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New data on Pyraloidea from the Canary Islands, Spain (Lepidoptera: Pyraloidea)

P. Falck, O. Karsholt & F. Slamka

Abstract

We record 21 species of Pyraloidea as new to the Canary Islands (Spain): *Aphomia sabella* (Hampson, 1901) (Galleriinae); *Aglossa rubralis* Hampson, 1900, *Hypsopygia rubidalis* ([Denis & Schiffemüller], 1775) and *Loryma egregialis* (Herrich-Schäffer, 1838) (Pyralinae); *Merulempista saharae* Leraut, 2002, *"Pempelia" laetanella* (Lucas, 1937), *Epicrocis neftaella* (Lucas, 1911), *"Epicrocis" metamelana* (Hampson, 1896), *Acrobasis bithynella* (Zeller, 1848), *Susia uberalis* (Caradja, 1910), *Euzophera gerini* (Leraut, 2014), *Ancylosis partitella* (Ragonot, 1887), *Homoeosoma capsitanella* (Chrétien, 1911), *Gymnancyla turensis* (Ragonot, 1887), *Gymnancyla ruscinonella* (Ragonot, 1888), *Cadra furcatella* (Herrich-Schäffer, 1849) and *Valdovecaria hispanicella* (Herrich-Schäffer, 1855) (Phycitinae); *Synclera bleusei* (Oberthür, 1887) and *Duponchelia caidalis* Oberthür, 1888 (Spilomelinae); *Euchromius gozmanyi* Błeszyński, 1961 and *Euchromius ramburiellus* (Duponchel, 1836) (Crambinae). A new species *Pima tricolorella* Falck, Karsholt & Slamka, sp. n. is described. *Bazaria venosella* Asselbergs, 2009 is shown to be a synonym of *Ancylodes pallens* Ragonot, 1887 (syn. n.), and *Salebria aumontella* (Lucas, 1911) is synonymized with *Nephopteryx* (*Salebria*) *metamelana* (Hampson, 1896) (syn. n.). The occurrence of *Aglossa pinguinalis* (Linnaeus, 1758) and *Synclera traducalis* (Zeller, 1857) in the Canary Islands is questioned. Photographs of adults of all species are shown. Photographs of the genitalia are either shown or references are given to literature where they are figured.
KEY WORDS: Lepidoptera, Pyraloidea, new species, new synonym, Canary Islands, Spain.

Nuevos datos de Pyraloidea de las Islas Canarias, España (Lepidoptera: Pyraloidea)

Resumen

Registramos 21 especies de Pyraloidea como nuevas para las Islas Canarias (España): *Aphomia sabella* (Hampson, 1901) (Galleriinae); *Aglossa rubralis* Hampson, 1900, *Hypsopygia rubidalis* ([Denis & Schiffemüller], 1775) y *Loryma egregialis* (Herrich-Schäffer, 1838) (Pyralinae); *Merulempista saharae* Leraut, 2002, *"Pempelia" laetanella* (Lucas, 1937), *Epicrocis neftaella* (Lucas, 1911), *"Epicrocis" metamelana* (Hampson, 1896), *Acrobasis bithynella* (Zeller, 1848), *Susia uberalis* (Caradja, 1910), *Euzophera gerini* (Leraut, 2014), *Ancylosis partitella* (Ragonot, 1887), *Homoeosoma capsitanella* (Chrétien, 1911), *Gymnancyla turensis* (Ragonot, 1887), *Gymnancyla ruscinonella* (Ragonot, 1888), *Cadra furcatella* (Herrich-Schäffer, 1849) and *Valdovecaria hispanicella* (Herrich-Schäffer, 1855) (Phycitinae); *Synclera bleusei* (Oberthür, 1887) y *Duponchelia caidalis* Oberthür, 1888 (Spilomelinae); *Euchromius gozmanyi* Błeszyński, 1961 y *Euchromius ramburiellus* (Duponchel, 1836) (Crambinae). Se describe una nueva especie *Pima tricolorella* Falck, Karsholt & Slamka, sp. n. Se muestra lo que es una nueva sinonimia *Bazaria venosella* Asselbergs, 2009 de *Ancylodes pallens* Ragonot, 1887 (syn. n.) y *Salebria aumontella* (Lucas, 1911) se sinonimiza con *Nephopteryx* (*Salebria*) *metamelana* (Hampson, 1896) (syn. n.). Se cuestiona la presencia, en las Islas Canarias, de *Aglossa pinguinalis* (Linnaeus, 1758) y *Synclera traducalis* (Zeller, 1857). Se muestran las fotografías de los adultos de todas las

especies. Se muestran fotografías de la genitalia o se indican las referencias donde se representan en la literatura.
PALABRAS CLAVE: Lepidoptera, Pyraloidea, nuevas especies, nuevas sinonimias, Islas Canarias, España.

Introduction

The Lepidoptera fauna of the Canary Islands, is similar to other oceanic islands, less diverse than of the adjacent continental countries (Morocco, Portugal), but it is still highly interesting due to its many endemic species and subspecies. The Lepidoptera of the islands are considered well-known. Although only few local inhabitants studied these insects for longer periods, the island have been visited by numerous lepidopterists from mainland Europe.

The basic data on Pyraloidea (as "Pyralidae") of the Canary Islands are eight papers published by the Austrian lepidopterist Hans Rebel between 1892 and 1938 (REBEL, 1892, 1938). Although Pyraloidea are generally considered as belonging to the so-called Microlepidoptera they were not included in the important works on these groups by WALSINGHAM (1908) and KLIMESCH (1977-1995). In order to remedy this shortcoming ARENBERGER *et al.* (2001) started a series on papers on Canary Islands Pyraloidea, but only the first part was published. The Scopariinae of the islands were included in a revision of the Macaronesian taxa of this subfamily by NUSS *et al*. (1997) and GOATER *et al*. (2005), the latter work also included the Evergestinae. In recent years the works on Pyraloidea of Europe (in a broad sense) by SLAMKA (2006, 2008, 2013) and LERAUT (2012, 2014) have, beside of providing new records of species from the Canary Islands, proved very useful for identifying the species occurring there.

Checklists of - or including - the Pyraloidea of the islands have been published by BÁEZ (latest version 2010), SPEIDEL *et al*. (last updated 2011) and VIVES MORENO (2014). Some smaller papers dealing with new records of Pyraloidea from the Canary Islands include ASSELBERGS (2009, 2016), GASTÓN *et al.* (2015) and GASTÓN & VIVES MORENO (2017).

Recent field work in Tenerife and Fuerteventura by the first author has shown that there are still a number of Lepidoptera which have not yet been recorded and identified from these islands. In the present paper we publish information on a number of Pyraloidea new to the Canary Islands, describe a new species of *Pima* Hulst, 1888, and give comments to a few other taxa. We also include information from material belonging to the Natural History Museum of Denmark. Our material includes a few further taxa of, e. g. *Epischnia* sp. and *Metasia* sp., which could not be identified to species, and which will be dealt with later on.

