



***Lepiseodina rothschildi* (Eaton, 1912) (Diptera: Psychodidae) –
a species of moth fly new to the Polish fauna**

***Lepiseodina rothschildi* (Eaton, 1912) (Diptera: Psychodidae) –
gatunek ćmianki nowy dla fauny polski**

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ABSTRACT: *Lepiseodina rothschildi* (Eaton, 1912) has so far been reported mainly from the western part of Europe and the northern part of Morocco. The authors present the first observation of *L. rothschildi* from Poland.

KEY WORDS: moth flies, first country record, faunistics, Poland, Lower Silesia

INTRODUCTION

Psychodidae are one of the oldest and most primitive families of Diptera. The known oldest fossil record of this family, identified from fossil imprints, is dated to the Lower Jurassic (Ansorge, 1994; Curler, et al. 2019). The family comprises over 3,500 species grouped within six extant subfamilies (Jaume-Schinkel, 2025), with around 500 species recorded in Europe (Wagner, 2013; Jaume-Schinkel, 2025).

Psychodidae are small flies with, hairy bodies, including antennae, wings, and legs. They are weak fliers, and their lanceolate wings often resemble leaves (Winiarska, 2007). When at rest, many species hold their wings horizontally over the abdomen, giving them the appearance of tiny moths. However, some species rest with their wings held along the body (Jaume-Schinkel, 2025).

They inhabit mainly moist environments, often forests, but can also be found in human dwellings, especially bathrooms and toilets. The vast majority of species, in their larval stage, inhabit standing or slow-flowing water. Occasionally, they may also be found in various moist environments, including different types of water bodies within riparian zones, such as streams and waterfalls, where they colonize stones covered with aquatic vegetation. Some species are adapted to heavily organically polluted waters and even animal feces. They feed on organic

matter and play an important role in nitrogen and nutrient cycling in ecosystems (Winiarska, 2007).

In Poland, Psychodidae are among the least studied Diptera families. To date, around 50 species have been recorded (Ježek, 2007; Winiarska, 2007), although this number is likely underestimated. Compared to much better studied Psychodidae fauna of Czechia (Ježek et al., 2021), the actual number of species in Poland may be at least higher.

Lepiseodina rothschildi (Eaton, 1912) has so far been recorded mainly in the southern part of Europe, including Austria, Belgium, Bulgaria, Czechia, Finland, France, Germany, Ireland, Italy, Lithuania, the Netherlands, Slovakia, Spain (including Mallorca), and the United Kingdom (Oboňa et al., 2021; Jaume-Schinkel et al., 2022), as well as in Estonia (Oboňa et al., 2024) and the northern part of Morocco (Saidoun et al., 2025) (Fig. 1).

