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

G. Baldizzone¹ & J. Tabell

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.

Coleophora luteochrella Baldizzone & Tabell, sp. n., una nueva coleofora de la Península Ibérica
(Lepidoptera: Coleophoridae)

Resumen

Se describe una nueva especie *Coleophora luteochrella* Baldizzone & Tabell, sp. n. de la Península Ibérica.
PALABRAS CLAVE: Lepidoptera, Coleophoridae, *Coleophora luteochrella*, especie nueva, Península Ibérica.

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 *C. 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 *C. 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 *C. 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.

Holotype ♂ “Lusitania, Algarve pr. Bensafrim, 4-IX-1973, P. Grotenfelt.”, coll. ZMH.

Paratypes (30 ♂♂, 23 ♀♀): 17 ♂♂, 8 ♀♀ idem, coll. ZMH. 2 ♂♂ (PG Bldz 14319, 14320), 1 ♀ (PG Bldz 14216) idem, coll. Baldizzone. 3 ♂♂ (GP JT 4014), 1 ♀ (GP JT 4017) idem, coll. Tabell. 1 ♀ ibidem, 23-IX-1973, coll. ZMH. 1 ♀ (PG 26 Toll ♀ = 4090 Mus. Vind.) “Andalusia Sa. Alfacar, 31-VI-27, Reisser leg.”, coll. NHMW. 1 ♂ (PG Bldz 14325) “Hispania mer. Sierra Nevada, Veletastrasse 1500 m, 17-VII-1962, leg. K. Sattler”, coll. Baldizzone. 1 ♂ “Hispania, Andalusia, Camino de Istan. ca. 400 m, 21-VII-1972, E.Traugott-Olsen”, coll. ZMUC. 1 ♀ (PG Bldz 14374) ibidem, 28-VI-1972, coll. ZMUC. 1 ♀ (PG Bldz 14326) ibidem, 8-VII-1972, coll. Baldizzone. 1 ♀ (PG Bldz 5354) ibidem, 4-VII-1973, coll. Baldizzone. 1 ♂ (PG Bldz 6012) “Hispania, Andalusia, Sierra Nevada 2000 m, Strada Veleta, 26-VII-1983 (lux), leg. G. Baldizzone & P. Triberti”, coll. Baldizzone. 3 ♂♂ (PG Bldz 14359, 14360) “SPAIN Teruel, Noguera, 1500 m, 11-VII-1986, C. Gielis”, coll. van der Wolf. 1 ♀ (PG v.d. Wolf 3021) “Cosa, Teruel. Hisp., 6-VIII-1986, leg. Gielis”, coll. van der Wolf. 1 ♀ (PG v.d. Wolf 4667) “HISP. Teruel, 5 km W Noguera, 1500 m, 27-VII-1991, H.W.v.d. Wolf”, coll. van der Wolf. 1 ♀ (GP Vives 2354), “Spain, Ciudad Real, Piedrabuena, 9-VIII-1980, leg. A. Vives”, coll. Vives (National Museum of Natural History, Madrid [MNCN]). 1 ♀ (GP Vives 2373) “Spain, Burgos, Ibeas de Juarros, 23-VII-1985, leg. A. Vives”, coll. Vives (MNCN). 1 ♀ (GP Vives 2458), “Spain, Teruel, Albarracin, 19-VII-1985, leg. A. Vives”, coll. Vives (MNCN). 1 ♀ (GP Corley 1036) “Portugal, Algarve, north of Alportel, 11-IX-1996, leg. M. Corley”, coll. Corley. 1 ♂ (GP Corley 1338) “Portugal, Algarve, Colinas Verdes, east of Bensafrim, 21-IX-1998, leg. M. Corley”, coll. Corley. 1 ♀ (GP Corley 2462) “Portugal, Beira Baixa, Monte Barata (Parque Natural Tejo Internacional), 13-IX-2005, leg. P. Pires”, coll. Corley. 1 ♀ (GP JT 4193) “Lusitania, Tras-os-Montes, Montalegre, Mourilhe, 15-IX-1973, P. Grotenfelt.”, coll. ZMH. 1 ♂ (GP. Vives 1455) “Portugal, [Algarve] Monchique, 19-IX-1978, leg. J. Passos de Carvalho”, coll. Vives (MNCN).

