

New data on Praydidae, Oecophoridae, Stathmopodidae, Scythrididae and Cosmopterigidae from the Canary Islands, Spain (Insecta: Lepidoptera)

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Abstract

Based on recent field work, mainly by the first author, we record the following eleven species of Microlepidoptera as new to the Canary Islands: *Prays peregrina* Agassiz, 2007 (Praydidae); *Epicallima mikkolai* (Lvovsky, 1995) (Oecophoridae); *Stathmopoda auriferella* (Walker, 1864) (Stathmopodidae); *Scythris albidella* (Stainton, 1867), *Scythris eucharis* Walsingham, 1907, *Scythris amplexella* Bengtsson, 2002, *Scythris mus* Walsingham, 1898, and *Enolmis acanthella* (Godart, 1824) (Scythrididae); *Bifascia nigralbella* (Chrétien, 1915), *Bifascioides leucomelanella* (Rebel, 1917), and *Pyroderces apicinotella* (Chrétien, 1915) (Cosmopterigidae). We also describe three hitherto undescribed species: *Tortilia flavescens* Falck & Karsholt, sp. n. (Stathmopodidae), *Scythris brithae* Falck & Karsholt, sp. n., and *Scythris grancanariella* Falck & Karsholt, sp. n. (Scythrididae). The family Oecophoridae, in its present concept, is new to the Canary Islands. We also deal with two species of Cosmopterigidae, which were formerly recorded from the Canary Islands, but not included in the catalogue by VIVES MORENO (2014): *Anatrachyntis rileyi* (Walsingham, 1882) and *C. gerasimovi* Danilevsky, 1950. We moreover discuss the genera *Coccidiphila* Danilevsky, 1950 and *Ascalenia* Wocke, 1876 in the Canary Islands and conclude that the occurrence of *C. ledereriella* (Zeller, 1850), *C. danilevskyi* Sinev, 1997 and *Ascalenia vanella* (Frey, 1860) in these islands is unconfirmed, and they should be removed from the list of Canary Island Lepidoptera. 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: Insecta, Lepidoptera, Oecophoridae, Praydidae, Cosmopterigidae, Stathmopodidae, Scythrididae, new species, Canary Islands, Spain.

Nuevos datos sobre Praydidae, Oecophoridae, Stathmopodidae, Scythrididae y Cosmopterigidae de las Islas Canarias, España (Insecta: Lepidoptera)

Resumen

Sobre la base del reciente trabajo de campo, principalmente por el primer autor, registramos como nuevas las siguientes once especies de Microlepidoptera para las Islas Canarias: *Prays peregrina* Agassiz, 2007 (Praydidae); *Epicallima mikkolai* (Lvovsky, 1995) (Oecophoridae); *Stathmopoda auriferella* (Walker, 1864) (Stathmopodidae); *Scythris albidella* (Stainton, 1867), *Scythris eucharis* Walsingham, 1907, *Scythris amplexella* Bengtsson, 2002, *Scythris mus* Walsingham, 1898, and *Enolmis acanthella* (Godart, 1824) (Scythrididae); *Bifascia nigralbella* (Chrétien, 1915), *Bifascioides leucomelanella* (Rebel, 1917) y *Pyroderces apicinotella* (Chrétien, 1915) (Cosmopterigidae). También describimos tres especies hasta ahora desconocidas: *Tortilia flavescens* Falck & Karsholt, sp. n. (Stathmopodidae), *Scythris brithae* Falck & Karsholt, sp. n., y *Scythris grancanariella* Falck & Karsholt, sp. n. (Scythrididae). La familia Oecophoridae, en su concepto actual, es nueva para las Islas Canarias. También añadimos dos especies de Cosmopterigidae, que fueron registradas de las Islas Canarias, pero no incluidas

en el catálogo por VIVES MORENO (2014): *Anatrachyntis rileyi* (Walsingham, 1882) y *C. gerasimovi* Danilevsky, 1950. Tratamos de los géneros: *Coccidiphila* Danilevsky, 1950 y *Ascalenia* Wocke, 1876 en las Islas Canarias y concluimos la presencia de *C. ledereriella* (Zeller, 1850), *C. danilevskyi* Sinev, 1997 y *Ascalenia vanella* (Frey, 1860) en estas islas, están sin confirmar y deben de ser retiradas de la lista de Lepidoptera de las Islas Canarias. Se muestran fotografías de los adultos de todas las especies. Se muestran fotografías de algunas de las genitalias o se dan las referencias, en la literatura, donde están representadas.

PALABRAS CLAVE: Insecta, Lepidoptera, Oecophoridae, Praydidae, Cosmopterigidae, Stathmopodidae, Scythrididae, nuevas especies, Islas Canarias, España.

Introduction

The Lepidoptera of the Canary Islands are considered well-known. Due to its pleasant climate many entomologists have visited the islands and collected Lepidoptera there. Similar to other oceanic islands the fauna of the Canary Islands is less diverse than that of the adjacent continental countries (Morocco, Portugal), but includes a number of endemic species.

The smaller Lepidoptera, the so-called Microlepidoptera, are often less well studied compared with the larger Macrolepidoptera. The most comprehensive studies of Microlepidoptera of the Canary Islands are those by WALSINGHAM (1908) and KLIMESCH (1977-1995), as well as the papers by Hans Rebel published between 1892 and 1938 (REBEL, 1892, 1938). Further information on Canary Island Microlepidoptera can be found in taxonomic revisions covering larger distribution areas, identification handbooks and in scattered publications in entomological journals.

Checklists of the Lepidoptera of the Canary Islands have been published by BÁEZ (latest version 2010), and VIVES MORENO (2014). In the present paper we refer to the latter.

Recent field work by the first author has revealed a number of hitherto unrecorded or even undescribed species of Lepidoptera occurring in the Canary Islands. In a previous paper (FALCK *et al.*, 2019) we dealt with the families Pyralidae and Crambidae, adding 22 species of these families to the fauna of the islands. In the present paper we present new data of several smaller families of Microlepidoptera. It is planned to publish data on further families when these have been studied in detail.

Material and methods

Most specimens have been attracted to artificial light. The two new Scythrididae species were either found resting on rocks or netted in afternoon sunshine.

Label data are listed in a standardized way under each species, with the islands in alphabetic sequence, and the records in chronological order. Data on holotypes are cited literally from their labels. 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 genititalia by using a Soptop CX40T Trinocular microscope and the same camera.

