

## Synopsis of the Neotropical *Cochylini* (Lepidoptera: Tortricidae)\*

Józef RAZOWSKI

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**Abstract.** All the known *Cochylini* are discussed and short diagnoses provided. 33 new species and 3 new genera are described. The drawings of genitalia except for the new species are not published because they are easily accessible in the known literature. The area studied is larger than that of the Neotropical region and corresponds with the area adopted in the "Atlas of Neotropical Lepidoptera".

**Key words:** *Cochylini*, *Tortricidae*, revision, Neotropical region

Józef RAZOWSKI, Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Sławkowska 17, 31-016 Kraków, Poland

### I. GENERAL

**Preface.** Studies on the Neotropical *Cochylini* were begun in 1877 with the description of a few species from Colombia by P. C. ZELLER. The publication of the Lepidoptera-Heterocera part of the Biologia Central-Americana by WALSINGHAM in 1913-1914 further stimulated interest in this group and many species were added by E. MEYRICK, A. BUSCK and others. The first paper dealing exclusively with the *Cochylini* (RAZOWSKI, 1967) increased the number of known species from 58 to 84. So far 42 genera and 401 species (14 unplaced) have been recorded from this area.

Recent studies have been based mainly on the collections of some major American and British institutions and the materials gathered by Dr. V. O. BECKER, Planaltina, Brazil, and Dr. J. A. POWELL of California University, Berkeley.

Although the number of known taxa is fairly large, our knowledge on *Cochylini* is still far from complete, as almost each sample of material comprises a new species. Large areas of the South American continent and Central America are practically unexplored.

As the data on the Neotropical cochylini are dispersed in many small publications, I decided to revise and summarize them in this synopsis. Short data important to determination, such as descriptions of external characters and genitalia, are given but the drawings

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are presented only in cases of new species. The drawings published are easily accessible in publications of the last ten years, listed in this paper.

The area studied does not exactly fit the actual area of the Neotropical Region. Its northern limits are of practical importance only and follow those adopted in the "Atlas of Neotropical Lepidoptera" (ed. by J. B. HEPPNER) and the "Moths of America north of Mexico (R. W. HODGES et al., edit.). Its limits follow the northern frontier of Mexico, the Nearctic Subregion, however, extends much farther to the south (broken line in maps, figs 1-4). The main purpose of such interpretation of this area is to make this paper comparable with the two above mentioned series.

A c k n o w l e d g m e n t s . It is a great pleasure for me to express my thanks to all who helped in the realization of this paper and especially to Prof. Dr. Jerry A. POWELL, Berkeley and Dr. John E. RAWLINS, Pittsburgh, for lending a vast material for study. I also thank Marek KOPEĆ who made numerous genitalia slides and some pencil sketches.

M o r p h o l o g y . I discussed the morphology of cochylini (RAZOWSKI, 1970) on the basis of the Palaearctic fauna. Some data on the Nearctic *Cochylini* have been given by POUGE and MICKEVICH (1990) and the diagnosis of the tribe has been compiled by HORAK (1991) and HORAK & BROWN (1991). The musculature of the male genitalia was studied mainly by KUZNETSOV and STEKOLNIKOV on the Palaearctic material (papers in Russian, mentioned by RAZOWSKI, 1981). Immature stages were treated by SWATSCHEK (1958, the larvae) and BRADLEY et al. (1973, the pupae). The abdominal scent organs are discussed by RAZOWSKI (1990).

B i o l o g y . There are few data on the biology of this tribe and the biology of Neotropical taxa is practically unknown. We do not even know the number of generations, which certainly is interesting as regards montane species and the fauna of arid biotopes of the northern part of the study area. In the tropical parts, especially in humid biotopes, the species occur in many generations all the year round and therefore the dates of collection are not given in the redescrptions of species.

The hosts are known in a few cases only. We may suppose that the majority of species are oligofagous and we only can mention that the Palaearctic species utilise plants belonging to 27 families, having a preference for the *Compositae* (cf RAZOWSKI, 1970, 1991).

G e o g r a p h i c a l d i s t r i b u t i o n . The Neotropical Region in one of the most abundant in species (cf Table I) which can be realised even if it is still insufficiently explored. Having compared the numbers of species in more closely studied countries (Mexico – 185 species, Brazil – 90 species) with those of unexplored areas, we may assume that approximately only a half of the fauna of this region is unknown.

Table I  
Numbers of *Cochylini* taxa in the zoogeographical realms

	Neotropical Reg.	Nearctic Subreg.	Palaearctic Subreg.	Oriental Reg.	Ethiopian Reg.	Australian Reg.
genera	42	11	21	5	4	2
species	401	127	305	35	25	4

The Neotropical fauna of cochylini is nearest to the Nearctic fauna, as they have 12 genera and 10 species in common. 30 genera are recorded exclusively from this area, but some of them should also be discovered further to the north. Of this number 16 are exclusively tropical, 4 reach in Mexico the formal northern border of the Neotropical region and further 5 genera are distributed in more northern parts of that country. There are also 7 genera exclusively Mexican which are, in fact, Nearctic. Several large genera are widely distributed and most of them are known from this area. For their distribution see Table II.

Table II

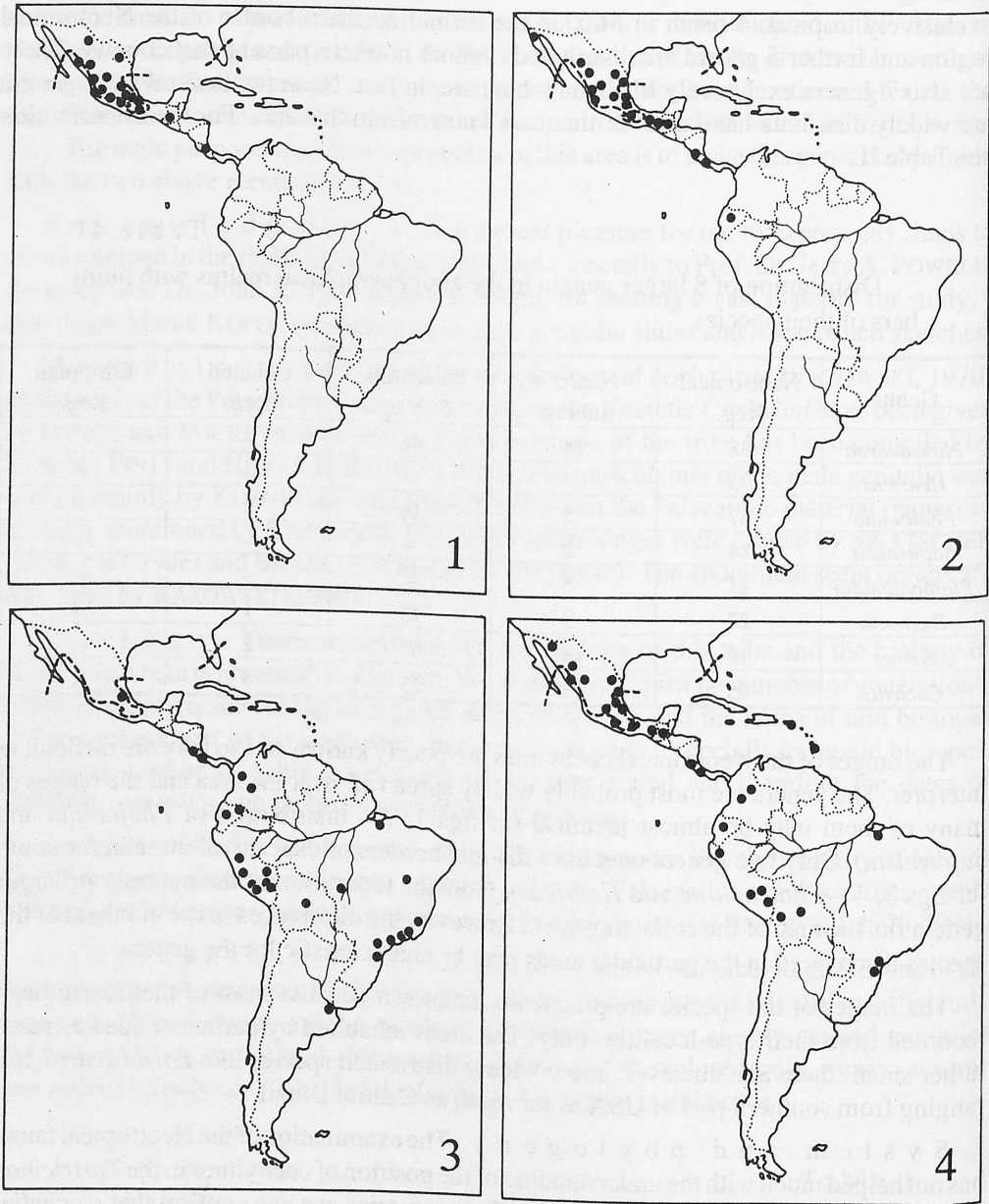
Distribution of 8 larger genera in the zoogeographical realms with numbers of their species

Genus	Neotropical Reg.	Nearctic Subreg.	Palaearctic Subreg.	Oriental Reg.	Ethiopian Reg.
<i>Phtheochroa</i>	38	14	46	–	–
<i>Henricus</i>	33	7	–	–	–
<i>Phalonidia</i>	47	5	16	2	–
<i>Saphenista</i>	84	2	–	–	–
<i>Platphalonidia</i>	15	5	–	–	–
<i>Eugnosta</i>	27	9	13	1	14
<i>Aethes</i>	19	18	67	2	–
<i>Cochylis</i>	25	13	25	5	–

The ranges of the Neotropical cochylini are poorly known and so they are difficult to interpret. The genera are most probably widely spread all over the area and the ranges of many of them may be almost identical (cf figs 1, 2 – distribution of *Phalonidia* and *Saphenista*). Only two genera may have distinct borders of their distribution in the south (cf figs 3, 4 – *Phtheochroa* and *Henricus*). Now the repartition of the majority of larger genera fits the map of the collecting sites. However, the differences in the numbers of the species discovered in the particular areas may be characteristic for the genera.

The ranges of the species are practically unknown because most of them have been recorded from their type-localities only. The areas inhabited by particular species seem rather small; there are, however, a few widely distributed species like *Lorita scarificata* ranging from southern part of USA as far south as Central Brazil.

**S y s t e m a n d p h y l o g e n y .** The examination of the Neotropical fauna has not helped much with the understanding of the position of cochylini in the *Tortricinae* and hardly improved their generic system. To summarise, we can confirm that *Cochylini* are certainly a monophyletic group, which is supported by some autapomorphies, viz., the distal position of the forewing vein *CuA*<sub>2</sub>, the reduction or complete atrophy of *CuP* and the forewing pattern, usually consisting of two fasciae parallel to the termen. Other characters treated as autapomorphies (e.g. very large aedeagus found in various genera) require reconsideration. Several apomorphic characters are mainly the reductions, occasionally found in other tortricinae moths.



Figs 1-4. Distribution in Neotropical region and Mexico: 1 – *Phalonidia* LE MARCHAND; 2 – *Saphenista* WALSINGHAM; 3 – *Phtheochroa* STEPHENS; 4 – *Henricus* BUSCK; broken line – northern boundary of Neotropical region



Unfortunately, no synapomorphy with any other tribe of *Tortricinae* has been found till now, and so the affinities of *Cochylini* are obscure. Numerous plesiomorphies and symplesiomorphies (e. g. a large number of muscles in the male genitalia, the presence of the accessory bursa) indicate a primitive nature of this tribe.

It is risky to construct a phylogenetic tree and generic system on the basis of the present data. In consequence, the system proposed for the Palaearctic fauna (RAZOWSKI, 1970), with some corrections (RAZOWSKI, 1987) is still in use. In their reflective analytical study POUGE & MICKEVICH (1990) presented several examples of the generic system of the Nearctic *Cochylini*. However, in this paper I stick to my older system of 1987, introducing several genera. Some changes introduced here may be explained as follows: as in most preceding systems, *Phtheochroa* is treated as the most primitive genus, showing several plesiomorphies (simple tegumen, strong uncus, drooping socii, complete vinculum, slender valva, etc.). Unfortunately, no autapomorphy of this genus has been found just as in the case of its allied Palaearctic genus *Cochylimorpha* RAZOWSKI, 1959 (with atrophy of the uncus). The main bulk of genera is constituted by the *Phalonidia* group. In this group the shape of the socii is probably the only character which may constitute a transformation series. There are two main tendencies in the evolution of the socii. In the first case the socii become gradually smaller, poorly specialized and slightly sclerotized. *Platphalonidia* may be treated as the final state of this evolutionary trend, linked with a very strong differentiation of the distal part of the tegumen, which forms an almost separate, hairy plate. In the second case the socius is rather rigid, lengthens out and becomes slender; it plays an important role in clasping during copulation. The form of the socii in *Eugnosta* and its allies may represent the final stage. In the group of *Aethes* the distal part of the tegumen is distinctly differentiated and the socius is slender and long. There is no basis for including those genera in the second series but some similarities, and so I place them after the *Eugnosta* group of genera. Between the *Phalonidia* group and *Phtheochroa* I provisionally place *Henricus*, whose female genitalia resemble those in the last genus but the abdominal scent organs are to some degree similar (in segments 6 and 7) to *Phalonidia*. The *Cochylis*-group of genera seems the most specialised as it is characterised by strong separation of the distal part of tegumen (probably convergent with *Platphalonidia*) occasionally forming a large uncus-like structure. The aedeagus of *Cochylis* differs from that in the mentioned genus and the cornuti are the non-capitate spines. The cone-like structure, being a cluster of minute cornuti is a probable autapomorphy of this group of genera. Other characters, such as the separate, often apically expanding arms of the vinculum, are variably distributed within the tribe and are probably of a convergent importance. For additional remarks on the systematic positions of particular genera see the systematic part of this paper. Unfortunately, the systematic positions of some genera still remain obscure.

The synonymy of the tribe is given in some papers, e. g. RAZOWSKI (1970 and 1976) that of the Neotropical genera is included in this paper. The diagnoses of the Palaearctic genera with their synonymies are given by RAZOWSKI (1987).

#### Abbreviations

AMNH – American Museum Natural History, New York



- CMNH – Carnegie Museum Natural History, Pittsburgh  
 CU – Cornell University,  
 CUB – California University, Berkeley  
 LACM – Los Angeles County Museum, Los Angeles  
 NHML – Natural History Museum, London  
 NHMW – Naturhistorisches Museum, Wien  
 NMNH – National Museum of Natural History (Smithsonian Institution), Washington, D.C.  
 SDNHM – San Diego Natural History Museum  
 MNRJ – Museu Nacional, Universidade Federal, Rio de Janeiro  
 ZMK – Zoological Museum Copenhagen (Universitetes Zoologiske Museum København)  
 G.S. – genitalia slide

**Note.** The figures given in the descriptions of the labial palpus indicate the proportion of its total length to the diameter of the eye. The descriptions of coloration concern lateral surface of palpus.

## II SYSTEMATIC PART

### *Phtheochroa* STEPHENS, 1829

*Phtheochroa* STEPHENS, 1829, Syst. Cat. Br. Insects, **2**: 191. Type-species: [*Tortrix*] *rugosana* HÜBNER, [1799], design. by monotypy. Palaearctic.

*Idiographis* LEDERER, 1859, Wien. ent. Mschr., **3**: 242. Type-species: *Tortrix centrana* HERRICH-SCHÄFFER, 1851, by monotypy. Palaearctic.

*Propira* DURRANT, 1914 [in] WALSINGHAM, Biol. cent.-am., Lepid. Heterocera, **4**: 297. Type-species: *Tortrix schreibersiana* FRÖLICH, 1828, by subsequent designation (FERNALD, 1908: 185). Palaearctic.

*Trachysmia* GUENÉE, 1845, Annls Soc. ent. Fr., (2) **3**: 164. Type-species: *Sericoris duponcheliana* COSTA, 1847, by subsequent designation (DESMAREST, 1857: 223, then by FERNALD, 1908: 30).

*Arce* JOANNIS, 1919, Annls Soc. ent. Fr., **88**: 18. Type-species: *Cochylis sulphurana* GUENÉE, 1845, by monotypy. Palaearctic.

*Parahysterosia* RAZOWSKI, 1960, Polskie Pismo ent., **30**: 298. Type-species: *Cochylis simoniana* STAUDINGER, 1859, by original designation and monotypy. Established as subgenus of *Hysterosia* STEPHENS. Palaearctic.

*Durrantia* RAZOWSKI, 1960, ibid.: 290; invalid, type-species not designated. Established as subgenus of *Hysterosia* STEPHENS. - *Hysterosia* auct. not STEPHENS, 1852 (not available, type-species not mentioned).

Alar expanse 13-33 mm. Labial palpus long, 1.5 - 5, in Neotropical species usually 2.5 - 5; forewing variable in shape, very often with costal fold. Venation: All forewing veins separate, *R*<sub>5</sub> to costa or termen, usually just beneath apex; chorda absent or its remnants extending from beyond *R*<sub>1</sub>; in hindwing all veins usually distinctly separate, but *M*<sub>3</sub> - *Cu*<sub>1</sub> are to some degree variable, often connate; *Rr-M*<sub>1</sub> usually approximate at base.

In male genitalia uncus always present, varying in shape and size; socius drooping, often dorso-lateral; vinculum strong. Valva long, sacculus often with free termination. Transtilla with well developed median part; juxta often species specific. Aedeagus usually stout, simple, with lateral process or with dorsal lobe at zone; one or two cornuti in Palaearctic species, 1-4 in Neotropical taxa.

**B i o l o g y .** The species are generally associated with steppe-forest zone and arid territories. The larvae feed in seeds, fruit, stems or roots being probably oligophagous. Food plants of only ten Palaearctic species are known (the data on the Nearctic species have not been gathered, but are also scarce). They are associated with 15 plant species belonging in 8 families. The majority of species feed on *Compositae* and only 3 Palaearctic species feed on deciduous trees. In the temperate zone the species occur in 1 or 2 generations a year.

**D i s t r i b u t i o n :** Holarctic and Neotropical Regions. Only 2 species are Holarctic in distribution: the ranges of the majority of species are rather limited. From this region 37 species are known.

**C o m m e n t s .** Although the species of this genus are easily distinguished no autapomorphy has been found, and so the diagnosis is not given. Almost all characters are of plesiomorphic importance (e.g. the presence or the uncus, the drooping socius) and convergent or variable (the positions of the accessory bursa, ductus seminalis, the presence of sclerites of the corpus bursae etc).

The Neotropical species are rather similar to the remaining ones and as the Palaearctic species regards only some differences in the number of the cornuti in the vesica. An asymmetry of the valvae (especially the sacculi) is noticed exclusively in several Neotropical species (the left valva being weaker and the sacculus smaller, with a shorter or completely atrophied free termination). The interpretation of variation in some parts of the genitalia (the size and the shape of median part of the transtilla, aedeagus, cornutus and uncus) requires further study. It may be supposed that they are of infraspecific importance; however, some taxa were described on that basis.

The species of *Phtheochroa* form some evolutionary lines discussed by me (RAZOWSKI, 1991) and some general data and a list of species are provided.

### *Phtheochroa gigantea* (BARNES & BUSCK, 1920)

*Hysterosia gigantea* BARNES & BUSCK, 1920, Ins. Insc. Mens. Wash., 8(4-6): 87. Type-locality: Mexico: Federal District: Mexico. Type in NMNH. - CLARKE, 1968, Proc. U.S. natn. Mus., 125(3660): 2, fig. 1 (female genit.), pl. 1, fig. 5 (photogr.).

Alar expanse 33 mm; labial palpus 5, olive-brown; head yellow-brown with front yellower. Forewing with termen weakly oblique, rather straight; ground-colour brownish, reticulated brown; pattern brown, mid-part of median fascia dark brown, costal portion paler; subterminal fascia somewhat darker than ground colour.

Male genitalia: Unknown.

Female genitalia (Fig. 72) sterigma with broad and short membranous colliculum; Prominence of distal part of corpus bursae broad, rather short (for remarks see comments).

**D i s t r i b u t i o n :** Central Mexico: Federal District.

**C o m m e n t s .** *P. gigantea* belongs in the group of species with broad sterigma, ovate concavity of the dorso-median part of corpus bursae, followed by a more or less sclerotized distal prominence. In the genitalia slide of the holotype the particular parts are in incorrect positions and so a more accurate comparison with the closely related species will be possible when some additional material is available. The species is distinguished by its broad forewing, weakly oblique, rather straight termen and brownish coloration. The pattern is brown, rather ill-defined. The median fascia is weakly oblique, distinct in costal and median parts.

***Phtheochroa loricata* (RAZOWSKI, 1984)**

*Trachysmia loricata* RAZOWSKI, 1984, Polskie Pismo ent., **53**: 568, figs 1-3 (male genit.), 16, 17 (female genit.). Type-locality: Mexico: Puebla: 2 mi SW Tehuacan; coll. CUB. – *Phtheochroa loricata* RAZOWSKI, 1992, Acta zool. cracov., **34**(1): 166 (listed).

Alar expanse 28-32 mm; labial palpus 5 in male, 6 in female, brown-grey. Forewing termen slightly concave beneath apex. Ground-colour greyish brown; pattern brown, pale edged.

Male genitalia with uncus very slender, socius slender, tapering terminally, median part of transtilla slightly longer than submedian prominences of dorsal edge. Valvae asymmetric; right sacculus with distinct free termination, left sacculus shorter, without termination. Terminal projection of aedeagus rather symmetric, slender; three cornuti in vesica.

Female genitalia with distal, sclerotized prominence more expanding than in preceding species and proximal part of corpus bursae much longer.

**D i s t r i b u t i o n** : Mexico: Puebla.

***Phtheochroa noctivaga* (RAZOWSKI, 1984)**

*Trachysmia noctivaga* RAZOWSKI, 1984, Polskie Pismo ent., **53**: 569, figs 4-6 (male genit.), 18-20 (female genit.). Type-locality: Mexico: Nuevo Leon: 4 mi W. Iturbide. Type in CUB. – *Phtheochroa noctivaga* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 166 (listed).

Alar expanse 18-22 mm. Head, thorax and ground-colour of forewing more ash-grey than in *loricata*, pattern brown.

Male genitalia as in *loricata* but uncus shorter, socius broader, rounded, distal part of valva slenderer and submedian lobes of dorsal edge of transtilla larger, as long as its median part. Ventro-terminal projection of aedeagus asymmetric.

Female genitalia with sterigma smaller and more narrow than in *loricata*, ductus bursae slender, dorsal pit and sclerotic lobe in postmedian part of corpus bursae.

**B i o l o g y** . Moths collected in September and October.

**D i s t r i b u t i o n** : Mexico: Nuevo Leon and Puebla.

***Phtheochroa meraca* (RAZOWSKI, 1984)**

*Trachysmia meraca* RAZOWSKI, 1984, Polskie Pismo ent., **53**: 570, figs 23, 24 (female genit.). Type-locality: Mexico: Puebla: 2 mi SW Tehuacan. Type in coll. CUB. – *Phtheochroa meraca* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 166 (in list).

Alar expanse 22-30 mm. Pattern dark grey; ground-colour grey, whitish along pattern elements, with strigulation darker.

Male genitalia (Figs 5, 6) similar to *noctivaga* and *loricata* but uncus longer and slenderer, socius smaller and more elongate; 4 (one very long, three small, rather equally long) cornuti in vesica.

Female genitalia (Fig. 73) as in *noctivaga* but sclerites of ductus bursae reaching middle of corpus bursae; sclerotized lobe as in *loricata* but much larger.

**B i o l o g y** . Moths in August and October, collected at an altitude of 5300 feet.

**D i s t r i b u t i o n** : Known from Mexico: Durango, the type-locality and from the vicinity of Azumbilla.



**C o m m e n t s .** Genitally close to *loricata* and *noctivaga* but easily distinguished by its ash-grey coloration and the absence of subapical fascia.

***Phtheochroa perspicuana* (BARNES & BUSCK, 1920)**

This species described from U.S.A., Arizona is probably exclusively Nearctic. The data from Mexico: Tehuacan (CLARKE, 1968:123) concern probably *noctivaga*.

***Phtheochroa chaunax* RAZOWSKI, 1991**

*Phtheochroa chaunax* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 168, figs 3-5 (male genit.). Type-locality: Mexico: Jalisco: Nevado de Colima (Parque Nacional). Type in SDNHM.

Alar expanse 21 mm; labial palpus 6. Similar to *loricata* but differing in strongly developed erect group of refractive scales and presence of ferruginous suffusion at base of forewing costa.

Male genitalia as in *chaunax* but with uncus somewhat expanding subterminally, median portion of transtilla broad, accompanied by small submedian lobes, and aedeagus longer, with single, strong cornutus in vesica.

**B i o l o g y** unknown except for the date of the collection of the type: IX.

**D i s t r i b u t i o n :** Mexico: Jalisco.

***Phtheochroa melasma* (CLARKE, 1968)**

*Hysterosia melasma* CLARKE, 1968, Proc. U.S. natn. Mus., **126**(3660): 9, pl.1, fig.4 (phot. of moth), fig.5 (male genit.). Type-locality: Guatemala: Chejel. Type in coll. NHMW. – *Phtheochroa melasma*: RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 167 (in list).

Alar expanse 22-24 mm. Labial palpus ca 5. Forewing costa convex, termen very slightly oblique, indistinctly concave beneath apex. Ground-colour whitish, with brown-grey suffusions and lines; pattern brown-grey, with darker parts and blackish brown strigulation.

Male genitalia with short, basally broad uncus, median part of transtilla broad, without submedian lobes and left sacculus with small, spine like termination; end part of right sacculus elongate-subtriangular; two large and two smaller cornuti in vesica.

**B i o l o g y**. Moth collected in June.

**D i s t r i b u t i o n :** Type-locality only.

**C o m m e n t s .** The type series consists of 4 examples, which certainly belong to the group represented by all preceding species, with similar sacculus but differ in the shape of the transtilla.

***Phtheochroa iodes* (CLARKE, 1968)**

*Hysterosia iodes* CLARKE, 1968, Proc. ent. Soc. Wash., **125**(3660): 4, pl. 2, fig. 3 (phot. of moth), fig. 2 (male genit.). Type-locality: Guatemala: Valcan Santa Maria. Type in coll. NHMW. – *Phtheochroa iodes*: RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 167 (in list).

Alar expanse 28 mm. Labial palpus ca 3, brown-grey; thorax purple-brown; forewing termen convex, costa weakly oblique; ground-colour brownish with violet hue, strigulation darker, pattern dark brown with same hue. Median fascia and subterminal mark straight or gently curved, pale edged.



Male genitalia: Uncus slender, not expanding distally, socius as in *loricata*; sacculus very long, slender with sharp, thin termination; aedeagus as in mentioned species, three large cornuti in vesica. Sacculi symmetric; transtilla completely different than in all discussed species, with long median part.

**D i s t r i b u t i o n :** Guatemala.

**C o m m e n t s .** Known from a single specimen. Seemingly close to *melasma* as indicated by the form of the uncus, socii, aedeagus and cornuti, but with the plesiomorphic sacculi showing no asymmetry and autapomorphic transtilla. Originally compared with Nearctic *P. birdana* (BUSCK) but certainly not belonging in that (*inopiana*) group of species.

### *Phtheochroa faulkneri* RAZOWSKI, 1991

*Phtheochroa faulkneri* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 168, figs 1,2 (female genit.). Type-locality: Mexico: Jalisco: Rio Verde: 17 mi Yahualica. Type in SDHNM.

Alar expanse 21 mm; head and thorax whitish, scaled grey, labial palpus 5. Much smaller than *meraca*, with forewing not expanding distally and costa strongly convex. Costal fold absent. Ground-colour whitish, diffusely strigulated and suffused grey-brown; pattern brown-grey, partially edged whitish.

Male genitalia showing asymmetry of valvae but both sacculi armed with free terminations, the left one shorter than the right; uncus very slender, socius ovate, producing apicad; median part of transtilla broad, not accompanied by submedian lobes; aedeagus with subterminal prominence of ventral lobe; only two cornuti in vesica.

**D i s t r i b u t i o n :** Mexico: Jalisco.

**C o m m e n t s .** Known from single male. The transtilla is of plesiomorphic type, with submedian lobes absent; the asymmetry of the sacculi less distinct than in preceding species.

### *Phtheochroa zerena* RAZOWSKI & BECKER, 1993

*Phtheochroa zerena* RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **21**(84): 234, figs 1,2 (male genit.). Type-locality: Mexico: Veracruz: Zangolica. Type in MNRJ.

Alar expanse 23 mm; labial palpus 4. Forewing not expanding posteriorly; apex broad, rounded; termen somewhat oblique, rather straight; costal fold absent. Ground-colour brownish, almost entirely suffused brown, only in terminal third of wing brownish white, with glossy lines or strigulae; ferruginous-yellow suffusion at basal portion of costa atrophying towards its middle, small concolorous marks beyond end of discal cell on two last median veins; dorsal blotch indistinct, dark brown, reaching subcostal vein. Fringes brown. Hindwing whitish.

Male genitalia as in *faulkneri* but uncus and socius much shorter, aedeagus simple, three cornuti in vesica.

**D i s t r i b u t i o n :** Mexico: Veracruz (only type, collected at altitude of 1400 m in October).

**C o m m e n t s .** Externally easily distinguished by ferruginous, diffuse marks of forewing.

*Phtheochroa chlidantha* sp.n.

Alar expanse 17 mm; labial palpus ca 3; head whitish, thorax white-cream, white distally, marked brown near base of tegula and beyond collar. Forewing hardly expanding terminally, whitish, with yellowish hue; median fascia and distinct refractive silver fascias and spots mainly in median and subterminal areas. Pattern dark brown in form of very slender postbasal fascia interrupted medially, two median fasciae becoming orangeous in dorsal half of wing and subterminal fascia (anterior edge of subapical mark); ill-defined brownish orange fascia in middle breadth of wing between postbasal and median pattern; black-brown dots along dorsum; apex finely edged brown. Fringes white. Hindwing and fringes white. Reverse of forewing with distinct brownish grey pattern, more complete than on the upper side.

Male genitalia (Figs 7,8). Tegumen broad, with large, membranous lateral areas; uncus with rather short, broad basal portion and very large lateral lobes; socius moderate, rather slender. Valva slender; sacculus long, reaching beyond middle of valva, tapering apically, with indistinct free termination. Median part of transtilla short, very broad, somewhat convex in middle, accompanied by small submedian lobes. Aedeagus broad, short, with some weakly sclerotized dorsal lobes; cornutus long, slender, curved basally.

**H o l o t y p e**, male: "Mex.[ico]: Oaxaca, 17 km SE Oaxaca, Ruinas Dainzu, 8-11-88, J.T. Doyen at nite"; G.S. 11935. Type in CUB.

**C o m m e n t s**. This new species is distinguished by its pale coloration, especially by line-shaped fasciae and a silver shine of the forewing. Genitalia with peculiar uncus and transtilla. The shape of the aedeagus and submedian lobes of the transtilla of *chlidantha* may speak of its affinities with the preceding species; however, the systematic position is unclear.

*Phtheochroa albiceps* (WALSINGHAM, 1914)

*Propira albiceps* WALSINGHAM, 1914, Biol. cent.-am., Lepid. Heterocera, 4: 297. Type-locality: Mexico: Guerrero: Amula. Type in NHML. – *Hysterosia albiceps*: RAZOWSKI, 1964, Annls zool. Warsz., 22: 364, figs 19,20 (male genit., holotype). – *Trachysmia albiceps*: RAZOWSKI, 1984, Polskie Pismo ent., 53: 572, figs 10,15 (male genit.), redescr., var. – *Phtheochroa albiceps*: RAZOWSKI, 1991, Acta zool. cracov., 34(1): 167 (in list).

Alar expanse 13-15 mm; labial palpus ca 3. Head and thorax white. Forewing expanding terminally, costal fold slender reaching nearly to mid-costa, termen oblique, hardly convex. Ground-colour white, pattern rust-brown, with darker median fascia and subapical blotch suffused as far as termen except costal area beyond median fascia; black-brown markings along median cell and  $M_2$  on pattern. Fringes paler than pattern. Variation: white areas at costa occasionally large; pattern more or less dark.

Male genitalia: Uncus short, fairly broad; socius dorso-lateral, elongate distally; sacculus 1/3 length of valva, sclerotized dorsally, spined in distal third. Aedeagus simple, one cornutus (variable in size) in vesica. Median part of transtilla variable, more or less concave apically.

Female genitalia with distal edge of antevaginal part of sterigma deeply incised medially; long sclerotic fasciae in ductus bursae, except for colliculum, and in posterior half of corpus bursae.

**B i o l o g y** . Moth collected in August and September (one at altitude of 6800 feet).

**D i s t r i b u t i o n** : Mexico: Durango, Guerrero, Sinaloa, Jalisco, Michoacan.

**C o m m e n t s** . The status of variation requires study on a larger material. Externally this species is distinguished by the proximal edge of median fascia distinctly oblique to the dorsum. The female genitalia illustrated by me (RAZOWSKI, 1984) belong to *zacualpana*.

***Phtheochroa zacualpana* (BUSCK, 1913)**

*Phtheochroa zacualpana* BUSCK, 1913, Ins.Inscit. Mens. Wash., **1**: 141. Type-locality: Mexico: Zacualpan. Type in NMNH.

Alar expanse 28-32 mm (in type 24 mm); labial palpus 4 in male, 5 in female, head and thorax white. Forewing broader than in *albiceps*, with broader apex and larger costal fold. Ground-colour clear white, costal fold and suffusions among pattern elements brownish grey, pattern brown-grey, spotted black mainly on median fascia and middle part of posterior third of wing, rust spots along apex and costal part of termen; refractive marks distinct; postmedian white area reaching at least to dorsal arm of median cell; proximal edge of median fascia usually perpendicular to dorsum beneath postcubital vein.

Male genitalia with uncus short, socius rounded and valva broad medially, tapering terminally; sacculus simple, slender; aedeagus broad, with ventro-terminal lobe and minutely spined pocket-like process beyond zone; one cornutus present.

Female genitalia: Antevaginal part of sterigma very broad; ductus bursae broad; sclerites of corpus bursae weak, the ventral strengthening base of accessory bursa situated in a long, median concavity.

**B i o l o g y** . Moth collected July-September at altitudes of 1900-2600 m.

**D i s t r i b u t i o n** : Mexico: Veracruz, Puebla, Jalisco, Sinaloa.

**C o m m e n t s** . Distinct in its dark pattern and the less oblique anterior edge of the median fascia, whose dorsal portion is usually perpendicular to that edge. The female genitalia are illustrated by me (RAZOWSKI, 1984, figs 29,30) under *albiceps*. *Ph. huachuicana* (KEARFOTT, 1907) from Arizona is very similar externally and was supposed to be synonymous with the species in question. There are, however, some slight differences in the male genitalia (mainly a very large, dentate ventro-lateral lobe near the end of the aedeagus) and the female is rather similar to *albiceps*.

***Phtheochroa quaesita* (RAZOWSKI, 1984)**

*Trachysmia quaesita* RAZOWSKI, 1984, Polskie Pismo ent., **53**: 570, figs. 21,22 (female genit.). Type-locality: Mexico: Zacatecas: 9 mi S Fresnillo. Type in CUB. – *Phtheochroa quaesita* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 167 (in list).

Alar expanse ca 30 mm. Labial palpus 5. Forewing somewhat expanding terminally; termen weakly convex. Ground-colour cream with brownish suffusions and strigulation; pattern brown, with ochreous admixture.

Male genitalia: Uncus short, dorsal; socius dorso-lateral, ovate, tapering dorsally; valva long, sacculus short, spined in dorso-terminal broadening; median part of transtilla broad, short; aedeagus short, with rounded sclerite at zone; one large cornutus present.



Female genitalia as in *meraca* and its allies but with weakly convex dorso-lateral sclerite of corpus bursae. Sterigma is very broad, ductus bursae very short.

**B i o l o g y .** Moth collected in July and August at altitude of 8800 feet.

**D i s t r i b u t i o n :** Mexico: Zacotecas and Durango.

**C o m m e n t s .** It is closely related to preceding species but has a simple transtilla and very slight asymmetry of the sacculi. The position of the uncus is of autapomorphic importance.

***Phtheochroa johnibrowni* RAZOWSKI, 1991**

*Phtheochroa johnibrowni* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 170, figs 6-8 (male genit.). Type-locality: Mexico: Jalisco: Nevado de Colima (Parque National). Type in SDNHM.

Alar expanse 30 mm; labial palpus 3. Forewing broadest postmedially, apex broad, rounded, termen not oblique, rather straight. Ground-colour in costal half of wing cream tinged ochreous-brown, veins paler, base of costa brown. Remaining surface much darker, more olive-brown, but base much paler.

Male genitalia as in *quaesita* but uncus apical, broader, rounded, not tapering terminally; socius slender, lateral; sacculus slenderer.

**B i o l o g y .** Collected in September at altitude of 8200 feet.

**D i s t r i b u t i o n :** Mexico: Jalisco.

**C o m m e n t s .** Very close to *quaesita* as the shape of the valva shows. The aedeagus also with a peculiar rounded sclerite near the dorsal part of the zona and a pair of processes laterally. Known from a unique male.

***Phtheochroa amphibola* sp.n.**

Alar expanse 18 mm in male, 24 mm in female; labial palpus 2.5 and 4, respectively, snow-white, mixed yellowish beyond base laterally in male, with grey in female. Remaining parts of head, thorax and ground-colour of forewing snow-white, this last glossy. Forewing in male broadest beyond middle, costal fold to median fascia dark olive-brown, median fascia slightly darker, consisting of a very large dorsal part and small costal blotch; terminal blotch reaching tornus, separate from small subapical spot, olive-brown with some black dots in middle; apex area with two parallel, arched, brownish red lines; ochreous-yellow shade between elements of median fascia and near costal fold; numerous refractive scales mainly on darker parts of pattern. Fringes and spots along termen brownish red. Hindwing whitish, with pale brownish grey strigulation; fringes white, with remnants of grey median line at apex. Male pattern more or less reduced in distal area of wing, with paler elements replaced by white ground-colour.

Male genitalia (Figs 9,10): Uncus slender, long; socius large, broad basally, strongly tapering apically. Sacculus long, tapering terminally, with reduced free termination, showing no asymmetry. Median part of transtilla broad, concave apically. Aedeagus rather short with broad coecum penis and small ventral termination; one very short cornutus in vesica.

Female genitalia (Fig. 74): Postvaginal part of sterigma broad, antevaġinal part small, partially well sclerotized; ductus bursae large, with numerous, rather weakly sclerotized



folds entering distal third of corpus bursae; small, weak sclerotization in median portion of this last, ventrally.

**H o l o t y p e**, female: "Mex.[ico]: Pue.[bla], Nicolas Bravo, 11 km NE Azumbilla, 2440 m, VIII-22-1987 bl. J. BROWN, J. POWELL"; G.S. 11939; paratypes, 4 males collected 7.5 km NE Azumbilla, at altitude of 2200 m., on VIII-22-87. Coll. CUB.

**C o m m e n t s**. Externally very similar to *zacualpana* and *agelasta* but easily distinguished mainly by ochreous-yellow suffusions beneath the costal pattern. Judging from the structure of the genitalia it is closer to the preceding species than to *zacualpana*.

### *Phtheochroa agelasta* (RAZOWSKI, 1967)

*Aethes agelasta* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 192, fig. 57 (female genit.), pl. 16, fig. 3 (as *Carolella hysterosiana*). Type-locality: Costa Rica: San José. Type in MNHL.

Alar expanse 20 mm; head whitish, labial palpus (2), and thorax pale brownish. Forewing white, suffused brown, mainly posteriorly; costal spots, subapical fascia and large area beyond median cell brown; median fascia concolorous, with small costal and subcostal spots and very large, expanding dorsally remaining part.

Female genitalia: Cup-shaped part of sterigma deeply incised posteriorly; posterior part of sterigma broad; ductus bursae short, partially sclerotized; long slerites in elongate corpus bursae.

**D i s t r i b u t i o n**: Costa Rica.

**C o m m e n t s**. The status of this species is rather obscure thus an examination of the male is needed.

### *Phtheochroa haplidia* RAZOWSKI, 1986

*Phtheochroa haplidia* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 375, figs 8,9 (male genit.). Type-locality: Mexico: Durango: 3 mi W El Salto. Type in coll. CUB.

Alar expanse 24 mm. Forewing not expanding terminally, with costa weakly convex, termen straight. Ground-colour pale brownish, distinctly suffused white medially and postbasally; remaining areas mixed brownish grey. Pattern edges parallel to termen; median fascia ferruginous, atrophying at costa.

Male genitalia with long tegumen and short uncus, tapering apically; socius large, broad basally, then slender, curved. Valva broader in basal part than in two preceding species, sacculi symmetric, weakly expanding subterminally, minutely bristled. Median part of transtilla slender; single cornutus in vesica.

**B i o l o g y**. Moth collected at altitude of 9000 feet in July.

**D i s t r i b u t i o n**: Mexico: Durango.

**C o m m e n t s**. Judging from the shape of the sacculus and aedeagus this species is close to *quaesita* and *johnibrowni*. They distinctly differ in the shapes of the socii, which in some following species (*ciona*, *hybrista*, *hyboscia*) are less differentiated.

Apart from the type-specimen two examples, a male from Fresnillo, Zacotecas and a female from Juchitepeck, Mexico have been examined. The male genitalia (Figs 7,8) differ from the holotype in having much broader transtilla, shorter valva and strong lateral lobe of the left side of the edeagus. This last cannot be compared with the type because of the

position of the aedeagus in the rather old slide. The female genitalia (Fig. 75) without a dorsal pit and dorso-lateral sclerotic lobe, rather similar to those in *hybrista* and its allies but with a longer anterior part of the sterigma.

***Phtheochroa ciona* RAZOWSKI, 1991**

*Phtheochroa ciona* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 170, figs 9-11 (male genit.). Type-locality: Mexico: Nayarit: 49.4 mi NE Venado, Mesa Naya. Type in SDNHM.

Alar expanse 18 mm; labial palpus 3.5, ferruginous. Forewing hardly expanding terminally, with costa distinctly convex, apex broad, termen weakly oblique, hardly concave beneath apex. Ground-colour yellow; costa suffused brownish, brown in basal third, termen concolorous, with groups of more orange scales; veins  $M_3$  and  $Cu_1$  completely suffused brown, partially edged orange; fringes dark brownish grey.

Male genitalia with uncus less tapering than in *haplidia*, socius shorter, with broader, uniformly rounded base and valva broader, concave beyond sacculus, then strongly convex ventrally; sacculus broad medially, convex ventrally, not setose; median part of transtilla large. Aedeaus short, without dorsal sclerite, but with weak lateral prominence at zone; one cornutus in vesica.

**D i s t r i b u t i o n** : Mexico: Nayarit.

***Phtheochroa hybrista* RAZOWSKI, 1991**

*Phtheochroa hybrista* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 171, figs 12, 13 (male genit.), 35 (female genit.). Type-locality: Mexico: Jalisco: 14.7 mi SW Yahualica: El Aguacate. Type in SDNHM.

Alar expanse 26 mm; labial palpus 4, white-grey. Shape of forewing as in *ciona* but termen straight. Ground-colour pale grey-brown, paler distally, with brown strigulation. Brownish white oblique lines postbasally and postmedially; dorsal portion of postmedian fascia broad.

Male genitalia as in *ciona* but uncus longer, slenderer, socius larger, angulate before middle dorsally, with long slender portion. Valva slenderer; sacculus longer, with terminal part convex; median part of transtilla very long; ventral edge of aedeagus with distinct lobe followed by curved ventro-terminal process.

Female genitalia without dorsal pit of corpus bursae and dorso-lateral lobe; sterigma with broad but short antevaginal part, ductus bursae membranous except base, sclerites in postmedian part of corpus bursae.

**B i o l o g y** . Moths collected in September at altitudes of 7700-8200 feet.

**D i s t r i b u t i o n** : Mexico: Jalisco.

***Phtheochroa cistobursa* RAZOWSKI, 1991**

*Phtheochroa cistobursa* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 172, fig. 36 (female genit.). Type-locality: Mexico: Jalisco: Nevado de Colima. Type in SDNHM.

Alar expanse 24 mm; labial palpus 5, brownish, scaled white. Forewing as in *hybrista* but costa more curved and termen somewhat sinuate. Ground-colour rust-ochreous with browner strigulation, costal strigulae darker, divided whitish; pattern as in *hyboscia* but weak; fringes white, brown terminally.

Female genitalia as in *hybrista* but antevaginal part of sterigma longer and sclerites of corpus bursae broader.

**B i o l o g y** . Moth collected in September at altitude of 8200 feet.

**D i s t r i b u t i o n** : Mexico: Jalisco.

**C o m m e n t s** . Close to *hyboscia* and *hybrista* but distinguished by the glossy ochreous shade of the forewing and the female genitalia. Known from a single specimen.

### *Phtheochroa hyboscia* RAZOWSKI, 1991

*Phtheochroa hyboscia* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 172, figs 14-16 (male genit.), 37, 38 (female genit.). Type-locality: Mexico: Jalisco: Nevado de Colima: Parque Nacional. Type in SDNHM.

Alar expanse 28-34 mm in male, 34 mm in female; labial palpus as in *cistobursa* but blackish brown with scattered white scales and yellowish tip. Forewing weakly expanding terminally, with termen slightly oblique, rather straight. Ground-colour blackish brown with numerous refractive whitish scales at edges of almost atrophied pattern, along costa and in terminal part of wing. Fringes concolorous with wing. Variation: pattern occasionally better developed, dark shades on ground colour among pattern elements.

Male genitalia as in *hybrista* but with uncus and basal portion of socius shorter; distal part of sacculus longer, convex; median part of transtilla smaller; aedeagus less convex before end ventrally, with shorter, straight ventro-terminal process.

Female genitalia with sterigma much broader than in two preceding species, accessory bursa much shorter, extending from sac-shaped base and large, ventro-lateral lobe beyond middle of corpus bursae.

**B i o l o g y** . Moth collected in September at altitude of 8200 feet.

**D i s t r i b u t i o n** : Mexico: Jalisco.

### *Phtheochroa eulabea* sp.n.

Alar expanse 23 mm; labial palpus missing, head and thorax snow white, base of tegula and collar marked black. Forewing slender, not expanding terminally, costa almost straight, termen oblique, hardly convex. Ground-colour white, marbled grey in dorsal half except base; pattern dark grey with black spots, represented by costal remnants of a basal blotch; large dorsal blotch accompanied by small costal spot, tornal triangle and subapical fascia reaching mid-termen; purple-rust spots from before apex to tornus. Fringes white; median line grey, black beneath apex. Hindwing whitish, reticulated dark grey; fringes white with remnants of median line grey.

Female genitalia (Fig. 76): Sterigma small, with slender lateral parts; antevaginal part rather weakly sclerotized, with posterior edge concave; ductus bursae long, with weakly sclerotized longitudinal folds, minutely spined except posterior portion; posterior third of corpus bursae also with sclerotized elements and small spines; elongate group of thick spines before middle of corpus; accessory bursa originating in postmedian part of ductus bursae, ductus seminalis from end part of the corpus.



**H o l o t y p e**, female: "Mexico: Pue.[bla], Nicolas Bravo, 11 km NE Azumbilla, 2440 m, VIII-22-1987, bl. J. B. BROWN, J. POWELL". G.S. 11933. Coll. CUB

**C o m m e n t s**. This species is very characteristic in coloration and resembles only some Palaearctic taxa, e.g. *Ph. thiana* (STAUDINGER, 1899).

***Phtheochroa deima* sp.n.**

Alar expanse 31 mm; labial palpus ca 5, ochreous-yellow, densely scaled brownish laterally, front darker than palpus, vertex brownish, thorax brown with some ochreous scales. Forewing weakly expanding terminally, with costa slightly convex, termen rather oblique, hardly convex. Ground-colour ochreous-brown in dorsal portion of wing, darkening towards costa where dark brown; some diffuse blackish spots along distal half of costa, black suffusion in distal part of median cell and between median veins beyond it, weak concolorous suffusion at tornus. Fringes pale ochreous yellow, basal line and dividings blackish. Hindwing cream, sprinkled grey, densely strigulated dark grey; fringes more yellow, with dark brownish grey basal line and indistinct postmedian line.

Female genitalia (Fig. 77): Sterigma rather short, partially weakly sclerotized, with small antevaginal part; ductus bursae short; sclerites of bursa copulatrix atrophied, minute spines in anterior part of corpus bursae and a fascia of thicker spines along middle.

**H o l o t y p e**, female: "Mex.[ico]: Mex.[ico], 10 air km. SE Amecameca, 2720 m, VIII-23-1987, BROWN & POWELL bl."; G.S. 11934. Coll. CUB.

**C o m m e n t s**. In the female genitalia it resembles *eulabea* but differs in the almost completely membranous bursa copulatrix. Externally (shape of the wings, remnants of pattern) somewhat resembles *ochodea*, but is very dark.

***Phtheochroa piptmachaeria* RAZOWSKI, 1986**

*Phtheochroa piptmachaeria* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 373, figs 1-3 (male genit.). Type-locality: Mexico: Durango: 10 mi W El Salto. Type in CUB. – RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 167 (in list).

Alar expanse 24 mm; labial palpus over 4, white-cream. Forewing not expanding posteriorly, costa gently convex, apex very short, termen obliquely convex. Ground-colour cream, suffused pale ochreous-grey, costa spotted grey-brown. Pattern ill-defined, ochreous-brown, atrophied in costal half. Basal half of  $M_2$  marked brown. Fringes concolorous with ground-colour, dark brown at tornus. Hindwing pale brownish, cream basally, spotted brownish.

Male genitalia with uncus long and slender, socius slender, drooping; valva broad basally, slender in distal half; sacculus convexely rounded, without free end, with dorso-basal plate-shaped process. Median part of transtilla broad, spined. Aedeagus dentate in middle ventrally, dorso-medially and in terminal part; single, short cornutus in vesica.

**B i o l o g y**. Moth collected in July and August at altitude of 8800 feet.

**D i s t r i b u t i o n**: Mexico: Durango.

**C o m m e n t s**. The three following species are very close to one another, showing great similarity in the shape of the aedeagus and the presence of basal plate-shaped process



of the sacculus. The uncus in all of them is long, slender, similarly as in *hydnum* and *circina* which have completely different sacculus. The female genitalia are known in *hydnum* only.

***Phtheochroa ochodea* RAZOWSKI, 1991**

*Phtheochroa ochodea* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 177, figs 31-33 (male genit.). Type-locality: Mexico: Durango: El Salto: Rancho Nuevo. Type in SDNHM.

Alar expanse 27 mm; labial palpus as in *piptmachaeria*; forewing as in that species and *chriodes* but with termen somewhat more oblique. Ground-colour whitish, with yellowish suffusions between veins; rows of black scales on entire wing surface.

Male genitalia as in *piptmachaeria* but uncus about twice shorter, socius smaller and aedeagus with two distinct, ventral processes, and delicate dentation of terminal and lateral prominences; two cornuti in vesica.

**B i o l o g y** . Moth collected between 30.VII. and 3.VIII.

**D i s t r i b u t i o n** : Mexico: Durango.

***Phtheochroa chriodes* RAZOWSKI, 1991**

*Phtheochroa chriodes* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 176, figs 28-30 (male genit.). Type-locality: Mexico: Sinaloa: El Palmito. Type in SDNHM.

Alar expanse 32 mm; labial palpus as in two preceding species, tinged ochreous at base. Forewing as in *piptmachaeria* but termen rather sinuate beneath apex, with ground-colour whitish, suffused ochreous between veins. Hindwing cream, strigulation brownish.

Male genitalia: Sacculus as in *piptmachaeria* but with slender plate like lobe, distal part of valva short, similar to *chriacta*; uncus shorter than in the two mentioned species; aedeagus with a few thorns and wedge-shaped termination.

**D i s t r i b u t i o n** : Mexico: Sinaloa.

***Phtheochroa chriacta* RAZOWSKI, 1991**

*Phtheochroa chriacta* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 176, figs 26,27 (male genit.). Type-locality: Mexico: Jalisco: Rio Verde: 17 mi S Yahualica. Type in SDNHM.

Alar expanse 22-26 mm; labial palpus 4, whitish, brownish near middle, laterally. Forewing similar to that in *piptmachaeria* but termen straight. Ground-colour white cream, with weak ochreous suffusions in middle, but without shades between veins at least in costal and terminal areas. Hindwing as in *chriodes*.

