BALTIC COASTAL ZONE

Vol. 24 pp. 61–64 2020

ISSN 2083-5485

Original research paper

Received: 7/04/2021
Accepted: 25/05/2021

FIRST RECORD OF THE *GONATOPUS BICOLOR* (HALIDAY, 1828) (HYMENOPTERA: DRYINIDAE: GONATOPODINAE) FROM THE FAUNA OF BELARUS

Artsiom M. Ostrovsky

Department of Public Health and Health Care with the course of the Faculty of Professional Development and Retraining, Gomel State Medical University, 5 Lange St., 246000, Gomel, Belarus
e-mail: arti301989@mail.ru

Abstract

The occurrence of *Gonatopus bicolor* (Haliday, 1828) (Hymenoptera, Dryinidae) a representative of the Gonatopodinae family was firstly recorded in the fauna of Belarus. Brief information on morphology, distribution and ecology of this species are given.

Key words: *Gonatopus bicolor*, new record, fauna, Belarus

INTRODUCTION

Dryinidae are wasps (Hymenoptera) belonging to the suborder Apocrita and the superfamily Chrysidoidea, which includes, besides Dryinidae, seven other families (Brothers and Finnamore 1993). Four of them (Bethylidae, Chrysididae, Embolemidae and Sclerogibbidae) are represented in the European fauna (Olmi 2013).

It has been estimated that there are around 16 000 species in the superfamily Chrysidoidea (Brothers and Finnamore 1993), approximately 1840 of which are Dryinidae (Olmi and Xu 2015). More than half of the described species of Dryinidae belong to three genera – *Anteon* Jurine, 1807, *Dryinus* Latreille, 1804 and *Gonatopus* Ljungh, 1810 (Olmi and Xu 2015, Tribull 2015). Approximately 250 species are currently recognised in the Palaearctic region and 100 in Europe (Macek 2007, Guglielmino et al. 2013).

To date, 12 species of Dryinidae were known in Belarus (Shlyakhtenok and Olmi 2019); one further, newly recorded ones is presented in this paper.

Dryinidae are easily distinguishable from other species of the superfamily by the presence of 10-segmented antennae placed low above the clypeus. The characteristic feature of females in this family (with the exception of the subfamilies Aphelopinae and Erwiniinae) is the "chela", a kind of pincers formed by the modified fifth segment of the protarsus, and an enlarged claw for gripping the potential host or prey (Klejdysz et al. 2018).
Dryinids are not well known insects whose specialize in parasitizing hoppers of the suborders Fulgoromorpha and Cicadomorpha (Hemiptera) (Lelej and Loktionov 2017, Klejdysz et al. 2018). They have potential significance as biological agents for natural control of some insect pests (Klejdysz et al. 2018).

MATERIAL AND METHODS

Gonatopus bicolor was identified by analyzing the materials from field surveys carried out by the author at 2020. This species was collected by hand on grass.

RESULTS

Dryinidae Haliday, 1840
Gonatopodinae Kieffer, 1906
Gonatopus bicolor (Haliday, 1828)

Fig. 1. *Gonatopus bicolor* (Haliday, 1828), female, lateral view

MATERIAL EXAMINED

Belarus: Gomel region, Vetka ditrict, southern edge of the Hal'ch village, 52°32'49.2" N, 31°9'11.7" E, field margin close to forest margin, 04.X 2020, 1 ♀, A.M. Ostrovsky leg. et det. The examined specimen is housed at the author's collection.

DIAGNOSTIC SIGNS

Pronotum, legs largely, middle of mesonotum yellow, reddish-yellow; scutellum, propodeum and abdomen black (Fig. 1). Metanotum, propodeum – except the middle part – rather strongly wrinkled dorsally and laterally. Mesonotum with a tendency for some longitudinal wrinkles. Frons deeply excavated. Pronotum at most on both sides with a faint trace of a short, slight impression. Maxillary palpi with 4 segments, labial palpi with 2. Enlarged claw with (5) lamellae and with a subapical tooth near top. Segment 5 of fore tarsi with two rows of scattered lamellae. Antennal segments thickened to two-third of antennae. Scutellum margined behind.

Remarks. *G. bicolor* is an Eurasian species, occurring from Western Europe to the Far East in Asia (Olmi and Xu 2015, Peeters et al. 2004). It develops on many species of planthoppers of the family Delphacidae (Guglielmino and Olmi 1997, 2006, 2007, Guglielmino et al. 2013).