Abbreviations used

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

Results

PRAYDIDAE

A small family with only 47 species worldwide (NIEUKERKEN *et al.*, 2011: 214). Three of

these, belonging to the genus *Prays* Hübner, [1825] are already known from the Canary Islands (VIVES MORENO, 2014: 105).

Prays peregrina Agassiz, 2007 (Fig. 1)

Material examined: FUERTEVENTURA, Betancuria, 400 m, 1 ♀, 7-27-XI-2017, leg. P. Falck, genitalia slide 2641PF (PF). **New to the Canary Islands.**

Distribution: Only known from the London and Kent area in Great Britain since 2003 (AGASSIZ, 2007).

Biology: The early stages are described and figured by PLANT (2016: 311-317). The larva mines leaves of *Ruta chalepensis* L. In the last instar it can also feed from the outside of a leaf. *Ruta chalepensis* is probably introduced to the Canary Islands (GONZÁLEZ, 2019).

Remarks: The genitalia are figured by, e.g. AGASSIZ (2007: 409). *P. peregrina* is a presumed adventive species in Great Britain. The geographical origin of the species is unknown, but it is suggested to have originated from Asia (AGASSIZ, 2007).

OECOPHORIDAE

Oecophoridae is a large family with more than 3,300 species in 313 genera (NIEUKERKEN *et al.*, 2011: 214), being most diverse in Australia. The larvae of most species feed on decaying organic material, like dead wood, leaf litter etc. No species of Oecophoridae is listed from the Canary Islands by VIVES MORENO (2014) and based on that catalogue the family -in its present concept- is thus new to these islands. However, BÁEZ (2010: 244) lists one species of Oecophoridae, *Harpella forficella* (Scopoli, 1763) from Gran Canaria. We suppose that it is not listed from the Canary Islands by VIVES MORENO (2014), because it is most likely an accidental imported species which has not established itself in the islands. Other taxa formerly referred to the Oecophoridae by, e.g. BÁEZ (2010) have now been transferred to other families like Depressariidae and Stathmopodidae.

Epicallima mikkolai (Lvovsky, 1995) (Fig. 2)

Material examined: GRAN CANARIA, Puerto Rico 0-50 m, 1 ♂, 1 ♀, 17-30-IX-2018, leg. P. Falck, genitalia slide 2863PF (PF). **New to the Canary Islands.**

Distribution: Known from Tunisia from the type-series (LVOVSKY, 1995) and two specimens ex. larvae *Phoenix dactylifera* L. from Spain: ALICANTE, Elche, 86 m, 8-IV-1998 (VIVES MORENO, 2003: 95, fig. 4).

Biology: The early stages are not described. The Spanish specimens were bred from larvae found on *Phoenix dactylifera* L. (Arecaceae).

Remarks: The genitalia are figured by LVOVSKY (1995), and the male genitalia by VIVES MORENO (2003: 105).

STATHMOPODIDAE

The Stathmopodidae is known from 408 described species, mostly with a tropical distribution (NIEUKERKEN *et al.*, 2011: 215). Only one species, *Neomariania rebeli* (Walsingham, 1894), was hitherto recorded in this family from the Canary Islands (VIVES MORENO, 2014: 134).

Stathmopoda auriferella (Walker, 1864) (Fig. 3)

Material examined: GRAN CANARIA, Pie de la Cuesta, 500 m, 1 ♂, 11-24-VI-2018, leg. P. Falck; Puerto Rico, 0-50 m, 1 ♂, 1 ♀, 11-24-VI-2018, same data, 3 ♂♂, but 17-30- IX-2018, leg. P. Falck, genitalia slides 2764PF, 2765PF (all PF). **New to the Canary Islands.**

Distribution: Middle East, Far East of Russia and widespread in the Oriental and Afrotropical regions (KOSTER & SINEV, 2003: 64). In Europe there have been some cases of introduction; one or two larvae in slight silken tubes in the calyx of a *Punica granatum* L. (Pomegranate) in the British

Isles, Devon, Plymouth, 30-X-2006 (HECKFORD, 2013), and one adult on an ornamental plant, *Melodorum fruticosum* Lour. in a greenhouse in the Netherlands, 29-VII-2009 (EPPO Global Database, 2010).

Biology: According to KOSTER & SINEV (2003: 64) the larva lives in silken galleries among various types of decaying vegetable matter. It has sometimes been recorded from living flowers, seeds or shoots, injured by other invertebrates. It is known as a pest of minor importance of pomegranates.

Remarks: Probably an adventive species which is already established on the southern part of Gran Canaria.

***Tortilia flavescens* Falck & Karsholt, sp. n.** (Figs 4, 18, 18a)

Holotype ♂, SPAIN: GRAN CANARIA, Pie de la Cuesta 8 km nnv, 895 m, 17-30-IX- 2018, leg. P. Falck", genitalia slide 2814PF (coll. ZMUC). Paratypes: SPAIN, GRAN CANARIA, Puerto Rico, 0-50 m, 3 ♂♂, 17-30-IX-2018, leg. P. Falck; El Sao, 110 m, 1 ♂, 17-30-IX-2018, leg. P. Falck; Pie de la Cuesta, 500 m, 4 ♂♂, 17-30-IX-2018, leg. P. Falck; 8 km nnv, Pie de la Cuesta, 895 m, 9 ♂♂, 17-30-IX-2018, leg. P. Falck, genitalia slides 2736PF, 2811PF, 2839PF (coll. PF, MNCN).

Description: Wingspan 10-11mm. Head and eye tuft white; neck dark brown; thorax light yellow. Scapula dark brown, distally and ventrally whitish; antenna lamellate dark brown. Labial palpus ascending, dorsally white with distal part of segment 2 dark brown, ventrally white; the length of segment 3 about two-thirds of segment 2. Forewing shining light yellow, with more or less suffusion of brown scales especially towards dorsum, sometimes forming two diffuse brown markings. Hindwing grey, with light yellow cilia. Abdomen light yellow.

Genitalia ♂ (Fig. 18): Tegumen with uncus and gnathos large, not as long as valva; valva long and slender with the distal part of cucullus bent, dorsal edge clearly concave, costa short, ampulla diminutive, sacculus short, about 2/5 length of valva; phallus (Fig. 18a) short and almost quadrangular, distally with apical strong hook.

Genitalia ♀: Unknown.

