

# **Taxonomic notes on Portuguese Microlepidoptera I. *Cacochroa rosetella* Corley, sp. n. (Lepidoptera: Depressariidae, Cryptolechiinae)**

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## **Abstract**

*Cacochroa rosetella* sp. n. is described from central Portugal. It is externally similar to *C. corfuella* Lvovsky, 2000 from Greece, but is clearly different in female genitalia.

KEY WORDS: Lepidoptera, Depressariidae, Cryptolechiinae, *Cacochroa*, new species, Portugal.

**Notas taxonómicas sobre Microlepidoptera de Portugal I. *Cacochroa rosetella* Corley, sp. n.  
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## **Resumo**

*Cacochroa rosetella* sp. n. é descrita do centro de Portugal. A nova espécie é semelhante externamente a *C. corfuella* Lvovsky, 2000, presente na Grécia, mas apresenta genitália feminina distinta.

PALAVRAS CHAVE: Lepidoptera, Depressariidae, Cryptolechiinae, *Cacochroa*, nova espécie, Portugal.

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## **Resumen**

*Cacochroa rosetella* sp. n. es descrita del centro de Portugal. La nueva especie es semejante externamente a *C. corfuella* Lvovsky, 2000, presente en Grecia, pero presenta genitália feminina distinta.

PALABRAS CLAVE: Lepidoptera, Depressariidae, Cryptolechiinae, *Cacochroa*, nueva especie, Portugal.

## **Introduction**

This is the first in a planned series of papers on Portuguese Microlepidoptera which will cover various taxonomic topics, such as description of new species, revision of status and description of the second sex of little known species. In this paper a new species of *Cacochroa* Heinemann, 1870 is described.

## **Methods**

Genitalia were dissected using standard techniques (ROBINSON, 1976).

*Cacochroa rosetella* Corley, sp. n.

Material examined: Holotype ♀ (fig. 1): PORTUGAL, Beira Litoral, 2 km east of Ansião, 18-VII-2015, leg. J. Rosete, Corley gen. prep. 4641. The holotype will be deposited in the Natural History Museum, London.

Description: Wingspan 13 mm. Head with face whitish, crown pale grey mixed light brown. Labial palp slightly recurved, segment 2 thickly scaled, buff near base, dark grey-brown distally, segment 3 two-fifths length of segment 2, slender, pointed, buff with black base and apex. Antenna greyish-white with narrow dark brown rings. Thorax and tegula pale grey mixed light brown. Forewing with costa curved throughout with greatest curvature at two-fifths, apex acute, termen very oblique, tornal angle obsolete; mixed grey and light olive-brown; blackish spots on costa at one-quarter and two-fifths, the second larger, with smaller spots near apex; various black dots, two in fold, two between fold and dorsum, one between cell and costa at one-quarter, one in cell at one-third, a smaller one just beyond this and one at end of cell; cilia grey-brown. Hindwing slightly narrower than forewing, apex acute, dull grey, darker towards apex; cilia dull grey.

Male unknown.

Female genitalia (fig. 2): Papillae anales parallel-sided, rounded at apex; apophyses posteriores 3.5 times as long as apophyses anteriores; ostium bursae partly covered by a broadly triangular plate with obtuse apex and concave sides, antrum conical; ductus bursae narrow, expanding into broadly pyriform corpus bursae; signum (fig. 3) long, three-fifths length of apophysis posterioris, slightly curved blade-like structure with expanded posterior end, abruptly narrowed to parallel-sided one-third, then expanded to anterior half with one margin serrated, acutely pointed.

Diagnosis: The genus *Cacochroa* Heinemann, 1870 was described to accommodate a single species, *C. permixtella* (Herrich-Schäffer, 1854). Comparison was made with *Anchinia* Hübner, 1825, with main differences in labial palps, forewing and hindwing shape. At the time of description genitalia were not in use as a taxonomic aid, but male genitalia have distinctive reduced uncus and gnathos, two processes at end of valva and a harpe on its inner face, long processes at end of juxta and aedeagus hooked at base.

*C. corfuella* Lvovsky, 2000 was added to the genus because it has external morphology similar to *C. permixtella* and male genitalia fitting the same pattern but with clear differences (LVOVSKY, 2000). The female genitalia show two notable differences, the presence of two sclerites over the ostium and a very different signum from the Y-shaped signum of *C. permixtella*.

For *C. rosetella* the male genitalia are unavailable, but the female genitalia have a single sclerite over the ostium and a signum of similar pattern to that of *C. corfuella* but longer, 1.5 times as long as apophyses anteriores, narrowed before expanding in width and finally tapering to the point, whereas that of *C. corfuella* is of same length as apophyses anteriores, and simply tapers to the point. Together with the external morphology which is very similar to *C. corfuella* this is sufficient to confirm that the new species belongs to *Cacochroa*.

Biology: The only specimen was taken at mercury vapour light in mid-July. The larva and host-plant are unknown. The habitat is woodland on limestone at 250 m, dominated by *Quercus faginea* Lam., *Crataegus monogyna* Jacq. and *Arbutus unedo* L., but with a great variety of shrubs including *Quercus coccifera* L., *Phillyrea latifolia* L. and various herbaceous plants.

Distribution: Only known from Beira Litoral, Portugal.

Remarks: Following the discovery of the holotype, a number of unsuccessful attempts have been made to collect additional material. In addition, larvae have been searched for on *Phillyrea latifolia* which is common in the locality, also without success. *Phillyrea angustifolia* L. is the known host-plant of *C. permixtella* (HUERTAS-DIONISIO, 2003). TOKÁR *et al.* (2005) also give *P. latifolia* as a host-plant. Failure to find additional material could be due to various factors.

