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Capperia fusca (Hofmann, 1898) is a new species in Hungary (Lepidoptera: Pterophoridae)

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FAZEKAS, I: *Capperia fusca (Hofmann, 1898) is a new species in Hungary (Lepidoptera: Pterophoridae).*
Abstract: The author announces the presence of *Capperia fusca* (Hofmann, 1898) in Hungary, the first record of the taxon in the Pannonian biogeographical Region. He describes the habitat and gives a photograph of the species, drawing of the genitalia and distribution map. With 5 figures.

Keywords: Lepidoptera, Pterophoridae, Hungary, Cappersia fusca, new records, biology

Introduction

So far, twenty-one species of *Capperia* have been described, of which sixteen occur in the Palaearctic Region. Eleven of these have been found in Europe, of which *Capperia celeusi* (Schmid, 1887) and *C. trichodactyla* (Denis & Schiffermüller, 1775) have been proved to occur in Hungary.

The true distribution of *C. britanniodactyla* (Gregson, 1869) is very imperfectly known. Data given in the literature is often vague and voucher specimens are lacking. Information on the distribution of *C. celeusi* and the *C. trichodactyla* in Hungary has been summarised in a previous contribution (FAZEKAS 2003b).

In this study, another species of *Capperia* is reported for the first time in Hungary. *C. fusca* (Hofmann, 1898) has been known for a long time in the surrounding countries but is everywhere rare and local. Its discovery in Hungary was expected, but until now only a single specimen has been reported, from the Mecsek mountains (S Hungary).

Capperia fusca (Hofmann, 1898) (Fig. 1.)

Oxyptilus leonuri var. *fusca* Hofmann, 1898, Ill. Z. Ent. 3: 339, 340. Locus typicus: French, Seine Maritime.
Synonym: *Capperia fusca* f. *marrubii* Adamczewski, 1951, Bull. Br. Mus. nat. Hist. (Ent.) 1 (5): 365-368. Taf. 19. Fig. 55.
References: ADAMCZEWSKI (1951), ARENBERGER (2002), FAZEKAS (1992, 1996, 2003ab, 2007), GIELIS (1996, 2003).

Diagnosis: *Capperia fusca* is superficially very similar to *C. trichodactyla*, but smaller. Wingspan 12.5-15.5 mm. Colour dark chocolate brown, with a reddish tinge. The white transverse markings reduced, almost absent. In *C. trichodactyla*, wingspan is 14.5-20.5 mm. Colour dark brown, with a green-brown gloss. The scale-tooth at the tip of the third lobe of the hindwing rounded. There is a considerable difference in the design of the abdomen between the two species.