Differential diagnosis: The lack of distinct pattern of the forewing separates *T. flavescens* from most other members of *Tortilia*. The genitalia are different from all other *Tortilia* species: the long, slender valva, the bent distal part of cucullus and the short quadrangular phallus are characteristic for the new species.

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

Distribution: Only known from the Spanish island of Gran Canaria.

Remarks: Hitherto only eight species of *Tortilia* are known (SINEV, 2015: 57-58).

Etymology: The species is named after the coloration of the forewing (*flavescens* means yellowish in Latin).

SCYTHRIDIDAE

This family is known from 669 species Worldwide (NIEUKERKEN *et al.*, 2011: 215), most of them in the genus *Scythis* Hübner, [1825]. Thirteen species have been recorded from the Canary Islands (VIVES MORENO, 2014: 151-155), nine being endemic to these islands (BENGTSSON, 1997). Here we add six species for the Canary Islands and describe two new species.

Scythis albidella (Stainton, 1867) (Fig. 5)

Material examined: FUERTEVENTURA, Betancuria, 400 m, 4 ♂♂, 1 ♀, 7-27-XI-2017, leg. P. Falck; Las Parcelas, 70 m, 3 ♂♂, 7-27-XI-2017 leg. P. Falck, genitalia slides 2575PF, 2576PF, 2678PF; Corralejo, 0-10 m, 1 ♂, 1 ♀, 27-II-19-III-2018, leg. P. Falck; Caldereta, 1 ♂, 27-II-19-III-2018, leg. P. Falck, genitalia slide 2698PF (all PF). **New to the Canary Islands.**

Distribution: Throughout North Africa to the Middle East and the Balkans (BENGTSSON, 1997: 57).

Biology: The early stages and host-plant are unknown. All the specimens were attracted to artificial light.

Remarks: The genitalia are figured by BENGTSSON (1997: Figs 48, 271).

Scythris eucharis Walsingham, 1907 (Fig. 6)

Material examined: FUERTEVENTURA, Corralejo, 0-10 m, 1 ♂, 1 ♀, 7-27-XI-2017, leg. P. Falck, genitalia slides 2580PF, 2681PF; Betancuria, 400 m, 1 ♀, 7-27-XI-2017, leg. P. Falck, genitalia slide 2578PF (all PF). **New to the Canary Islands.**

Distribution: Algeria, Israel and Tunisia (BENGTSSON, 1997: 85).

Biology: The type series was reared from *Traganum nudatum* Moq. (BENGTSSON, 1997: 85), which has not been found in the Canary Islands (GONZÁLEZ, 2019). On the biotope *Traganum moquinii* Webb occurs commonly and may be the hostplant for *S. eucharis*. All the specimens were attracted to artificial light.

Remarks: The genitalia are figured by BENGTSSON (1997: Figs 93, 314).

Scythris amplexella Bengtsson, 2002 (Fig. 7)

Material examined: FUERTEVENTURA, Corralejo, 0-10 m, 1 ♀, 7-27-XI-2017, leg. P. Falck, genitalia slide 2577PF (PF). **New to the Canary Islands.**

Distribution: Oman and Yemen (BENGTSSON, 2002a, b).

Biology: The early stages and host-plant are unknown. The specimen was attracted to artificial light.

Remarks: The genitalia are figured by BENGTSSON (2002a: 110).

Scythris camelella Walsingham, 1907 (Fig. 8)

Material examined: TENERIFE, El Médano, 0-50 m, 2 ♂♂, 1-20-III-2017, leg. P. Falck, genitalia slide 2571PF (PF). **New to the Canary Islands.**

Distribution: Algeria, Egypt, Iran, Sudan, Tunisia and Yemen (BENGTSSON, 2002b: 70).

Biology: The early stages and host-plant are unknown. All the specimens were attracted to artificial light.

Remarks: The genitalia are figured by BENGTSSON (1997: Figs. 160, 363).

Scythris mus Walsingham, 1898 (Fig. 9)

Material examined: FUERTEVENTURA, Betancuria, 400 m, 4 ♂♂, 1 ♀, 7-27-XI-2017, leg. P. Falck, genitalia slide 2679PF; same data, 2 ♂♂, 2 ♀♀, but 27-II-19-III-2018, leg. P. Falck; Vallebrón, 250 m, 1 ♂, 2 ♀♀, 7-27-XI-2017, leg. P. Falck; Corralejo, 0-10 m, 2 ♂♂, 7-27-XI-2017, leg. P. Falck; Caldereta, 120 m, 2 ♂♂, 1 ♀, 7-27-XI-2017, leg. P. Falck (all PF); LANZAROTE, Urb. Famara, 55 m, 1 ♂, 2-8-XI-2018, leg. B. Skule & C. Hviid; 2 km SW Urb. Famara, Las Laderas, 55 m, 5 ♂♂, 2-8-XI-2018, leg. B. Skule & C. Hviid (all ZMUC); TENERIFE, El Médano, 0-50 m, 1 ♂, 1-20-III-2017, leg. P. Falck, genitalia slide 2680PF (PF). **New to the Canary Islands.**

Distribution: Widely distributed in the Mediterranean area, from Spain and North Africa to Saudi Arabia (BENGTSSON, 1997: 137).

Biology: The early stages and host-plant are unknown. All the specimens were attracted to artificial light.

Remarks: The genitalia are figured by BENGTSSON (1997: Figs 159, 367).

***Scythris brithae* Falck & Karsholt, sp. n.** (Figs 10, 19, 19a, 20)

Holotype ♂: "SPAIN, GRAN CANARIA, Los Tilos de Moya, 500 m, 11-24-VI-2018, leg. P. Falck" (coll. ZMUC). Paratypes: GRAN CANARIA, Los Tilos de Moya, 500 m, 10 ♂♂, 3 ♀♀, 11-24-VI-2018,

leg. P. Falck, genitalia slides 2731PF, 2733PF, 2860PF; same data, 2 ♂♂, but 17-30-IX-2018, leg. P. Falck, genitalia slide 2862PF (coll. PF, MNCN).

