Acta Entomologica Serbica, 2021, 26(1): 25-29

UDC: 595.784.2(497.5)
DOI: 10.5281/zenodo.4551159

DIORYCTRIA ROBINIELLA (MILLIÈRE, 1865) (LEPIDOPTERA: PYRALIDAE) IS A MEMBER OF FAUNA OF CROATIA

TONI KOREN

Association Hyla, Lipovac I 7, HR-10000 Zagreb, Croatia
E-mail: toni.koren@hhdhyla.hr

Abstract

The occurrence of *Dioryctria robiniella* in Croatia is confirmed. The species has a disjunct areal in the Mediterranean area of Europe and it is one of the rarer species of its genus. The presence of this species in Croatia has in the literature been noted before, but has recently been excluded from recent checklists of Pyraloidea of Croatia and the Balkan Peninsula. However, the species indeed occurs in the country and has been recorded at seven localities across the coastal areas, from Pag island in the north down to Konavle area in the south, near the border with Montenegro. Further surveys of other neighbouring countries should reveal additional localities for this species in the Balkan peninsula.

KEY WORDS: Pyraloidea, Mediterranean, distribution

Introduction

Recently, a significant contribution to the Pyraloidea of the Balkan Peninsula has been published (Plant & Jakšić, 2018). In it, 310 Crambidae and 259 Pyralidae have been reported from the Balkan peninsula. However, several species have been categorized as questionable or even excluded from the list. One of such examples is the status of *Dioryctria robiniella* (Millière, 1865), mentioned as *Ocrisia robiniella* (Millière, 1865), in Croatia.

The genus *Dioryctria* belongs to the large and taxonomically unresolved tribe Phycitini. However, it an easily recognizable genus of usually larger Pyralidae specimens. In Europe eight species have been recorded so far (Leraut, 2014) of which seven can be found in the Balkan peninsula (Plant & Jakšić, 2018). While for the correct identification of most species of the genus, the examination of the internal male and female genital structures is necessary, this is not the case with *D. robiniella*. *D. robiniella* is very different from all other European species, and can be easily recognized due to the grey coloring and the distinct black markings.

The markings can sometimes become less visible in worn specimens but in that case, the genitals are distinctive enough (see Knölke, 2007).

The goal of this paper is to confirm the presence of *D. robiniella* in Croatia and present the known distribution of the species in the country.

Materials and Methods

During the last decade, a rich Microlepidoptera material has been collected across Croatia by the author in order to contribute to the moth diversity of the country. Pyraloidea specimens were collected along with other lepidoptera families using pyramidal UV light traps. Usually, five traps were in operation for about 4h after dusk at each locality. The collected specimens were set, identified and stored in the private collection of the author (Koren, Zagreb). For identification of species, Leraut (2014) and the online portal lepiforum (Lepiforum, 2020) were used.

Results and discussion

During this survey, *D. robiniella* has been recorded on seven new localities, all of them located near the shoreline of the Adriatic Sea (Fig. 1). Aside from these, the species has been recorded in the literature only in Senj (Speidel & Asselbergs, 2000; Fig. 1).

Material examined

Pag island, Sveti Petar, north of Košljun, 44.425487° N,15.038836° E, 60 m a.s.l., 11.07.2015, 1 ♀♂., leg. TK; Neretva river Delta, mouth of Neretva river near the small chapel, calcareous hill surrounded by reed channels, 43.024857° N, 17.462471° E, 2 m a.s.l., 06.08.2012, 1 ♀♂, leg. TK; Neretva river delta, wetlands near Pižinovac village, 42.984799° N,17.544394° E,182 m a.s.l., 15.08.2020, 1 ♀♂, leg. TK; Neretva river delta, Klek, Smrdengrad, abandoned village above Klek settlement, 42.950376° N,17.565465° E, 2 m a.s.l., 09.09.2020, 1 ♀♂, leg. TK; Dubrovnik, island Lokrum, Botanical garden, 42.625264° N, 18.121176° E,18 m a.s.l., 17.08.2016, 09.06.2017, 10.07.2017, 10.10.2017, leg. TK, Dubrovnik, island Lokrum, near the small lake named dead sea, 42.623065° N,18.120865° E, 15 m a.s.l., 21.07.2017, 1 ♀♂, leg. TK; Konavle, Vitaljina, north of the village,42.456494° N,18.468841° N,126 m a.s.l., 04.09.2015, 1 ♀♂, leg. TK.

According to Plant & Jakšić (2018), the species is listed in Šašić (2016) for Croatia, but as the list contains several other suspect entries, and accordingly, the species has been excluded from the list of Pyraloidea of the Balkan Peninsula. The mentioned publication, Šašić (2016) is only a technical project report that only lists species recorded within the project, but with any mention of the exact localities, dates or any other accompanying information. Thus, such works do not represent a good citable work, and as such should be avoided prior to the correct publications of containing data. In the recent checklist (Gumhalter, 2019a) and updated checklist (Gumhalter, 2019b) the species is also not mentioned for the fauna of Croatia. In Leraut (2014) the distribution of this species is also marked for the Dalmatia in Croatia, but without any reference to the data on which this is based on. Knölke (2007) includes Croatia within the distribution range of the species, but cites Speidel & Asselbergs, 2000) as a source. In their work, Speidel & Asselbergs (2000) mention the specimen collected in Senj. This is so far the only other published record from Croatia other than the records presented in this work (Fig. 1).