Perhaps the species is scarce in the locality or is naturally reluctant to come to light and the host-plant may not be *Phillyrea*.

In fig 2. it is possible that the ductus bursae is broken and not actually as long as it appears in the photo. There is a peculiar tongue-like flap with long hairs attached to the margin of sternite 6. Without additional material it is not possible to know if this is a normal feature of *C. rosetella* or an abnormality.

*C. corfuella* was described from the island of Corfu, Greece (LVOVSKY, 2000), but has recently been found in Cyprus (BARTON, 2018). *C. permixtella* has a wide distribution from Spain to Turkey and Israel, also including Austria and the Mediterranean islands of Corsica, Sardinia, Crete, Chios and Lesbos.

The classification of Gelechioidea has always been contentious. Recent molecular studies have given greater insight than was possible with earlier classifications based only on morphology, but some uncertainties still remain. In this paper *Cacochroa* is placed in subfamily Cryptolechiinae within family Depressariidae, following HEIKKILÄ *et al.* (2014).

In the Portuguese list (CORLEY, 2015) *C. rosetella* should be placed after *Anchinia cristalis* as species 0479.1.

Etymology: The epithet *rosetella* is in honour of my friend Jorge Rosete, diligent microlepidopterist, who collected the holotype.

### Acknowledgements

I am most grateful to Jorge Rosete for allowing me to study his specimen of *C. rosetella*, to Alexander Lvovsky for comments on the female genitalia photo and for confirming that this was undescribed, to André Lameirinhas for the photos of the holotype, to Brian Goodey for the photo of the female genitalia and to Sónia Ferreira for valuable comments on the manuscript and for translating the abstract into Portuguese and Spanish.

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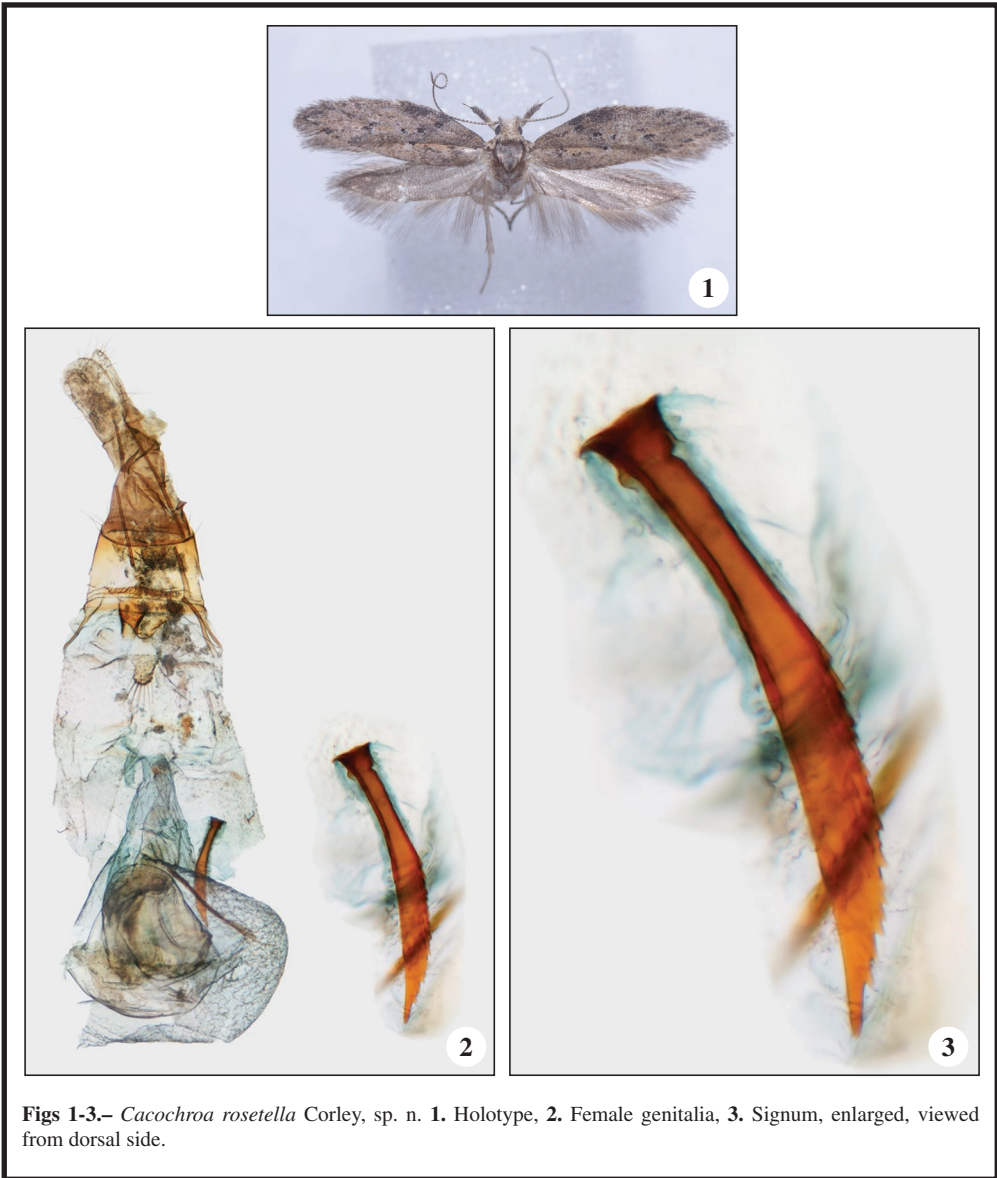
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**Figs 1-3.**– *Cacochoa rosetella* Corley, sp. n. **1.** Holotype, **2.** Female genitalia, **3.** Signum, enlarged, viewed from dorsal side.