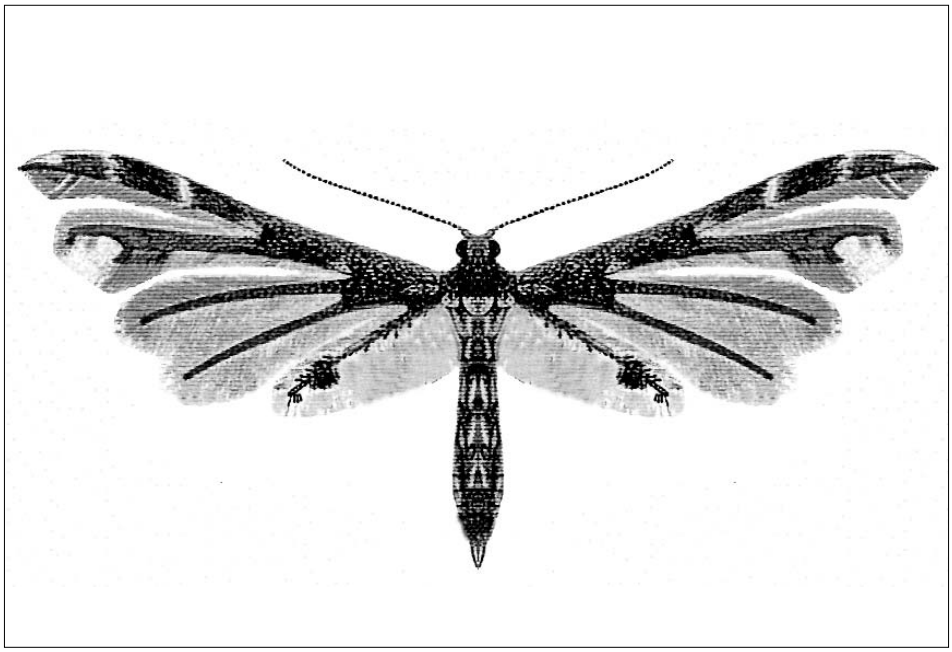

Fig. 1. Adult of *Capperia fusca* (Hofmann, 1898): with a pencil drawing

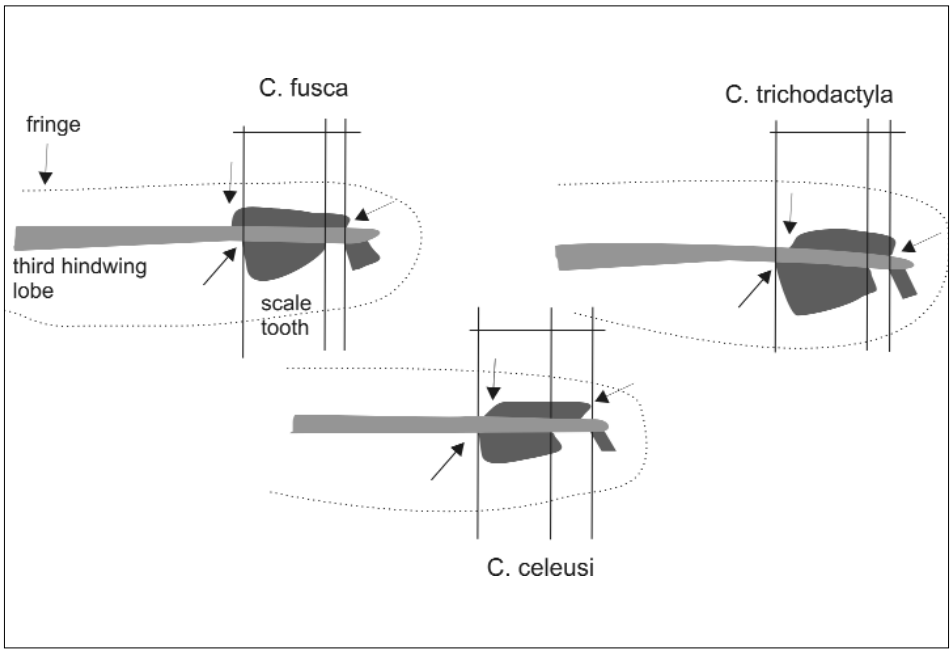

Fig. 2. Third hindwing lobe of *Capperia* species. Average wing pattern differences between (sketchy)

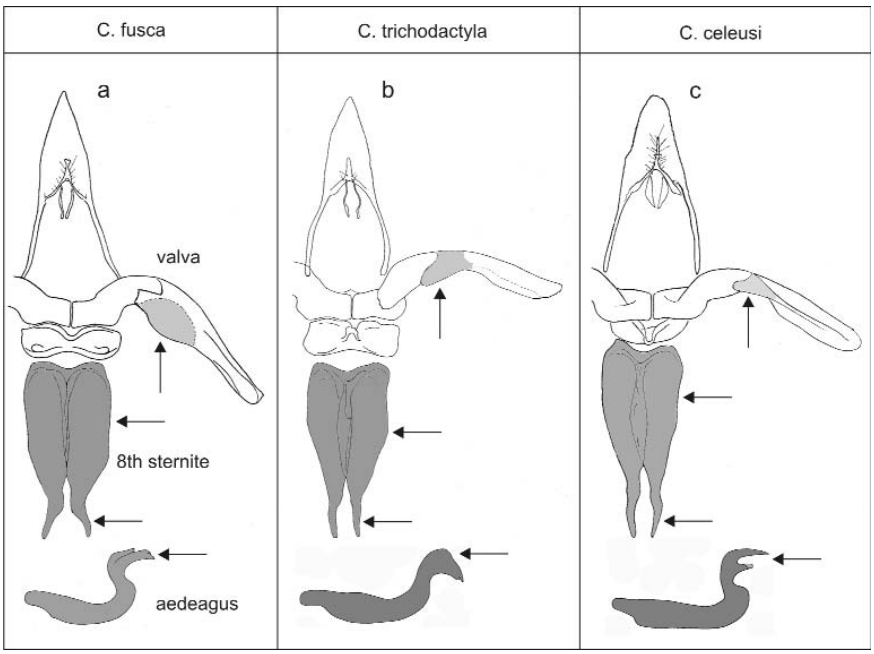

Fig. 3. Male genitalia of *Capperia* species: a) *C. fusca*, b) *C. trichodactyla*, c) *C. celeusi*

