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Description of *Pseudoinsalebria* Slamka, Ylla & Macià, gen. n. and *Pseudoinsalebria iberica* Slamka, Ylla & Macià, sp. n., a closely related species to *Pseudoinsalebria albipunctella* (Chrétien, 1911) (Lepidoptera: Pyralidae, Phycitinae)

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Abstract

A new genus of Phycitinae - *Pseudoinsalebria* Slamka, Ylla & Macià, gen. n., and a new species - *Pseudoinsalebria iberica* Slamka, Ylla & Macià sp. n., are described from the south of Spain. The genus *Pseudoinsalebria* differs from the related genera *Insalebria* Filipjev, 1924 and *Selagia* Hübner, [1825] 1816 by external characters and also by male and female genitalia. *Pseudoinsalebria iberica* differs from the closely related *P. albipunctella* (Chrétien, 1911) by the forewing markings and by male and female genitalia. Photographs of the adults and figures of the genitalia of both species are provided.
KEY WORDS: Lepidoptera, Pyralidae, Phycitinae, *Pseudoinsalebria*, new genus, *Pseudoinsalebria iberica*, new species, Spain.

Descripción de *Pseudoinsalebria* Slamka, Ylla & Macià, gen. n. y *Pseudoinsalebria iberica* Slamka, Ylla & Macià, sp. n., especie muy próxima a *Pseudoinsalebria albipunctella* (Chrétien, 1911) (Lepidoptera: Pyralidae, Phycitinae)

Resumen

Se describe un nuevo género, *Pseudoinsalebria* Slamka, Ylla & Macià, gen. n. y una nueva especie de Phycitinae, *Pseudoinsalebria iberica* Slamka, Ylla & Macià, sp. n., del sur de España. El género *Pseudoinsalebria* se diferencia de los géneros afines *Insalebria* Filipjev, 1924 y *Selagia* Hübner, [1825] 1816 a través de los caracteres externos, así como por la comparación de los genitalia del macho y de la hembra. *Pseudoinsalebria iberica* difiere de la especie próxima *P. albipunctella* (Chrétien, 1911) por los dibujos de las alas anteriores y por la estructura de los genitalia. Se presentan fotografías de los adultos y de los genitalia de ambos sexos.
PALABRAS CLAVE: Lepidoptera, Pyralidae, Phycitinae, *Pseudoinsalebria*, nuevo género, *Pseudoinsalebria iberica*, nueva especie, España.

Introduction

LERAUT (2014) placed the species *Selagia albipunctella* Chrétien, 1911 in the genus *Laristania* Amsel, 1951, which, according to our investigations is incorrect; see the diagnosis section. *Pseudoinsalebria* gen. n. is established on the basis of the shape of juxta in the male genitalia, which seems to be unique as it has not yet been observed in subfamily Phycitinae. *Pseudoinsalebria iberica*

sp. n. is described from the south-eastern Spain. This species was formerly overlooked and considered as *Selagia albipunctella* Chretién, 1911, which was described from Algeria. LERAUT (2014) mentioned it as *"Laristania" albipunctella* from South Spain and North Africa; the figure of male genitalia is correct, but in the text it is confused with *Epischnia albella* Amsel, 1954 (see Remarks at *P. iberica*), which makes the situation even more complicated. VIVES MORENO (2014), also includes it in the same genus, *Laristania.*

Currently the genus *Pseudoinsalebria* includes two species: *P. albipunctella* and the species newly described here as *P. iberica.*

Material and methods

The majority of the specimens were collected with the help of the usual entomological light traps (actinic and mercury vapour bulbs, mainly). Other specimens were found in coll. ZMUC.

The holotype is deposited in the MNCN. The paratypes in coll. ZMUC, coll. NMPC, coll MCNB, coll. J. Ylla and coll. F. Slamka. The genitalia of holotype and the paratypes were permanently mounted in Euparal or Entellan, while others were stored in Glycerine in plastic tubes. The photographs of genitalia were taken by binocular microscope using a Nikon camera.

