**, 209–219. URL: https://www.zobodat.at/pdf/KOR_84_2014_0209-0219.pdf.
- Angus, R. B., Ryndevich, S. K., Zhang, T. 2017. A new species of *Helophorus* Fabricius, 1775 from the Chinese Altai, with notes on the former subgenus *Atractohelophorus* Kuwert, 1886 and selected species (Coleoptera: Helophoridae). *Koleopterologische Rundschau*, **87**, 239–252. URL: https://www.zobodat.at/pdf/KOR_87_2017_0239-0252.pdf.
- Csabai, Z., Szél, G. 1999. Checklist of Spercheidae, Hydrochidae, Helophoridae, Hydrophilidae and Hydraenidae of Hungary (Coleoptera). *Folia Entomologica Hungarica*, **60**, 213–230. URL: http://publication.nhmus.hu/pdf/foletoent/FoliaEntHung_1999_Vol_60_213.pdf.
- Hebauer, F. 1983. Corrigenda et Addenda zum Beitrag zur Faunistik und Ökologie der Elminthidae und Hydraenidae in Ostbayern Coleoptera. *Mitteilungen der Münchner Entomologischen Gesellschaft*, **72**, 1–8. URL: https://www.zobodat.at/pdf/MittMuenchEntGes_072_0001-0008.pdf.
- Hebauer, F. 1985. Populationswellen und Populationsspitzen bei Wasserkäfern. *Nachrichtenblatt der Bayerischen Entomologen*, **34**(1), 25–31. URL: https://www.zobodat.at/pdf/NachBIBayEnt_034_0025-0031.pdf.
- Hebauer, F., Bussler, H., Heckes, U., Hess, M., Hofmann, G., Schmidl, J., Skale, A. 2003. Rote Liste gefährdeter Wasserkäfer (Coleoptera aquatica) Bayerns. In: *Rote Liste gefährdeter Tiere Bayerns. Schriftenreihe LfU*, **166**, 112–116. URL: https://www.lfu.bayern.de/natur/rote_liste_tiere/2003/doc/tiere/coleoptera_aquatica.pdf.
- Przewoźny, M. 2019. *Catalogue of Palearctic Hydrophiloidea (Coleoptera)*. Internet version 2019-01-01. URL: http://waterbeetles.eu/documents/PAL_CAT_Hydrophiloidea_2019.pdf.
- Trávníček, D., Fikáček, M., Boukal, M. 2005. Hydrophiloidea (vodomilové). In: Farkač, J., Král, D., Škorpík, M., eds. *Červený seznam ohrožených druhů České republiky. Bezobratlí. [Red list of threatened species in Czech Republic. Invertebrates]*. Agentura ochrany přírody a krajiny ČR, Praha, 422–424.

Vasyl Karazin Kharkiv National University