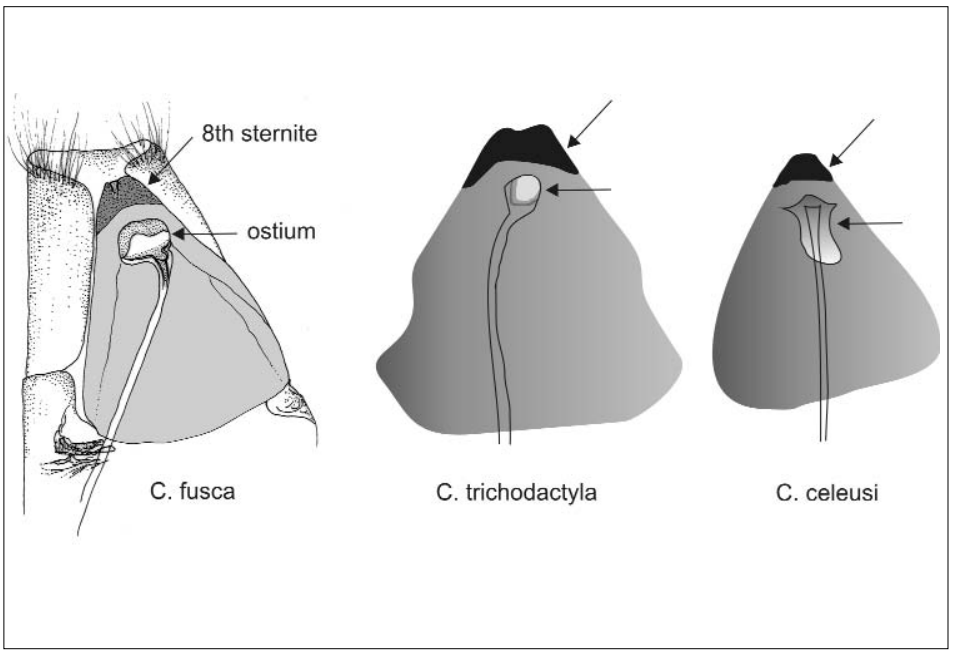

Fig. 4. Female genitalia of *Capperia* species (from left one right): *C. fusca* (Komló, prep. Fazekas, No. 3174), *C. trichodactyla*, *C. celeusi* (original: sketchy)

Similar species: *C. trichodactyla* and *C. jozana* (Matsumura, 1931). *C. jozana* is larger than *C. fusca*, and the ground colour of the wings is clear brown. At present, known only from Japan.

Genitalia: Hungarian species of *Capperia* can be safely identified on genitalia characters. In males of *C. fusca* the valvae at middle conically widened. Aedeagus strongly S-shaped, the apex weakly bilobed. Regarding the female, depiction of genitalia differs (ARENBERGER 2002, GIELIS 1996). The best figures and descriptions are given by ADAMCZEWSKI (1951). Features of the ostium and shape of the 8th sternite are important. In general, the female genitalia are rather similar to those of *C. trichodactyla* but distinct. The end of the eighth sternite of *C. fusca* is more slender and not so large as in *C. trichodactyla*. The plate covering the ostium bursae is flat, round, with the ostium opening symmetrically at the base of the plate, while in *C. trichodactyla* the plate is formed like a ring assymmetrically placed on one side of the ostium.

Table 1. Important diagnostic characters of species of *Capperia*

Characters	***celeusi***	***trichodactyla***	***fusca***
wingspan (mm)	15.5–20,5	14.5–20.5	11.5–15.5
colour	from dark brown, to yellow-brown and grey-brown	dark brown, with a green-brown gloss	dark chocolate brown, with a reddish tinge
hindwing (scale tooth)	the top and lower scale a row begins on identical place	short, round form, thick scales	the scales are at a standstill rarely, the upper row has beginning near to the stem of the wing.
valva	nearly parallel, apex provided	the edges are parallel mostly, big triangular process	at middle conically widened
aedeagus	strongly curved in an S-shape, with processes near the tip	weakly S-curved, the apex thickened	strongly S-shaped, the apex weakly expanded
8th sternite	the base relatively narrow, the two long spurs.	the base wide, the two spurs short.	in the middle convex, the two spurs curved outwards
ostium	asymmetrical U-shaped	tiny and round.	with an oval shape
ductus bursae	centrally ending in the open part of the U	ending on the left lateral just before side of the sclerotised ridge	long, arched
lamina antevaginalis	central plate trapezoidal	with trapezoid central plate, distinctly wider basally	central plate more nearly rectangular
larval foodplants	Teucrium chamaedrys (monophagus)	Leonurus cardiaca (monophagus)	Stachys alpina, S. cassia, Marrubium vulgare (oligophagus)
phenology	III–VIII. (double-brooded)	V–VIII. (single-brooded)	V–IX. (single-brooded)
habitat	dry and semi-dry closed grasslands, open dry deciduous woodlands	lowland dry degraded grasslands, colline and montane dry degraded grasslands	beech and oak-hornbeam woodlands, semi-natural, often secondary woodland-grassland mosaics