Abbreviations

coll. - Collection
gen. prep. nr. - genital preparation number
MCNB - Museu de Ciències Naturals de Barcelona, Spain
MGAB - National Museum of Natural History "Grigore Antipa", Bucharest, Romania (coll. A. Caradja)
MNCN - Museo Nacional de Ciencias Naturales, Madrid, Spain
NMPC - National Museum Prague, Czech Republic
ZMUC - Zoological Museum University of Copenhagen, Denmark

Pseudoinsalebria Slamka, Ylla & Macià, gen. n.

Type species: *Selagia albipunctella* Chrétien, 1911 by original designation.

= *Laristania* sensu Leraut, 2014

Diagnosis: *Pseudoinsalebria* is characterized by the unique shape of the juxta in the male genitalia of the type species (Fig. 6). It is very large, well sclerotized and more or less follows the shape of vinculum. In the aedeagus, the base of the main strong cornutus is situated in an oval sclerotized capsule. In the female the ductus bursae is strongly sclerotized, being interrupted by a membranous part in the middle. No signum is evident.

The genus *Pseudoinsalebria* is apparently closely related to *Insalebria* Filipjev, 1924. In *Insalebria* the juxta has a different shape, small, spatulate and with two lateral lobes. In the aedeagus there is only one free, single, strong cornutus. In the female of *I. serraticornella* (Zeller, 1839) the ductus is sclerotized only in its terminal part near ostium, being membranous in the other part. In *I. kozhantshikovi*, Filipjev, 1924 the ductus has a similar shape as in *P. albipunctella*, but in the first mentioned species a large and strong sclerotized signum is evident (cf. SINEV, 1990: 426, Fig. 18). In the genus *Selagia* Hübner, [1825] 1816, only *S. spadicella* (Hübner, 1796), has similar genitalia but the juxta is small and there are two cornuti in the aedeagus, whereas the female has the base of the ductus a different shape and an oval, sclerotized signum in the bursa copulatrix.

Next genus - *Laristania* combined with *albipunctella* (LERAUT, 2014: 312) is incorrect, because the male genitalia of type species *Laristania sardzella* Amsel, 1951 is quite different (cf. AMSEL, 1951: 560, Fig. 18).

Male genitalia (Fig. 4): Uncus apically rounded; gnathos short and narrow, ending in a spine-shaped point; tegumen short; valva narrow, sacculus sclerotized sparsely covered by short hairs, costal arm strong and pointed at apex; juxta very large at base with small lateral lobes, sparsely covered by fine setae. The juxta is well sclerotized, with its apical part triangular and generally following more or less the shape of vinculum. Vinculum long, U-shaped, strongly sclerotized. Aedeagus robust, cylindrical, with a main strong cornutus with its base situated in an oval sclerotized capsule. Culcita placed on sternite VIII, W-shaped, ventrally with paired long scale tufts.

Female genitalia (Fig. 5): Papillae anales small, triangular, apophyses long, posteriors about 1/4 longer than anterior apophyses; tergite VIII short; ostium well sclerotized with two laterally curved long spikes. Ductus bursae strong sclerotized, in the middle interrupted by a membranous zone. Bursa copulatrix membranous, oval shaped, sclerotized on only about 1/3 of its area near the the origin of the ductus seminalis.Signum absent.

Etymology: The name *Pseudoinsalebria* is a combination of pseudos (Greek), meaning an absence of truth or accuracy and *"insalebria*" (Latin), meaning even, not rugged.

***Pseudoinsalebria iberica* Slamka, Ylla & Macià, sp. n.** (Figs. 1-2)

= *Selagia albipunctella* sensu Ylla, Macià & Huertas Dionisio, 2008
= *Laristania albipunctella* sensu Palm, 2012
= *Laristania albipunctella* sensu Vives Moreno, 2014
= *Epischnia albella* sensu Leraut, 2014: 317, Fig. 113a - male genitalia - misidentification of *Pseudoinsalebria albipunctella* (Chrétien, 1911)

Fig. 8.– Distribution map of *Pseudoinsalebria iberica* Slamka, Ylla & Macià, sp. n.

Material examined: Holotype ♂, SPAIN: Almería, Tabernas, 425 m, 30S WF59, J. Ylla leg., 21-IV-2001, N-2001-06, gen. prep. nr. 1632 ♂ F. Slamka. Deposited in the MNCN, Madrid, Spain.