Male genitalia as in *piptmachaeria* but with uncus much shorter, socius broader, rounded, median part of transtilla smaller and slenderer, sacculus with smaller rounded part and slenderer dorso-basal process, distal part of valva not constricted beyond sacculus; aedeagus slenderer, without spined lobes.

**B i o l o g y** . Moth collected in September.

**D i s t r i b u t i o n** : Mexico: Jalisco.

***Phtheochroa hydnum* RAZOWSKI, 1991**

*Phtheochroa hydnum* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 174, figs 21,22 (male genit.), 41 (female genit.). Type-locality: Mexico: Chihuahua: Sierra de la Catarina, 81 rd mi SW Buenaventura. Type in LACM.

Alar expanse 26 mm; labial palpus in male 3, in female 4, pale ochreous tinged rust laterally. Forewing slender, not expanding posteriorly, termen obliquely convex. Ground colour ochreous cream, suffusions between veins brown, dorsal suffusion cinnamon brown.

Male genitalia with uncus long, slender, socius large, rounded apically; sacculus with strong dorso-postmedian thorn; median part of transtilla broad, rounded apically; aedeagus with small carina penis; no cornuti in vesica.

Female genitalia: Distal part of sterigma weakly sclerotized, membranously connected with apophyses anteriores, with antevaginal part atrophied; colliculum somewhat broader and more strongly sclerotized than short ductus bursae; small sac at base of the latter at the right side, ventrally.

**B i o l o g y .** Moth collected in August at altitude of ca 8000 feet.

**D i s t r i b u t i o n :** Mexico: Chihuahua.

**C o m m e n t s .** Seemingly close to *piptmachaeria* and its allies but without a plate-shaped lobe of the sacculus.

### ***Phtheochroa circina* RAZOWSKI, 1991**

*Phtheochroa circina* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 175, figs 23-25 (male genit.). Type-locality: Mexico: Sinaloa: El Palmito. Type in SDNHM.

Alar expanse 26 mm; labial palpus and forewing as in *hydnum*. Strong ochreous shades between veins, marginal spots black-brown.

Male genitalia as in mentioned species but uncus shorter, somewhat broadening subterminally; median part of transtilla slightly concave apically, dorsal thorn of sacculus shorter, aedeagus longer, slightly convex to the left terminally, with large carina penis.

**B i o l o g y .** Moth collected at the beginning of August.

**D i s t r i b u t i o n :** Mexico: Sinaloa.

### ***Phtheochroa superbissima* (RAZOWSKI, 1984)**

*Trachysmia superbissima* RAZOWSKI, 1984, Acta zool. cracov., **53**: 571, figs 7-9 (male genit.), 27,28 (female genit.). Type-locality: Mexico: Veracruz: 2 mi W El Joyita. Type in CUB.

Alar expanse 22 mm in male, 29 mm in female; labial palpus 4 and 5 respectively. Forewing apex short, termen slightly concave beneath apex. Ground-colour yellow, costa rust basally; dorsum brown to before tornus (a blotch broadest medially), termen brown, fringes grey-brown.

Male genitalia: Uncus long, slender; socius subtriangular, rounded dorsally; valva long; sacculus short, thick, with sharp termination; median part of transtilla fairly large; aedeagus moderate, with ventro-terminal prominence on the left side; cornutus as long as sacculus.

Female genitalia: Antevaginal part of sterigma in the form of a large, sclerotic lobe with anterior edge concave medially; ductus bursae with subterminal, slender sac which is a remnant of the accessory bursa.

**B i o l o g y .** Moths collected in August at altitude of 2300 m.

**D i s t r i b u t i o n :** Mexico: Veracruz.

**C o m m e n t s .** This and the following two species are closely related to one another, showing great external similarity and differing chiefly in the female genitalia (shape of the remnant of accessory bursa, antevaginal lobe of sterigma); the males are different mainly in the shapes of the sacculus, aedeagus and transtilla, less so in the shape of the socii.

Apart from the nominate form there are some specimens which are not included in the descriptions of *descensa* and *superbissima*. These are: taxon 1, from Mexico, Veracruz (Canyon Las Minas, 13 km NE Perote, 2150 m; 18 Aug.): A female with a broad forewing and large antevaginal plate (Fig. 78), very weakly concave proximally; taxon 2, males from Juchitepec, Federal District, collected at altitude 2750 m in August: Pale yellowish patternless forewing; genitalia (Figs 13,14) as in *superbissima* but sacculus very short and median part of transtilla slender.

***Phtheochroa descensa* RAZOWSKI, 1991**

*Phtheochroa descensa* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 173, figs 17,18 (male genit.), 40 (female genit.). Type-locality: Mexico: Jalisco: Nevado de Colima. Type in SDNHM.

Alar expanse 22-24 mm; labial palpus ca 6, orange to ochreous-yellow, ferruginous ventro-laterally. It differs from *superbissima* in the absence of dorsal blotch of the forewing, development of disco-tornal fascia, much shorter terminal fascia reaching the apex area and more oblique termen.

Male genitalia as in *superbissima* but uncus a little longer, median part of transtilla tapering terminally, concave apically, valva longer and aedeagus smaller, more bent.

Female genitalia as in mentioned species but antevaginal plate much smaller, indistinctly concave ventro-anteriorly, sac of ductus bursae with much longer, slender terminal portion and sclerotized folds of ductus bursae much smaller.

**B i o l o g y .** Moths collected in September at altitude of 8200 feet.

**D i s t r i b u t i o n :** Mexico: Jalisco.

***Phtheochroa noema* RAZOWSKI, 1991**

*Phtheochroa noema* RAZOWSKI, 1991, Acta zool. cracov., **34**(1): 174, figs 19,20 (male genit.), 40 (female genit.). Type-locality: Mexico: Jalisco: Nevado de Colima: Parque National. Type in SDNHM.

Alar expanse 26 mm. Externally very similar to *descensa* but with traces of pattern only.

Male genitalia as in mentioned species but with socius longer and slenderer, median part of transtilla much longer, slenderer, deeply incised apically and sacculus much longer, provided with a long, sharp free termination; size and proportions of aedeagus as in *superbissima*.

Female genitalia as in *descensa* but with antevaginal plate larger, distinctly convex, rounded proximally, and ventro-lateral sac of ductus bursae shorter, not tapering apically.

**B i o l o g y .** Moth collected in September at altitude of 8200 feet.

**D i s t r i b u t i o n :** Mexico: Jalisco.



*Phtheochroa thaumantias* sp.n.

Alar expanse 24-25 mm. Head cream scaled ferruginous, labial palpus ca 2, darker; thorax concolorous with lateral part of head, rust in distal half, tegula rust postbasally. Forewing as in *hamartopenis*, with termen somewhat more oblique; ground-colour glossy, cinnamon-rust, in distal part whitish in the form of a triangle extending from apex of wing to beyond mid-termen and beyond end of median cell; whitish area more suffused rust costally separated from the former by rust fascia terminating at apex; white streak anterior to its end; ochreous-orange, diffuse blotches in remaining, proximal area. Fringes whitish suffused ochreous rust distally, more rust at apex. Hindwing greyish; fringes greyish white. Variation: There are darker and paler specimens; one female with forewing distinctly suffused rust and with ochreous blotches weak, but white parts are well preserved.

Male genitalia (Figs 15,16) as in *hamartopenis* but with transtilla more expanding distally, with broad base of median part and uniform, densely spined termination; valva broad; sacculus slender, straight, minutely spined, with distinct free termination. Aedeagus with several spines in dorso-terminal area, the distal ones extending to the end of dorso-terminal process.

Female genitalia (Fig. 79): Proximal and distal parts of sterigma distinctly sclerotized; sclerite of colliculum expanding proximally; bursa copulatrix densely spined, without other sclerites; ductus seminalis and accessory bursa ventral, originating before middle of corpus bursae and ductus bursae, respectively.

H o l o t y p e , male: "Mex.[ico]: Mexico, 7 km WSW Juchitepec 2750 m, VIII-24-1987, J. BROWN & J. POWELL bl.; G.S. 11948. coll. CUB. Paratypes, 4 males and 6 females with identical labels.

C o m m e n t s . This species is very close to *hamartopenis* both externally and genitally but is easily distinguished by the lack of the silver, radial fascia extending from the wing base, non bifid median part of the transtilla, the straight aedeagus and the longer praeostial part of the sterigma.

*Phtheochroa hamartopenis* RAZOWSKI, 1986

*Phtheochroa hamartopenis* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 374, figs 4-7 (male genit.), 66 (female genit.). Type-locality: Mexico: Durango: 30 mi W Durango: Tepalcates. Type in CUB.

Alar expanse 18 mm; labial palpus 1.5, ochreous orange, vertex and front cream. Forewing slender, costa weakly convex, termen strongly oblique, rather straight. Ground-colour whitish in the form of radial, glossy fascia from mid-base of wing and transverse violet-grey fasciae, separating orange-rust pattern: postbasal, median and postmedian fasciae and paler suffusion on last radial and anterior median veins.

Male genitalia with uncus and socius broad, the latter on slender, short base, sacculus with setose distal part (free termination mainly) and bifid median part of transtilla; aedeagus broad with long termination and lateral process and 4 dorsal spines.

Female genitalia (Fig. 80): Sterigma broad, with antevaginal plate slender, surrounded by a membrane; ductus bursae fairly long, without sclerites.

B i o l o g y . Moths collected in August at altitude of 8400 feet.

**D i s t r i b u t i o n :** Mexico: Durango.

**C o m m e n t s .** The systematic position is still unclear. Externally this species and *thaumantias* do not resemble any New World species of this genus.

### Unplaced species

#### *Phtheochroa obnubila* (RAZOWSKI, 1984)

*Trachysmia obnubila* RAZOWSKI, 1984, Polskie Pismo ent., **53**: 571, figs 25, 26 (female genit.). Type-locality: Mexico: Hidalgo: Jacala. Type in CUB.

Alar expanse 16 mm; labial palpus 3, cream, mixed ochreous to middle, laterally. Forewing distinctly expanding terminally; ground-colour pale ochreous suffused brown; pattern: basal blotch ill-defined, median fascia brown, oblique from base of dorsum, atrophying near mid-costa. Subapical pattern, spots along costa and termen concolorous.

Female genitalia: Antevaginal plate large, with ribs; colliculum bulbous; small anterior sclerite in corpus bursae; accessory bursa extending from distal part of corpus bursae, ductus seminalis at same level, laterally.

**B i o l o g y .** Moth collected in September at altitude of 4600 feet.

**D i s t r i b u t i o n :** Mexico: Hidalgo.

#### *Phtheochroa primula* (WALSINGHAM, 1914)

*Hysterosia primula* WALSINGHAM, 1914, Biol. cent.-am. Lepid.-Heterocera, **4**: 299, pl. 9, fig. 8 (moth). Type-locality: Mexico: Puebla: Popocatepetl. Type in NMNH.

**R e d e s c r i p t i o n .** Alar expanse 24 mm; labial palpus over 5, white-yellow with ochreous and brownish scales along middle of second joint laterally, white dorsally; remaining parts of head whitish; thorax yellowish. Forewing weakly expanding posteriorly with costa slightly convex, apex very short, termen moderately oblique, almost straight. Almost unicolorous, yellowish; dots along dorsum, at end of median cell and on median veins black, costal dots black and grey. Fringes paler than wing. Hindwing cream suffused and strigulated brownish, with base paler, less distinctly strigulated. Fringes white-cream, with basal line pale brownish.

**D i s t r i b u t i o n :** Mexico: Puebla.

**C o m m e n t s .** Genitalia unknown. The redescribed specimen, a female, is the holotype but in the collection bears a label 'lectoparatype'. It was collected in July at an altitude of 800-1000 feet.

#### *Phtheochroa veirsi* RAZOWSKI, 1986

*Phtheochroa veirsi* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 376, fig. 67 (female genit.). Type-locality: Mexico: Durango: 30 mi W. Durango. Type in CUB.

Alar expanse 16 mm; labial palpus 4, pale ochreous; head cream, thorax mixed ochreous. Forewing broad, not expanding terminally, costa convex, apex rounded, termen oblique, slightly convex. Wing pale yellow-brown, darker basally, with two almost parallel, diffuse, white fasciae extending from postbasal part of costa past mid-dorsum to before tornus, to the end of median cell.

Female genitalia: Sterigma small, rounded anteriorly; ductus bursae slender with membranous, somewhat broader colliculum; spines in corpus bursae and anterior part of ductus bursae where accompanied by weakly sclerotized folds.

**D i s t r i b u t i o n :** Mexico: Durango.

**B i o l o g y .** Moth collected in August at altitude of 8400 feet.

***Phtheochroa vicina* (WALSINGHAM, 1914)**

*Propira vicina* WALSINGHAM, 1914, Biol. cent.-am.: Lepid., Heterocera, 4: 297, pl. 9, fig. 6 (moth). Type-locality: Guatemala: Alta Vera Paz: Panama. Type in NHML. – *Hysterosia vicina*: RAZOWSKI, 1964, Annls zool. Warsz., 22: 364, fig. 21 (female genit. of type).

Alar expanse 15 mm. Head and thorax white. Forewing weakly expanding terminally, costa rather straight to beyond middle, termen oblique, hardly convex. Ground-colour whitish, pattern greish brown; median fascia weakly oblique, with some black dots near middle; terminal area and dorsum suffused and spotted brownish, subapical marking brown, orange near costa.

Female genitalia: Sterigma fairly broad, with antevaginal part short, broad; colliculum membranous; sclerites of corpus bursae weak, accompanied by innumerable spines.

**B i o l o g y .** Single specimen collected in October at altitude of 1800 feet.

**D i s t r i b u t i o n :** Guatemala.

***Henricus* BUSCK, 1943**

*Henricus* BUSCK, 1943, Bull. S. California Acad. Sci., 42: 38, new name for *Heinrichia* BUSCK, 1939.

*Heinrichia* BUSCK, 1939, ibid., 38: 103. Type-species: *Phtheochroa macrocarpana* WALSINGHAM, 1895 – by orig. design. & monotypy.

*Irazona* RAZOWSKI, 1964, Annls zool. Warsz., 22(16): 356. Type-species: *Conchylis comes* WALSINGHAM, 1884 – by original design. & monotypy. – RAZOWSKI, 1984, Acta zool. cracov., 27(13): 235 (revision); RAZOWSKI, 1991, SHILAP Revta lepid., 19(73): 53 (revision).

Alar expanse 12-25 mm. Labial palpus 1.5-2, smaller in male than in female. Forewing with costa convex, weakly oblique, termen convex; costal fold absent; long groups of scales before and behind mid-costa. Venation: In forewing all veins separate,  $R_5$  to costa near apex, chorda absent; in hindwing  $Rr-M_1$  stalked to  $1/3$ ,  $M_3-Cu_1$  from one point or approximate to one another. Coloration: Head, thorax and ground colour of forewing and fringes pale, usually white; pattern grey, brown or similar, in the form of basal blotch, costal remnants of median fascia and subapical blotch fused with large, dorsal suffusion.

Male genitalia: Tegumen tapering terminally, with large, membranous lateral parts bearing groups of scent scales; socii apical, drooping; uncus atrophied or represented by a small prominence seldom distinct; vinculum arms not coalescent ventrally; valva broad basally, slender in distal half, with basal portion of costa often broad, provided with long scent scales; sacculus simple, or with dorsal thorns or processes, often with small free termination. Transtilla broad laterally, with median part species-specific, spined apically; juxta very small, fused with broad caulis. Aedeagus large, with pair, often asymmetric ventro-lateral processes; usually one large and several small cornuti in vesica.

Abdominal scent organs. Prominences of distal edges of sternites six and seven variably developed: in *powelli* process of the former sternite well developed, in *ateleutus* small,



and in *hemitelius* completely reduced. Sternite of subgenital segment is strongly reduced whilst its tergite is large, convex dorsally, strengthened by longitudinal sclerites and provided with distal concavities in which groups of long scent scales occur. The shape, size and number of scales variable specifically. At the level of the mid-part of the valva base long patch of slender scent scales or broad scales forming a peculiar spherical cluster; another elongate patch situated near sacculus bears slenderer, short scales (in *ateleutes*) or broad, long scales often sticking terminally.

Female genitalia characterized by short ovipositor. Sterigma species specific, usually with well developed postvaginal plate and short, ring-shaped antevaginal portion. Colliculum in some species distinct, membranous (rarely with sclerites), occasionally developing sacs (in *parmulus*) or lobes. Elongate sclerites often occur in the ductus bursae and corpus bursae; the ductus seminalis is anterior or median, often ventral or lateral, the accessory bursa originates in the ductus bursae, usually ventrally.

**Biology.** Only CIBRIAN et al. (1986) provide detailed data on biology of *melanoleucus* and RAZOWSKI (1991) gathers some observations on 3 species. *H. melanoleucus* is probably bivoltine. First generation emerges in January and February and they deposit their eggs on overwintering conelets of *Pinus oyacahuite* var. *veitchii*. The larvae pupate in July in the scales and the moths of second generation fly in August and oviposit on mature cones; pupation takes place in scales or seeds in December; by the end of same month the moths start to fly. The known food plants of other species belong to conifers (*Cupressus* spp., *Sabina* sp.) and only *insolitus* lives in galls of *Ollifiella cristicole* on an oak species.

**Distribution:** *Henricus* is known exclusively from the New World. The main bulk of species (24 of 40) is known from Mexico; the number of species decreases northwards and only 5 species are recorded from USA (Arizona, California, New Mexico) and 3 from Canada. The southernmost stands of *Henricus* are in Costa Rica (4 species known). After examination of Nearctic *H. contrastanus* (KEARFOTT, 1907) and *H. banus* (KEARFOTT, 1907) my point of view presented in the above mentioned paper of 1991 had to be changed as concerns the northern border of the repartition of this genus.

**Comments.** Diagnosis: *Henricus* is characterized by the following supposed autapomorphies: Base of socii connected by a cup-shaped ventral sclerite; juxta very small, thick; fusion of juxta with caulis; asymmetric distal processes of aedeagus; swollen basal portion of valval costa (in many species); presence of subgenital bunches of scent scales; presence of medio-lateral bunch of scent scales forming a thick cluster; presence of ventro-lateral bunch of scent scales connected with specialised plate at end of vinculum arm. Other characters listed by me (RAZOWSKI, 1984) were correctly treated as convergent. The presence of the sternal scent organs of the abdomen may be regarded as a synapomorphy with several genera which are close to *Lasiothyris*. *Henricus* is closely related to *Cartagena*.

The arrangement of the species is based on the structures of the abdominal scent organs and the genitalia. In more generalised species the subgenital scent organs are simple and resemble those in some *Archinini* or *Tortricini* (cf RAZOWSKI, 1990). Their scales are very slender (*charagus*), whilst in more advanced species (*rubrograptus* and following) they become broader, coalescent, their bunches are often highly transformed and the upper bunch may form a cluster. It seems that this structure may occasionally be reduced.

***Henricus charagus* RAZOWSKI, 1991**

*Henricus charagus* RAZOWSKI, 1991, SHILAP Revta lepid., **19**(73): 58, figs 1,2 (male genit.). Type-locality: Mexico: Nayarit, 6 m E Riitos, road to San Andreas. Type in SDNHM.

Alar expanse 20 mm. Forewing broadest medially; ground-colour glossy white-cream with weak, grey strigulation in distal third, brownish along dorsum and costa. Basal blotch small, convex, brownish, spotted brown, remaining pattern grey.

Male genitalia: Socius broadest medially, subtriangular distally; sacculus with dorsum sclerotic, marked with a few minute thorns; median termination of transtilla short; aedeagus with symmetric, short processes; single, very long cornutus (almost as long as entire aedeagus) present.

Female unknown.

**Distribution:** Mexico: Nayarit.

**Comments.** Distinguished by its pale coloration and brown basal blotch of forewing, from *parmulus* differing in grey costal pattern elements. In male genitalia it is similar to *palimpsestus* and especially to Californian *H. umbrabasanus* (KEARFOTT, 1908) from which it differs in having a very long cornutus.

***Henricus palimpsestus* RAZOWSKI & BECKER, 1986**

*Henricus palimpsestus* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 446, figs 19-21 (male genit.), 143,144 (female genit.). Type-locality: Mexico: Veracruz: Huatusco. Type in coll. MNRJ.

Alar expanse 18 mm. Forewing costa weakly convex, with distinct scale tufts. Ground-colour dark cream, suffused and spotted ochreous, suffused grey distally, dorsum mixed with grey; basal blotch olive-brown, ochreous posteriorly.

Male genitalia: Tegumen with minute tip; socius rounded apically; valva with broadened basal half of costa, longer than in preceding species, with sacculus longer, smooth; median part of transtilla broader; processes of aedeagus asymmetric, broad; cornutus reaching half the length of aedeagus.

Female genitalia: Postvaginal part of sterigma short, broad; antevaginal part sclerotic, fused (?) with colliculum; accessory bursa originating before middle of ventral side of very short ductus bursae; ductus seminalis anterior, from top of invagination of corpus bursae.

**Biology.** Moth collected in August at altitude of 1300 m.

**Distribution:** Mexico: Veracruz.

**Comments.** Closely related to preceding species (cf. comments).

***Henricus ellampus* RAZOWSKI, 1992**

*Henricus ellampus* RAZOWSKI, 1992, Misc. Zoll., **14**(1990): 88, fig. 35 (female genit.). Type-locality: Costa Rica: Puntarenas Prov.: Monteverde. Type in CUB.

Alar expanse 19 mm. Head whitish cream but labial palpus ochreous to middle, laterally; thorax brownish cream. Forewing whitish cream, basal and subterminal suffusions pale brownish, dorsum darker, spotted brown; pale ochreous dots along costa and near tornus.

Female genitalia as in *palimpsestus* but cup-shaped part of sterigma much larger, tapering proximally.

**B i o l o g y** . Moth collected in May.

**D i s t r i b u t i o n** : Costa Rica.

### *Henricus hemitelius* RAZOWSKI, 1991

*Henricus hemitelius* RAZOWSKI, 1991, SHILAP Revta lepid., **19**(73): 58, figs 3,4 (male genit.). Type-locality: Mexico: Baja California Norte: Sierra San Pedro Mortir, vic. of Vallecitos. Type in SDNHM.

Alar expanse 16 mm; labial palpus ochreous. Forewing costa distinctly convex, termen oblique. Ground-colour cream-ochreous, slightly mixed brownish, darker in mid-costa and near apex. Pattern ferruginous; posterior edge of basal blotch straight, oblique; subtriangular blotch at tornus.

Male genitalia: Socius short, broadest medially; sacculus with dorsal sclerite slender, smooth; median process of transtilla long. Aedeagus large, with asymmetric processes (right is subdorsal); cornutus as long as aedeagus.

**D i s t r i b u t i o n** : Mexico: Baja California.

**C o m m e n t s** . Externally resembling *comes*, but differs in its forewing which does not taper distally. Distinct also in strong asymmetry of processes of aedeagus (one is subdorsal, resembling transformed carina penis). The female and biology are unknown.

### *Henricus turbulus* (CLARKE, 1968)

*Irazona turbula* CLARKE, 1968, Proc. U. S. Natn. Mus. Wash., **128**(3660): 40, fig. 21 (female genit.), pl.4, fig.3 (photogr.). Type-locality: Guatemala: Volcan Santa Maria. Type in NMNH - *Henricus turbulus*: RAZOWSKI & BECKER, 1986, *ibid.*, **29**(20): 449, figs 29-32 (male genit.).

Alar expanse 16 mm. Ground-colour white; basal blotch brownish grey, dorsal blotch consisting of numerous brown and grey bars, subapical pattern paler, a blackish dot at the end of median cell.

Male genitalia (specimen from Chiapas, Mexico) as in *rubrograptus* but with socius larger, sacculus shorter and distal processes of aedeagus much slenderer, not expanding ventrally.

Female genitalia as in mentioned species but with longer, more sclerotized proximal part of ductus bursae beyond which the ductus of the accessory bursa originates.

**B i o l o g y** . Type collected in July, other specimens in June at altitude of 2300 m (in Chiapas).

**D i s t r i b u t i o n** : Guatemala and Mexico: Chiapas.

**C o m m e n t s** . Externally differing from *rubrograptus* in the lack or reddish marks; the differences in the genitalia as given above. The Mexican specimens most probably are conspecific with the type, but further material from Guatemala is needed to confirm this determination.

### *Henricus melanoleucus* (CLARKE, 1968)

*Irazona melanoleuca* CLARKE, 1968, Proc. U.S. natn. Mus. Wash., **125**(3660): 44, fig. 23 (male and female genit.), pl. 4, fig. 2 (photogr. of type). Type-locality: Mexico: Puebla. Type in NMNH. - *Henricus melanoleucus* RAZOWSKI, 1984, Acta zool. cracov., **27**(13): 238, figs 7-10 (male genit.), 4 (scent organ).



Alar expanse 16 mm. Head whitish, labial palpus 2,5; thorax brownish, tegula greyer, whitish distally. Forewing rather uniformly broad, termen weakly oblique. Ground-colour whitish; strigulation and suffusions grey; base of wing dark grey, darkest at costa, marked black; median fascia dark grey with black dots, paler dorsally; subapical blotch paler, also spotted black.

Male genitalia as in *rubrograptus* and *turbulus* but with more dense and distinct spinulation of inner edge of socius, processes of aedeagus slenderer than in *rubrograptus*, with longer slender portions.

Female genitalia as in *turbulus* but with much shorter ductus bursae and broader colliculum.

**Biology.** Moth in January (types) and September to February. Type reared from *Pinus* sp.; RAZOWSKI & BECKER (1986) record *Pinus ayacahuite* from San Rafael, Mexico.

**Distribution:** Mexico: Puebla.

### ***Henricus ateleutus* RAZOWSKI, 1991**

*Henricus ateleutus* RAZOWSKI, 1991, SHILAP Revta lepid., **19**(73): 59, figs 5,6 (male genet.). Type-locality: Mexico: Durango: El Salto, Rancho Nuevo. Type in SDNHM.

Alar expanse 20 mm; head white cream, labial palpus over 2; thorax dark grey-brown, forewing slender, expanding terminally, costa almost straight except for base. Head and ground-colour white, thorax brown-grey. Costal and terminal spots grey; dorsal pattern completely fused with basal blotch, with sharp, concave anterior edge; distal edge straight, perpendicular to dorsum at termen.

Male genitalia: Dorsal sclerite of sacculus smooth, somewhat broadening terminally; distal part of valva slenderer than in *hemitelius*, median part of transtilla as in *charagus*. Aedeagus much longer than in *hemitelius*, with broader right process; cornutus much longer than aedeagus.

Laterel scent organ consists of a large median tuft of slender scales and a small tuft of ventral, very slender scales.

**Distribution:** Mexico: Durango.

**Comments.** Situation of processes of aedeagus is a synapomorphy shared with *hemitelius*; distinct mainly in the shape of the aedeagus, the cornutus and the length of the median part of transtilla. Distinct in coloration. Female and biology unknown.

### ***Henricus zelotes* RAZOWSKI & BECKER, 1986**

*Henricus zelotes* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 448, figs 25,26 (male genet.). Type-locality: Mexico: Veracruz: Huatusco. Type in coll. MNRJ.

Alar expanse 14 mm. Ground-colour whitish, with yellowish hue; dorsum and costa strigulated brown; basal blotch chestnut brown, slightly convex near costa; the weak costal and median marks and brown subternal blotch are remnants of the median fascia; two subterminal brownish fascias.

Male genitalia: Socius elongate, rounded apically; basal part of costa of valva strongly swollen; sacculus with simple dorsal sclerite; median part of transtilla short. Aedeagus with symmetric, sharp terminal processes with sclerotic dorsal parts, membranous ventrally; short cornutus in vesica.

Ventro-lateral scent organ with large, broad scales.

**B i o l o g y** . Moth collected in August at altitude of 1300 m.

**D i s t r i b u t i o n** : Mexico: Veracruz.

**C o m m e n t s** . Distinct mainly in the shape of the terminal processes of the aedeagus.

***Henricus exsanguis* sp.n.**

Alar expanse ca 15 mm. Head white, thorax cream; labial palpus ca 2, cream ochreous except distal portion, laterally. Forewing slender, with termen distinctly oblique. Ground-colour cream suffused with brownish cream especially in posterior half of wing. Pattern: basal blotch yellowish brown, dotted brown distally, costal remnant of median fascia and subapical blotch much paler; black-brown dots along distal part of costa, dorsum and entire termen. Fringes rather concolorous with ground-colour, with a few blackish divisions. Hindwing whitish, cream on periphery; fringes cream.

Male genitalia (Figs 17,18): From *zelotes* it differs in having simple costa of valva, distinct free termination of sacculus and presence of large postbasal group of spines of dorsal edge of sacculus. From *platina* distinguishable by much longer spines and smaller termination of sacculus, and absence of uncus. In shape of socius similar to *powelli*. Aedeagus slenderer than in the two species; a series of 5 slender cornuti in vesica.

**H o l o t y p e** , male: "Costa Rica: Estac [ion]. Carillo 600 m, Parc.[o] Nation.[al], Braulio Carrillo, S.J. Prov. VII-28/30-1990"; G.S. 11958. Coll. CUB.

***Henricus generosus* sp.n.**

Alar expanse 17.5 mm; labial palpus 1.5, ferruginous, vertex and collar darker, tegula ferruginous, cream distally, median part of thorax ferruginous-grey. Forewing broad in basal half, tapering distally, with costa strongly convex to middle, apex sharp, termen straight, oblique. Ground-colour yellowish cream; basal and terminal thirds of costa and dorsum ferruginous; the latter forming a subternal blotch (remnant of median fascia). Fringes concolorous with ground-colour, ferruginous at apex. Hindwing cream, mixed with pale ochreous on periphery; fringes concolorous with middle of wing.

Male genitalia (Figs 19,20) with aedeagus and cornuti similar to *platina*. Transtilla differing in strongly incised apical portion of median part. Dorsum of sacculus broadening subterminally, where minutely spined.

**H o l o t y p e** , male: "Ecuador: Via Sta. Barbara - La Bonita, 23 km, 2400 m, Napo Prov., IV-7/9- bl, S.McKamey collr."; G.S. 11953. Coll. CUB.

**C o m m e n t s** . Distinct externally, in genitalia resembles *planaltina* and *zelotes*, from which it differs in the presence of a broad sclerite at the top of the tegumen which may represent the uncus.

***Henricus platina* (CLARKE, 1968)**

*Irazona platina* CLARKE, 1968, Proc. U.S. Natn. Mus., **125**(3660): 45, fig. 24 (male genit.), pl. 2, fig. 5 (photogr. of type). Type-locality: Costa Rica: Mont Poas. Type in NMNH.

Alar expanse 16 mm. Head white, thorax damaged, after original description fuscous. Forewing ground-colour silver-white; pattern dark grey with brown marks in form of large costal and small dorsal remnants of median fascia, terminal marks, and costal remnants of basal blotch. Fringes ochreous-rust, base browner.

Male genitalia with characteristic, slender uncus, very broad median part of transtilla and minutely spined dorsum of sacculus; aedeagus as in *zelotes* but with numerous small cornuti in vesica as in *inspergatus*.

**B i o l o g y** . Moth collected in May.

**D i s t r i b u t i o n** : Costa Rica.

### *Henricus inspergatus* RAZOWSKI & BECKER, 1986

*Henricus inspergatus* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 445, figs 12-14 (male genit.), 127 (abdominal scent organ), 142 (female genit.). Type-locality: Mexico: Chiapas: San Christobal de las Casas. Type in coll. MNRJ.

Alar expanse 15 mm. Head whitish but labial palpus brownish, whitish terminally; thorax grey; ground-colour whitish, tinged cream distally; pattern brown, delicately strigulated dark brown: basal blotch distinct at costa, median fascia weak costally, broad medially; dorsum suffused brownish; terminal pattern indistinct, spotted black.

In male genitalia similar to *zelotes*: Distal part of socius elongate; dorsum of sacculus distinctly sclerotized, with irregular minute prominences; median part of transtilla extremely short. Aedeagus with right process slender, short and left process broad, sclerotized dorsally, sharp.

Female genitalia resembling those in *cognatus* but with much broader sclerotized colliculum; ductus bursae provided with numerous sclerotic folds and without sclerites of corpus bursae.

**B i o l o g y** . Moth collected in June at altitude of 2300 m.

**D i s t r i b u t i o n** : Mexico: Chiapas.

### *Henricus attalus* sp.n.

Alar expanse 19 mm. Head and thorax blackish, labial palpus 2, ochreous, browner basally. Forewing apex broad, rounded, termen fairly oblique. Ground-colour white with some grey-black strigulae; apical part of costa and slender subapical fascia concolorous. Pattern blackish, basal blotch fused with dorsal blotch, the latter strongly expanding towards small, paler costal blotch. Fringes white, grey to apex. Hindwing whitish grey, densely reticulate smoky grey; fringes white.

Female genitalia (Fig. 81): Ovipositor fairly long; cup-shaped part of sterigma short, followed by large ventral lobe; ductus bursae weakly sclerotized, plicate, with stonger sclerite of left side accompanied by spines; spined area reaching anterior third of corpus; accessory bursa originating before plicate zone of ductus bursae, ductus seminalis from before middle of corpus, both ventral.

**H o l o t y p e** , female: "Mex.[ico]: Pue.[bla], Nicolas Bravo, 11 km NE Azumbilla, 2440 m, VIII-22-1987, bl. J. BROWN, J. POWELL"; G.S. 11950; coll. CUB.



Externally this species is easily distinguished by its large, blackish forewing pattern, the costal edge of which is deeply concave to form a sharp angle. The genitalia distinct in the large ventral plate of the sterigma. Probably closest to *inspergatus*.

### ***Henricus exploratus* RAZOWSKI & BECKER, 1986**

*Henricus exploratus* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 448, figs 22-24 (male genit.), 148 (female genit.). Type-locality: Costa Rica: Braulio Carrillo. Type in MNRJ.

Alar expanse 12 mm. Head white with base of labial palpus ochreous; thorax olive-brown. Forewing ground-colour white-cream, whiter proximally; basal blotch olive-brown, ochreous distally, convex, median fascia represented by concolorous costal and tornal blotches, the latter accompanied by dorsal brownish strigulation; subapical blotch paler; ochreous brownish suffusion posterior to median cell.

Male genitalia as in *inspergatus* but socius less tapering terminally, median part of transtilla larger, basal and terminal portions of sacculus broadened, the latter dentate proximally; aedeagus slender with two equally long processes and smaller group of short cornuti.

Female genitalia with antevaginal sclerite large, ductus bursae short; bursa copulatrix with some spines, without sclerites.

**B i o l o g y**. Moth collected in July and November at altitudes of 1100 m and 1500 m, respectively.

**D i s t r i b u t i o n**: The type-locality and Volcan Turrialba (type-series only).

### ***Henricus rubrograptus* RAZOWSKI, 1991**

*Henricus rubrograptus* RAZOWSKI, 1991, SHILAP Revta lepid., **19**(73): 60, figs 7,8 (male genit.), 9 (female genit.). Type-locality: Mexico: Jalisco: Nevado de Colima (Parco National). Type in SDNHM.

Alar expanse 17 mm; head and ground-colour of forewing white, thorax chestnut-brown. Silver hue on ground-colour and similar spots on pattern; dorsal blotch completely fused with basal blotch, ferruginous-brown with refractive marbling, distal part of blotch expanding towards end of median cell; reddish and black spots in apex area.

Male genitalia: Inner edge of socius spined; long, acute process near base of sacculus, dorsally; median part of transtilla tapering apicad. Processes of aedeagus broad, tapering apically convex at end of broad portions, ventrally; single short, capitate cornutus present.

Lateral scent organ as in *zelotes* and some following species, e.a. with cluster like median structure and broad scales of ventral organ.

Female genitalia: Lateral arms of postvaginal part of sterigma small; cup-shaped portion short; colliculum in form of a broadening of a rather long ductus bursae; ductus of accessory bursa rigid, curved, originating before middle of ductus bursae; ductus seminalis from middle part of spined corpus bursae, dorsally.

**B i o l o g y**. Moth collected in September.

**D i s t r i b u t i o n**: Mexico: Jalisco.

**C o m m e n t s**. This species is similar to *turbulus* and *ophyroides*.

*Henricus flebilis* sp.n.

Alar expanse 14.5 mm; head and thorax white; labial palpus 1.5; forewing broadest near middle, with termen straight, distinctly oblique. Ground-colour glossy white, strigulation and spots scarce, greish; basal blotch consisting of brownish grey spots, browner distally; dorsal blotch similar in colour, with darker dorsal remnant of median fascia; costal portion of this last small, concolorous; terminal pattern paler, preserved in apical area; a line from tornus; black spots at end of median cell. Fringes white. Hindwing white-grey, mixed brown on periphery; fringes whitish.

Male genitalia (Figs 21,22) as in *rubrograptus* but processes of aedeagus equally long, slender, almost straight and inner edge of socius spined in convex part only. One large cornutus and group of minute spines in vesica.

Abdominal scent organ: Sternite 7 with weak distal prominence, sternite 8 without organ, sternite 9 as in *powelli*.

H o l o t y p e , male: "Mex.[ico]: Ver.[acruz], 6 air km SW Banderilla, 1710 m, VIII-17-87, BROWN & POWELL bl."; G.S. 11954. Coll. CUB.

*Henricus ophyrodes* (MEYRICK, 1927)

*Phtheochroa ophyrodes* MEYRICK, 1927, Exot. Microlepid., 3: 139. Type locality: Costa Rica: La Trinidad: Irazu. Type in NHML – *Phtheochroa ophyrodes*: CLARKE, 1963, Cat. MEYRICK types Mirolepid., 4: 35, pl. 17, fig. 2 (photogr. of type). Type-locality: Costa Rica: La Trinidad: Volcan Irazu. Type in NHML. – CLARKE, 1963, Cat. MEYRICK Types, 4: 35, pl. 4, fig. 2 (photogr. of type). – *Henricus ophyrodes*: RAZOWSKI & BECKER, 1986, Acta zool. cracov., 29(20): 450, figs 33-35 (male genit.), 149, 150 (female genit.).

Head white, thorax brownish. Ground-colour whitish, strigulation grey. Base of wing and dorsum brownish to brown-grey, costal and median part of median fascia concolorous or greyer. Apex area grey with subapical and apical marks.

Male genitalia as in two preceding species but distal part of socius slender, inner edge not spined, basal process of sacculus shorter; processes of aedeagus asymmetric, similar to *rubrograptus*.

Female genitalia as in *turbulus* but with postvaginal part of sterigma larger, colliculum broader, ductus bursae shorter, membranous; small sclerite in corpus bursae present.

B i o l o g y . Moth collected in June, August and October at altitudes of 1100-1800 m.

D i s t r i b u t i o n : Known from several localities in Costa Rica.

C o m m e n t s . The determination of the examined specimens is based on a comparison with the type which lacks the abdomen.

*Henricus icogrammus* (CLARKE, 1986)

*Irazona icogramma* CLARKE, 1986, Proc. U.S. Natn. Mus. Wash., 125(3660): 38, fig. 20 (female genit.), pl. 4, fig. 2 (photogr. of type). Type-locality: Guatemala: Volcan Santa Maria. Type in NMNH. – *Henricus icogrammus*: RAZOWSKI, 1984, Acta zool. cracov., 27(13): 239 (in list).

Alar expanse 12-13 mm. Head and forewing ground-colour cream, thorax fuscous. Pattern brownish consisting of a very small basal blotch and remnants of median fascia; subapical marks grey; ternal blotch extending to mid-dorsum, brown-grey, marked with black dots. Large tuft of ochreous scales beyond mid-costa, smaller tuft near apex.

Female genitalia: Postvaginal part of sterigma delicate, antevaginal plate slender; colliculum cup-shaped, rather membranous; corpus bursae densely spined, with posterior lateral lobe; accessory bursa ventral, ductus seminalis dorsal.

**D i s t r i b u t i o n :** Guatemala.

**C o m m e n t s .** Drawing in original paper incorrect. Although the male remains unknown, the species may certainly be included in this group as the external characters and structure of the bursa copulatrix show.

### *Henricus powelli* RAZOWSKI, 1984

*Henricus powelli* RAZOWSKI, 1984, Acta zool. cracov., **27**(13): 238, figs 5,6 (male genit.), 16 (female genit.). Type-locality: Mexico: Nuevo Leon, 4 mi W Iturbide. Type in CUB.

Alar expanse 18-22 mm. Head white, thorax olive-brown. Ground-colour white, diffusely marbled grey at mid-costa, mid-disc and near apex; pattern dark olive-brown, mixed ochreous postbasally and postmedially; basal blotch fused with dorsal blotch.

Male genitalia: Socius broad, angulate dorso-laterally; base of costa of valva swollen; sacculus minutely spined in basal half, mainly dorsally. Aedeagus with two slender postmedian processes and sharp ventral termination; cornutus large, accompanied by numerous small spines.

Female genitalia with antevaginal part of sterigma short, colliculum membranous, with ventral sac, from which extends accessory bursa; sclerites and spines in corpus bursae, sclerotic folds to middle of ductus bursae.

**B i o l o g y .** Moth collected in August and September at altitudes of 4000-5000 feet.

**D i s t r i b u t i o n :** Mexico: Nuevo Leon, Veracruz (near Cd. Mendoza) and Tamaulipas.

**C o m m e n t s .** Distinct mainly in the position of the processes of the aedeagus and the median sac of ductus bursae.

### *Henricus tenerimus* (RAZOWSKI, 1986)

*Phtheochroa tenerima* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 376, fig. 68 (female genit.). Type-locality: Mexico: Nuevo Leon, 4 mi W. Iturbide. Type in CUB.

Alar expanse 18 mm; labial palpus 3, brownish grey. Forewing not expanding posteriorly, termen oblique, rather straight. Ground-colour brownish cream, suffusions brownish; pattern brownish: Diffuse median fascia, spots along costa and suffusion in posterior half of wing. Variation: Ground-colour may be more yellow, fringes rather concolorous.

Female genitalia with rather short, sclerotic colliculum and membranous sac at its base, ventrally; accessory bursa from end of ductus bursae, laterally; ductus seminalis ventral, originating before middle of corpus bursae; spines mainly in ductus bursae. Male unknown.

**B i o l o g y .** Moth collected in September at altitude of 5000 feet.

**D i s t r i b u t i o n :** Mexico: Nuevo Leon.

### *Henricus paredrus* RAZOWSKI, 1991

*Henricus paredrus* RAZOWSKI, 1991, SHILAP Revta lepid., **19**(73): 60, fig. 10 (female genit.). Type-locality: Mexico: Nayarit: 6 mi E. Riitos: road to San Andreas. Type in SDNHM.



Alar expanse 20 mm. Head whitish, thorax dark olive-brown, white-grey posteriorly. Ground-colour white, diffusely strigulated and spotted grey, more brown also in median cell. Dorsum and base olive-brown; refractive marbling distinct.

Female genitalia: Postvaginal sterigma with arms, antevaginal part, a ring-shaped sclerite slender; ductus of accessory bursa originating on slender sac before colliculum; sclerites in anterior half of ductus bursae extending into corpus bursae.

**B i o l o g y** . Moth collected in March.

**D i s t r i b u t i o n** : Mexico: Nayarit.

**C o m m e n t s** . Externally similar to *powelli* but differs in its clear ground-colour and the lack of costal remnants of the median fascia. Genitally resembles it in the presence of a sac of ductus bursae.

### *Henricus cognatus* (WALSINGHAM, 1914)

*Propira cognata* WALSINGHAM, 1914, Biol. cent.-am., Lepid. Heterocera, 4: 298, pl.9, fig. 6 (moth). Type-locality: Mexico: Veracruz: Las Vigas. Type in coll. NHML. – *Propira cognata*: RAZOWSKI, 1964, Annls zool. Warsz., 22: 369, figs 30,31 (male genit. of type). – *Henricus cognatus*: RAZOWSKI, 1984, Acta zool. cracov., 27(13): 238, figs 11-13 (male genit.), 17-19 (female genit.).

Alar expanse 19-21 mm. Head and ground-colour white, cream; basal blotch brownish, dorsum diffusely strigulated pale brown, more ochreous at tornus, paler spot at mid-costa; apical marbling very pale, brownish.

Male genitalia: Socius large, broadest postbasally; basal half of costa of valva enlarged; sacculus with dense thorns in distal half; median part of transtilla moderate. Aedeagus with short, sharp terminal processes; cornuti longer than half length of aedeagus.

Female genitalia: Sterigma short; colliculum bulbous, sclerotized; sclerotic folds to beyond middle of ductus bursae where the accessory bursa originates; small median sclerite and group of spines before middle of corpus bursae; dorso-anterior sac of corpus bursae present.

**B i o l o g y** . Moth collected in July and August at altitudes of 4000 and 8800 feet. Food-plant: *Quercus omissa* (after RAZOWSKI, 1984).

**D i s t r i b u t i o n** : Apart from type-locality reported from Durango, Mexico.

**C o m m e n t s** . The description of the female genitalia and the aedeagus based on material from Durango. The type has not been revised for this paper. The species is slightly variable.

### *Henricus improvisus* RAZOWSKI & BECKER, 1986

*Henricus improvisus* RAZOWSKI & BECKER, 1986, Acta zool. cracov., 29(20): 446, figs 15-18 (male genit.). Type-locality: Mexico: Veracruz: Huatusco. Type in coll. MNRJ.

Alar expanse 15 mm. Head whitish with vertex brownish; thorax olive-brown. Ground-colour cream, weakly strigulated ochreous. Dorsum suffused pale brown; basal blotch convex, brown, mixed ochreous distally; dorsal remnants of median fascia paler.

Male genitalia: Uncus minute; socius shorter than in *cognatus*, also convex beyond base, medially. Costa of valva slender; sacculus with small group of short spines at middle of dorsal sclerite. Median part of transtilla concave apically. Aedeagus with two long, asymmetric terminal processes; one long cornutus in vesica.

**B i o l o g y** . Moth collected in August at altitude of 1300 m.

**D i s t r i b u t i o n** : Mexico: Veracruz.

**C o m m e n t s** . Probably closest to *cognatus*; distinct mainly in spines of the sacculus.

***Henricus comes comes* (WALSINGHAM, 1884)**

*Conchylis comes* WALSINGHAM, 1884, Trans. ent. Soc. London, **1884**: 129. Type-locality: U.S.A.: Arizona. Type in NHML. – *Commophila comes*: BUSCK, 1907, Ill. N.Y. ent. Soc., **15**: 31 (food-plant: oak sp.). – *Irazona comes*: RAZOWSKI, 1964, Annls zool. Warsz., **22**: 369, figs 32,33 (male genit. of type). – *Henricus comes*: RAZOWSKI, 1984, Acta zool. cracov., **27**(13): 239 (in list).

Nominate subspecies is Nearctic. Short description is given for comparison with *comes vicecomes*.

Forewing broadest before middle; ground-colour ochreous-yellow; pattern in the form of median and subapical ochreous-brown spots at costa and weaker basal suffusion.

Male genitalia: Uncus small; base of costa of valva swollen; sacculus armed with spines, with minute free termination; median part of transtilla strongly reduced. Aedeagus with long, curved processes; cornutus twice shorter than the process.

***Henricus comes vicecomes* RAZOWSKI & BECKER, 1986**

*Henricus comes vicecomes* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 449, figs 27,28 (male genit.), 146,147 (female genit.). Type-locality: Mexico: Veracruz: Huatusco. Type in MNRJ.

Alar expanse 12 mm in male, 21 mm in female. Head, thorax and ground-colour of forewing ochreous-cream, this last strigulated ochreous brownish; remnants of pattern darker, median fascia atrophied medially.

Male genitalia situated medially as in nominate subspecies but posterior part of sacculus without any prominence and spines: processes of aedeagus shorter; cornutus thicker, distinctly curved.

Female genitalia: Anterior part of sterigma with lateral lobes; ductus bursae rather uniformly broad, with longitudinal sclerites; corpus bursae spined, with small sclerite near base of ductus seminalis.

**B i o l o g y** . Moth collected in August at altitude of 1300 m.

**D i s t r i b u t i o n** : Mexico: Veracruz.

**C o m m e n t s** . The differences between the two subspecies are rather slight. As the female genitalia of *comes comes* are unknown I cannot decide if these taxa represent distinct species.

***Henricus parmulus* RAZOWSKI, 1991**

*Henricus parmulus* RAZOWSKI, 1991, SHILAP Revta lepid., **19**(73): 61, fig. 11 (female genit.). Type-locality: Mexico: Jalisco: 10.8 mi N Hwy 54, Nevado Colima. Type in SDNHM.

Alar expanse 20 mm; head and thorax whitish; forewing ground-colour white-cream; dorsal blotch greish, strigulated grey, sprinkled black; basal blotch ill-defined. Variation: strigulation more or less dark, pattern occasionally weakly developed.

Female genitalia: Anterior edge of sterigma rounded, concave medially; antrum with two ventro-lateral sacs; no sclerites in remaining parts of bursa copulatrix.

**B i o l o g y .** Moth collected in May.

**D i s t r i b u t i o n :** Two localities in Jalisco, Mexico.

**C o m m e n t s .** Resembling *charagus* but with distinct dorsal blotch marked brown distally and cream shade of the hindwing periphery.

***Henricus ademonius* CLARKE, 1968**

*Henricus ademonius* CLARKE, 1968, Proc. U.S. Natn. Mus. Wash., **125**(3660): 42, fig. 22 (female genit.), pl. 4, fig. 4 (photogr. of holotype). Type-locality: Costa Rica: La Florida. Type in NMNH. – *Henricus ademonius*: RAZOWSKI, SHILAP Revta lepid., **19**(73): 57 (in list).

Alar expanse 16 mm. Head white, median joint of labial palpus ochreous to middle, laterally; thorax brownish. Ground-colour glossy snow-white; strigulation slight, brownish, greyish in distal area. Median fascia built of bars, coalescent with dorsal, similar blotch, the two and basal blotch similar in coloration; dark brown mark near vein *Cu*<sub>1</sub>.

Female genitalia: Antevaginal part of sterigma short (postvaginal part invisible), colliculum tapering proximally, sclerites of ductus bursae long; accessory bursa originating in middle of ductus bursae; spinulation of corpus bursae dense, resembling *chroicopterus*.

**D i s t r i b u t i o n :** Costa Rica.

**C o m m e n t s .** As the male is unknown, the systematic position remains uncertain. In the female genitalia it resembles *chroicopterus*.

***Henricus chroicopterus* RAZOWSKI, 1991**

*Henricus chroicopterus* RAZOWSKI, 1991, SHILAP Revta lepid., **19**(73): 61, fig. 12 (female genit.). Type-locality: Mexico: Durango: El Salto, Rancho Nuevo. Type in SDNHM.

Alar expanse 28 mm; head white, creamer dorsally, thorax yellowish brown with white marks. Forewing as in *insolitus*; ground-colour white with silver hue and strigulation greyish; basal blotch large, obliquely convex, brown with darker spots; dorsal blotch concolorous extending towards end of disc posteriorly, fused with subterminal pattern.

Female genitalia: Subgenital sclerite of sterigma short, convex in middle anteriorly; colliculum and remaining part of ductus bursae with long sclerites.

**B i o l o g y .** Moth collected in June.

**D i s t r i b u t i o n :** Mexico: Durango.

**C o m m e n t s .** Closest to *insolitus*, with similar membrane connecting parts of the sterigma but with smaller anterior prominences of the colliculum.

***Henricus insolitus* RAZOWSKI & BECKER, 1986**

*Henricus insolitus* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 447, fig. 145 (female genit.). Type-locality: Mexico: Santo Thomas, Apipilihoasco. Type in MNRJ.

Alar expanse 26 mm; head whitish, mixed brown dorsally; thorax brown with end of tegula cream. Forewing termen straight, weakly oblique; ground-colour white; basal blotch and mid-part of median fascia brown, dorsum suffused ash-grey.

Female genitalia: Antevaginal part of sterigma connected with postvaginal part by means of large membrane; proximal parts of colliculum sac-shaped, dorsal.



**B i o l o g y .** Food-plant (after RAZOWSKI & BECKER, 1986): *Quercus* sp.; moth collected in January.

**D i s t r i b u t i o n :** Mexico: Apipilihoasco.

**C o m m e n t s .** Closely related to *chroicopterus*; in both species males are unknown.

### *Henricus inchoatus* RAZOWSKI & BECKER, 1986

*Henricus inchoatus* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 450, figs 36-40 (male genit.). Type-locality: Mexico: Hidalgo: Real del Monte. Type in MNRJ.

