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Coleophora sattleri Baldizzone, 1995 in Portugal, with description of the female and the larval biology (Lepidoptera: Coleophoridae)

G. Baldizzone* & M. F. V. Corley

Abstract

Coleophora sattleri Baldizzone, 1995, previously known only from three males collected in the French Pyrenees has been found in Portugal. The female and the larval case are described, together with some details of its biology.

KEY WORDS: Lepidoptera, Coleophoridae, *Coleophora sattleri*, female, biology, Portugal.

Coleophora sattleri Baldizzone, 1995 en Portugal, con descripción de la hembra y biología de la larva (Lepidoptera: Coleophoridae)

Resumen

Coleophora sattleri Baldizzone, 1995, previamente conocida por tan sólo tres machos recogidos en los Pirineos Franceses ha sido descubierta en Portugal. La hembra y la pupa son descritas y se aportan algunos detalles de su biología.

PALABRAS CLAVE: Lepidoptera, Coleophoridae, *Coleophora sattleri*, hembra, biología, Portugal.

Introduction

Coleophora sattleri Baldizzone, 1995 was described from the Central Pyrenees of France based on three males collected by K. Sattler, K. Tuck and G. Robinson in July and August 1981 (BALDIZZONE, 1995). It has apparently not been found since (NEL, 2001).

Material

On 22-III-2011, at Parâmio in the Parque Natural de Montesinho in Trás-os-Montes, north-east Portugal, MFVC found leaves of *Arenaria montana* L. which showed characteristic white circular mines, typical of feeding *Coleophora* larvae. After further searching, a single larval case of a *Coleophora* was located. The larva continued to feed for a few weeks. Eventually a moth hatched from this case on 30-V-2011.

* Contribution to the knowledge of Coleophoridae CXXXVI.

Results

The moth that emerged was of distinctive appearance, but unfamiliar to MFVC. The specimen was therefore sent to GB, who identified it as the unknown female of *C. sattleri* (Fig. 1). *C. sattleri* and *C. chalcogrammella* Zeller, 1839 are the only species in the Group 10 of TOLL (1962). From the wing markings of the female from Portugal, it can only belong to *C. sattleri*, however the antennal flagellum of the Portuguese female differs from that of the French *sattleri* in being uniformly dark fuscous, whereas that of the male *sattleri* is ringed ochreous and dark fuscous. *C. chalcogrammella* also shows sexual dimorphism in the antennal flagellum, which is blackish with a white apex in both sexes, but the male has an additional white ring, one to three segments long at three-quarters length.

BALDIZZONE (1995) described the male of *C. sattleri*, comparing it with *C. chalcogrammella*, and figuring the head, including the antenna, and male genitalia of each species.

Female genitalia of both species are figured (Figs. 3-6). They differ in several features, notably in the shape of the spinulate part of the ductus bursae, which consists of a single lobe in *sattleri* (Fig. 4) and usually two lobes in *chalcogrammella* (Fig. 3), and also in the antrum, which is significantly shorter in *C. sattleri* (Fig. 6).

Bionomics

The larval case (Fig. 2) is constructed with brown silk. It is 8 mm long, elongate cylindrical in form, a little wider in the middle part; the oral aperture is round with a small flap on the outer edge and is angled at 30° to the long axis; the anal opening is three-lobed, slightly paler; lines of growth are visible on the surface of the case, especially in the dorsoventral aspect, while on the front of the case on the dorsal side there are the remains of the primary case, about 2.5 mm long and slightly rough, evidently built with a piece of the leaf of the host plant.

MFVC had on two previous occasions found single cases, similar to but smaller than the Parâmio case, also on *Arenaria montana* by the Rio Mondego between Trinta and Videmonte in Serra da Estrela, Beira Alta. These were collected on 8-VI-2008 and 14-VII-2009. Although the larvae continued to feed for some time they were not successfully overwintered.

At Parâmio the *Arenaria* grew on soil at the top of a bank by a track quite heavily shaded by trees at an altitude of 860 m. By the Rio Mondego it was growing in soil crevices among near vertical rocks with a north-east aspect, with weak shading from scattered shrubs, about 10 to 15 m above the normal river level, at an altitude of 740 m.

By contrast the specimens from the Pyrenees were collected at altitudes of 2400 and 2650 m (BALDIZZONE, 1995). According to LÓPEZ-GONZÁLEZ (1990), *A. montana* ascends to a maximum altitude of 1850 m in Spain, so *C. sattleri* must surely have a different foodplant in the French localities.