Paratypes: 1 ♀, [Spain], Tabernas (Almería), 1-VI-2003, 438 m, 30SWF59, J. Ylla leg., gen. prep. nr. 1633 ♀ F. Slamka, (coll. J. Ylla); 2 ♂♂, Tabernas (Almería), 400 m, J. Ylla leg., 29-IV-1995 (coll. MCNB and coll. J. Ylla); 1 ♂, Tabernas (Almería), 400 m, 30SWF59, J. Ylla leg., 29-IV-1995 (coll. J. Ylla); 2 ♂♂, 1 ♀, Tabernas (Almería), 425 m, 30SWF59, J. Ylla leg., 21-IV-[20]01, gen. prep. nr. 3362 ♂, 3411 ♂, 3366 ♀ (coll. J. Ylla); 1 ♀, Tabernas (Almería), 460 m, 30S WF59, J. Ylla leg., 16-V-2013, gen. prep. nr. 4596♀ (coll. J. Ylla); 1 ♂, Hispania, Almería, Mini Holywood, 230 m, 4-8-V-1994, leg. F. Schepler, gen. prep. nr. 1832 ♂ (in glycerine) F. Slamka; 1 ♂, Spain, Prov. Almeria, 2 km SW of Tabernas, Rambla de Tabernas, 350 m, 18-IV-2001, B. Skule & P. Skou leg., gen. prep. nr. 1833 ♂ F. Slamka; 1 ♂, 2 ♀♀, Spain, Prov. Murcia, 2 km S. of Bolnuevo, 5 m, 28-30-IV-2000, Peder Skou leg. (all coll. ZMUC). 4 ♂♂, 3 ♀♀, Spain, Almería, Tabernas env., Aghuilla Salada, 420 m, 2-3-V-2008, J. Šumpich leg. (research collection of J. Šumpich, coll. NMPC and coll. F. Slamka); 1 ♂, Los Yesos, Sierra de los Filabres (Almería), 625 m, 30SWG60, J. Ylla leg, 30-IV-1995, gen. prep. nr. 1658 ♂ (coll. J. Ylla); 2 ♂♂, Monte Alfaro, Sierra Alhamilla (Almería), 278 m, 30SWF58, J. Ylla leg., 29-III-2008, gen. prep. nr. 4594 ♂, 4595 ♂ (coll. J. Ylla).

Description: Male (Fig. 1). Wingspan males 25,0-28,6 mm (n=13), females 22,0-25,0 mm (n=9). Holotype 28,6 mm. Frons and vertex with creamy, brownish-tipped scales. Antenna filiform about 2/3 length of forewing, dorsally with brown/pale brown scales, ventrally with dark brown/brown scales. Cilia very short (approx. 1/6 diameter of antenna). Labial palpus long and straight (approx. 4 x diameter of the eye) with creamy, brownish-tipped scales, the last segment pointing down. Thorax, and tegulae with creamy, brownish-tipped scales, mesothorax creamy coloured. Abdomen creamy with suffusion of ochreous and pale brownish scales. Forewings narrow, generally greyish with admixture of creamy scales; veins dark coloured, especially radial and anal veins; costa always paler up to postmedial line; discoidal spot dark brown, always well visible and located in a creamy/whitish longitudinal streak. Just above this discoidal spot there is another small brownish spot, more or less indistinct; ante-medial line weakly developed, sometimes consisting of dark transverse line on costa and two arrow-shaped dots. On medial and anal vein; post-medial line creamy often undeveloped; marginal line dark, weakly interrupted, fringes with creamy, brownish-tipped scales. Hindwing pale brownish; marginal bands blurry, darker than central part of wing; fringes pale ochreous even whitish.

Female (Fig. 2): Externally similar to male, generally smaller, antennae filiform and thinner (about 1/2 - 2/3 of male antenna), with very short cilia.