Description: Wingspan 9.5-10.5 mm. Head, collar, tegula and thorax dark brown, with a different degree of mixture with pale ochreous scales, especially around the neck. Scapula dark brown with mixture of ochreous; antenna dark brown, length 3/4 of the forewing, cilia in male about 0.7 of antenna diameter, in female absent. Labial palpus slightly ascending, dark brown on the upper side, beige ventrally, length of third segment 3/4 of second segment. Forewing blackish brown with two incomplete whitish fasciae and two or more pale blotches in distal third and near the apex; an outward oblique fascia at 1/3 to the middle of forewing; outer fascia from tornus more straight reaching the middle of forewing; cilia dark grey. Hindwing width about 1/2 of the forewing, dark fuscous; cilia dark grey, ochreous towards base. Underside of wings uniform dark grey. Legs dark fuscous, paler ochreous inwardly. Abdomen dark brown dorsally, laterally and ventrally beige ochreous, more whitish in female.

Genitalia ♂ (Fig. 19): Almost symmetrical. Uncus anvil-shaped, slightly depressed posteriorly. Gnathos small and apex hook-like. Tegumen with lateral, rounded protrusions. Valvae almost symmetrical, basally subtriangular, with a long lateral tapering process. Phallus almost straight in caudal half then meandering with two bends. Tergum VIII (Fig. 19a) subtriangular with two small lateral protrusions and asymmetrical anvil-shaped posterior tip; sternum VIII (Fig. 19a) subrectangular, posterior end with two digitate rounded processes.

Genitalia ♀ (Fig. 20): Sternum VII with almost invisible median fissure. Segment VIII subrectangular with a small spine anteriorly. Antrum small and funnel-shaped.

Differential diagnosis: The dark colour of forewing and the incomplete, oblique fascia separate *S. brithae* from the other members of the *S. petrella*-group; however, *S. arachnodes* has dark coloured forewings too, but there are two complete diffuse white fasciae. The genitalia are different from the other species: the anvil-shaped uncus, an almost symmetrical valva with long tapering process, the phallus almost straight in caudal part and with two bends distally in the male, and small funnel-shaped antrum, sternum VII with almost invisible median fissure and no sclerotized, anterior, V-shaped structure in the female are characteristic.

Biology: The early stages are unknown, but the larva probably feeds on lichens. The type-specimens were collected sitting on - or disturbed from a rock wall with abundant growth of lichens.

Distribution: Only known from the type-locality Los Tilos de Moya, Gran Canaria, Canary Islands.

Remarks: *S. brithae* and *S. grancanariella* belong to the *S. petrella* species-group (BENGTSSON, 1997: 138); *S. arachnodes* Walsingham, 1908, *S. hierroella* Klimesch, 1986, *S. petrella* Walsingham, 1908 and *S. pseudarachnodes* Bengtsson, 1997. These species are rather small with dark forewings and whitish markings in form of more or less complete fasciae and sometimes additional pale blotches. Male genitalia with sigmoid or meandering phallus, lateral, rounded extension on tegumen, small valvae and asymmetrical segment VIII. Female genitalia are usually with visible antrum; sternum VII with median fissure, furnished with sclerotized, anterior, V-shaped structure. Larva feeds on lichens. Endemic species group of the Canary Islands (BENGTSSON, 1997: 138). BENGTSSON (1997: 10) notes that classification is further complicated by the fact that the female genitalia in several cases do not match a grouping based on the male genitalia, which seems to be the case with the two new species, sternum VII has a slurred median fissure and lacks the sclerotized, anterior V-shaped structure.

Etymology: The species is named after the wife of the first author, Britha Falck, who has been very supportive during many collecting trips to the Canary Islands.

***Scythris grancanariella* Falck & Karsholt, sp. n.** (Figs 11, 21, 21a, 22)

Holotype ♀: "SPAIN, GRAN CANARIA, Los Tilos de Moya, 500 m, 11-24-VI-2018, leg. P. Falck"

genitalia slide (coll. ZMUC). Paratypes: GRAN CANARIA, Los Tilos de Moya, 500 m, 1 ♂, 2 ♀♀, 11-24-VI-2018, leg. P. Falck, genitalia slides 2732PF, 2961PF (coll. PF, MNCN).

Description: Wingspan 9-10 mm. Head, collar and neck dark grey-brown, slightly bronzy, especially the head. Mesothorax and thorax dark grey-brown with whitish scales posteriorly. Scapula dark brown; antenna dark brown, length 3/4 of forewing, cilia in male longer than antenna diameter, in female shorter than antenna diameter. Labial palpus slightly ascending, dark grey-brown, length of third segment about 3/4 of second segment. Forewing greyish brown, darker towards costa; white markings rather diffuse giving the moth a speckled appearance; a bent fascia at 1/3, a diffuse zigzag fascia from tornus almost to costa, often with a dark spot in the middle, scattered white scales and a diffuse white patch in apical area; cilia grey. Hindwing width about 3/4 of forewing, dark grey; cilia grey. Underside of wings uniform greyish brown. Abdomen dark greyish brown, ventrally whitish.

Genitalia ♂ (Fig. 21): Asymmetrical. Uncus anvil-shaped. Tegumen with lateral, rounded protrusions. Gnathos small and hook-like. Valvae asymmetrical, left valva digitate, basally subtriangular, dorsally a spatulated process and a hook-like process (sacculus?), tapering with pointed apex; right valva as left, but sacculus only with a small spine. Phallus basally straight, dorsally sigmoid. Tergum VIII (Fig. 21a) almost symmetrical, with lateral oval protrusion, posterior part digitate with two rounded protrusions. Sternum VIII (Fig. 21a) subrectangular with lateral tongue-shaped protrusion, posterior part asymmetrical with two rounded sclerotized processes.

Genitalia ♀ (Fig. 22): Sternum VII with slurred median fissure, rim slightly sclerotized. Segment VIII sub-rectangular. Antrum funnel-shaped, clearly visible, ductus bursae with a circular sclerotized dilatation.

Differential diagnosis: External appearance of *S. grancanariella* is similar to *S. hierroella* Klimesch, 1986, *S. petrella* Walsingham, 1908 and *S. pseudoarachnodes* Bengtsson, 1997; the lighter greyish forewings with more blurred whitish markings separates *S. grancanariella* from *S. brithae*, which occurs in the same locality, and *S. arachnodes* Walsingham, 1908. The genitalia of *S. grancanariella* are clearly distinct from the other species in the group: the asymmetrical valvae with the hook-shaped process on the left, the oval protrusion on tergum VIII in the male, and the visible antrum and the swelling of ductus bursa in the female are characteristic.

Biology: The early stages are unknown, but the larva probably feeds on lichens. Adult specimens were flying in the afternoon sun.

