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New microlepidopterans in the fauna of Hungary (Lepidoptera: Meessiidae, Epermeniidae)

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Abstract – The first records of *Eudarcia kasyi* (Petersen, 1971) (Lepidoptera: Meessiidae) and *Phaulernis dentella* (Zeller, 1839) (Lepidoptera: Epermeniidae) from Hungary are presented. Adult habitus and the genitalia are illustrated.

Key words – moths, faunistics, distribution, Palaearctic Region, Apiaceae

INTRODUCTION

In the present decade, many species of moths (Lepidoptera) have been recorded in Hungary as new to its fauna (Szabóky 2023, Takács & Kőszegi 2024, Tóth *et al*. 2024, Buschmann & Pastorális 2025). The number of the known species is continuously increasing: in the present paper, two further species are presented from Hungary, namely *Eudarcia kasyi* (Petersen, 1971) (Meessiidae) and *Phaulernis dentella* (Zeller, 1839) (Epermeniidae).

Only one species of the genus *Eudarcia* Clemens, 1880, and no species from *Phaulernis* Meyrick, 1895, have been known in Hungary prior to this study (Pastorális & Buschmann 2018). *Eudarcia kasyi* was described originally in the genus *Obesoceras* Petersen, 1967 (Petersen 1971) based on specimens collected in Albania, Greece, and North Macedonia. *Phaulernis dentella* was described by Zeller (1839), who published only limited information on this species. Later on, Schütze (1931) and Budashkin & Gaedike (2005) complemented our knowledge with distributional and host plant data.

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Altogether twelve specimens of *Phaulernis dentella* (none of them from Hungary) and no specimens of *Eudarcia kasyi* have been found in the Palaearctic part of the Lepidoptera Collection of the Hungarian National Museum Public Collection Centre – Hungarian Museum of Natural History, Budapest (HNHM) (Gergely Katona, personal communication).

All voucher specimens are deposited in the HNHM. Images of adults were taken with a Canon 450 D camera set on a Carl Zeiss Stemi-2000 binocular stereomicroscope.

RESULTS

Meessiidae

Eudarcia kasyi (Petersen, 1971)
(Figs 1–2)

Material examined – Hungary: two males, Heves County, Nagytálya, 47°48'50.4"N 20°24'10.7"E, 8 W fluorescent lamp, 5.VIII.2024, leg. Sz. Gulyás.

Remarks – First record from Hungary. Specimens examined in course of this study were identified by Ignác Richter based on the male genitalia (Fig. 2). Proposed Hungarian name: "nagytályai zuzmómoly", in allusion to its closest relative and the collection site.

Distribution – In Europe, the species has been reported from the following countries: Albania, Belgium, Bulgaria, Czech Republic, Greece (mainland and several islands), Hungary (present paper), the Netherlands, North Macedonia, and Slovakia (Gaedike 2015, Tokár *et al.* 2015, Muus *et al.* 2019, Rennwald & Rodeland 2023*a*).

Bionomy – Unknown. Adults were found from May to mid-July in the Balkans; highest known altitude is 2100 m, in the Olympos Mountains (Petersen 1971). In the railway station of Galanta, Slovakia, adults were flying "in large numbers between the tracks" (Tokár *et al.* 2015). The specimens from Hungary were attracted to an 8 W fluorescent lamp installed in the first author's garden.

Identification – A reliable identification of this species is not possible based on external characters only but it requires examination of the male genitalia. Wingspan is 8–10 mm. The vertex is provided with a medially yellowish white, laterally dark brown scale tuft. Base of the antenna is brown, its tip is off-white, labial palps are also off-white. Ground colour of forewing is creamy white with variable greyish brown patterns, including three short streaks at costa before apex.

Figs 1–2. Voucher specimens of *Eudarcia kasyi* (Petersen, 1971) from Hungary, 1 = adult male, scale bar = 2 mm, 2 = male genitalia, scale bar = 0.2 mm (photos by Attila Takács (Fig 1) and Ignác Richter (Fig 2))

Epermeniidae

Phaulernis dentella (Zeller, 1839) (Figs 3–5)

Material examined – Hungary: one male, one female, Heves County, Noszvaj, Attila-kút, 47°57'08.6"N 20°27'23.7"E, 25.V.2024, leg. Sz. Gulyás & G. Tamási.

