

**FIRST RECORD OF THE *GONATOPUS LUNATUS* KLUG, 1810
(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 lunatus* Klug, 1810 (Hymenoptera, Dryinidae, Gonatopodinae) was firstly recorded in the fauna of Belarus. Brief information on morphology, distribution and ecology of this species are given.

Key words: *Gonatopus lunatus*, 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 (Bethyidae, Chrysididae, Embolemidae and Sclerogibbidae) are represented in the European fauna (Olmí 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 (Olmí 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 (Olmí and Xu 2015, Tribull 2015). Approximately 250 species are currently recognised in the Palearctic region and 100 in Europe (Macek 2007, Guglielmino et al. 2013).

To date, 13 species of Dryinidae were known in Belarus (Shlyakhtenok and Olmí 2019, Ostrovsky 2020); 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 (Klejdzysz 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, Klejdzysz et al. 2018). They have potential significance as biological agents for natural control of some insect pests (Klejdzysz et al. 2018).

MATERIAL AND METHODS

Gonatopus lunatus was identified by analyzing the materials from field surveys carried out by the author in 2021. This species was collected by “netting” on the grass with an entomological net. Correctness of species identification is confirmed by Massimo Olmi (Tropical Entomology Research Center, Viterbo, Italy).

RESULTS

Dryinidae Haliday, 1840
Gonatopodinae Kieffer, 1906
Gonatopus lunatus Klug, 1810

Material examined

Belarus: Gomel region, Loevsky district, Rudnya Kameneva village, 52°05'48" N, 30°44'54" E, sand dunes, 08.08.2021, 1 ♀, A. M. Ostrovsky leg. et det. The examined specimen is housed at the author's collection.

Diagnostic signs

Body black, greater part of face, occiput, pronotum, middle of tergite 1, legs partly reddish-testaceous; mesonotum, legs (partly) yellow; mandibles, lower side of scape, margins of inner orbits white (Fig. 1). Disc of pronotum with a distinct transverse impression. Mesonotum distinctly longer than broad. Scutellum-metanotum-propodeum stout, broad in front; scutellum and metanotum separable. Metanotum-propodeum rising suddenly from a depression in lateral view, its highest point before middle of its length; ventral side of metanotum-propodeum forming an obtuse angle beyond a short section and extending flatly to origin of leg 2. Enlarged claw without lamellae but with six short bristles, preapical tooth vestigial. Tarsal segment 5 hardly raised but apical part strongly curved with about 12-21 lamellae and 16-23 bristles, apical group

of seven long and several short lamellae and several bristles. Maxillary palpi with four segments, labial with two.