Distribution: Only known from the type-locality Los Tilos de Moya, Gran Canaria, Canary Islands.

Remarks: See previous species.

Etymology: The species is named after the Canary Island: Gran Canaria, where the type-series was collected.

Enolmis acanthella (Godart, 1824) (Fig. 12)

Material examined: LANZAROTE, above Barranco la Elvira, at Haria, 575 m, 1 ♂, 2-XI-2018, leg. B. Skule & C. Hviid, genitalia slide 5351OK (ZMUC). **New to the Canary Islands.**

Distribution: South-western Europe and North-western Africa (BENGTSSON, 1997: 170).

Biology: The early stages and host-plant are unknown, but the larva is assumed to feed on lichens. The specimen was attracted to artificial light.

Remarks: The genitalia are figured by BENGTSSON (1997: 255, 278).

COSMOPTERIGIDAE

This is a rather large family with 1792 species in 135 genera (NIEUKERKEN *et al.*, 2011: 215). Thirteen species have been recorded from the Canary Islands (VIVES MORENO, 2014: 151-159). Here we add five species which are new to these islands. The first two belong to the subfamily Chrysopleiinae and the other three to the subfamily Cosmopteriginae.

Bifascia nigralbella (Chrétien, 1915) (Fig. 13)

Material examined: FUERTEVENTURA, Corralejo, 0-10 m, 2 ♂♂, 1 ♀, 7-27-XI-2017, leg. P. Falck; Betancuria, 400 m, 1 ♂, 7-27-XI-2017, leg. P. Falck; Caldereta, 120 m, 1 ♀, 7-27-XI-2017, leg. P. Falck (all PF). **New to the Canary Islands.**

Distribution: Spain, North Africa, Middle East eastwards to Pakistan and western India, Central Asia eastwards to Mongolia (KOSTER & SINEV, 2003: 187).

Biology: *Acacia* Mill. and *Tamarix* L. (KOSTER & SINEV, 2003: 187).

Remarks: The genitalia are figured by KOSTER & SINEV (2003: Figs 155).

Bifascioides leucomelanella (Rebel, 1917) (Fig. 14)

Material examined: TENERIFE, Arona, 600 m, 1 ♂, 1-20-III-2017, leg. P. Falck (PF). **New to the Canary Islands.**

Distribution: Malta and North Africa (KOSTER & SAMMUT, 2006).

Biology: Unknown.

Remarks: The genitalia are figured by KOSTER & SINEV (2003: Figs 156).

Pyroderces apicinotella (Chrétien, 1915) (Figs 15, 23)

Material examined: FUERTEVENTURA, Corralejo, 0-10 m, 1 ♂, 7-27-XI-2017, leg. P. Falck, genitalia slide 2672PF; GRAN CANARIA, Puerto Rico, 0-50 m, 1 ♀, 11-24-VI-2018, leg. P. Falck; TENERIFE, Armenime, 0-50 m, 2 ♀♀, 1-20-III-2017, leg. P. Falck, genitalia slides 2508PF, 2516PF (all PF). **New to the Canary Islands.**

Genitalia ♀ (Fig. 23): Apophyses anteriores about 0.8 as long as apophyses posteriores. Ostium small, surrounded by a sclerotized rim. Sterigma large, bulbous, U-shaped, tapering anteriorly and with bent sclerotized rim in middle. Ductus bursae about two-thirds as long as corpus bursae. Corpus bursae oval; signa tongue-shaped with broader base and surrounded by several smaller blunt sclerotized spines. The large U-shaped sterigma and signa are characteristic.

Distribution: Tunisia, Libya and Iraq (KOSTER & SINEV, 2003: 129).

Biology: Unknown.

Remarks: The species was hitherto only known from males.

Anatrachyntis rileyi (Walsingham, 1882) (Fig. 16)

Material examined: GRAN CANARIA, El Sao, 110 m, 1 ♀, 11-24-VI-2018, leg. P. Falck, genitalia slide 2736PF.

Distribution: The species is found in much of the warm or tropical areas of the Old World, Australia, South and North America and Caribbean (COCK & BURRIS, 2013).

Biology: The larvae have been recorded from rotten cotton bolls, cotton seeds, corn, Milo maize, stems of corn, corn husks, flowers of castor bean, etc. (KOSTER & SINEV, 2013).

Remarks: This species is included here because it was recorded from the Canary Islands (Tenerife) by KOSTER & SINEV (2003: 130), but not included from there by VIVES MORENO (2014). The genitalia are figured by, e. g. KOSTER & SINEV (2003: 280, 340).

Coccidiphila Danilevsky, 1950

During the 20th Century several authors, e.g. WALSINGHAM (1908: 963-964) and KLIMESCH (1983: 105) listed *Coccidiphila ledereriella* (Zeller, 1850) from the Canary Islands. TRAUOGOTT-OLSEN (1986) proved that *Coccidiphila* in these islands was represented by at least three species: *C. gerasimovi* Danilevsky, 1950, *C. riedli* (Traugott-Olsen, 1986) and *C. kasypinkeri* (Traugott-Olsen, 1986). He also included *C. ledereriella*, based on literature records. BÁEZ (2010: 237) listed the same four species as TRAUOGOTT-OLSEN, and *C. patriciae* Nel & Nel, 2000.

KOSTER & SINEV (2003: 133-136), in their treatment of the European Cosmopterigidae included the following species from the Canary Islands: *C. gerasimovi*, *C. riedli*, *C. kasypinkeri*, and the then recently described *C. patriciae*. They referred Canary Island records of *C. lederiella* to *C.*

riedli. KOSTER & SINEV (2003: 134) considered *C. patriciae*, which was described from two females with distorted genitalia, as a doubtful taxon, and Sjaak Koster (in litt.) is of the opinion that it is probably a synonym of *C. gerasimovi*.

In the recent catalogue by VIVES MORENO (2014: 157) the following species of *Coccidiphila* are listed from the Canary Islands: *C. patriciae*, *C. kasypinkeri*, *C. riedli* and *C. danilevskyi* Sinev, 1997, the latter with the synonym "*ledereriella* sensu Traugott-Olsen, 1986". The status of *C. ledereriella* and *C. danilevskyi* as distinct species is unclear KOSTER & SINEV (2003: 135), and according to Koster (in litt.) they are most likely synonyms.