Acknowledgements

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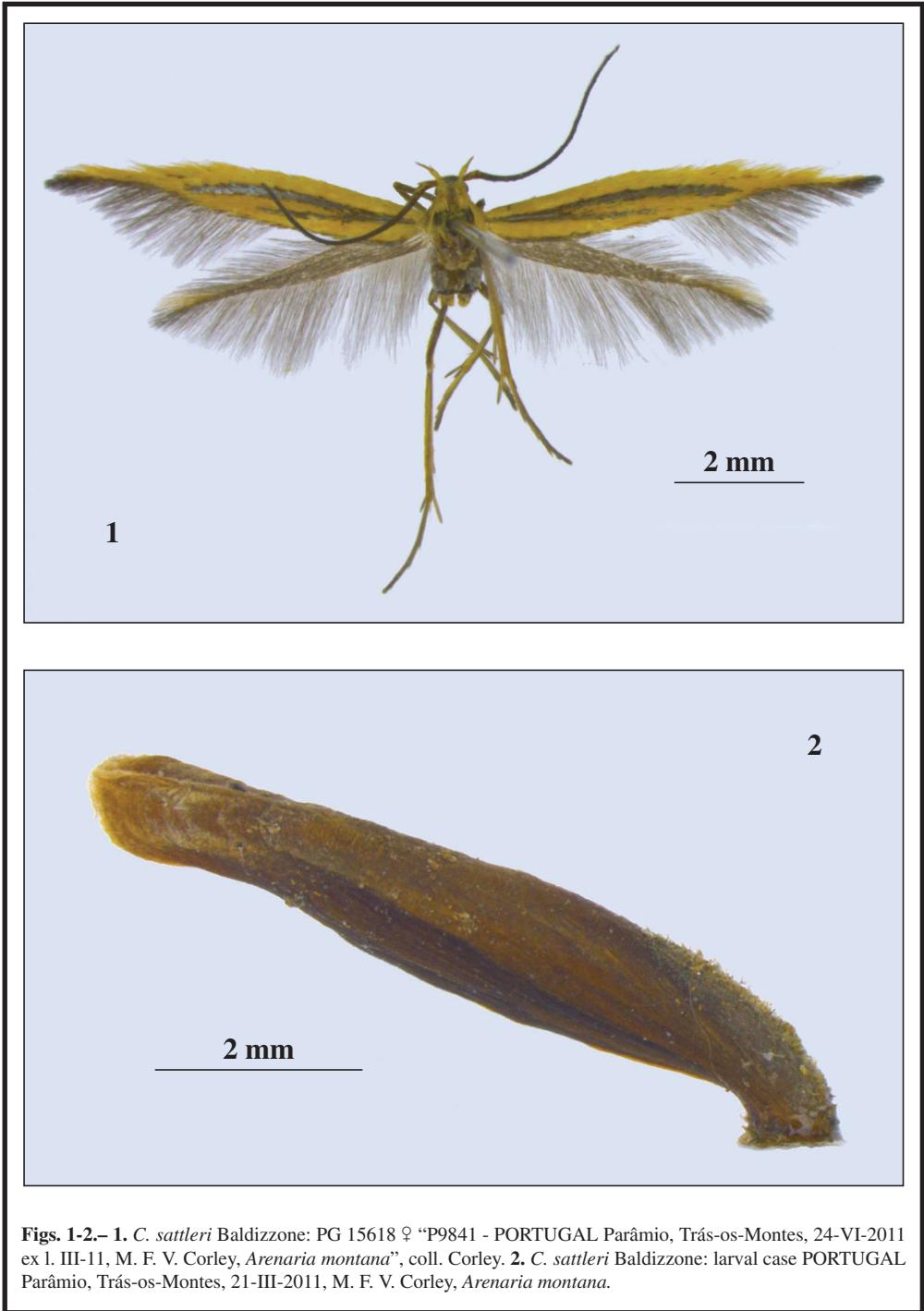
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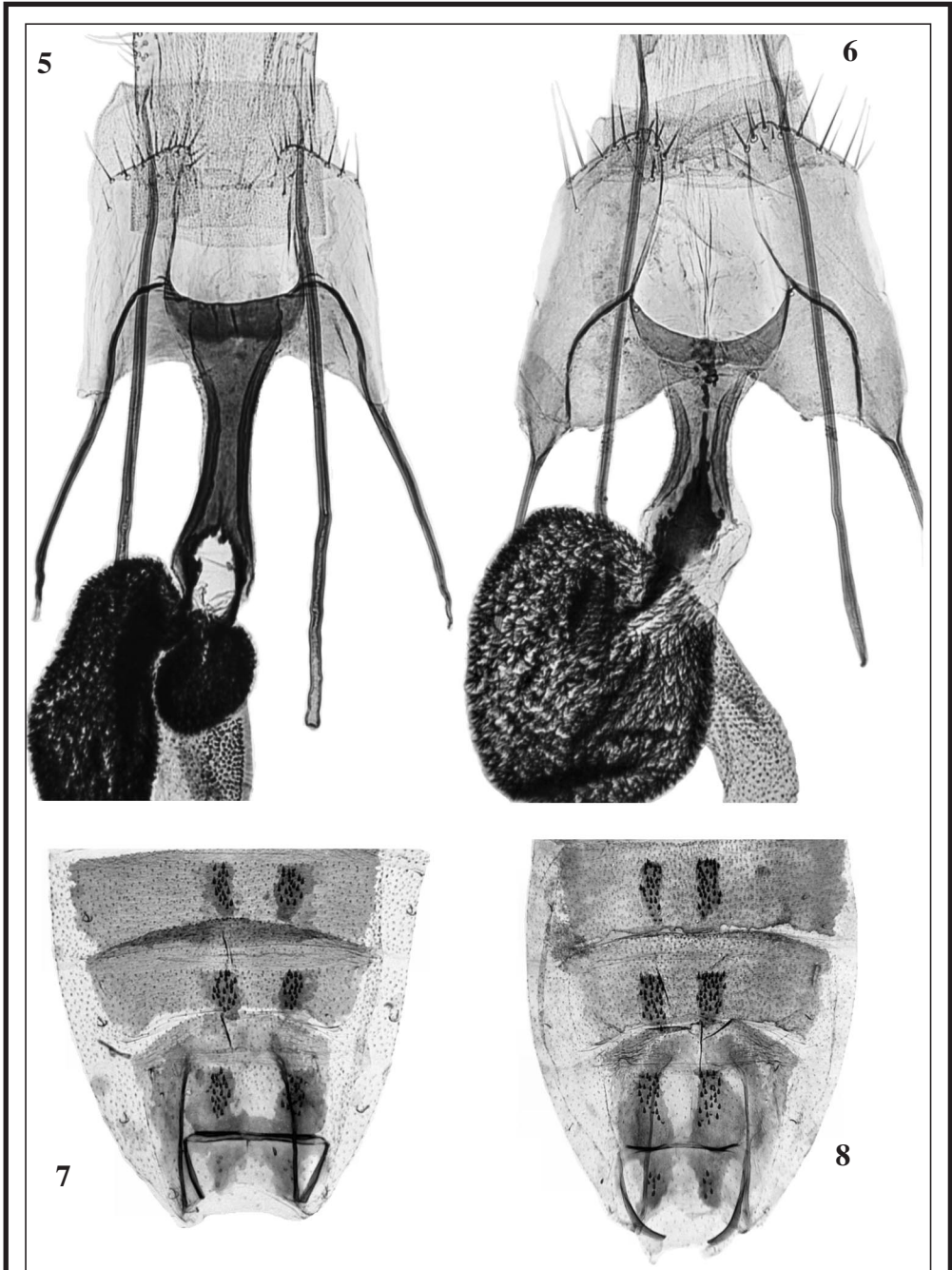
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Figs. 1-2.— **1.** *C. sattleri* Baldizzone: PG 15618 ♀ “P9841 - PORTUGAL Parâmio, Trás-os-Montes, 24-VI-2011 ex l. III-11, M. F. V. Corley, *Arenaria montana*”, coll. Corley. **2.** *C. sattleri* Baldizzone: larval case PORTUGAL Parâmio, Trás-os-Montes, 21-III-2011, M. F. V. Corley, *Arenaria montana*.



Figs. 3-4.— **3.** *C. chalcogrammella* Zeller: PG Bldz 15619 ♀ “SUECIA Silvåkra, 14-VII-1979, B. Å. Bengtsson”, coll. Baldizzone. **4.** *C. sattleri* Baldizzone: PG 15618 ♀ “P9841 - PORTUGAL Parâmio, Trás-os-Montes, 24-VI-2011 ex l. III-11, M. F. V. Corley, *Arenaria montana*”, coll. Corley.



Figs. 5-8.— 5, 7. *C. chalcogrammella* Zeller. 7. Abdomen. 6, 8. *C. sattleri* Baldizzone; 8. Abdomen