

**First record of *Coleophora amellivora* BALDIZZONE, 1979
(Lepidoptera: Coleophoridae) from Poland**

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ABSTRACT. *Coleophora amellivora* Baldizzone, 1979 is reported from Poland for the first time. The species has been found in xerothermic habitats in the Pieniny Mountains. Two of the specimens were reared from larvae mining leaves of *Aster alpinus* L. In the paper, imago, male and female genitalia, as well as larval case are illustrated.

KEY WORDS: Lepidoptera, Coleophoridae, *Coleophora amellivora*, *Aster alpinus*, host plant, faunistics, new record, Poland.

INTRODUCTION

The family Coleophoridae s.s., with more than 1340 species worldwide, is most richly developed in the Northern Hemisphere. Majority representatives of this taxon have been classified in only one homogenous genus *Coleophora* HÜBNER, 1822 (BALDIZZONE et al. 2006). It comprises generally small to medium-sized, narrow-winged moths, with larval stage feeding from portable silk case, structure of which is frequently characteristic for species.

In Poland, Coleophoridae is one of the best studied groups of Microlepidoptera; this situation is a result of long-lasting history of research on these moths carried out mainly by famous microlepidopterist dr. Sergiusz TOLL (1952); furthermore, very important contribution to the knowledge of Polish coleophorid fauna is also a monograph published by prof. Józef RAZOWSKI (1990). Hitherto, 149 species of Coleophoridae have been recorded from

the country (RYNARZEWSKI 2000, FUGLEWICZ E., FUGLEWICZ S. 2002, BARAN 2003, RYNARZEWSKI et al. 2007, STÜBNER 2007). This article reports a next species that has not been known so far from the territory of Poland, i.e. *Coleophora amellivora*. Below, some morphological and bionomical data on this coleophorid moth are given.

Acknowledgement

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SYSTEMATICS

Coleophora amellivora BALDIZZONE, 1979

Adult (Fig. 1)

Wingspan: 13-15 mm. Head cocoa brownish with some white scales above eyes. Flagellum of antenna annulated with white and brown (the annulations less distinct in most distal part, as well as in basal part of female flagellum). Forewing cocoa brown with pronounced and contrasting white streaks along costa, termen, dorsum and main veins (apical third of costa lined with ground colour beyond white line); narrow dark brown lines or dark brown spots may be present, especially next to white streaks and in apical portion of the wing; cilia brown greyish, apically whitish. Hindwing brown greyish with paler, whitish longitudinal area situated more or less in middle of wing width; cilia proximally brown greyish, distally whitish.

Male genitalia (Figs 2-4)

Gnathos knob large, suboval. Tegumen short, with long and slender pedunculi. Cucullus broad, basally slightly narrower, somewhat rounded distally, and extended beyond sacculus apex. Valvula rather indistinctly delineated, setose. Proximal portion of sacculus with dorsal process, as well as with small triangular protrusion placed next to process base; the dorsal process long, bent inwardly, somewhat tapering, with rounded apex; ventrocaudal angle of sacculus more or less bulged and rounded. Juxta rods asymmetrical, right rod obliquely truncated and pointed, clearly shorter than left one; distal part of left rod somewhat widened, its most apical portion bent upwardly and tapered. Vesica with comparatively long (to about 3/4 length of left juxta rod), spine-like, basally somewhat widened and distally tapered cornutus.