Alar expanse 25 mm. Head white-cream, thorax brown; forewing termen oblique, rather straight; ground-colour whitish, glossy, partially mixed with ash-grey; pattern grey, dark grey at costa; median fascia weak at dorsum, slender fascias marked black in distal third of wing; spots in subapical area and dorsal suffusion grey; fringes white-cream.

Male genitalia as in *H. macrocarpanus* (WALSINGHAM, 1885) from California (socius very large, sacculus with strong free termination, partially serrate) but distal part of aedeagus without spine, cornuti larger, termination of sacculus longer.

**B i o l o g y .** Moth collected in January; food-plant: *Cupressus beathocoi* (after RAZOWSKI & BECKER, 1986).

**D i s t r i b u t i o n :** Mexico: Hidalgo.

**C o m m e n t s .** Very close to *macrocarpanus*. Apart from the characters given above it also differs from it in stronger serration of the inner edge of the socius and straight dorsal edge of the sacculus.

### *Henricus inanimalis* RAZOWSKI & BECKER, 1986

*Henricus inanimalis* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 450, fig. 141 (female genit.). Type-locality: Mexico: Chiapas: Teopisca. Type in MNRJ.

Alar expanse 14 mm. Labial palpus grey, white terminally, remaining parts of head white, thorax grey. Forewing slender, termen straight, oblique. Ground-colour white, pattern grey, edged brown, in terminal area marked black; basal blotch undulate, convex distally; median fascia interrupted subcostally and subdorsally; terminal pattern in form of lines; dorsum suffused grey.

Female genitalia: Antevaginal part of sterigma ring-shaped; colliculum membranous, slightly broader than other part of ductus bursae, provided with sclerites; accessory bursa originating dorsally in middle of ductus bursae.

**B i o l o g y .** Moth collected in June at altitude of 1900 m.

**D i s t r i b u t i o n :** Mexico: Chiapas.

**C o m m e n t s .** Externally somewhat similar to *inchoatus* and *macrocarpanus* but much smaller. The systematic position cannot be fixed without examination of a male.

### *Henricus inspergatus* RAZOWSKI & BECKER, 1986

*Henricus inspergatus* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 445, figs 12-14 (male genit.), 127 (abdominal scent organ), 142 (female genit.). Type-locality: Mexico: Chiapas: San Christobal de las Casas. Type in MNRJ.

Alar expanse 15 mm. Head whitish but labial palpus brownish, whitish terminally; thorax grey; ground-colour whitish, tinged cream distally; pattern brown, delicately

strigulated dark brown: basal blotch distinct at costa, median fascia weak costally, broad medially; dorsum suffused brownish; terminal pattern indistinct, spotted black.

Male genitalia similar to those of *zelotes*: distal part of socius elongate; dorsum of sacculus distinctly sclerotized, with irregular minute prominences; median part of transtilla extremely short. Aedeagus with right process slender, short and left process broad, sclerotized dorsally, sharp.

Female genitalia resembling those in *cognatus* but with much broader, sclerotized colliculum and ductus bursae provided with numerous sclerotic folds and without sclerites of corpus bursae.

**D i s t r i b u t i o n :** Mexico: Chiapas.

**B i o l o g y .** Moth collected in June at altitude of 2300 m.

### ***Henricus rhiobursa* RAZOWSKI, 1991**

*Henricus rhiobursa* RAZOWSKI, 1991, SHILAP Revta lepid., **19**(73): 62, fig. 13 (female genit.). Type-locality: Mexico: Nayarit: 6 mi E Riitos (road to San Antonio). Type in SDNHM.

Alar expanse 27 mm. Head whitish; thorax mixed brownish, black proximally. Forewing termen slightly concave below apex; ground-colour white, tinged cream distally. Basal blotch fused with dorsal blotch, both brownish grey strigulated black; tornal area grey, with similar bars.

Female genitalia: Postvaginal part of sterigma connected with the anterior part by means of median plate; large ventral sac in middle of corpus bursae.

**B i o l o g y .** Moth collected in March.

**D i s t r i b u t i o n :** Mexico: Nayarit.

**C o m m e n t s .** Externally somewhat similar to *chroicopterus*, but distinguished by the sac of the corpus bursae.

### Unplaced species

#### ***Henricus acosmetes* (RAZOWSKI, 1986) comb.n.**

*Phtheochroa acosmetes* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 375, figs 10,11 (male genit.). Type-locality: Mexico: Durango, 30 mi. W Durango. Type in CUB.

Alar expanse 21 mm. Head white but labial palpus ochreous proximally; thorax white. Forewing pale brownish; fringes whitish. Hindwing white.

Male genitalia: Uncus distinct, tapering terminally; sacculus with very short, serrate dorsal part; median part of transtilla very broad. Aedeagus rather uniformly broad, with single ventral termination; numerous peculiar cornuti in form of discs with small median tips.

**B i o l o g y .** Moth collected in August at altitude of 8400 feet.

**D i s t r i b u t i o n :** Mexico: Chiapas.

**C o m m e n t s .** This species was described in *Phtheochroa* on the basis of external similarity and the subtriangular uncus. The presence of an area of sockets at the base of

the valva and the separate arms of the vinculum speak of its relationship with *Henricus*. The shape of the cornuti differs from their shape in all known *Cochylini* and therefore I treat *acosmetes* as an unplaced species.

### *Cartagogena* RAZOWSKI, 1992

*Cartagogena* RAZOWSKI, 1992, Misc. Zool., **14**(1900): 85. Type-species: *Cartagogena ferruminata* RAZOWSKI, 1992, by orig. design.

Alar expanse 24-25 mm; labial palpus 2 - 3. Forewing slightly expanding terminally especially in male, termen distinctly oblique. No costal fold in male. Venation: In forewing all veins separate, *R*<sub>5</sub> reaching costa before apex; in hindwing veins *Rr-M*<sub>1</sub> and *M*<sub>3-Cu</sub><sub>1</sub> each originating at one point. Coloration yellow-brown with indistinct refractive pattern. Pattern typical of *Tortricinae*.

Male genitalia: Tegumen somewhat shorter than in *Henricus*, in one species with small apical prominence, which is probably a remnant of uncus; socius and transtilla as in mentioned genus. Valva broad basally, sacculus with distinct, claw-shaped free termination. Juxta typical of the subfamily. Aedeagus with a pair of almost symmetric ventro-lateral processes; cornutus strong, formed of two (or more?) fused spines.

Abdominal scent organs reduced; eighth tergite enlarged, with latero-terminal sclerotization and small distal prominence.

Female genitalia: Sterigma smaller than in *Henricus*, with postvaginal part short and antevaginal sclerite ring-shaped; colliculum membranous, very short; ductus bursae long, with longitudinal sclerites and distinct anterior sac situated dorso-laterally or dorsally; ductus of accessory bursa ventral, originating in distal part of ductus bursae; ductus seminalis lateral or dorso-lateral; corpus bursae free of sclerites.

**B i o l o g y**. No data except for the dates of collection of moths (all species collected in May at an altitude of 3000 m).

**D i s t r i b u t i o n**: Costa Rica.

**C o m m e n t s**. *Cartagogena* is very close to *Henricus* as indicated by the structures of the tegumen, socii, valva, transtilla, aedeagus and the specialized subgenital tergite in the male. The differences are in the shapes of the sacculus, valva (with costa simple in this genus) and the presence of the dorsal pouch of corpus bursae. The juxta is plesiomorphic. Three species included. Three species known.

### *Cartagogena februa* RAZOWSKI, 1992

*Cartagogena februa* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 86, fig. 32 (female genit.). Type-locality: Costa Rica: Prov. Cartago: Pension La Georgina, Cerro de Muerte. Type in CUB.

Alar expanse 24 mm; labial palpus 3, brownish, head and thorax brownish cream. Forewing ground-colour yellowish cream, sprinkled and strigulated brown; pattern brownish.

Female genitalia: Antevaginal part of sterigma fairly long; sclerites of ductus bursae rather weak; dorsal sac small, slender.

**B i o l o g y**. See the description of the genus.



***Cartagogenafiltrata* RAZOWSKI, 1992**

*Cartagogenafiltrata* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 86, figs 1,2 (male genit.), 3 (pregenital tergite). Type-locality: Costa Rica: Prov. Cartago: Pension La Georgina, Cerro de Muerte. Type in CUB.

Alar expanse 24 mm; labial palpus 2, whitish, mixed with ochreous to middle, sprinkled black; other parts of head and thorax brownish grey. Forewing termen less oblique than in preceding species, monochrome whitish, slightly tinged grey, with a few black scales scattered in distal part.

Male genitalia: Distal fourth of socius slender; free termination of sacculus short, hardly extending beyond valva edge. Two, almost completely fused short cornuti in vesica.

**Biology and distribution** as for *februa*.

**Comments.** This species is easily distinguished by its pale, monochrome forewing, short cornutus and short terminal process of the sacculus.

***Cartagogenaferruminata* RAZOWSKI, 1992**

*Cartagogenaferruminata* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 87, figs 4-6 (male genit.), 33,34 (female genit.). Type-locality: Costa Rica: Prov. Cartago: Pension La Georgina, Cerro de Muerte. Type in CUB.

Alar expanse 23-25 mm; labial palpus 2.5 brownish ferruginous, creamer distally, remaining parts of head brownish cream, thorax brownish. Ground-colour brownish cream, suffusions and strigulation rust-brown; pattern dark rust-brown, with small basal blotch and inconspicuous other elements. Hindwing pale brownish cream, with brown reticulation and periphery. Variation distinct: reticulation often strong, pattern variably developed, ground-colour occasionally whitish near costa.

Male genitalia: Uncus minute, hairy; free termination of sacculus very long, extending far beyond valva; processes of aedeagus asymmetric, long; cornutus longer than half the length of aedeagus.

**Biology and distribution** as with preceding species, one specimen however, taken in August.

**Comments.** Externally resembling *februa* but differing mainly in dense strigulation or reticulation and more rust basal blotch. The female genitalia show some variation. The species requires further study.

***Parirazona* RAZOWSKI, 1984**

*Parirazona* RAZOWSKI, 1984, Acta zool. cracov., **27**(13): 240. Type-species: *Irazona penthinana* RAZOWSKI, 1967, by orig. design. – RAZOWSKI & BECKER, 1993, SHILAP Revta lepid. **21**(83):163 (revision).

Alar expanse 13-19 mm. Labial palpus 1-1.5 in male, 2 in female. Venation: All veins separate, in forewing *R*<sub>5</sub> to apex, in hindwing *M*<sub>3</sub> - *Cu*<sub>1</sub> from one point. Coloration: head, dorsum of thorax and ground-colour of forewing usually white, basal blotch and median fascia suffused brown, forming a dark area followed by a suffusion at dorsum; at least one black dot beyond median cell. Groups of erect scales and refractive pattern developed. Fringes concolorous with pattern. Dark coloured species known.

Male genitalia. Uncus atrophied; apical portion (remnants of uncus?) of tegumen convex; socius latero-apical, hairy and minutely spined especially along inner edge, provided with large, semimembranous, spoon-shaped terminal process. Vinculum arms

not coalescent ventrally. Distal part of sacculus slender, with more or less distinct free termination. Aedeagus simple; caulis subterminal; cornutus large, single spine.

Abdominal scent organs absent.

Female genitalia. Ovipositor short. Sterigma in major part delicately sclerotized, with lateral arms more or less rigid; surroundings of ostium usually membranous; colliculum ill-defined; ductus bursae with sclerites; ductus seminalis and accessory bursa originating dorsally in a concavity strengthened by means of sclerotic, often incomplete belt, rarely well distanced from one another.

**B i o l o g y** unknown. Moths collected at altitudes of 720-920 m, mainly in forests.

**D i s t r i b u t i o n**: Known from Brazil only.

**C o m m e n t s**. This genus is distinct in the following supposed autapomorphies: the presence of a semimembranous, spoon-shaped process of the ventro-apical part of the socius, minute bristles and spines of the inner edge of the socius, spinulation of the dorsal surface of the median part of the transtilla, the narrow distal portion of the sacculus, and the presence of the ring-shaped sclerite protecting the bases of the ductus seminalis and the ductus of accessory bursa. Originally, it was compared with *Henricus*. A compact genus comprising seven species. Seven species included.

### ***Parirazona penthinana* (RAZOWSKI, 1967)**

*Irazona penthinana* RAZOWSKI, 1967, Acta zool. cracov., **12**(8):179, figs 33-35 (male genit.), pl. 15, fig. 7. Type-locality: Brazil: Petropolis. Type in NHML. – *Parirazona penthinana*: RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **21**(83): 165, fig. 8 (female genit., redescription).

Alar expanse 15-19 mm. Head white; thorax brown. Basal half of forewing brownish, diffusely spotted brown; dark brown spots along dorsum; subterminal fascia slender, brownish, tinged rust in tornal part; terminal mark in form of apical and terminal suffusions or spots (subapical one rust); black spot beyond end of median cell; groups of erect scales scattered all over wing surface. Hindwing brownish, strigulated brown.

Variation: Paler and darker specimens noticed. Occasionally, anterior half of forewing and thorax brownish cream, strigulated brownish; hindwing in those examples also very pale.

Male genitalia: Basal part of sacculus fairly short, terminal, slender portion proportionally large; cornutus as long as sacculus.

Female genitalia characterized by the presence of long sclerite of ductus bursae, being much longer on the left than on the right side; the ostium area membranous; ductus of accessory bursa and ductus seminalis originating in middle of delicate, dorsal sclerotic ring.

**D i s t r i b u t i o n**: Known from Paraná and Santa Catarina.

### ***Parirazona dolorosa* (MEYRICK, 1932)**

*Phtheochroa dolorosa* MEYRICK, 1932, Exot. Microlepid., **4**: 266. Type-locality: Brazil: Santa Catarina: Jaraguá. Type in NHMW. – *Parirazona dolorosa*: RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **2**(83): 165, fig. 9 (female genit.).

Alar expanse 16 mm. Coloration as in preceding species but anterior half of forewing brownish; distal half of wing white; terminal area strigulated or suffused brownish; subterminal fascia distinct, curved, brown.

Female genitalia as in *penthinana* but ductus bursae short, with short, broad terminal sclerite.

**D i s t r i b u t i o n :** Brazil: Santa Catarina only.

**C o m m e n t s .** The species is not well known; the male is unknown.

### ***Parirazona serena* (CLARKE, 1968)**

*Cochylis serena* CLARKE, 1968, Proc. U.S. Natn. Mus. Wash., **125**(3660): 20, fig. 10, pl. 4, fig. 6. Type-locality: Brazil: Santa Catarina: Nova Teutonia. Type in NMNH. - *Parirazona serena*: RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **21**(83): 166, redescription.

Alar expanse 15-17 mm. Head white, middle part of thorax and termination of tegula whitish; basal half of wing brownish to brownish grey, with browner spots, marked with purple-brown near middle and basally; distal half of wing white tinged yellowish, subterminal fascia brownish grey, purple towards tornus; apical pattern brownish grey. Fringes whitish with basal line blackish. Hindwing dirty cream with strigulation brownish cream.

Variation. Some darker and paler specimens with more or less distinct maculation of the forewing seen. Spots and fascias of distal wing area occasionally confluent.

Male genitalia charcaterised by very short sacculus and fairly long cornutus.

Female genitalia with ductus bursae slightly longer than in *dolorosa*, with weak posterior sclerite. Ductus seminalis and accessory bursa extending from postmedian concavity, protected by a rather weak, incomplete sclerotic ring.

**D i s t r i b u t i o n :** Santa Catarina and Paraná.

**C o m m e n t s .** Very close to *dolorosa*, differing in the situation of the ductus seminalis and accessory bursa, and the weaker sclerite of the ductus bursa.

### ***Parirazona illota* RAZOWSKI & BECKER, 1993**

*Parirazona illota* RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **2**(83): 166, figs 1,2 (male genit.). Type-locality: Brazil: Paraná: Morro de Meio. Type in MNRJ.

Alar expanse 16 mm. Front white, labial palpus pale ochreous; thorax brown. Basal half of forewing brownish, diffusely spotted brown, with darkest triangular spot near mid-costa; posterior area of wing pale brownish cream suffused brownish; subterminal fascia and apical spots brown, purple along termen. Fringes concolorous with ground colour. Hindwing brownish, with weak, darker strigulation.

Male genitalia as in *penthinana* and *serena* but with broad, strong sacculus and very slender median part of transtilla.

**D i s t r i b u t i o n :** Brazil: Paraná.

**C o m m e n t s .** The female is unknown. Externally this species is easily distinguished by the almost uniform dark coloration of the forewing.

### ***Parirazona brusqueana* RAZOWSKI & BECKER, 1993**

*Parirazona brusqueana* RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **21**(83): 167, figs 4,5 (male genit.), 10, 11 (female genit.). Type-locality: Brazil: Santa Catarina: Brusque. Type in MNRJ.



Alar expanse 14 mm. Externally similar to *illota* but in distal part of forewing ground-colour whiter. Pattern brownish.

Male genitalia as in *illota* but socius rounded terminally, median part of transtilla thick, not tapering apicad and sacculus slenderer.

Female genitalia with very long, well sclerotized ductus bursae.

**D i s t r i b u t i o n :** Brazil: Paraná and Santa Catarina.

### ***Parirazona sobrina* RAZOWSKI & BECKER, 1993**

*Parirazona sobrina* RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **21**(83): 167, figs 6,7 (male genit.). Type-locality: Brazil: Santa Catarina: Rio Vermelho. Type in MNRJ.

Alar expanse 13 mm. Externally very similar to *serena*, with rather pale anterior half of wing and very pale subterminal fascia, without reddish marks at termen near tornus.

Male genitalia as in mentioned species, but with broad, rounded socius and broad distal portion of sacculus. Aedeagus thick, cornutus much longer than in *serena*, as long as costa of valva (in *serena* reaching 2/3 of costa).

**D i s t r i b u t i o n :** Brazil: Santa Catarina.

### ***Parirazona lagoana* RAZOWSKI & BECKER, 1993**

*Parirazona lagoana* RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **21**(83): 167, figs 12,13 (female genit.). Type-locality: Brazil: Minas Gerais: Sete Lagoas. Type in MNRJ.

Alar expanse 17 mm. Head white, labial palpus tinged cream, vertex with grey; thorax whitish. Ground-colour white; basal part of forewing to beyond middle of costa brownish grey, spotted black-brown, tinged bluish along costa; dorsum suffused with similar colour, but with paler spots; subterminal fascia ill-defined; ground-colour white, preserved between dark areas, marked by a few blackish grey diffuse spots. Hindwing pale brown-grey.

Female genitalia as in *dolorosa* but sterigma forming a pair of postvaginal lobes; ostium protected by a rather weak sclerite which forms a colliculum slightly tapering towards ductus bursae; ductus seminalis and ductus of accessory bursa protected by small sclerites.

**D i s t r i b u t i o n :** Brazil: Minas Gerais.

### ***Coristaca* RAZOWSKI, 1992**

*Coristaca* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 99. Type-species: *Coristaca capsularia* RAZOWSKI, 1992, by orig. design.

Alar expanse 13 mm; labial palpus more than 1. Venation: In forewing  $R_4$ - $R_5$  connate, the latter to apex; remaining veins separate; in hindwing  $Rr$ - $M_1$ ,  $M_3$ - $Cu_1$  connate.

Male genitalia: Tegumen large, firmly coalescent with uncus and socii directed distally, uncus not curved ventrally; vinculum broadly fused with termen, complete; sacculus slender, almost as long as costal part of valva; pulvinus short, terminating subbasally; median part of transtilla slender; aedeagus slender; coecum penis and caulis fairly long; cornuti absent.

Female and biology unknown.

**D i s t r i b u t i o n :** Costa Rica.

**C o m m e n t s .** A monotypical genus of uncertain affinity, as the genitalia are highly specialised and no synapomorphy with any known genus is found. The socii are rigid, but

their position as well as the position of the uncus are apomorphic; also the shape of the uncus (dorso-ventral flattening) is treated as its autapomorphy. The genus was originally placed between *Phalonidia* and *Cochylis*.

***Coristaca capsularia* RAZOWSKI, 1992**

*Coristaca capsularia* RAZOWSKI, 1992, Misc. Zool., 14(1990): 99. Type-locality: Costa Rica: Cartago Prov.: 7 km SE El Canon. Type in CUB.

Head and proximal part of thorax blackish, otherwise paler, more brown-grey. Forewing broad, expanding terminally; ground-colour blackish grey, whitish at costa beyond median mark and median cell; remaining area suffused and strigulated black; pattern ill-defined: costal blotch and subapical blotch.

Male genitalia: Uncus broadest submedially, sacculus tapering distally, with small free end, costa of valva straight; aedeagus slender; coecum penis curved.

**D i s t r i b u t i o n :** Costa Rica (moth collected at altitude of 2500 m).

***Banhadoa* RAZOWSKI & BECKER, 1983**

*Banhadoa* RAZOWSKI & BECKER, 1983, Acta zool. cracov., 26(1): 432. Type-species: *Banhadoa luculenta* RAZOWSKI & BECKER, 1983, by orig. design.

Alar expanse 8 mm; labial palpus 1. Venation as in *Phalonidia* and its allies.

Male genitalia as in *Phalonidia* or *Saphenista* but with vinculum doubly-emarginated proximally; ventral portion of valva reduced; cornutus peculiar, connected with lateral wall of aedeagus; juxta high.

**B i o l o g y** unknown; moth collected at altitude of 800 m.

**D i s t r i b u t i o n :** A monotypical genus known from Brazil: Paraná.

***Banhadoa luculenta* RAZOWSKI & BECKER, 1983**

*Banhadoa luculenta* RAZOWSKI & BECKER, 1983, Acta zool. cracov., 26(1): 433, figs 35-37 (male genit.). Type-locality: Brazil: Paraná: Banhado (Quatro Barras). Type in MNRJ.

Alar expanse 8 mm; forewing ground-colour yellowish, suffused ochreous. Base of wing, costal part of median fascia and subapical fascia golden-ferruginous, dorsal part of median fascia rust-brown. Dorsum partially suffused grey, tornus with grey-black; distinct refractive pattern in postbasal area.

Male genitalia: Base of socii slender, free parts fairly long; median part of transtilla long, bifurcate apically; sacculus long, curved, with free termination. Otherwise as described for the genus.

**D i s t r i b u t i o n :** A monotypical genus known from Brazil: Paraná.

***Marylinka* RAZOWSKI & BECKER, 1983**

*Marylinka* RAZOWSKI & BECKER, 1983, Acta zool. cracov., 26(13): 438. Type-species: *Marylinka mimera* RAZOWSKI & BECKER, 1983, by orig. design. Type in MNRJ.

Alar expanse 9 mm; labial palpus 1.5. Habitus as in *Phalonidia*.

Male genitalia: Tegumen broad, short; free terminations of socii present; arms of vinculum separate; processus basalis of valva large; median part of transtilla plate-shaped (supposed autapomorphy). Abdominal scent organ absent.

**B i o l o g y** unknown.

**C o m m e n t s** . Closely related to *Phalonidia* and *Lasiothyris*. Monobasic.

***Marylinka mimera* RAZOWSKI & BECKER, 1983**

*Marylinka mimera* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 438, figs 55-58 (male genit.). Type-locality: Brazil: Paraná: Banhado (Quatro Barras). Type in MNRJ.

Labial palpus brown-cream, front whitish, other parts of head and thorax tinged ochreous-brown. Base of forewing cream, mixed ferruginous towards costa, darker, glossy beyond median fascia dorsally, silver-pink terminally. Median fascia rust-brown, suffused black proximally; subapical fascia curved, reaching tornus.

Male genitalia. Dorsal part of valva slender; sacculus broad, convex postbasally and terminally, spined; aedeagus slender; one cornutus present. Other characters described for the genus.

***Dinophalia* RAZOWSKI & BECKER, 1993**

*Dinophalia* RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **21**(84): 234: Type-species: *Dinophalia egregia* RAZOWSKI & BECKER, 1993, by orig. design.

Alar expanse 11 mm. Labial palpus over 1.5. Forewing with slender costal fold not reaching median fascia. Venation not examined.

Male genitalia: Tegumen broad basally; uncus short, concave ventrally; socius moderately short, drooping; vinculum arms membranously connected ventrally. Proximal half of valva broad, dorsal part slender distally, with well developed costa; sacculus broad, with short free termination, minutely spined postmedially. Median part of transtilla very broad, rounded apically, concave ventrally, lateral parts very small; juxta small, with dorso-posterior prominence. Aedeagus simple; coecum penis short; cornutus large.

Female genitalia and biology unknown.

**D i s t r i b u t i o n** : Costa Rica.

**C o m m e n t s** . This monotypical genus belongs in the *Phalonidia* group of genera as the structures of the aedeagus, the cornutus and the socii show. The presence of the uncus is a plesiomorphy, but its shape (concave ventral surface) is of autapomorphic importance. Further probable autapomorphies are the shape of the median part of the transtilla which is concave ventrally and the atrophy of its lateral parts. The pattern is somewhat similar to that in *Juxtolenia*. Probably related to *Mourecochylis*. The genus is monotypical.

***Dinophalia egregia* RAZOWSKI & BECKER, 1993**

*Dinophalia egregia* RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **21**(84):235, figs 3,4 (male genit.). Type-locality: Costa Rica: Turrialba. Coll. MNRJ.

Alar expanse ca 11 mm. Head whitish, labial palpus ochreous to before end laterally, whitish distally; thorax more brown, with brownish bases of tegulae. Forewing slender, with costa slightly convex, apex rounded and termen convexly oblique. Ground-colour in the form of four silver-white fasciae diffuse posteriorly, one perpendicular to 1/3 of costa, median fascia somewhat oblique, parallel to subterminal fascia, both edged dark brown



anteriorly, the last one situated just at apex. Remaining areas of wing ochreous brownish, concolorous with fringes. Hindwing pale ochreous brown, with much paler fringes.

Male genitalia as described for the genus. Some further characters are as follows: apex of median part of transtilla rounded, distal portion finely spined dorsally, subterminal portion with short lateral lobes; ventral edge of sacculus convex, termination marked by a strong spine.

Female and biology unknown.

Distribution: Costa Rica.

### *Juxtolena* RAZOWSKI & BECKER, 1993

*Juxtolena* RAZOWSKI & BECKER, 1993 SHILAP Revta lepid., **21**(84): 235. Type-species: *Juxtolena omphalia* RAZOWSKI & BECKER, 1993.

Alar expanse 16 mm. Labial palpus ca 2. Male forewing with ill-defined fold reaching mid-costa. Venation: Vein  $R_1$  very long,  $R_5$  to costa near apex,  $M_3$ - $Cu_1$  approaching to one another at median cell; in hindwing  $Rr$ - $M_1$  stalked to beyond middle, stalk of  $M_3$ - $Cu_1$  very short.

Male genitalia: Tegumen curved, membranous laterally as far as base of socii; uncus short; socius slender, slightly expanding basally; vinculum arms coalescent ventrally. Valva broad in basal third, with distinctly separate dorsal part and costa strongly sclerotized to middle; sacculus distinctly sclerotized, with long terminal process; bunch of spines above sacculus, postbasally. Median part of transtilla large, with apical process; juxta armed with a very long dorso-median process directed distally. Aedeagus simple, slender; single cornutus in vesica.

Female and biology unknown.

Distribution: Costa Rica.

Comments. This genus is probably closest to *Mourecochylis* and *Dinophalia* but more advanced. The autapomorphies of *Juxtolena* are the presence of the dorso-median process of the juxta, the apical process of the transtilla and the bunch of long spines of the discal surface of the valva. Two species known.

### *Juxtolena omphalia* RAZOWSKI & BECKER, 1993

*Juxtolena* RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **21**(84):236, figs5, 6 (male genit.). Type-locality: Costa Rica: Volcan Turrialba. Coll. MNRJ.

Alar expanse ca 16 mm. Head white tinged ochre around eyes; labial palpus ochreous, whitish distally; thorax whitish, base of tegula ochreous brownish. Forewing slender, somewhat expanding beyond base posteriorly, apex short, rounded, termen obliquely convex. Ground-colour in the form of four transverse, glossy white fasciae slightly broadening at costa, somewhat concave proximally, suffused ochreous distally. First fascia postbasally, second from mid-costa to middle of termen, subdivided dorsally by triangular group of brownish erect scales, third fascia close to the preceding fascia at costa, terminating at tornus, last fascia short, limiting the subapical area. Remaining surface of wing brownish, darkening costally, brown at proximal edges of fasciae near dorsum. Fringes pale brownish cream. Hindwing greyish; fringes cream, with a faint ochreous hue.

Male genitalia as described for the genus; free termination of sacculus curved ventrally, distal part of valva expanding terminally; median part of transtilla expanding terminally,

with a slender apical process; dorso-median process of juxta slightly curved, tapering distally.

**C o m m e n t s .** The coloration and pattern are peculiar, differing from other cochyline moths, without a dorsal blotch. Instead, four rather parallel fasciae extend across the wing.

***Juxtolenia oncodina* RAZOWSKI & BECKER, 1994**

*Juxtolenia oncodina* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., **22**(85): 33, figs 5,7 (male genit.). Type-locality: Brazil: Federal District: Planaltina. Coll. MNRJ.

Alar expanse 13.5 mm; labial palpus 1.5 white, concolorous with other parts of head and posterior half of thorax; anterior half of thorax tinged brownish, base of tegula brown. Forewing uniformly broad throughout, costa straight, apex rounded, termen short indistinctly convex, slightly oblique. Ground-colour silver white, pattern greish brown, darkest at costa, ill-defined at dorsum, with some brown scales on distal edges, consisting of basal blotch, with convex posterior edge; median fascia parallel to posterior edge, subapical fascia more oblique and straight, and apical fascia very short; brown mark near tornus.

**D i s t r i b u t i o n :** Brazil: Federal District.

Male genitalia: Similar to *omphalia* but socius slenderer, sacculus, aedeagus, cornutus and rod-like process of the juxta shorter, differing also in the presence of the long dorso-lateral processes of the juxta.

***Cirrothaumatia* RAZOWSKI & BECKER, 1986**

*Cirrothaumatia* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 460. Type-species: *Phalonia tornosema* CLARKE, 1968, by orig. design.

Alar expanse 12-14 mm; labial palpus over 1.5-2. Venation as in *Phalonidia* but in hindwing  $M_3-Cu_1$  stalked.

Male genitalia: Socius sublateral; large tuft of scent scales situated on the convexity of base of valva; sacculus without free termination.

Female genitalia as in *Phalonidia*; ductus seminalis and ductus of accessory bursa originating in corpus bursae.

**B i o l o g y** unknown.

**D i s t r i b u t i o n :** From Mexico to Venezuela.

**C o m m e n t s .** The presence of the tuft of androconial scales near the base of the valva is the synapomorphy of this genus and *Thysanphalonia*. The two genera differ, however, in the structure of the valva and the sacculus (in *Thysanphalonia* the sacculus is setose apically and the ventral edge of the valva is almost entirely membranous). The scent scales in *Cirrothaumatia* are directed proximally and originate on the bulbous prominence which is not the case in *Thysanphalonia*. Three species included.

***Cirrothaumatia tornosema* (CLARKE, 1968)**

*Phalonia tornosema* CLARKE, 1968, Proc. U.S. Natn. Mus. Wash., **125**(3660): 12, fig.6 (female genit.), pl. 2, fig. 7 (photogr. of type). Type-locality: Guatemala. Type in NMNH. – *Cirrothaumatia tornosema*: RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 460, figs 68,69 (male genit.).

Alar expanse 12-14 mm; head white with vertex brownish and labial palpus of female tinged grey basally; thorax grey, tegula rust. Ground-colour whitish grey in the form of a large postmedian blotch at costa and near mid-termen, orange blotch at tornus; anterior wing area brownish, strigulated brown, with numerous groups of refractive, erect scales; median fascia indistinct, brownish; marks beyond it brown. Variation: White parts of ground-colour more or less large, orange places intense, rust spots near or on subterminal, brown pattern.

Male genitalia: Socius broad; median part of transtilla long, very slender.

Female genitalia: Cup-shaped part of sterigma rather short, postvaginal part weakly sclerotized; ductus seminalis and accessory bursa originating before middle of corpus bursae, ventrally.

**D i s t r i b u t i o n :** Guatemala, Costa Rica and Mexico: Veracruz, where a moth was collected at an altitude of 1300 m.

### *Cirrothaumatia tornocarpa* (MEYRICK, 1932)

*Phtheochroa tornocarpa* MEYRICK, 1927, Exot. Microlepid., 4: 267. Type-locality: North Panama: Lino [?]. Type in NHMW. – RAZOWSKI, 1964, Annls zool., Warsz., 22: 480, fig. 82 (female genit. of type). – *Cirrothaumatia tornosema*: RAZOWSKI, 1990, ibid., 43(20): 401, n. comb.

Alar expanse ca 12 mm; head and thorax brownish grey, tegula brown. Ground-colour grey, strigulation brownish; pattern as in *tornosema*, but basal blotch more ochreous-olive, costal parts of median fascia more brown, subapical fascia rust-brown, orange towards tornus; marks beyond median fascia black-brown.

Female genitalia as in *tornosema* but the ductus of accessory bursa extends from the prominence near the semicircular sclerite.

**D i s t r i b u t i o n :** Panama.

**C o m m e n t s .** Externally very similar to *tornosema*, but darker, with brownish head. Probably its variation is similar to that in the preceding species.

### *Cirrothaumatia vesta* (CLARKE, 1968)

*Phalonia vesta* CLARKE, 1968, Proc. U.S. Natn. Mus. Wash., 125(3660): 14, figs 7 (male and female genit.), pl. 4, fig. 7 (photogr. of holotype). Type-locality: Venezuela: Aragua: Rancho Grande. Type in NMNH. – *Cirrothaumatia vesta*: RAZOWSKI & BECKER, 1986, Acta zool. cracov., 29(20): 460, n. comb.

Alar expanse 12-13 mm; Head white, labial palpus over 2, grey to beyond middle, thorax and vertex brownish. Ground-colour as two small, white blotches beyond median fascia, and orange tornal blotch darker than in *tornosema*, otherwise brownish; pattern brown, median fascia darker.

Male genitalia as in *tornosema* but median part of transtilla short, broader, and socius more elongate.

Female genitalia: Ductus bursae longer than in both mentioned species, prominence of corpus bursae as in *tornocarpa*.

**D i s t r i b u t i o n :** Venezuela.

**C o m m e n t s .** The differences in the female genitalia between *tornocarpa* and this species are slight and difficult to assess on the basis of the available material.



***Thysanphalonia* RAZOWSKI & BECKER, 1986**

*Thysanphalonia* RAZOWSKI & BECKER, 1986, Acta zool. cracov., 29(20): 460. Type-species: *Thysanphalonia cirrhitus* RAZOWSKI & BECKER, 1986, by orig. design.

Alar expanse 14 mm; labial palpus 1. Habitus and venation as in *Phalonidia*.

Male genitalia. Supposed autapomorphies: heavily sclerotized dorsum of sacculus; setose termination of sacculus; lateral socius. Other characters: broad median part of transtilla; submedian, group of scent scales on outer side of valva base.

B i o l o g y unknown.

D i s t r i b u t i o n : Mexico.

***Thysanphalonia cirrhitus* RAZOWSKI & BECKER, 1986**

*Thysanphalonia cirrhitus* RAZOWSKI & BECKER, Acta zool. cracov., 29(20): 461, figs 70-74 (male genit.). Type-locality: Mexico: Veracruz: Zangolica. Type in MNRI.

Head greyish, thorax grey, darker proximally. Forewing ground-colour white, weakly suffused and sprinkled grey. Basal blotch dark grey, interrupted along middle; median fascia in the form of subsquare, ferruginous, grey-edged blotch near tornus; two diffuse fasciae in subterminal area reaching termen and tornus.

Male genitalia: Socius elongate, broadest ventrally, with free dorsal end; valva broad, curved apically, with ventral edge membranous almost to base; arms of vinculum separate; juxta cup-shaped; no cornuti. See also the description of the genus.

D i s t r i b u t i o n : Mexico: Veracruz.

***Phalonidia* LE MARCHAND, 1933**

*Phalonidia* LE MARCHAND, 1933, Amat. Papill., 6: 242. Type-species: *Cochylis affinitana* Douglas, 1846 (Palearctic), by orig. design.

*Brevisociaria* OBRAZTSOV, 1943, Mitt. münch. ent. Ges., 33: 96. Type-species: *Cochylis gilvicomana* ZELLER, 1847 (Palearctic), by orig. design.

Alar expanse 9-18 mm; labial palpus 1.5-2, seldom 1 or 3. Venation: In forewing all veins separate; chorda, PCu and M atrophied, R<sub>5</sub> extends to costa; in hindwing Rr-M<sub>1</sub> approaching each other basally or stalked to middle; remaining veins separate. Sexual dimorphism slight; no costal fold in male. Coloration cryptic, with delicate refractive elements on forewing; pattern typical of *Cochylini*.

Male genitalia. Tegumen rather small, with distal part forming with socii a more or less differentiated complex; uncus atrophied; socius drooping, hairy; vinculum arms not coalescent ventrally. Valva slender, with costa well developed, long; sacculus species-specific, often with free termination. Median part of transtilla long, slender, with apical tips or hooks; juxta simple. Aedeagus simple, with fairly long coecum penis and ventral termination; caulis postmedian; cornutus single, with small capitulum.

Female genitalia. Sterigma rather delicate, with well-developed cup-shaped part; corpus bursae with spines, often arranged in a ring; ductus seminalis originating in corpus bursae; ductus seminalis in ductus bursae, same side.

B i o l o g y and early stages of Neotropical species unknown (those of Palearctic fauna mentioned by RAZOWSKI, 1987).

**D i s t r i b u t i o n** (Fig. 3): Holarctic and Neotropical Regions. In the latter spread all over the area, most abundant in Brazil, however, that may depend on comparatively good exploration of that country. 47 species are known from the area studied.

**C o m m e n t s** . In the Holarctic Region it is well limited, in the Neotropical Region the differences from the 6 following genera are rather slight and probably inconstant. 46 Neotropical species are known to date. In this region the species are usually well-differentiated.

***Phalonidia swammerdamiana* (ZELLER, 1877)**

*Conchylis swammerdamiana* ZELLER, 1877, Horae Soc. ent. Ross., **13**: 133, pl.2, fig.46 (moth). Type-locality: Colombia: Bogota. Type in NHML. – *Phalonidia swammerdamiana*: RAZOWSKI, 1967, Acta zool. cracov., **12**: 164, figs 4,5 (male genit.).

Alar expanse 12 mm; labial palpus 1.5, brownish ochreous, head more grey. Forewing expanding terminally, with costa weakly convex, termen oblique, straight. Ground-colour brownish grey, sprinkled brown; strigulation brown, shades weak, ochreous. Pattern brown, with basal blotch weak, median fascia broadest costally and subapical pattern paler.

Male genitalia: Socii broad basally, with fairly large free parts. Valva long; sacculus broad, convex distally. Median part of transtilla as long as cornutus; aedeagus broad.

**B i o l o g y** and female unknown.

**D i s t r i b u t i o n** : Colombia.

***Phalonidia rufoatra* RAZOWSKI, 1992**

*Phalonidia rufoatra* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 97, figs 24,25 (male genit.). Type-locality: Costa Rica: Prov. Puntarenas: Monteverde. Type in CUB.

Alar expanse 10 mm; head and thorax whitish, labial palpus 2. Forewing slender, not expanding terminally, termen oblique, straight. Ground-colour pale ochreous, ferruginous beyond blackish suffusion, whitish beyond median fascia; subapical blotch ferruginous. Female (with abdomen missing) darker.

Male genitalia: Distal part of tegumen broader than in *swammerdamiana*, tapering distad; free ends of socii short; median part of transtilla very slender, broad at base. Sacculus longer, convex near middle; aedeagus strongly bent; cornutus shorter than sacculus.

**B i o l o g y** . Moth collected in May in cloudy forest at altitude of 1400-1500 m, in May.

**D i s t r i b u t i o n** : Costa Rica.

***Phalonidia phlebotoma* RAZOWSKI & BECKER, 1994**

*Phalonidia phlebotoma* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., **22**(85): 24, figs 1,2 (male genit.). Type-locality: Brazil: Pará: Belem. Type in MNRJ.

Alar expanse 7 mm. Labial palpus 1; head and thorax cream but front white and collar ochreous. Ground-colour cream, tinged yellowish at pattern edges. Pattern and costal maculation brownish yellow; median fascia atrophying subcostally and in dorsal half of wing, marked brown in middle and at costa; subapical fascia darker, tapering terminally, marked brown at costa, dotted black near termen; apical and terminal marks brownish; ochreous shade between end of median cell and tornus.

Male genitalia: Terminal parts of socii short; valva fairly broad; sacculus long, rather uniformly broad throughout, without free termination; median part of transtilla broad in basal half, very slender in terminal portion. Aedeagus long, slender, strongly curved, with long, very slender terminal portion; cornutus very long, very slender.

**D i s t r i b u t i o n :** Brazil: Pará.

**C o m m e n t s .** Externally resembling some species of *Saphenista* WALSINGHAM, e.g. *S. lacteipalpis* (WALSINGHAM, 1891), but in the genitalia it is rather close to *rufotatra*, differing from it however mainly in the very long aedeagus.

### ***Phalonidia karsholti* RAZOWSKI, 1993**

*Phalonidia karsholti* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 163, fig.38 (female genit.). Type-locality: Peru: Dept. Ayacucho: 50 km E Nazca. Type in ZMK.

Alar expanse 14 mm; head white-grey, labial palpus 1.5, olive-grey; thorax darker, tegula ochreous-grey. Forewing expanding terminally; costa straight to beyond middle, apex broad, termen weakly oblique, rather straight. Ground-colour olive-grey, suffused grey and blackish, dispersely scaled glossy whitish in distal area of wing. Median fascia and subapical fascia diffuse, ochreous, preserved in median parts of wing.

Sexual dimorphism: Forewing slenderer in female than in male; ground-colour paler, fascias ochreous, marked black; fringes ochreous with dark grey divisions. Variation distinct both in male and female; ground colour more or less dark, suffusion beyond end of median cell often distinct, pale ochreous; blackish scales more dense; refractive pattern occasionally forming lines; pattern sometimes distinct, blackish.

Male genitalia; Median part of transtilla curved; sacculus large, angulate, rounded terminally, armed with long, basal process; aedeagus slender; cornutus small.

Female genitalia: Cup-shaped part of sterigma unified with colliculum to form a long, sclerotized tube; ductus bursae very short; corpus bursae with spines and small latero-posterior sclerite; ductus seminalis ventral, from base of ductus bursae; accessory bursa dorsal, from proximal part of the corpus.

**D i s t r i b u t i o n :** Peru: Ayacucho and Ancash.

**C o m m e n t s .** Easily distinguished by the presence of very long dorsal rod-like processes of the base of the sacculi.

### ***Phalonidia kathetospina* RAZOWSKI, 1993**

*Phalonidia kathetospina* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 164, figs 5,6 9 male genit.). Type-locality: Peru: Dept. Puno: 5 km E Limbani. Type in ZMK.

Alar expanse 11 mm; labial palpus over 1, brown, cream apically; front white, other parts of head brownish; thorax rust-brown, darker proximally, rust-grey distally, with collar partially white-grey. Forewing slender; termen strongly oblique. Ground-colour ochreous-cream, suffusions ochreous, white from beyond indistinct ferruginous median fascia to blackish subapical blotch, suffused white in apex area, black dashes on white ground-colour posteriorly; base of costa and diffuse median fascia ferruginous, tinged black in distal part at dorsum and black strip near costa.



Male genitalia: Socii large; valva slender; sacculus fairly broad, angulate distally, followed by sclerotized, sharp process of ventral portion of valva. Aedeagus large, curved in distal third; cornutus longer than sacculus.

**D i s t r i b u t i o n :** Peru: Puno.

**C o m m e n t s .** Externally this species resembles *Lasiothyris ficta* from Brazil. It certainly is close to the preceding two species, but very distinct in the presence of the valval thorn.

### ***Phalonidia embaphion* RAZOWSKI, 1984**

*Phalonidia embaphion* RAZOWSKI, 1984, Annls zool., Warsz., **38**(13): 276, figs 5,6 (male genit.), 7 (sixth sternite). Type-locality: Venezuela: 8 km SE Apartaderos. Type in NMNH.

Alar expanse 16-18 mm; labial palpus 1, pale ferruginous, white terminally, other parts of head whitish, front white; thorax grey. Basal half of forewing grey, strigulated brownish, distal part marbled grey; basal blotch dark brown-grey, represented by median spots; median fascia preserved at costa; subapical fascia grey. Fringes cream, brownish at apex.

Male genitalia: Terminal part of tegumen short; socii elongate; valva broad to middle; sacculus broad, rounded ventro-terminally; median part of transtilla slender, tapering terminad. Aedeagus curved in distal part; cornutus very slender, as long as coecum penis; two thorns in vesica.

**D i s t r i b u t i o n :** Venezuela; moth collected in February.

**C o m m e n t s .** This is one of innumereous *Phalonidia* species with abdominal scent organ preserved.

### ***Phalonidia synucha* RAZOWSKI & BECKER, 1986**

*Phalonidia synucha* RAZOWSKI, 1986, Acta zool. cracov., **29**(20): 458, figs 66.67 (mal genit.), 162, 163 (female genit.). Type-locality: Costa Rica: Turrialba. Type in MNRJ.

Alar expanse 9 mm; labial palpus 1.5 greyish, cream distally; front white; vertex and thorax pale brownish. Forewing termen oblique, rather straight. Ground-colour ochreous-cream, suffused and sprinkled brownish; pattern indistinct, brownish, preserved in costal part of wing.

Male genitalia: Basal part of socii slightly longer than their free parts; valva broadest postmedially; sacculus without free termination, rounded distally; base of median part of transtilla subtriangular; aedeagus very slender; cornutus as long as coecum penis.

Female genitalia: Sterigma membranous except for cup-shaped part; ductus bursae and distal half of corpus bursae membranous; accessory bursa dorsal, beyond middle of the latter; ductus seminalis subterminal, situated ventrally.

**D i s t r i b u t i o n :** Costa Rica; moth collected at altitude of 600 m (VIII-IX).

### ***Phalonidia ochracea* RAZOWSKI, 1967**

*Phalonidia ochracea* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 164, figs 1,2 (male genit.), 3 (female genit.), pl. 15, fig.1 (forewing). Type-locality: Ecuador: Huigra. Type in NHML.

Alar expanse 10 mm; similar to *synucha* but head browner, front cream. Ground-colour brownish cream, with brownish suffusions beyond middle and in apex area; pattern brownish, in form of median and subapical costal blotches.

Male genitalia as in *synucha* but aedeagus broad, cornutus more than twice longer than sacculus, with basal plate.

**D i s t r i b u t i o n :** Ecuador; moth collected at altitude of 4500 feet.

**C o m m e n t s .** The female genitalia figured originally may represent another close species as the example comes from British Guiana.

***Phalonidia squalida* (RAZOWSKI & BECKER, 1983)**

*Saphenista squalida* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 424, figs 9,10 (male genit.), 80 (female genit.). Type-locality: Brazil: Paraná: Banhado, Quatro Barras. Tpe in MNRJ.

Alar expanse 8-10 mm; head and thorax ochreous-cream; forewing termen slightly convex, oblique. Ground-colour pearl-cream, darkening basally. Pattern ochreous, diffuse; median fascia divided in the three part, subterminal fascia reduced to costal blotch.

Male genitalia as in *ochracea* but with much smaller aedeagus and shorter, straight cornutus; terminal portion of sacculus (at valva edge) with small prominence.

Female genitalia as in *synucha* but with a small process between lateral arms of sterigma and a larger cup-shaped sclerite: ring-shaped group of spines in postmedian part of corpus bursae.

**B i o l o g y .** Moth collected at altitudes 800 – ca 1000 m.

**D i s t r i b u t i o n :** Brazil: Paraná and Santa Catarina.

***Phalonidia haesitans* RAZOWSKI & BECKER, 1993**

*Phalonidia haesitans* RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **22**(85): 23, fig. 21 (female genit.). Type-locality: Brazil: Minas Gerais: Unaí. Type in MNRJ.

Alar expanse 9.5 mm. Head and thorax cream; labial palpus over 1, marked ochreous near middle. Forewing broadest medially, with costa almost uniformly convex, termen oblique, rather straight. Ground-colour cream with weak ochreous hue in places and blackish strigulation or single black scales. Pattern brownish yellow with some blackish dashes; median fascia interrupted subcostally and submedially; subterminal fascia mixed black in terminal half; terminal and apical pattern atrophying.

Female genitalia: Close to *squalida* but easily distinguished mainly by the absence of the sclerites and spines of the corpus bursae, membranous colliculum and much shorter ductus bursae.

**D i s t r i b u t i o n :** Brazil: Minas Gerais.

**C o m m e n t s .** This species is also comparable with *ochracea* and *synucha*. This group contains also *pellax* which, however, is more specialised as is has the asymmetric sacculi.

***Phalonidia pellax* (RAZOWSKI & BECKER, 1983)**

*Saphenista pellax* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 425, figs 11,12 (male genit.). Type-locality: Brazil: Paraná: Banhado (Quatro Barras). Type in MNRJ.

Alar expanse and habitus as in *squalida* but forewing slightly slenderer, termen straight, more oblique. Ground-colour whiter, pattern more ochreous-cream, median mark brown; subterminal fascia slenderer.

Male genitalia as in *squalida* but left sacculus with short termination and right sacculus with very long terminal process.

**Distribution:** Brazil: Paraná; type was collected at altitude of 800 m.

***Phalonidia fatua* (RAZOWSKI & BECKER, 1983)**

*Saphenista fatua* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 428, figs 89 - 91 (female genit.). Type-locality: Brazil: Santa Catarina: Rio Vermelho. Type in MNRJ.

Alar expanse 8 mm; coloration brownish ochreous, ground colour cream, with ochreous suffusions; pattern brownish at costa, more ochreous in remaining wing areas, with groups of brown scales.

Female genitalia as in *squalida* but with slenderer cup-shaped part of sterigma, weak sclerotic folds of ductus bursae and dorsal, circular, plicate folds embracing ductus of accessory bursa; ductus seminalis also dorsal, extending from middle of ductus bursae.

**Distribution:** Brazil: Santa Catarina; moth collected at altitude of 968 m.

***Phalonidia brilhanteana* (RAZOWSKI & BECKER, 1983)**

*Saphenista brilhanteana* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 429, figs. 92,93 (female genit.). Type-locality: Brazil: Mato Grosso: Rio Brilhante. Type in MNRJ.

Labial palpus 1.5, cream, tinged rust laterally, head and thorax more olive-brown. Ground-colour cream with olive-grey admixture and darker suffusions. Pattern olive-ochreous with subterminal fascia and costal remnant of median fascia distinct, both wedge-shaped. Remaining parts of the latter slender.

Female genitalia as in *fatua* but sterigma broader, small lateral sclerite of corpus bursae present, ductus seminalis and accessory bursa originating near base of ductus bursae, ventrally.

**Distribution:** Brazil: Mato Grosso.

***Phalonidia dotica* RAZOWSKI, 1993**

*Phalonidia dotica* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 163, fig. 38 (male genit.). Type-locality: Peru: Dept. Huánuco: Tingo Maria. Type in ZMK.

Alar expanse 8 mm; head cream, labial palpus 1, cream, brownish anteriorly; vertex, thorax and anterior part of tegula browner. Forewing termen strongly oblique. Ground-colour cream, tinged yellowish at base of costa and beyond median fascia; the latter diffuse, interrupted subcostally, slender at costa, broad otherwise, both yellow-brown, marked blackish at costa and in middle of wing, posteriorly fusing with blackish suffusion at dorsum; subapical fascia rather concolorous, reaching beyond mid-termen.

Female genitalia. Cup-shaped part of sterigma broad; ductus bursae very short; corpus bursae with numerous sclerotized folds and groups of small spines; accessory bursa from distal part of corpus, dorso-laterally; ductus seminalis dorsal, from middle of this last.

**Distribution:** Peru: Dept. Huánuco.

**Comments.** Genitally closest to *brilhanteana* as one can judge from the shape of the sterigma and the bursa copulatrix, but differs in the shape of the small median



convexity situated between the distal edges of the postvaginal sterigma, longer corpus bursae, and more proximal accessory bursa.

***Phalonidia horrens* (RAZOWSKI & BECKER, 1983)**

*Saphenista horrens* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 428, figs 86-88 (female genit.). Type-locality: Brazil: Santa Catarina: Rio Vermelho. Type in MNRJ.