Material and methods

Most specimens have been attracted to artificial light.

Label data is listed in a standardized way under each species, with the islands in alphabetic sequence and the records in chronological order.

The photographs of specimens were taken with Canon EOS700D camera and Soptop SZN 6745 Trinocular zoom microscope and Toup Tek P10500A-E3 / E3ISPM05000KPA-E3 / 5.0MP USB3 camera. Those of the genitalia by using a Soptop CX40T Trinocular biologic microscope and the same camera.

Abbreviations used

FS	František Slamka, Bratislava, Slovakia
GP	Genitalia preparation
MNCN	Collection A. Vives, Museo Nacional de Ciencias Naturales, Madrid, Spain
PF	Collection of Per Falck, Neksø, Denmark
ZMUC	Zoological Museum, Natural History Museum of Denmark, Copenhagen, Denmark

Results

GALLERIINAE

Aphomia sabella (Hampson, 1901) (Fig. 1)

Material examined: TENERIFE, Playa Paraíso, 0-50 m, 1 ♂, 3 ♀♀, 1-20-III-2017, P. Falck (PF, MNCN). **New to the Canary Islands**.

Distribution: North Africa to Middle East; south-eastern Spain (SLAMKA, 2016).

Biology: The larva feeds on *Phoenix dactylifera* L. and can occasionally be harmful to crops of dates (SLAMKA, 2006: 60-61).

Remarks: The species can be confused with the similar *Cathayia insularum* (Speidel & Schmitz, 1991), which occurs more commonly in the Canary Islands. The genitalia are figured by, e.g. LERAUT (2014: 78, 83).

PYRALINAE

Aglossa rubralis Hampson, 1900 (Fig. 2)

Material examined: FUERTEVENTURA, Lajares, 50-80 m, 5 ♂♂, 7-27-XI-2017, leg. P. Falck, genitalia slide 2683PF; Corralejo, 0-10 m, 2 ♂♂, 7-27-XI-2017, leg. P. Falck; same data, 5 ♂♂, but 27-II-19-III-2018, leg. P. Falck; Caldereta, 120 m, 1 ♂, 7-27-XI-2017, leg. P. Falck; same data, 1 ♂, but 27-II-19-III-2018, leg. P. Falck (all PF). LANZAROTE, La Degollada, 1 ♂, 1-II-1994, leg. J. P. Baungaard (ZMUC). **New to the Canary Islands**.

Distribution: North Africa and Middle East (LERAUT, 2014: 57).

Biology: The early stages and host-plant are unknown. In the Canary Islands adults have been collected during winter from November to late March.

Remarks: ARENBERGER *et al*. (2001) treated this species as *A. pinguinalis* (Linnaeus, 1758) which is a misidentification. It is doubtful if the real *A. pinguinalis* has been found in the Canary Islands. The genitalia are figured by, e. g. YLLA *et al*. (2017: 223-224).

Hypsopygia rubidalis ([Denis & Schiffemüller], 1775) (Fig. 3)

Material examined: TENERIFE, Playa Paraíso, 0-50 m, 1 ♂, 1-20-III-2017, leg. P. Falck (PF). **New to the Canary Islands**.

Distribution: North Africa, S., C. and E. Europe to Turkey and Armenia (SLAMKA, 2006: 39).

Biology: The early stages and host-plant are unknown.

Remarks: The genitalia are figured by, e.g. SLAMKA (2006: 85, 91).

Loryma egregialis (Herrich-Schäffer, 1838) (Fig. 4)

Material examined: FUERTEVENTURA, Corralejo, 0-10 m, 1 ♂, 27-II-19-III-2018, leg. P. Falck; Caldereta, 120 m, 1 ♂, 27-II-19-III-2018, leg. P. Falck; Lajares, 50-80 m, 1 ♂, 27-II-19-III-2018, leg. P. Falck (all PF). **New to the Canary Islands**.

Distribution: North Africa, southern Europe to Turkey and Middle East (SLAMKA, 2006: 49).

Biology: The early stages and host-plant are unknown.

Remarks: *L. egregialis* is a very characteristic species.

PHYCITINAE

***Pima tricolorella* Falck, Karsholt & Slamka, sp. n.** (Figs 5-6)

Holotype ♂: SPAIN, LANZAROTE, La Degollada, 5-II-1994, leg. J. P. Baungaard. Gen. prep. nr. 5340 ♂ O. Karsholt, deposited in (ZMUC).

Paratypes: FUERTEVENTURA, Corralejo, 0-10 m, 4 ♀♀, 27-II-19-III-2018, leg. P. Falck, genitalia

slide ♀ 2701PF (PF); Caldereta, 120 m, 2 ♂♂, 3 ♀♀, 27-II-19-III-2018, leg. P. Falck, genitalia slides ♀ 2705PF, ♂ 2704PF, 2714PF, 1952FS (PF, FS); Lajares, 50-80 m, 3 ♀♀, 27-II-19-III-2018, leg. P. Falck (PF, MNCN). LANZAROTE, La Degollada, 5 ♂♂, 1-4-II-1994, leg. J. P. Baungaard (ZMUC, MNCN); Las Casitas de Femes, 5 ♂♂, 1-5-II-1994, leg. J. P. Baungaard (ZMUC); Puerto del Carmen, 2 ♂♂, 1-2-II-1994, leg. J. P. Baungaard, genitalia slide ♀ 1951FS (FS, ZMUC).

Description: Male (fig. 5). Wingspan 18-21 mm. Frons and vertex with grey, white-tipped scales, vertex sometime more whitish, neck tufts ochreous brownish. Antenna about 2/3 length of forewing, brown / ochreous ringed, with short cilia (approx. 3/4 diameter of antenna). Labial palpus long (approx.2.5 diameter of the eye) and straight with grey, white-tipped scales, more whitish medially. Thorax and mesothorax greyish; tegulae ochreous brownish. Forewings narrow, generally greyish, ochreous brownish coloured with admixture of black and white scales; costa dark; from the base of costa and vein R a white streak until the post-medial line; the white streak is, from base until the ante-medial line, distinct and then becomes more or less indistinct due to suffusion with dark scales. The white streak is bordered with black scales dorsally; space between vein R and Cubital veins from base until post-medial line ochreous brownish, dividing the weak, grey brown discoidal spot; basal part of dorsum grey; ante-medial line weakly developed; at dorsum a small white spot bordered with blackish scales; post-medial line weakly developed, often interrupted; dorsal third grey with blackish scales; fringes greyish with more dark fringe lines. Hindwing pale greyish; marginal line brown; fringes pale ochreous. Abdomen greyish with suffusion of ochreous brownish scales. Female (fig. 6). Externally similar to male, antennae filiform with shorter cilia (approximately 1/4 diameter of the antenna).