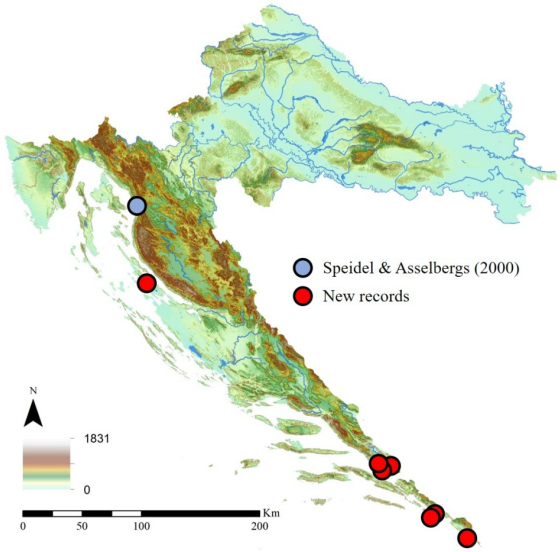

Figure 1. Distribution of *Dioryctria robiniella*in Croatia.

Figure 2. Male specimen of *Dioryctria robiniella* from the island Lokrum nerar Dubrovnik. (photo by Toni Koren).

The caterpillars of *D. robiniella*feed on *Cupressus sempervivens* (Speidel & Asselbergs, 2000). This plant species is in Croatia widely distributed in the wider coastal areas, including several scattered records from the mainland (Nikolić, 2005-2020). Accordingly, all the records of *D. robiniella* fall within the distribution range *C. sempervivens* (Nikolić, 2005-2020). The wider distribution of its larvae host plant may also indicate the wider distribution of the moth in the country, but this should be confirmed by additional surveys. The seven records mentioned in this work significantly expand the known range of the species in the country, and shows that is more widespread than it was previously known. Several localities, especially in the southern Dalmatia are located very near the borders with Bosnia & Herzegovina and Montenegro, indicating the probability that the species will be recorded also in those countries.

References

Gumhalter, D. (2019a). First checklist of pyraloid moths (Lepidoptera: Pyraloidea) in Croatia. *Zootaxa*, *4604*, 59-102.

Gumhalter, D. (2019b). A revised checklist of pyraloid moths (Lepidoptera: Pyraloidea) in Croatia. *Natura Croatica*, *28*, 271-288.

Knölke, S. (2007). A revision of the European representatives of the microlepidopteran genus *Dioryctria* Zeller, 1846. Phd Thesis, Ludwig-Maximilians-University, Munich, Germany, 113 pp.

Lepiforum, E. V. (2020). *Dioryctria robiniella* (Millière, 1865). Lepiforum E.V. [ed.] (2008-2020): Bestimmungshilfe für die in Europa nachgewiesenen Schmetterlingsarten. Retrieved from: http://www.lepiforum.de/lepiwiki.pl?Dioryctria_Robiniella. [Accessed on 03.12.2020].

Leraut, P. (2014). Moths of Europe, Volume 4: Pyralids 2. *NAP Editions, Verrières-le Buisson,* 440pp.

Nikolić T. (2005-2020). Distribution of *Cupressus sempervirens* L. in Croatia, Flora Croatica data base Retrieved from: http://hirc.botanic.hr/fcd. Prirodoslovno-matematički fakultet, Sveučilište u Zagrebu [Accessed on 20.12.2020].

Plant, C. W., & Jakšić, P. (2018). A provisional checklist and bibliography of the Pyraloidea of the Balkan Peninsula (Lepidoptera: Pyralidae & Crambidae). *Atalanta*, *49*, 219-263.

Speidel, W., & Asselbergs J. E. F. (2000). The status of *Ocrisia* Ragonot, 1893, and notes of *Dioryctria* Zeller, 1846 (Lepidoptera: Pyralidae, Phycitinae). *Entomologische Zeitschrift* Stuttgart, *110*(5), 144-146.

Šašić-Kljajo, M. (2016). Završno izvješće za skupinu Lepidoptera: 188-226, maps, figs. In Hatič, D., Mrakovčič, M., & Mesič, Z. (Eds.), Projekt integracije u EU Natura 2000: Terensko istraživanje i laboratorijska analiza novoprikupljenih inventarizacijskih podataka za taksonomske skupine: Actinopterygii i Cephalaspidomorphi, Amphibia i Reptilia, Aves, Chiroptera, Decapoda, Lepidoptera, Odonata, Plecoptera, Trichoptera. [Lepidoptera,188-226].

DIORYCTRIA ROBINIELLA (MILLIÈRE, 1865) (LEPIDOPTERA: PYRALIDAE) ЈЕ ЧЛАН ФАУНЕ ХРВАТСКЕ

ТОНИ КОРЕН

Извод

Потврђена је присутност врсте *Dioryctria robiniella* у Хрватској. Врста има раздвојени ареал на медитеранском подручју Европе и једна је од ређих врста свог рода. Присуство ове врсте у Хрватској било је раније забележено у литератури, али је недавно искључено са чеклиста Pyraloidea Хрватске и Балканскога полуострва. Међутим, врста се заиста појављује у земљи и забележена је на седам локалитета широм приобалних подручја, од острва Паг на северу до подручја Конавала на југу, близу границе са Црном Гором. Даља истраживања других суседних земаља требало би да открију додатне локалитете за ову врсту на подручју Балканског полуострва.

Received: December 21st, 2020
Accepted: January 25th, 2021