

# *Chlamydatius drymophilus* Vinokurov, 1982 (Hemiptera, Miridae), a species new to the Estonian fauna

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The article presents data on the occurrence and distribution of *Chlamydatius drymophilus* Vinokurov, 1982 in Estonia. The species is new for the fauna of Estonia. Worldwide there are only a few records of *C. drymophilus* in Europe and northern part of Asia. However, due to its small size, the occurrence and distribution of the species is most probably under-recorded. The first known record of *C. drymophilus* in Estonia is from 2012, at the drained bog of Laukasoo in the eastern part of the country. The second record was found in 2013, also from a bog habitat at Marimetsa bog, but in western Estonia. It seems that the species is associated with bog habitats and has a scattered distribution over the country.

Key words: Heteroptera, *Chlamydatius drymophilus*, habitat, new records, Estonia.

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## Introduction

The true bugs (Hemiptera-Heteroptera) are quite well studied in Estonia. There are 454 species of true bugs reported from the country (Coulianos 2005). The genus *Chlamydatius* Curtis, 1833 is represented in the fauna of Estonia by 3 species (Coulianos 2005).

In the literature, recordings of the species *Chlamydatius drymophilus* are scarce. Furthermore, there are only a few publications with exactly pointed localities of the species. Vinokurov (1982) declared the first findings in eastern Russia (Yakutia). Kanyukova & Kerzhner (2010) mention that *C. drymophilus* is distributed in the Russian Far East and on the Sakhalin Island. There is also a reference that reports that *C. drymophilus* has been found in Russian Karelia (Rintala & Rinne 2011). More detailed data of the records and distribution of the species comes from

Finland. There the species is probably distributed throughout the territory but despite that considered as a rare species (Rintala & Rinne 2011). However, the actual distribution of *C. drymophilus* is still poorly known and needs further investigations.

Accordingly, the biology of *C. drymophilus* is poorly known. In general, the species has been found in acidic biotopes. For example, in southern part of Finland, *C. drymophilus* occurs in coastal pine forests and dry moors (Hyönteistietokanta 2014). In addition, the species has also been found in thin peat pine mires and xerothermic meadows (T. Rintala pers. comm.). In eastern Russia the species is found in mountain tundra and humid larch forests (Lehr 2001). It has been suggested that the bug may be associated with the plant genera *Empetrum*, *Arctostaphylos*, *Vaccinium*, *Rhododendron* and *Calluna* (Lehr 2001, Rintala & Rinne 2011).

## The records

There are only two known records of *C. drymophilus* in Estonia (Table 1). The first record of the species is from 2012 in eastern part of Estonia, at the drained bog of Laukasoo. Next year the species was found in the western part of the country, at the bog of Marimetsa. At both localities the probable food plants (*Empetrum nigrum*, *Vaccinium uliginosum* and *Rhododendron tomentosum*) are present. However, in the finding site of Laukasoo particular plant association is missing because the specimen was caught by sweep net. At the bog of Marimetsa the species was collected via aspirator from black crowberry (*E. nigrum*). A small number of specimens found suggests that the species is not abundant and may be rare in Estonia.

## Discussion

These two geographically separated recordings of the species arise many questions: is *C. drymophilus* a recent immigrant or a resident species. Considering the fact that the entomofauna of Estonian bogs and mires has been thoroughly investigated about 60 years ago (Maavara 1955, Vilbaste 1955), we may suggest that the species has immigrated to Estonia lately. On the other hand, there is a high probability that due to its small size and possible cryptic way of life, the species has been overlooked. The latter assumption is confirmed by the fact that the species was found in geographically separated areas. Thus, *C. drymophilus* has had enough time to expand its range in Estonia. However, the actual distribution of the species is poorly known and needs further

investigation.

Furthermore, there is always the possibility that some early *C. drymophilus* specimens have been wrongly identified as *Chlamydatius pulicarius* or *Chlamydatius pullus*. Therefore, revisions of these species are needed, especially in northern Europe and Asia. In the case of Estonia, the older material of Heteroptera has been revised by C. Coulianos and there were no records of *C. drymophilus* in earlier years.

According to the information about the records, a suitable habitat type for *C. drymophilus* is bog community. In this biotope the two main requirements for the herbivorous bug are met: warmer microclimatical conditions and existence of primary host plants that usually grow in acidic soil. However, there may be other biotopes where the species occur but due to lack of information we can only suggest that *C. drymophilus* is related with bog community as an optional habitat type in Estonia.

In conclusion, there is very little data about the distribution of the species in Estonia and worldwide, so it is not sufficient to make valid conclusions about the distribution and ecology of this species.

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**Table 1.** Records of *Chlamydatius drymophilus* Vinokurov, 1982 in Estonia.

Date	Locality	Geographical coordinates	No. of individuals	Method	leg./det.
14.VIII.2012	Laukasoo bog, Tartu County	58°25'43"N 26°29'23"E	1 ♂	sweeping	A.Liivamägi/ P.Tarlap
19.VII.2013	Marimetsa bog, Lääne County	58°57'09"N 24°01'51"E	1 ♂	exhausting	P.Tarlap/ P.Tarlap

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