Genitalia ♂ (fig. 25): Uncus rounded; gnathos short and narrow, ending in spine-shaped point; tegumen quite short; valva narrow, sacculus sclerotized covered by long spines or hairs, costal arm strong and slightly bifid at apex; juxta relatively large, weakly sclerotized, bi-lobed; vinculum long, V-shaped, strongly sclerotized. Phallus robust, slightly bent at base, with two strongly sclerotized cornuti, one of them slender and pointed, the other broad at the base, tapering towards apex (fig. 25a). Culcita placed on sternit VIII U-shaped with ventrally paired long scale tufts (fig 25b).

Genitalia ♀ (fig. 28): Papillae anales small, triangular, posterior and anterior apophyses of same length; tergite VIII short; antrum broad, weakly sclerotized on the edges. Ductus bursae uniformly wide and straight, ± membranous; bursa copulatrix elongate, ovoid with longitudinally sclerotized structures, upper part rounded and covered by fine spines, slug-shaped, ending in ductus seminalis; in the middle part of bursa copulatrix a large, strongly sclerotized blotch.

Diferential diagnosis: *P. tricolorella* is closely related to *P. boisduvaliella* (Guenée, 1845) (Europe to Central Asia) and *P. aureliae* (Leraut, 2014) (North African). *P. tricolorella* differs from them by external characters of the forewings: it has the white streak conspicuously developed only at the basis of costa until the ante-medial line (fig. 5a), while *P. boisduvaliella* and *P. aureliae* have the white streak well developed along the whole length of the wing. The space between vein R and the Cubital veins is generally pale brownish, i.e. paler than the rest of the wing, while *P. boisduvaliella* and *P. aureliae* have this space darker coloured. *P. leucoloma* (Herrich-Schäffer, 1849) (Spain, SE Europe, Turkey) and *Pima pempeliella* (Zerny, 1936) (Morocco) are quite different by external characters and in the genitalia of both sexes.

The male genitalia of *P. tricolorella* differ from those of *P. boisduvaliella* and *P. aureliae* by the strong cornuti in the phallus: one of them is slender and pointed, and the other is at the base broad, tapering towards to apex (fig. 25a). In *P. aureliae* (fig. 26) one cornutus is long and very slender and the other short and large, equally tapering into a short point (in *P. tricolorella* both cornuti are stronger, and the short one has a broader base and a more pointed apex). In *P. boisduvaliella* the basis of both cornuti are broad, and they are long and pointed (fig. 27).

The female genitalia of *P. tricolorella* are similar to those of *P. boisduvaliella* and *P. aureliae*. *P. tricolorella* differs from *P. boisduvaliella* (fig. 29) as follows: the posterior and anterior apophyses are distinctly shorter and also segment VIII is shorter; antrum is narrower, and the sclerotized structures in the bursa copulatrix are different (fig. 28a). The female genitalia of *P. tricolorella* differ

from those of *P. aureliae* as follows: apophysis posteriores and anteriores are shorter. They differ particularly in the left angle between the ductus bursa and the bursa corpulatrix, which is 170º-180º in *P. tricolorella* (fig. 28b), about 95º in *P. aureliae* and about 100º - 110º in *P. boisduvaliella* (fig. 29a); also, two distinct sclerotized longitudinally structures in the bursa copulatrix are characteristic for *P. tricolorella*.

Bionomy: Early stages and host-plant are unknown. The type series was collected in February and March in semi-deserts at low altitudes.

Distribution: So far known only from the Canary Islands, Spain (Fuerteventura and Lanzarote Islands).

Etymology: The species name *tricolorella*, meaning three-coloured, refers to the colours of the forewings of the new species.

Remark: We could not examine type material of the female of *P. aureliae* and compared the female genitalia of *P. tricolorella* with the rather schematic drawing of *P. aureliae* by LERAUT (2014: 331).

Merulempista saharae Leraut, 2002 (Fig. 7)

Material examined: FUERTEVENTURA, Corralejo, 0-10 m, 3 ♂♂, 2 ♀♀, 7-27-XI-2017, leg. P. Falck, genitalia slides ♀ 2597PF, ♂ 2598PF; Betancuria, 400 m, 2 ♀♀, 7-27-XI-2017, leg. P. Falck. TENERIFE, El Médano, 0-50 m, 1 ♂, 1-20-III-2017, leg. P. Falck (all PF). **New to the Canary Islands**.

Distribution: North Africa, Saudi Arabia.

Biology: The early stages and host-plant are unknown.

Remarks: The female genitalia are figured by LERAUT (214: 274). The male genitalia are figured here (figs. 30, 30a).

"*Pempelia*" *laetanella* (Lucas, 1937) (Fig. 8)

Material examined. FUERTEVENTURA, Betancuria, 400 m, 1 ♂, 7-27-XI-2017, leg. P. Falck, genitalia slide 2594PF (PF). **New to the Canary Islands**.

Distribution: Tunisia (LERAUT, 2014: 270).

Biology: The early stages and host-plant are unknown.

Remarks: The generic placement of this species is tentative. LERAUT writes (2014: 270) that he figures the genitalia, but that is not the case. The male genitalia are figured here (figs. 31, 31a).

Epicrocis neftaella (Lucas, 1911) (Fig. 9)

Material examined: FUERTEVENTURA, Caldereta, 120 m, 2 ♂♂, 7-27-XI-2017, leg. P. Falck; Corralejo, 0-10 m, 1 ♀, 7-27-XI-2017, leg. P. Falck (PF). **New to the Canary Islands**.

Distribution: North Africa, Cyprus (LERAUT, 2014: 344).

Biology: The larva feeds on *Acacia tortilis* (Forssk.) Hayne (LERAUT, 2014).

Remarks: The female genitalia are figured by LERAUT (2014: 346).

"Epicrocis" metamelana (Hampson, 1896) (Fig. 10)
Salebria aumontella (Lucas, 1911), **syn. n.**

Material examined: FUERTEVENTURA, 5 ♂♂, Corralejo, 0-10 m, 7-27-XI-2017, leg. P. Falck, genitalia slide 2587PF; Caldereta, 120 m, 1 ♂, 4 ♀♀, 7-27-XI-2017, leg. P. Falck. TENERIFE: El Médano, 0-50 m, 1 ♂, 1-20-III-2017, leg. P. Falck (all PF). **New to the Canary Islands**.

Distribution: Tunisia (LERAUT, 2014: 344) and Yemen (HAMPSON, 1896: 272). The records by DE PRINS & DE PRINS (2018) from Africa requires confirmation, as the associated photograph shows another species.