Male genitalia (Fig. 4): Uncus apically rounded or conical; gnathos short and narrow, ending in spine-shaped point; tegumen short; valva narrow, sacculus sclerotized sparsely covered by short hairs, costal arm strong and pointed at apex; juxta very large at base with small lateral lobes which are sparsely covered by fine setae, apical part of juxta is rounded sometimes with small notch in the middle, well sclerotized and following more or less the shape of the vinculum (Fig. 4b). Vinculum long, U-shaped, strongly sclerotized. Aedeagus robust, cylindrical, with the base of the main, strong cornutus situated in an oval sclerotized capsule; there is another small cornutus long, narrow and slightly bent, terminally wider and apically rounded (Fig. 4a). Culcita placed on sternite VIII, W-shaped with a paired long scale tufts ventrally (Fig. 4c).

Female genitalia (Fig. 5): Papillae anales small and triangular, apophyses long, posterior ones about⁄longer than anterior ones; tergite VIII short; ostium well sclerotized with two laterally straight long spikes (Fig. 5a), with lateral projections at its base. Ductus bursae strong sclerotized, interrupted in the middle by a membranous part. Bursa copulatrix membranous, oval, its sclerotization is only of 1/4 of area near tube seminalis. Signum absent.

Diagnosis: *P. iberica* is closely related to *P. albipunctella* differing by external characters of the wings. In *P. iberica* (Figs. 1, 2) the forewing is less uniformly greyish and the discoidal dark brown spot is always well visible in a creamy white longitudinal streak.The hindwing is pale brownish with

marginal bands and apex blurry and darker than the central part of the wing. In *P. albipunctella* (Fig. 3) the hind wings are whitish.

The male genitalia are differing as follows: in *P. iberica* (Fig. 4) the aedeagus has a second long and slender cornutus which is terminally wider and rounded apically lying alongside the first big and strong cornutus, whereas *P. albipunctella* has only one big cornutus (Fig. 6).

In the female genitalia of *P. iberica* the ostium area has two laterally straight long spikes with lateral projections at its base (Fig. 5a). In *P. albipunctella* (Fig. 7a) these spikes are longer and slightly curved with indistinctly developed distal projections. In *P. iberica* the sclerotized part of the ductus bursae is proximally slightly bent at the inner side (Fig. 5b) whereas in *P. albipunctella* the sclerified part of the ductus bursae is longer and bent at 90-100 degrees (Fig. 7b).

Biology: Moths were collected from April to June, in semi-desert-like biotopes, with a vegetation very similar to that present in many areas of Algeria, Morocco and Tunisia. They are active by night and are attracted to light. The early stages and the larval foodplant are unknown; *P. albipunctella* is listed on *Limonium pruinosum* (L.) Chaz. (Plumbaginaceae) (CHRÉTIEN, 1911). *P. iberica*, is probably associated with many of the species that inhabit the same xerothermophilic habitat and is thought to be strongly stenochorous.

Distribution: So far known only from the south of Spain, in the provinces Almería and Murcia (Fig. 8).

Etymology: The species name *iberica*, (from Iberia), refers to the territory of the distribution of the new species.

Remarks: Specimens listed from Spain (LERAUT, 2014; PALM, 2012; VIVES MORENO, 2014; YLLA *et al*., 2008) belong to the new species *P. iberica*. The female genitalia of *P. albipunctella* were compared with Paralectotype of *Selagia albipunctella* (gen. prep. nr. 4949, U. Roesler, coll. MGAB).