Awaiting further research, especially based on studied of the DNA of the involved species, we refrain from establishing new synonyms here. However, we are of the opinion that there are three confirmed species of *Coccidiphila* in the Canary Islands: *C. gerasimovi*, *C. riedli* and *C. kasypinkeri*, and one species of doubtful status (*C. patriciae*). The occurrence of *C. ledereriella* and / or *C. danilevskyi* in these islands is unconfirmed, and they should be removed from the list of Canary Island Lepidoptera.

Coccidiphila gerasimovi Danilevsky, 1950 (Fig. 17)

Material examined: FUERTEVENTURA, Betancuria, 400 m, 1 ♂, 7-27-XI-2017, leg. P: Falck, genitalia slide, 2568PF; Corralejo, 0-10 m, 1 ♂, 4 ♀♀, 7-27-XI-2017, leg. P: Falck, genitalia slides 2569PF, 2671PF; Lajares 50-80 m, 1 ♀, 7-27-XI-2017, leg. P: Falck, genitalia slide 2570PF. GRAN CANARIA, El Sao, 110 m, 2 ♂♂, 11-24-VI-2018, leg. P. Falck, genitalia slide 2794PF; Puerto Rico, 0-50 m, 2 ♂♂, 2 ♀♀, 11-24-VI-2018, leg. P. Falck; Los Tilos de Moya, 500 m, 3 ♂♂, 1 ♀, 11-24-VI-2018, leg. P. Falck; Pie de la Cuesta, 500 m, 1 ♂, 1 ♀, 17-30-IX-2018, leg. P. Falck (all PF). LANZAROTE, 0.8 km S Conil, 1.4 km N Tias, 240 m, 1 ♂, 2-8-XI-2018, leg. B. Skule og C. Hviid (ZMUC). TENERIFE, Adeje, 300 m, 1 ♀, 1-20-III-2017, leg. P. Falck, genitalia slide 2513PF; Aguamansa, 1050 m, 1 ♂, 1-20-III-2017, leg. P. Falck, genitalia slide 2514 (all PF).

Distribution: Mediterranean countries from Portugal to Turkey, Middle East and Caucasus (KOSTER & SINEV, 2003: 134).

Biology: The larva feed on eggs of Coccoidea (KOSTER & SINEV, 2003).

Remarks: This species is included here because it was recorded from the Canary Islands (Tenerife) by KOSTER & SINEV (2003: 130), but not included from there by VIVES MORENO (2014). The genitalia are figured by, e. g. KOSTER & SINEV (2003: 280, 340).

Ascalenia Wocke, 1876

Two species of *Ascalenia* have been recorded from the Canary Islands: *A. vanella* (Frey, 1860) and *A. acaciella* Chrétien, 1915 (KOSTER & SINEV, 2003: 177, 180; VIVES MORENO, 2014: 155). The occurrence of *A. vanella* is based on KASY (1969: 345) who writes: "Dünen im Süden von Gran Canaria bei Maspalomas". In his review of family Walshiidae from the Canary Islands KLIMESCH (1983: 106) only deals with one *Ascalenia* species, viz. *A. acaciella* from: "GRAN CANARIA: Maspalomas, Dunengebiet" and "LA GOMERA: Hermigua". At the same time (KLIMESCH, 1983: 106) -under *A. acaciella* and without mentioning *A. vanella*- he refers to KASY (1969: 362-365). Our interpretation is that Kasy's specimen(s) of *A. vanella* had by then been identified as *A. acaciella*. This is not surprising to us, as the latter is the only *Ascalenia* occurring in the dune area by Maspalomas, where *Acacia* grows plentiful. Based on this we propose to remove *A. vanella* from the list of Lepidoptera occurring in the Canary Islands.

Discussion

The Lepidoptera fauna of the Canary Islands consists of the following elements: 1) endemic species, 2) species with a wider distribution (most often including North Africa and western Europe, 3) occasional or regularly migrant species, 4) species originally brought to the islands by man,

having now become established there, and 5) accidentally introduced species, which have not become established in the islands.

The two new species of *Scythris* described above almost certainly belong to the endemic species, not only because that have only been found in the Canary Islands, but also because they belong to the *S. petrella*-group, which are considered as endemic to the islands. Although *Tortilia flavescens* Falck & Karsholt, sp. n. at moment should be considered endemic, we are of the opinion that it more likely belongs to “group 4”, and that it has been introduced to the Canary Islands (like *Stathmopoda auriferella*), but its origin is presently unknown. That is also the case for *Prays peregrina*, which is at present only known from the U. K., but most likely originates from Asia. The remaining new species belong to “group 2”, and their occurrence in the Canary Islands has thus hitherto been overlooked.

It is a main focus for both field work and taxonomic studies to keep trace of the taxa of a certain group of organisms occurring in a given area. Checklists and catalogues are indispensable tools for that, but a main problem is that during the preparation of such works species previously listed in such lists are not always critically evaluated. During the preparation of the present paper we became aware of three species of Cosmopterigidae (*Coccidiphila ledereriella*, *C. danilevskyi* and *Ascalenia vanella*), which are listed from the Canary Islands in the most recent checklist of the Lepidoptera occurring there, but which - due to different mistakes - do not belong to the fauna. We are of the opinion that not only the addition of species but also the removal of misplaced species represent equally important progress towards a better knowledge of the fauna of the Canary Islands.

