

**Occurrence of *Grammodes bifasciata* (Petagna, 1786) in Hungary
(Lepidoptera: Erebidae)**

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Abstract – *Grammodes bifasciata* (Petagna, 1786) (Lepidoptera: Erebidae: Catocalinae) is reported for the first time from Hungary.

Key words – immigrant, Mediterranean, new record, agricultural light trap, citizen science, Catocalinae

INTRODUCTION

The family Erebidae (Lepidoptera) is among the most species-rich groups of Macroheterocera in the fauna of Hungary with 135 recorded species, including the one reported in this paper. The last addition to the checklist of this family was presented by SZEŐKE (2021), who collected one specimen of *Zebeeba falsalis* (Herrich-Schäffer, 1839) in the Vértes Mountains. A similarly unexpected extreme occurrence of a Mediterranean moth species was detected by TÓTH (2023) who collected one specimen of *Idaea spissilimbaria* (Mabille, 1888) (Geometridae: Sterrhinae) in western Hungary.

Grammodes bifasciata (Petagna, 1786) (Erebidae: Catocalinae) is a tropical-subtropical species distributed in Africa and the Mediterranean area in Europe (GOATER *et al.* 2003). It tends to exhibit migrant behaviour: individual specimens were observed in Romania, Dobrogea (SZÉKELY 2012), Austria (HUEMER 2013), and the United Kingdom (KIMBER 2024).

The aim of this paper is to present the first records of *Grammodes bifasciata* from Hungary. The voucher specimens are deposited in the Lepidoptera Collection of the Hungarian National Museum Public Collections Centre – Hungarian Natural History Museum (HNHM), Budapest, unless stated otherwise.

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RESULTS

Grammodes bifasciata (Petagna, 1786)
(Figs 1–2)

Material examined – Hungary: one female, Baranya County, Véménd, Kossuth Lajos street, garden, 46.149°N, 18.627°E, at light, 5.IX.2024, leg. Balázs Szabó, id. no. HNHM-LEP-12396 (Fig. 1); one female, Győr-Moson-Sopron County, Győr-Bácsa, 26.IX.2024, agricultural light trap (deposited in the private collection of Béla Havasréti); one female, Békés County, Kaszaper, Dózsa street, garden, 46.45788°N, 20.83484°E, flushed up daytime, 4.X.2024, leg. Csilla Csordás (Fig. 2).

Remarks – First records from Hungary. The species is absent from all Hungarian national checklists and faunistic works, only ABAFI-AIGNER (1907) and GOZMÁNY (1970) mentioned it as unrecorded from Hungary but can be found in Dalmatia. Most likely all the three specimens are immigrants, similarly to those occurred in Austria (HUEMER 2013) and Great Britain (KIMBER 2024). During most of September 2024 the weather was unusually hot and dry in the Carpathian Basin which facilitated the Mediterranean migrant species to reach this area: *Rhodometra sacraria* (Linnaeus, 1767) (Geometridae), *Chrysodeixis chalcites* (Esper, 1789), *Mythimna unipuncta* (Haworth, 1809), and *Leucania loreyi* (Duponchel, 1827) (all Noctuidae) were also detected in this period (unpublished data, voucher specimens are deposited in HNHM).

The first known Hungarian specimen of *Grammodes bifasciata* was collected in a garden in Véménd, Baranya County. This village is situated at the southern foot of Mecsek Mountains, surrounded by plain area and low hills from the south. The specimen came to a white sheet illuminated by two 20 W BL368 compact tubes, at 22:30 on 5 September. It was calm, remained at the same place until its capture one hour later. The specimen is intact. The second specimen came to the light trap operated by the Department of Agriculture, Plant Protection and Soil Conservation of the Government Office of Győr-Moson-Sopron County. The light trap is placed in a suburban area at the northern part of Győr, a town with 130,000 inhabitants. The trap is operated with a 145 W mercury vapour bulb because many streetlights are present nearby (Béla Havasréti, pers. comm). This specimen is worn (no scales on the left side of the mesonotum, apex of left forewing missing, and left hindwing with three incisions). The third specimen was observed in a garden in Kaszaper, Békés County. This village is situated in the Great Hungarian Plain, ca. 20 km north of the Romanian border, surrounded by arable lands. The moth was flushed up from vegetation before noon, it landed soon perhaps due to the cool weather, then it was photographed and retained. This record is available at a popular citizen science webpage**. The specimen is worn (left hindwing with one deep incision).

** <https://www.izeltlabuak.hu/talalat/492382>

Grammodes bifasciata should be inserted to the Hungarian checklist before *Grammodes stolidus* (Fabricius, 1775).

Distribution – The species was described from Calabria, Italy, then recorded from the majority of the Mediterranean countries, the Caucasus as well as from East Africa to the Republic of South Africa. Migrant specimens have occurred also in Romania, Austria, Switzerland and the United Kingdom (RENNWALD & RODELAND 2024).

Bionomy – Adults fly usually from May to September in Europe, the larva is polyphagous, the pupa overwinters (GOATER *et al.* 2003). Observations on the species will likely become more frequent in Hungary due to climate change but, despite the polyphagy of the larva, we do not expect it to become a pest on plants of economic importance.

Identification – *Grammodes bifasciata* can be easily identified. In the European fauna *Grammodes stolidus* is somewhat similar, but on the upperside of the wings the brown band along the costa of the forewing is much broader and lighter in the former species, furthermore the postmedial line of forewing is straight in the former species while it is slightly curved and indented below cell in *Grammodes stolidus*. The light transverse line and especially the sub-tornal patch on the hindwing are greyish and blurred in *Grammodes bifasciata* while they are white and sharp in *Grammodes stolidus*. The ground colour on the underside of the wings is brownish grey in *Grammodes bifasciata*, with somewhat lighter, blurred transverse lines and fields, while the ground colour is black and the transverse lines are white and clear in *Grammodes stolidus*.



Figs 1–2. *Grammodes bifasciata* (Petagna, 1786) specimens from Hungary, 1 = female, mounted specimen from Véménd, scale bar = 10 mm, 2 = female, live specimen from Kaszaper (photos by Balázs Tóth (Fig. 1) and Csilla Csordás (Fig. 2))

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