Alar expanse and coloration as in *fatua*, but with brown hue on head and thorax and more ochreous forewing.

Female genitalia: Distal part of sterigma atrophied, dorsal portion with submedian pit; cup-shaped part small; corpus bursae with some spines; sclerites of bursa copulatrix wanting. Ductus seminalis dorsal, originating near middle of corpus bursae.

**D i s t r i b u t i o n** : Brazil: Santa Catarina: Rio Vermelho (at same altitude as *fatua*).

***Phalonidia walkerana* RAZOWSKI, 1967**

*Phalonidia walkerana* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): figs 6,7 (male genit.), pl. 15, fig. 2 (forewing). Type-locality: Peru: Callao. Type in NHML.

Alar expanse 10 mm. Head grey-brown, labial palpus 1.5, thorax darker, mixed with rust. Ground-colour of forewing whitish cream suffused brownish; basal half of wing brownish tinged ochreous, suffused brown-black; brown spot at end of median cell, subterminal fascia brown, terminal suffusion slightly paler.

Male genitalia: Free parts of socii fairly long; free termination of sacculus large, subtriangular; aedeagus slender; cornutus small.

**D i s t r i b u t i o n** : Peru (type-locality only).

***Phalonidia acrota* RAZOWSKI, 1993**

*Phalonidia acrota* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 162, figs 1,2 (male genit.). Type-locality: Peru: Dept. Ancash: 30 km E Huaraz: Chávin de Huanter. Type in ZMK.

Alar expanse 15; head and thorax brownish grey; labial palpus over 1. Forewing distinctly expanding terminally, broad in distal part. Ground-colour clear white, in the form of broad blotch from mid-costa to before apex, reaching beyond middle breadth of wing, with arched distal edge. Dorsal half of wing suffused grey; apical area dark grey with blackish reticulation and some whitish spots; base of wing brownish-grey with black dashes; median fascia ill-defined, blackish, darkest in costal half.

Male genitalia: Sacculus with long, rounded free termination; median part of transtilla fairly long, with distinct apical bifurcation. Aedeagus slender, bent; caulis very large, with protruding, spined lateral projections; cornutus as long as median part of transtilla.

Abdominal scent organ small, in form of short process of distal edge of sixth sternite, with extending lateral corners.

**D i s t r i b u t i o n** : Peru: Dept. Ancash.

**C o m m e n t s** . Closely related to *walkerana* but easily distinguished by its more black pattern and white blotch of ground colour at the forewing costa, rounded end of the sacculus, larger aedeagus and very large, spined caulis.

***Phalonidia unguifera* (RAZOWSKI, 1967)**

*Cochylis unguifera* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 203, figs 80,81 (male genit.), 82 (female genit.), pl. 16, figs 9,10 (wings). Type-locality: Brazil: Paraná: Castro. Type in NHML. – *Saphenista unguifera*: RAZOWSKI & BECKER, 1983, ibid., **26**(13): 425, figs 13,14 (male genit.), 81,82 (female genit.).

Alar expanse 7-10 mm. Head ochreous, front cream, palpus 1.5, mixed with orange. Forewing ground-colour ochreous-orange, median and subterminal fasciae orange-rust, dorsum strigulated, paler. In some specimens white blotch at costa postmedially, in some others costal half of median fascia black and basal half of costa blackish grey. Fringes orange-ochreous.

Male genitalia: Free ends of socii very small; valva slender; sacculus with terminal claw-shaped process above rounded ventral prominence which is much smaller than in *walkerana*. Aedeagus as in mentioned species.

Female genitalia: Postvaginal, lateral parts of sterigma broad, not fused with apophyses anteriores; cup-shaped part short; ductus seminalis and accessory bursa originating in distal part of corpus bursae, ventrally.

**D i s t r i b u t i o n** : Brazil: Paraná, Santa Catarina and São Paulo.

***Phalonidia lochites* RAZOWSKI, 1993**

*Phalonidia lochites* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 165, figs 6,7 (male genit). Type-locality: Peru: Dept. Apurimac: 25 km S Chalhuanca: Rio Lacaruse: Lacaia. Type in ZMK.

Alar expanse 16 mm; head brownish, thorax darker, labial palpus 3. Forewing expanding posteriorly, with apex broad, termen oblique, straight. Wing brownish cream, suffused brownish, scaled brown; pattern atrophied.

Male genitalia: Sacculus with ventral edge almost straight, terminating in small hook directed proximally, accompanied by a much larger spine of ventro-caudal part of valva. Median part of transtilla bifid apically. Aedeagus slender; caulis long; terminal part of aedeagus short, curved; cornutus shorter than caulis.

**D i s t r i b u t i o n** : Peru: Apurimac.

**C o m m e n t s** . Monochrome species not similar to any other *Phalonidia* of this region.

***Phalonidia scolopis* RAZOWSKI, 1993**

*Phalonidia scolopis* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 165, figs. 9, 10 (male genit.). Type-locality: Peru: Dept. Cusco: 40 km NW Sicuani, 5 km E Laguna Pomacanchi. Type in ZMK.

Alar expanse 12 mm; head and thorax whitish, labial palpus over 2, tegula brownish. Forewing expanding terminally, costa rather straight, termen distinctly oblique, straight. Ground-colour whitish; base of wing and proximal third of costa brownish; median fascia similar in colour, with traces of yellow-brown suffusions, followed by weak brownish suffusion and dots and diffuse fascia towards tornus; subapical blotch triangular, followed by a line reaching mid-termen.

Male genitalia as in *lochites* but sacculus without hook-shaped process, broader, angulate distally, fusing with sclerite of caudal edge of valva; strong spine at the end of sclerotization, three times larger in right valva than in the left. Aedeagus shorter than in

*lochites*, more curved, with cornutus as long as spine of right valva and caulis similar, but slenderer.

**D i s t r i b u t i o n :** Peru: Cusco: 40 km NW Sicuani, 5km E Laguna Pomacanchi.

***Phalonidia melletes* RAZOWSKI & BECKER, 1994**

*Phalonidia melletes* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid. **22**(85): 23, fig. 22 (female genit.). Type-locality: Brazil: Federal District: Planaltina. Type in MNRJ.

Alar expanse 9.5 mm. Head white cream, labial palpus ca 1. Forewing ground-colour cream, slightly suffused ferruginous; pattern ferruginous, partially edged with silver lines, consisting of costal remainders of basal blotch, hardly oblique, inconspicuous median fascia and subapical fascia almost reaching tornus.

Female genitalia: Postvaginal part of sterigma sclerotized, with distal edge concave medially and lateral arms ill-defined, membranously connected with apophyses; colliculum membranous, slightly asymmetric; corpus bursae provided with slender sclerite in the shape of an incomplete ring; small group of spines in distal part; accessory bursa in basal portion of ductus bursae, ventrally.

**D i s t r i b u t i o n :** Brazil: Federal District; moth collected at altitude of 1000 m.

**C o m m e n t s .** Probably close to *unguifera* as indicated by the shape of the sterigma and the lack of the sclerotized juncture between it and apophyses anteriores. It is easily distinguished by the rust pattern, more cream ground-colour and, in the female genitalia, by weakly sclerotized colliculum.

***Phalonidia olivana* (RAZOWSKI, 1967)**

*Cochylis olivana* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 209, fig. 91 (female genit.). Type-locality: Brazil: Paraná: Castro. Type in NHML.

Alar expanse 14 mm. Head ochreous-olive, thorax darker, labial palpus 1.5, ochreous, tinged brown. Ground-colour of forewing glossy, pale olive-cream, pattern brownish-olive; median fascia perpendicular to median cell, then bent; subternal blotch triangular; subapical fascia curved.

Female genitalia: Sterigma in major part membranous, not connected with apophyses, but having a distinct cup-shaped, sclerotized portion; sclerotic folds in ductus bursae and small sclerite in corpus bursae.

**D i s t r i b u t i o n :** Brazil: Paraná.

**C o m m e n t s .** Known from 3 females only. The systematic position is uncertain.

***Phalonidia aetheria* RAZOWSKI, 1967**

*Phalonidia aetheria* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 169, figs 13, 14 (male genit.), pl. 15, fig. 3 (forewing). Type-locality: Brazil: São Paulo: São Paulo. Type in NHML.

Alar expanse ca 7 mm. Head and thorax pale brownish ochreous. Forewing ground-colour glossy, pale yellowish ochreous, suffusions ochreous; pattern brownish, in the form of blotch at mid-costa and the slender subapical fascia; base of wing, apex and partially dorsum suffused brownish; median remnants of median fascia weak, brownish.

Male genitalia (figs. 23, 24): Free parts of socii very small; median part of transtilla tapering terminally; valva short; sacculus curved, with terminal group of spines.



**D i s t r i b u t i o n :** Brazil: São Paulo and Santa Catarina where collected at an altitude of 1400 m.

***Phalonidia sarovalva* RAZOWSKI, 1993**

*Phalonidia sarovalva* RAZOWSKI, 1993, Acta zool. cracov., **36**(1):166, figs 11,12 (male genit.). Type-locality: Peru: Dept. Apurimac: 7 km E Chalhuanca: Rio Chalhuanca. Type in ZMK.

Alar expanse 14 mm; head cream, labial palpus ca 1.5, brownish to before end; thorax pale ochreous-cream proximally, otherwise white-cream. Ground-colour whitish; suffusions cream, ochreous-cream in distal area. Wing edges spotted grey, black scales terminally, black spot near end of median cell; median fascia diffuse, consisting of brownish costal blotch and submedian spots; subapical fascia cream, edged brownish, followed by ochreous-rust; minute fascia just before apex.

Male genitalia: Socii and median part of transtilla slender; basal half of valva broad; right valva with fold curved dorsad to end half of sacculus, extending and bristled ventro-terminally; left valva with ovate depression edged by distal belt of spines, without projection of sacculus. Aedeagus small, terminating in a short process; caulis with large lateral lobes; cornutus fairly long, slender.

**D i s t r i b u t i o n :** Bolivia: Apurimac.

**C o m m e n t s .** Close to *aetheria* but with asymmetric valvae, large ventro-terminal process of the right sacculus, long cornutus and short end of aedeagus.

***Phalonidia introrsa* RAZOWSKI, 1993**

*Phalonidia introrsa* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 166, figs. 13,14 (male genit.). Type-locality: Bolivia: Dept. Cochabamba: 10 km SW Aiquille. Type in ZMK.

Alar expanse 14 mm; head cream, labial palpus ca 1.5; thorax brownish cream. Forewing slightly expanding terminally, costa weakly convex, termen straight, oblique. Ground-colour cream, suffused ochreous; base of costa, remnants of median fascia (costal blotch, dorsal fascia) and subapical, curved fascia brown.

Male genitalia: Socii rather short; valva broad to end of sacculus, then slender; sacculus somewhat convex terminally, with deep dorso-terminal concavity armed with short, distal spine, accompanied by several small thorns. Median part of transtilla broad basally, then very slender. Aedeagus slender, bent, with broad caulis.

**D i s t r i b u t i o n :** Bolivia: Cochabamba: 10 km SW Aiquille.

**C o m m e n t s .** This species resembles *aetheria* but has a broader forewing and the dorso-posterior portion of the sacculus is concave, edged by both dorsal and ventral folds.

***Phalonidia diamphidia* (CLARKE, 1968)**

*Lasiothyris diamphidia* CLARKE, 1968, Proc. U.S. Natn. Mus., **125**(3660): 49, fig. 26 (male & female genit.), pl. 4, fig. 5 (photogr. of type). Type-locality: Peru: Cusco: Machu Picchu. Type in NMNH.

Alar expanse 12-14 mm. Head and thorax brownish, labial palpus 1.3; thorax brown proximally. Ground-colour white-cream suffused ferruginous-brown to mid-costa, along dorsum and at base; ochreous-cream suffusion posterior to median cell. Pattern ferruginous-brown, diffuse; subapical fascia tapering distally.

Male genitalia: Terminal parts of socii very short; valvae asymmetric, right sacculus broad, left sacculus slender, shorter, both spined terminally. Aedeagus slender, broadest beyond caulis.

Female genitalia: Sterigma slender; ductus bursae with long sclerite; ductus seminalis originating near concavity of corpus bursae; accessory bursa from (?ventrally).

**D i s t r i b u t i o n :** Peru (type locality only).

### *Phalonidia diaphona* RAZOWSKI & BECKER, 1986

*Phalonidia diaphona* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 459, figs 62-65 (male genit.). Type-locality: Mexico: Veracruz: biological station 'Los Tuxtlas'. Type in coll. MNRJ.

Alar expanse 10 mm. Labial palpus 1, ochreos-cream, head paler. Ground-colour yellowish brown, brown dots along dorsum, black suffusion in basal 2/3 of costa, followed by grey suffusion which is a remnant of median fascia.

Male genitalia: Socii long, with atrophied ends; median part of transtilla broad; valva long, with costal claw-like terminal process.

**D i s t r i b u t i o n a n d b i o l o g y :** Mexico: Veracruz; moth collected in June.

### *Phalonidia trabalea* RAZOWSKI & BECKER, 1994

*Phalonidia trabalea* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., **22**(85): 25, figs 3,4 (male genit.). Type-locality: Brazil: Pará: Igarape Acu. Type in MNRJ.

Alar expanse 9 mm. Labial palpus and thorax ochreous cream, remaining parts of head cream, front whiter; Forewing apex short, rounded; termen weakly oblique, indistinctly convex. Ground-colour cream suffused ochreous, sprinkled brown. Dorso-basal blotch brown-yellow, followed by a paler dorsal suffusion; basal part of costa concolorous with the latter; median fascia consisting of marginal and median yellow-brown blotches marked black; subterminal fascia browner, marked black, reaching end of last median vein. Fringes concolorous.

Male genitalia: Socii broad, rounded apically; median part of transtilla long, slender. Sacculus slender, with small subterminal prominence followed by a large, minutely spined process reaching end of valva. Aedeagus fairly broad, with elliptic, ventral lobe before caulis; cornutus absent.

**D i s t r i b u t i o n :** Brazil: Pará.

**C o m m e n t s .** Externally similar to *phlebotoma*. Most probably is it closest to *diamphidia* as can be judged from the spine-like terminal process of the aedeagus.

### *Phalonidia submissana* (ZELLER, 1877)

*Conchylis submissana* ZELLER, 1877, Horae Soc. ent. Ross., **13**: 131, pl. 2, fig. 45 (moth). Type-locality: Colombia: Vicinity of Bogota. Type in NHML.

Alar expanse 11 mm; labial palpus 1.5, brownish. Forewing ground-colour yellowish grey, sprinkled dark grey and ochreous. Base and subapical blotch dark brown, traces of median fascia and beyond the former blotch much paler.

Male genitalia: Socius damaged; valva broad basally, then slender; terminal part of sacculus large; aedeagus very slender; cornuti absent.

**D i s t r i b u t i o n :** Colombia (type locality only).

***Phalonidia ecuadorensis* RAZOWSKI, 1967**

*Phalonidia ecuadorensis* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 167, figs 8 (forewing), 9, 10 (male genit.). Type-locality: Ecuador: Huigra. Type in MNHL.

Alar expanse 12 mm. Head and thorax brownish grey; labial palpus shorter than 2; forewing ground colour whitish grey, preserved as costal blotch reaching almost to end of termen; basal and dorsal parts of wing brownish, with darker, diffuse spots, terminal and apical parts paler, also spotted.

Male genitalia: Socii long; valva broadest postmedially, with ventral edge dentate beyond long termination of sacculus; aedeagus broad, spined before end dorsally.

**D i s t r i b u t i o n :** Ecuador (type locality, moth collected at 4500 feet).

***Phalonidia ochrimixtana* (ZELLER, 1877)**

*Conchylis ochrimixtana* ZELLER, 1877, Horae Soc. ent. Ross., **13**: 134 (moth). Type-locality: Colombia: vicinity of Bogota. Type in NHML.— *Phalonidia ochrimixtana*: RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 168, figs 11, 12 (male genit.).

Alar expanse 14 mm. Head and thorax ochreous-yellow; labial palpus 1.5. Ground-colour brownish yellow, with cream places; costal spots and base of wing yellow-brown, median fascia rust costally, ill-defined in middle, darker brown in dorsal part; subapical fascia delicate, paler, marked with brown lines.

Male genitalia: Socii tapering terminad, with short free parts; distal part of valva somewhat longer than terminal process of sacculus; the latter long, convex postbasally; aedeagus slender; cornutus moderate.

**D i s t r i b u t i o n :** Colombia: Vicinity of Bogota.

***Phalonidia loipa* sp.n.**

Alar expanse 18 mm. Head cream, labial palpus ca 2, front, vertex and scape of antenna white; thorax brownish cream, mixed with black proximally. Forewing expanding terminally; apex broad, rounded; termen oblique, slightly sinuate. Ground-colour cream, base of wing suffused brown, strigulate darker along edges, median fascia broad, black-brown, darker at places, subapical fascia concolorous, wedge-shaped reaching mid-teremen, where a line from the middle of the former terminates. Fringes missing. Hindwing broad, cream, anal field brownish; fringes whitish.

Male genitalia (Figs 25, 26): Socius tapering terminally; arm of vinculum slender; costal part of valva long, marked by medio-terminal fold; sacculus longer than half of costal part, convex beyond base ventrally, with ventro-terminal plate; base of transtilla large, slender; aedeagus large, tapering beyond caulis; long, capitate cornutus in vesica apart from sculpture, which in the distal part consists of rather large sclerotic shields.

**H o l o t y p e ,** male: "Ecuador: Cerro Mirador, 2800 m, Sta Barbara, Napo Prov. IV-10-86, bl, S. McKamey collr"; G.S. 11921; coll. CUB.

**C o m m e n t s .** This species is distinct externally in having black-brown pattern on the cream ground-colour and in the forewing shape. I place it near the Colombian *ochrimixtana* on the basis of some similarities in the shape of the socii and the valva. The left socius is strongly reduced (compare *nonaxyra*).



*Phalonidia nonaxyra* sp.n.

Alar expanse 12-13 mm; head and thorax brownish, labial palpus 1.5, white distally, front and vertex white, proximal part of thorax blackish brown, end of tegula mixed with whitish. Forewing rather not expanding terminally, with costa rather straight, termen distinctly oblique, hardly convex. Ground-colour white, suffused and spotted grey-brown to middle, with scarce, greyer marks in distal area, rust-brown mark at apex; median pattern included in suffusion, with black strip near middle (distinct in female), darkest at costa; subapical fascia curved, slender. Fringes whitish, brownish in costal portion. Hindwing pale brown-grey, darkening on periphery and on venation; fringes similar.

Male genitalia (Figs 27-30): Socius as in *loipa*, transtilla much smaller with median part slender; dorsal part of valva fairly broad, with caudal edge armed with strong thorns to beyond middle; sacculus also dentate, with distinct terminal part; aedeagus long, distinctly curved; cornutus approximately as long as sacculus; caulis large, submedian.

Abdominal scent organ (Fig. 31) in the form of a short process of sternite 6 and indistinct prominence of the former sternite.

Female genitalia (Fig. 76): Sterigma in major part membranous, with distinct median sclerite beyond ostium bursae, broad cup-shaped portion, rather distinctly sclerotized and spinulate distally, strongly convex in middle; ductus bursae slender, rather completely membranous; corpus bursae with numerous folds, and large, well sclerotized collar-like fold beyond middle, with numerous spines inside; inception of accessory bursa in distal part of corpus, dorsally.

H o l o t y p e , male: "Ecuador: Via Sta Barbara-La Bonita, km 23, 2400 m, Napo Prov. IV 7/9-76, bl. S. McKamey collr."; G.S. 11922. Coll. CUB. Paratypes, 2 males and 1 female, bearing identical labels.

C o m m e n t s . This species resembles externally *ecuadorensis*, but is easily distinguished by the strong thorns of the valva and the sacculus and much smaller distal process of the latter, and in the slenderer and shorter aedeagus. The socius in this new species is distinctly tapering apically and asymmetric (2 specimens examined) as in *loipa*.

*Phalonidia mesomerista* sp.n.

Alar expanse ca 14 mm; head snow white, vertex mixed grey distally, labial palpus over 1.5, mixed brownish to beyond middle; thorax brownish grey, end of tegula mixed with whitish. Forewing slender, costa slightly concave medially, termen distinctly oblique, almost straight. Ground-colour white, preserved in distal half of wing and as indistinct spots before middle of subcostal area; anterior part of wing suffused grey, diffusely spotted dark brownish grey; median fascia indistinct, marked only by blackish subcostal streak; subapical fascia large, dark grey, spotted blackish along distal edge, strongly convex, reaching tornus; suffusions anterior to fascia brownish, atrophied in costal half; apex area grey, spotted black-grey; fringes whitish grey, basal line grey. Hindwing greyish, semi-transparent brownish grey on periphery, diffusely reticulate with same colour distally; fringes brownish grey.

Female genitalia (Fig. 83): Postostial part of sterigma sclerotized, bilobed, with attached weakly sclerotized, hairy posterior lobe; proximal part sclerotized, with corners rounded and median sclerite rounded distally; ductus bursae weakly sclerotized except for two subostial plates; sclerite of basal portion weak, extending to apex of corpus bursae; membranous area of the latter with plicate, delicate elliptic belt, beyond which subdorsal ductus seminalis originates; accessory bursa from membranous, minutely spined median part of ductus bursae.

*H o l o t y p e*, female: "Ecuador: Via Sta Barbara-La Bonita, km 23, 2400 m, Napo Prov. IV-7/9-86 bl, S. McKamey collr."; G.S. 11920; coll. CUB.

*C o m m e n t s*. Externally very similar to *nonaxyra* but distinct in the absence of the rust spots at the forewing apex. The female genitalia with peculiar sterigma and bursa copulatrix; the subgenital sternite fusing with the sterigma. Basing myself on external similarity I place this species near *nonaxyra*.

### *Phalonidia thryptica* sp.n.

Alar expanse 12 mm; head and thorax yellowish white, labial palpus over 2, broad, midex pale ochreous to middle. Forewing broad, with rather uniformly rounded terminal portion. Ground-colour cream, whiter, glossy near pattern edges, suffused cream and ochreous cream in basal half, with brownish at costa basally, with rust-ochreous between median fascia and tornus and from black spot at end of median cell; this last is a large area reaching tornus and fusing with concolorous distal part of subterminal fascia brownish at costa; median fascia broad, rust-brown, brown in dorsal half along edges. Fringes cream. Hindwing broad, with apical part short, dark brownish grey; fringes whitish with brown-grey median line.

Female genitalia (Fig. 84): Papilla analis slender distally; apophyses fairly long; sterigma in major part membranous, scobinate, with cup-shaped part well developed and rather well sclerotized ventrally; ductus bursae long, slender; collar-like fold extending from anterior part of corpus to base of ductus bursae; ductus seminalis from middle of corpus, originating near accessory bursa, both dorsal.

*H o l o t y p e*, female: "C[osta] R[ica]: Guanacaste, Sta. Rosa N.P. HQ area 280 m, VI-14-88, bl. BROWN, POWELL"; G.S. 11919; coll. CUB.

*C o m m e n t s*. This species is distinct in the peculiar, rounded forewing shape and probably has a separate position within the genus. In the shape of the collar-like fold of the bursa copulatrix it resembles *nonaxyra*, *synucha* and some other species. Provisionally it is placed near *mesomerista*.

### *Phalonidia mimohospes* (RAZOWSKI & BECKER, 1983)

*Cochylis mimohospes* RAZOWSKI & BECKER, 1983, Acta zool. cracov., 26(13): 433, figs 38-40 (male genit.), 103 (female genit.). Type-locality: Brazil: Paraná: Banhado (Quatro Barras). Coll. MNRJ. – RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., 22(85): 25, transf. to *Phalonidia*, notes.

Alar expanse 8-12 mm. Labial palpus 2, yellowish, tinged brown, remaining parts of head similar in colour. Ground-colour yellowish cream, suffused pale ochreous dorsally and terminally, basal part of costa brown. Pattern: median fascia brownish yellow, diffuse

in dorsal half, mixed with grey and black in costal portion; subapical fascia weak, brownish yellow. Variation: Pale specimens with head, thorax and ground-colour of forewing whitish; dark examples with pattern distinct, especially the costal portion of median fascia, which is brown, suffused black, rust or grey.

Male genitalia: Base of socii broad, short, free terminal parts distinct. Distal part of valva slender, sacculus broad, terminating in strong spine accompanied by some minute thorns. Aedeagus slender, bent; caulis with dorsal processes.

Female genitalia: Sterigma a large plate with rounded proximal corners; ductus bursae slender, somewhat stronger sclerotized distally; ductus seminalis and accessory bursa dorsal; ostium beyond middle of sterigma; no sclerites in bursa copulatrix.

**B i o l o g y** : Moth collected at altitudes of 800 - 1000 m; several generations a year.

**D i s t r i b u t i o n** : Brazil: Paraná and Santa Catarina.

### *Phalonidia chloridia* RAZOWSKI & BECKER, 1994

*Phalonidia chloridia* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., **22**(85): 26, fig. 23 (female genit.). Type-locality: Brazil: Federal District: Planaltina. Type in MNRJ.

Alar expanse 9.5 mm. Head, thorax and forewing ground-colour whitish; labial palpus ca 2, with median joint mixed with ochreous medially; wing base and tornus suffused ochreous; spots along costa darker. Pattern: median fascia pale ferruginous, suffused and sprinkled black, interrupted near costa and dorsum; subapical fascia ochreous rust reaching termen, marked with other black dots; some black dots near end of median cell and termen.

Female genitalia resemble *mimohospes* but the sterigma is very large and colliculum broad, in major part sclerotised.

**D i s t r i b u t i o n** : Brazil: Federal District.

### *Phalonidia assensus* RAZOWSKI, 1967

*Phalonidia assensus* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 178, figs 30,31 (male genit.), 32 (female genit.), pl.15, fig.6 (forewing). Type-locality: Brazil: São Paulo: São Paulo. Type in NHML.

Alar expanse 14 mm. Head and thorax ochreous, labial palpus 1.5, tinged brownish distally, collar brownish. Ground-colour of forewing cream or yellowish mixed with pale ochreous; ochreous suffusions in dorsal half of wing; pattern brown to yellowish brown; median fascia orange internally, interrupted near costa, subapical blotch concolorous beyond costa, subterminal mark proximally so. Fringes cream.

Male genitalia: Base of socii broad, terminal part concave; sacculus without any termination; aedeagus stout; cornuti – two plates, one with dense thorns, the other with 3 marginal thorns.

Female genitalia: Cup-shaped sclerite of sterigma broad, distal portions of strigma in the form of two minutely spined patches; ductus bursae with sclerites and (proximally) spines.

**D i s t r i b u t i o n** Brazil: São Paulo.

### *Phalonidia meizobursa* RAZOWSKI & BECKER, 1994

*Phalonidia meizobursa* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., **22**(85): 26, fig. 24 (female genit.). Type-locality: Brazil: Minas Gerais: Unáí. Type in MNRJ.



Alar expanse 13 mm. Head, thorax and ground-colour of forewing ochreous-cream; labial palpus 1.5; wing with darker suffusions mainly in basal and postbasal areas, paler, sprinkled black postmedially and inside median fascia subcostally (in left wing). Median fascia pale yellow-brown, interrupted subcostally, suffused black dorsally (a triangular blotch) and medially (two longitudinal streaks); subterminal mark in the form of a chestnut-brown fascia in terminal part marked black along edges; black suffusion in middle of subterminal area.

Female genitalia: Sterigma elongate, with long lateral arms; colliculum short, sclerotic, ductus bursae long, somewhat more strongly sclerotized before colliculum than in remaining parts; ovate area of concentric folds surrounded by a membranous collar, densely spined ventrally.

**D i s t r i b u t i o n :** Brazil: Minas Gerais.

### *Phalonidia dysmorphia* (CLARKE, 1968)

*Lasiothyris dysmorphia* CLARKE, 1968, Proc. U.S. Natn. Mus., **125**(3660): 47, fig. 25 (male genit.), pl.2, fig. 6 (photogr. of paratype). Type-locality: Bolivia: Cochabamba: Incachaca. Type in NMNH.

Alar expanse 14 mm. Head and thorax brownish grey; labial palpus 1.3, brownish cream. Forewing ground-colour cream suffused and spotted brownish, in distal area and costa mixed brown. Variation: Basal blotch, median fascia and subapical fascia brown.

Male genitalia: Base of socii short, terminal parts large, sharp; dorsal part of valva slender, with spined ventro-caudal prominence; ventral part of valva large, sacculus with long, curved distal process. Aedeagus long; small cornutus in vesica.

**D i s t r i b u t i o n :** Bolivia: Cochabamba.

### *Phalonidia praemorsa* RAZOWSKI, 1993

*Phalonidia praemorsa* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 167, figs 17,18 (male genit.). Type-locality: Peru: Puno: 5 km E Limbani.

Alar expanse 16 mm; labial palpus 2.5, strongly curved upwards, brownish, second joint cream terminally, terminal joint rust; remaining parts of head cream; thorax brown, end of tegula olive-grey. Forewing slender, expanding terminally, with rather straight costa, broad apex and oblique, slightly sinuate termen. Ground-colour cream, suffused ferruginous; base of wing rust, browner at costa; costal blotch brown, remaining traces of median fascia rust, marked with 3 darker, median spots; subapical blotch and apical suffusion ferruginous.

Male genitalia: Median part of transtilla broad, in middle laterally expanding into small processes, with two rounded apical prominences. Valva broad at base, slender, tapering terminally beyond spined caudal projection; sacculus with long terminal part, left one with row of thorns along dorsal edge, right with longer, sharper end. Aedeagus long; caulis broad; cornutus shorter than median part of transtilla.

**D i s t r i b u t i o n :** Peru: Puno. Moth collected at an altitude of 3000 m.

**C o m m e n t s .** This species is distinct in the ferruginous coloration of the forewing and peculiar male genitalia. It certainly is close to *dysmorphia*, having a similar aedeagus, socii and the differentiated saccular portion of the valva.

*Phalonidia dyas* (RAZOWSKI & BECKER, 1983)

*Saphenista dyas* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 427, figs 22, 23 (male genit.). Type-locality: Brazil: Santa Catarina: Brusque. Type in MNRJ.

Alar expanse 8 mm. Front cream; thorax brownish. Forewing with termen oblique, slightly convex. Ground-colour grey-cream, glossy, suffused and sprinkled ochreous. Median fascia diffuse, ochreous; terminal pattern in the form of brownish strigulation.

Male genitalia: Free parts of socii slender, distinctly separate from one another; median part of transtilla fairly broad, spined apically; valva slender, tapering distally, with sacculus slender, without free termination. Aedeagus long, with asymmetric termination; no cornuti in vesica.

D i s t r i b u t i o n : Brazil: Santa Catarina.

*Phalonidia astricta* (RAZOWSKI & BECKER, 1983)

*Saphenista astricta* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 427, figs 24, 25 (male genit.), 85 (female genit.). Type-locality: Brazil: Paraná: Banhado (Quatro Barras). Type in MNRJ.

Alar expanse 8 mm; similar to *dyas* but pale cream in colour; ground-colour sprinkled ochreous; costa and part of termen dotted brown, base suffused ochreous. Pattern brownish cream; median fascia divided into three parts, dorsal part ill-defined; subterminal fascia distinct costally. Variation: Pattern more or less distinct.

Male genitalia as in *dyas* but distal parts of socii and median part of transtilla much longer, valva slenderer and aedeagus longer, with symmetric termination.

Female genitalia as in *fatua* but distal part of sterigma membranous, ductus bursae very short, dorsal circular fold small and accessory bursa originating in distal part of corpus bursae.

D i s t r i b u t i o n : Brazil: Paraná and Santa Catarina.

*Phalonidia hypagosocia* RAZOWSKI, 1993

*Phalonidia hypagosocia* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 167, figs 15, 16 (male genit.). Type-locality: Bolivia: Dept. Cochabamba: 25 km NW Mizque. Type in ZMK.

Alar expanse 14 mm; head and thorax cream, vertex tinged ochreous, labial palpus 1.5, brownish to beyond middle. Forewing slender, termen strongly oblique, straight. Ground-colour pale yellowish cream, glossy; suffusions more ochreous; costa brownish at base; median fascia consisting of ochreous spot at costa, spot in middle of wing tinged rust, scaled black, and slender, oblique, brown blotch at dorsum.

Male genitalia: Socius flattened, directed ventrally; median part of transtilla slender, bifid apically; sacculus with small, slender, subterminal process; aedeagus long; cornutus, a very thin spine.

D i s t r i b u t i o n : Bolivia: Cochabamba.

C o m m e n t s . This species is very closely related to *astricta* and *dyas*. It differs from them in coloration and in having a broad socius, short bifurcation of the end of the transtilla and in the presence of the cornutus. In all these species the tegumen is broad, broadly fused with vinculum whose arms are almost completely coalescent apically.

## Unplaced species

***Phalonidia remota* (RAZOWSKI & BECKER, 1983)**

*Saphenista remota* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 429, figs 26-28 (male genit.). Type-locality: Brazil: M[inas] G[erais]: Cambuí. Type: MNRJ.

Alar expanse 12 mm. Head and thorax cream; labial palpus 2; forewing ground-colour concolorous, with yellowish admixture and pale ochreous-orange suffusions; pattern darker than suffusions, tinged brown; dorsal third of median fascia indistinct, marked brown medially; subapical fascia slender, pale.

Male genitalia: Base of socii short, distal parts rounded; transtilla arch-shaped, with slender median part; sacculus broad, angulate distally; valva beyond saculus slender; aedeagus to caulis broad, membranous dorsally.

**D i s t r i b u t i o n** : Brazil: Minas Gerais.

***Phalonidia paliki* (RAZOWSKI & BECKER, 1983)**

*Saphenista paliki* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 430, figs 94,95 (female genit.). Type-locality: Brazil: Paraná: banhado (Quatro Barras). Type in MNRJ.

Alar expanse 12 mm. Head and thorax yellow-brown; labial palpus 2; forewing ground-colour similar, with dorsum creamer and yellow-brown strigulation; some black strigulae along costa. Fringes yellow-brown.

Female genitalia: Papilla analis with large warts; sterigma with shallow anterior pockets and lateral dentate lobes of postvaginal part; spines in corpus bursae; ductus seminalis anterior; accessory bursa from ductus bursae, ventrally.

**D i s t r i b u t i o n** : Brazil: Paraná.

***Phalonidia vorticata* (MEYRICK, 1912)**

*Phalonia vorticata* MEYRICK, 1912, Trans. ent. Soc. London, **1911**: 673. Type-locality: Argentina: at Paraná River. Type in NHML. – MEYRICK, 1963, Cat. *Microlepid*. MEYRICK, **4**: [31], pl. 15, figs 2-2b (female genit., photogr. of type). – RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., fig. 25 (female genit.).

Alar expanse 16 mm. Head, thorax, ground-colour of forewing and fringes white; terminal portion of wing and basal strigulae grey, ochreous shades edged with black subterminally and in middle of large, black-grey dorsal part of median fascia; costal portion of this last small, grey.

Female genitalia: Sterigma elongate, well sclerotized anteriorly; ductus bursae with large sclerites.

**D i s t r i b u t i o n** : Argentina: at the Paraná R. and Brazil: Paraná.

***Phalonidia hapalobursa* RAZOWSKI & BECKER, 1986**

*Phalonidia hapalobursa* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 459, fig. 166 (female genit.). Type locality: Costa Rica: Turrialba. Type in MNRJ.

Alar expanse 13 mm; head and thorax ochreous-cream, labial palpus 1.5. Forewing slender; ground-colour pale ochreous, yellower distad to median fascia, glossy pearl near



pattern; median fascia in the form of rust costal blotch; subapical mark paler, accompanied by subterminal fascia; black suffusion on veins, distally.

Female genitalia: Antevaginal part of sterigma shorter than the postvaginal plate, well sclerotized, broader than ductus bursae; weak sclerite at end of corpus bursae from where the dorsal ductus seminalis extends.

*D i s t r i b u t i o n* : Costa Rica (moth collected in November).

### *Lasiothyris* MEYRICK, 1917

*Lasiothyris* MEYRICK, 1917, Trans. ent. Soc. Lond., **1917**: 4. Type-species: *Lasiothyris limatula* MEYRICK, 1917, by monotypy. – RAZOWSKI & BECKER, 1993, Acta zool. cracov., **36**(1): 121 (revision).

Alar expanse 8-13 mm. Head with antenna simple and labial palpus usually ca 1.5. Coloration as in other taxa of the *Saphenista*-group of genera. Male hindwing with well-developed, however, occasionally short (in *cerastes*) or strongly reduced (in *perjura*) costal fold. Under the fold there is a scale tuft, usually pale in colour, exceptionally (in *cnestovalva*) with black termination. In the hindwing of some species (e.g. *sorbica*) basal, anal and median areas of wing sparsely clothed with somewhat altered, thin, long, terminally expanding scales. Venation slightly variable: In hindwing veins  $M_3$  -  $Cu_1$  may be stalked or separate.

Male genitalia. Socii variable in length, with broad base. Vinculum arms membranously connected ventrally or fused with one another, with apical parts occasionally protruding (e.g. in *luminosa*), or separate. Valva simple, tapering, more or less up-curved; sacculus simple, without terminal process. Median part of transtilla of *Phalonidia*-type, in a few species strongly reduced, short. Juxta usually small. Aedeagus long or extremely long, in some species, however, medium-sized. Coecum penis moderate, terminal part short; caulis subterminal. Cornutus, if developed, slender, straight or swung, occasionally extremely long. In a few species there are more than one cornutus: two in *megapenis*, four in *perjura*.

Abdominal scent organ, a bifurcate process of distal edge of sixth male abdominal segment, if present. The shape and size of the organ is species-specific (very large in *luminosa*, small in *gravida* and *sorbica*).

Female genitalia. There are two types of the female genitalia within the genus. In *ficta* they resemble *Phalonidia*-species and are characterised by ductus seminalis originating in the middle of the area of corpus bursae surrounded by a series of spines and the accessory bursa extending from the ductus bursae. In *competitrix* and its allies there are two accessory bursae. First of them is situated as in *ficta*, the second, larger one, is more proximal. Its ductus may be strengthened with some sclerites. Ductus seminalis originates in proximal portion of ductus bursae, just beyond corpus bursae. In the *omissa*-group there is only the posterior accessory bursa whilst the ductus seminalis is situated as in the *omissa*-group.

*B i o l o g y* . Unknown.

*D i s t r i b u t i o n* : 19 species from Veracruz, Mexico (*gravida*) to Santa Catarina, Brazil.

*C o m m e n t s* . *Lasiothyris* belongs to the *Saphenista*-group of genera together with *Phalonidia* LE MARCHAND, 1933, *Saphenista* WALSINGHAM, 1914 and some small, mainly monotypical genera as *Marylina* RAZOWSKI & BECKER, 1983, *Mielkeana* RAZOWSKI & BECKER, 1983 or *Mourecochylis* RAZOWSKI & BECKER, 1983. It differs from them by the presence of the hindwing costal fold and the shape of the abdominal scent

organ of the sixth sternite. The costal fold has seldom been found in remaining cochyline moths (e.g. in *Belemgena*). The abdominal scent organ was discovered in *Mielkeana* but on segments five and six and that of the latter sternite is short, not bifid. In some species of *Saphenista* occurs a scent organ of sternite 6 but it consists of a pair of short submedian lobes. This organ was also found in some other genera as in *Mimeugnosta* RAZOWSKI, 1986, *Henricus* BUSCK, 1943 and *Lorita* BUSCK, 1939. There are four ill-defined groups of species within *Lasiothyris*. In group one (*limatula*, *cerastes*, *sorbia*, *ficta*, *perjura*) the aedeagus is long but cornutus is very weak, rudimentary or absent (only in *perjura* there are 4 small cornuti) and the end of the sacculus is angulate. The female has rather primitive genitalia, similar to *Phalonidia*, with ductus seminalis originating in corpus bursae. In the *gravida*-group of species (*gravida*, *heterophaea*, *luminosa*, *competitrix*, *ilingocornuta*, *tardans*) the aedeagus is long and the cornutus usually very large, the caulis is subterminal, the socii elongate and the distal part of the sacculus rounded; the females have two accessory bursae, both extending from the ductus bursae and the ductus seminalis originating in the proximal part of the latter. The position of *ichthyochroa* is unclear, as its socii are highly specialised, unusual. In the *omissa*-group (*pervicax*, *omissa*, *revulsa*) the socius is strongly reduced (male of one species known only) and the females resemble those of the *gravida*-group but have retained only one accessory bursa. The last two species, *cnestovalva* and *diclada*, have a small aedeagus and differ in some other parts of their genitalia from the remaining representatives of this genus but have a typical abdominal scent organ of sternum 6 and well developed costal fold of the hindwing.

### *Lasiothyris limatula* (MEYRICK, 1917)

*Lasiothyris limatula* MEYRICK, 1917, Trans. ent. Soc. London, **1917**: 4. Type-locality: Ecuador: Huigra. – CLARKE, 1968, Cat. Microlepid. MEYRICK, **4**: [19], pl.9 (wings, venat., male genit. of holotype). Type in NHML. – RAZOWSKI & BECKER, 1993, Acta zool. cracov., **36**(1):123, fig 1,2 (male genit.).

Alar expanse 8 mm. Head missing; thorax ochreous-cream. Forewing ground-colour ochreous-yellow, darker in basal half and in terminal area of wing. Pattern more ochreous than ground-colour consisting of a costal spot (remnant of median fascia); weak dorsal and median suffusions and slender fascia from end of discal cell to tornus; ochreous dots in middle of terminal area.

Male genitalia: Terminal part of socius slender, long; vinculum arms not coalescent ventrally. Median part of transtilla very slender, bifurcate apically; sacculus with small terminal prominence. Aedeagus long, slender, with small ventral termination; cornutus absent.

**D i s t r i b u t i o n** : Ecuador.

**C o m m e n t s** . This species is distinct in its slender aedeagus and the lack of cornutus. The abdomen requires examination for the presence of the abdominal scent organ.

### *Lasiothyris cerastes* RAZOWSKI & BECKER, 1986

*Lasiothyris cerastes* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 461, figs 75,76 (male genit.), 132 (abdominal scent organ), 168,169 (female genit.). Type-locality: Costa Rica: Turrialba. Type in NHML.

Alar expanse 10 mm. Similar to the preceding species, but somewhat darker in coloration, with the pinkish hue in the posterior portion of wing and with more ferruginous pattern.

Male genitalia very similar to *limatula*, differing in longer base of the socii, slenderer lateral parts of transtilla and its extremely slender median part. Aedeagus much shorter and broader and a rudimentary cornutus present. The abdominal scent organ with broad base and moderate lateral arms.

Female genitalia with long, slender ductus bursae and small, cup-shaped colliculum.

**D i s t r i b u t i o n :** Costa Rica.

### *Lasiothyris sorbia* RAZOWSKI & BECKER, 1993

*Lasiothyris sorbia* RAZOWSKI & BECKER, 1993, Acta zool. cracov., **36**(1): 124, figs 3,4 (male genit.), 5 (abdominal scent organ). Type-locality: Brazil: Federal District: Planaltina. Type in MNRJ.

Alar expanse 8 mm. Head cream, thorax more ochreous; labial palpus 1. Forewing slender; ground colour yellowish cream, slightly suffused ochreous; ferruginous dots along costa and dorsum. Pattern ill-defined, rust-ochreous at costa, ochreous in remaining parts; median fascia almost completely atrophied (median and dorsal parts), subapical fascia reaching termen, marked rust-brown terminally. Hindwing transparent, brownish, with scales of basal, median and anal parts sparse, thin, expanding apically. Costal fold indistinct, but large marginal scales present.

Male genitalia as in *cerastes* but socius much longer, median part of transtilla broader, with asymmetric terminal thorns, distal part of valva slenderer and terminal prominence of sacculus broader. Aedeagus much longer and slenderer, with elongate distal portion; cornutus minute; dorso-posterior parts of anellus subtriangular. Abdominal scent organ delicate, with fairly broad lateral parts directed caudally.

**D i s t r i b u t i o n :** Brazil: Federal District (moths collected at altitude of 1000 m).

**C o m m e n t s .** This species is very close to *limatula*, *cerastes* and *telesocia*.

### *Lasiothyris ficta* (RAZOWSKI & BECKER, 1983)

*Saphenista ficta* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 426, figs 19-20 (male genit.), 21 (abdominal scent organ), 83,84 (female genit.). Type-locality: Brazil: Paraná: Curitiba. – *Lasiothyris ficta* RAZOWSKI & BECKER, 1993, *ibid.*, **36**(1): 125 (redescription).

Coloration darker than in the two preceding taxa; rust-brown subterminal fascia, reaching mid-termen, present; median pattern ill-defined.

Male genitalia very similar those of to *cerastes* but the base of the socii very broad, median part of the transtilla broad, wedge-shaped, and the ventro-terminal prominence of the sacculus absent. Aedeagus larger, also with ill-defined cornutus. Abdominal scent organ with long lateral processes.

Female genitalia quite distinct, with very short ductus bursae and broad, bulbous colliculum.

**D i s t r i b u t i o n :** Brazil: Paraná and Santa Catarina.

### *Lasiothyris perjura* RAZOWSKI & BECKER, 1993

*Lasiothyris perjura* RAZOWSKI & BECKER, 1993, Acta zool. cracov., **36**(1): 125, figs 5,6 (male genit.). Type-locality: Brazil: Santa Catarina: São Joaquin. Type in MNRJ.

Alar expanse ca 13 mm. Labial palpus 2, pale brownish grey, whitish dorsally and terminally, front, part of vertex and scape of antenna whitish, remaining parts of head pale



brownish grey. Forewing ground-colour whitish sprinkled and strigulated brownish grey; pattern darker than strigulation; median fascia rather uniformly broad, connected with dorsum by means of short fascia; discal dot brown-grey; fascia curved, thin terminally, reaching tornus. Costal fold of hindwing ill-defined.

Male genitalia: Base of socii broad, not tapering towards tegumen; socius with small, naked apical process; median part of transtilla wedge-shaped, with many small thorns. Four inequally long cornuti present. Abdominal scent organ absent.

**D i s t r i b u t i o n :** Brazil: Santa Catarina (moth collected at 1400 m).

### *Lasiothyris grvida* RAZOWSKI, 1986

*Lasiothyris grvida* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 379, figs 30 - 32 (male genit.), 33 (abdominal scent organ), 75 (female genit.). Type-locality: Mexico: Veracruz: Cordoba. Type in CUB. – RAZOWSKI & BECKER, 1993, ibid., **36**(1): 126 (redescription).

Alar expanse 10 mm; labial palpus over 1. Forewing ground-colour yellow-cream; pattern brownish yellow with median fascia atrophying below costa; subapical fascia well developed, marked with black scales before end.

Male genitalia: Base of socii large, terminal edge somewhat concave medially; distal portion of socius slender. Median part of transtilla tapering terminally; Aedeagus extremely long; cornutus almost as long as whole aedeagus.

Abdominal scent organ with moderate lateral arms.

Female genitalia: Sterigma and colliculum fairly broad, rather weakly sclerotized; two accessory bursae developed, one originating before colliculum, the other being larger than corpus bursa copulatrix; ductus seminalis just beyond corpus bursae.

**D i s t r i b u t i o n :** Mexico: Veracruz.

### *Lasiothyris luminosa* (RAZOWSKI & BECKER, 1983)

*Saphenista luminosa* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 426, figs 15 - 17 (male genit.), 18 (abdominal scent organ). Type-locality: Brazil: Santa Catarina: Brusque. Type in MNRJ. – *Lasiothyris luminosa* RAZOWSKI & BECKER, 1993, ibid., **36**(1): 126 (redescription).

Externally similar to *grvida*, but with ground-colour glossy, with a pinkish hue and black scales on distal edge of median and subterminal fasciae.

Male genitalia: Free parts of socii larger and broader than in *grvida*; valva broader basally; median part of transtilla larger, much broader; vinculum arms distinctly protruding and coalescent ventrally. Aedeagus and cornutus larger than in mentioned species.

Abdominal scent organ with long lateral parts.

**D i s t r i b u t i o n :** Brazil: Santa Catarina.

**C o m m e n t s .** The external differences between the species of this group are rather slight and their variation is insufficiently known.

### *Lasiothyris heterophaea* (CLARKE, 1968)

*Phalonidia heterophaea* CLARKE, 1968, Proc. U.S. Natn. Mus. Wash., **125**(3660): 36, fig. 19 (male genit.), pl. 4, fig. 1 (photogr. of holotype). Type-locality: Colombia: Antioquia: La Estrella. Type in NMNH. – *Lasiothyris heterophaea*: RAZOWSKI & BECKER, 1993, Acta zool. cracov., **36**(1): 127 (redescription).

Alar expanse 11 mm. Ground-colour yellowish white, glossy, especially in distal area; strigulation olive-cream; median fascia brownish olive, with brown marks.

Male genitalia similar to those in *luminosa* but distal portion of valva shorter and distal angulation of sacculus more pronounced, less rounded; aedeagus seemingly longer.

**D i s t r i b u t i o n :** Colombia.

**C o m m e n t s .** The genitalia of the holotype require re-examination. The socii are insufficiently clearly seen. The abdominal scent organ is also similar in the two species.

***Lasiothyris ichthyochroa* (WALSINGHAM, 1897)**

*Phalonia ichthyochroa* WALSINGHAM, 1897, Proc. zool. Soc. London, **1987**: 136. Type-locality: St. Croix (West Indies). Type in NHML. – *Phalonidia ichthyochroa*: RAZOWSKI, 1964, Annls zool., Warsz., **22**(16): 367, figs 28,29 (male genit. of holotype). – *Lasiothyris ichthyochroa*: RAZOWSKI & BECKER, 1993, Acta zool. cracov., **36**(1): 127 (redescription).

Alar expanse 6.5 mm. Head whitish, tinged brown; labial palpus 1.3, brownish; thorax cream. Ground-colour of forewing cream-white; base of wing, median fascia and terminal area pale ochreous; basal half of costa, distal edge of median fascia, subapical and subterminal marks brownish, costal part of median fascia darker; small groups of brownish scales along wing edges and amidst pattern. Fringes concolorous with ground-colour, mixed with ochreous in median area. No data on the hindwing costal fold.

Male genitalia: Socius slender, rounded terminally. Median part of transtilla with pair of apical thorns. Aedeagus and cornutus very long.

**D i s t r i b u t i o n :** West Indies: St. Croix.

**C o m m e n t s .** This species requires re-examination. Not checked for the presence of the abdominal scent organ.

***Lasiothyris ilingocornuta* RAZOWSKI & BECKER, 1993**

*Lasiothyris ilingocornuta* RAZOWSKI & BECKER, 1993, Acta zool. cracov., **36**(1): 127, figs 10,11 (male genit.), 20 (female genit.). Type-locality: Brazil: Federal District. Type in MNRJ.

Alar expanse 10-12 mm. Head white cream, labial palpus over 1, cream, thorax cream, tinged ochreous. Forewing ground-colour cream, suffused ochreous at places; costa tinged ochreous basally, concolorous suffusion posterior to median cell. Median fascia pale ochreous olive-grey, scaled black at costa, along proximal edge and near middle of posterior edge; subapical pattern olive-grey, marked black in terminal third near termen. Hindwing greyish, transparent (median and basal area clothed with sparse, thin scales). Costal fold of hindwing long, scent scales white-cream.

Male genitalia as in *megapenis* but with base of socii large, expanding in terminal portion, socius slender, fairly long. Median part of transtilla longer, gradually tapering terminally; cornutus more strongly curved.

Abdominal scent organ absent.

Female genitalia as in *megapenis* but sterigma short, ductus bursae in distal part membranous, broad, well sclerotized postmedially, curved, less sclerotized in anterior portion; ductus of accessory bursa, as in that species, beyond sclerite of ductus bursae, that of accessory bursa short, more anterior, situated dorsally.

**D i s t r i b u t i o n :** Brazil: Federal District.

**C o m m e n t s .** Very close to *megapenis* but easily distinguished by its irregularly suffused forewing ground-colour and almost complete pattern.

***Lasiothyris megapenis* RAZOWSKI & BECKER, 1993**

*Lasiothyris megapenis* RAZOWSKI & BECKER, 1993, Acta zool. cracov., **36**(1): 128, figs 8,9 (male genit.), 21 (female genit.). Type-locality: Brazil: Minas Gerais: Unaí. Type in MNRJ.