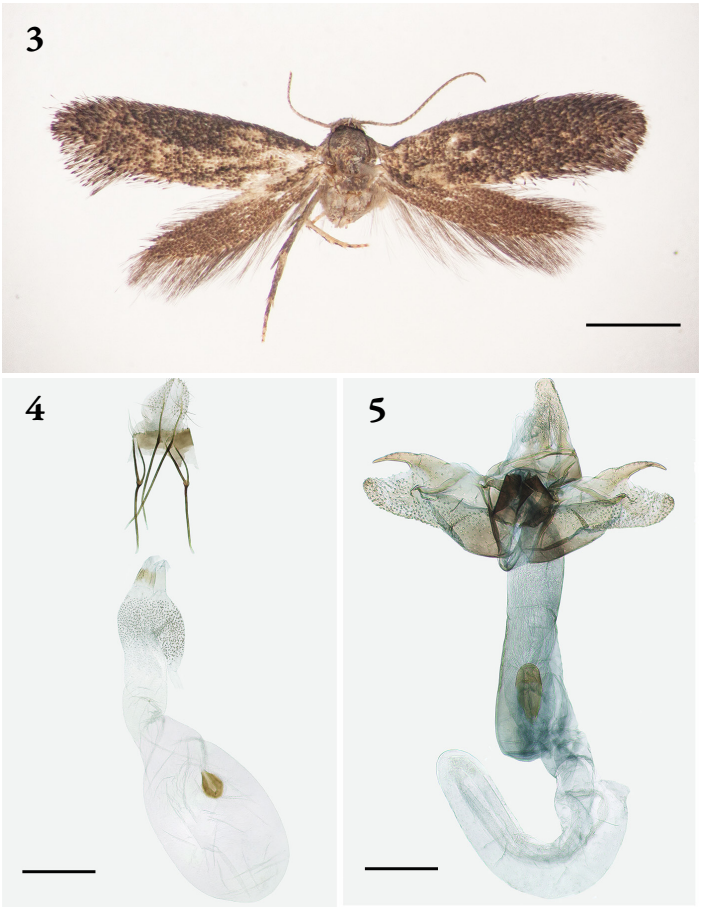
Remarks – First record of the genus and the species from Hungary. Specimens examined in course of this study were identified by Ignác Richter based on male and female genitalia (Figs 4–5). The following, additional four species of the genus have been reported from Europe: *Phaulernis statariella* (Heyden, 1863), *Phaulernis fulviguttella* (Zeller, 1839), *Phaulernis rebeliella* Gaedike, 1966, and *Phaulernis laserinella* Nel, 2003 (Rennwald & Rodeland 2023*b*). Proposed Hungarian name: "baraboly-íveltmoly".

Distribution – The species has been reported from Albania, Austria, Belgium, Crimea, Croatia, Czech Republic, Denmark (except the Faroe Islands and Greenland), Germany, Estonia, Finland (except the Åland Islands), France (European territory excluding Corsica), Great Britain (England, Scotland, Wales, excluding Northern Ireland), Italy (mainland and small islands near the mainland), Hungary (present paper), Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Romania, Russia (European part, between the Manych lowlands and Kaliningrad Oblast), Slovakia, Sweden, and Switzerland (Budashkin 1996, Rennwald & Rodeland 2023*b*).

Bionomy – The following remarks on bionomics, accompanying the original description of *Phaulernis dentella*, were provided by Zeller (1839) (here translated from German): "I have collected 24 specimens at sunset, on the flowers of *Chaerophyllum bulbosum* (L.), there was also a pair in copula". However, he did not provide much information on adult morphology. Adults can be found in the

inflorescences of Apiaceae, sometimes in high numbers, eggs are also deposited there (Rennwald & Rodeland 2023*b*). Schütze (1931) found larvae on *Aegopodium* sp. (Apiaceae) in August. Pupae overwinter among the seeds in the umbel. Budashkin & Gaedike (2005) reported *Chaerophyllum bulbosum* L., *Chaerophyllum temulum* L., *Aegopodium podagraria* L., and *Angelica sylvestris* L. (all Apiaceae) as host plants. The first author observed the adults feeding on the host plant between 11:50 and 14:50.

Identification – Wingspan is 8–9 mm. Forewing is greyish brown, with some scales rising up from wing plain, and with whitish scales dorsally; former scales became flattened to wing plain during setting of the specimen.



Figs 3–5. Voucher specimens of *Phaulernis dentella* (Zeller, 1839) from Hungary, 3 = adult male, scale bar = 2 mm, 4 = female genitalia, scale bar = 0.2 mm, 5 = male genitalia, scale bar = 0.2 mm (photos by Attila Takács (Fig. 3) and Ignác Richter (Figs 4–5)

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