

**Tracking disappeared species VI. Occurrence of *Psychoides verhuella*
Bruand, 1850 and *Aphomia foedella* (Zeller, 1839) in Hungary
(Lepidoptera: Tineidae, Pyralidae)**

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Abstract – Following a 65-year hiatus in observations, four new localities of *Psychoides verhuella* Bruand, 1850 (Lepidoptera: Tineidae) are presented, with various observations on its bionomics. A new Hungarian locality of the rare *Aphomia foedella* (Zeller, 1839) (Lepidoptera: Pyralidae) is reported.

Key words – Microlepidoptera, moths, faunistics, Palaearctic Region, new records, host plant, *Asplenium*

INTRODUCTION

Psychoides verhuella Bruand, 1850 (Lepidoptera: Tineidae: Teichobiinae) was first recorded from Hungary by GOZMÁNY & SZŐCS (1965), as follows (translated from Hungarian): “So far it has been collected only in Central Europe; recorded in Hungary in the Dunazug Mountains (Két-bükkfa-nyereg). Flight time: VI., VII. The young larva mines, then feeds on lichens in its tubular case made from sand grains and spore granules”. SZŐCS (1977) misidentified the species as “*Teichobia verhuelella* Stt.”, noted that it feeds on *Asplenium*, *Ceterach* and *Phyllitis* spp. (Aspleniaceae), and described its mine as a white or brownish patch mine with few scattered excrement grains visible on both leaf sides. The larva overwinters in its mine and prepares a case from web full of spores in spring.

Aphomia foedella (Zeller, 1839) (Lepidoptera: Pyralidae: Galleriinae) is a rare species associated with xerothermic open habitats and meadows. It is considered extremely scarce in the region; to date, only five specimens have been reported from Hungary. The species is also of considerable ecological interest: while its larval biology is unknown, closely related species are known to be nest

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parasites of aculeate Hymenoptera. This paper presents four new localities for *Psychoides verhuella* and one new locality for *Aphomia foedella*. Specimens are deposited in the private collections of Csaba Szabóky (PCCsSz) and Attila Takács (PCAT). Specimens were photographed using Canon 450 D and Pentax cameras, applied to a Carl Zeiss Stemi-2000 binocular stereomicroscope. The habitat was photographed using a Samsung S22 cell phone.

RESULTS

Psychoides verhuella Bruand, 1850 (Figs 1–8)

Material examined – The collection of the Hungarian National Museum Public Collection Centre – Hungarian Natural History Museum, Budapest (HNHM) harbours 30 voucher specimens of *Psychoides verhuella* from Hungary: Komárom-Esztergom County, Dunazug Mountains, Két-bükkfa-nyereg, 3.V.1959 (1 specimen); same but 22.V.1960 (3 specimens); same but 27.IV.1959 (2 specimens); same but 21.V.1960 (3 specimens); same but 23.V.1960 (2 specimens); same but 24.V.1960 (2 specimens); same but 25.V.1960 (5 specimens); same but 27.V.1960 (1 specimen); same but 28.V.1960 (3 specimens); same but 30.V.1960 (1 specimen); same but 31.V.1960 (1 specimen); same but 2.VI.1960 (1 specimen); same but 4.VI.1960 (2 specimens); same but 7.VI.1960 (1 specimen); same but 8.VI.1960 (1 specimen); same but 10.VI.1960 (1 specimen), all adults were reared from larvae collected by J. Szőcs.

The present study reports the species from the following further localities in Hungary: Veszprém County, Veszprém, Ostrom lépcső, 18.IV.2025 (five larvae, from which three adults emerged on 2.VI.2025), leg. A. Takács, (2 specimens PCCsSz, 1 specimen PCAT); Veszprém County, Zirc, Köztársaság út, outer surface of the stone wall of the botanical garden, 19.IV.2025 (two larvae, from which two adults emerged on 2.VI.2025) (2 specimens PCCsSz); Heves County, Szilvásvárad, on the stone wall of Szalajka spring (Fig. 3), 3.V.2025 (three larvae, from which one adult emerged on 6.VI.2025), leg. A. Takács (PCAT); Borsod-Abaúj-Zemplén County, Ómassa, right side of Garadna valley, 22.X.2025 (ten larvae), leg. Cs. Szabóky.

Distribution – *Psychoides verhuella* has been recorded in Austria, Belgium, Czech Republic, France (without Corsica), Germany, Hungary, Ireland, Netherlands, North Macedonia, Norway (mainland), Poland, Romania, Slovakia, Slovenia, Spain (mainland), Sweden, Switzerland, and the United Kingdom (including Northern Ireland) (KARSHOLT & RAZOWSKI 1996, RENNWALD & RODELAND 2023).