Alar expanse 11 mm; labial palpus ca 1.5. Head and thorax white cream, base of tegula tinged ochreous. Forewing ground-colour white-cream, with indistinct yellowish-olive hue in median and apical areas of wing, whiter basally. Costa suffused brown in basal third, costal remnant of median fascia concolorous, followed by much paler, more ochreous median shade; subapical mark pale yellow-brown, brown at costa; black dots near apex and before middle of termen. Hindwing pale grey-brown, partially transparent, but with typical, broad scales; fringes cream-grey. Hindwing costal fold weakly developed. Female paratype with forewing more ochreous, preserved mainly near costa.

Male genitalia: Free part of socius long, rounded terminally, base large. Median part of transtilla stout, abruptly tapering in apical portion; juxta very small; vinculum arms not coalescent ventrally. Aedeagus very large, with one very long, swung cornutus and one very short cornutus in vesica.

Abdominal scent organ absent.

Female genitalia as in *gravida* but colliculum not differentiated, ductus of accessory bursa just from beyond origin of very broad, irregularly sclerotized part of ductus bursae; ductus of accessory bursa almost entirely membranous, dorsal; corpus bursae without signum. Position of ductus seminalis not established.

**D i s t r i b u t i o n :** Brazil: Minas Gerais (moths collected at an altitude of 700 m).

**C o m m e n t s .** This species is easily distinguished by the coloration of the forewing, especially the olive-cream shade of its ground-colour and the presence of brown, costal remnants of the pattern. The male genitalia are very similar to those in *heterophaea* and *gravida* but distinctly differ by the short, stout median part of the transtilla.

***Lasiothyris competitrix* (RAZOWSKI & BECKER, 1983)**

*Mielkeana competitrix* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 440, figs 59-61 (male genit. & abdominal scent organ), 113,114 (female genit.). Type- locality: Brazil: Paraná: Bnhado (Quatro Barras). Type in MNRJ. – *Lasiothyris competitrix* RAZOWSKI & BECKER, 1993, Acta zool. cracov., **36**(1): 129 (redescription).

Alar expanse 9 mm; labial palpus ca 1.5. Ground-colour cream sprinkled and suffused brownish; pattern ochreous-brown in the form of postbasal spot at costa, median fascia atrophying dorsally and almost concolorous subapical fascia marked black towards the end.

Female genitalia: Sterigma rather broad; colliculum short, very weakly sclerotized; ductus bursae as in *megapenis* but with single, longitudinal sclerotic belt and sclerotized ductus of accessory bursa.

**D i s t r i b u t i o n :** Brazil: Paraná and Santa Catarina.



***Lasiothyris tardans* RAZOWSKI & BECKER, 1993**

*Lasiothyris tardans* RAZOWSKI & BECKER, 1993, Acta zool. cracov., **36**(1): 129, figs 12, 13 (male genit.). Type-locality: Brazil: Minas Gerais: Unai. Type in MNRJ.

Alar expanse 9.5 mm; Externally very similar to *ilingocornuta*, distinguished only by its broader forewing and slightly convex posterior edge of subterminal fascia. Pattern, especially at costa, browner, without a greyish-olive hue. Hindwing with long costal tuft long, scales of median area of wing slender but dense.

Male genitalia as in *ilingocornuta* but smaller, with slenderer socii, broader median part of transtilla, slenderer valva and much smaller aedeagus provided with shorter, straight cornutus. Abdominal scent organ absent.

**D i s t r i b u t i o n :** Brazil: Minas Gerais.

***Lasiothyris pervicax* RAZOWSKI & BECKER, 1993**

*Lasiothyris pervicax* RAZOWSKI & BECKER, 1993, Acta zool. cracov., **36**(1):129, fig. 22 (female genit.). Type-locality: Brazil: Federal District: Planaltina. Type in MNRJ.

Alar expanse 11 mm. Labial palpus over 1.5, cream-ochreous laterally, white dorsally; remaining parts of head whiter, vertex mixed with ochreous; thorax yellow-brown, mixed with cream distally. Forewing fairly broad, not expanding terminally, ground-colour ochreous cream mixed with yellowish in basal half, with pink beyond median fascia. Base of wing and dorsum above median fascia ferruginous; median fascia concolorous in dorsal and median parts, rust-brown at costa, marked with black dots near middle and on dorsum; pale rust-brown shade posterior to median fascia; subapical fascia rust-brown, slender, dotted black in terminal third. Hindwing brownish, with paler fringes. Scales dense, typical; costal fold rather short. Variation: Paler and darker specimmens are seen.

Female genitalia as in *megapenis* but with much larger, swung postmedian portion of ductus bursae; ductus seminalis originating beyond corpus bursae; accessory bursa not located.

**D i s t r i b u t i o n :** Brazil: Federal District.

**C o m m e n t s .** Very similar and close to *ilingocornuta*. Externally differing in broader forewing, more convex costa and termen and in rust coloration of the costal pattern.

***Lasiothyris omissa* RAZOWSKI & BECKER, 1993**

*Lasiothyris omissa* RAZOWSKI & BECKER, 1993, Acta zool. cracov., **36**(1): 130, figs 14,15 (male genit.), 23 (female genit.). Type-locality: Brazil: Pará: Belem. Type in MNRJ.

Alar expanse 9 mm. Head white, labial palpus over 1, white, mixed cream, vertex more ochreous; thorax pale ochreous cream. Forewing slenderer than in *pervicax* and *tardans*; ground-colour cream, suffusions weak, ochreous cream. Pattern yellowish brown: median fascia atrophying on dorsum and subcostally, with a brown costal portion; subapical fascia concolorous, marked brown at costa and terminally; brown dots at termen, before apex and on posterior edge of median fascia. Costal fold of hindwing long; scales of median area of wing dense, typical. Variation: Forewing darker, more brown.

Male genitalia as in *tardans* but with large median part armed with some apical thorns, longer aedeagus and shorter cornutus. No abdominal scent organ.

Female genitalia very similar to those in *pervicax* but membranous, proximal part of ductus bursae short.

**D i s t r i b u t i o n :** Brazil: Pará.

***Lasiothyris revulsa* RAZOWSKI & BECKER, 1993**

*Lasiothyris revulsa* RAZOWSKI & BECKER, 1993, Acta zool. cracov., **36**(1): 131, figs 16,17 (male genit.). Type-locality: Brazil: Federal District: Planaltina. Type in MNRJ.

Alar expanse 9.5-10.5 mm. Head and thorax white, labial palpus 1.5, pale ochreous; vertex and thorax white-ochreous. Ground-colour cream-ochreous, darkest in distal half of wing except for costal portion which is whitish; suffusions greyish brown; costa brownish to middle; costal portion of median fascia and subapical blotch brown, median part of the former marked with group of brown scales posteriorly or with median, elongate strip. Costal fold long; scales of mid-part of wing dense, typical.

Male genitalia: Socii reduced to a transverse hairy lobe terminated in two submedian prominences; vinculum arm fused ventrally. Valva slender. Transtilla broad, with small, acute median part and submedian prominences of dorsal edge. Aedeagus long, slender, with small, sharp terminal portion and a ventral convexity with its top at the end of caulis; cornutus absent. Abdominal scent organ absent.

**D i s t r i b u t i o n :** Brazil: Federal District.

**C o m m e n t s .** This species differs from all other members of this genus in the peculiar structure of the aedeagus which is constricted subterminally. The socii are also different, strongly reduced. They resemble those in *Platphalonidia* but differ in the shape of the basal part.

***Lasiothyris cnestovalva* RAZOWSKI & BECKER, 1986**

*Lasiothyris cnestovalva* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 463, figs 79-82 (male genit.). Type-locality: Costa Rica: Braulio Carrillo. Type in MNRJ. – RAZOWSKI & BECKER, 1993, *ibid.*, **36**(1): 131, redescription.

Alar expanse 9 mm; labial palpus over 1; forewing with rather straight costa and weakly oblique termen. Ground-colour glossy, pale ochreous-cream; pattern yellow-brown; median fascia interrupted medially; black mark in middle of subterminal area. Hindwing with long costal tuft.

Male genitalia with base of socii large and terminal parts rounded apically; distinct, sharp prominence between socii, dorsally. Median part of transtilla broad to middle. End of sacculus broad, rounded. Aedeagus small, slender, without cornutus.

Scent organ of sixth sternite large, with long lateral parts; small median prominence on the distal edge of the following sternite.

**D i s t r i b u t i o n :** Costa Rica.

**C o m m e n t s .** This species and *diclada* distinctly differ from the remaining members of *Lasiothyris* especially in the shape of the valva and aedeagus. However, both possess the costal fold of the hindwing and the abdominal scent organ typical of this genus.

***Lasiothyris diclada* RAZOWSKI & BECKER, 1986**

*Lasiothyris diclada* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 462, figs 77, 78 (male genit.), 133 (abdominal scent organ). Type-locality: Costa Rica: Turrialba. Type in MNRJ. – RAZOWSKI & BECKER, 1993, *ibid.*, **36**(1): 132, redescription.

Alar expanse 8 mm; labial palpus, shape of forewing and coloration as in *cnestovalva*, but pattern yellow-brown, with dark brown markings, without black scales. Costal fold of hindwing long.

Male genitalia as in *cnestovalva* but socius long, tapering apically, sharp, median part of transtilla longer, slenderer, sacculus termination minute; cornutus present. Abdominal scent organ only on sixth sternite, with slender lateral parts.

**Distribution.** Costa Rica.

## Unplaced species

***Lasiothyris micida* RAZOWSKI & BECKER, 1986**

*Lasiothyris micida* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 463, figs 83, 84 (male genit.), 171 (female genit.). Type-locality: Costa Rica: Turrialba. Type in MNRJ.

Alar expanse 10 mm; head and thorax black-brown, labial palpus over 1. Forewing broad, expanding terminally; ground-colour blackish with bluish hue; pattern black-brown, without gloss, in form of a basal blotch, interrupted median fascia and subapical fascia followed by apical and terminal spots.

Male genitalia: Socius tapering distally; vinculum forming large, semimembranous saccus and median, curved processes directed proximally; aedeagus slender; cornutus as long as distal part of this last.

Female genitalia: Cup-shaped part of sterigma short, broad, concave distally and proximally; ductus bursae tapering towards small corpus bursae; ductus seminalis ventral, from end of corpus bursae, accessory bursae dorso-lateral, close to the corpus bursae.

**Distribution:** Costa Rica.

**Comments.** The male genitalia curious in having median processes of the vinculum and a very broad saccus; the female resembles some *Saphenista* species.

***Saphenista* WALSINGHAM, 1914**

*Saphenista* WALSINGHAM, 1914, Biologia cent.-am., Lepid. Heterocera, **4**: 296. Type-species: *Conchylis lacteipalpis* WALSINGHAM, 1891, by orig. design. – RAZOWSKI, 1985, Nota lepid., **8**(1): 55, redescription. – RAZOWSKI, 1986, Acta zool. cracov., **29**(17): 398, catalogue of spp.

Alar expanse 7-21 mm. Labial palpus 1-2, exceptionally 3. Pattern and venation as in *Phalonidia*; some veins, e.g.  $R_rM_1$  and  $M_3-Cu_1$  in hindwing somewhat variable.

Male genitalia: Tegumen with remnant of uncus in form of small convexity; socius usually apical, extending distally with long, setose or hairy free part; base of socii short, strengthened by lateral sclerites; vinculum arms long, separate ventrally, with sharp median process; valva long, slender, with rather well sclerotized basal pocket; sacculus without free termination. Median part of transtilla long, broadening terminally, with latero-apical processes. Aedeagus simple, or with subterminal, ventral process; one cornutus in vesica.



Abdominal scent organs occur in several species on segments 6 and 7. Usually they are preserved on the segment 6 and are short, often bilobed.

Female genitalia of two main types: in one group of species simple, usually without sclerites of bursa copulatrix and with short, cup-shaped part of sterigma and variably situated ductus seminalis and accessory bursa. In the subgroup of *cordifera* the sac of ductus bursae is present. In the other type a collar-like sclerite of the ducus bursae is developed and accompanied by long, plicate sclerites; the very small accessory bursa originates in the ductus bursae ventrally.

**B i o l o g y** unknown except for the dates and altitudes of the collection of some species some species.

**D i s t r i b u t i o n** : Neotropical region (84 species) and southern part of Nearctic subregion.

**C o m m e n t s** . The supposed autapomorphies are: the tooth-like process of the vinculum, a rather well sclerotized pocket-shaped concavity of the base of valva, the laterally expanded apical portion of transtilla and probably, the presence of the subterminal prominence of the aedeagus (atrophied in many species). *Saphenista* is closely related to *Phalonidia*, showing some similarities in the structure of the valva, transtilla and socii. The presence of the abdominal scent organs may support the formation of a group which includes the genera from *Phalonidia* to *Mielkeana* (or *Mimeugnosta*).

The genus is one of the most abundant cochyline genera; 82 Neotropical species are known to this date. The differences between the taxa are rather slight as the genitalia are rather simple. In many cases the external characters are more important than the genital ones. In some cases, e.g. in *praefasciata* a number of forms showing small differences have been discovered. They are treated as infraspecific forms and are not discussed in this paper.

### ***Sapheniasta teopiscana* RAZOWSKI & BECKER, 1986**

*Sapheniasta teopiscana* RAZOWSKI & BECKER, 1986, Acta zool. cracov., 29(20): 450, figs 41, 42, 128 (abdom. scent organ). Type-locality: Mexico: Chiapas: Teopisca. Type in MNRJ.

Alar expanse 12 mm; head white, labial palpus 1.5, cream; thorax ochreous, ground-colour creamer, with orange suffusions; dorso-basal blotch diffuse, brownish; median fascia atrophied; subapical fascia ferruginous.

Male genitalia: Socius broadening terminally; median part of transtilla distinctly shorter than cornutus. Process of vinculum arm short; aedeagus slender.

Abdominal scent organs: Broad, single lobe of sternite 6, and very slender convexity of the followig sternite.

**B i o l o g y** . Moth collected in June at altitude of 1900 m.

**D i s t r i b u t i o n** : Mexico: Chiapas.

### ***Sapheniasta discrepans* sp.n.**

Alar expanse 11 mm; head white; labial palpus ca 1.5, tinged ochreous to middle; thorax cream. Forewing weakly expanding terminally, broadest subterminally, with termen oblique, slightly convex. Ground-colour pale ochreous cream; dorso-basal suffusion

browner, costal suffusion concolorous but darker; dorsal blotch triangular, dark brown, pale edged, costal part of median fascia slightly darker than suffusions, median part vestigial; subapical fascia slender, darker than costal part of median fascia, reaching mid-termen; subterminal blotch paler, marked brown, extending towards base of median veins. Fringes paler than ground-colour. Hindwing dirty cream, tinged ochreous on periphery; fringes cream. Female with forewing broader than in male, and hindwing browner.

Male genitalia (Figs 32,33) distinct in having long socius, long median part of transtilla with distal edge distinctly convex, long cornutus and slender apical part of fused arms of vinculum. Abdominal scent organ (fig. 34) a short, broad prominence of distal edge of sixth sternite.

**H o l o t y p e**, male: "C[osta] R[ica]: Alajuela, NE slope volcan Poas, 8 km N Vara Blanca 1400 m, VI-6-88, bl. J. BROWN, J. POWELL"; G.S. 11892; coll. CUB. Paratype, female: "Costa Rica: Estac. Carrillo, 600 m, Parque Nac. Braulio Carrillo S.J.Prov., VII-28/30-1990; J. POWELL black lite".

**C o m m e n t s**. This species is distinct in the male genitalia but shows some genital and external similarities with *teopiscana*.

### *Saphenista consona* RAZOWSKI & BECKER, 1983

*Saphenista consona* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 423, figs 4-6 (male genit.), 73 (female genit.). Type-locality: Brazil: Paraná: banhado (Quatro Barras). Type in MNRJ.

Alar expanse 10-14 mm; head and thorax orange, front white-cream; ground-colour glossy cream, suffusions orange; pattern dark orange mixed with brownish or rust, especially in distal part of wing. Variation: female with distinct, brown dorsal blotch.

Male genitalia: Median part of transtilla almost as long as in *teopiscana*, valva broader, aedeagus longer. Scent organ smaller.

Female genitalia: Cup-shaped part of sterigma short, weakly sclerotized; small, ventral sac before middle of ductus bursae, accessory bursa more anterior, subdorsal; ductus seminalis dorsal, originating in middle of corpus bursae.

**D i s t r i b u t i o n**: Brazil: Paraná.

### *Saphenista delicatulana* (ZELLER, 1877)

*Conchylis delicatulana* ZELLER, 1877, Horae Soc. ent. Ross., **13**: 137. Type-locality: Colombia: Bogota: Rio Fucha. Type in NHML. – *Phalonidia delicatulana*: RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 173, figs 22,23 (male genit. of type).

Alar expanse 13 mm. Head whitish, labial palpus and vertex mixed with yellow; thorax brownish. Ground-colour yellowish-cream, suffusions ochreous-yellow, glossy shades along pattern; this last brownish ochreous, brown scaled along edges. Basal area dark costally, paler dorsally where strigulated; triangular blotch at costa followed by paler remnants of median fascia; subapical fascia limiting pale terminal area, apical area tinged ochreous-yellow.

Male genitalia: Socius tapering terminally; cornutus almost as long as aedeagus. No data on abdominal scent organ.

**D i s t r i b u t i o n**: Colombia.

***Saphenista multistrigata* WALSINGHAM, 1914**

*Saphenista multistrigata* WALSINGHAM, 1914, Biologia cent.-am. Lepid. Heterocera, 4: 296, pl.9, fig. 5 (moth). Type-locality: Mexico: Veracruz: Atoyac. Type in NHML. – *Phalonidia multistrigana*: RAZOWSKI, 1964, Annls zool., Warsz., 22: 365, fig.23 (male genit. of type).

Alar expanse 8-9 mm. Head whitish; thorax and ground colour of forewing yellowish with brown admixture; pattern yellowish brown, ill-defined in median area of wing, almost atrophied in basal part; subapical fascia distinct.

Male genitalia: Socius long, slender; cornutus strong, as long as median part of transtilla.

Female genitalia: Bursa copulatrix very small, cup-shaped part of sterigma as long as ductus bursae, accessory bursa dorsal.

Distribution: Mexico: Veracruz.

Comments. This species requires re-examination, as the above mentioned female was compared with the type only externally. The almost identical specimens from Jamaica (cornutus smaller and slenderer) may be not conspecific.

The specimens from Puerto Rico (Forbes, 1931: 354, pl.45, fig. 27, male genit.) represent probably a distinct species.

***Saphenista lacteipalpis* (WALSINGHAM, 1891)**

*Conchylis lacteipalpis* WALSINGHAM, 1891, Proc. zool. Soc. London, 1991: 500. Type-locality: St. Vincent: Windward Side. Type in NHML. – *Saphenista lacteipalpis* WALSINGHAM, 1914, Biologia cent.-am. Lepid., Heterocera, 4: 296. – RAZOWSKI, 1964 Annls zool., Warsz., 22: 367. – *Phalonidia lacteipalpis*: RAZOWSKI, 1967, Acta zool. cracov., 12(8): 175, fig. 24 (female genit, paralectotype).

Alar expanse 9-10 mm. Front and labial palpus whitish, thorax yellowish brown; ground-colour yellowish tinged brownish; pattern yellow-brown, marked rust-brown, consisting of a large basal blotch; median fascia interrupted subcostally, subapical fascia short, curved, shorter than in *multistrigata*.

Female genitalia smaller than in *multistrigata*, with somewhat longer ductus bursae and corpus bursae minutely spined; cup-shaped part of sterigma short, distal edges of postvaginal sterigma well sclerotized, long.

Distribution: West Indies: St. Vincent.

***Saphenista nauphraga* RAZOWSKI & BECKER, 1983**

*Saphenista nauphraga* RAZOWSKI & BECKER, 1983, Acta zool. cracov., 26(13): 422, figs 1,2 (male genit.), 3 (abdominal scent organ), 75,76 (male and female genit.). Type-locality: Brazil: Santa Catarina: Brusque. Type in MNRJ.

Alar expanse 9-10 mm; head and thorax pale cream, ground-colour of forewing concolorous or whiter, with pearly gloss. Pattern yellowish brown to brownish, often marked brown, consisting of dorso-basal, slender triangle, two elongate blotches in median area of wing and subapical fascia tapering towards end and terminating before tornus.

Male genitalia with socius slender, long; aedeagus slender; cornutus somewhat longer than median part of transtilla. Scent organ: Bilobed process of sternite 6.

Female genitalia as in *lacteipalpis* but ductus bursae and cup-shaped part of sterigma longer; accessory bursa originating in distal part of corpus bursae, dorsally; ductus seminalis proximal.



**Distribution.** Brazil: Santa Catarina, Paraná and Federal District.

***Saphenista orichalcana* RAZOWSKI & BECKER, 1986**

*Saphenista orichalcana* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 451, figs 43,44 (male genit.), 45 (abdominal scent organ). Type-locality: Costa Rica: Braulio Carrillo. Type in MNRJ.

Alar expanse 8 mm; labial palpus 1, brownish, white distally; front white; remaining parts of head and thorax ochreous, the latter brown proximally. Ground-colour of forewing pale yellowish-ochreous, with a weak pinkish hue. Pattern ferruginous, browner at costa; basal blotch in the form of a dorsal triangle; median fascia interrupted three times.

Male genitalia as in *nauphraga* but median part of transtilla longer, cornutus twice smaller, and aedeagus very slender. Abdominal scent organ smaller, with very short, distinctly separated lobes.

**Biology.** Only the date of collection (July) and altitude (1100 m) are known.

**Distribution:** Costa Rica.

***Saphenista phenax* sp.n.**

Alar expanse 12 mm; head white, labial palpus ca 1.5, tinged ochreous to middle; thorax ochreous cream, browner proximally. Forewing not expanding terminally, with rather straight costa, broad, rounded apex and weakly oblique termen. Ground-colour cream; suffusions ochreous, costa more brown basally, dorso-basal shade paler. Pattern and postmedian suffusion yellow-brown, the latter scaled brown costally, median fascia strongly so in median and dorsal parts, pale yellow-brown subcostally; subapical fascia broad to before end, strongly tapering, marked brown terminally. Fringes darker than ground-colour. Hindwing pale brownish cream; fringes cream.

Male genitalia (Figs 35,36) as in *lathridia* or *orichalcana* but with broad aedeagus, large cornutus and strongly broadening termination of median part of transtilla. No lateral process of vinculum arm; abdomminal scent organ atrophied.

**Holotype**, male: "Costa Rica: Estac. Carrillo, 600 m, Parque Nac. Braulio Carrillo, S.J. Prov., VIII-10-90; J. POWELL black lite"; G.S. 11884; coll. CUB.

***Saphenista imaginaria* RAZOWSKI & BECKER, 1986**

*Saphenista imaginaria* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 252, figs 45,46 (male genit.), 130 (abdominal scent organ), 151 (female genit.). Type-locality: Costa Rica: Turrialba. Type in MNRJ.

Alar expanse 8 mm. Head and forewing ground-colour dirty cream, thorax slightly browner; pattern yellowish brown with browner suffusions; dorso-basal blotch elongate-triangular; median fascia distinct at costa, paler dorsally, with separate median portion; subapical fascia brownish, distinct.

Male genitalia as in *orichalcana* but aedeagus small and cornutus proportionally large, as long as median part of transtilla; arm of vinculum with short process. Abdominal scent organ similar, but lobes on short base.

Female genitalia as in *nauphraga* and *lacteipalpis* but with distal edge of antevaginal part of sterigma distinctly incised.

**Distribution:** Costa Rica.

**R e m a r k .** One specimen from Honduras examined, differing in its somewhat longer aedeagus and proportionally shorter cornutus may represent a distinct species.

***Saphenista gilva* RAZOWSKI & BECKER, 1986**

*Saphenista gilva* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 453, figs 147-149 (male genit.). Type-locality: Costa Rica: Turrialba. Type in MNRJ.

Alar expanse 10 mm. Head and thorax pale ochreous, front whitish. Forewing ground-colour ochreous-cream with remnants of ferruginous subapical fascia; apex edged with ferruginous; grey suffusion in dorso-basal area of wing.

Male genitalia as in *imaginaria* but aedeagus fairly large, with cornutus shorter than median part of transtilla and arm of vinculum without a process. Abdominal scent organ not developed.

**D i s t r i b u t i o n :** Costa Rica.

***Saphenista temperata* RAZOWSKI, 1986**

*Saphenista temperata* RAZOWSKI, 1986, Acta zool. cracov., **29**(17): 399, fig. 21 (female genit.). Type-locality: Mexico: Tamaulipas: 21 mi SW Ciudad Victoria. Type in CUB.

Alar expanse 10 mm. Labial palpus over 1, ochreous-cream, front and vertex paler; thorax brownish yellow. Ground-colour yellowish cream, with some groups of pearly scales and ochreous suffusions near wing edges; costa brownish basally; pattern much darker than ground-colour, diffuse: basal blotch indistinct; median fascia preserved at costa; subapical fascia diffuse medially, where marked with black scales.

Female genitalia resembling two last species but sterigma membranous except for cup-shaped part, ductus bursae longer; short ventral process from middle of ductus bursae, ventrally.

**B i o l o g y .** Moth collected in September at altitude of 4000 feet.

**D i s t r i b u t i o n :** Mexico: Tamaulipas.

***Saphenista aeraria* (RAZOWSKI, 1967)**

*Phalonidia aeraria* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 170, figs 15,16 (male genit.), pl.15, fig. 4 (forewing). Type-locality: Peru: Cusco Mts. Type in NHML.

Alar expanse 10-12 mm; head brownish, labial palpus 1.5, ochreous brown, front grey-cream; thorax ochreous-brown. Forewing ground-colour pale ochreous cream in anterior part of wing, grey, with a weak violet hue from beyond basal ochreous-orange blotch, brownish terminally and dorsally; dorso-basal blotch darker than basal blotch, black along costal edge; costal part of median fascia orange, thin, paler towards dorsum; postmedian and subterminal pattern dark brown.

Male genitalia: Socius rather short; median part of transtilla broad; valva slender; sacculus weakly convex ventrally; aedeagus as long as valva, rather broad; cornutus half the length of aedeagus.

**D i s t r i b u t i o n :** Peru: Cusco Mts.

**C o m m e n t s .** Genitally similar to *rafaeliana* but externally quite different, having a distinct dorso-basal blotch.

*Saphenista raphaeliana* RAZOWSKI, 1989

*Saphenista raphaeliana* RAZOWSKI, 1989, SHILAP Revta lepid., 17(22): 206, figs 5-7 (male genit.). Type-locality: Colombia, Cauca: Paramo de Parace: Lake San Rafael. Type in NMNH.

Alar expanse 16 mm. Head cream-brown, labial palpus 1.5, browner. Ground-colour cream mixed and suffused brownish, dorsum tinged grey-brown; pattern darkest costally; basal blotch yellow-brown; median fascia brown, rust-brown at costa; subapical fascia brown-grey costally, then much paler, concolorous with shades at tornus and posterior to end of median cell.

Male genitalia: Socius broad, rounded apically; median part of transtilla broad, with large terminal processes; sacculus with postbasal lobes; aedeagus short, broad; cornutus strong.

**D i s t r i b u t i o n :** Colombia (moth collected at an altitude of 3570 m).

*Saphenista penai* (CLARKE, 1968)

*Amallectis penai* CLARKE, 1968, Proc. U.S. natn. Mus., 125(3660): 28, fig. 15 (female genit.), pl. 2, fig. 2 (photogr. of holotype). Type-locality: Bolivia: Cochabamba: Incachaca. Type in NMNH.

Alar expanse 14 mm; head cream, labial palpus 1.5, whitish terminally, thorax ochreous mixed with rust. Forewing ground-colour cream-ochreous, glossy in proximal part, mixed with rust along basal half of costa. Dorsal part of median fascia tawny ferruginous, costal part paler; subapical fascia ferruginous-brown, paler towards the end, dorsal blotch rust, black edged costally, more ochreous-cream dorsad. Variation: In paratype pattern edged or tinged (median fascia) with black.

Female genitalia: Cup-shaped part of sterigma rather weakly sclerotized, posterior part of sterigma slender; ductus bursae with longitudinal, sclerotized folds to middle; corpus bursae minutely spined.

**D i s t r i b u t i o n :** Bolivia and Peru (paratype).

**C o m m e n t s .** *S. penai* is placed in this system on the basis of its external similarity to *aeraria*, whose female genitalia are however, unknown. The paratype was described from Peru and I believe it is conspecific with the holotype.

*Saphenista frangula* (CLARKE, 1968)

*Amallectis frangula* CLARKE, 1968, Proc. U.S. natn. Mus., 125(3660): 30, fig. 16, pl. 2, fig. 8 (photogr. of holotype). Type-locality: Venezuela: Aragua: Rancho Grande. Type in NMNH.

Alar expanse 16 mm; head cream, labial palpus 1.5, cream-ochreous proximally, front whitish, vertex and thorax more ochreous, the latter browner proximally. Ground-colour cream, suffusions and basal blotch golden-ochreous, costa and median fascia more rust; blotch near tornus rust-brown; subapical fascia paler, both edged black-brown. Female genitalia with cup-shaped part of sterigma short, concave proximally; ductus bursae slender, membranous; corpus bursae minutely spined.

**D i s t r i b u t i o n :** Venezuela: Aragua.

**C o m m e n t s .** The systematic position of *frangula* is not clear; it is placed in this system because of its similarity to *penai* in the pattern and membranous corpus bursae.



***Saphenista nephelodes* (CLARKE, 1968)**

*Amallectis nephelodes* CLARKE, 1968, Proc. U.S. natn. Mus. Wash., **125**(3660): 27, fig. 14 (male & female genit.), pl. 2, fig. 3 (photogr. of type). Type-locality: Bolivia: Cochabamba: Incachaca.

Alar expanse 16-21 mm. Labial palpus pale ochreous, other parts of head and thorax brownish. Ground colour of forewing cream, suffused ochreous, glossy, in distal half of wing darker, grey, dotted black and brown; basal area brownish ochreous, brownish at costa. Median fascia ochreous-olive-brown in costal part, paler in dorsal part; transverse fuscous blotch beyond this fascia; subapical fascia slender, fuscous.

Male genitalia: Socius long; median part of transtilla shorter than cornutus; aedeagus fairly short, with long ventro-terminal portion.

Female genitalia: Cup-shaped part of sterigma short, sclerotized; accessory bursa dorso-lateral, with broad ductus originating in subterminal part of plicate ductus bursae; ductus seminalis from middle of corpus bursae, dorsally.

**Biology.** Moth collected in August and September at an altitude of 2100 m, in tropical cloud area.

**Distribution:** Bolivia.

***Saphenista peruviana* RAZOWSKI, 1993**

*Saphenista peruviana* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 170, figs 26-28 (male genit). Type-locality: Peru: Dept. Apurimac: 12 km N Abancay, Cerro Turonmocco. Type in ZMK.

Alar expanse 21 mm; head cream, labial palpus ca 3, brownish; thorax greyish olive, with tegula brownish. Forewing broad, expanding posteriorly, termen long, hardly sinuate. Ground-colour brownish-olive, suffused brown, more ochreous cream in costal part of basal area and between tornus and middle of wing, greyish terminally. Dorsal fascia brown, marked dark brown inside median cell. Fringes yellowish cream.

Male genitalia: Socius broad, with inner edge expanding postmedially; median part of transtilla rather short, minutely spined apically; sacculus slender; aedeagus shorter than costa of valva; cornutus longer than half the length of the latter; caulis postmedian.

**Distribution:** Peru: Apurimac.

**Comments.** Similarly patterned and close to *nephelodes*; distinct mainly in much shorter socius and large cornutus. The terminal edge of the median part of the transtilla spined.

***Saphenista campalita* RAZOWSKI, 1993**

*Saphenista campalita* RAZOWSKI, 1993, Acta zool. Cracov., **36**(1): 171, figs 29,30. Type-locality: Peru: Lima: Type in ZMK.

Alar expanse 14-17 mm; head white, labial palpus 1.5, brownish to middle laterally; thorax grey. Forewing slender, termen distinctly oblique, slightly convex. Ground-colour greyish white densely strigulated brownish, with darker spots along termen and distal part of dorsum, sparsely scaled black in distal area. Median fascia a brown, diffuse subdorsal blotch; subapical blotch ill-defined, pale brown. Variation: One specimen with large, grey suffusions and broad brown subdorsal blotch.

Male genitalia similar to *peruviana* but median part of transtilla slenderer, with longer lateral projections; aedeagus short, broad, with caulis postmedian; cornutus long, curved, flat medially, with long basal sclerite. Abdominal scent organ absent.

**D i s t r i b u t i o n :** Peru: Lima.

**C o m m e n t s .** This species is distinct in the shape of the cornutus. It probably belongs to same group as the preceding two species.

### *Saphenista deliphibursa* (RAZOWSKI, 1992)

*Phalonidia deliphibursa* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 97, fig. 40 (female genit.). Type-locality: Costa Rica: Puntarenas: Monteverde (Cloud Forest Res.). Type in CUB.

Alar expanse 8.5 mm. Head white, thorax creamer, with base of tegula yellower. Forewing very slender; ground-colour pearl-white; pattern glossy, pale ochreous-yellow, in the form of basal and submedian suffusions, median fascia perpendicular to costa; subapical marking accompanied by more proximal suffusion and weak terminal mark.

Female genitalia: Cup-shaped part of sterigma sclerotized ventrally, short, concave in middle, dorsally; ductus bursae very short; ductus seminalis dorsal, originating beyond middle of corpus bursae.

**D i s t r i b u t i o n :** Costa Rica: Prov. Puntarenas.

### *Saphenista xysta* sp.n.

Alar expanse 10 mm. Head ochreous cream, front cream, labial palpus 1.5, cream in distal half; thorax ferruginous. Forewing broad; termen convex, oblique. Ground-colour pale ochreous-cream, reticulation indistinct, rust; pattern as in *multistrigata*, rust; median fascia divided into two parts, subapical fascia tapering towards 2/3 of termen. Fringes concolorous with ground-colour. Hindwing brown grey, pale towards base; fringes much paler.

Female genitalia (Figs 85) as in *deliphibursa* but cup-shaped part of sterigma shorter, weakly sclerotized, dorsal part of sterigma semimembranous; ductus bursae slender, ductus seminalis originating in anterior part of corpus bursae.

**H o l o t y p e , male:** "Costa Rica: Alejeula, Rio Sarapiquí, 6 air km San Mingel, 800 m, 6 - IX- 88 bl., J. BROWN, J. POWELL."; G.S. 11902. Coll. CUB.

### *Saphenista peraviae* sp.n.

Alar expanse 12 mm; head pale brownish cream, front cream, labial palpus ca 2, brownish. Forewing somewhat expanding posteriorly, termen oblique, indistinctly sinuate. Ground-colour cream densely strigulated and sprinkled grey, suffusions ochreous-olive, greyish at costa and termen. Pattern: median fascia consisting of blackish grey costal blotch and pale ferruginous dorsal blotch marked black dorsally and dorso-posteriorly, blackish dorsal blotch and slightly paler subapical blotch; subterminal and apical spots as well as terminal spots paler. Fringes cream. Hindwing greyish cream, suffused and densely strigulated grey; fringes grey-cream.

Female genitalia (Fig. 86): Papilla analis slender, long; apophyses anteriores long; sterigma with well sclerotized distal edges of lateral arms, weakly sclerotized dorsally except for median belt; preostial part sclerotized; bursa copulatrix small, membranous except for large folded lobe of ventral part of corpus; ductus bursae broad.

**H o l o t y p e**, female: "Dominican Republic, Peravia, 3 km SW La Nuez, tributary to Rio las Cuevas, 18°40'N, 70°38'W, 1870 m, 5-6 August 1990, J. RAWLINS, S. THOMPSON"; G.S. 10679; coll. CMNH.

**C o m m e n t s**. Externally this species is distinct in its coloration, in the genitalia with a large lobe of the corpus bursae and the sterigma. Probably close to *deliprobursa*.

### ***Saphenista onychina* RAZOWSKI & BECKER, 1986**

*Saphenista onychina* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 452, figs 152, 153 (female genit.). Type-locality: Costa Rica; S. Cruz: Turrialba. Type in MNJ.

Alar expanse 10 mm; head whitish, labial palpus 1.5; thorax olive-cream. Forewing expanding terminally; ground-colour olive-cream, suffusions darker and greyer; pattern dark olive-grey, paler and creamer along middle of wing; median fascia with distinct costal part, elongate median part of blotch and weak dorsal part; basal blotch preserved at costa; subapical blotch followed by median suffusion, marked with black before end.

Female genitalia with ductus bursae long, slightly sclerotized subterminally; distal edge of cup-shaped part of sterigma concave medially; ductus seminalis originating in distal half of corpus bursae, dorsally.

**D i s t r i b u t i o n**: Costa Rica.

### ***Saphenista fluida* RAZOWSKI, 1986**

*Saphenista fluida* RAZOWSKI, 1986, Acta zool. cracov., **29**(17): 402, fig. 25 (female genit.). Type-locality: Mexico: Veracruz: Fortin de las Flores. Type in CUB.

Alar expanse 10 mm. Ground-colour of forewing pale ochreous-cream; pattern preserved in apical part of wing, dark brown, similar to that in *nongrata*; median remnants of median fascia present.

Female genitalia similar to those in *onychina* but distal edge of cup-shaped part of sterigma very slightly concave, ductus bursae rather membranous; ventral wart-like prominence near middle of corpus bursae.

**D i s t r i b u t i o n**: Mexico: Veracruz.

### ***Saphenista nongrata* RAZOWSKI, 1986**

*Saphenista nongrata* RAZOWSKI, 1986, Acta zool. cracov., **29**(17): 397, fig. 17 (female genit.). Type-locality: Mexico: Veracruz: Fortin de las Flores. Type in CUB.

Alar expanse 10 mm; head, end of tegula and labial palpus whitish, brownish anteriorly. Forewing ground-colour cream, with wing edges suffused pale olive-brown. Pattern brownish; dorso-basal blotch slender, subtriangular, costal part mixed with yellow terminally, dorsal blotch subsquare, two median parts arranged longitudinally; subapical fascia fusing with subterminal mark.



Male genitalia: Distal part of apex of transtilla with spine-like processes; process of vinculum arm short; aedeagus uniformly broad anteriorly, with long ventral end; cornutus almost as long as aedeagus, with rather short basal sclerite. Abdominal scent organ absent.

Female genitalia: Distal parts of sterigma membranous; cup-shaped part large, broadening medially; ductus bursae extremely short; ductus seminalis dorsal, extending from end of corpus bursae; accessory bursa, a rigid, long sac situated at base of ductus bursae, sublaterally.

**B i o l o g y .** Moth collected in July and December.

**D i s t r i b u t i o n :** Mexico: Veracruz.

### *Saphenista praia* RAZOWSKI, 1986

*Saphenista praia* RAZOWSKI, 1986, Acta zool. cracov., **29**(17): 399, figs 1-4 (male genit.). Type-locality: Costa Rica: Prov. Puntarenas: 6 km S San Vito. Type in CUB. – RAZOWSKI & BECKER, 1986, *ibid.*, **29**(20): 453, fig. 154 (female genit.).

Similar to *nongrata*, but pattern brownish-ochreous consisting of elongate dorso-basal blotch and subterminal fascia, reaching mid-termen; median fascia divided also into 4 parts.

Male genitalia as in *nongrata* but apical part of transtilla broader and cornutus as long as aedeagus.

Female genitalia as in *nongrata* but ductus bursae longer and cup-shaped part of sterigma smaller.

**B i o l o g y .** Moth collected in March and May at an altitude up to 1800 m.

**D i s t r i b u t i o n :** Costa Rica: Prov. Puntarenas.

### *Saphenista eranna* RAZOWSKI & BECKER, 1986

*Saphenista eranna* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 453, fig 52,53 (male genit.). 131 (abdominal scent organ), 155(female genit.). Typ-locality: Costa Rica: Braulio Carillo. Type in MNRJ.

Alar expanse 11 mm; head cream with front white; thorax ochreous-brownish. Fore-wing ground-colour yellowish-cream, with median and costal suffusions ochreous; pattern: dorso-basal blotch brown accompanied by ochreous suffusion; median fascia strongly atrophied; subapical fascia brownish, followed by similar, scaled black suffusion. Variation distinct: Ground colour varies from ochreous to ferrugionous, pattern darker, pale-edged, costal part of median fascia always absent.

Male genitalia as in two preceding species but with median part of transtilla longer, aedeagus slender, with cornutus more than half the length of aedeagus and the process of vinculum arm vestigial. Strong scent organ on sternite 6, in the form of a broad process, somewhat expanding terminally. Distal edge of following sternite slightly convex.

Female genitalia: Distal edges of postvaginal part of sterigma sclerotized; cup-shaped part weakly sclerotized; large, flat process at base of colliculum; accessory bursa originating before middle of ductus bursae, under the former sac; ductus seminalis from before middle of corpus bursae, dorsally.

**B i o l o g y .** Moth collected in July at an altitude of 1100 m.

**D i s t r i b u t i o n :** Costa Rica.

*Saphenista dexia* RAZOWSKI & BECKER, 1986

*Saphenista dexia* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 454, fig. 156 (female genit.). Type-locality: Costa Rica: Volcan Turrialba. Type in MNRJ.

Alar expanse 10 mm. Head with front geyish, vertex and antenna pale olive-brownish. Forewing ground-colour olive-cream, suffusions weak, browner. Pattern brownish in the form of an indistinct dorso-basal blotch, diffuse median fascia marked brown in middle and subapical fascia atrophying terminally.

Female genitalia similar to those of *eranna* but postvaginal part of sterigma long, membranous and cup-shaped part well sclerotized; ductus bursae slender; sac of ductus bursae postmedian, long, curved.

Distribution: Costa Rica.

*Saphenista allasia* sp.n.

Alar expanse 19 mm; head white-cream; labial palpus ca 1.5, tinged ochreous to before end of median joint; thorax more ochreous, browner proximally. Forewing broad, with costa strongly bent, apex broad, termen almost straight, oblique. Ground-colour cream ochreous, suffusions ochreous-orange; dorsum suffused black postbasally, strigulated so beyond middle; pattern darker than suffusions: median fascia ill-defined divided into three parts (dorsal part damaged); subapical fascia long, with distal part tapering apically, reaching mid-termen; apical pattern vestigial; suffusion extending from end of median cell scaled brown; tornal suffusion weak. Fringes pale cream ochreous. Hindwing white, tinged yellowish, cream on periphery; fringes cream.

Female genitalia (Fig. 87) as in *dexia* but with broader, membranous cup-shaped part of sterigma and completely membranous postostial sterigma; sac of ductus bursae large; ductus seminalis extending from middle of this last.

Holotype, female: "Ecuador: Via Sta. Barbara-La Bonita km 23, 2400m, Napo Prov. IV-7/9-86 bl, S. MCKAMEY collr."; G.S. 11882; coll. CUB.

*Saphenista aculeata* (RAZOWSKI, 1967)

*Phalonidia aculeata* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 171, figs 18, 19 (male genit.), pl. 15, fig. 5 (forewing). Type-locality: Ecuador: Huigra. Type in NMHML.

Alar expanse 8 mm. Head brownish, end of labial palpus (ca 1) and front cream; thorax brownish-ochreous, browner proximally. Forewing ground-colour ochreous-cream, suffused ochreous at costa, base and middle of wing, glossy pearly distally. Pattern: Median fascia yellowish brown, darker at costa, subapical blotch rather rust, subtriangular.

Male genitalia as in three preceding species but median part of transtilla as long as socius, with large, ovate spined terminal part; aedeagus short; cornutus about as long as aedeagus which is broad and stout.

Distribution: Ecuador.

*Saphenista sphragidias* (MEYRICK, 1932)

*Phalonia sphragidias* MEYRICK, 1932, Exot. Microlepid., **4**: 265. Type-locality: Bolivia: Andes. Type in NHMW. - RAZOWSKI, 1964, Annls zool., Warsz., **22**: 478, fig. 76 (female genit. of holotype). - *Phalonidia sphragidias*: RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 173, figs 20, 21 (male genit.).

Alar expanse 19 mm. Head cream, thorax mixed with brown proximally. Forewing distinctly expanding terminally; ground-colour white cream with brownish-reddish median and postmedian suffusions and brownish dorsal suffusion (dorsum grey), pale reddish brown shades between veins; small costal part of median fascia grey, edged black, subapical blotch rust, followed by some concolorous costal and terminal spots; median part of median fascia reduced to two shades, dorsal part atrophied.

Male genitalia: Socius long; sacculus rather weakly sclerotized; aedeagus stout, with short terminal part; one short, curved cornutus present.

Female genitalia: Diatal part of sterigma almost completely membranous; cup-shaped part short, with straight anterior edge; ductus bursae broad, weakly sclerotized, plicate; corpus bursae spined.

**D i s t r i b u t i o n :** Bolivia.

### *Saphenista omoea* RAZOWSKI, 1993

*Saphenista omoea* RAZOWSKI, 1993, Acta zool. cracov., **36**(1):169, figs 22,23 (male genit.). Type-locality: Peru: Dept.: Puno: 15 km E Ayaviri: Laguna Aznacocha. Type in ZMK.

Alar expanse 22 mm; head whitish, labial palpus 2, suffused brownish, thorax paler than palpus, tegula concolorous. Forewing distinctly expanding terminally; termen rather straight. Ground-colour whitish, tinged and suffused brownish; pattern brown, in the form of an oblique, dorsal fascia and very slender subapical fascia.

Male genitalia: Median part of transtilla broad, short; aedeagus slender, with long ventral termination; caulis median; cornutus less than twice shorter than aedeagus, bent postbasally. No abdominal scent organ.

**D i s t r i b u t i o n :** Peru: Puno.

**C o m m e n t s .** Resembling *sphragidias* but distinctly differs in the very short median part of the transtilla and the long cornutus.

### *Saphenista amusa* RAZOWSKI, 1993

*Saphenista amusa* RAZOWSKI, 1993, Acta zool. cracov., **36**(1):170, fig. 41 (female genit.). Type-locality: Peru: Dept. Puno: 5 km W Limbani. Type in ZMK.

Alar expanse 21 mm; head yellowish cream, labial palpus 2, yellow-brown to before end laterally; thorax cream, tegula brown except its terminal part. Forewing expanding terminally, termen oblique, gently sinuate. Ground-colour pale ochreous-cream, suffusions and reticulation in distal part of wing ferruginous; base of wing rust-brown at costa and on dorsum; median fascia brown, much paler at costa; subapical blotch concolorous with the costa; dorsal spot at tornus brown.

Male genitalia as in *omoea* but socius long, median part of transtilla twice as long; aedeagus slenderer.

**D i s t r i b u t i o n :** Peru: Puno.

**C o m m e n t s .** Closely related to *omoea* but easily distinguished by the ochreous-cream colour of the forewing, and by the genitalia.



***Saphenista domna* (CLARKE, 1968)**

*Amallectis domna* CLARKE, 1968, Proc. U.S. natn. Mus., **125**(3660): 34, fig. 18 (male genit.), pl. 2, fig. 4 (photogr. of holotype). Type-locality: Colombia: Narino: Volcan Galeras. Type in NMNH.

Alar expanse 15 mm; head and thorax brownish cream, labial palpus 2, front cream. Forewing ground-colour whitish mixed greyish brown in dorsal and terminal areas, black along middle of the latter; suffusions golden-ochreous. Median fascia brown-grey mixed with ochreous at costa, brown near dorsum, darkened proximally; subapical blotch brownish.

Male genitalia: Median part of transtilla short, distinctly expanding terminally; valva slender; sacculus convex ventrally; aedeagus rather as long as valva; cornutus approximately half the length of aedeagus.

**D i s t r i b u t i o n :** Colombia.

***Saphenista anaxia* (CLARKE, 1968)**

*Amallectis anaxia* CLARKE, 1968, Proc. U.S. natn. Mus., **125**(3660): 32, fig. 17 (female genit.), pl. 2, fig. 1 (photogr. of holotype). Type-locality: Guatemala: Volcan Santa Maria. Type in NMNH.

Alar expanse 17 mm; head cream, thorax and base of labial palpus (1.5) ochreous. Forewing ground-colour pale ochreous-cream; suffusions golden-ochreous. Dorsal blotch concolorous, suffused black-brown, slenderer than in *penai*, up-curved; subapical fascia short, brownish ochreous, concolorous with middle of median fascia; subternal blotch golden-ochreous, black-scaled posteriroly and costally.

Female genitalia with cup-shaped part of sterigma strong, concave distally; ductus bursae broad, short, weakly sclerotized proximally; spines and a short, lateral sclerite in corpus bursae.

**D i s t r i b u t i o n :** Guatemala.

***Saphenista burrens* RAZOWSKI, 1993**

*Saphenista burrens* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 169, fig. 41 (female genit.). Type-locality: Peru: Huánuco: 25 km NE Huanúco, Cordillera Carpathian. Type in ZMK.

Alar expanse 18.5 mm; head cream-grey, front white, vertex brownish olive, labial palpus 1.5, brown-rust, grey terminally; thorax olive-brown, creamer distally. Forewing apex short, rounded; termen weakly convex, oblique. Ground-colour cream-ochreous in costal third of wing and beyond triangular, greenish ochreous costal part of median fascia, concolorous with it along basal third of costa; dorsum grey-green; distal third of wing reddish cream, subapical blotch purple-brown followed by two darker apical spots; ground-colour between them dark grey, silver-edged; strong suffusion from subapical blotch to tornus. Fringes cream-ochreous.

Female genitalia: Distal part of sterigma except for posterior ribs membranous; cup-shaped part tubular, broad around ostium; ductus bursae sclerotized basally, membranous distally; ductus of accessory bursa from sclerotized tube at base of this last; ductus seminalis dorsal, from distal part of corpus bursae.

**D i s t r i b u t i o n :** Peru: Huanúco.

**C o m m e n t s .** Easily distinguished by the purple and greenish areas of the forewing. The female genitalia resemble those of *sphragidias* to some degree.

***Sapthenista neanica* RAZOWSKI & BECKER, 1986**

*Sapthenista neanica* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 458, figs 164, 165 (female genit.). Type-locality: Mexico: Veracruz: Huatusco. Type in MNRJ.

Alar expanse 16 mm; head dirty cream, thorax darker, ferruginous proximally, labial palpus 1.5, brownish cream, mixed with ferruginous to middle. Forewing broad; ground-colour ferruginous-cream, paler beyond mid-costa, suffused brownish basally and medially. Median fascia in the form of a dark brown spot at costa and pale-edged dorsal triangle; subapical blotch dark brown.

Female genitalia: Cup-shaped part of sterigma well sclerotized, distal parts strongly reduced; ductus bursae short, very broad, membranous, with ductus seminalis in proximal part; accessory bursa also dorsal, extending from postmedian part of corpus bursae near a group of spines; elongate postmedian sclerites present.

**Distribution:** Mexico: Veracruz (type collected in July at altitude of 1300 m).

***Sapthenista cryptogramma* RAZOWSKI & BECKER, 1994**

*Sapthenista cryptogramma* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., **22**(85): 28, fig. 26 (female genit.). Type-locality: Brazil: Pará: Belem. Type in MNRJ.

Alar expanse ca 11 mm. Head and thorax ochreous-cream, front whitish, collar brownish, labial palpus ca 1, concolorous, but upper side of palpi and front whitish. Ground-colour of forewing cream, in distal half of wing pearl-cream, costa and base of median cell suffused ochreous; dorso-basal blotch brownish-ochreous, fused with median part of median fascia; the latter interrupted subcostally, atrophied in costal half, yellow-brown, pale-edged, marked with black streaks in median portion (subdivided into two parts); subapical fascia just before apex, angulate, very slender terminally, browner than median fascia, black-edged.

Female genitalia: Colliculum broad, weakly sclerotized, with several ventral folds and median depression; ductus bursae very broad, with weak, dorsal sclerite before colliculum; corpus bursae provided with large posterior prominence; ductus seminalis from before middle of corpus bursae, accessory bursa at base of mentioned lobe, both ventrally.

**Distribution:** Brazil: Pará.

**Comments.** Externally similar to *nauphraga* and its allies but distinct by pearl cream ground-colour and much more terminal position of the subapical fascia. In the female genitalia resembling *neanica*.

***Sapthenista sclerorhaphia* RAZOWSKI & BECKER, 1994**

*Sapthenista sclerorhaphia* RAZOWSKI & BECKER, 1994, SHILAP Rrevta lepid., **22**(85): 29 fig. 27 (female genit.). Type-locality: Brazil: Santa Catarina: Sao Joaquin. Type in MNRJ.