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, irrorated 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,

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, spinules 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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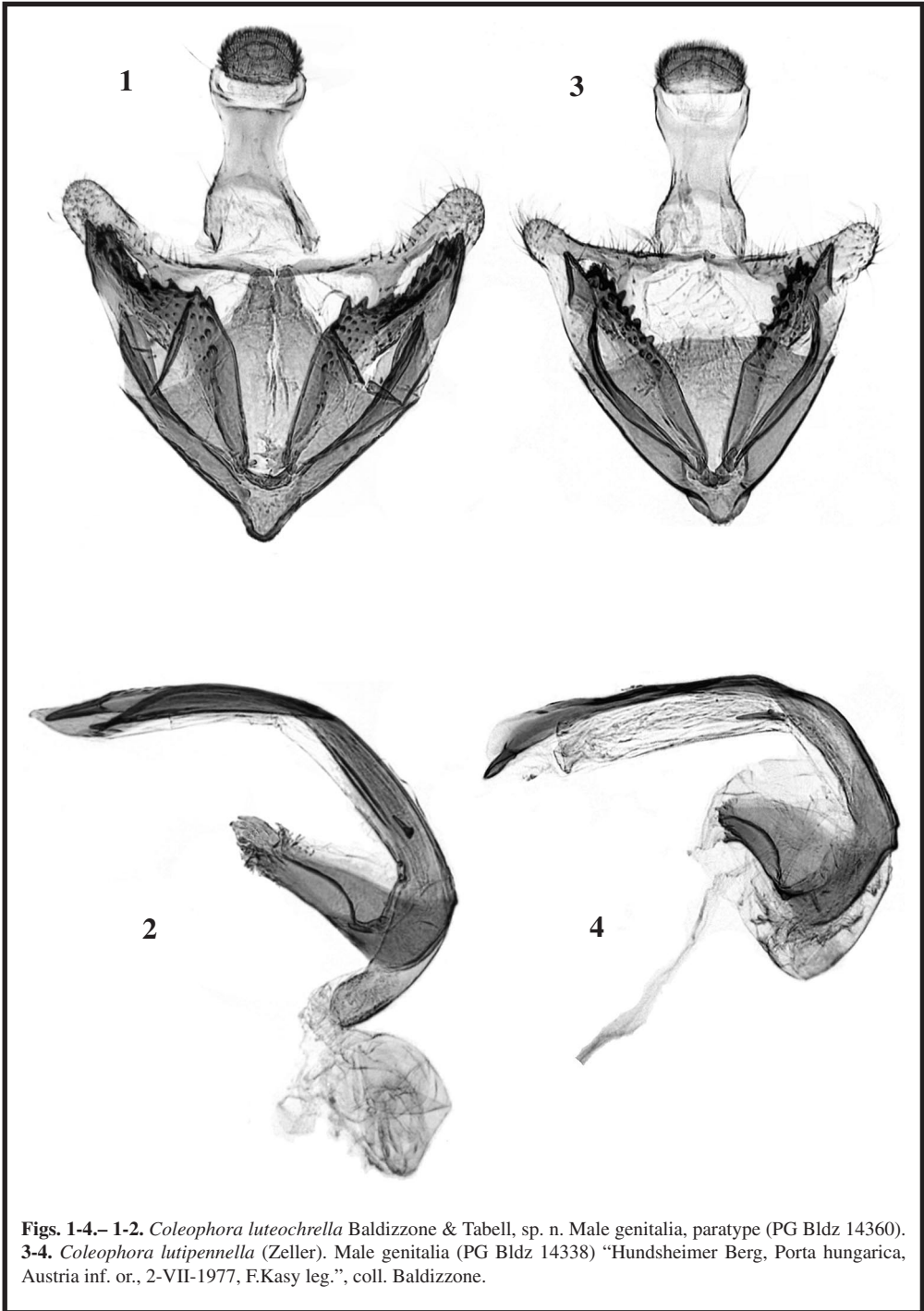
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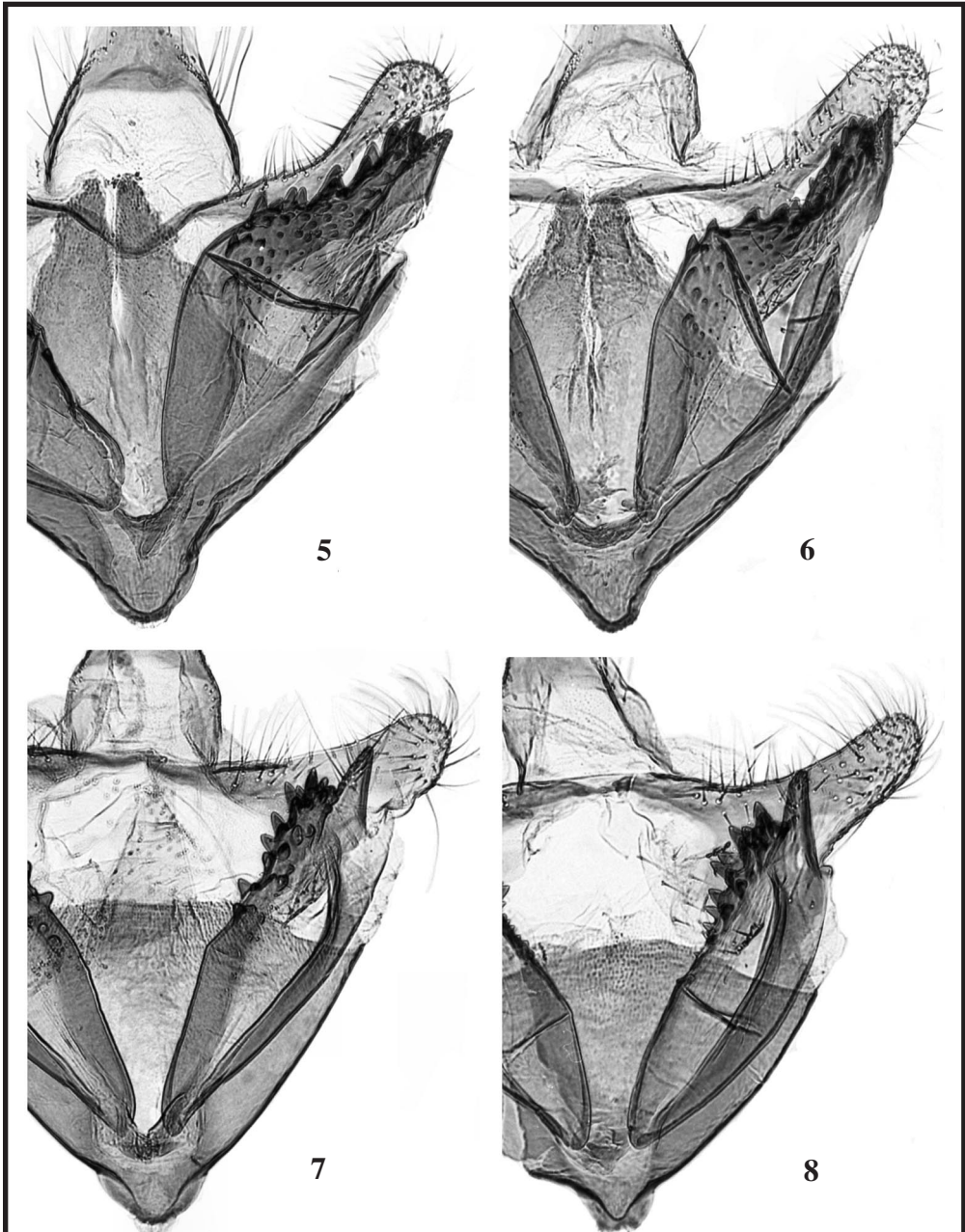
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Figs. 1-4.— 1-2. *Coleophora luteochrella* Baldizzone & Tabell, sp. n. Male genitalia, paratype (PG Bldz 14360).
3-4. *Coleophora lutipennella* (Zeller). Male genitalia (PG Bldz 14338) “Hundsheimer Berg, Porta hungarica,
Austria inf. or., 2-VII-1977, F.Kasy leg.”, coll. Baldizzone.