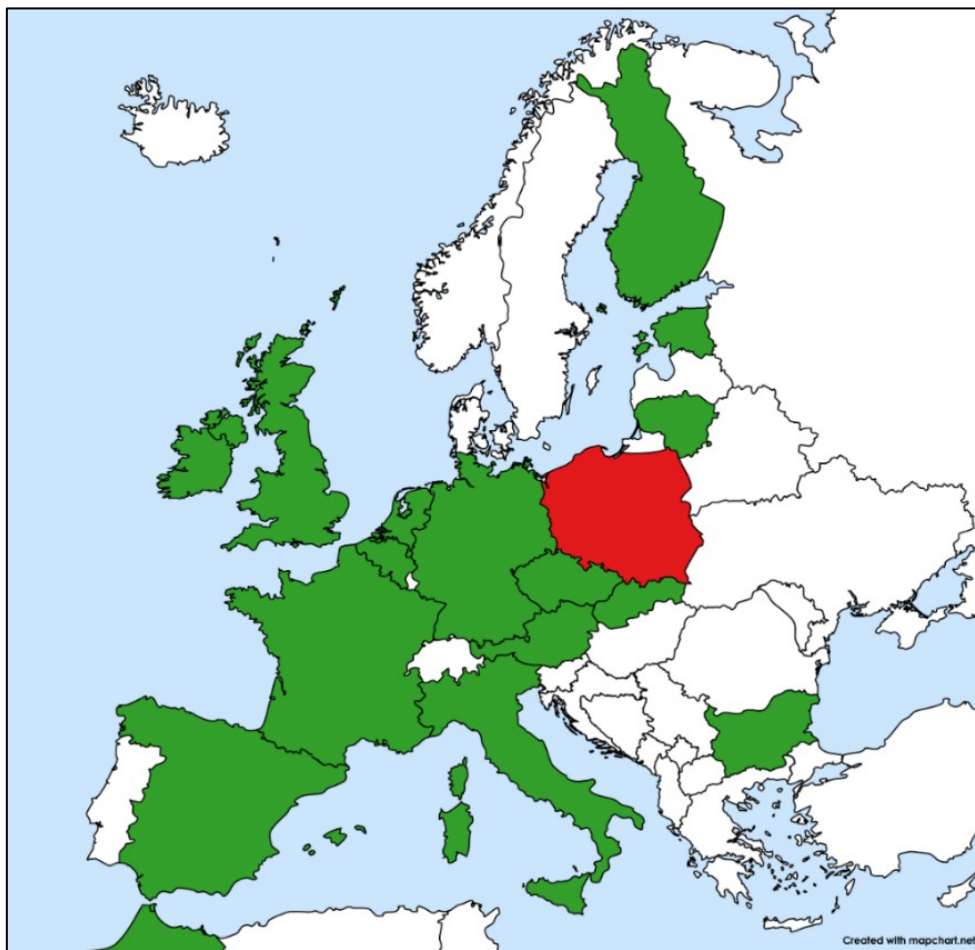


Fig. 1. Distribution of *Lepiseodina rothschildi* in Europe; green – countries where the species has been found; red – new record from Poland (map generated in the online application Mapchart.net).

Adult specimens of *L. rothschildi* are typically observed in dendrotelmata, i.e., water-filled tree cavities (Oboňa et al., 2021; Jaume-Schinkel et al., 2022). Dendrotelmata generally occur in old, living or dead trees and are considered a key component of forest ecosystems (Beran et al., 2010). The preferred habitat of *L. rothschildi* consists of such microhabitats found in beech (*Fagus* spp.), hornbeam (*Carpinus* spp.), and maple (*Acer* spp.) trees (Reinboud, 2025).



Fig. 2. *Lepiseodina rothschildi* (Eaton, 1912) (Photo by G. Lewek).

The head of *L. rothschildi* is covered with light-colored setae, followed by a broad black band across the entire width of the thorax (Fig. 2). The wings are blackish-grey with a whitish sheen. At the ends of the veins, there are bands of white setae that together form a slightly broader stripe than in related species. The distal edge of the wing is dark-colored (Fig. 2) (Eaton, 1912; Ježek, 2004; Reinboud, 2025). Detailed morphological characteristics of *L. rothschildi* were presented by Ježek (2004).

RESULTS

Below is the first confirmed record of *L. rothschildi* from Poland (Fig. 3). The faunistic region name follows the *Catalogue of Polish Fauna* (Burakowski et al., 1986; Tykarski, 2010). The specimen is deposited in the collection of the first author.

New locality record of the species:

Lower Silesia

– Wrocław-Old Town [XS46], Juliusza Słowackiego Park, GPS: 51.110030 N, 17.046292 E (Fig. 4), 1 male specimen (Fig. 2) collected from decaying logs beneath a Norway maple (*Acer platanoides* L.) (Fig. 5), at temperature ~20 °C., 18 April 2025, leg. G. Lewek, det. G. Lewek & M. Kadej, det. ver. Weia Reinboud.