Alar expanse 15 mm. Head cream-ochreous; labial palpus whiter apically, front whitish; thorax ochreous-olive. Ground-colour pale olive-cream, suffused more brownish olive, finely sprinkled black. Pattern ochreous-olive suffused black, consisting of postbasal fascia (base of blotch much paler), curved median fascia, much broader in costal third than in oblique dorsal part, followed by subtoral, triangular blotch and subapical spot, which extends in the form of a diffuse fascia towards the end of termen, marked with blackish medially and terminally; termen finely edged black.

Female genitalia: Sterigma large, elongate, rounded proximally; colliculum ill-defined, weakly sclerotized, ductus bursae better sclerotized; corpus bursae almost entirely membranous, with numerous small spines; ductus seminalis median, broad basally; ductus of accessory bursa originating just before plication of ductus bursae.

**Distribution:** Brazil: Santa Catarina (moth collected at altitude of 1400 m).

**Comments.** Externally distinct, mainly in the olive hue of the forewing. In the genitalia it resembles the species of the *cordifera*-group but has no curved process of the ductus bursae.

### *Saphenista euprepia* RAZOWSKI, 1993

*Saphenista euprepia* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 171, figs 31,32 (male genit.). Type-locality: Peru: Dept. Cajamarca: 10 km W Huambos. Type in ZMK.

Alar expanse 13-14 mm; head white, labial palpus 1.5; thorax olive brownish grey, darker proximally. Forewing termen straight, oblique. Ground-colour white; base of wing and dorsum to median cell concolorous with thorax, costal part of median fascia triangular, paler, dorso-median parts fused with dorsal suffusion, marked ochreous, with a few blackish spots; subapical blotch triangular or elongate, spots along termen, at apex, and grey suffusion posterior to end of median cell.

Male genitalia with long free part of socius, long valva and slender sacculus. Aedeagus stout; cornutus almost as long as aedeagus, curved, flat in distal third, with slender basal plate. Abdominal scent organ absent.

**Distribution:** Peru: Cajamarca.

**Comments.** This species belongs in the group of *cordifera* as shows its habitus. In the male genitalia it differs in the absence of the submedian process of the ventral edge of the valva, the shape of the aedeagus and the cornutus.

### *Saphenista pruinosa* (ZELLER, 1877)

*Conchylis pruinosa* ZELLER, 1877, Horae Soc. ent. Ross., **13**: 129, pl. 2, fig. 44 (wings). Type-locality: Colombia: Bogota. Type in NHML. – *Phalonidia pruinosa*: RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 176, fig. 25 (female genit.).

Alar expanse 16 mm; head white, brownish laterally; labial palpus over 1.5, brownish; thorax brownish. Ground-colour of forewing and fringes white; weak, brownish suffusions anteriorly; dorsum diffusely strigulated and suffused brownish; median fascia represented by brown costal blotch; subapical fascia ill-defined.

Female genitalia: Very large, hooked sac from dorsum of sterigma; ductus bursae plicate; spined ovate area in mid-part of corpus bursae.

**Distribution:** Colombia.

**Comments.** Described from a series of specimens collected near Bogota, Ubaque and Cerro de San Pedro. Further specimens are from Sierra de Libano. The male genitalia are unknown but probably are similar to those in four following species. Their status requires re-examination.

### *Saphenista embolina* RAZOWSKI, 1984

*Saphenista embolina* RAZOWSKI, 1984, Annls zool., Warsz., **38**(13): 277, figs 8,9 (female genit.). Type-locality: Venezuela: 4 km S. Sto Domingo. Type in NMNH. – RAZOWSKI, 1989, SHILAP Revta lepid., **17**(66): 208 as *embolima*, what is correct grammatically.



Alar expanse 14 mm. Head white, labial palpus over 1, mixed with ochreous to middle; thorax olive-brown. Ground-colour of forewing white; pattern olive-brown, median fascia ochreous subcostally, rust near middle; subterminal pattern weak, greyish; fringes whitish.

Female genitalia very similar to those of *pruinosa*, with dorsal part of sterigma asymmetric, membranously connected with lateral arms; sac large, lateral; ductus bursae long; ductus seminalis from middle of corpus bursae, surrounded by a ring of spines.

**Distribution:** Venezuela.

### *Saphenista mira* RAZOWSKI, 1989

*Saphenista mira* RAZOWSKI, 1989, SHILAP Revta lepid., 17(66): 206, fig. 8 (female genit.). Type-locality: Guatemala: Volcan Santa Maria. Type in NMNH.

Alar expanse 13 mm. Head whitish; labial palpus 1.5; thorax cream. Forewing ground-colour whitish, with silver hue posteriorly; suffusions (mainly at base) pale brownish. Pattern brown, consisting of median fascia, distinct, brown at costa, diffuse otherwise, indistinct anteriorly; subapical fascia reaching termen; black dot at apex.

Female genitalia as in other species of this subgroup (*pruinosa* - *cordifera*) but with membranous posterior parts of sterigma and ventral sac in proximal portion of ductus bursae; ductus seminalis proximal.

**Distribution:** Venezuela.

**Comments.** Placed in this subgroup on the basis of external similarity and the presence of the ventral sac. The position of the sac and ductus seminalis is, however, different than in other species.

### *Saphenista substructa* (MEYRICK, 1927)

*Phtheochroa substructa* MEYRICK, 1927, Exot. Microlepid., 3: 367. Type-locality: Colombia: M. Tolima. Type in NHML. – *Aethes substructa*: CLARKE, 1963, Cat. Microlepid. MEYRICK, 4: 3, pl. 1, figs 3-3b (photogr. of type, male genit.).

Alar expanse 17 mm. Similar to *pruinosa*; costa brown-grey to middle; dorsal suffusion paler, consisting of diffused bars, broadest near middle of wing; median remnant of median fascia weak, costal part very small; subapical fascia slender, followed by apical mark.

Male genitalia: Socii distinctly separate basally; median part of transtilla short; ventral edge of valva with process beyond sacculus; cornutus strongly bent.

**Distribution:** Colombia.

### *Saphenista cordifera* (MEYRICK, 1932)

*Phtheochroa cordifera* MEYRICK, 1932, Exot. Microlepid., 4: 67. Type-locality: Bolivia: Rio Songo. Type in NHMW. – *Phalonidia cordifera*: RAZOWSKI, 1967, Acta zool. cracov., 12(8): 176, (figs 26, 27 and 28 [male and female genit.]) may belong to different species).

Alar expanse 13 mm. Similar to two preceding species.

**Distribution:** Bolivia.

**Comments.** As the holotype is without its abdomen, the identification of this species is impossible unless a comparison of the material from the type-locality is carried out. The male genitalia illustrated by me (RAZOWSKI, 1967) may represent a different

species. It comes from Colombia but is not conspecific with *substructa* (weakly bent sacculus and longer median part of transtilla). The female mentioned in that paper (fig. 28) was taken in Paraná, Brazil. The males of the Brazilian and Colombian specimens from La Crumbre are almost identical and only a comparison of the females may solve this problem. The genitalia of Brazilian population are described by RAZOWSKI & BECKER (1983). There is a further species (RAZOWSKI, 1967, fig. 29) whose female genitalia differ from *pruinosa* and the Brazilian species. It probably belongs in the type-series of the former.

*Saphenista rawlinsiana* sp.n.

Alar expanse 14 mm. Head white, labial palpus ca 2, tinged grey to middle; thorax brownish grey, scaled white. Forewing slender; termen oblique, hardly convex. Ground-colour white, suffusions along wing edges grey, that of dorsum broad, with weakly differentiated dorsal blotch; terminal and apical spots darker, postmedian marks weak; median part of median fascia dark grey scaled blackish, costal part small, paler; subapical blotch elongate, dark grey. Fringes white-cream. Hindwing white, suffused and densely reticulate grey; fringes whitish.

Male genitalia (Figs 37,38) as in *cordifera*-group of species, differing in short, distally broad socius and long, swung cornutus.

**H o l o t y p e**, male: "Ecuador: Azuay Pass, 8 km NE Giron 2600m, 8 Nov.1987, J. RAWLINS, C. YOUNG, R. DAVIDSON, Montane woodland"; G.S. 10677; coll. CMNH. Paratypes 2 identically labelled males.

**C o m m e n t s**. Externally this species resembles *substructa* and *cordifera* but is paler and has an ill-defined median fascia. In the male genitalia it is distinct in the shape of the socius and the cornutus which is as long as the entire aedeagus, swung. The species of this group differ mainly in the female genitalia (cf also *pruinosa* and *embolina*).

*Saphenista milicha* sp.n.

Alar expanse 14 mm; head pale brownish cream, front and end of labial palpus (ca 1.5) cream. Forewing fairly broad; costa bent at 2/3, termen weakly oblique, slightly convex. Ground colour olive cream, in costal area slightly tinged pinkish, suffusions pale brownish olive in anterior half of dorsum, darker and greyer in distal half; basal third of costa olive brownish; median fascia as concolorous costal spot and paler, more greyish remaining parts marked with black scales costally; subapical blotch uniformly broad almost reaching mid-termen; subterminal and postmedian pattern rather concolorous, with black scales on last two median veins. Fringes cream-ochreous with weak basal brown line. Hindwing brownish grey; fringes greyer.

Female genitalia (Fig. 88) resembling those in *onychina* and *fluida* but with broader cup-shaped part of sterigma, stronger sclerotization of ductus bursae and very large ventral sac extending from base of ductus bursae, probably representing the accessory bursa.

**H o l o t y p e**, female: "Mex[ico]: Veracruz, Banderilla 1440 m, VIII-19-1987, at lights, J. POWELL"; G.S. 11899; coll. CUB; paratypes, 4 females from Veracruz, 3 collected 6 km S Coscomatepec, 1370, VIII-12-1987, collected by J. POWELL and J. BROWN and 1 from San Andres, 6km NW Jalapa, VIII-20-1987, same collectors.

***Saphenista ephimera* RAZOWSKI, 1992**

*Saphenista ephimera* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 88, figs 7,8 (male genit.). Type-locality: Costa Rica: Cerro Muerte: Pension La Georgina. Type in CUB.

Alar expanse 16 mm. Head whitish, labial palpus 1.5, whitish, tinged ochreous anteriorly. Forewing termen distinctly oblique; ground-colour white-cream, mixed with pale ochreous distally, along dorsum and in discal cell. Pattern blackish, in the form of a costal spot followed by weak, paler shade (median fascia); black spots along dorsum and termen.

Male genitalia: Sacculus with ventro-terminal prominence; cornutus absent. Other characters as mentioned below.

**D i s t r i b u t i o n**: Costa Rica: Cartago Province. Moth collected in May at an altitude of 3000 m.

**C o m m e n t s**. This and all following species are characterised by the presence of a basal lobe of the valva. The postbasal lobe of the sacculus, process of the vinculum arm and the subterminal process of the ventral edge of the aedeagus are present.

***Saphenista solda* sp.n.**

Alar expanse ca 15 mm; head cream, vertex tinged grey, labial palpus 1.5, tinged brownish to before end. Forewing expanding terminally, with termen oblique, rather straight. Ground-colour cream suffused pale brownish ochreous, more brownish so in distal half of wing; wing edges dotted blackish, similar dot at end of median cell; suffusions of basal third of costa and apex more brown. Median fascia uniformly broad, diffuse, brownish, blackish in costal third and dorso-posteriorly; subapical spot concolorous with costal part of the former. Fringes ochreous-cream. Hindwing white cream, tinged greyish distally; fringes concolorous with wing base.

Male genitalia (Figs 39,40) as in *ephimera* but easily distinguished by much slender distal part of valva, simple angulation of the end of sacculus (extending ventrally in the mentioned species), very short, broad termination of aedeagus and the median part of transtilla longer, less concave apically.

Female genitalia (Fig. 89,90) as in *oreada* but collar-like sclerite of ductus bursae asymmetric, distal lobes of sterigma longer and sclerite of the right side of ductus bursae long, curved at its base.

**H o l o t y p e**, male: " Mex.[ico]: Ver.[acruz], 22 rd km W Cd. Mendoza, 2150 m, VIII-13-87, BROWN & POWELL bl."; G.S. 11876; coll. CUB. Paratype, one identically labelled female.

***Saphenista consulta* RAZOWSKI, 1986**

*Saphenista consulta* RAZOWSKI, 1986, Acta zool. cracov., **29**(17): 400, figs 5-7 (male genit.). Type-locality: Costa Rica: Puntarenas Province: 6 km S. San Vito. Type in coll CUB.



Alar expanse 7 mm. Labial palpus 1, pale brownish ochreous, front and vertex white cream; thorax yellowish cream, brownish anteriorly; ground colour similar, dotted black especially in distal half of wing; base of wing yellow-brown; median fascia broad, diffuse, brownish ochreous, distinct at costa; subapical blotch concolorous, black at costa, not reaching mid-breadth of wing.

Male genitalia with lobe of sacculus extremely small; process of vinculum short; end of aedeagus long, ventral process half the length of cornutus. No abdominal scent organ.

**D i s t r i b u t i o n :** Costa Rica: Province Puntarenas.

### *Saphenista epiera* RAZOWSKI, 1992

*Saphenista epiera* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 96, figs 22,23 (male genit.). Type-locality: Costa Rica: Alajuela Province: N. slope of Volcan de Rincon. Type in CUB.

Alar expanse 18 mm. Head and thorax cream, labial palpus 1.5, more ochreous, whitish distally. Forewing ground-colour cream, suffused and sparsely sprinkled ochreous and brownish; base of costa ochreous-brown; dorso-basal blotch paler; median fascia a brown triangle at costa and paler suffusion medially, atrophying on dorsum; subapical blotch elongate.

Male genitalia: Sacculus slender, without lobe; ventral process of aedeagus strong; cornutus slender, shorter than median part of transtilla; process of vinculum indistinct. No abdominal scent organ.

**D i s t r i b u t i o n :** Costa Rica: Province Alajuela.

### *Saphenista lathridia* RAZOWSKI & BECKER, 1986

*Saphenista lathridia* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 457, figs 60,61 (male genit.). Type-locality: Costa Rica: Volcan Turrialba. Type in MNRI.

Alar expanse 10 mm. Head and thorax pale yellowish brown, labial palpus 1.5, ochreous, whitish terminally, front grey. Ground-colour cream, suffused pale ochreous; pattern ill-defined, ochreous-brownish dorso-basal blotch in the form of an indistinct median fascia, and terminal suffusion.

Male genitalia: Sacculus short, simple; process of vinculum longer than sacculus; aedeagus slender, with large subterminal process; cornutus as long as socius.

**D i s t r i b u t i o n :** Costa Rica.

### *Saphenista consecraria* RAZOWSKI, 1993

*Saphenista consecraria* RAZOWSKI, 1993, Polskie Pismo ent. **62**: 118, figs 1,2 (male genit.). Type-locality: Mexico: Sonora: Rio Cuchujaqui, 8 rd mi E of Alamos. Type in LACM.

Alar expanse 16 mm; head and thorax whitish, labial palpus 2, ochreous-brown except the end. Forewing slender; ground-colour pearl-white, reticulation brownish, base and postmedian part of dorsum suffused chestnut-brown; median pattern: brown dorsal fascia and more rust costal triangle; subapical blotch and tornal fascia brown.

Male genitalia as in *glorianda* but vinculum process long and process of socius small; from *livida* differing in smaller vinculum process, from the two also externally. Abdominal scent organ missing.

**D i s t r i b u t i o n :** Mexico: Sonora (moth collected in August at 1000 feet).

*Saphenista cnemiodota* sp.n.

Alar expanse 16-18 mm. Head dirty whitish, tinged brown laterally, labial palpus 2, pale brownish, whitish distally; thorax brownish. Forewing expanding terminally, with long, hardly sinuate termen. Ground-colour white-grey with a indistinct brownish hue, densely strigulated brown, paler along pattern edges; basal third of costa and dorso-basal area brownish. Pattern dark brown, in the form of a rather subtriangular, costally rounded dorsal blotch terminating at radial branch of median cell and much paler, brownish grey, costal blotch farther to the black; subapical blotch small, concolorous with the former. Fringes concolorous with ground-colour of distal part of wing. Hindwing brownish grey, whiter in basal half, browner on periphery, with strigulation and fringes brownish; median line brownish, weak.

Female genitalia (Fig. 91) as in *glorianda* but with broader and much longer sclerite of sterigma, much longer, rather well sclerotized ductus bursae and more anterior, larger lateral lobe extending from middle of corpus bursae to postbasal part of ductus bursae.

**H o l o t y p e**, female: "Mex.[ico]: Mex., 10 air km SE Amecameca, 2720 m, VIII-23-1987, BROWN & POWELL bl."; G.S. 11904; paratype, one identically labelled female; coll. CUB.

**C o m m e n t s**. Externally distinct in the absence of the subterminal blotch which in *glorianda* and *illimis* is dark, rounded costally and in *consectaria* slender, vestigial. There is also a male (not included in the description of this species) from Veracruz (Canon Las Minas, 30 km NE Rerote, 2150 m, VIII-191-87, same collectors), which slightly differs from the above described females in the pale forewing ground-colour, whitish edges of median pattern and brownish postmedian suffusion. Its male genitalia (Figs 41,42) resemble those in *illimis*, *glorianda*, *consectaria* and *livida* but differ in the much longer, arched process of the vinculum arm, the shorter, strongly terminally broadening median part of the transtilla and the longer distal part of aedeagus; valva with very dense, thick hair.

*Saphenista mediocris* RAZOWSKI, 1986

*Saphenista mediocris* RAZOWSKI, 1986, Acta zool. cracov., **29**(27): 398, fig. 18 (female genit.). Type-locality: Mexico: Nuevo Leon: 4 mi W Iturbide. Type in CUB. – RAZOWSKI, 1990, SHILAP Revta lepid., **18**(72): 339, figs 3,4 (male genit.).

Alar expanse 12 mm. Head whitish, labial palpus pale ochreous to middle; thorax ochreous, browner proximally. Forewing ground-colour cream, mixed with greyish dorsally, ochreous-brown to mid-costa, glossy pearly in distal half. Pattern in form of ferruginous dorso-basal blotch and dorsal part of median fascia; costal part of the latter and subapical fascia olive-brown ferruginous.

Male genitalia as in *livida* but median part of transtilla short, with large terminations. and aedeagus much longer than valva, with small ventral prominence; cornutus twice as long as sacculus.

Female genitalia: Postvaginal sterigma in major part weakly sclerotized, cup-shaped part concave in middle posteriorly; proximal portion of ductus bursae broad, plicate, weakly sclerotized as far as small concavity, beyond which slender, well sclerotized; accessory bursa originating beyond concavity, dorsal; ductus seminalis ventral, from middle of corpus bursae.

**B i o l o g y** unknown; moth collected in September at an altitude of 1770 m.

**D i s t r i b u t i o n** : Mexico: Nuevo Leon and Guerrero.

***Saphenista glorianda* RAZOWSKI, 1986**

*Saphenista glorianda* RAZOWSKI, 1986, Acta zool. cracov., **29**(17): 401, figs 10-13 (male genit.), 24 (female genit.). Type-locality: Mexico: Nuevo Leon: 4 mi W Iturbide. Type in CUB.

Alar expanse 12 mm. Head white, labial palpus pale ochreous except the end; thorax brownish grey, base of tegula brown, end whitish. Forewing ground-colour whitish; suffusions brownish grey; costa brown basally and terminally; pattern in the form of a large, brown dorsal blotch, rounded towards costa; remaining costal part ochreous-olive, brown costally; subapical fascia ochreous-olive.

Male genitalia as in *livida* but process of vinculum broad, shorter than median part of transtilla; aedeagus somewhat longer.

Female genitalia: Cup-shaped part of sterigma short, broad; colliculum longer, well sclerotized; ductus bursae with large lateral lobe extending from corpus bursae to before colliculum.

**D i s t r i b u t i o n** : Mexico: Nuevo Leon.

***Saphenista cinigmula* (RAZOWSKI & BECKER, 1986) comb.n.**

*Lasiothyris cinigmula* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 462, fig. 170 (female genit.). Type-locality: Mexico: Veracruz: biological station 'Los Tuxtlas'. Type in MNRJ.

Alar expanse 7 mm; head cream white, labial palpus over 1, thorax browner. Forewing ground-colour cream, suffusions weak, ochreous; median fascia almost atrophied, darker than ground-colour; subapical fascia short, ferruginous.

Female genitalia: Cup-shaped part of sterigma short; corpus bursae with large lobe of the left side; accessory bursa dorsal, from base of the latter; ductus seminalis dorsal, from beyond middle of corpus bursae.

**D i s t r i b u t i o n** : Mexico: Veracruz (moth collected in June).

**C o m m e n t s** . Probably the closest to *glorianda* as is indicated by the presence of the lobe of the corpus bursae.

***Saphenista livida* RAZOWSKI, 1986**

*Saphenista livida* RAZOWSKI, 1986, Acta zool. cracov., **29**(17): 402, figs 14-16 (male genit.). Type-locality: Mexico: Durango: 11 mi E Revolcaderos. Type in CUB.

Alar expanse 14 mm. Head whitish, vertex creamer, labial palpus 1.5, brownish-ochreous. Ground-colour of forewing greyish with weak violet hue and brownish strigulation; base of wing suffused brownish, dorso-basal blotch absent. Median fascia dark brown, interrupted subcostally, brownish at costa; subapical blotch brownish, brown at costa.

Male genitalia: Process of vinculum twice as long as cornutus; inner surface of the latter concave to middle of terminal lobe of sacculus; aedeagus slender; cornutus spiniform.

**D i s t r i b u t i o n** : Mexico: Durango and Federal District.



*Saphenista illimis* RAZOWSKI, 1986

*Saphenista illimis* RAZOWSKI, 1986, Acta zool. cracov., **29**(17): 400, figs 8,9 (male genit.), 22,23 (female genit.). Type-locality: Mexico: Sinaloa: 8 mi W El Palmito. Type in CUB.

Alar expanse 14 mm. Head olive-ochreous, labial palpus 2, front white; thorax with a grey hue. Forewing ground-colour whitish cream with yellowish hue, rather glossy; base of costa suffused brown, then spotted brown; dorsal marks indistinct; median fascia ochreous-olive at costa, mixed brown in middle, atrophying dorsally; subapical and apical marks ochreous-olive, dotted black. Fringes cream.

Male genitalia: Sacculus large, concave before terminal prominence, demarcated from anterior part by perpendicular lobe followed by rounded convexity of ventral edge of valva. Aedeagus broad.

Female genitalia: Sterigma with well sclerotized, broad postvaginal part and smaller anterior portion; ductus bursae broad, with ring-shaped sclerite extending from middle ventrally to before sterigma dorsally, marked with a small sclerotized median prominence of ventral membrane; accessory bursa very small, originating on sclerotized wart at base of ductus bursae, ventrally; dorso-basal sac on right side of corpus bursae with submedian ductus seminalis.

**Biology.** Moth collected in July-August and then in October at altitudes of 6400-7500 feet.

**Distribution:** Mexico: Sinaloa, Durango and Veracruz.

*Saphenista absidata* sp.n.

Alar expanse 15 mm; head white, labial palpus 1.5, tinged ochreous-cream to before end of median joint; thorax yellowish. Forewing slender, slightly expanding terminally; termen oblique, hardly convex. Ground colour yellowish cream, glossy (especially in distal third of wing), dorsum suffused yellowish brown, basal half of costa concolorously spotted, some darker spots beyond end of median cell and along termen, subapical blotch somewhat browner; median fascia concolorous with the latter, interrupted near costa and postmedially where marked brown. Fringes cream with ill-defined brownish median line. Hindwing brownish, pale in basal half; fringes dirty cream.

Female genitalia (Fig. 92) as in *illimis* but collar-like sclerite of ductus bursae very large, broadest near middle, ventrally, with smaller dorsal part, almost discontinuous on right side.

**Holotype**, female: "Mex[jico]: Sinaloa, 8 mi W El Palmito, 6000', X-12-1975, at light; J. POWELL & J. CHEMSAK collectors"; G.S. 11886; coll. CUB.

**Comments.** Externally resembling *illimis* and *orescia*, but differing in the glossy, yellowish hue of the forewinng and the lack of blackish suffusions of the pattern.

*Saphenista constipata* sp.n.

Alar expanse 14 mm; head cream, labial palpus darker; thorax more olive ochreous. Forewing weakly expanding terminally; costa convex; termen oblique, hardly sinuate.

Ground-colour olive cream, suffusions weak, more brownish grey; base of costa and dorso-basal suffusions much darker than postmedian and dorsal shades; median fascia consisting of small costal blotch concolorous with costal suffusion and large dorso-median part marked blackish brown costally and anteriorly; subapical fascia dark at costa, pale towards mid-dorsum, concolorous with apical spots; subterminal blotch small, marked with some brown scales. Fringes concolorous with ground-colour, slightly tinged ochreous. Hindwing grey; fringes creamer.

Female genitalia (Fig. 93) as in *absidata* but with collar-like sclerite of ductus bursae smaller, almost atrophying dorsally, ductus bursae and lateral lobe of corpus bursae weakly sclerotized and base of accessory bursa broad, sclerotic.

**H o l o t y p e**, female: "Mex.[ico]: Ver.[acruz], Canon Las Minas, 13 km NE Perote, 2150 m, VIII-19-1987 bl., J. BROWN, J. POWELL"; G.S. 11887; coll. CUB.

**C o m m e n t s**. Externally similar to *illimis* but with larger dorsal blotch marked black-brown. In the genitalia resembling *absidata* (the differences as mentioned above).

### *Saphenista storthingoloba* RAZOWSKI, 1992

*Saphenista storthingoloba* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 93, figs 18, 19 (male genit.). Type-locality: Costa Rica: Cartago Province: Cerro de Muerte: Pension La Georgina. Type in CUB.

Alar expanse 21 mm. Head pale ochreous, labial palpus 2, cream postmedially, lower part of front concolorous. Forewing ground-colour pale ochreous-cream with an olive hue, glossy in distal half; base and costa suffused olive-brown. Pattern brown with rust hue costally, olive-brown dorsally: median fascia distinct at costa, and submedially; subapical fascia divided into some parts; blackish, diffuse blotch posterior to end of median cell.

Male genitalia large; sacculus with small lobe before subterminal concavity; process of vinculum short; aedeagus large; cornutus as long as ventral process of this last.

**B i o l o g y**. No data except for collection of the moth - May, at an altitude of 300 m.

**D i s t r i b u t i o n**: Costa Rica: Province Cartago.

### *Saphenista eneilema* RAZOWSKI, 1992

*Saphenista eneilema* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 90, figs 9, 10 (male genit.), 36 (female genit.). Type-locality: Costa Rica: Cartago Province: Cerro de Muerte: Pension La Georgina. Type in CUB.

Alar expanse 19 mm; head cream, labial palpus 2, suffused and spotted brownish; thorax pale ochreous cream, tegula suffused blackish. Forewing ground-colour pale yellowish cream, with indistinct ochreous hue, sprinkled black along dorsum, suffused grey to mid-costa. Median fascia as a group of ochreous and black scales at 1/3 of dorsum and black spot at costa; subapical triangular mark and two dots at apex black.

Male genitalia as in *storthingoloba* but cornutus longer (half the length of aedeagus) and slenderer and lobe of sacculus broad, directed basad.

The female genitalia differ from those in *illimis* in the absence of a sclerotized wart in the ring-shaped sclerite of the ductus bursae, sclerotized left side of the corpus bursae and twice shorter lateral sac with spines situated near the base.

**D i s t r i b u t i o n**: Costa Rica: Cartago Province.

**C o m m e n t s**: Externally similar to *ephimera* but with straight costa of forewing.

*Saphenista juvenca* RAZOWSKI & BECKER, 1986

*Saphenista juvenca* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 455, figs 54,55 (male genit.). Type-locality: Costa Rica: Volcan Turrialba. Type in MNRJ.

Alar expanse 14 mm; head and thorax yellow-brown, labial palpus, 1.5, brownish. Forewing ground-colour pale brownish cream, suffused and sprinkled yellow-brown; pattern similar, diffuse, consisting of indistinct basal blotch, broad median fascia interrupted subcostally and subterminal fascia marked black near middle.

Male genitalia small; lobe of sacculus large (half of juxta); process of vinculum arm small, weakly sclerotized; aedeagus much smaller than in *storthingoloba* (3 times longer than median part of transtilla); cornutus half the length of aedeagus, slender. Costa of valva with basal prominence as in two following species.

**B i o l o g y** . Moth collected in May and August at an altitude of 1800 m.

**D i s t r i b u t i o n** : Costa Rica: Cartago Province.

*Saphenista erasmia* RAZOWSKI, 1992

*Saphenista erasmia* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 92, figs 14,15 (male genit.). Type-locality: Costa Rica: Cartago Province: 7 km SE El Canon. Type in CUB.

Alar expanse 14 mm; head and thorax ochreous-cream, labial palpus darker. Forewing ground-colour whitish cream, suffusion indistinct, ochreous, terminal; black spot at apex and mid-costa; subcostal remainder of median fascia brownish.

Male genitalia as in *juvenca* but with broad aedeagus provided with strong subterminal lobe and larger lobe of sacculus.

**B i o l o g y** unknown except date of collection of moth: May, altitude: 2500 m.

**D i s t r i b u t i o n** : Costa Rica: Cartago Province.

*Saphenista epipolea* RAZOWSKI, 1992

*Saphenista epipolea* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 92, figs. 16,17 (male genit.). Type-locality: Costa Rica: Cartago Province: Cerro de Muerte: Pension La Georgina. Type in CUB.

Alar expanse 15 mm; head dirty cream, thorax darker, labial palpus whitish, densely scaled brown, tegula browner. Ground-colour of forewing whitish cream with olive-brown suffusion and diffuse strigulation. Pattern brown grey, with olive hue, darker than suffusions, consisting of almost complete median fascia, darkest at costa, and subapical blotch fused with terminal pattern.

Male genitalia as in *erasmia* but sacculus shorter, with lobe larger and aedeagus smaller.

**D i s t r i b u t i o n** : Costa Rica: Cartago Province (collected at 3000 m, in May).

**C o m m e n t s** . Genitally very similar to *erasmia* but differing in much darker coloration, brownish olive hue and lack of blackish costal pattern elements.

*Saphenista ereba* RAZOWSKI, 1992

*Saphenista ereba* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 94, figs 20,21 (male genit.). Type-locality: Costa Rica: Cartago Province: Cerro de Muerte: Pension La Georgina. Type in CUB.



Alar expanse 18 mm. Labial palpus ferruginous scaled brown, grey terminally; front greyish, vertex ferruginous; thorax black-grey, blackish proximally. Forewing ground-colour pale ochreous-cream densely sprinkled and suffused black-brown basally and beyond median cell, dorsum and postmedian part of wing paler, suffused brown; remaining surface black-brown; costal suffusion beyond middle paler.

Male genitalia as in *epipolea* but aedeagus twice as large and process of vinculum very short.

**Distribution:** Costa Rica: Cartago Province. Collected in May at an altitude of 3000 m.

***Saphenista chloromixta* RAZOWSKI, 1992**

*Saphenista chloromixta* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 93, fig. 37 (female genit.). Type-locality: Costa Rica: Cartago Province: Cerro de Muerte: Pension La Georgina. Type in CUB.

Alar expanse 15 mm; head and thorax olive-cream with distinct green admixture, labial palpus over 2, pale ochreous, white terminally. Forewing ground-colour cream, mixed with rust at tornus, suffused green in basal and costal areas; refractive lines in distal part of wing. Pattern darker than ground-colour, dotted black-green at costa; median fascia atrophied, marked with some black dots similarly as indistinct subapical fascia.

Female genitalia as in *illimis* or *juvenca* but collar-like sclerite of ductus bursae almost complete, proximal portion of ductus sclerotized, ductus of accessory bursa originating on top of large, sclerotized wart and sac of corpus bursae very small.

**Distribution:** Costa Rica: Cartago Province (moth collected in May).

***Saphenista endomycha* RAZOWSKI, 1992**

*Saphenista endomycha* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 96, fig. 38 (female genit.). Type-locality: Costa Rica: Puntarenas Province: Monteverde. Type in CUB.

Alar expanse 12-14 mm; head ochreous cream, front cream, labial palpus ochreous-yellow; thorax yellow-brown, rust anteriorly. Forewing ground-colour glossy yellowish cream, suffusions brownish; basal blotch wedge-shaped parallel to dorsal blotch; subapical fascia reaching termen; spot at apex, beyond end of median cell and at tornus.

Female genitalia with weakly sclerotized anterior part of sterigma, semicircular, lateral sclerite of ductus bursae and sac situated near middle of corpus bursae; wart of extremely small accessory bursa sclerotized.

**Distribution:** Costa Rica: Puntarenas Province.

***Saphenista gnathmocera* RAZOWSKI, 1992**

*Saphenista gnathmocera* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 92, figs 14, 15 (male genit.). Type-locality: Costa Rica: Cartago Province: Cerro de Muerte: Pension La Georgina. Type in CUB.

Alar expanse 17 mm; head ochreous, front creamer, labial palpus more ochreous; forewing ground-colour pale ochreous-cream, in dorsal and posterior parts suffused ochreous, costa so with grey to middle, dotted black; larger dots along dorsum. Median fascia brownish, mixed with grey at dorsum, with black-grey at costa; subapical blotch black-grey, dotted black.

Male genitalia as in *ereba* but process of vinculum much longer and aedeagus convex near middle, ventrally.

**D i s t r i b u t i o n :** Costa Rica: Cartago Province (moth collected in May at 3000 m).

***Saphenista praefasciata* (MEYRICK, 1932)**

*Phalonia praefasciata* MEYRICK, 1932, Exot. Microlepid., 4: 266. Type-locality: Costa Rica: Irazu. Type in NHMW. – RAZOWSKI, 1964, Annls zool., Warsz., 22(24): 478, figs 77, 78 (male genit. of type; referable to *Phalonia*). – *Saphenista praefasciata*: RAZOWSKI & BECKER, 1986, Acta zool. cracov., 29(20): 455, figs 57, 58 (male genit.), 159, 160 (female genit.), redescription.

Alar expanse 17–19 mm. Head yellowish brown, labial palpus ca 2, brownish, thorax darker than head. Ground-colour brownish yellow with darker suffusions, whitish at pattern edges. Base of costa brown, followed by paler spots, base of wing suffused brownish, subapical spots small, brown spots on large suffusion beyond median cell concolorous; dorsal fascia broad, trapezoid, accompanied by a small, much paler costal spot.

Male genitalia as in *gnathmocera* but with large aedeagus, twice shorter cornutus and very large lobe of sacculus.

Female genitalia with incomplete, lateral collar-like sclerite of ductus bursae, small sac and large, convex sclerite of corpus bursae.

**D i s t r i b u t i o n :** Costa Rica.

**C o m m e n t s .** The description of the male genitalia is based on the type, that of the female genitalia on the specimen from Cerro de Muerte. However, the males from that locality slightly differ from the type. Variation in the genitalia is rather slight and there are some intermediate forms. The external characters, mainly the coloration and shape of the pattern also vary to some degree.

***Saphenista cyphoma* sp.n.**

Alar expanse 19 mm; head white, vertex and palpus (ca 3) creamer, the latter mixed with brownish except end part. Forewing costa almost straight, termen hardly sinuate postapically, then straight. Ground-colour yellowish cream, rather glossy, suffusions mixed with brownish, marginal spots browner; median fascia with broad, subsquare dorsal part and triangular median portion, both marked black anteriorly, and with small costal blotch; subapical blotch small, concolorous, accompanied by apical, subterminal and postmedian blotches similar in colour. Fringes darker than ground-colour. Hindwing brownish, pale towards base; fringes pale brownish cream.

Female genitalia (Fig. 94) similar to *praefasciata* but ductus bursae membranous, with incomplete but large collar-like sclerite, atrophying at the right side; in corpus bursae only base of accessory bursa sclerotized.

**H o l o t y p e ,** female: "Mex.[ico]: Mex., 10 air km SE Amecameca, 2720 m, VIII-23-1987, BROWN & POWELL, bl."; G.S. 11881; coll. CUB.

**C o m m e n t s .** In coloration resembling *absidata* but distinguished by much broader forewing and long labial palpus.

***Saphenista incauta* RAZOWSKI & BECKER, 1986**

*Saphenista incauta* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 456, fig. 161 (female genit.).  
Type-locality: Costa Rica: Santa Cruz: Turrialba. Type in MNRJ.

Alar expanse 16 mm; head brownish cream, vertex and thorax brownish. Ground-colour brownish grey; remnants of basal blotch and median fascia yellow-brown, preserved at costa; terminal pattern brownish, diffuse; similar suffusion in middle of wing (part of median fascia).

Female genitalia as in *endomycha* or *praefasciata* but collar-like sclerite of ductus bursae slender, lateral, incomplete; anterior part of ductus bursae longer; anterior sclerite and sac of corpus bursae atrophied.

**D i s t r i b u t i o n :** Costa Rica (moth collected in August at an altitude of 1500 m).

***Saphenista orescia* RAZOWSKI & BECKER, 1986**

*Saphenista orescia* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 456, fig. 157 (female genit.).  
Type-locality: Mexico: Federal District: Parc national Zoquiapan. Type in MNRJ.

Alar expanse 16 mm; head cream, labial palpus pale brownish. Ground-colour of forewing pale cream with olive-grey hue; costa strigulated brown; median fascia in the form of an olive-ochreous costal spot and indistinct brownish part marked black; subapical blotch ochreous-olive accompanied by grey suffusion at end of distal cell and before termen, also marked with black.

Female genitalia distinct in strong prominence of posterior sclerite on the left side of corpus bursae followed by plicate sclerite of ductus bursae; collar-like sclerite vestigial; sac of corpus bursae extending beyond it proximally.

**D i s t r i b u t i o n :** Mexico: Federal District (moth collected in August at altitude of 3200 m) and Veracruz (in August at 2750 m).

***Saphenista oreada* RAZOWSKI & BECKER, 1986**

*Saphenista oreada* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 456, fig. 158 (female genit.).  
Type-locality: Mexico: Chiapas: San Cristobal de las Casas. Type in MNRJ.

Alar expanse 14 mm; head whitish, labial palpus 1, vertex cream; thorax olive-cream mixed brownish grey anteriorly. Forewing ground-colour whitish, suffusions grey, some brown strigulae along dorsum, brown spots along middle. Yellowish brown mark at base of costa; median fascia diffuse, brownish, marked brown; subapical spot and terminal suffusion brown.

Female genitalia with large postvaginal lobes of sterigma and ovate plate around ostium; long ductus of accessory bursa originating beneath it; ductus bursae short, sclerotized; ductus seminalis from before middle of corpus bursae; the latter without sac.

**D i s t r i b u t i o n :** Mexico: Chiapas (moth collected in June at altitude of 2300 m).

**C o m m e n t s .** This species certainly belongs in the *praefasciata*-group as the shape of the ductus bursae and the sterigma show, but the lobes of this last are very distinct and the ductus of accessory bursa differently situated and very long.



*Saphenista melema* RAZOWSKI, 1992

*Saphenista melema* RAZOWSKI, 1992, Misc. Zool., **14**(1990): 94, fig. 39 (female genit.). Type-locality: Costa Rica: Cartago Province: Cerro de Muerte: Pension La Georgina. Type in CUB.

Alar expanse 17 mm; head whitish, labial palpus 2, tinged to middle ochreous-cream; thorax cream. Forewing ground-colour white-cream, in distal third of wing suffused ochreous. Large, brown, diffuse dorsal blotch with costal edge straight, terminating subcostally, with distal edge almost perpendicular to tornus; brown suffusions near tornus and the end of median cell; remnants of ochreous subapical blotch present.

Female genitalia: Sterigma with large distal lobes; colliculum strongly enlarged proximally just beyond well-developed collar-like sclerite of ductus bursae.

**D i s t r i b u t i o n :** Costa Rica: Cartago Province (moth collected in May at an altitude of 3000 m).

*Saphenista ambidextria* sp.n.

Alar expanse 14 mm. Head white, labial palpus 1.5, cream to before end; thorax pale brownish cream. Forewing weakly expanding terminally; termen oblique, hardly convex. Ground-colour pale ochreous-cream, indistinctly suffused brownish, with diffuse brownish marbling in distal third; dorsum dotted brown, a few dots along mid-termen; median fascia diffuse, brownish, with some darker dots; subapical blotch vestigial. Fringes cream, with more brownish divisions. Hindwing broad, white-cream, tinged brownish on periphery; fringes whitish.

Female genitalia (Fig. 95) as in *melema* but ductus bursae entirely sclerotized, its distal collar asymmetric, broad in right part, distal part of anterior lobe of strigma uniformly convex and ventral edge of ostium bursae rather irregular, concave medially.

**H o l o t y p e**, female: "Mex.[ico]: Ver.[acruz], Cañon Las Minas, 13 km NE Perote 2150 m, VIII-19-1987 bl. J. BROWN, J. POWELL"; G.S. 11883; coll. CUB.

## Unplaced species

*Saphenista semistrigata* FORBES, 1931

*Saphenista semistrigata* FORBES, 1931, J. Dept. Agric. Porto Rico, **4**: 355, pl. 22, fig. 5 (forewing), not pl. 45, fig. 26 (male genit. of *Lorita scarificata*). Type-locality: Puerto Rico: Luquillo Mts.: El Yunque. Type in NMNH. - Pogue, 1988, Proc. ent. Soc. Wash., **90**(4): 440, note.

Alar expanse 9 mm. After original description ground colour ochreous cream, dorso-basal mark in form of olive fascia reaching median cell, similar costal suffusion at base, median fascia divided into three parts, the dorsal of which rounded costally, followed by a triangular blotch at the tornus, marked with the black dot; similar dots at end of median cell and near mid-termen where accompanied by blackish strigulae.

**D i s t r i b u t i o n :** Puerto Rico.

**C o m m e n t s .** The genitalia slide not located; the only specimen belonging to the type-series is the paratype collected on March, 29 which also lacks its abdomen. This

specimen is paler than the holotype, with an ill-defined median fascia (excepting the costal yellow-brown part) and the remnants of the tornal triangle. The systematic position is uncertain and so I retain its original generic status. In the same paper Forbes described two other species mentioned on pp. 136 and 174 in this genus.

***Saphenista lassa* (RAZOWSKI, 1986) comb.n.**

*Aethes lassa* RAZOWSKI, 1986, *Annls zool.*, Warsz., **40**(7): 390, figs 8,9 (female genit.). Type-locality: Mexico: Sinaloa: 8 mi W El Palmito. Type in CUB.

Alar expanse 9.5 mm; head whitish cream, thorax darker, labial palpus 1.5, brownish to middle. Forewing ground-colour cream, suffused brownish and ochreous among pattern. Pattern diffuse; median fascia and basal blotch brownish; subapical blotch brown, reaching mid-termen.

Female genitalia with elongate sterigma and colliculum long, weakly sclerotized, tapering proximally; corpus bursae rather weakly sclerotized, expanding distally, with large dorsal concavity from which the ductus seminalis extends; ductus of accessory bursa originating at base of short, weakly sclerotized ductus bursae.

**D i s t r i b u t i o n :** Mexico: Sinaloa.

**C o m m e n t s .** The systematic position of this species and *ryrsiloba* is doubtful. The shape of the colliculum reminds of *Aethes* in which *lassa* was described, but the coloration is of the *Saphenista* type. The two are very similar genitally but *ryrsiloba* differs in the shape of the ductus bursae, colliculum, sterigma and the degree of the sclerotization of the corpus bursae.

***Saphenista ryrsiloba* RAZOWSKI, 1990**

*Saphenista ryrsiloba* RAZOWSKI, 1990, *SHILAP Revta lepid.*, **18**(72): 339, fig. 5 (female genit.). Type-locality: Mexico: Chilpancingo de los Bravos. Type in CUB.

Alar expanse 11 mm; head whitish, labial palpus 1.5, ochreous; thorax ochreous brownish. Forewing ground-colour pale pearl cream with weak pink hue especially along costa and termen, suffusions ochreous (mainly at base of wing). Median fascia indistinct, ochreous, with brownish strigulation, brown at costa.

Female genitalia: Sterigma small, with distinct lateral lobes; ductus bursae slender, rather well sclerotized; corpus bursae in major part sclerotized, with numerous spines in dorsal concavity from where the accessory bursa extends; ductus seminalis also dorsal.

**D i s t r i b u t i o n :** Mexico.

For comments see *lassa*.

***Saphenista delapsa* RAZOWSKI, 1990**

*Saphenista delapsa* RAZOWSKI, 1990, *SHILAP Revta lepid.*, **18**(72): 340, figs 6,7 (female genit.). Type-locality: Mexico: Guerrero: 16 km NW Iguala. Type in CUB.

Alar expanse 10 mm; head whitish brown, thorax darker, labial palpus 1.5, brownish ochreous to before end; forewing ground-colour cream, with greyish admixture basally, and ochreous distally; refractive pattern distinct; basal streak ochreous, median fascia pale ochreous divided into small costal blotch and dorsal fascia; subapical spot concolorous.

Female genitalia: Ovipositor rather elongate; sterigma small, in major part membranous, with a few bristles; cup-shaped part (colliculum?) membranous dorsally; bursa copulatrix minutely spined, without sclerites; ductus bursae long.

**Distribution:** Mexico: Guerrero.

### *Amallectis* MEYRICK, 1917

*Amallectis* MEYRICK, 1917, Trans. ent. Soc. London, **1917**: 1. Type-species: *Amallectis devincta* MEYRICK, 1917, designated by monotypy. — CLARKE, 1968, Cat. Microlepid. MEYRICK, **4**: 4 (head, venation, genit.).

Alar expanse 13 mm. Venation: In forewing  $R_5-M_1$  and in hindwing  $Rr-M_1$  long stalked.

Male genitalia as in *Phalonidia*; median part of transtilla with very large terminal processes; valva up-curved; sacculus very short, rounded terminally.

Biology unknown.

**Distribution:** Peru.

**Comments.** Judging from the venation and male genitalia *Amallectis* is very close to or congeneric with *Saphenista*. Unfortunately the genitalia have not been re-examined for this paper and the shape of the socius is insufficiently seen in the figure by CLARKE (1968) and in my old drawing. The stalk of forewing veins  $R_5-M_1$  is unusual and accidental. Monotypical genus.

### *Amallectis devincta* MEYRICK, 1917

*Amallectis devincta* MEYRICK, 1917, Trans. ent. Soc. London, **1917**: 1. Type-locality: Peru: Lima. Type in NHML. — CLARKE, 1968, Cat. Microlepid. MEYRICK, **4**: 4, pl. 2, figs 1 (head), 1a-c (photogr., venat., male genit. of type).

For external characters see original description. Male genitalia (Figs 43,44): Valva slender, curved; arms of vinculum long; aedeagus stout; cornutus slender, fairly long. Cf. also the description of the genus.

**Distribution:** Peru.

### *Platphalonidia* RAZOWSKI, 1985

*Platphalonidia* RAZOWSKI, 1985, Nota lepid., **8**(1): 58. Type-species: *Phalonia felix* WALSINGHAM, 1895, by orig. design. Nearctic-Neotropical. — RAZOWSKI, 1986, Annls zool., Warsz., **40**(6): 381, catalogue.

Externally similar to members of *Phalonidia* and *Cochylis*. Labial palpus 1-3, usually 2, alar expanse 10-17 mm.

Male genitalia as in *Phalonidia*, but distal part of tegumen almost completely separated from its main portion; socii strongly reduced, in the form of a pair of lateral hairy prominences.

Female genitalia: sterigma consisting of cup-shaped part (membranous dorsally) followed by elongate postvaginal plate; bursa copulatrix as in *Phalonidia*, often with ring-shaped sclerite; ductus seminalis dorsal, from middle of corpus bursae; accessory bursa from ductus bursae, dorsal or dorso-lateral.

Early stages and biology unknown. The host-plant of two species known (*mystica*, p. 105, *subolivacea*, p. 107).



**D i s t r i b u t i o n:** Neotropical region; some species in southern parts of Nearctic subregion, one reaching central Canada (*felix*, one of the most widely distributed New World cochyline species, known also from central Mexico). List of species is given by RAZOWSKI (1986a). Now, in this area 15 species (2 treated as unplaced) known.

**C o m m e n t s .** The supposed autapomorphies are: the presence of the shape of a group of scent scales on the outer, marginal part of the valva and the incisure of the end part of the transtilla. The reduction of the socius and separation of the distal part of the tegumen may be included in the transformation series of *Cochylini*. The systematic position of *Platphalonidia* is still insufficiently clear. It shares some characters (the shapes of the valva, cornutus, sterigma and corpus bursae) with *Phalonidia* and some (the reduction of the socius, the perpendicular position of the end part of the tegumen, etc) with *Cochylis*. Supposedly it is an off-shot of a primitive part of the *Phalonidia* branch.

***Platphalonidia assector* (RAZOWSKI, 1967)**

*Cochylis assector* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 206, figs 87,88 (male genit.), 89 (female genit.), pl. 16, fig. 11 (forewing.). Type-locality: Argentina: Tucuman: Los Vasquez. Type in NHML.

Alar expanse 12 mm; head and thorax brownish grey to cream-grey, labial palpus 1.5, brownish. Forewing ground-colour whitish grey to brownish; strigulation browner or cream-grey; pattern brown: median fascia in the form of a paler costal blotch and a long dorsal fascia; subterminal pattern weak, pale. Variation: In pale specimen only the dorsal fascia is preserved; no strigulation.

Male genitalia: Ventral edge of sacculus distinctly convex; aedeaus broad, cornutus 2.5 times shorter.

Female genitalia: Cup-shaped part of sterigma concave proximally; sclerite of ductus bursae as long as apophysis anterior.

**D i s t r i b u t i o n :** Argentina: Tucuman, Corrientes.

***Platphalonidia dubia* (RAZOWSKI & BECKER, 1983)**

*Saphenista dubia* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 431, figs 96,97 (female genit.). Type-locality: Brazil: Mato Grosso: Rio Brilhante. Type in MNRJ.

Alar expanse 12 mm; head and thorax grey-cream, labial palpus 2, tinged ochreous. Forewing ground-colour cream, suffusions ochreous; median fascia ochreous-olive, dorsal part mixed with rust towards middle, costal portion with grey, subapical fascia concolorous with this last.

Female genitalia as in *assector* but ductus bursae much shorter, with smaller sclerite reaching almost to concavity of cup-shaped part of sterigma.

**D i s t r i b u t i o n :** Brazil: Mato Grosso.

***Platphalonidia mystica* (RAZOWSKI & BECKER, 1983)**

*Saphenista mystica* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 431, figs 31,32 (male genit.), 98,99 (female genit.). Type-locality: Brazil: Minas Gerais: Corumbá.

Alar expanse 14 mm; head and thorax brownish, labial palpus 3, greyer. Forewing ground-colour brownish grey strigulated and suffused brown; pattern in the form of a long,

dark brown dorsal blotch and much paler, diffuse subterminal fascia. Variation: strigulation often dark, subterminal pattern with a tendency to atrophy, exceptionally, pattern yellowish brown.

Male genitalia as in *assector* but median part of transtilla slenderer, with apical incisure deeper, aedeagus much longer and slenderer.

Female genitalia as in two preceding species but cup-shaped part of sterigma larger, sclerite of ductus bursae broad extending to sclerotized base of accessory bursa.

**B i o l o g y** : Host-plant: *Parthenium hysterophorum* Clyde H. Wild, *Compositae*.

**D i s t r i b u t i o n** : Brazil; Minas Gerais.

### *Platphalonidia ochraceana* (RAZOWSKI, 1967)

*Cochylis ochraceana* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 207, fig. 90 (female genit.), pl. 16, fig. 12 (forewing). Type-locality: Argentina: Tucuman: Los Vasquez. Type in NHML.

Alar expanse 12 mm; head and thorax ochreous-brown, labial palpus 2, front cream. Forewing ground-colour pale brownish ochreous; postmedian area in major part suffused reddish rust, spots along costa and termen concolorous; median fascia brown, mixed with rust near dorsum, interrupted near middle.

Female genitalia: Cup-shaped part of sterigma small; sclerite of ductus bursae slender, plicate in basal half, reaching sterigma.

**D i s t r i b u t i o n** : Argentina: Tucuman.

### *Platphalonidia sublimis* (MEYRICK, 1917)

*Phalonia sublimis* MEYRICK, 1917, Trans. ent. Soc. London, **1917**: 2. Type-locality: Peru: Huancayo. Type in NHML. - CLARKE, 1963, Cat. Microlepid. MEYRICK, **4**: 31, pl. 15, figs 1-1b (photogr., female genit. of holotype). - *Cochylis sublimis*: RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 206.