Figs. 5-8.— **5-6.** *Coleophora luteochrella* Baldizzone & Tabell, sp. n. Male genitalia enlarged. **5.** Paratype (PG Bldz 14359). **6.** Paratype (PG Bldz 14360). **7-8.** *Coleophora lutipennella* (Zeller). Male genitalia enlarged. **7.** (PG Bldz 14338). **8.** (PG Bldz 14340) “Italia, Monte Baldo, Spiazzi, 600 m, 20-VII-1983, leg. Skou & Skule”, coll. Baldizzone.

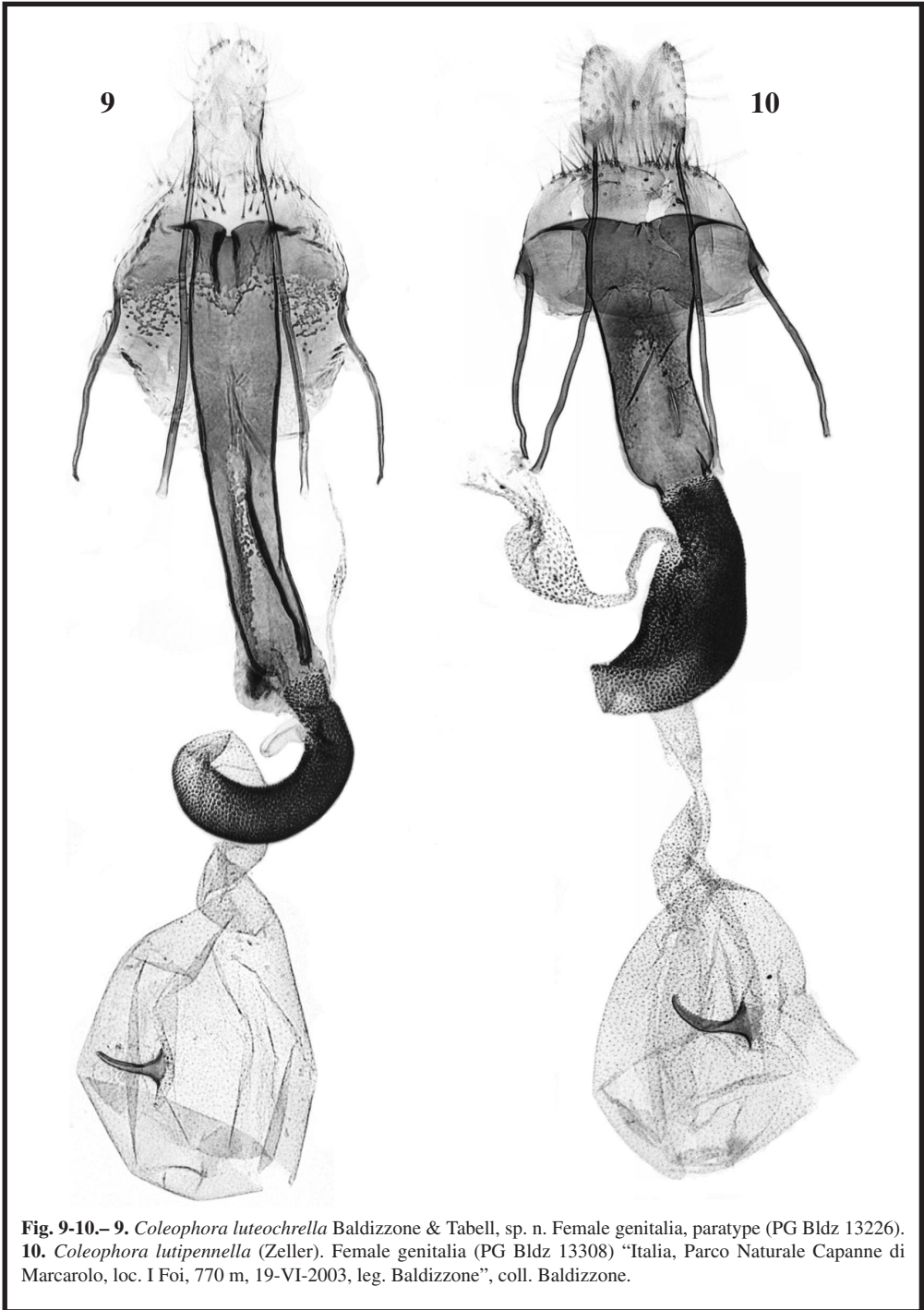
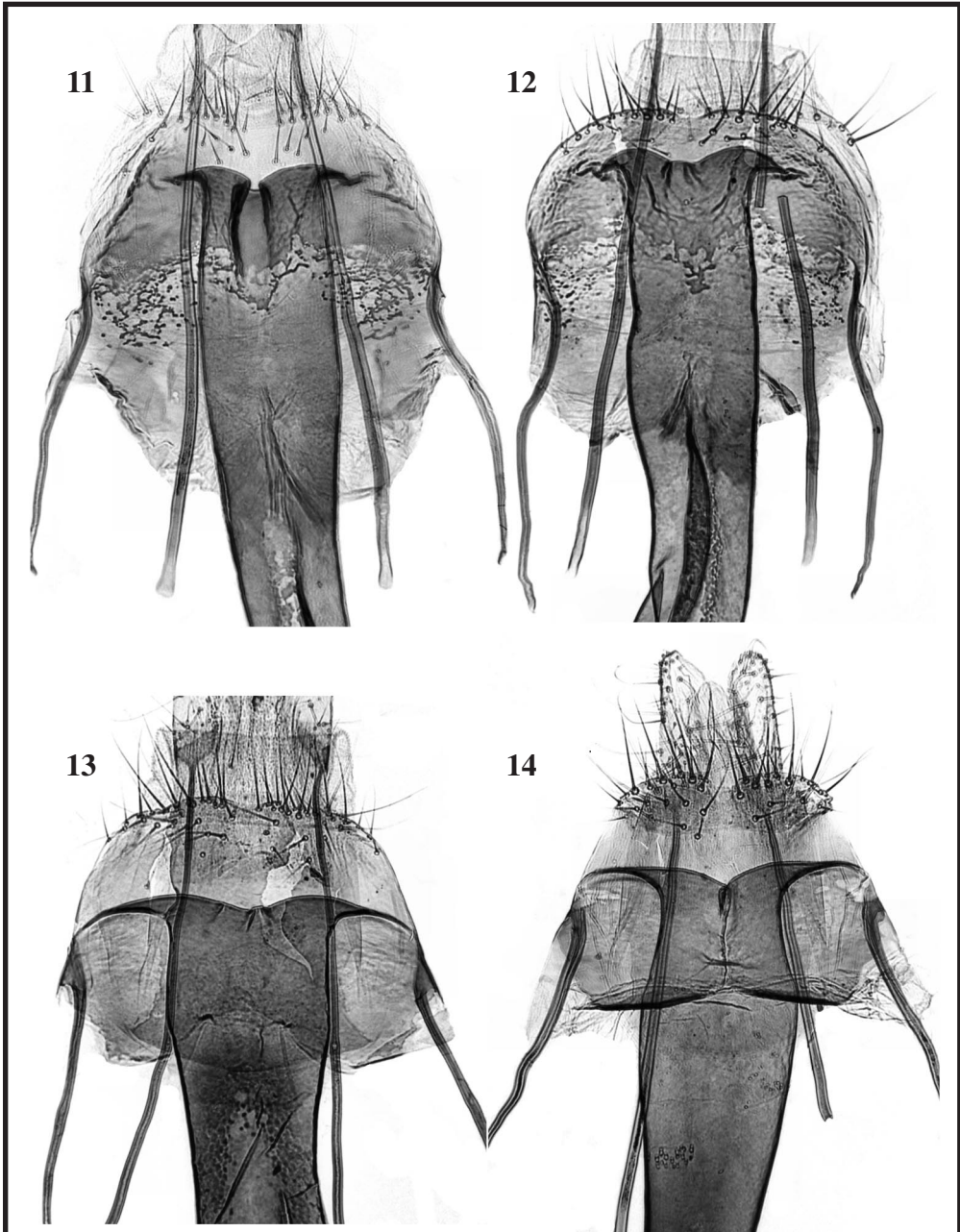


Fig. 9-10.— **9.** *Coleophora luteochrella* Baldizzone & Tabell, sp. n. Female genitalia, paratype (PG Bldz 13226). **10.** *Coleophora lutipennella* (Zeller). Female genitalia (PG Bldz 13308) "Italia, Parco Naturale Capanne di Marcarolo, loc. I Foi, 770 m, 19-VI-2003, leg. Baldizzone", coll. Baldizzone.



Figs. 11-14.— **11-12.**— *Coleophora luteochrella* Baldizzone & Tabell, sp. n. Female genitalia enlarged. **11.** Paratype (PG Bldz 13226). **12.** Paratype (PG Bldz 14216). **13-14.**— *Coleophora lutipennella* (Zeller). Female genitalia enlarged. **13.** (PG Bldz 13308). **14.** (PG Bldz 14363) “Bulgaria, Obzor, 4-VII-1997, T. Rynarzewski leg.”, coll. van der Wolf.