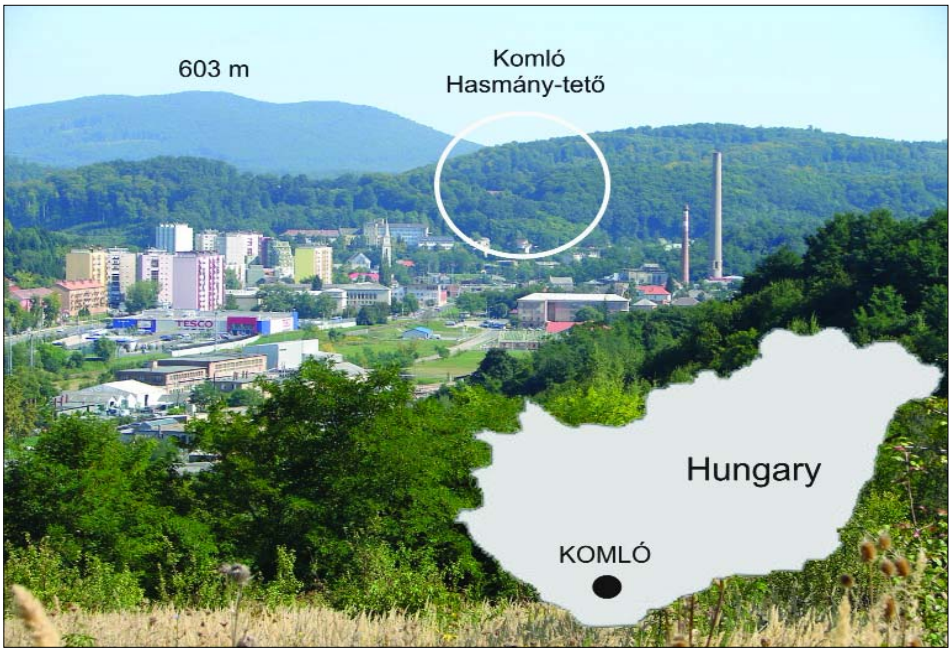

Fig. 5. Habitat and the first Hungary locality of C. fusca: Komló, Hasmány-tető

Biology: Recorded hostplants of *C. fusca* are *Stachys alpina, S. cassia, Marrubium vulgare*. The moth flies from mid-May to mid-June and from mid-July to mid-August (in litt. C. Gielis, Nl-Lexmond). *Stachys alpina* is found in Hungary only in Mecsek Mountain and in a few isolated localities at medium altitude in the northern mountains. *Stachys cassia* does not occur in the country. According to ADAMCZEWSKI (1951) larvae of *C. fusca* transferred to the closely allied *Stachys sylvatica* died: they did not touch this food. *Stachys sylvatica* is spread universally in the Hungarian leafy forests. We do not know for what kind of chemical reasons the caterpillars do not accept this plant. The larvae appear twice a year. The spring specimens feed after hibernation on the stems and lower leaves, becoming full fed in the second half of May.

Habitat in Hungary: Illyrian beech and oak-hornbeam woodlands. The first Hungary locality (Komló, Hasmány-tető) is at an altitude of 350 m. This is a sylvan environment in a residential area, effectively a sylvan clearing, where they are private gardens and small orchards. In the immediate neighbourhood there are forests of beech and oak. Up to the year 2000, there was intensive coalmining in the area. Intensive industrial activity characterized the country for nearly 150 years, but the mines were closed in 2000 and recultivation began.

Distribution: Albania, Austria, Belgium, Bulgaria, Crete, Croatia, Czech Republic, French mainland, Greek mainland, Italian mainland, Kazakhstan, Luxembourg, Macedonia, Poland, Romania, Russia South, Slovakia, Spanish mainland, Switzerland, Turkey.

New data from Hungary: Hungary, Mecsek Mts, Komló, Hasmány-tető, 18.07.1997, leg. et prep. Fazekas No. 3174. in coll. Biological Coll. of Regiografo, H-Komló.

Note: We still have little knowledge of Hungarian Capperia species (FAZEKAS 2003). Hardly any specimens are located in collections, and identification of the species by genitalia examination has rarely been undertaken. Most literary data is unreliable. Another species, the reappearance of which is to be expected, is *Capperia lorana* (Fuchs, 1895), primarily the western and northern parts of Hungary.

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