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Coleophora luteochrella Baldizzone & Tabell, sp. n., a new coleophorid moth from the Iberian Peninsula (Lepidoptera: Coleophoridae)

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Abstract

A new species Coleophora luteochrella Baldizzone & Tabell, sp. n. from the Iberian Peninsula is described. KEY WORDS: Lepidoptera, Coleophoridae, Coleophora luteochrella, new species, Iberian Peninsula.

Introduction

Coleophora lutipennella (Zeller, 1838) is a well-known, common and widely distributed European micromoth (BALDIZZONE et al., 2006) connected with deciduous Quercus species. Because of the peculiar and readily recognizable structures of both male and female genitalia it has belonged to a less interesting and “easy” species to identify and thus avoided almost all closer investigations. As a result, no sister-species of Coleophora lutipennella have been described so far.

Recently the junior author identified pinned Coleophora specimens from the large stock of Lepidoptera preserved in the Finnish Museum of Natural History, University of Helsinki (ZMH). The collector of this material, the Finnish amateur entomologist Paul Grotenfelt, made several excursions to the southern parts of Europe between 1971 and 1987, gathering over 2,500 coleophorid moths. Surprisingly, a series of specimens differing slightly genitally from Coleophora lutipennella was detected among the material. Correspondence with the senior author revealed that the investigated specimens belong to an undescribed taxon, which is described here as Coleophora luteochrella Baldizzone & Tabell, sp. n. Some further specimens were found in the collections of the Zoological Museum, University of Copenhagen (ZMUC), H. W. van der Wolf and M. Corley.

The female genitalia of the new species have already been illustrated under the name Coleophora lutipennella by S. Toll in his incompleted revision of Palearctic Coleophoridae (TOLL, 1962: Taf. 2 W, fig. 11). This specimen, deposited in the Museum of Natural History of Vienna (NHMW) bears labels as follows: “Toll 26 (? = 4090 Mus. Vind.)”, “Andalusia Sa. Alfacar, 31-VI-[19]27, Reisser ¹ CXVIII Contribution to the knowledge of Coleophoridae.
leg.”, “coll. Mus. Vind.”, “Coleophora fraternella Toll”, “Typus”. Obviously Toll was unsure about the specimen’s identity, or he intended to describe the specimen as a new taxon later, but his death did away with that intention. Subsequently H. G. Amsel described several new species from the specimens studied by Toll, illustrating also C. fraternella (TOLL & AMSEL, 1967) from North Afghanistan (Polichomri), but this taxon doesn’t show close affinity with Toll’s C. fraternella in litteris.

When finishing this paper Dr. A. Vives informed us that the figures of both male and female genitalia of C. lutipennella (VIVES MORENO, 1987; pl. IV, fig. 4a and pl. CXX, fig. 4b) actually belong to this new taxon, and these specimens have been included in the type material too.

Coleophora luteochrella Baldizzone & Tabell, sp. n.


Diagnosis: The new taxon is closely related to C. lutipennella (Zeller, 1848) (Figs. 3-4, 7-8, 10, 13-14). The external appearance of the moth provides no diagnostic features compared to lutipennella, and thus the study of the genitalic structures is indispensable for correct identification. Separating details in the male genitalia of luteochrella are a broader sacculus with concave lateral margin, a two-lapped and strongly expanded firm membrane around the basal part of sacculus, and a smaller cornutus. In the female genitalia of luteochrella the main distinguishing characters are a markedly longer colliculum and its shorter caudal projections, and a narrower spinulate section of ductus bursae.

Description: Wingspan 10,5-12 mm. Head, thorax and labial palpus pale ochreous. Antenna annulated with brown and white, scape covered by pale ochreous scales. Forewing light ochreous to ochreous, irrated with ochreous-brown-tipped scales; cilia pale ochreous. Hindwing light grey; cilia pale ochreous.

Male genitalia (Figs. 1-2, 5-6): Gnathos knob transversely oval, slightly broader than tegumen. Tegumen constricted medially, pedunculi short. Cucullus parallel-sided. Transtilla slender, wedge-shaped. Valvula small, as broad as cucullus. Sacculus strongly sclerotized; proximal part surrounded by a sclerotized, ventrally expanded shield, which prevents to spread sacculus out, medially deeply excavated, distal edge reaching transtilla; lateral margin concave, serrated with several robust teeth, cilia pale ochreous.
surface decorated by small follicles, dorsal angle acute, ventral one obtuse. Phallotheca arched, apically bifurcated, apices sharp. Cornutus single, short, spiniform.

Female genitalia (Figs. 9, 11-12): Papillae anales oval. Posterior apophyses twice as long as anterior apophyses. Sterigma trapezoid, proximal margin strongly swollen, caudal margin evenly rounded, covered with several bristles. Ostium bursae wide, situated at distal half of sterigma. Colliculum sclerotized, long, tubular, slightly tapered towards ductus bursae, anterior half with two longitudinal ridges, proximal end unilaterally bulged with a strongly sclerotized plate, distally with two short, triangular horizontal projections. Spinulate section of ductus bursae curved, half length of colliculum, spines small and dense. Corpus bursae oval, with one thorn-like signum.

Bionomy: The host plant and the early stages are unknown.
Distribution: Known from a few localities in southern, eastern and northern Portugal and in southern Spain.

Derivation of name: Latin luteus = yellow, ochra = ochre. The specific name refers to the color of the forewing.

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Figs. 1-4. – 1-2. Coleophora luteochrella Baldizzone & Tabell, sp. n. Male genitalia, paratype (PG Bldz 14360).