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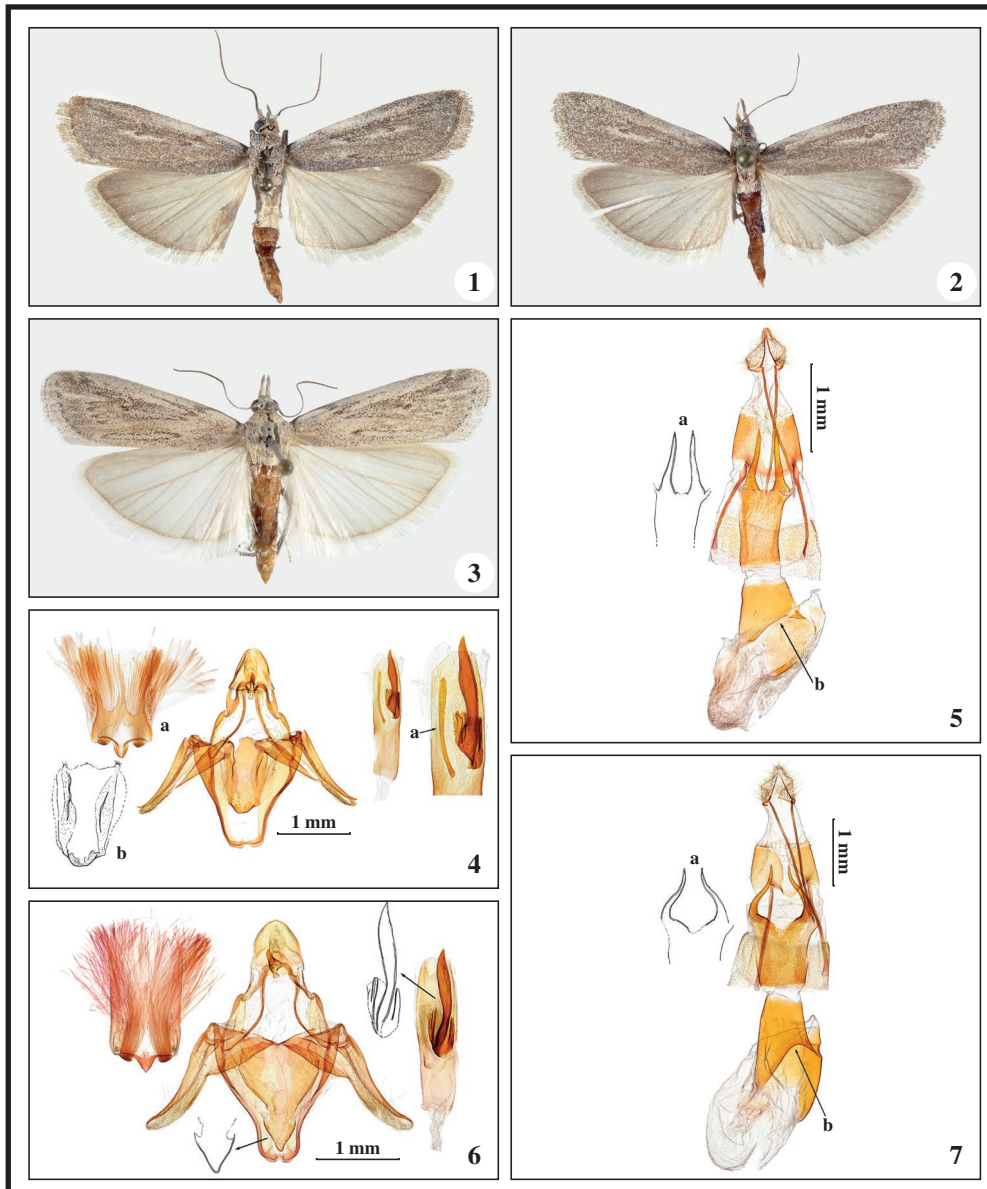

Figs. 1-7.– 1. *Pseudoinsalebria iberica* Slamka, Ylla & Macià, sp. nov., Holotype ♂, Spain, Almería, Tabernas (coll. MNCN). **2.** *Pseudoinsalebria iberica* Slamka, Ylla & Macià, sp. n., Paratype ♀, Spain, Almería, Tabernas (coll. J. Ylla). **3.** *Pseudoinsalebria albipunctella* (Chrétien, 1911). ♂, Morocco, Erfoud / Rissani area (coll. ZMUC). **4.** *Pseudoinsalebria iberica* Slamka, Ylla & Macià, sp. n., Holotype ♂, Spain, Almería, Tabernas (coll. MNCN), **a.** additional cornutus; **b.** shape of juxta; **c.** culcita. **5.** *Pseudoinsalebria iberica* Slamka, Ylla & Macià, sp. nov., Paratype ♀, Spain, Almería, Tabernas, (coll. J. Ylla), **a.** - shape of ostium; **b.** - inner edge of ductus. **6.** *Pseudoinsalebria albipunctella* (Chrétien, 1911). ♂, Morocco, Erfoud / Rissani area, (coll. ZMUC). **7.** *Pseudoinsalebria albipunctella* (Chrétien, 1911). ♀, Morocco, Erfoud / Rissani area (coll. ZMUC); **a.** - shape of ostium; **b.** - inner edge of ductus.