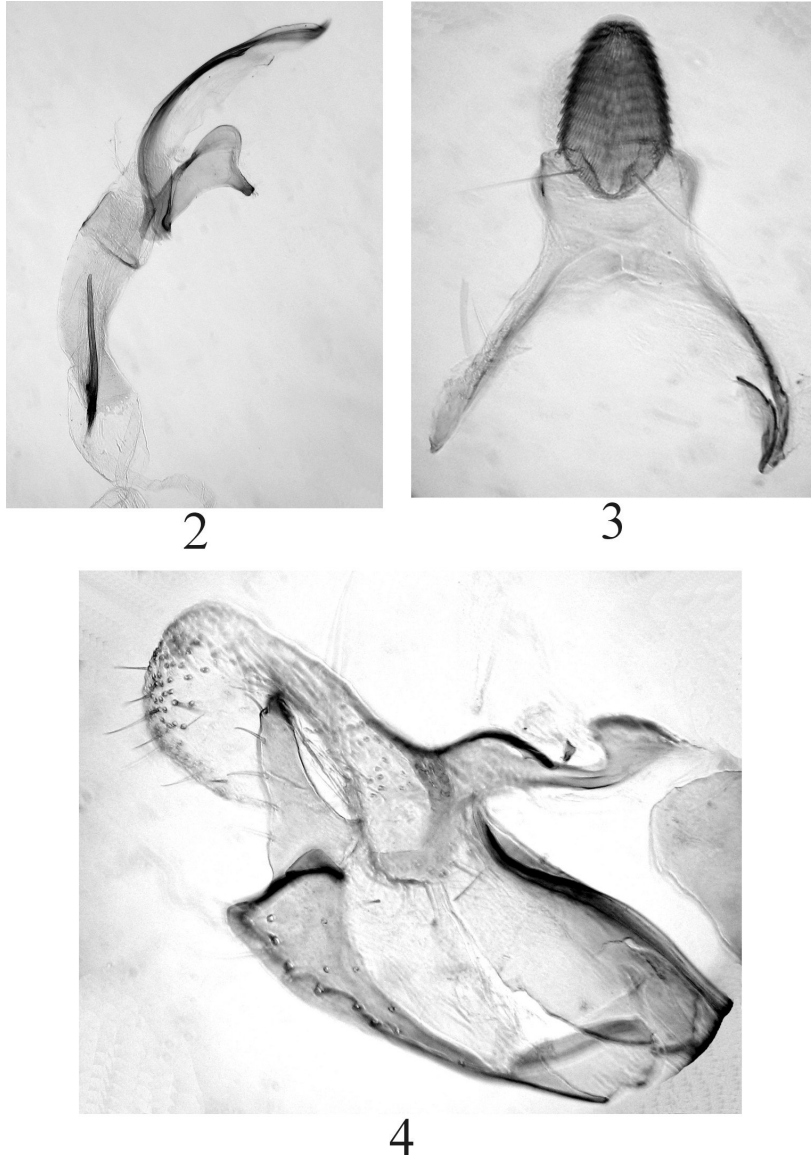


Fig. 1. Female adult of *Coleophora amellivora*.

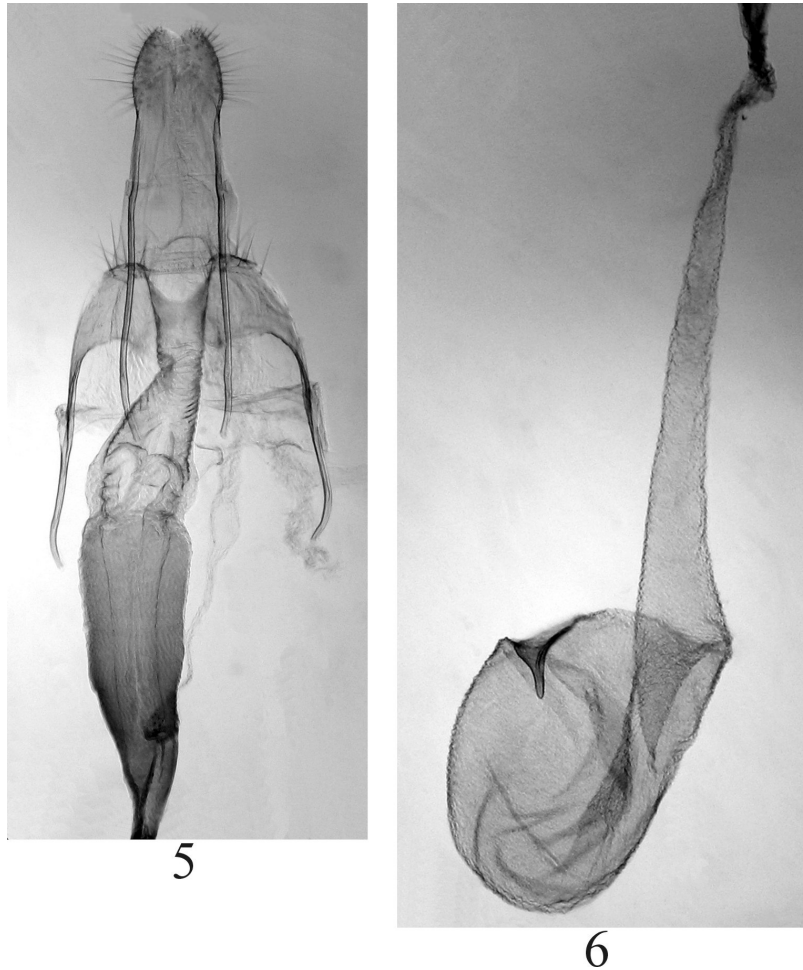
Female genitalia (Figs 5-6)