Alar expanse 16 mm; head and thorax grey-cream, labial palpus 2; forewing slender; ground-colour cream ochreous, suffusions darker, in terminal wing area ferruginous, subapical and terminal pattern concolorous, with some blackish scales; median fascia rust, densely suffused with black-grey.

Female genitalia (requiring re-examination), with fairly long membranous part of ductus bursae.

**D i s t r i b u t i o n** : Peru.

### *Platphalonidia paranae* (RAZOWSKI & BECKER, 1983)

*Saphenista paranae* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 430, figs 29,30 (male genit.). Type-locality: Brazil: Paraná: Mandurituba. Type in MNRJ.

Alar expanse 10 mm; Head and thorax grey, labial palpus 2. Forewing ground-colour cream-grey, suffused grey postmedially, strigulation brown-grey. Median fascia indistinct, brown-grey at costa, well-developed in dorsal part; subapical blotch and subterminal fascia concolorous with the latter.

Male genitalia: Median part of transtilla broad, short; aedeagus short; cornutus curved, half the length of aedeagus.

**D i s t r i b u t i o n** : Brazil: Paraná.

***Platphalonidia plicana* (WALSINGHAM, 1884)**

*Conchylis plicana* WALSINGHAM, 1884, Proc. zool. Soc. London, **1884**: 131. Type-locality: Mexico: Sonora. Type in NHML. – *Cochylis plicana*: RAZOWSKI, 1964, Annls zool., Warsz., **22**(16): 379, figs 70, 71 (male genit. of type).

Alar expanse 10–12 mm; head and thorax brownish cream; forewing ground-colour cream mixed with brownish; suffusions darker; dorsal blotch or median fascia darker than suffusions, subterminal suffusion distinct. Variation; the median fascia may be almost complete and subterminal blotch form a fascia with much paler termination.

Male genitalia with median part of transtilla shorter than cornutus; aedeagus longer than valva.

Female genitalia with weak sclerite of corpus bursae and large sclerite of ductus bursae, rounded terminally.

**D i s t r i b u t i o n** : Mexico: Sonora; probably reaching as far as Puebla.

***Platphalonidia galbanea* (MEYRICK, 1917)**

*Phalonia galbanea* MEYRICK, 1917, Trans. ent. Soc., London, **1917**: 2. Type-locality: British Guiana: Bartica. Type in NHML. – *Lorita galbanea*: CLARKE, 1963, Cat. Microlepid. MEYRICK, **4**: 20, pl. 10, figs 1–1b (photogr. of lectotype, female genit.).

Alar expanse 12 mm; head pale ochreous cream, labial palpus 2, thorax browner. Forewing ground-colour pale ochreous-cream, suffusions more brownish ochreous, pattern darker, partially suffused brownish, consisting of remnants of basal blotch; median fascia almost interrupted submedially, subterminal fascia broadest in middle, reaching beyond mid-termen.

Female genitalia: Cup-shaped part of sterigma incised distally; sclerite of ductus bursae weak, rather short.

**D i s t r i b u t i o n** : British Guiana.

***Platphalonidia californica* RAZOWSKI, 1986**

*Platphalonidia californica* RAZOWSKI, 1986, Annls zool., Warsz., **40**(6): 381, figs 1, 2 (male genit.), 3 (female genit.). Type-locality: Mexico: Baja California Norte: Miller's Landing. Type in CUB.

Alar expanse 14 mm; head brownish, labial palpus 2, brownish, thorax darker. Wing brownish, with paler groups of scales especially in terminal area; pattern indistinct, darker, in the form of a diffuse dorsal blotch and a vestige of subapical blotch.

Male genitalia as in *felix* but sacculus longer, median part of transtilla with two apical tips and aedeagus smaller.

Female genitalia as in *felix* but proximal edge of cup-shaped part of sterigma not concave.

**D i s t r i b u t i o n** : Mexico: Baja California Norte (moth collected in March, April and August).

***Platphalonidia subolivacea* (WALSINGHAM, 1897)**

*Phalonia subolivacea* WALSINGHAM, 1897, Proc. zool. Soc. London, **1897**: 137. Type-locality: St. Thomas, Danish W. Indies. Type in NHML. – ? FORBES, 1931, J. Dept. Agric. Porto Rico, **4**: 354, pl. 45 fig. 28 (male genit.) – *Cochylis subolivacea*: RAZOWSKI, 1964, Annls zool., Warsz., **22**(16): 380, figs 75, 76 (male genit. of type).



Alar expanse ca 10 mm; head, thorax and forewing ground-colour cream-grey tinged brownish, suffusions slightly darker; median fascia bent near costa, grey-brown, dorsal blotch small connected with much paler fascia.

Male genitalia: Median part of transtilla short, expanding terminally; aedeagus broad; cornutus strong, with basal sclerite.

Female genitalia with short cup-shaped part of sterigma and elongate postvaginal part; ductus bursae rather membranous; corpus bursae densely spined.

**D i s t r i b u t i o n :** St. Thomas and St. Vincent. In Puerto Rico bread from *Erechtites hieracifolia*.

### *Platphalonidia felix* (WALSINGHAM, 1895)

*Phalonia felix* WALSINGHAM, 1895, Trans. ent. Soc. London, **1895**: 499, pl. 12, fig. 2. Type-locality: U.S.A.: Colorado: Loweland. Type in NHML. – *Cochylis felix*: RAZOWSKI, 1964, Annls zool. Warsz., **22**(16): 379, figs 67-69 (male genit. of lectotype).

Alar expanse 14-17 mm; head and thorax yellowish brown, labial palpus 2. Forewing expanding in apical part; ground-colour brownish to yellowish brown; pattern browner, with well developed dorsal fascia and small costal elements; postmedian suffusion forming large blotch. Variation rather strong: some specimens with black-brown elements of pattern, chiefly a subterminal blotch; ground-colour ochreous-cream to brownish.

Male genitalia: Median part of transtilla short, apical processes accompanied with a pair of minute thorns; aedeagus approximately as long as valva; cornutus more than half as long as aedeagus.

Female genitalia with postvaginal part of sterigma elongate, hairy; ductus bursae rather slender, sclerite plicate, not reaching sterigma. No ring-shaped sclerite in corpus bursae.

**D i s t r i b u t i o n :** From Central Canada to Central Mexico.

### *Platphalonidia luxata* RAZOWSKI & BECKER, 1986

*Platphalonidia luxata* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 464, figs 85,86 (male genit.). Type-locality: Mexico: Federal District: Mexico City. Type in MNRJ.

Alar expanse 16 mm; head and thorax brownish cream, labial palpus over 1. Ground-colour brownish white; base, postmedian area and wing edges suffused brownish; median fascia interrupted near costa, brownish, brown proximally; subapical blotch paler.

Male genitalia as in *felix* but with aedeagus slenderer, cornutus proportionally longer and sacculus more extending ventrally.

Female genitalia as in *felix* but ductus bursae shorter and proximal edge of cup-shaped part of sterigma concave.

**D i s t r i b u t i o n :** Mexico: Federal District (moth collected in August).

### *Platphalonidia mendora* (CLARKE, 1968)

*Cochylis mendora* CLARKE, 1968, Proc. U.S. natn. Mus., **125**(3660): 24, fig. 12 (male & female genit.), pl. 3, fig. 2 (photogr. of paratype). Type-locality: Chile: Santiago Prov.: Cordillera, El Centro: Cajon de Mayo. Type in NMNH.

Alar expanse 14-15 mm; head and thorax whitish, labial palpus 1.5, brownish grey, tegula concolorous. Forewing whitish; suffusions, mainly at base and distally, yellowish; pattern brownish with some pale ochreous shades; median fascia weak at costa, broad in dorsal half of wing with black dots; base of wing ochreous with black-brown dots.

Male genitalia: Terminal part of tegumen, weak, plate-shaped, with vestigial socii; median part of transtilla short; aedeagus slender; cornutus curved, twice shorter.

Female genitalia: Cup-shaped part of sterigma fairly long; bursa copulatrix very small, with very short ductus bursae; some spines on corpus bursae.

**D i s t r i b u t i o n :** Chile.

### Unplaced species

#### *Platphalonidia fusifera* (MEYRICK, 1912)

*Phtheochroa fusifera* MEYRICK, 1912, Trans ent. Soc. London, **1911**: 674. Type-locality: Brazil: São Paulo. Type in NHML. – *Phalonidia fusifera*: CLARKE, 1963, Cat. Microlepid. MEYRICK, **4**: 27, pl. 11, fig. 4 (photogr. of holotype).

Alar expanse 13 mm. Head, thorax and ground-colour of basal half of wing ash-grey, in distal area paler, with brownish suffusions; base of costa and median fascia greyish brown, more rust in dorsal portion; subterminal blotch broad, situated in tornal half of wing; subapical pattern very weak.

Male genitalia: Aedeagus slender; cornutus 2.5 times shorter.

**D i s t r i b u t i o n :** Brazil: São Paulo.

**C o m m e n t s .** This species was discussed by RAZOWSKI (1967) and RAZOWSKI & BECKER (1983) but now I have some doubts as to the determination of the material examined. A comparison with the type is difficult because it lacks the abdomen. Thus the problem needs further study of the material from the type-locality.

#### *Platphalonidia tehuacana* RAZOWSKI, 1986

*Platphalonidia tehuacana* RAZOWSKI, 1986, Annls zool. Warsz., **40**(6): 384, figs 4-7 (male genit.). Type-locality: Mexico: Puebla: 2 mi SW Tehuacan. Type in CUB.

Alar expanse 11 mm. Head and thorax olive-cream, base of tegula darker, labial palpus 2. Forewing ground-colour concolorous, suffused and strigulated grey along edges, tinged ochreous distad to median cell; median fascia indistinct, grey, mixed with brownish, subcostally, dark grey at costa; subterminal fascia grey, reaching mid-termen.

Male genitalia with vestigial uncus, wedge-shaped, bent median part of transtilla and long coecum penis.

**D i s t r i b u t i o n :** Mexico: Puebla (moth collected in October at an altitude of 5300 feet).

**C o m m e n t s .** The socii and valva are typical of this genus, but the transtilla resembles that in *Phalonidia*.

#### *Platphalonidia laetitia* CLARKE, 1968

*Cochylis laetitia* CLARKE, 1968, Proc. U.S. natn. Mus., **125**(3660): 25, fig. 13 (male genit.), pl.3, fig. 3 (photogr. of holotype). Type-locality: Argentina: Tucuman: Ciudad Universitaria. Type in NMNH.

Alar expanse 15 mm; head and thorax ochreous cream; forewing ground-colour yellowish cream; strigulation more ochreous; pattern ochreous, darker terminally; median fascia atrophying costally, divided at dorsum into main anterior part and posterior triangle; apical suffusion reaching tornus, all grey, black-scaled, blackish-edged. Hindwing cream, ochreous at apex, strigulated grey cream.

Male genitalia: Socius weakly sclerotized; median part of transtilla terminating in a pair of small processes; valva distinctly tapering terminally; sacculus weakly convex; aedeagus bent postmedially; cornutus slender.

**D i s t r i b u t i o n :** Argentina: Tucuman.

**C o m m e n t s .** The original drawing is partially wrong (the socii, aedeagus, and the transtilla are incorrectly situated, etc). The species most probably belongs in this genus.

### *Spinipogon* RAZOWSKI, 1967

*Spinipogon* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 199. Type-species: *Spinipogon trivius* RAZOWSKI 1967, by orig. design.

Alar expanse 8-15 mm; labial palpus 1-2. Habitus of *Cochylis* or *Phalonidia*-type. Venation: in forewing all veins separate,  $R_5$  to costa or to apex; in hindwing  $Rr-M_1$  stalked, usually to middle, remaining veins separate.

Male genitalia: Tegumen short, broad, occasionally with uncus-like terminal process and strongly reduced distal portion unified with the socii; vinculum large, with well-developed proximal part forming a saccus. Transtilla band-shaped, with more or less distinct median part terminating in processes or thorns; juxta large, broad, resembling that in several *Cochylis*-species. Valva variable in shape, with membranous submedian or post-basal part of costa; sacculus often as long as costal portion of valva, the two areas very often strongly spined. Aedeagus slender; coecum penis moderate; caulis short, postmedian, distal part of aedeagus in many species very slender; cornutus very slender, if present.

Abdominal scent organ in the form of dense groups of scales on the dorsal and subventral prominences of the terminal segment.

Female genitalia: Sterigma usually a small postvaginal plate accompanied by additional sclerites, often densely spined, or simple; cup-shaped formation situated before ostium bursae may represent a colliculum. Ductus seminalis originating in posterior or median part of large, usually ventral wart of middle area of corpus bursae; lateral walls of the latter strengthened by numerous spines; accessory bursa ventral, extending from ductus bursae, in some species not located, in one species (*atrox*) small, curved sac present in its position. Subgenital sternite highly specialised in some species (e.g. in *veracruzanus*), with slender incisure and submedian lobes of the posterior edge, with dense spiculation of entire surface.

**B i o l o g y** unknown.

**D i s t r i b u t i o n :** Neotropical Region, from Guerrero, Mexico and Puerto Rico as far as Southern Brazil (Paraná, Santa Catarina) and Peru.

**C o m m e n t s .** Eleven species included; previously supposed to be closest to *Cochylis* because of the strongly reduced distal portion of the tegumen and the structure of the socii. In the light of the description of *Platphalonidia* and the process of the reduction



of the distal portion of the tegumen in several *Cochylini*-genera its affinity with *Cochylis* does not seem so close. *Spinipogon* is probably an off-shot of the *Phalonidia* branch just as *Platphalonidia* is. The supposed autapomorphies of this genus are the presence of the slender saccus, the membraned postbasal, or submedian portion of the costa of valva and the large wart-like configuration of the corpus bursae with lateral walls plicate and strengthened with numerous spines of at least two sizes. The bottom of the wart is extrusible, membranous except for the median, longitudinal sclerite protecting the base of the ductus seminalis.

Two groups of the species are distinguished. In the group of *veracruzanus* both ventral and dorsal parts of the valva are well-developed, armed with spines, the proximal part of the aedeagus is almost uniformly broad, the strigma is slender and the subgenital sternite highly specialised. The membranisation of the postbasal part of the costa of the valva is extremely slight. In the species from *harmozones* to *studiosus* the dorsal part of valva dominates over the ventral part which is characterised by the short sacculus and the lack of spines. The spines in the former part are delicate and show a tendency to a reduction. The sterigma is plate-shaped, rather not elaborate and the subgenital sternite simple or weakly specialised. In the type-species of this genus the specialisation of the dorsal part of the valva is very advanced.

### *Spinipogon veracruzanus* RAZOWSKI & BECKER, 1986

*Spinipogon veracruzanus* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 467, figs 103, 104 (male genit.). Type-locality: Mexico: Veracruz: biol. station 'Los Tuxtlas'. Type in MNRJ.

Alar expanse 9 mm; head and thorax whitish, labial palpus over 1, more ochreous. Forewing ground-colour whitish, tinged ochreous in basal area; base of costa suffused brownish; pattern indistinct; costal portion of median fascia grey-brown, remaining part diffuse, pale ochreous; subterminal fascia concolorous with the latter, browner along edges.

Male genitalia: Socii slender; vinculum large, with broad apical part; valva broad, with broad, rather short costal portion marked with terminal and subcostal groups of spines; saccular part longer, slenderer, extending distally, with terminal group of spines fused with long row of ventral spines; median part of transtilla long, distinctly expanding terminally; aedeagus curved beyond middle, with short terminal projection; cornuti absent.

Female genitalia: Sterigma in form of two spinose plates forming a slender collar around ostium, accompanied by lateral, slender plates, fused anteriorly with densely spined, deeply incised subgenital sternite; posterior lobes of the latter convex; ductus bursae short.

**D i s t r i b u t i o n :** Mexico: Veracruz (moth collected in June).

**C o m m e n t s .** At least three forms may be distinguished in the material from Central America. In Turrialba, Costa Rica, occurs the form with brownish coloration and almost complete forewing pattern. It has slender costal part of the valva and median part of the transtilla thicker than in the holotype. In another Costarican form (from Guacayacan) the costal part of the valva is broader and the median part of the transtilla slenderer, less expanding apically. In the form from Honduras (Siguatepeque) the ventral part of the valva is rather slender as in the preceding form, the median part of the transtilla long, weakly broadening apically. In all these forms the vinculum is much slender than in the holotype.

*Spinipogon spiniferus* RAZOWSKI, 1967

*Spinipogon spinifera* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 200, figs 74,75 (male genit.), pl. 16, fig. 6 (forewing). Type-locality: Brazil: Santarem. Type in NHML.

Alar expanse ca 9 mm; head and thorax cream, labial palpus ca 1, pale ochreous. Forewing ground-colour cream, suffusions more ochreous; base of costa strigulated brownish; median fascia ochreous, edged brownish, interrupted near costa; subapical fascia almost concolorous.

Male genitalia as in *veracruzanus* but costal part of valva much shorter, bent, ventral part more slender, median part of transtilla short, broad distally; vinculum slender.

Female genitalia as in *veracruzanus* but subgenital sternite with more rounded lateral lobes and sclerite of main part of sterigma longer.

**D i s t r i b u t i o n** : Brazil: the type locality and Minas Gerais.

**C o m m e n t s** . Very close to *veracruzanus*, and probably also variable in the male genitalia as I can judge by the male from Minas Gerais. The females of the two species are very similar to one another.

*Spinipogon thes* RAZOWSKI & BECKER, 1983

*Spinipogon thes* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 437, figs 50-52 (male genit.). Type-locality: Brazil: Santa Catarina: Brusque. Type in MNRJ.

Alar expanse and labial palpus as in *spiniferus*, the latter more brownish, front whitish, thorax ochreous-cream. Forewing slenderer, with ground-colour brownish cream, suffusions brownish and ill-defined, and diffused brownish pattern.

Male genitalia: Socii broad; vinculum short; basal third of costal part of valva strong, followed by short membranous area; sacculus 1/3 of valva, rounded terminally; median part of transtilla long, spined terminally; aedeagus slender, curved beyond zone.

**D i s t r i b u t i o n** : Brazil: Santa Catarina.

*Spinipogon harmozones* RAZOWSKI, 1986

*Spinipogon harmozones* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 380, figs 38-42 (male genit.). Type-locality: Mexico: Nuevo Leon: Chipinque Mesa. Type in CUB.

Alar expanse 11 mm; head, thorax and forewing ground-colour cream with some more ochreous shades, labial palpus over 1. Forewing slender; pattern ochreous, grey suffusion before median fascia; grey-black mark at dorsum of median fascia and at tornus.

Male genitalia similar to those in *thes* but sacculus shorter, extending ventro-terminally, aedeagus shorter and uncus-like process of the tegumen top present.

**D i s t r i b u t i o n** : Mexico: Nuevo Leon and Tamaulipas (moth collected in September at 4000 feet).

**C o m m e n t s** . The females discussed in the original description (genitalia in figs 76,77) were most probably mis-identified and require re-examination.

*Spinipogon atrox* RAZOWSKI & BECKER, 1983

*Spinipogon atrox* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 437, figs 53,54 (male genit.), 111, 112 (female genit.). Type-locality: Brazil: Paraná: Marumbi (Morretes). Type in MNRJ.

Alar expanse 15 mm; head cream brown, thorax and labial palpus (2) brownish. Forewing ground-colour pale brownish cream, suffusions ochreous brown, pattern darker, brown at costa; median fascia interrupted subcostally, mixed with rust subdorsally; large suffusion near tornus.

Male genitalia somewhat similar to *harmozones* but distal part of valva broadening, more elliptic, termination of sacculus slender and aedeagus longer with very thin cornutus.

Female genitalia: Sterigma with posterior plate followed by some spined transverse convexities and weakly sclerotized proximal prominences; cup-shaped part may represent collicular portion of ductus bursae; this last broad, marked with dorsal, curved process. Subgenital sternite not specialised.

**D i s t r i b u t i o n** : Brazil: Paraná (two localities).

***Spinipogon elaphroterus* RAZOWSKI & BECKER, 1986**

*Spinipogon elaphroterus* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 468, figs 109, 110 (male genit.), 278, 279 (female genit.). Type-locality: Costa Rica: Turrialba. Type in MNRJ.

Alar expanse 8 mm; head and thorax cream, labial palpus 1.5; forewing expanding terminally, similar to *ialtris*, ground-colour white-cream, pattern brownish; median fascia darkest at costa; subapical fascia fusing with fascia extending from disc to tornus.

Male genitalia: Valva slender, tapering towards the end, with long membranous part of costa; sacculus short, strongly protruding ventrally; end of median part of transtilla bifurcate; very thin cornutus present.

Female genitalia: Sterigma, an uniform plate well sclerotized distally, rounded proximally, with median ostium bursae; colliculum slender, rounded proximally, sclerotized; accessory bursa originating in anterior part of slender ductus bursae.

**D i s t r i b u t i o n** : Costa Rica and Mexico: Veracruz.

***Spinipogon ialtris* RAZOWSKI, 1986**

*Spinipogon ialtris* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 381, figs 43-45 (male genit.). Type-locality: Mexico: Veracruz: Cordoba. Type in CUB. – RAZOWSKI, 1990, SHILAP Revta lepid., **18**(72): 342, figs 13, 14 (female genit.).

Alar expanse 8 mm; head ochreous cream, labial palpus (1.5) and partially thorax darker. Forewing not expanding posteriorly, termen oblique; ground-colour yellowish cream, pattern yellowish brown at costa, indistinct, otherwise ochreous.

Male genitalia: Median part of transtilla broad, bifid; end of valva expanding ventrally; sacculus expanding ventrally, slender, dentate at the end.

Female genitalia as in *elaphroterus* but proximal edge of sterigma not rounded, colliculum large and ductus bursae broad.

**D i s t r i b u t i o n** : Mexico: Veracruz (moth collected in July).

***Spinipogon studiosus* RAZOWSKI & BECKER, 1993**

*Spinipogon studiosus* RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **21**(84): 237, figs 10, 11 (female genit.). Type-locality: Mexico: Guerrero: Aguas de Obispo. Type in MNRJ.

Alar expanse 12 mm; head and thorax and forewing ground-colour white-cream, labial palpus 1.5. Pattern brownish, median fascia oblique, subterminal fascia broad, reaching end of termen; suffusions ochreous, spotted black-brown.



Female genitalia as in *ialtris* but ductus bursae much longer, colliculum three times shorter, with almost straight, well sclerotized distal edge; sterigma with a pair of elongate proximal lobes never found in this genus.

**D i s t r i b u t i o n :** Mexico: Guerrero.

***Spinipogon trivius* RAZOWSKI, 1967**

*Spinipogon trivius* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 199, figs 71,72, pl. 16, fig. 1 (mistakenly as *Aethes agelasta*). Type-locality: Brazil: Paraná: Castro. Type in NHML.

Alar expanse 12 mm; head and thorax cream, labial palpus 2, more ochreous, orange to middle. Forewing broad; ground-colour pale ochreous cream, ochreous suffusions in basal and subternal areas, grey at wing middle; median fascia a small rusty costal blotch and dorsal fascia rust-brown, mixed with grey near dorsum, black-brown edged; subterminal fascia ferruginous, slender at costa.

Male genitalia: Median part of transtilla as in *ialtris*; socii much larger; costa part of valva very slender, long, with large group of spines beyond middle of ventral edge; sacculus short, with small, irregular prominences.

**D i s t r i b u t i o n :** Brazil: Paraná.

**C o m m e n t s .** The female included in the original description (fig. 73) does not seem conspecific with the type despite their great external similarity, and represents a distinct species.

***Spinipogon luxurius* RAZOWSKI, 1993**

*Spinipogon luxurius* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 173, figs 23,24 (male genit.). Type-locality: Peru: Lima. Type in coll. ZMK.

Alar expanse 11 mm; head brownish cream, thorax browner, labial palpus over 1. Forewing ground-colour pale ochreous-cream to median fascia, costa olive-brown, suffusions grey; median fascia brownish ochreous, suffused olive distally, marked black; subapical blotch ochreous, broadest medially; apical spot accompanied by much paler suffusion extending from mid-wing to tornus. Female paler, with pattern more distinct than in male.

Male genitalia: Valva slender, broadest basally, base of sacculus expanding ventrad; socii and aedeagus as in *elaphroterus*, median part of transtilla with much broader, bifid terminal projections; cornutus very large, longer than 1/3 of the length of aedeagus.

Female genitalia as in *elaphroterus* but with indistinct colliculum; distal edges of subgenital sternite forming two lateral, shallow pockets.

**D i s t r i b u t i o n :** Peru: Dept. Lima.

**Unplaced species**

***Spinipogon signatus* RAZOWSKI, 1967**

*Spinipogon signatus* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 202, fig. 76, pl. 16, fig. 7 (forewing). Type-locality: Argentina: Tucuman (Ciudad). Type in NHML.

Alar expanse 10 mm; head and thorax ochreous brownish (labial palpus missing); ground-colour of forewing concolorous, more yellow in anterior half; suffusions browner; median fascia rust-brown, slender, gently concave proximally, narrowing medially; subterminal fascia paler, broad medially, convex distally.

Female genitalia: Proximal edge of sterigma weakly convex, pair of submedian pits before scobinate latero-posterior lobes; median part of ductus bursae sclerotized; corpus bursae densely spined except for proximal part.

Distribution: Argentina: Tucuman.

Comments. The female genitalia differ from those of all other *Spinipogon*-species in the lack of the spined wart of the corpus bursae and the elaborate sterigma. It should be excluded from this genus, but without an examination of the male an assessment of its true generic position is impossible.

### *Mourecochylis* RAZOWSKI & BECKER, 1983

*Mourecochylis* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 440. Type-species: *Mourecochylis ramosa* RAZOWSKI & BECKER, 1983, by orig. design.

Alar expanse 8-9 mm; labial palpus externally resembling *Mielkeana*.

Male genitalia as in *Mielkeana* but socii not overlapping their base, terminating in a minute process, or completely fusing with one another. Median part of transtilla with single or bifid tip.

Female genitalia of the *Saphenista* - *Phalonidia* type, without ventral sac.

Biology unknown.

Distribution: From Mexico to Costa Rica (5 species).

### *Mourecochylis ramosa* RAZOWSKI & BECKER, 1983

*Mourecochylis ramosa* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 441, figs 63-65 (male genit.). Type-locality: Brazil: Paraná: Bnhado (Quatro Barras). Type in MNRJ.

Alar expanse 8 mm; head and thorax ochreous, front and end of palpus cream. Forewing ground-colour pale cream with pearly gloss, suffusions indistinct, ochreous, pink shine along costa. Median fascia brownish, consisting of costal and median parts, dorsal blotch ferruginous; subapical fascia reaching 2/3 of termen.

Male genitalia: Socii completely unified distally, resembling uncus, broad anteriorly; sacculus very long, with terminal spines; base of median part of transtilla broad, terminal part single; juxta large; aedeagus curved, with large caulis.

Distribution: Brazil: Paraná.

### *Mourecochylis limenarchis* RAZOWSKI, 1986

*Mourecochylis limenarchis* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 379, figs 34-37 (male genit.). Type-locality: Costa Rica: Puntarenas Province: 6 km S San Vito. Type in CUB. – RAZOWSKI & BECKER, 1986, *ibid.*, **29**(20): 464, fig. 173 (female genit.).

Alar expanse 9 mm; head cream, vertex and thorax darker, the latter brownish proximally. Forewing ground-colour cream suffused ochreous, strigulated pale rust; pattern rust-brown; median fascia preserved at costa and submedially; subapical blotch short, accompanied by paler subterminal mark.

Male genitalia as in *ramosa* but termination of socius minute, sharp; sacculus reaching beyond mid-valva.

Female genitalia: Distal part of sterigma broad, weakly sclerotized; subostial lobe rather asymmetric; ductus bursae, excepting distal third, with sclerotized folds, separated from corpus bursae by means of collar-like fold; spines in corpus; ductus seminalis dorsal, originating in mentioned fold; accessory bursa ventral, from end part of ductus bursae sclerites.

**D i s t r i b u t i o n :** Costa Rica.

***Mourecochylis mimosina* (RAZOWSKI, 1986)**

*Platphalonidia mimosina* RAZOWSKI, 1986, Annls zool., Warsz., **40**(6): 382, figs 8,9 (female genit.). Type-locality: Mexico: Veracruz: Cordoba. Type in CUB.

Alar expanse 10 mm; head whitish brown, labial palpus 1.5, brownish, cream terminally; thorax ochreous with tegula browner. Forewing ground-colour pale ochreous; pattern (median fascia and subterminal blotch) brownish rust, marked brown; tornal spot paler, edged brown.

Female genitalia as in *limenarchis* but antevaginal plate of sterigma much smaller, accessory bursa originating beyond middle of ductus bursae from plicate sclerites; ductus bursae broader.

**D i s t r i b u t i o n :** Mexico: Veracruz.

***Mourecochylis stibeutes* (RAZOWSKI, 1992)**

*Platphalonidia stibeutes* RAZOWSKI, 1992, Misc. zool., **14**(1990): 98, fig. 41. Type-locality: Costa Rica: Cartago Prov.: Aquiares nr. Santa Cruz. Type in CUB.

Alar expanse 12 mm; thorax pale ferruginous; forewing ground-colour paler, ochreous cream; suffusions and spots more ochreous, edged refractively; pattern rust-brown; dorsal part of median fascia marked grey-black, costal part and subapical blotch concolorous, darker at costa; black dot at end of median cell.

Female genitalia as in *limenarchis* but anteostial part of sterigma small, rounded.

**D i s t r i b u t i o n :** Costa Rica.

***Mourecochylis affecta* (RAZOWSKI, 1986)**

*Saphenista affecta* RAZOWSKI, 1986, Acta zool. cracov., **29**(17): 399, figs 19,22 (female genit.). Type-locality: Mexico: Veracruz: Fortin de las Flores. Type in CUB.

Alar expanse 10 mm; head cream, labial palpus pale ochreous; thorax ferruginous, cream posteriorly. Ground-colour of forewing pale ochreous cream, suffusions ferruginous, occurring mainly in basal and terminal parts of wing. Median fascia dark ferruginous, diffuse, atrophying dorsally, mixed with black in costal half; terminal pattern purple-ferruginous, slender.

Male genitalia: Base of socii large, terminations short; median part of transtilla with pair of apical spines; sacculus, a curved, slender, well sclerotized arm reaching third of valva; arm of vinculum large; aedeagus stout, with short termination; apart from spiniform cornutus 3 thorn-like sclerites.



Female genitalia similar to those in *limenarchis* but sterigma larger, with lateral folds; colliculum broad; membranous part of ductus bursae very short; collar-like fold stronger; plicate part of ductus bursae narrowing medially.

**D i s t r i b u t i o n :** Mexico: Veracruz.

**C o m m e n t s .** The examined Costarican male distinctly differs in the genitalia (Figs 45,46) from the examples from Mexico, Veracruz mainly in having well sclerotized, convex caudal part of sacculus and in lower number of the thorn-like cornuti. It probably represents a distinct species.

### *Mielkeana* RAZOWSKI & BECKER, 1983

*Mielkeana* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 439. Type-species: *Mielkeana gelasima* RAZOWSKI & BECKER, 1983, by orig. design.

Externally similar to *Saphenista*. Alar expanse 8-12 mm; labial palpus 1-1.5.

Male genitalia as in *Saphenista* but socii in form of large basal lobes folded ventrally and extending distally in a pair of slender, sharp processes; median part of transtilla stout, minutely spined; arms of vinculum simple, short, not fusing apically.

Abdominal scent organ a large process of sternite six terminating in two lateral lobes, and a weak prominence of the following sternite.

Female genitalia (known in one species only), with ventral ductus semnalis, lateral accessory bursa and additional ventral sac, all at base of ductus bursae.

**B i o l o g y** unknown.

**D i s t r i b u t i o n :** Known from Mexico and Brazil, but certainly widely distributed in the Neotropical region.

**C o m m e n t s .** The genus is an off-shot of the *Phalonidia* - *Saphenista* branch showing some common characters with the former, viz., the shapes of the aedeagus, base of the socii or the shape of the juxta. The shape of the socii, broad median part of the transtilla and probably subsquare sclerite of the tuba analis fused with the transtilla are the supposed autapomorphies of *Mielkeana*. Three species described.

### *Mielkeana gelasima* RAZOWSKI & BECKER, 1983

*Mielkeana gelasima* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 439, figs 59-61 (male genit.), 113, 114 (female genit.). Type-locality: Brazil: Paraná: Banhado (Quatro Barras). Type in MNRJ.

Alar expanse 8 mm; head brownish, labial palpus ochreous, its terminal part and front cream; thorax brownish. Forewing ground-colour pale ochreous, mixed rust at costa, brownish in terminal area where spotted darker. Median fascia brownish, divided in 2-3 parts, of which the costal is dark brown, median weak, marked black, dorsal diffuse; subapical blotch brown. Variation distinct; often distal part of wing dark; females darker than males, with brownish front.

Male genitalia: Sharp part of socius long, median part of transtilla large, sacculus with protruding termination, aedeagus large.

Female genitalia: Sterigma rather weakly sclerotized, colliculum rather well so, sclerites of bursa copulatrix weak. Otherwise as described for the genus.

**D i s t r i b u t i o n :** Brazil: Paraná and Santa Catarina.

***Mielkeana angysocia* RAZOWSKI & BECKER, 1986**

*Mielkeana angysocia* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 465, figs 87-89 (male genit.). Type-locality: Costa Rica: Volcan Turrialba. Type in MNRJ.

Alar expanse 12 mm; head pale ochreous cream, palpus darker front whitish. Forewing ground-colour whitish; suffusions, strigulation and basal blotch brownish; median fascia concolorous with black marks costal and subcostal; subapical blotch reaching mid-termen.

Male genitalia as in *gelasima* but end part of socius and median part of transtilla shorter, sacculus rounded terminally, aedeagus slender, small. Lateral prominences of abdominal scent organ very slender, almost as long as the length of the base.

**D i s t r i b u t i o n :** Costa Rica.

***Mielkeana perbella* RAZOWSKI, 1993**

*Mielkeana perbella* RAZOWSKI, 1993, Polskie Pismo ent., **62**: 118, figs 3,4 (male genit.). Type-locality: Mexico: Durango: El Salto, Rancho Nuevo.

Alar expanse 21 mm; head cream, labial palpus 1.5, ochreous; rust terminally; termen pale ferruginous. Forewing slender; ground-colour ochreous cream, almost uniformly suffused ferruginous, with some indistinct, browner, transverse shades and refractive scales; yellowish fascias on median veins in distal half of wing divided by ferruginous; discal spot rust brown.

Male genitalia with socii shorter than in *angysocia*, median part of transtilla very broad and sacculus armed with numerous spines; no cornutus in vesica; no abdominal scent organ.

**D i s t r i b u t i o n :** Mexico: Durango (moth collected in June).

***Mimeugnosta* RAZOWSKI, 1986**

*Mimeugnosta* RAZOWSKI, 1986, Acta zool. cracov., **29**(18): 416. Type-species: *Mimeugnosta particeps* RAZOWSKI, 1986, by orig. design.

Alar expanse ca 10 mm. Labial palpus 1. Externally resembling Neotropical species of *Eugnosta*. Venation as in other genera of this group.

Male genitalia: Terminal part of tegumen short, with very long socii; vinculum arms in *enopla* coalescent ventrally, with median process of proximal edge; disc of valva with large group of pectinate scales.

Abdominal scent organ developed on sixth sternite, varying in size.

Female genitalia as in *Mourecochylis*, or without collar-shaped fold of corpus bursae (*arta*).

**B i o l o g y** unknown.

**D i s t r i b u t i o n :** Mexico to Costa Rica.

**C o m m e n t s .** Originally compared to *Mielkeana* on the basis of the structure of the distal part of the tegumen (base of socii) but more specialised (very long socius and presence of pectinate scales of the valva). Four species known.

***Mimeugnosta particeps* RAZOWSKI, 1986**

*Mimeugnosta particeps* RAZOWSKI, 1986, Acta zool. cracov., **29**(18): 416, figs 12-15 (male genit.). Type-locality: Honduras: Siguatepeque. Type in CUB.

Alar expanse 9 mm; Head and thorax ochreous cream, front and vertex cream. Forewing ground-colour cream, base and terminal part of wing suffused ochreous; pattern darker than suffusions; median fascia diffuse, mixed with brownish at dorsum; subapical blotch indistinct; black dots at end of median cell and near mid-termen.

Male genitalia: Median part of transtilla one-third as long as aedeagus; cornutus short, half the length of aedeagus.

Abdominal scent organ: Two small prominences of distal edge of sixth sternite.

**D i s t r i b u t i o n** : Honduras (collected in August) and Mexico: Guerrero (September, 750 m).

### *Mimeugnosta enopla* RAZOWSKI & BECKER, 1986

*Mimeugnosta enopla* RAZOWSKI & BECKER, 1986, Acta zool. cracov., 9(20): 465, figs 96-99 (male genit.), 135 (female genit.). Type-locality: Costa Rica: Turrialba. Type in MNRI.

Alar expanse 8 mm; head and thorax cream, the latter ochreous proximally; ground-colour cream with slight ochreous hue; pattern diffuse, pale yellow-ferruginous, in the form of costal part of median fascia and subapical blotch.

Male genitalia as in *particeps* but socius much longer, median part of transtilla very long (somewhat shorter than aedeagus) and cornutus almost as long as the latter. Vinculum arm with a distinct process.

Abdominal scent organ a large, apically concave process of sixth sternite.

**D i s t r i b u t i o n** : Costa Rica.

**C o m m e n t s** . As there are some doubts concerning a conspectivity of the originally described female, I exclude this specimen from the present redescription.

### *Mimeugnosta arta* RAZOWSKI & BECKER, 1986

*Mimeugnosta arta* RAZOWSKI & BECKER, 1986, Acta zool. cracov., 29(20): 466, fig. 175 (female genit.). Type-locality: Guatemala: Rio Dulce: Isabel. Type in MNRI.

Alar expanse 10 mm; head cream, thorax more ochreous. Forewing ground-colour glossy, pale ochreous cream; pattern yellowish ochreous: remnants of basal blotch, diffuse median fascia and distinct, ferruginous subapical fascia reaching termen, marked brown in middle; black dot at end of median cell.

Female genitalia: Transverse lobe beyond ostium and proximal part of sterigma broad; ductus bursae and colliculum slender; no collar-like fold of corpus bursae.

**D i s t r i b u t i o n** : Guatemala (moth collected in September).

### *Mimeugnosta chascax* sp.n.

Alar expanse 8 mm. Head cream, labial palpus 1.5, front paler; thorax cream, tinged ochreous proximally. Forewing hardly expanding terminally, with termen weakly oblique, almost straight. Ground-colour cream, rather glossy, tinged with ochreous, in distal third hardly so with pinkish. Pattern ochreous, base suffused mainly along costa, median fascia distinct, more yellow-brown in costal third, broad medially, where fused with postmedian suffusion; subapical blotch concolorous, broad, reaching mid-termen, where marked with some black scales, followed by a slightly paler, broad suffusion. Fringes ochreous-cream. Hindwing brownish grey, with fringes much paler.



Male genitalia (Figs 47,48) as in *enopla* but socius and median part of transtilla much shorter, valva broader and shorter, with spines similar, sharp; process of vinculum arm smaller; aedeagus short, strongly tapering distally; cornutus slender, bent, much shorter than in *enopla*.

**H o l o t y p e**, male: "Costa Rica: Parque Nac.[ional] Sta Rosa, Guan., VII-19/20-90, blacklite J. POWELL"; G.S. 11909. Coll.CUB.

**C o m m e n t s**. In the male genitalia this new species shows some similarities also with *particeps*, especially in the shape of the aedeagus and the cornutus, the median part of the transtilla is much longer and slenderer. From the two species *chascax* differs also in the lack of the abdominal scent organ.

### *Eugnosta* HÜBNER, [1825]

*Eugnosta* HÜBNER, [1825], Verz. bekannter Schmett.: 394. Type-species: [*Tortrix*] *lathoniana* HÜBNER, [1800], by subs. design. (FERNALD, 1908; 17), Palaearctic. – RAZOWSKI, 1970, Microlepid. Palaearctica, 3: 250, figs, redescri., palaearctic taxa. – RAZOWSKI, 1987, Acta zool. cracov., 30(11): 164, figs., redescri.

*Safra* WALKER, 1863, List Specimens lepid. Insects Colln Br. Mus., 27: 195. Type-species: *Safra metaphaeella* WALKER, 1863 (= *Conchylis dives* Butler, 1878), design. by monotypy.

*Carolella* BUSCK, 1939, Bull. S. Calif. Acad. Sci., 38: 104, nom. nov. for *Pharmacis* Hübner, 1823, nom. preocc. by *Pharmacis* HÜBNER, 1823, in *Geometridae*. Type-species: *Pharmacis sarthana* Hübner, 1823, hereditarius. – RAZOWSKI, 1986, Acta zool. cracov., 29(18): 409, list of species, notes.

Alar expanse 11-29 mm. Neotropical taxa smaller than the Palaearctic species, 11-24 mm; labial palpus usually 1.5-2, seldom 3 to 5. Pilifers absent in New World species (POGUE & MICKEVICH, 1990). Venation: In forewing all veins separate, *R*<sub>5</sub> to costa before apex; in hindwing *Rr-M*<sub>1</sub> stalked to middle, *M*<sub>3</sub>-*Cu*<sub>1</sub> stalked for a short or extending from one point. Most of Palaearctic species with silver ground-colour, most New World taxa cream to brownish. Their most common pattern is dorsal fascia, being a remnant of median fascia, reaching middle of wing, and subapical or terminal blotch; end of median cell often marked with dark spot, and a diffuse fascia runs towards tornus. In another type of pattern all basal and median areas of wing are dark, and subterminal or subapical marks are weaker.

Male genitalia: Tegumen with rather weakly differentiated top part; socius long, sparsely hairy; uncus atrophied; vinculum coalescent ventrally; valva simple; sacculus without free termination; aedeagus usually stout; cornuti: 1 - 4 capitate spines.

Female genitalia: Sterigma well sclerotized, with cup-shaped antevaginal part and lateral arms of postvaginal portion; positions of ductus seminalis and accessory bursa variable – dorsal or ventral.

**B i o l o g y** little known. Host of one Palaearctic species is *Jurinea* and one Nearctic species was known to feed on *Parthenium hysterophorum*, *Compositae*.

**D i s t r i b u t i o n**: Known from all regions but the Australian. In Palaearctic subregion there are 14 species, in the Nearctic 18. Here 27 species are listed.

**C o m m e n t s**. The system of the New World species is provisional. The genital differences between the species are often very slight, however, they are easily distinguished externally. Thus the species are grouped rather on the basis of their external similarity.

***Eugnosta emarcida* (BECKER & RAZOWSKI, 1986)**

*Carolella emarcida* RAZOWSKI & BECKER, 1986, Acta zool. cracov., 9(20): 442, figs 3-5 (male genit.). Type-locality: Honduras: La Venta, Peo.: Morazan. Type in MNRJ.

Alar expanse 13 mm; head and thorax cream, labial palpus 1.5, tinged brownish. Forewing broad, weakly expanding terminally. Ground-colour cream, sprinkled brown; costa grey-brown to middle; costal half of median fascia and small subapical blotch ochreous-brown, dorsal part of the former grey, followed by paler tornal suffusion; dark spot at end of median cell.

Male genitalia: Socius shorter than cornutus; median part of transtilla very broad; aedeagus large; cornutus without basal plate.

**D i s t r i b u t i o n :** Honduras.

***Eugnosta desinens* (RAZOWSKI, 1986)**

*Carolella desinens* RAZOWSKI, 1986, Acta zool. cracov., 26(18): 410, figs 1,2 (male genit.). Type-locality: Mexico: Veracruz: Fortin de las Flores. Type in CUB. – RAZOWSKI & BECKER, 1986, ibid., 29(26): 442, figs 136, 137 (female genit.).

Alar expanse 12 mm; head and end of tegula cream, labial palpus 2, tinged brown, thorax brownish. Forewing broad, not expanding terminally; ground-colour cream, suffusions weak, brownish ochreous, especially terminally; costa brown to middle; pattern: brownish dorsal fascia distinctly oblique, black-brown at dorsum; brown dot at end of median cell.

Male genitalia: Socius slender, longer than median part of transtilla which is fairly broad; aedeagus short, convex dorso-terminally; cornutus half the length of aedeagus, with large basal plate.

Female genitalia: Cup-shaped part of sterigma broad, postvaginal parts membranous; ductus bursae slender medially, bulbous, spined basally; accessory bursa dorsal, ductus seminalis dorso-lateral.

**D i s t r i b u t i o n :** Mexico: Nuevo Leon, Veracruz.

***Eugnosta ouralia* (RAZOWSKI, 1986)**

*Carolella ouralia* RAZOWSKI, 1986, Acta zool. cracov., 29(18): 412, figs 8-11 (male genit.). Type-locality: Mexico: Durango: 9 mi W El Salto. Type in CUB.

Alar expanse 14 mm; head and thorax white, labial palpus 1.5, brownish, white terminally, base of tegula brownish. Forewing ground-colour cream marbled grey, strigulated brown along dorsum and termen; median fascia brownish, brown on dorsum, tapering towards middle of wing.

Male genitalia as in *desinens* but aedeagus and cornutus longer, the latter without basal plate.

**D i s t r i b u t i o n :** Mexico: Durango, Sinaloa.

***Eugnosta aguila* (RAZOWSKI & BECKER, 1986)**

*Carolella aguila* RAZOWSKI & BECKER, 1986, Acta zool. cracov., 29(20): 443, figs 6,7 (male genit.). Type-locality: Mexico: Veracruz: Biol. Station 'Los Tuxtlas'. Type in MNRJ.

Alar expanse 10 mm; head whitish, labial palpus greyer; thorax brown. Ground-colour of forewing cream-yellow preserved in basal area and as a fascia between end of median cell and tornus; costa dark brown to middle; distal part of wing black-brown; median fascia indistinct, oblique. Fringes black-brown.

Male genitalia as in *ouralia* but with traces of basal plate of cornutus.

**D i s t r i b u t i o n** : Mexico: Veracruz (moth collected in June).

**C o m m e n t s** . Externally quite distinct, slightly resembling Nearctic *E. erigeronana* (Riley), but in the genitalia hardly distinguished from two preceding species.

### *Eugnosta asthenia* (CLARKE, 1968)

*Carolella asthenia* CLARKE, 1968, Proc. U.S. natn Mus., **125**(3660): 55, fig. 29 (male genit.), pl. 3, fig. 6 (photogr. of type). Type-locality: Guatemala: Palin. Type in NMNH.

Alar expanse 12 mm. Head and thorax cream white, labial palpus 1.5. Forewing ground-colour white suffused cream distally to median cell and near termen; dorsal blotch ochreous scaled brown on dorsum; apex of wing and spots near tornus brown, spot at mid-costa brownish; fringes whitish, blackish at apex.

Male genitalia: Socius long; median part of transtilla stout; aedeagus almost as long as valva, cornutus about twice shorter.

**D i s t r i b u t i o n** : Guatemala.

**C o m m e n t s** . The systematic position of this species is unclear; I place it near *opalina*, basing myself mainly on its habitus.

### *Eugnosta opalina* (RAZOWSKI, 1986)

*Carolella opalina* RAZOWSKI, 1986, Acta zool. cracov., **29**(18): 411, figs 3,4 (male genit.), 29 (female genit.). Type-locality: Mexico: Durango: 25 m W Durango. Type in CUB.

Alar expanse 12 mm; head ochreous, labial palpus ca 2; thorax darker. Forewing ground-colour whitish cream, glossy in distal part along pale ochreous-olive transverse mark; basal half of costa brownish; median fascia atrophied at costa, olive-brown, marked brown on dorsum. Fringes grey-cream.

Male genitalia as in three preceding species but median part of transtilla broad, weakly tapering terminally.

Female genitalia with sterigma weakly sclerotized except for vicinity of ostium, postvaginal parts triangular; corpus bursae slightly spined distally; ductus bursae broad; ductus seminalis dorsal, accessory bursa more lateral, posteriorly to the latter, just beyond middle of the corpus.

**D i s t r i b u t i o n** : Mexico: Durango and Chihuahua (moth taken in July at 6000-8100 feet).

### *Eugnosta leonana* (RAZOWSKI, 1986)

*Carolella leonana* RAZOWSKI, 1986, Acta zool. cracov., **29**(18): 411, fig. 30 (female genit.). Type-locality: Mexico: Nuevo Leon: 4 mi W. Iturbides. Type in CUB.

Alar expanse, head and thorax as in *opalina*, but forewing uniformly broad throughout, termen weakly oblique. Ground-colour pale ochreous-cream, costa and termen slightly



darker; median fascia tapering and atrophying towards costa, ferruginous, subterminal blotch and subapical blotch concolorous.

Female genitalia as in *opalina* but distal parts of postvaginal sterigma membranous and ostium protected by short sclerite; corpus bursae densely spined ventrally.

Distribution: Mexico: Nuevo Leon (moth collected in September).

Comments. Externally resembles Nearctic *E. bimaculana* (Robinson) but is distinguished by its less sclerotized sterigma.

### ***Eugnosta medioxima* (RAZOWSKI, 1986)**

*Carolella medioxima* RAZOWSKI, 1986, Acta zool. cracov., **29**(18): 410, fig. 28 (female genit.). Type-locality: Mexico: Nayarit: Jesus Maria. Type in CUB.

Alar expanse 16 mm; Head and thorax olive-brown; forewing hardly expanding terminally. Ground-colour olive-cream, suffused brownish grey at wing base; two concolorous transverse shades postmedially and subterminally. Median fascia brownish, atrophied near costa.

Female genitalia as in *leonana* but cup-shaped part of sterigma well-developed (three times as long as in *leonana*); spines mainly in basal half of ductus bursae; sterigma weakly sclerotized.

Distribution: Mexico: Nayarit (moth collected in August).

### ***Eugnosta ochrolemma* (RAZOWSKI, 1986)**

*Carolella ochrolemma* RAZOWSKI, 1986, Acta zool. cracov., **29**(18): 412, figs 5-7 (male genit.), 31,32 (female genit.). Type-locality: Mexico: Coahuila: 17 mi SE Saltillo. Type in CUB.

Alar expanse 13 mm; head and thorax dark grey, labial palpus brownish. Ground-colour of forewing pale brownish; dorsal fascia ferruginous; terminal pattern almost completely atrophied.

Male genitalia as in other species of the *bimaculana*- group, with valva distinctly tapering terminally; socius slender, long, with broadened base; median part of transtilla slender; aedeagus and cornutus as in *desinens* and *aguila*.

Female genitalia as in *medioxima* but cup-shaped part of sterigma slenderer, ductus bursae long, slender; ductus seminalis and accessory bursa from distal part of corpus bursae.

Distribution: Mexico: Coahuila (moth collected in September at 6800 feet).

### ***Eugnosta tenacia* RAZOWSKI & BEKER 1994**

*Eugnosta tenacia* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., **22**(85): 37, figs 15,16 (male genit.). Type-locality: Brazil: Federal District: Planaltina. Type in MNRI.

Alar expanse 11-12 mm. Head whitish, labial palpus over 2, brownish, whitish terminally; thorax brownish white, browner anteriorly. Forewing ground-colour brownish cream suffused brownish; dorsal blotch somewhat darker, atrophying dorsally; costa brownish to middle.

Male genitalia: Socius very long, slender; valva broad; median part of transtilla slender, long, minutely spined apically. Aedeagus broad; cornutus almost as long as distal part of aedeagus, with long, slender basal plate.

**D i s t r i b u t i o n :** Brazil: Federal District and Minas Gerais (moth collected at an altitude of 700 m).

**C o m m e n t s .** Externally this species resembles the Nearctic *Eugnosta sarthana* (Hübner, 1823) and certainly belongs in its group. It can be distinguished by the pale forewing ground-colour, the absence of the subterminal blotch and weakly developed dorsal blotch and by the shapes of the aedeagus and cornutus.

***Eugnosta deceptana* (BUSCK, 1907)**

*Eugnosta deceptana* BUSCK, 1907, J. N.Y. ent. Soc., **15**: 29. Type-locality: U.S.A.: Texas: Karreville. Type in NMNH.

Alar expanse 14-15 mm. Head and thorax grey; forewing ground-colour white-grey, suffusions and strigulation grey, much darker, edged whitish in terminal half of wing. Remnant of median fascia in the form of an ovate, brown-grey blotch extending from median cell to before dorsum.

Male genitalia with broad base of socius, median part of transtilla expanding terminally and cornutus almost as long as aedeagus.