Figs 1–3. *Psychoides verhuella* Bruand, 1850, 1 = female from Szilvásvárad, scale bar = 2.5 mm, 2 = larval case, scale bar = 1.5 mm, 3 = locality at Szilvásvárad (photos by Csaba Szabóky (Fig. 1) and Attila Takács (Figs 2–3))



Figs 4–8. *Psychoides verhuella* Bruand, 1850, mines and larvae observed at Ómassa, 4 = leaf mines, scale bar = 5 cm, 5 = close-up of a leaf mine, scale bar = 1.5 mm, 6 = spores for case construction, scale bar = 1.5 mm, 7 = L4 larva, scale bar = 1.5 mm, 8 = habitat with *Asplenium scolopendrium* (photos by Csaba Szabóky)

Bionomy – Flight time: June to July. Adults reported by SZÖCS (1977) emerged from April to early June according to label data of the voucher specimens. Host plants include *Asplenium ceterach* (L.), *Asplenium ruta-muraria* (L.), *Asplenium scolopendrium* (L.), *Asplenium trichomanes* (L.), *Pteridium aquilinum* (L.) Kuhn (Dennstaedtiaceae), and *Polystichum* sp. (Dryopteridaceae) (GOZMÁNY 1963, GOZMÁNY & SZÖCS 1965, LAŠTUVKA *et. al* 2018, RENNWALD & RODELAND 2023). Larvae live on plants growing on northern, shady sides of rocks or stone walls (Fig. 3), in mines from autumn to May, including overwintering.

We found larvae on *Asplenium ruta-muraria* and *Asplenium scolopendrium* (L.) (Aspleniaceae) (Fig. 8). Note that the genera *Ceterach* and *Phyllitis* are now synonyms of *Asplenium* according to recent literature (BARTHA *et al.* 2015). *Asplenium scolopendrium* has a large population at Ómassa, where we were able to observe the behaviour of the larvae: they prepare patch mines with few excrement grains visible on both leaf sides from autumn to May (Figs 4–5). Each larva prepares a case from web full of spores in spring (Fig. 2), then mines from this case, thus spring mines do not contain excrement (SZÖCS 1977). The mine is marked by a brownish patch on the leaf (Fig. 6). We observed that larvae (Fig. 7) may prepare spore-covered cases even in autumn.

Remarks – The previously proposed Hungarian vernacular name (“zuzmóevő moly”) (BUSCHMANN & PASTORÁLIS 2024) is, in our opinion, misleading, as the species does not feed on lichens. A new Hungarian name, “páfrányaknázómoly”, is therefore proposed.

Identification – Wingspan 8–10 mm (Fig. 1). Head vestiture adpressed and directed anteriorly; antennal segments rectangular; maxillary palps and proboscis absent; labial palps porrect, second segment of labial palps with a few erect bristles distally, apical segment slender and pointed. Wings elongated, ovate-lanceolate; forewing dark brown with a faint violet-red sheen, lacking any markings; cilia concolorous with the wing; hindwing greyish yellow with dark grey cilia (GOZMÁNY & SZÖCS 1965).

Aphomia foedella (Zeller, 1839)
(Figs 9–10)

Material examined – The HNHM harbours three voucher specimens from Hungary: Pest County, Budaörs, 12.VII.1958, leg. I. Balogh; Somogy County, Kaposvár, 23.VII.1951, leg. M. Nattán; Tolna County, Tolnai-dombság, Bátaapáti, 320m, N46°12.025' E18°36.422', 23.VII.2003, leg. B. Benedek, A. Kun & L. Ronkay. PASTORÁLIS & SZEŐKE (2018) reported the species from Fejér County (Vértes mts., Gánt, Gránás, 8.VIII.2015, leg. K. Szeőke; Csákvár, Zöld hill, 18.VII.2017, leg. K. Szeőke); these specimens were not studied by us. Here we report a further occurrence in Hungary: Győr-Moson-Sopron County,

Pannonhalma, Csejder valley, 19.VI.2025, leg. Cs. Szabóky, during the Hungarian Entomological Society's annual excursion; one specimen was attracted to a 125 W HgLi bulb, deposited in the PCCsSz.

Distribution – A rare species in Europe (ŠLÁMKA 2022); it has been reported from Croatia, Czech Republic, Estonia, Hungary, Italy, Romania, Russia (between the Manyh Depression and the main ridge of the Caucasus Mountains), Serbia, Slovakia, and the Ukraine (KARSHOLT & RAZOWSKI 1996, GUMHALTER *et al.* 2023).

Bionomy – Flight time: June to September. The life history is unknown.

Identification – Wingspan 24–32 mm (male), 36–40 mm (female) (Figs 9–10). Both inner and outer transverse bands on forewing forming very broad fasciae, veins lacking black dots; pattern indistinct blackish-grey, only transverse bands whitish, with diffuse margins; discal cell usually enclosing a single dark dot, if two, then being very minute and never forming an eyespot. Hindwing dark grey.

9



10



Figs 9–10. *Aphomia foedella* (Zeller, 1839), 9 = mounted female, scale bar = 10 mm, 10 = adult in resting posture (photos by Csaba Szabóky)

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