

First record of *Parornix atripalpella* WAHLSTRÖM, 1979 (Lepidoptera, Gracillariidae) in Romania

Florin-Mihai POP & László RÁKOSY

Summary: *Parornix atripalpella* WAHLSTRÖM, 1979 has been reported for the first time in Romania. This species is present in 10 European countries, most of them on the western side of the continent.

Key words: Lepidoptera, Gracillariidae, new record, general distribution, Romania.

Introduction

Dating back to the Cretaceous period (FISCHER 2021) the *Gracillariidae* family has a remarkable diversity, comprising over 100 genera and nearly 2000 described species (KAWAHARA *et al.* 2016), distributed on all continents except Antarctica (MOREIRA *et al.* 2013). The larvae of these tiny moths live as leaf and stem miners, with studies additionally documenting instances of bore in flowers and fruits (DAVIS *et al.* 2020). Several genera such as *Caloptilia* or *Parornix* have two distinct endophytic habits; they initially feed as miners for several instars before switching to leaf folders (TOOKER and GIRON 2020). In Romania there are 119 species in the family *Gracillariidae* and 15 species in the genus *Parornix* (RÁKOSY and GOIA 2021). A sixteenth species, *Parornix atripalpella* WAHLSTRÖM, 1979, is reported for the first time from Romania.

Distribution

Described in 1979 from Öland island near Sweden (WAHLSTRÖM, 1979) *P. atripalpella* is also recorded from Bornich, Dörscheid (near Rhine) (Biesenbaum, 2001) and Brandlberg-Keilberg (near Danube) in Germany (HASLBERGER *et al.* 2015), Arbaz in the canton of Valais in Switzerland (https://lepiforum.org/wiki/page/Parornix_atripalpella accessed at 26/11/2023, 2:37 p.m), Dungeness on the coast of Kent, England (HAMMOND 2016), Corsica (VARENNE 2016) and Villard-de-Saint Crépin in France (NEL 2003), Sardinia and Bolzano, South Tyrol, Italy (TRIBERTI 1982), Wiewiórki, Warmian-Masurian Voivodeship, in northern Poland (BIESENBAUM 2001, TRIBERTI 1982), Gemerský Jablonec, Rimavská Sobota District, Slovakia (TOKÁR *et al.* 2021), Dvorichansky National Park, Kharkiv Oblast, Ukraine (KAROLINSKIY *et al.* 2018) and Borcut, Maramureş, in northern Romania (this paper) (Fig.1).

Materials and methods

A male of *P. atripalpella* was collected on 19.06.2020 from Borcut, Maramureş County (389m, N 47.480722, E 23.852944). The specimen was captured using a light trap with 60 UV LEDs powered by a 12V-7Ah maintenance-free battery. The habitat of the species is *Prunus spinosa* shrubs, the only foodplant known for this species (BIESENBAUM 2001). The light trap was positioned close to a belt of shrubs at the border that separates two agricultural parcels (Fig. 2).

P. atripalpella can be identified only by analyzing the genitalia (TRIBERTI 1982). Genitalia were dissected after the male abdomen were boiled in 10% caustic potash. Photographs for adult specimen (Fig. 3) were taken with NexiusZoom EVO 1703-P stereo microscope coupled with Canon EOS 1300D DSLR camera. The genitalia (Fig. 4) were photographed with BTC BIM 105B microscope coupled with Canon EOS 1300D DSLR camera. The moth and the small tube with the genitalia are currently deposited in the collection of Florin-Mihai Pop.

Diagnosis

P. atripalpella male genitalia are similar to *Parornix szocsi* GOZMÁNY, 1952 but can be differentiated by the absence of the horn-shaped projections on the *sacculus* (TRIBERTI 1982). The female genitalia do not provide very clear features for easy identification. BIESENBAUM (2001) improves and provides a better representation of the female genitalia.

Conclusions

Due to the minute size of the species and the low number of researchers in Romania *P. atripalpella* is probably quite a rare native species which has remained undetected until now for the Romanian lepidopteran fauna.

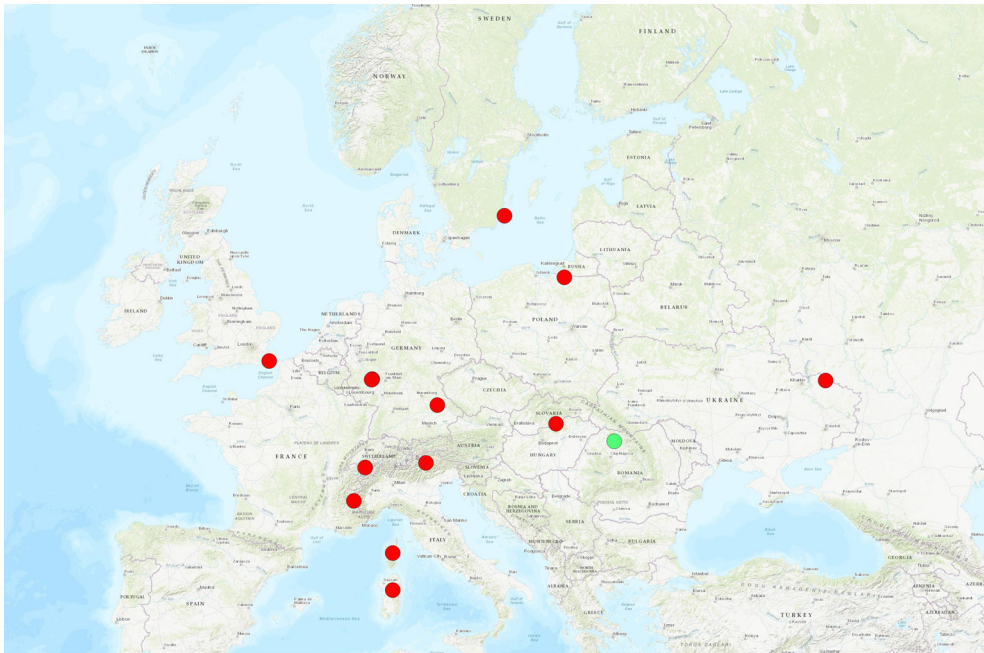


Fig. 1. Distribution map of *Parornix atripalpella* WAHLSTRÖM, 1979 in Europe. Red circles: literature; green circle: current record from Borcut (Maramureş county, Romania).



Fig. 2. The habitat of *Parornix atripalpella* WAHLSTRÖM, 1979 in Borcut, Maramureş County, Romania.



Fig. 3. The first specimen of *Parornix atripalpella* WAHLSTRÖM, 1979 from Romania collected at Borcut (Maramureş) on 19th June 2020 (leg. Florin-Mihai Pop). Scale bar: 2 mm.



Fig. 4. *Parornix atripalpella* WAHLSTRÖM, 1979 ♂ genitalia. Scale bar: 0,10 mm.

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Florin-Mihai POP
Doctoral School in Integrative Biology,
Faculty of Biology and Geology,
Babeş-Bolyai University,
Clinicilor 5-7, Cluj-Napoca, Romania.
E-mail: mihaipopbioeco@gmail.com

László RÁKOSY
Department of Taxonomy and Ecology,
Faculty for Biology and Geology,
Babeş-Bolyai University
Clinicilor 5-7, Cluj-Napoca, Romania;
Forestry Faculty, "Ștefan cel Mare" University,
Universității 13, Suceava, Romania.
E-mail: laszlo.rakosy@ubbcluj.ro

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