Biology: The early stages and host-plant are unknown.

Remarks: *Salebria aumontella* (Lucas, 1911), which was combined with *Epicrocis* by LERAUT (2014: 344), is a synonym of *Nephopteryx* (*Salebria*) *metamelana* Hampson, 1896 (in

WALSINGHAM & HAMPSON, 1896: 271, pl. 10, fig. 7) (**syn. n.**). The species is here only provisional combined with the genus *Epicrocis*, and we are unaware of its correct generic assignment. The female genitalia are figured by LERAUT (2014: 346), the male genitalia are figured here (figs. 32, 32a)

Acrobasis bithynella (Zeller, 1848) (Fig. 11)

Material examined: TENERIFE, Aguamansa, 1050 m, 1 ♂, 1♀, 8-22-XI-2017, leg. P. Falck, genitalia slides ♂ 2604PF and ♀ 2691PF (PF). **New to the Canary Islands**.

Distribution: North Africa and southern Europe to southern Russia (SPEIDEL *et al.*, 2011).

Biology: The larva is described in detail by (HUERTAS-DIONISIO, 2009: 71-72). It feeds on *Cistus* species.

Remarks: *A. bithynella* is similar to and may be confused with *A. obliqua* (Zeller, 1847). Adults of both species are rather variable. In the Canary Islands *A. bithymella* is in average larger and has a more distinct, straight fascia near the base of the forewing, compared to *A. obliqua*, and the male antennae are more dentate. In the male genitalia *A. bithynella* has shorter and broader anellus arms, and in the female genitalia *A. bithynella* has a distinctly sclerotized signum, compared to that of *A. obliqua.* The genitalia are figured by, e.g. LERAUT (2014: 356, 359). The third Canary Island species of the genus, *A. klimeschi* Roesler, 1978 is larger and has an oblique transverse line near the base of the forewing, and the male antennae are strongly serrate.

Susia uberalis (Caradja, 1910) (Fig. 12)

Material examined: FUERTEVENTURA, Corralejo, 0-10 m, 4 ♂♂, 1 ♀, 7-27-XI-2017; same data, 5 ♂♂, but 27-II-19-III-2018, leg. P. Falck; Caldereta, 120 m, 1 ♂, 1 ♀, 27-II-19-III-2018, leg. P. Falck, genitalia slide 2599PF (PF). LANZAROTE, La Degollada, 1 ♂, 1-II-1994, leg. J. P. Baungaard (ZMUC). **New to the Canary Islands**.

Distribution: Widely distributed (in three subspecies) from North Africa through Sahara to the Middle East and Arabia to Pakistan (ROESLER, 1993: 152-156).

Biology: The larva is described by CHRÉTIEN (1917: 435-436). It feed on Boraginaceae: *Heliotropium undulatum* Vahl, *Lithospermum callosum* Vahl and *Echiochilon suffruticosum* Desf.

Remarks: The Canary Island population belongs to ssp. *desertella* (Caradja, 1916). The genitalia are figured by ROESLER (1993: pl. 29, 62).

Euzophera gerini (Leraut, 2014) (Fig. 13)

Material examined: LANZAROTE, Las Casitas de Femes, 2 ♀♀, 2-3-II-1994, leg. J. P. Baungaard, genitalia slide 5342OK (ZMUC). **New to the Canary Islands**.

Distribution: Morocco and Tunisia.

Biology: The early stages and host-plant are unknown.

Remarks: Female genitalia fig. 33. The male genitalia are figured by LERAUT (2014: 387).

Ancylodes pallens Ragonot, 1887 (Fig. 14)

Bazaria venosella Asselbergs, 2009, **syn. n**.

Remarks: By checking several specimens of *A. pallens* from Tenerife and Fuerteventura it became clear that the recently described *Bazaria venosella* Asselbergs, 2009 from La Palma, Tenerife (and Malta) is a synonym of *A. pallens*. Both in male and in female genitalia and in general appearance (q. v. ROESLER, 1973) there are no differences. Also, the descriptions of the male antennae are the same: "Sinus flat, segments 3-8 with tiny sclerified thorns..." (ASSELBERGS, 2009), "Hinter dem Basalglied mit zusammengedrükten Schuppen (angedeuteter Sinus) und auf den Gliedern 3-9 mit winzigen Chitinhöckerchen, die nur erkennbar werden..." (ROESLER, 1973). ASSELBERGS (2009: 63) did not compare *B. venosella* with *A. pallens* when describing the species.

Ancylosis partitella (Ragonot, 1887) (Fig. 15)

Material examined: FUERTEVENTURA, Barranco de Esquinzo, 1 ♀, 11-I-14-II-2004, leg. R. Paas (ZMUC); Corralejo, 0-10 m, 2 ♂♂, 1 ♀, 7-27-XI-2017, leg. P. Falck; Betancuria, 400 m, 1 ♂, 7-27-XI-2017, leg. P. Falck; TENERIFE, El Médano, 0-50 m, 3 ♂♂, 1-20-III-2017, leg. P. Falck, genitalia slide 2550PF; Arona, 700 m, 1 ♀, 1-20-III-2017, leg. P. Falck, genitalia slide 2549PF (all PF). **New to the Canary Islands**.

Distribution: Widely distributed from North Africa to Arabia and into Asia. In Europe known from Malta and southern Russia (LERAUT, 2014: 413).

Biology: The early stages and host-plant are unknown.

Remarks: The genitalia are figured by ROESLER (1973: pl. 76, 141), and those of the female by LERAUT (2014: 409).

Homoeosoma capsitanella (Chrétien, 1911) (Fig. 16)

Material examined: FUERTEVENTURA, Lajares, 50-80 m, 3 ♂♂, 1 ♀, 27-II-19-III-2018, leg. P. Falck, genitalia slides 2699PF, 2703PF; Caldereta, 120 m, 3 ♂♂, 1 ♀, 27-II-19-III-2018, leg. P. Falck; Corralejo, 0-10 m, 1 ♀, 27-II-19-III-2018, leg. P. Falck (all PF). **New to the Canary Islands**.

Distribution: Throughout North Africa to Iran and Afghanistan (ROESLER, 1973: 528). In Europe known from Portugal and Spain (VIVES MORENO, 2014: 413).

Biology: The early stages and host-plant are unknown.

Remarks: The genitalia are figured by ROESLER (1973: pl. 82, 149).

Gymnancyla turensis (Ragonot, 1887) (Fig. 17)

Material examined: FUERTEVENTURA, Corralejo, 0-10 m, 1 ♂, 7-27-XI-2017, leg. P. Falck, genitalia slide 2602PF (PF). **New to the Canary Islands**.

Distribution: From North Africa eastwards to Central Asia (ROESLER, 1993).