Sterigma (sternum 8) short, subtrapezoid; anterior margin somewhat protruded and irregularly edged in median portion; posterolateral arms of sterigma (those parts between ostium bursae) setose at posterior and inner edges. Ostium bursae more or less U-shaped, situated in posterior half of sterigma. Colliculum more or less sand-glass shaped, but posterior half only slightly narrowing towards midlength (walls almost parallel-sided), and anterior half clearly widening towards anterior end (anterior end of colliculum distinctly wider than posterior one), sclerotized, as well as transversally wrinkled, about equal in length to anterior apophyses.

Ductus bursae with two sections; posterior section 'stiff', funnel-shaped, about as long as posterior apophyses, with small, spined sclerotized plate in anterior part (next to inception of ductus seminalis); anterior section comparatively narrow, rather delicate, membranous, and gradually widening towards subspherical corpus bursae, about as long as complex of colliculum-posterior section of ductus bursae. Signum of corpus bursae a spine-like sclerotization directed inwards, basally abruptly and rather extensively, more or less asymmetrically broadened.



Figs 2-4. Male genitalia of *Coleophora amellivora*. 2 – complex of aedeagus-juxta; 3 – complex of tegumen-gnathos; 4 – valva.



Figs 5-6. Female genitalia of *Coleophora amellivora*. 5 – complex of ovipositor-segment 8-colliculum-posterior section of ductus bursae; 6 – complex of anterior section of ductus bursae-corporis bursae.

Bionomics

In the Pieniny Mountains, the species inhabits xerothermic grasslands on limestone rocks. The larvae within cases were found mining leaves of *Aster alpinus* L. in the first half of September; the larvae fed, often gregariously, by making blotches in the leaves. As host plants of *Coleophora amellivora*, *Aster amellus* L. and *Solidago* sp. are also mentioned

(BALDIZZONE 1979, RAZOWSKI 1990). The larva is an overwintering stage of this coleophorid species in Poland. The larval case (Fig. 7) is tubular, slightly bent next to angled at about 30°-40° oral end, somewhat narrowing towards both ends, equipped with trivalved anal end, and with more or less prominent dorsal and ventral keels; its surface is more or less grained, often covered with short hairs; the case is brownish in coloration, and attains about 8-11 mm in length.

Although phenology of the species needs further investigations in the country, adults fly most likely in one brood – from June to July.



Fig. 7. Mature larval case of *Coleophora amellivora*.

Distribution

Coleophora amellivora is locally but widely distributed throughout Europe; it is known mainly from southern, central and northern parts of the continent. In the original description, BALDIZZONE (1979) recorded this coleophorid from Poland but it was an error resulting of misunderstanding of literature data (see RAZOWSKI 1990).

Remarks

It is worth noticing that *Coleophora amellivora* is a next rare xerobiotic micro-moth mining on *Aster alpinus* in the Pieniny National Park; in the 90's of last century, mines of a gracillariid moth – *Aristaea pavoniella* (ZELLER, 1847) has been found on leaves of this flowering plant (BARAN 1996). In the Polish part of the Pieniny Mts., both these local species occur in similar habitats.

Material examined

The Pieniny Mts. (DV 57): Czertezik (740 m), 1 female, ex larva, 26 IV (in captivity), 1 female, ex larva, 28 IV 2003 (in captivity) – host plant: *Aster alpinus* L.(leg., coll.

T. BARAN); Facimiech (550 m), 4 males (at light), 7 VII 2005; Podskalnia Góra (650 m), 1 male (at light), 8 VII 2005 (leg., coll. T. RYNARZEWSKI).

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