First confirmed record of *Niphonympha dealbatella* (Zeller, 1847) (Lepidoptera: Yponomeutidae) in Portugal: a new genus and species for the national fauna

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Abstract

Niphonympha dealbatella (Zeller, 1847), a moth of the family Yponomeutidae, is confirmed from Portugal for the first time. A single female was collected on 6.vii.2024 at Monte Barata (Castelo Branco) using a light trap, representing the first morphologically verified record in the country and extending the known range to the western Iberian Peninsula. Previously, its presence had only been suggested via DNA metabarcoding. Identification was confirmed by genitalia dissection.
Key words: Lepidoptera, Yponomeutidae, *Niphonympha*, faunistic record, Portugal.

Resumo

Niphonympha dealbatella (Zeller, 1847), uma borboleta da família Yponomeutidae, é confirmada pela primeira vez em Portugal. Um único indivíduo fêmea foi recolhido a 6.vii.2024 em Monte Barata (Castelo Branco) através de armadilha luminosa, representando o primeiro registo morfologicamente verificado no país e expandindo a distribuição conhecida para a Península Ibérica ocidental. Anteriormente, a sua presença apenas havia sido sugerida através de metabarcoding de DNA. A identificação foi confirmada mediante dissecação de genitalia.
Palavras-chave: Lepidoptera, Yponomeutidae, *Niphonympha*, registo faunístico, Portugal.

Introduction

The Iberian Peninsula hosts a high diversity of microlepidoptera, yet the Portuguese fauna remains insufficiently documented. Within this context, the family Yponomeutidae is underrepresented in national faunistic records, with several genera still unrecorded.

Niphonympha dealbatella (Zeller, 1847) is a rarely recorded micro-moth with a patchy distribution across Europe, having been reported from: Germany, Austria, Slovakia, France, Hungary, Italy, Czech Republic, Sicily, Switzerland and Turkey (Vives & Gastón, 2017; Lantz et al., 2021). Adults are small, with a white, silky appearance and forewings that bear faint dark markings. The flight period extends from late June to early August, with peak activity typically in July. The species is nocturnal and attracted to artificial light.

Its biology remains poorly understood, but several authors have suggested that the larvae feed on oaks (*Quercus*) (Vives & Gastón, 2017; Laštůvka et al., 2018; Leraut, 2023). Adults are inconspicuous and rarely collected, likely owing to their cryptic behaviour and weak flight.

Although *N. dealbatella* had previously been recorded in neighbouring Spain, there were no documented records from Portugal until now. This short note reports the first confirmed occurrence of the species and genus in the country.

Material and Methods

On the night of 6.vii.2024, a single female specimen of *Niphonympha dealbatella* was collected at Monte Barata, Castelo Branco, central Portugal (39.701405, -7.315563, 229 m), using a 125W mixed mercury vapour lamp over a white sheet. The specimen was subsequently dissected following standard genitalia preparation techniques. The genitalia were mounted on slide. Gen. Prep. no. 7367-2212 HC (Figure 2).

Discussion

This record represents the first confirmed occurrence of *Niphonympha dealbatella* in Portugal, thereby extending the known range of both the genus and species to the western part of the Iberian Peninsula. While the species was already known from Ávila, Spain (Vives & Gastón, 2017), its presence in Portugal had not yet been morphologically verified. The collected specimen showed slight wing wear, which obscured some of the characteristic black markings, but the typical resting posture of the species provided an additional diagnostic feature supporting the identification. Community-level trophic studies of bats in north-east Portugal had previously observed DNA barcodes of this species in a faecal sample of a common pipistrelle (*Pipistrellus pipistrellus* (Schreber, 1774)) captured at Serra do Reboredo, Torre de Moncorvo (41.18, -7.02, 593 m), on the night of 29.vi.2016 (V. Mata, personal communication), but the record was considered uncertain due to the lack of visual observations of the species in Portugal. This finding highlights the importance of targeted nocturnal surveys using light traps in uncovering and validating the presence of under-recorded groups such as micro-moths.

Acknowledgements

I would like to thank Vanessa Mata (CIBIO/InBIO, University of Porto), and Martin Corley, for sharing unpublished data regarding the detection of *Niphonympha dealbatella* in DNA metabarcoding studies of bat diets in Portugal. Their contributions provided valuable context for the interpretation of this record.

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Fig. 1. *Niphonympha dealbatella* ♀ — dorsal habitus of the specimen collected at Monte Barata.

Fig. 2. Genitalia of *Niphonympha dealbatella*, slide no. 7367-2212 HC.