Biology: The larva is described by CHRÉTIEN (1917: 425). It feeds on *Nitraria retusa* (Forssk.) Asch. (= *N. tridentata* Desf.) (Nitrariaceae).

Remarks: The genitalia are figured by ROESLER (1993: pl. 20, fig. 23 male, pl. 53, fig. 23 female).

Gymnancyla ruscinonella (Ragonot, 1888) (Fig. 18)

Material examined: FUERTEVENTURA, Corralejo, 0-10 m, 1 ♂, 1 ♀, 7-27-XI-2017, leg. P. Falck, genitalia slide 2584PF; Las Parcelas 70 m, 3 ♂♂, 2 ♀♀, 7-27-XI-2017, leg. P. Falck; Lajares, 50-80 m, 2 ♂♂, 7-27-XI-2017, leg. P. Falck, genitalia slide 2583PF (all PF). **New to the Canary Islands**.

Distribution: North-western Africa, Spain, southern France (LERAUT, 2014: 279).

Biology: The larva feeds on *Haloxylon salicornium* (Moc.) Bunge ex Boiss. and *Atriplex halymus* L. (Amaranthaceae) (LERAUT, 2014: 279).

Remarks: The female genitalia are figured by VIVES MORENO & HUERTAS-DIONISIO (2002: 90).

Cadra furcatella (Herrich-Schäffer, 1849) (Fig. 19)

Material examined: TENERIFE, Las Cañadas, 2000 m, 1 ♀, 30-VII-1979, leg. P. Stadel Nielsen, genitalia slide 5333OK (ZMUC). **New to the Canary Islands**.

Distribution: From North Africa and Spain eastwards to Afghanistan (LERAUT, 2014: 434).

Biology: Larvae on different kinds of organic debris (LERAUT, *op cit*.). According to ROESLER (1973: 644) the life history is not known for sure.

Remarks: The genitalia are figured by, e.g. ROESLER (1973: pl. 91, 158).

Valdovecaria hispanicella (Herrich-Schäffer, 1855) (Fig. 20)

Material examined: GRAN CANARIA, Pinos de Galdar, 1200 m, 1 ♀, 22-VII-1984, leg. Olsen, Skule & Stadel, genitalia slide 5341OK (ZMUC). **New to the Canary Islands**.

Distribution: Spain to south-western France (LERAUT, 2014: 101).

Biology: The early stages and host-plant are unknown.

Remarks: We figure the male genitalia (figs. 34, 34a).

SPILOMELINAE

Synclera bleusei (Oberthür, 1887) (Fig. 21)

Material examined: FUERTEVENTURA, Corralejo, 0-10 m, 1 ♀, 7-27-XI-2017, leg. P. Falck; Las Parcelas, 70 m, 1 ♀, 7-27-XI-2017, leg. P. Falck (all PF). TENERIFE, Los Cristianos, 1 ♂, 29-XII-2003, leg. O. Karsholt (ZMUC); Playa Paraíso, 0-50 m, 1 ♂, 1-20-III-2017, leg. P. Falck (PF).

Distribution: North Africa to Iran and Afghanistan (SLAMKA, 2013: 117).

Biology: The early stages are described in detail by CHRÉTIEN (1917: 448-449). The larva feeds on *Daemia cordata* R.Br. (now: *Pergularia tomentosa* L.) (Asclepiadaceae). Also, *Suaeda vera* (Forssk. ex. J. F. Gmel.) is listed as a host-plant (CATANIA, 2018: 174).

Remarks: *S. bleusei* is not listed from the Canary Islands by VIVES MORENO (2014). It was, however, already recorded from Tenerife by REBEL (1906: 37) as *"Nymphula bleusei*", and from Fuerteventura by MUUS (2011). It is unclear to us if the record from the Canary Islands as *Synclera traducalis* (Zeller, 1857) by SLAMKA (2013: 116) and VIVES MORENO (2014: 423) refers *S. bleusei*, and the occurrence of the former in these islands requires confirmation. Recently the species was recorded in this journal from Malta under the name of *Bocchoris bleusei* (CATANIA, 2018), who also refers to the record from Tenerife published by REBEL (1906).

Duponchelia caidalis Oberthür, 1888 (Fig. 22)

Material examined: FUERTEVENTURA, Las Parcelas, 70 m, 4 ♂♂, 1 ♀, 7-27-XI-2017, leg. P. Falck, genitalia slide 2625PF; same data, 1 ♀, but 27-II-19-III-2018, leg. P. Falck (all PF). **New to the Canary Islands**.

Distribution: Algeria, Tunisia, Egypt, Palestine (SLAMKA, 2013: 107), United Arab Emirates (*Piletocera opacalis* Rebel, 1927, ASSELBERGS, 2007: 557-558).

Biology: The larva feeds on *Acacia farnesiana* (L.) Willd. and *A. tortilis* (Forssk.) Hayne (Fabaceae) (CHRÉTIEN, 1917: 449).

Remarks: The genitalia are figured by SLAMKA (2013: 176, 250).

CRAMBINAE

Euchromius gozmanyi Błeszyński, 1961 (Fig. 23)

Material examined: FUERTEVENTURA, Las Parcelas, 70 m, 2 ♂♂, 1 ♀, 27-II-19-III-2018, leg. P. Falck, genitalia slide 2700PF (PF). **New to the Canary Islands**.

Distribution: North Africa and western Mediterranean countries (SLAMKA, 2008: 24).

Biology: The larva feeds on *Salicornia* (SCHOUTEN, 1992: 224).

Remarks: The genitalia are figured by, e. g. SLAMKA (2008: 164-165, 193).

Euchromius ramburiellus (Duponchel, 1836) (Fig. 24)

Material examined: FUERTEVENTURA, Corralejo, 0-10 m, 1 ♀, 7-27-XI-2017, leg. P. Falck, genitalia slide 2635PF; TENERIFE, El Médano, 0-50 m, 1 ♂, 2 ♀♀, 1-20-III-2017, leg. P. Falck genitalia slide 2636PF (all PF).

Distribution: North Africa, southern Europe, Turkey, Middle East and Arabia to Central Asia (SLAMKA: 2008: 24).

Biology: The larva is described by CHRÉTIEN (1917: 414). It feeds on dead leaves of *Frankenia pallida* (Boiss.) (Frankeniaceae). It is also reported feeding on dead leaves of *Cirsium, Hieracium* and *Cichorium* (Astraceae) (SCHOUTEN, 1992: 228).

Remarks: This species is dealt with here because it was recorded from the Canary Islands

(Fuerteventura) by SCHOUTEN (1992: 227-228), but not included from there by VIVES MORENO (2014). The genitalia are figured by, e. g. SLAMKA (2008: 165, 193).