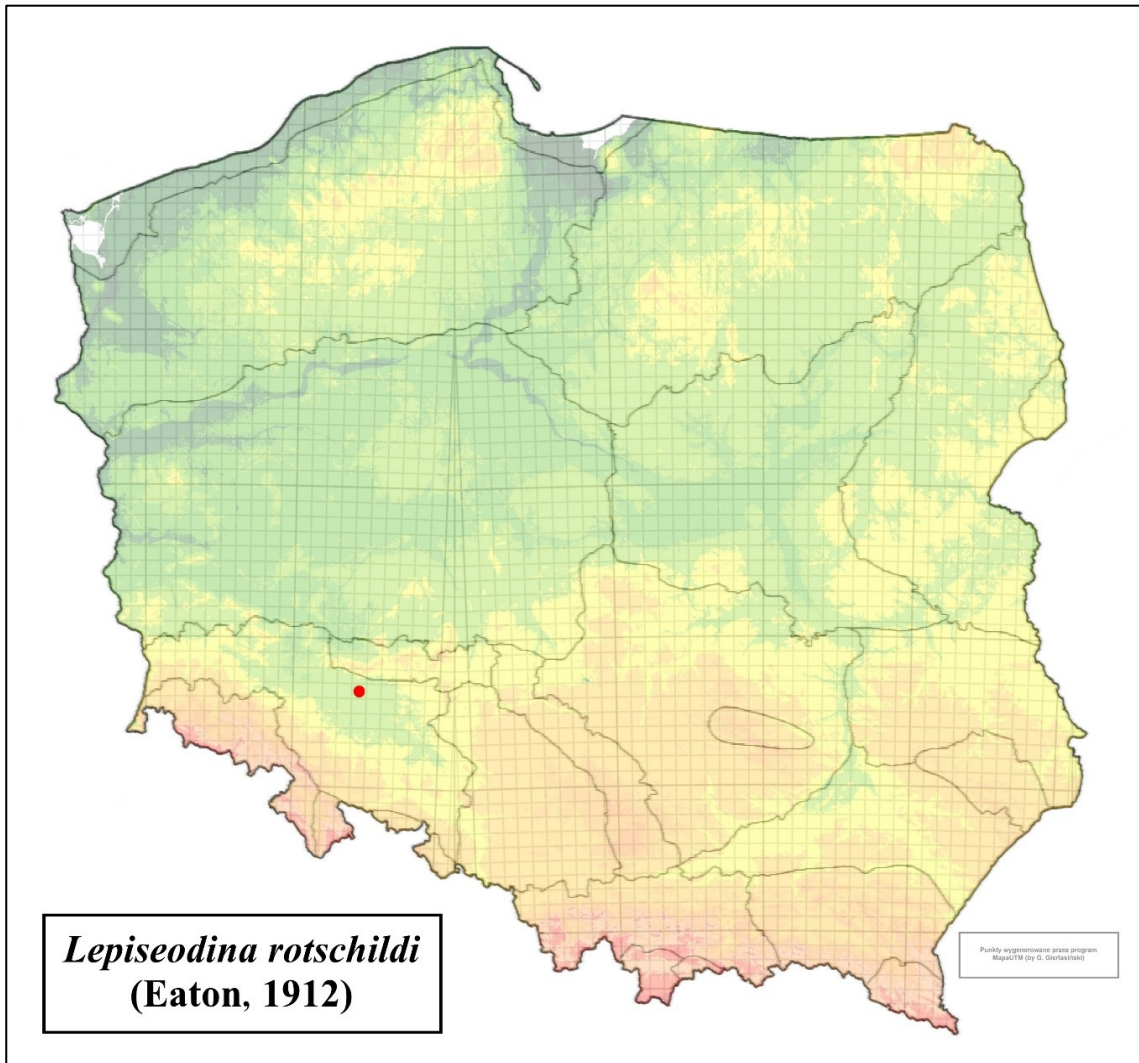


Fig. 3. The first record of *Lepiseodina rothschildi* (Eaton, 1912) in Poland. Map generated using the non-commercial Map UTM software (Gierlasinski, 2025).



Fig. 4. City of Wrocław (part of a map) with a marked red observation point, Map developed using the QGIS software (QGIS Development Team 2025).



Fig. 5. Observation site of *L. rothschildi*, Wrocław-Old Town, Juliusza Słowackiego park (Photo G. Lewek).

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STRESZCZENIE

W pracy przedstawiono pierwsze potwierdzone stwierdzenie muchówki z gatunku *Lepiseodina rothschildi* w Polsce. Gatunek ten, dotychczas znany z zachodniej Europy i północnego Maroka, został odnaleziony we Wrocławiu (Dolny Śląsk) w kwietniu 2025 roku. Okaz został zebrany w Parku Juliusza Słowackiego, na rozkładającym się drewnie pod klonem zwyczajnym (*Acer platanoides*). *L. rothschildi* jest typowo związany z dziuplami drzew liściastych wypełnionymi wodą (dendrotelmatami), zwłaszcza buka, grabu i klonu. Obecność tego gatunku w Polsce poszerza znany zasięg jego występowania i podkreśla znaczenie miejskich terenów zielonych jako potencjalnych siedlisk. Odkrycie to wskazuje również na potrzebę dalszych badań nad słabo poznanymi Psychodidae w Polsce.



<https://pte.up.poznan.pl/pte/dipteron/redakcja.htm>

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