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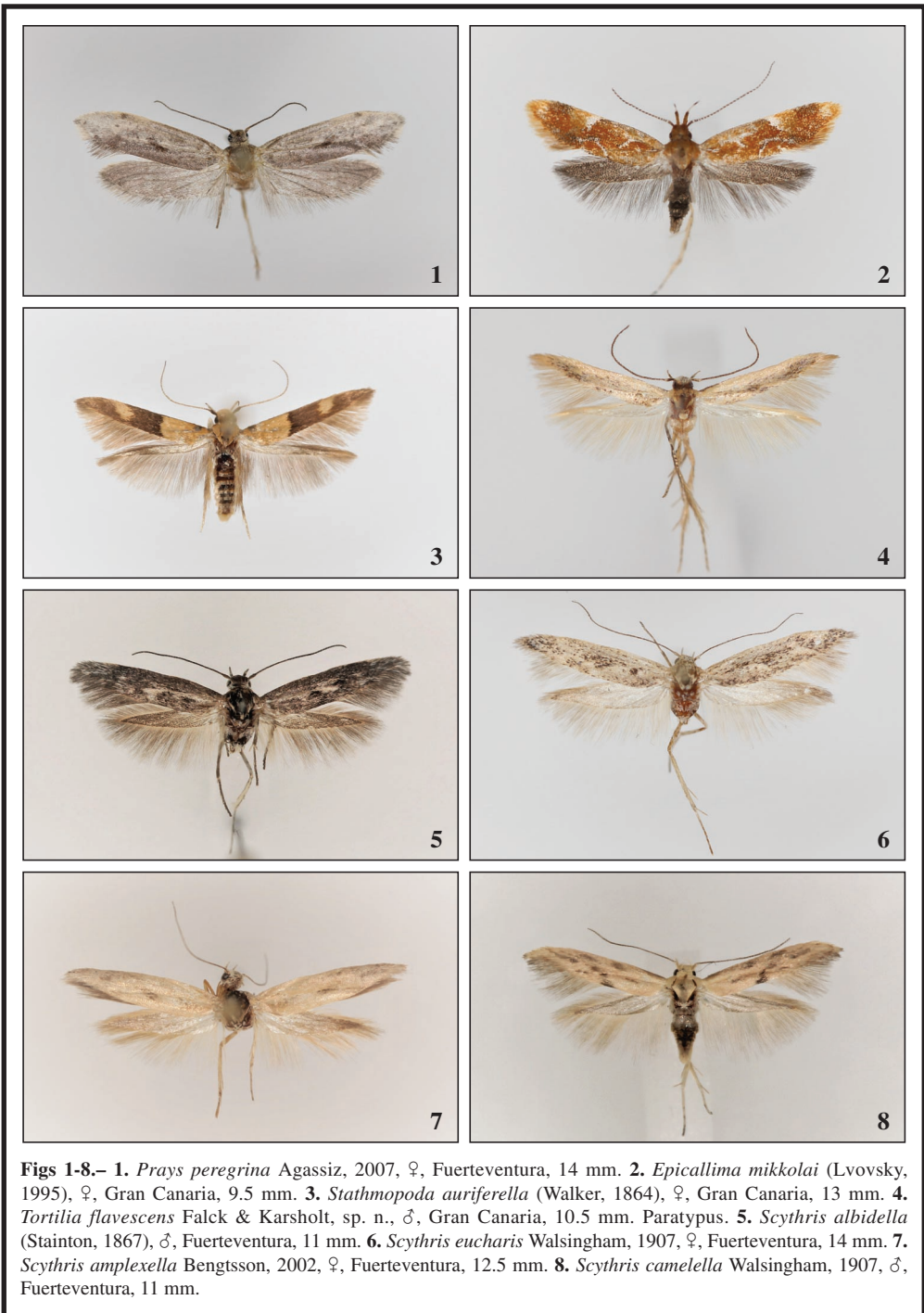
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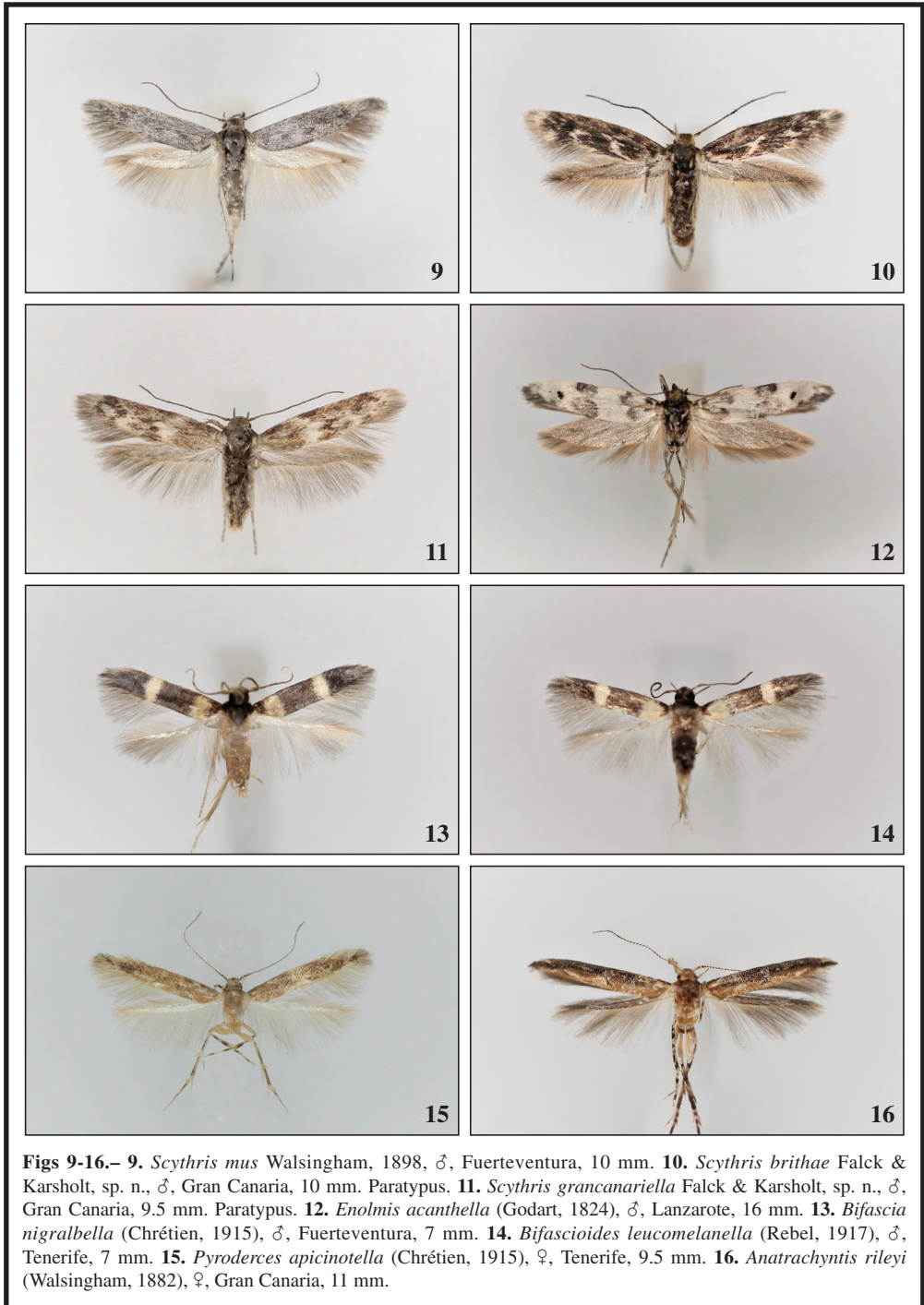
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Figs 9-16.– **9.** *Scythris mus* Walsingham, 1898, ♂, Fuerteventura, 10 mm. **10.** *Scythris brithae* Falck & Karsholt, sp. n., ♂, Gran Canaria, 10 mm. Paratypus. **11.** *Scythris grancanariella* Falck & Karsholt, sp. n., ♂, Gran Canaria, 9.5 mm. Paratypus. **12.** *Enolmis acanthella* (Godart, 1824), ♂, Lanzarote, 16 mm. **13.** *Bifascia nigralbella* (Chrétien, 1915), ♂, Fuerteventura, 7 mm. **14.** *Bifascioides leucomelanella* (Rebel, 1917), ♂, Tenerife, 7 mm. **15.** *Pyroderces apicinotella* (Chrétien, 1915), ♀, Tenerife, 9.5 mm. **16.** *Anatrachyntis rileyi* (Walsingham, 1882), ♀, Gran Canaria, 11 mm.