Discussion

VIVES MORENO (2014) listed 128 species of Pyraloidea from the Canary Islands, and the additions published by GASTÓN *et al*. (2015), ASSELBERGS (2016) and VIVES MORENO & GASTÓN (2017) raised the number to 132 species. In the present paper, we add 22 species, synonymize one species and question the occurrence of two species in the Canary Islands, bringing the number of Pyraloidea recorded from these islands up to 151 species.

The fact that a few weeks of collecting in the Canary Islands by the first author, and the study of the rather small collection of Canary Islands Pyraloidea in one museum (ZMUC) have resulted in a 15% increase in the number of recorded species questions our postulate in the introduction of this paper that "The Lepidoptera of the islands are considered well known". We find it more likely that there are still many species to be discovered and recorded from the Canary Islands.

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*P. F.
Aarsdalevej 22
DK-3730 Neksø
DINAMARCA / *DENMARK*
E-mail: per.falck@live.dk
https://orcid.org/0000-0002-0030-9214

O. K.
Zoological Museum
Natural History Museum of Denmark
Universitetsparken 15
DK-2100 Copenhagen
DINAMARCA / *DENMARK*
E-mail: okarsholt@snm.ku.dk
https://orcid.org/0000-0002-6969-2549

F. S.
Racianska 61
SK-83102 Bratislava
ESLOVAQUIA / *SLOVAKIA*
E-mail: f.slamka@nextra.sk
https://orcid.org/0000-0002-7048-3410