CONCLUSIONS

The subfamily, genus and species of the Dryinids are formally new to Belarus' fauna: Gonatopodinae Kieffer, 1906, *Gonatopus* Ljungh, 1810, and *Gonatopus bicolor* (Haliday, 1828). The listed species is widespread in the temperate zone of Eurasia.

REFERENCES

Brothers D.J., Finnamore A.T., 1993. Superfamily Vespoidea. In: Goulet H., Huber J.T. Eds. Hymenoptera of the world: an identification guide to families. Research Branch, Agriculture Canada, Ottawa, 161-278.

Guglielmino A., Olmi M., 1997. A host-parasite catalog of world Dryinidae (Hymenoptera: Chrysidoidea). *Contributions on Entomology, International*, 2, 2, 165-298.

Guglielmino A., Olmi M., 2006. A host-parasite catalog of world Dryinidae (Hymenoptera: Chrysidoidea). First supplement. *Zootaxa*, 1139, 39, 35-62.

Guglielmino A., Olmi M., 2007. A host-parasite catalog of world Dryinidae (Hymenoptera: Chrysidoidea). Second supplement. *Bollettino di Zoologia Agraria e di Bachicoltura, Ser. 2*, 39, 2, 121-129.

Guglielmino A., Olmi M., Bückle C., 2013. An updated host-parasite catalogue of world Dryinidae (Hymenoptera: Chrysidoidea). *Zootaxa*, 3740, 1, 1-113.

Klejdysz T., Klukowski Z., Pruszyński G., Kubasik W., 2018. New data and a checklist

of Dryinidae (Hymenoptera) from Poland, and their role in controlling leafhopper and planthopper crop pests (Hemiptera: Cicadomorpha, Fulgoromorpha). *Polish Journal of Entomology*, 87, 41-55. doi: 10.2478/pjen-2018-0003.

Lelej A.S., Loktionov V.M., 2019. Family Dryinidae. In: Eds. A.S. Lelej et al. Annotated catalogue of the Hymenoptera of Russia. Vol. 1. Symphyta and Apocrita: Aculeata. Proceedings of the Zoological Institute RAS, Supplement, 6, 118-121.

Macek J., 2007. Chrysidoidea: Dryinidae (lapkovití) and Embolemidae (vejřenkovití). *Acta Entomologica Musei Nationalis Pragae*. *Supplement*, 65–84.

Olmi M., 2013. Fauna Europaea: Dryinidae. In: Mitroiu M.-D. Europaea version 2.6.2. https://fauna-eu.org [accessed 21.06.2021].

Olmi M., Xu Z. 2015. Dryinidae of the Eastern Palaearctic region (Hymenoptera: Chrysidoidea). *Zootaxa*, 3996, 1, 1-253.

Peeters T.M.J., van Achterberg C., Heitmans W.R.B., Klein W.F., Lefeber V., van Loon A.J., Mab A.A., 2004. Dutch Fauna 6. The aculeate wasps and ants of the Netherlands (Hymenoptera: Aculeata). Nationaal Natuurhistorisch Museum Naturalis Leiden, KNNV Uitgeverij Utrecht & European Invertebrate Survey – Nederland, Leiden.

Shlyakhtenok A.S., Olmi M., 2019. K poznaniyu os-driinid (Hymenoptera, Dryinidae) Belarusi (To the knowledge of Dryinidae wasps (Hymenoptera, Dryinidae) of Belarus). In: A.V. Derunkov et al. Eds. Itogi i perspektivy razvitiya entomologii v Vostochnoy Europe: sbornik statey 3 Mezhdunarodnoy nauchno-prakticheskoy konferentsii (Results and prospects of entomology development in Eastern Europe: collection of articles of the 3 International scientific and practical conference). Minsk, 433-437, (in Russian).

Tribull C., 2015. Phylogenetic relationships among the subfamilies of Dryinidae (Hymenoptera, Chrysidoidea) as reconstructed by molecular sequencing. *Journal of Hymenoptera Research*, 45, 15.

NOWE GATUNEK OSY *GONATOPUS BICOLOR* (HALIDAY, 1828) (HYMENOPTERA: DRYINIDAE: GONATOPODINAE) DLA FAUNY BIAŁORUSI

Streszczenie

W 2020 roku na południowym wschodzie Białorusi złapano samicę bezskrzydłej samotnej osy z rodziny Dryinidae. Gatunek ten nie był wcześniej wskazany dla Białorusi. Ta osa jest pasożytem piewików z podrzędów Fulgoromorpha and Cicadomorpha i może odgrywać ważną rolę w ograniczaniu liczebności szkodników.

Słowa kluczowe: osa samotna, Białoruś, pierwsze wskazanie, *Gonatopus bicolor* (Haliday, 1828)