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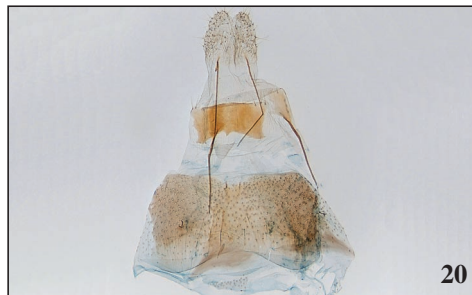
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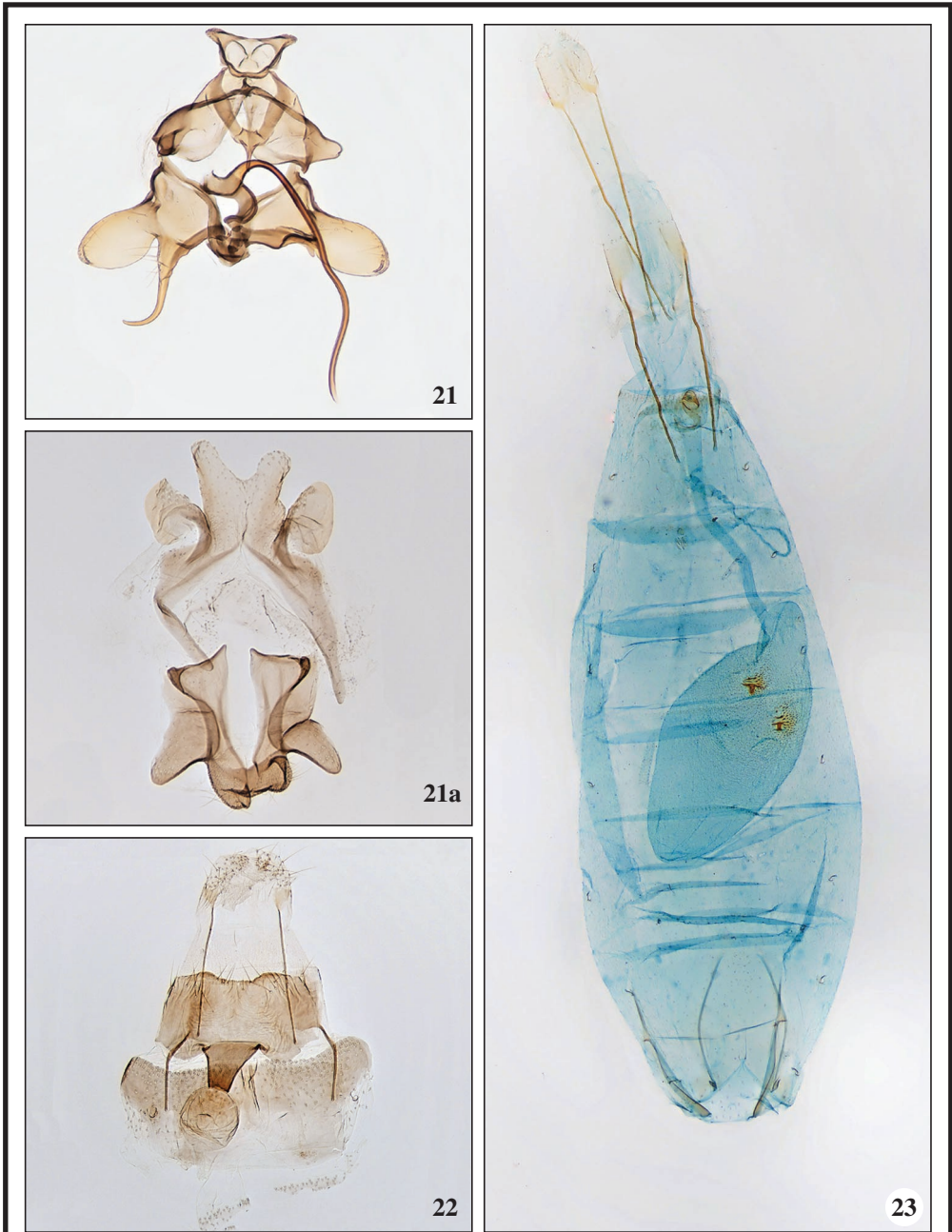


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Figs 17-20.– 17. *Coccidiphila gerasimovi* Danilevsky, 1950, ♂, Tenerife, 9 mm. 18. *Tortilia flavescens* Falck & Karsholt, sp. n., Gran Canaria, ♂, GP2886PF. 18a. Phallus, GP2814PF. 19. *Scythris brithae* Falck & Karsholt, sp. n., Gran Canaria, ♂, GP2860PF. 19a. Segment VIII. 20. *Scythris brithae* Falck & Karsholt, sp. n., Gran Canaria, ♀, GP2733PF.



Figs 21-23.— **21.** *Scythris grancanariella* Falck & Karsholt, sp. n., Gran Canaria, ♂, GP2732PF. **21a.** Segment VIII. **22.** *Scythris grancanariella* Falck & Karsholt, sp. n., Gran Canaria, ♀, GP2730PF. **23.** *Pyroderces apicinotella* (Chrétien, 1915), Tenerife, ♀, GP2508PF.