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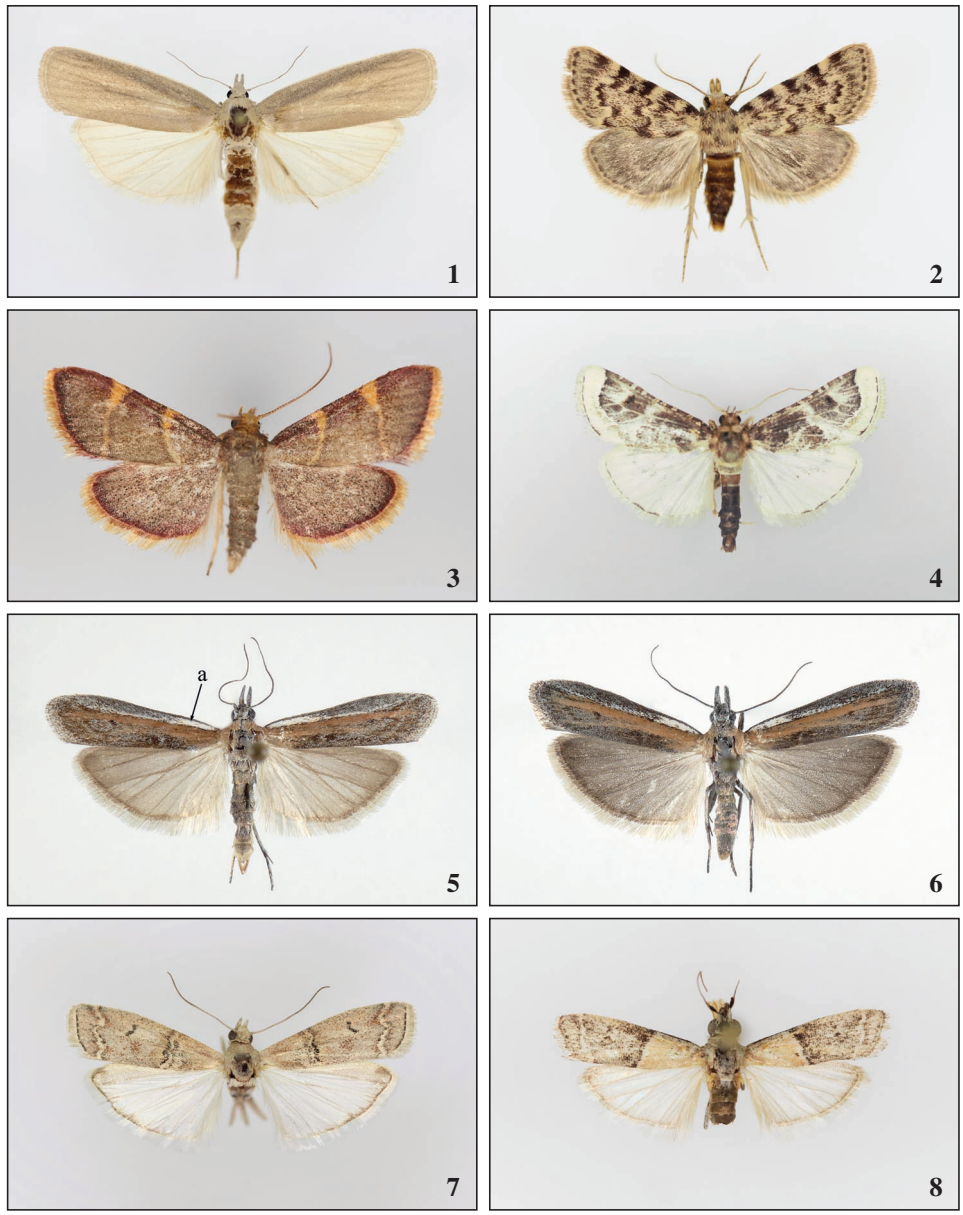
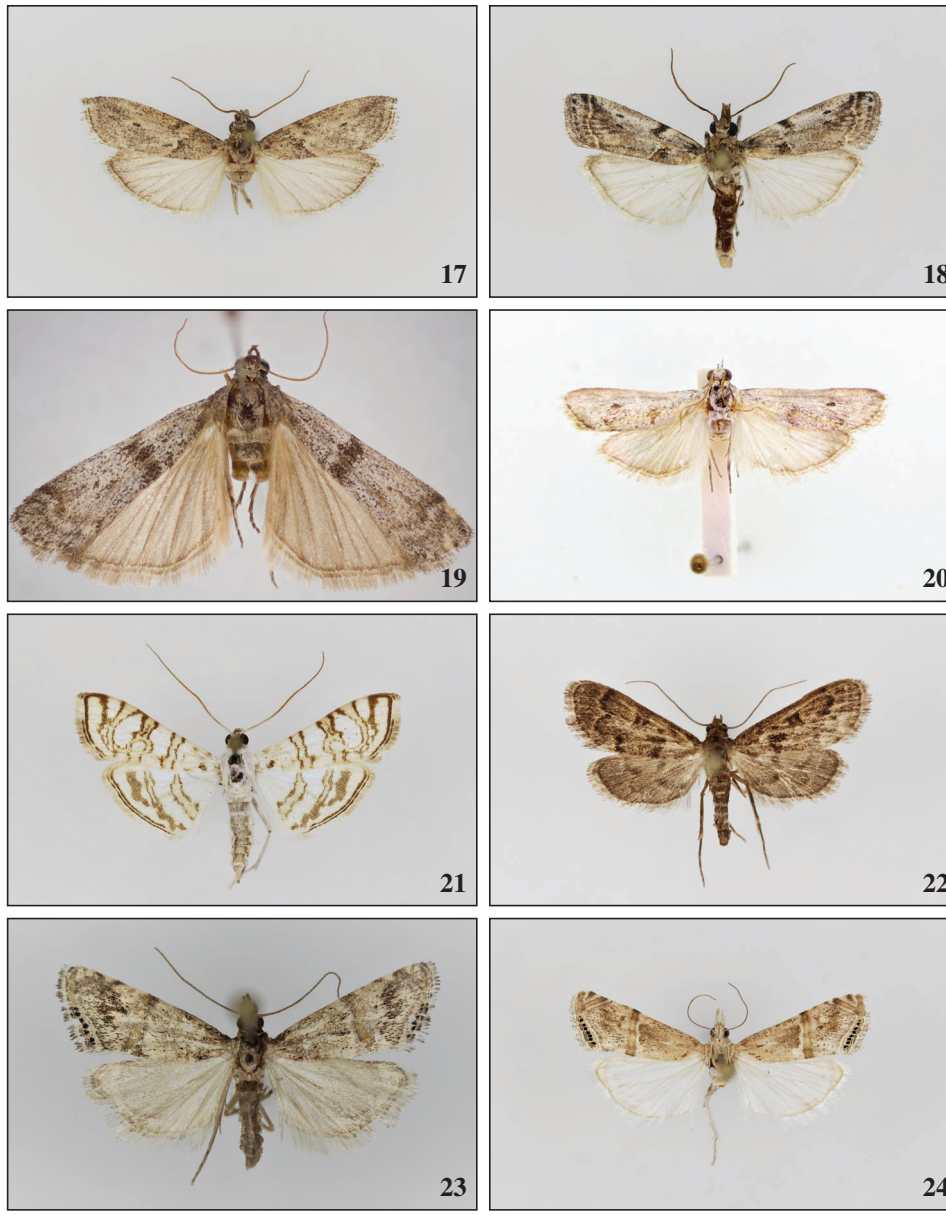
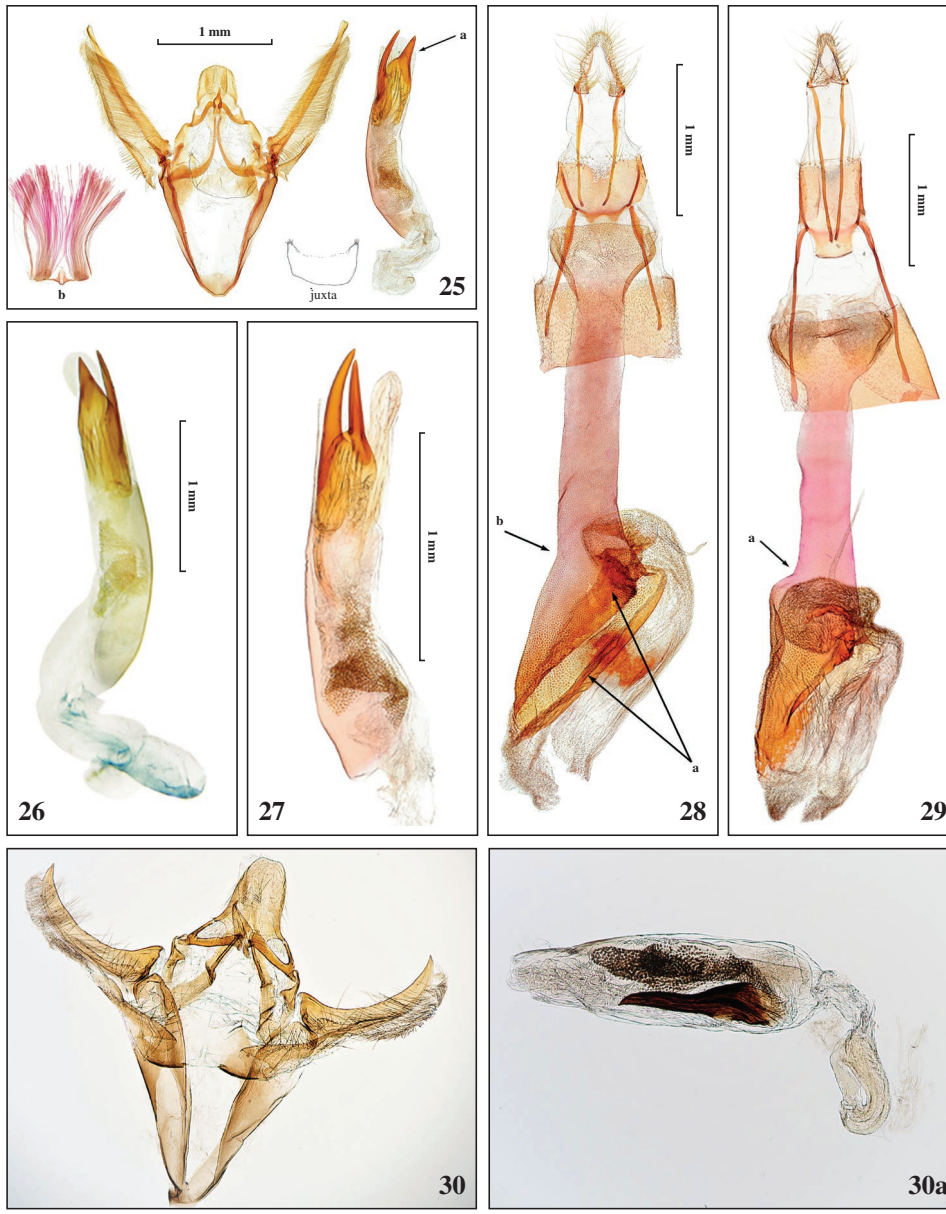


Figs. 1-8.– 1. *Aphomia sabella* (Hampson, 1901), ♀, Tenerife, 44 mm. **2.** *Aglossa rubralis* Hampson, 1900, ♂, Fuerteventura, 24 mm. **3.** *Hypsopygia rubidalis* ([Denis & Schiffemüller], 1775), ♂, Tenerife, 16 mm. **4.** *Loryma egregialis* (Herrich-Schäffer, 1838), ♂, Fuerteventura, 24 mm. **5.** *Pima tricolorella* Falck, Karsholt & Slamka, sp. n., paratype, ♂, Lanzarote, 20.5 mm. **5a.** whitish streak. **6.** *Pima tricolorella* Falck, Karsholt & Slamka, sp. n., paratype, ♀, Fuerteventura, 18.5 mm. **7.** *Merulempista saharae* Leraut, 2002, ♀, Fuerteventura, 20 mm. **8.** *"Pempelia" laetanella* (Lucas, 1937), ♂, Fuerteventura, 13 mm.