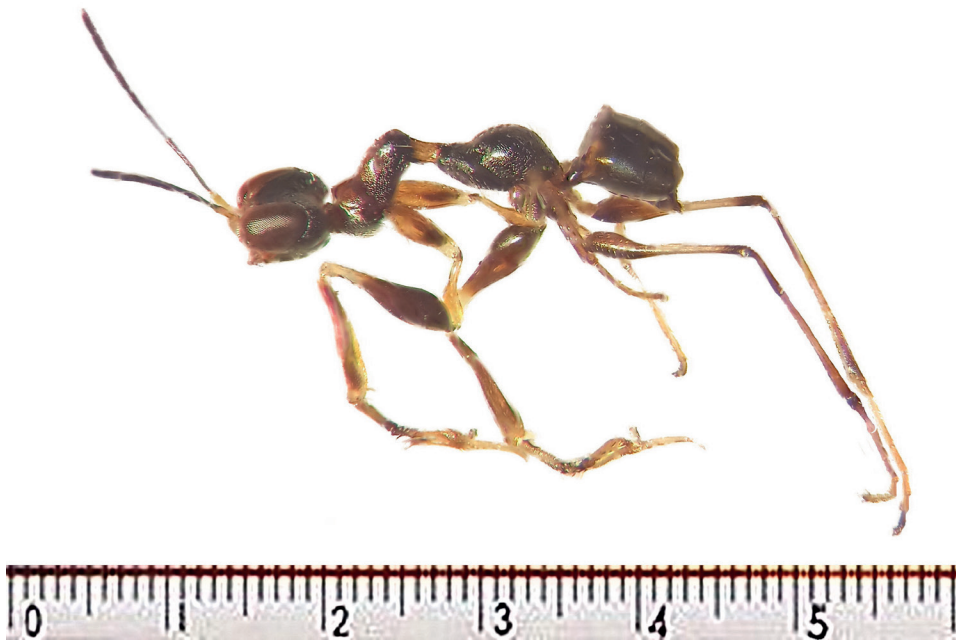


Fig. 1. *Gonatopus lunatus* Klug, 1810, female, lateral view

Remarks

G. lunatus is Eurasian species, occurring from Western Europe to the Korean Peninsula. It develops on species of leafhoppers of the subfamily Deltocephalinae (Lelej and Loktionov 2017).

CONCLUSIONS

Gonatopus lunatus Klug, 1810 is formally new to Belarus' fauna of the Dryinids. The listed species is widespread in the Palaearctic region.

REFERENCES

- Brothers D. J., Finnamore A. T. 1993. Superfamily Vespoidea. In: Hymenoptera of the world: an identification guide to families. (Eds.) H. Goulet, J. T. Huber, Research Branch, Agriculture Canada, Ottawa, 161-278.
- 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). *Pol. J. Entomol.*, 87, 41-55. DOI: 10.2478/pjen-2018-0003.
- Lelej A. S., Loktionov V. M., 2017. Family Dryinidae. In: Annotated catalogue of the Hymenoptera of Russia. Vol. 1: Symphyta and Apocrita: Aculeata. (Eds.) A. S. Lelej et al., *Proceedings of the Zoological Institute RAS*, Supplement 6, 118-121.
- Macek J., 2007. Chrysoidea: Dryinidae (Iapkovití) and Embolemidae (vejřenkovití). *Acta Entomologica Musei Nationalis Pragae*, Supplement 2007, 65-84.
- Olmí M., 2013. Fauna Europaea: Dryinidae. In: M.-D. Mitroiu, *Europaea version 2.6.2. fauna-eu.org*, (access 30.08.2022).
- Olmí M., Xu Z., 2015. Dryinidae of the Eastern Palaearctic region (Hymenoptera: Chrysoidea). *Zootaxa*, 3996 (1), 1-253.
- Ostrovsky A. M., 2020. First record of the *Gonatopus bicolor* (Haliday, 1828) (Hymenoptera: Dryinidae: Gonatopodinae) from the fauna of Belarus. *Balt. Coast. Zone*, 24, 61-64.
- Shlyakhtenok A. S., Olmí M., 2019. To the knowledge of Dryinidae wasps (Hymenoptera, Dryinidae) of Belarus. In: Results and prospects of entomology development in Eastern Europe: collection of articles of the 3rd International scientific and practical conference. (Eds.) A. V. Derunkov et al., AN Varaksin, Minsk, 433-437, (in Russian).
- Tribull C., 2015. Phylogenetic relationships among the subfamilies of Dryinidae (Hymenoptera, Chrysoidea) as reconstructed by molecular sequencing. *J. Hymenoptera Res.*, 45, 15.

NOWY GATUNEK OSY *GONATOPUS LUNATUS* KLUG, 1810
(HYMENOPTERA: DRYINIDAE: GONATOPODINAE)
W FAUNIE BIAŁORUSI

Streszczenie

W roku 2021 na południowym wschodzie Białorusi złapano samicę bezskrzydłej samotnej osy z rodziny Dryinidae. Gatunek ten nie był wcześniej podawany dla Białorusi. Jest on pasożytem piewików z podrzędu Cicadomorpha i może odgrywać ważną rolę w ograniczaniu liczebności szkodników.