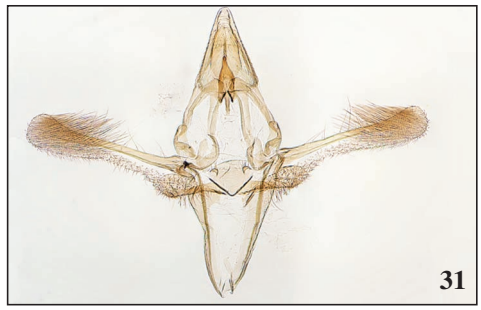
Figs 9-16.– 9. *Epicrocis neftaella* (Lucas, 1911), ♂, Fuerteventura, 17.5 mm. **10.** *"Epicrocis" metamelana* (Hampson, 1896), ♀, Fuerteventura, 18 mm. **11.** *Acrobasis bithynella* (Zeller, 1848), ♂, Tenerife, 23 mm. **12.** *Susia uberalis* (Caradja, 1910), ♀, Fuerteventura, 23.5 mm. **13.** *Euzophera gerini* (Leraut, 2014), ♀, Lanzarote, 22 mm. **14.** *Ancylodes pallens* Ragonot, 1887, ♂, Tenerife, 22 mm. **15.** *Ancylosis partitella* (Ragonot, 1887), ♂, Tenerife, 17 mm. **16.** *Homoeosoma capsitanella* (Chrétien, 1911), ♂, Fuerteventura, 20 mm.

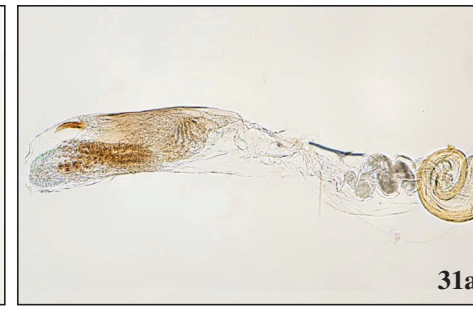


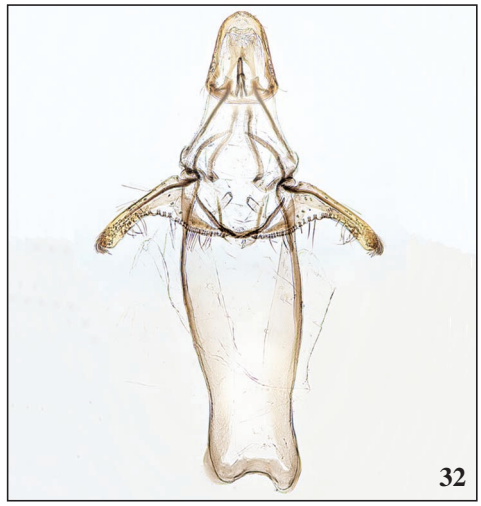
Figs. 17-24.– 17. *Gymnancyla turensis* (Ragonot, 1887), ♂, Fuerteventura, 19 mm. **18.** *Gymnancyla ruscinonella* (Ragonot, 1888), ♂, Fuerteventura, 17 mm. **19.** *Cadra furcatella* (Herrich-Schäffer, 1849), ♀, Tenerife, 21 mm. **20.** *Valdovecaria hispanicella* (Herrich-Schäffer, 1855), ♂, Gran Canaria, 22 mm. **21.** *Synclera bleusei* (Oberthür, 1887), ♀, Fuerteventura, 20 mm. **22.** *Duponchelia caidalis* Oberthür, 1888, ♂, Fuerteventura, 12.5 mm. **23.** *Euchromius gozmanyi* Błeszyński, 1961, ♂, Fuerteventura, 13 mm. **24.** *Euchromius ramburiellus* (Duponchel, 1836), ♂, Tenerife, 17 mm.

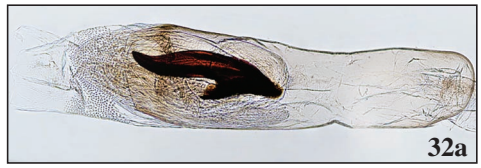


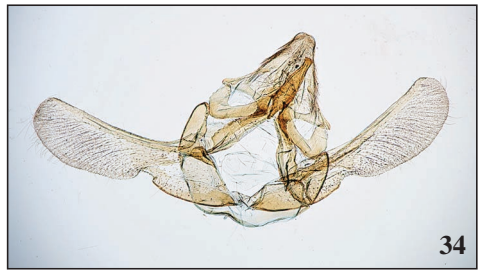
Figs. 25-30.– 25. *Pima tricolorella* Falck, Karsholt & Slamka, sp. n., andropigio, Lanzarote, GP1951FS; **25a**. cornutus; **25b.** culcita. **26.** *Pima aureliae* (Leraut, 2014), holotype, phallus of andropigio, "P. Leraut det. prép. Nº 6932" (photo J. Minet). **27.** *Pima boisduvaliella* (Guenée, 1845), phallus of andropigio, Germany, GP1141FS. **28.** *Pima tricolorella* Falck, Karsholt & Slamka, sp. n., paratype, ginopigio, Fuerteventura, GP1952FS; **28a.** sclerotized structures; **28b.** angle between ductus bursa and bursa copulatrix. **29.** *Pima boisduvaliella* (Guenée, 1845), ginopigio, Hungary, GP1112FS. **29a.** angle between ductus bursa and bursa copulatrix. **30.** *Merulempista saharae* Leraut, 2002, Fuerteventura, andropigio, GP2598PF; **30a.** phallus.

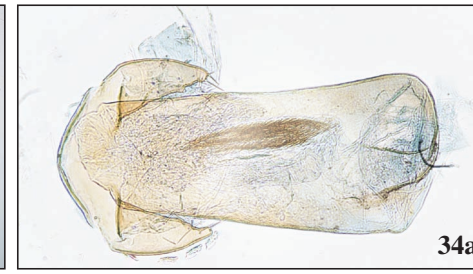












Figs 31-34.– 31. *"Pempelia" laetanella* (Lucas, 1937), Fuerteventura, andropigio, GP2594PF; **31a.** phallus. **32.** *"Epicrocis" metamelana* (Hampson, 1896), Fuerteventura, andropigio, GP2719PF; **32a.** phallus. **33.** *Euzophera gerini* (Leraut, 2014), ginopigio, GP5342OK. **34.** *Valdovecaria hispanicella* (Herrich-Schäffer, 1855), Gran Canaria, andropigio, GP5341OK; **34a.** phallus.