Female genitalia: Cup-shaped part of sterigma broad; bursa copulatrix small, with broad ductus bursae.

**D i s t r i b u t i o n :** U.S.A.: Texas.

**C o m m e n t s .** One female specimen collected in Mexico (Nuevo Leon: W. of Linares) differs from the Texan examples in the length of the cup-shaped part of the sterigma and may represent a distinct species. As the occurrence of *deceptana* in this region is possible the above redescription is provided.

***Eugnosta saltillana* (RAZOWSKI, 1986)**

*Carolella saltillana* RAZOWSKI, 1986, Acta zool. cracov., **29**(18): 413, figs 16-18 (male genit.). Type-locality: Mexico: Coahuila: 17 mi SE Saltillo. Type in CUB.

Alar expanse 14 mm; head grey, labial palpus dark grey, 3, front greyish. Forewing broad, expanding terminad. Ground-colour ash-grey, suffusions and strigulation darker, strong. Median fascia remnant, an ovate dark brown blotch, situated as in *deceptana*.

Male genitalia as in *deceptana* but median part of transtilla slender, broad in terminal third, aedeagus slenderer with terminal process twice as long.

**D i s t r i b u t i o n :** Mexico: Coahuila.

**C o m m e n t s .** The species is insufficiently known and so the differences with *deceptana* require reconsideration.

***Eugnosta lauta* RAZOWSKI, 1993**

*Eugnosta lauta*, 1993, Polskie Pismo ent., **62**(117-124): 121, figs 9,10 (male genit.). Type-locality: Mexico: Jalisco: 10.8 mi NHwy 54 Nevado Colima. Type in SDNHM.

Alar expanse 22 mm; head and thorax white-grey, dark grey proximally. Forewing expanding terminad, termen concave beyond apex. Ground-colour whitish, preserved along pattern edges and veins, darker in distal than basal area; suffusions and strigulation grey. Median fascia grey, spotted dark grey, rather pale in costal third; dark triangle on dorsum before tornus; postdiscal suffusion broad, subterminal suffusion pale.

Male genitalia with socius short, broad basally; median part of transtilla large, expanding terminally; aedeagus very large, stout (longer than valva); cornutus shorter than median part of transtilla.

**D i s t r i b u t i o n :** Mexico: Jalisco (moth collected in May).

***Eugnosta sebasta* sp.n.**

Alar expanse 22-27 mm; head whitish scaled grey, thorax darker (more densely scaled), labial palpus ca 4. Forewing slender, slightly expanding terminally, with costa bent at 2/3, termen strongly oblique, straight. Ground-colour white suffused grey, sprinkled black mainly on the veins; pattern strongly reduced: median pattern in form of very slender, oblique median fascia atrophying at dorsum, rust brown marked black; paler, more ochreous suffusion at end of median cell; grey spots subapically and along termen. Fringes white, scaled black beyond median line. Hindwing whitish, veins suffused pale brownish cream, delicate strigulation concolorous. Variation: In some specimens pattern completely atrophied, suffusions weak; no trace of median fascia or postmedian ochreous shade; suffusions also variable.

Male genitalia (Figs 49,50) somewhat similar to those in *lauta* but with socius longer, slenderer basally, median part of transtilla very slender, with innumerable terminal thorns, valva broader and distal part of aedeagus slenderer and proportionally longer; cornutus similar but accompanied by plate-shaped sclerite.

**H o l o t y p e**, male: "Mex.[ico] Baja Calif.[ornia] 1 mi.N. Meling Ranch, 2100', III-17-1972, at light J. DOYEN & J. POWELL", coll. CUB. Paratypes, 10 males with identical labels.

**C o m m e n t s**. Genitally similar to *lauta* and certainly closest to that species. However, externally completely different.

***Eugnosta macneili* (RAZOWSKI, 1986)**

*Carolella macneili* RAZOWSKI, 1986, Acta zool. cracov., **29**(18): 413, figs 19-21 (male genit.). Type-locality: Mexico: Durango: 30 mi W Durango. Type in CUB.

Alar expanse 20 mm; head and thorax grey, labial palpus 5, whiter. Forewing not expanding posteriorly; ground-colour white-grey, strigulation and suffusions brownish, weak; subdorsal blotch, representing median fascia, brown-grey.

Male genitalia as in *deceptana* but median part of transtilla very slender, socius rather shorter and cornutus broad, ca half the length of aedeagus.

**D i s t r i b u t i o n :** Mexico: Durango (moth collected in August at 8400 feet).

***Eugnosta mexicana* (BUSCK, 1907)**

*Pharmacis mexicana* BUSCK, 1907, J. N. Y. ent. Soc., **15**: 30. Type-locality: U.S.A.: New Mexico: Beulah. Type in NMNH.

Alar expanse 15-16 mm; head whitish, labial palpus greyish, thorax similar in colour, mixed with brown proximally. Forewing ground-colour whitish suffused brownish grey



at base, brownish, brown or grey suffusions at tornus and from costa to termen and tornus; dorsal fascia slender, dark grey to brown-grey; edges of pattern whitish. Fringes white basally, grey beyond middle.

Male genitalia: Socius slender, long; median part of transtilla fairly long, slender; cornutus slightly longer than the latter.

**D i s t r i b u t i o n :** U.S.A.: New Mexico and Arizona.

**C o m m e n t s .** The Mexican data concern other species, but the occurrence of *mexicana* south of U.S.A. seems possible. In Mexico and Southern U.S.A. occurs another species, viz., *chemsakiana*, which differs in lacking the white base of the forewing cilia and the short median part of the transtilla. The females require re-examination.

***Eugnosta chemsakiana* (RAZOWSKI, 1986)**

*Carolella chemsakiana* RAZOWSKI, 1986, Acta zool. cracov., 29(18): 414, figs 22-24 (male genit.). Type-locality: Mexico: Durango: 29 mi E El Salto. Type in CUB.

Alar expanse 20-21 mm; head and thorax grey, labial palpus 4. Forewing distinctly expanding terminally. Ground-colour whitish, preserved mainly near pattern edges, suffused brownish. Dorsal fascia uniformly broad; subapical fascia delicate.

Male genitalia as in *busckana* but base of socius broad, median part of transtilla twice shorter than cornutus and valva distinctly tapering beyond sacculus.

**D i s t r i b u t i o n :** Mexico: Durango. Also U.S.A.: Utah, and Arizona.

**C o m m e n t s .** This species differs from *mexicana* in having pale subtornal area, and from *busckana* in lacking the white base of the fringes. All these species show some genital differences.

***Eugnosta mitis* RAZOWSKI, 1993**

*Eugnosta mitis* RAZOWSKI, 1993, Polskie Pismo ent. 62: 121, figs 7,8 (male genit). Type-locality: Mexico: Baja California Norte. Type in SDNHM.

Alar expanse 22 mm; head whitish, labial palpus (2) and thorax white-grey. Forewing termen slightly concave beyond apex; ground-colour whitish suffused grey, white along pattern edges; suffusions irregular, grey; median fascia oblique, almost straight, subtriangular grey blotch beyond it, dorsally; postmedian part of wing suffused grey except apex area.

Male genitalia as in *mexicana* but median part of transtilla slightly longer and cornutus resembling that in *deceptana*. Aedeagus slender.

**D i s t r i b u t i o n :** Mexico: Baja California Norte.

**C o m m e n t s .** This species differs from *mexicana* in the grey fringes in the apical part of the wing and the almost complete, grey median fascia.

***Eugnosta chromophanes* sp.n.**

Alar expanse 13-14 mm. Head greyish white, labial palpus ca 3, brownish grey, whitish basally; thorax whitish, collar and postbasal part of tegula grey. Forewing not expanding

terminally, with costa gently convex, apex sharp, termen strongly oblique. Ground-colour pale ochreous-yellow; costa, and partially dorsum suffused brownish. Pattern brown, median fascia a slender blotch, often atrophying dorsally reaching, median cell; trace of subapical blotch usually included in dark brown fascia tapering towards end of median cell; another, slenderer fascia from it to tornus, both tinged ochreous distally; somewhat paler suffusion along dorsal half of terminal fascia marked with refractive scales. Fringes white cream at apex, otherwise brownish grey, with basal line in median part of wing blackish. Hindwing rather dark, brownish grey; fringes slightly paler, creamer at apex.

Male genitalia (Figs 51,52) resembling *mitis* but differing in shorter median part of transtilla, shorter and broader valva and larger aedeagus with smaller terminal part; cornutus longer with simple, small capitulum.

**H o l o t y p e**, male: "Mex.[ico]: Durango 3-4 mi S El Salto 8000' VIII-11-86, BROWN & POWELL"; G.S. 11945. Coll. CUB. Paratypes, 3 males identically labelled.

**C o m m e n t s**. This species is easily distinguished externally mainly thanks to its V-shaped pattern of the forewing. In the male genitalia it is similar to *mitis*.

### *Eugnosta busckana* (COMSTOCK, 1939)

*Carolella busckana* COMSTOCK, 1939, Bull. S. Calif. Acad. Sci., **38**: 113. Type-locality: U.S.A.: California: El Segundo. Type in NMNH.

Alar expanse 24-25 mm; head and thorax grey. Forewing expanding terminally; ground-colour greyish, suffusions darker, subdorsal blotch elongate, brown; brownish grey, distinct suffusion posterior to end of median cell, not separated from subterminal suffusion by a whitish line.

Male genitalia as in *macneili* but socius long, slender, valva and median part of transtilla much slenderer. Aedeagus small (rather as long as costa of valva), slender; cornutus slender.

**D i s t r i b u t i o n**: U.S.A.: California. One specimen collected in Mexico: Baja California Sur.

**C o m m e n t s**. This species is similar to two other Californian species, *E. beevorana* (COMSTOCK) and *E. willettana* (COMSTOCK), which can be found much farther southwards. From the latter it differs in its much shorter socii situated more laterally, and broader valva whilst from *beevorana* in the much longer median part of the transtilla. The top of the tegumen and the socii are in *beevonana* similar to *witellana*.

### *Eugnosta californica* (RAZOWSKI, 1986)

*Carolella californica* RAZOWSKI, 1986, Acta zool. cracov., **29**(18): 414, figs 25-27 (male genit.). Type-locality: Mexico: Baja California Norte: 5 km S Bahia los Angeles. Type in CUB.

Alar expanse 24 mm; head and thorax grey, labial palpus 2; forewing weakly expanding posteriorly, termen straight. Ground-colour whitish grey densely spotted and strigulated brownish grey, suffused with same colour at 2/3 of costa; median fascia uniformly broad; pale-edged dorsal blotch not reaching subcostal area.

Male genitalia large, socius broad at base; median part of transtilla long, slender; aedeagus slightly longer than costa of valva; cornutus thick, with large base.

**D i s t r i b u t i o n**: Mexico: Baja California Norte (moth collected in December).

*Eugnosta argentinae* (RAZOWSKI, 1967)

*Carolella argentinae* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 196, figs 66, 67 (male genit.), pl. 16, fig. 6 (erroneously as *Spinipogon spinifera*). Type-locality: Argentina: F.C. Santa Fé: Villa Ana. Type in NHML.

Alar expanse 8 mm; head and thorax pale brownish cream; labial palpus 4, brownish ochreous. Forewing slender, expanding in distal third; ground-colour ochreous-cream, with slight violet-rosy hue; strigulation along distal part of costa and from beyond base of dorsum brown, that in distal third of wing much paler, concolorous with fringes. Dorsal fascia dark, brown, slender, curved.

Male genitalia: Socius slender, long; median part of transtilla slender, broad basally; aedeagus stout; cornutus slightly shorter than aedeagus, with very large basal plate.

**D i s t r i b u t i o n :** Argentina: Santa Fé.

*Eugnosta selecta* (MEYRICK, 1931)

*Euxanthis selecta* MEYRICK, 1931, Exot. Microlepid., **4**: 158. Type-locality: Paraguay: Asunción. Type in NHMW. – RAZOWSKI, 1964, Annls zool., Warsz., **22**(21): 476, fig. 71 (female genit. of lectotype). – *Carolella selecta*: RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 197, figs 68, 69 (male genit.). – RAZOWSKI & BECKER, 1983, ibid., **26**(13): 440, distr., notes, figs 117, 118 (female genit.).

Alar expanse 18–20 mm; head and thorax yellowish with brownish olive hue; labial palpus 4, browner, concolorous with base of tegula. Forewing slender; ground-colour cream, dorso-basal and dorso-postmedian suffusions brownish, fascia extending from end of median cell to tornus and subterminal fascia darker; median fascia brown, dark brown along edges, atrophying in costal area. Often dark marks pale-edged.

Male genitalia with socius broad, fairly short, median part of transtilla broad, slightly expanding in terminal part; aedeagus stout; cornutus as long as median part of transtilla, with large basal plate.

Female genitalia: Distal part of sterigma membranous, cup-shaped part short, weakly sclerotized; ductus bursae slender; accessory bursa and ductus seminalis ventral, from distal and proximal parts of corpus bursae, respectively.

**D i s t r i b u t i o n :** Paraguay and Brazil: Federal District, Minas Gerais, Paraná.

*Eugnosta synaetera* RAZOWSKI & BECKER 1994

*Eugnosta synaetera* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., **22**(85): 36, figs 13, 14 (male genit.). Type-locality: Brazil: Santa Catarina: São Joaquin. Type in MNRJ.

Alar expanse 18 mm; head whitish, labial palpus 2.5, brownish in basal half grey posteriorly; thorax whitish grey, brownish anteriorly. Wing brown densely spotted white (remnants of ground colour) except for diffuse dorsal blotch and the area posterior to median cell. Fringes white; basal line dark brown.

Male genitalia: Socius long, distinctly sclerotized; median portion of transtilla broad basally, with club-shaped terminal portion; aedeagus slender; cornutus very short, provided with large basal plate.

**D i s t r i b u t i o n :** Brazil: Santa Catarina (moth collected at 1400 m).

**C o m m e n t s .** This species is genitally close to *selecta* as shown by the shape of the transtilla and cornutus. It differs from it mainly in having slenderer valva and aedeagus. Externally completely different.



*Eugnosta aphrobapta* (MEYRICK, 1931)

*Eulia aphrobapta* MEYRICK, 1931, Exot. Microlepid., 4: 152. Type-locality: Brazil: Espirito Santo: Guandú. Type in NHMW. — RAZOWSKI, 1964, Annls zool. Warsz., 22: 475, figs 69,70 (male genit. of type).

Alar expanse 15 mm; head and thorax white. Basal half of forewing brownish, diffusely spotted brown, extending towards tornus; posterior area white, sparsely spotted brownish; row of darker spots along termen and slender subapical fascia.

Male genitalia: Socius slender; median part of transtilla broad; aedeagus longer than valva; cornutus as long as median part of transtilla.

**D i s t r i b u t i o n :** Brazil: apart from type-locality also Federal District.

*Eugnosta hysterosiana* (RAZOWSKI, 1967)

*Carolella hysterosiana* RAZOWSKI, 1967, Acta zool. cracov.: 12(8): 195, figs 63,64 (male genit.), 65 (female genit.), pl. 16, fig.5 (mistakenly as *Aethes agelasta*). Type-locality: Argentina: Tucuman. Type in NHML.

Alar expanse 16 mm; head brownish, labial palpus greyer; thorax dark brown. Forewing blackish, with some cream-grey places among black strigulae, with distal portion much darker, not extending towards tornus; shade before large subapical fascia grey-black, the latter blackish, concolorous with terminal spots.

Male genitalia with socius and median part of transtilla much smaller and slenderer than in *aphrobapta*; cornutus about twice longer than the latter.

**D i s t r i b u t i o n :** Argentina: Tucuman.

**C o m m e n t s .** The forewing is slenderer than in *aphrobapta*, and the dark pattern black in hue, not brown. The female requires re-examination as it may represent a different species.

*Eugnosta molybdina* (CLARKE, 1968)

*Carolella molybdina* CLARKE, 1968, Proc. U.S. natn. Mus., 125: 53, fig. 28 (male genit.), pl.3, fig.8 (photogr. of type). Type-locality: Mexico: S.L.P.: Tamazunchale.

Alar expanse 11-14 mm; head ochreous, thorax greyer, labial palpus of type missing. Forewing costa distinctly convex postmedially. Ground-colour ochreous-cream, with diffuse, yellowish spots and silver marks on them and pattern. Costal and dorsal parts of incontinuous median fascia, subapical area and termen to middle purple-brown; this last with bluish refractive spots. Fringes cream ochreous; basal line black.

Male genitalia: Tegumen with small median prominence between very short socii; median part of transtilla as long as socius, very slender; valva broad at base, then slender; sacculus concave submedially. Aedeagus long, slender, not sclerotized in distal half, dorsally; cornutus longer than costa of valva.

Female genitalia with postostial part of sterigma short and well sclerotized lateral arms; colliculum weakly sclerotized, ductus bursae long, sclerotized folds in anterior half long, weak; ductus seminalis dorsal, with corpus bursae at junction; accessory bursa ventral, originating before middle of the latter.

**D i s t r i b u t i o n :** Mexico, type locality only.

**C o m m e n t s .** The systematic position of *molybdina* is unclear, and so I place it at the end of the system.

*Eugnosta molybdanthes* (MEYRICK, 1932)

*Phtheochroa molybdanthes* MEYRICK, 1932, Exot. Microlepid., 4: 266. Type-locality: Brazil: Santa Catarina: Neu Bremen. Type in NHMW. – RAZOWSKI, 1964, Annls zool., Warsz., 22: 479, figs 80,81 (male genit. of lectotype). – *Carolella molybdanthes*: RAZOWSKI & BECKER, 1986, Acta zool. cracov., 26(13): 442, fig. 119 (female genit.). – RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., 22(85): 37, noteds, distrib.

Alar expanse 20-25 mm; head and thorax white, labial palpus 1.5. Forewing broad, with apex rounded. Ground-colour white; base of wing and terminal area incl. fringes blackish, diffusely spotted black; rust marks at costa terminally and at dorsal edge of basal blotch. Dense groups of erect refractive scales, bluish in pattern areas.

Male genitalia: Socii slender, distinctly separate basally; sacculus with long, sharp termination; ventral edge of aedeagus with subterminal prominence; one very short spine-like cornutus and sclerotized plate in vesica.

Female genitalia with extremely large sterigma consisting of sclerotic distal lobes and anterior membranous fold; ductus bursae broad, rather weakly sclerotized, with median accessory bursa; ductus seminalis from before middle of corpus bursae, also ventrally.

**D i s t r i b u t i o n** : Brazil: São Paulo, Paraná and Santa Catarina.

**C o m m e n t s** . This species differs from all known *Eugnosta* in the pattern and the male and female genitalia, but in my opinion does not deserve a separation into a distinct genus.

## Unplaced species

*Eugnosta dyschiria* (RAZOWSKI, 1986)

*Carolella dyschiria* RAZOWSKI, 1986, Acta zool. cracov., 29(18): 414, figs 33,34 (female genit.). Type-locality: Mexico: Oaxaca: 7 mi SE Nochixtlan. Type in CUB.

Alar expanse 17 mm; head and thorax whitish, labial palpus 1.5. Forewing ground-colour whitish delicately strigulated and sprinkled grey, suffused dark grey in terminal half of wing, chiefly posteriorly to median cell and at apex where some black and brown scales occur. Median fascia interrupted near costa, dark grey, strigulated brown on dorsum.

Female genitalia: Postvaginal part of sterigma broad, convex distally; antevaginal portion slender; ductus bursae long, partially well sclerotized, concave before accessory bursa ventrally; corpus bursae with distinct median sclerite; ductus seminalis ventral, beyond middle of ductus bursae.

**D i s t r i b u t i o n** : Mexico: Oaxaca.

**C o m m e n t s** . The female genitalia are peculiar; before the male has been discovered the systematic position is unclear. Externally it resembles the Palaearctic *Cochylis posterana* ZELLER.

*Anielia* RAZOWSKI & BECKER, 1983

*Anielia* RAZOWSKI & BECKER, 1983, Acta zool. cracov., 26(13): 442. Type-species: *Anielia paranica* RAZOWSKI & BECKER, 1983, by orig. design.

Venation and head as in *Eugnosta*.

Male genitalia with tegumen high, terminating in median lobe (remnant of uncus); socius dorso-terminal, long, sclerotized dorsally; transtilla emarginate dorsally and ven-

trally, convex dorsally; sacculus without free termination; vinculum arms coalescent ventrally; no distinct cornutus in vesica.

**B i o l o g y** unknown.

**D i s t r i b u t i o n**: Brazil: Paraná.

**C o m m e n t s**. This genus is closest to *Eugnosta* from which it differs in the following supposed autapomorphies described above: the dorsal sclerotization of socius, the doubly folded transtilla and the presence of its dorsal convexity. A monobasic genus.

### *Anielia paranica* RAZOWSKI & BECKER, 1983

*Anielia paranica* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 442. Type-locality: Brazil: Paraná: Morro de Meio. Type in MNRJ.

Alar expanse 12 mm; head grey-brown, labial palpus 2, ochreous, scaled black, cream apically; thorax blackish brown. Forewing ground-colour cream diffusely strigulated pale ochreous, costa spotted black, dark ferruginous at base; costal mark trapezoidal, grey-black; subterminal fascia browner, limiting apex area, the latter strigulated brown and spotted grey.

Male genitalia: Base of socius broad; valva slender, with disc spined postmedially; sacculus without free end; aedeagus large, membranous beyond middle, with caulis postmedian; numerous short thorns in vesica.

### *Acarolella* RAZOWSKI & BECKER, 1983

*Acarolella* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 443. Type-species: *Euxanthis stereopis* MEYRICK, 1931, by orig. design.

Alar expanse 14-16 mm; labial palpus 3. Venation as in *Eugnosta* (in *stereopis* hindwing veins  $M_3-Cu_1$  originating at one point which is regarded as lying within the range of variation of that genus).

Male genitalia: Distal part of tegumen differentiated by membranisation of lateral parts; socius long; vinculum uniform; subcostal, bristled lobe of disc of valva; sacculus with long free termination; transtilla very thin medially; cornutus absent.

Female genitalia: Ductus of accessory bursa originating ventrally, ductus seminalis dorsal.

**B i o l o g y**. No data.

**D i s t r i b u t i o n**: C. Brazil and N. Argentina.

**C o m m e n t s**. Close to *Anielia* and *Eugnosta*, but more advanced. Its supposed autapomorphies are the arch-shaped transtilla and the presence of a bristled lobe of the disc of the valva. Three species included.

### *Acarolella stereopis* (MEYRICK, 1931)

*Euxanthis stereopis* MEYRICK, 1931, Exot. Microlepid., **4**: 158. Type-locality: Argentina: N. Chaco de Santa Fé. Type in NHMW. – RAZOWSKI (as *steropis* [sic!]), 1964, Annls zool., Warsz., **22**(21): 477, figs 72, 73 (male genit. of type). – *Acarolella stereopis* [sic!]: RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 443, figs 65-67 (male genit.), 120-122 (female genit.).

Alar expanse 14-17 mm; head pale cream-brown; thorax whitish, suffused grey anteriorly and medially. Forewing ground-colour white; basal blotch brownish, scaled black; median fascia almost perpendicular to wing edges, brownish, tinged rust in middle,



grey anteriorly, spotted and strigulated black; black dot at end of median cell; terminal area brown, yellow-brown proximally, paler at tornus.

Male genitalia as described for the genus. Distal part of valva slender; process of sacculus somewhat shorter than socius; aedeagus very slender, with median colliculum and very short coecum penis.

Female genitalia: Middle part of postvaginal sterigma concave, antevaginal part convex in middle; proximal part of ductus bursae sclerotized, distal half membranous; base of ductus in collar-like, slightly sclerotized fold; corpus bursae spined.

**D i s t r i b u t i o n :** N. Argentina and C. Brazil: Federal District (collected at an altitude of 1000 m).

### *Acarolella gentilis* sp.n.

Alar expanse 17 mm; head and thorax whitish, labial palpus 1.5, creamer to middle, base of tegula tinged grey. Forewing slender, expanding to middle, then broad; apex broad, rounded; termen hardly oblique, convex. Ground-colour white-cream, preserved in posterior half of wing where strigulated pale brownish grey, and at base in the form of some spots. Anterior half of wing brown, with some dark brown strigulae and irregular distal edge; blackish spot at end of median cell; distal area with confluent brownish strigulae and fasciae, the largest subapically. Fringes concolorous with suffusions. Hindwing greyish brown, with darker strigulation in distal half; fringes brownish. Variation: In paratype postbasal area white, blackish strigulae and spots on paler, refractive ground-colour; subapical fascia weak.

Male genitalia (Figs 53,54) as in *stereopis* but distal part of sacculus elongate, extending far beyond base of dorso-terminal process; aedeagus smaller, with broad coecum penis.

**H o l o t y p e ,** male: "Steinbach Acc. 5058, P.[rovince] del Sara, Bol.[ivia]"; G.S. 10678; coll. CMNH. Paratype, male with similar label: "Bolivia: Santa Cruz, Province del Sara, 450 m, Nov. 1909, Jose STEINBACH".

**C o m m e n t s .** Closely related to *stereopis* but distinct in the cream thorax which in the mentioned species is brownish. The dark area of the basal half of the fore wing is probably in the two species variable.

### *Acarolella obnixa* RAZOWSKI & BECKER, 1983

*Acarolella obnixa* RAZOWSKI & BECKER, 1983, Acta zool. cracov., 26(13): 443, figs 123,124 (female genit.). Type-locality: Brazil: Paraná: Curitiba. Type in MNRJ.

Alar expanse 14 mm; head and thorax dirty yellowish; forewing ground-colour yellowish cream mixed with pale ochreous along median cell; median fascia, an ill-defined, diffuse brownish dorso-basal blotch.

Female genitalia: Postvaginal part of sterigma almost entirely membranous; colliculum large, weakly sclerotized; ductus bursae short, in proximal part sclerotized; no spines in corpus bursae.

**D i s t r i b u t i o n :** Brazil: Santa Catarina (collected at 1400 m), and Paraná.

***Rigidsociaria* RAZOWSKI, 1986**

*Rigidsociaria* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 377. Type-species: *Rigidsociaria erinaceola* RAZOWSKI, 1986, by orig. design.

Alar expanse 14-21 mm; labial palpus 1.5. Forewing costal fold present.

Male genitalia: Tegumen short, broad; socius slender, rigid, bristled apically; vinculum arms not coalescent ventrally; valva short, with dorsal part subtriangular and subcostal fold extending proximally; sacculus with free termination; median part of transtilla stout, bifid, spined apically; coecum penis slender, rather short; caulis far before middle; trace of capitate cornutus in vesica.

Female genitalia: Ovipositor short; postvaginal sterigma consisting of two elongate, spined lobes membranously connected with apophyses anteriores; colliculum with anterior, membranous ventral sac and inner tubular sclerite, reaching ostium bursae; ductus seminalis and accessory bursa ventral, originating in middle of ductus bursae and posterior part of corpus bursae, respectively; ductus bursae slender, corpus spined.

B i o l o g y unknown.

D i s t r i b u t i o n : Mexico: Sinaloa.

C o m m e n t s : The supposed autapomorphies are the shape of the socius, the presence of its terminal bristles, the densely bristled, bifurcate median part of the transtilla, the extending inner lobe of the subcostal pocket of the valva and the elongate sterigma. One species included.

***Rigidsociaria erinaceola* RAZOWSKI, 1986**

*Rigidsociaria erinaceola* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 377, figs 19-21 (male genit.), 69-71 (female genit.). Type-locality: Mexico: Sinaloa: 15 mi W El Palmito. Type in CUB.

Alar expanse 14 mm in male, 21 mm in female; head whitish, thorax creamer, base of socius tinged ochreous. Forewing ground-colour white, suffusions in distal half of wing ochreous and brownish; silvery-grey marks on pattern edges and suffusions; costal fold brown; broad, diffuse dorsal blotch and ochreous spot brownish at costa constitute the median fascia; fringes whitish.

Male genitalia as described for the genus; sacculus angulate ventrally, with slender caudal termination; aedeagus curved, with numerous thorns in distal third.

Female genitalia as described for the genus.

D i s t r i b u t i o n : Mexico: Sinaloa (moth collected in July).

***Rudenia* RAZOWSKI, 1985**

*Rudenia* RAZOWSKI, 1985, Polskie Pismo ent., **55**: 519. Type-species: *Rudenia paupercula* RAZOWSKI, 1985, by orig. design.

Alar expanse 11-15 mm; labial palpus 1-2. Venation as in other genera of this group: In forewing  $R_5$  to costa, chorda absent. In hindwing  $Rr-M_1$  stalked,  $M_3-Cu_1$  separate.

Male genitalia: Tegumen rather short, very broad proximally; with distal part elongate, terminating in two flat processes; arms of vinculum not coalescent ventrally. Median process of transtilla slender; aedeagus as in *Lorita* but with lateral depression; cornutus absent.

Abdominal scent organ not found.

Female genitalia: Sterigma, a medially concave plate followed by a scobinate membrane; funnel-like prominence in middle of antevaginal edge; colliculum ill-defined, or absent; proximal part of ductus bursae densely folded longitudinally, sclerotized; accessory bursa dorsal or lateral, extending from sclerotized area; ductus seminalis from apex of corpus bursae, or dorso-subapical.

**Biology.** BUSCK (orig. descript.) writes that the larvae of *leguminana* were collected in September, bred in February from seedpods of *Gleditschia horrida*.

**Distribution:** Nearctic subregion and Neotropical region: Baja California.

**Comments.** Originally this genus was treated as close to *Eugnosta*. As the homology of the top part of the tegumen is not clear I place *Rudenia* near *Lorita* basing myself on the similarity of the female genitalia. The supposed autapomorphies of this genus are the presence of flat processes of the top of the tegumen, the funnel-like depression of dorsal part of this region of the tegumen, strongly elongate base of the sacculus parallel to the vinculum arm, the long concavity of the left side of the aedeagus, two rows of small, sclerotized folds in the postvaginal part of the sterigma beyond the weakly sclerotized area posterior to the ostium and the sclerotized structure of the end of the aedeagus. Four species included.

### *Rudenia leguminana* (BUSCK, 1907)

*Phalonia leguminana* BUSCK, 1907, Ill. N.Y. ent. Soc., **15**: 28. Type-locality: Washington, D.C. Type in NMNH. – *Rudenia leguminana*: RAZOWSKI, 1985, Polskie Pismo ent., **55**: 521.

Alar expanse 13-15 mm; labial palpus 2, greyish; thorax grey, darker proximally. Ground-colour of forewing white to greyish, strigulation and suffusions grey; base of wing, terminal area and often costa suffused grey; dorsal blotch more or less broad, grey, black along proximal and distal edges; subapical fascia weak, darker than suffusions. Variation occurs in the intensity of pattern and suffusions of the ground-colour.

Male genitalia: Base of process of tegumen rounded, hairy; valva rounded distally, terminal part of sacculus free, short.

Female genitalia: Membranous, distal part of ductus bursae very short.

**Biology.** As mentioned in the description of the genus.

**Distribution:** Widely distributed in Nearctic subregion, found in various parts of Mexico, e.g. Sinaloa, Puebla, Nuevo Leon, Coahuila.

**Comments.** The Mexican specimens show some genital variation.

### *Rudenia paupercula* RAZOWSKI, 1985

*Rudenia paupercula* RAZOWSKI, 1985, Polskie Pismo ent., **55**: 521, figs 1-3 (male genit.), 4 (female genit.). Type-locality: Mexico: Baja California Norte: Arroyo Catavina, 35 mi S Progreso. Type in CUB.

Alar expanse 14 mm; head and thorax dark grey, labial palpus 1. Forewing ground-colour grey, sprinkled and suffused dark grey; pattern indistinct, black-grey in the form of postbasal and median blotches and slender subapical fascia, reaching mid-termen.

Male genitalia as in *leguminana* but, with valva broader and sacculus short, with ventro-terminal projection.

Female genitalia smaller than in *leguminana*, with broader ductus bursae, sclerotized part of ductus bursae shorter than its distal, membranous portion, sterigma broader, with broad postostial prominence.



**D i s t r i b u t i o n :** Mexico: Baja California Norte (moth collected in April).

***Rudenia nigrans* RAZOWSKI, 1985**

*Rudenia nigrans* RAZOWSKI, 1985, Polskie Pismo ent., **55**: 521, fig. 5 (female genit.). Type-locality: Mexico: Baja California Sur: 7 mi SE Guerrero Negro. Type in CUB.

Alar expanse and other characters as in *paupercula* but front whitish grey, subterminal pattern broad, reaching tornus, and partially fusing with indistinct median fascia.

Female genitalia: Sterigma much broader than in *paupercula*, with antevaginal part more strongly sclerotized and with longer postostial prominence; sclerite ductus bursae of weaker, anterior membranous part much longer than terminal part.

**D i s t r i b u t i o n :** Mexico: Baja California Sur (moth in April).

***Rudenia immanis* sp. n.**

Alar expanse 15 mm. Head and thorax grey, white scaled; labial palpus 2. Forewing ground-colour whitish densely sprinkled grey, strigulated black; three black, slightly convex lines across the wing, first submedially, the other subterminally, terminating near tornus. Fringes concolorous with ground-colour. Hindwing white-grey, tinged brownish grey and concolorously strigulated in terminal half; fringes whitish.

Female genitalia (Fig. 96): Sterigma large, with very large postostial, semielliptic sclerite and proportionally short dorsal plate with rounded distal corners; ductus bursae broad, well sclerotized, with several dorso-lateral folds; accessory bursa originating from distal part of that area; numerous spines in corpus bursae.

**H o l o t y p e**, female: "Mex: Baja Calif.[ornia] Norte. Diablito Cyn. E. face Sierra San Pedro Martir; at light IV-5/6-73 J. POWELL"; G.S. 11918; coll. CUB.

**C o m m e n t s**. Genitally differing from all known species of this genus in having very large and proportionally short postostial part of the sterigma, and large, distinctly sclerotized part of ductus bursae.

***Lorita* BUSCK, 1939**

*Lorita* BUSCK, 1939, Bull. S. Calif. Acad. Sci., **38**: 100. Type-species: *Lorita abornana* BUSCK, 1930 = *Phalonia scarificata* MEYRICK, 1917, by orig. design. – POGUE, 1988, Proc. ent. Soc. Wash., **90**(4): 443, figs 3-6 (abdominal scent organ, head, venation).

Alar expanse 7-10 mm; labial palpus 1.5-2. Venation of the *Phalonidia* type: All veins separate; In forewing *R*<sub>5</sub> to costa, chorda absent; in hindwing *Rr-M*<sub>1</sub> stalked to middle or 2/3, *M*<sub>3</sub>-*Cu*<sub>1</sub> connate at base; in male of *baccharivora* hindwing costal fold present.

Male genitalia: Tegumen high, with distal lobe touching lateral parts of transtilla; uncus fused with socii, bulbous, with single or bifid apical process; arms of vinulum not fused apically; costa of valva convex postbasally; sacculus simple; median part of transtilla large; aedeagus of the *Phalonidia* type, without cornutus.

Abdominal scent organ: Stout process of sixth abdominal sternite, and small convexity of the following sternite.

Female genitalia: Cup-shaped part of sterigma membranous dorsally, followed by deep concavity in middle of postvaginal part; ductus bursae sclerotized to middle; accessory bursa from that sclerite, ventrally; ductus seminalis dorsal, from corpus bursae.

Early stages described and illustrated by Pogue (figs 26-28 - egg, 13-18, 29-40 - larva, various details, chaetotaxy, 20-25, 42-47 - pupa).

**Biology.** Hosts of *baccharivora* and *scarificata* recorded by Pogue, 1988. Several generations yearly.

**Distribution:** Spread from Florida and N. California to Brazil, known from the islands of the Caribbean Sea; it was also introduced to Hawaii (Oahu and Kauai). *L. scarificata* has the broadest distribution amongst the Neotropical *Tortricidae*.

**Comments.** In the shape of the aedeagus and the presence of the abdominal scent organs *Lorita* resembles the taxa of the *Phalonidia-Saphenista* group. Its autapomorphies are the presence of the subterminal, ventral lobes of the tegumen, connecting the lateral portions of the transtilla and the strongly convex costa of the valva. The structure of the upper part of the tegumen is peculiar. Pogue (1988) calls it the uncus, but it may represent the socii with their apical processes comparable with those in the two preceding genera. In *scarificata* they are fused apically but there is a ventral slit extending as far as the end of the bulbous part. Three species known.

### *Lorita baccharivora* POGUE, 1988

*Lorita baccharivora* POGUE, 1988, Proc. ent. Soc. Wash., **90**(4): 449, figs 2 (moth), 6 (venat.), 9, 10 (male genit.), 12 (female genit.), 26-47 (early stages). Type-locality: U.S.A.: California: Okeechobee Co.: Lake Okeechobee. Type in NMNH. – DIATLOFF & PALMER, 1988, *ibid.*, **90**(4): 458 (biology).

Alar expanse 7.5-9 mm. Head and thorax cream; labial palpus greyish; forewing ground-colour whitish, densely strigulated and suffused ochreous or brownish grey. Pattern ill-defined, yellowish brown in the form of costal remnants of median fascia and subapical blotch. Variation: Some specimens with remnants of pattern somewhat darker than ground-colour, often with basal suffusion and subapical fascia present. Strigulation usually distinct, often dark.

Male genitalia: Socius bifid apically, valva with long, apically broad scales; median part of transtilla broader than sacculus.

Female genitalia: Membranous part of ductus bursae reduced.

Early stages discussed in the original description.

**Biology** treated by DIATLOFF & PALMER (1988). Moth in April and May; host: *Baccharis halimifolia* L., *Compositae*.

**Distribution:** Central and southern Florida and eastern Texas.

### *Lorita scarificata* (MEYRICK, 1917)

*Phalonia scarificata* MEYRICK, 1917, Exot. Microlepid., **4**: 3. Type-locality: British Guiana: Bartica. Type in NHML. – *Lorita scarificata*: CLARKE, 1963, Cat. Microlepid. MEYRICK, **4**: 20, pl. 10, fig. 2 (photogr.), 2a-b (male genit. of lectotype). – POGUE, 1988, Proc. ent. Soc. Wash., **90**(4): 443, figs. 1 (photogr.), 3 (abdom. scent organ), 4 (head), 5 (venation), 7, 8 (male genit.), 11 (female genit.), 13-25 (early stages). – *Lorita abornana* BUSCK, 1939, Bull. S. Calif. Acad. Sci., **38**: 101, pl. 17, figs 1-5 (genit., head, venation). Type-locality: U.S.A.: California: Los Angeles Co.: El Segundo. Type in NMNH. – *Lorita abornana* var. *chatka* BUSCK, 1939, *ibid.*, **38**: 101.

Alar expanse 8-12 mm. Head cream to ochreous cream, thorax darker. Ground-colour of forewing concolorous, with more ochreous or brownish suffusions or strigulation.

Pattern brownish, consisting of median fascia atrophying medially, well developed and dark at costa, often partially ochreous brown or blackish on dorsum; subapical fascia concolorous with costal part of the former; tornal mark variable. Hindwing without costal fold. Variation: Pattern often strongly reduced, with black or grey elements. Ground-colour with pearly gloss, variably coloured and suffused.

Male genitalia: Socii fused, bulbous part terminating in naked process; median part of transtillae as broad as mid-part of sacculus; disc of valva with normal hair.

Female genitalia: Posterior, membranous part of ductus bursae present.

Early stages described by POGUE (1988).

**Biology.** Larvae are noticed as pest, boring in stalks and capsules of bell pepper. It also feeds in blossoms of *Chrysanthemum*, and dodder.

**Distribution.** Known from Texas, S. California and Florida to Puerto Rico, Antigua, Venezuela and Brazil. The southernmost stands are in Mato Grosso and Federal District.

### *Lorita lepidulana* (FORBES, 1931) comb.n.

*Saphenista lepidulana* FORBES, 1931, J. Dept. Agr. Porto Rico, 4: 354, pl. 42, fig. 4 (forewing), pl. 45, fig. 25 (male genit.). Type-locality: Puerto Rico: Coamo Springs. Type in CU (after orig. paper). – *Thyralia lepidana*: WALSHINGHAM, 1897, Proc. zool. Soc., London, 1897: 139.

Alar expanse ca 10 mm; head and thorax cream-ochreous, labial palpus 1.3, darker. Forewing ground-colour and suffusions darker, concolorous with distal part of wing; median fascia broad in dorsal half, slender towards costa, brown; subapical fascia and some apical lines paler. Variation: One specimen (NMNH coll.) much paler, with yellow-brown, paler and browner near costa, brown-edged; subapical fascia similar.

Male genitalia (described from the original drawing) with uncus short; median part of transtilla stout; valva rather short, broadest near middle with costa convex submedially; aedeagus without cornutus.

**Distribution:** Puerto Rico.

**Comments.** This species certainly belongs in *Lorita* as suggested by the shapes of the valva, the uncus and the aedeagus. The above description is based on the original diagnosis and one specimen, which is probably a paratype. As the original drawing is very superficial I am unable to compare the genitalia of the specimen from S. Croix which has its bifid uncus and slenderer valva marked with pectinate scales.

### *Tambomachaya* RAZOWSKI, 1989

*Tambomachaya* RAZOWSKI, 1989, SHILAP Revta lepid., 17(66): 205. Type-species: *Tambomachaya pollexifera* RAZOWSKI, 1989, by orig. design.

Alar expanse 21 mm; labial palpus 2. Venation: In forewing all veins separate, *M*-stem well-developed, terminating between *M*<sub>1</sub>-*M*<sub>2</sub>, two last radial veins closely approaching each other basally; in hindwing *Rr*-*M*<sub>1</sub> stalked to middle, *M*<sub>3</sub>-*Cu*<sub>1</sub> connate.

Male genitalia: Tegumen rather short, bent distally beyond bases of pedunculi, with distal part tapering terminally, bristled dorsally; socii fusing with the ventro-lateral parts of the pedunculi, with very short, sharp, upcurved apices; vinculum fully developed, in



ventral part slender; valva broad with cucullus-like distal part armed with small pollex; sacculus short, without free termination; median part of transtilla distinct, tapering apically; coecum penis broad; caulis median; cornuti absent.

Female genitalia and biology unknown.

**Distribution:** Peru.

**Comments.** The supposed autapomorphies of *Tambomachaya* are the broad, setose cucullus-like distal part of the valva, the presence of the pollex, the shape of the socii as described above and the caulis, whose distal parts form lateral lobes directed ventrally. A monobasic genus.

### *Tambomachaya pollexifera* RAZOWSKI, 1989

*Tambomachaya pollexifera* RAZOWSKI, 1989, SHILAP Revta lepid., 17(66): 205, figs 1-4 (male genit.).

Type-locality: Peru: Cusco: Tambomachay. Type in NMNH.

Head and thorax whitish, labial palpus ferruginous except for base, tegula brownish. Forewing distinctly expanding towards the end; ground-colour brownish, base of wing suffused brown, remnants of median fascia (median and subdorsal) and suffusion towards tornus concolorous; distal part of wing tinged ochreous, apex area rust-ochreous; fringes rust-brown.

Male genitalia as described for the genus; juxta small, distal part of aedeagus tapering ventrally, broad, rounded, extending to the left; subscaphium strong.

**Distribution:** Peru: Cusco (moth collected in February at an altitude of 3690 m).

### *Tenoa* gen.n.

Type species: *Tenoa curicoana* sp.n.

In forewing all veins separate,  $R_5$  to arex; in hindwing  $Rr-M_1$  stalked to middle,  $M_3-Cu_1$  connate.

Tegumen high, producing and tapering terminally; socius, lateral, slender, hairy folds of distal portion of tegumen and a pair of short, hooked apical processes are probable autapomorphies of this genus. Vinculum arms slender, connected with one another by means of short thick membrane. Transtilla with median part similar to that in *Tambomachaya*; valva slender, without terminal cucullus-like broadening; sacculus with terminal process situated on valva; aedeagus small, with median, rather large caulis; cornutus missing.

**Comments.** In the shape of the forewing the type-species of this genus resembles that of *Tambomachaya*, its pattern being characterised by several, rather parallel fasciae of the forewing. It is probably related to the mentioned genus, but has a more specialised terminal part of the socii. Monotypical.

The name of the genus is derived from the locality-name, Rio Teno, Chile.

### *Tenoa curicoana* sp.n.

Alar expanse 18 mm; head white-grey, labial palpus over 4; thorax grey, tegula whiter distally. Forewing slightly expanding posteriorly, costa rather straight, termen distinctly

oblique, straight. Ground-colour whitish, suffused and sprinkled grey, weak yellowish suffusion subterminally; pattern grey, spotted brown-grey dorsally and medially, consisting of basal blotch, elongate dorsal part of median fascia followed by a small subternal blotch; row of diffuse spots from tornus to subapical blotch, the latter by a weaker apical spot; a series of 3 small spots along median part of costa. Fringes grey, with darker divisions. Hindwing white-grey, brownish grey from beyond middle; fringes pale brownish grey.

Male genitalia (Figs 55,56) as described for the genus.

**H o l o t y p e**, male: "Rio Teno, mts of northeastern Curico Province, I-24,26-1968; L.E. Pena Collector"; G.S. 10556. Coll. AMNH.

### ***Planaltinella* RAZOWSKI & BECKER, 1994**

*Planaltinella* RAZOWSKI & BECKER, 1994, SHIALP *Revta lepid.*, **22**(85): 33. Type-species: *Planaltinella rhatyma* RAZOWSKI & BECKER, 1994.

Labial palpus ca 2, second joint broad posteriorly. Venation: In forewing all veins separate,  $R_5$  to apex; in hindwing  $Rr-M_1$  stalked to about  $2/3$ ,  $M_2-M_3-Cu_1$  equidistant.

Male genitalia: Tegumen short, with small dorsal prominence at base of socii; socii small, fused together basally, approaching one another; arms of vinculum separate. Valva broad, with rather weakly sclerotized postmedian, ventral process; sacculus with free termination. Median part of transtilla slender. Aedeagus thick, coecum penis broad; cornutus missing.

**C o m m e n t s**. The supposed autapomorphies of this monobasic genus are the presence of a membranous zone between the sacculus and the postbasal portion of the ventral area of the valva, and the presence of the ventral process of the valva. In the shape of the socii similar to *Belemgena* and the genera mentioned in its description may be of synapomorphic importance. In the shape of the aedeagus it is rather similar to *Eugnosta* than to the genera of the *Phalonidia* group. The male genitalia resemble also those of *Tambomachaya* but the valva is without the ventral prominence, provided with a pollex-like spine.

**D i s t r i b u t i o n**: Brazil: Federal District.

### ***Planaltinella rhatyma* RAZOWSKI & BECKER, 1994**

*Planaltinella rhatyma* RAZOWSKI & BECKER, 1994, SHILAP *Revta lepid.*, **22**(85): 34, figs 9,10 9Male genit). Type-locality: Brazil: Federal District: Planaltina. Type in MNRJ.

Alar expanse 12 mm. Head and thorax white. Forewing not expanding terminally, broadest in middle; termen somewhat oblique, rather straight. Ground-colour white, suffusions and strigulation greyish, costal strigulae grey. Pattern grey, diffuse: basal blotch represented by small costal spot; median fascia in form of costal spot and dorso-median blotch atrophying dorsally, scaled black and ochreous; subapical spot extending towards mid-termen, marked with black scales at mid-termen. Fringes white.

Male genitalia as described for the genus.

### ***Aphalonia* RAZOWSKI, 1984**

*Aphalonia* RAZOWSKI, 1984, *Annls zool.*, Warsz., **38**(13): 276. Type-species: *Aphalonia monstrata* RAZOWSKI, 1984, by orig. design.

Alar expanse 22-30 mm; labial palpus over 1.2. Venation as in *Aethes*, externally resembling some Neotropical *Phtheochroa* species.

Male genitalia: Tegumen very broad, with apical part short, limited by lateral membrane, fused with broad base of socius; distal part of socius naked, slender, extending distally; vinculum arms membranously connected ventrally; dorsal part of valva rather slender; sacculus with dorsal, sclerotic margin; lateral parts of transtilla strongly reduced, median part extremely broad, with terminal thorns; aedeagus large, with short ventral termination; coecum penis broad; caulis subbasal; cornutus, a single capitate spine.

Female and biology unknown.

**D i s t r i b u t i o n :** Colombia and Peru.

**C o m m e n t s .** Two species included. The affinities are rather obscure; in the shape of the aedeagus, cornutus and distal part of the tegumen and the socii it to some degree resembles the genera close to *Eugnosta*. The supposed autapomorphies of *Aphalonia* are the shape of the socii, the very broad median part of the transtilla and the very strongly sclerotized dorsal edge of the sacculus found only in *Henricus*.

### *Aphalonia monstrata* RAZOWSKI, 1984

*Aphalonia monstrata* RAZOWSKI, 1984, Annls zool., Warsz., **38**(13): 276, figs 1-4 (male genit.). Type-locality: Peru: Diversoria. Type in NMNH.

Alar expanse 22 mm; head white-grey, palpus over 1, grey, brownish basally, thorax white; forewing costa slightly concave medially; ground-colour, a cream-white dorso-basal blotch and postmedian costal elliptic blotch almost reaching end of termen; remaining area brownish grey, strigulated black-grey; subapical area paler; rust marks distally to median cell.

Male genitalia: Dorso-posterior part of sacculus slightly convex.

**D i s t r i b u t i o n :** Peru (moth collected at an altitude of 5200 feet).

### *Aphalonia praeposita* (MEYRICK, 1917)

*Phtheochroa praeposita* MEYRICK, 1917, Trans. ent. Soc. London, **1917**: 5. Type-locality: Western Colombia: San Antonio. Type in NHML.

Alar expanse 26-30 mm; head brownish, darker laterally, labial palpus 2, brown terminally, thorax white; coloration as in *monstrata* but costal blotch broader, with some grey and black spots, rust suffusion from tornus; refractive pattern in the form of irregular lines.

Male genitalia as in *monstrata* but dorso-terminal part of sacculus with two strong thorns.

**D i s t r i b u t i o n :** Colombia.

### *Belemgena* RAZOWSKI & BECKER, 1994

*Belemgena* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., **22**(85): 34. Type-species: *Belemgena phlattotreta* RAZOWSKI & BECKER, 1994.

Labial palpus ca 1, slender. No costal fold in forewing. Venation: in forewing all veins separate, distance between  $R_4$  and  $R_5$  at median cell short, the latter terminating at apex,  $Cu_1$  subterminal; in hindwing all veins but  $M_3-Cu_1$  (stalked to 1/3) separate. Long bunch of scent scales originating beyond base of costa under ill-defined fold.



Male genitalia: Uncus short, bifurcate apically; socius absent. Vinculum arms asymmetric, not coalescent ventrally, in large part membranous. Valva very broad basally, with costa strongly sclerotized in basal portion; sacculi armed each with two processes; process of left sacculus shorter, accompanied by a short, more ventral additional process; processes of left sacculus longer, the additional ventral process slenderer, longer, less curved. Median part of transtilla very broad, bilobed; juxta very large. Aedeagus simple; cornuti missing.

Female genitalia unknown.

**C o m m e n t s .** The supposed autapomorphies are as follows: the presence of two processes of the base of the sacculus, the presence of the asymmetric, long ventral portions of the vinculum membranised dorsally and the reduction of the socii. The convergences are the presence of the hindwing costal scent organ (found also in *Lasiothyris*) and a reduction in the distinct sclerotization of the costa of the valva, which, however, has not been found in the lineage of *Phalonidia*. The similar shape of the uncus may represent a synapomorphy with *Aphalonidia* nad *Marylinka*. One species included.

**D i s t r i b u t i o n :** Brazil: Pará.

### ***Belemgena phlattotreta* RAZOWSKI & BECKER, 1994**

*Belemgena phlattotreta* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., **22**(85):35, figs 11,12 (male genit.). Type-locality: Brazil: Pará: Belém. Coll. MNRJ.

Alar expanse ca 13 mm. Labial palpus, front and scape of antenna whitish cream, remaining parts of head and anterior part of thorax mixed with brownish; tegula yellower, spotted greyish. Forewing rather not expanding terminally; costa straight, apex broad, rounded; termen somewhat oblique, hardly convex. Ground-colour yellowish cream diffusely spotted yellowish ochreous and grey; costa and terminal spots darker. Pattern ill-defined; median fascia concolorous with maculation of ground-colour, but darker, atrophying dorsally, suffused grey, marked grey-black costally and submedially; subapical mark extending to beyond mid-termen, slender costally, broadest subterminally, concolorous with median fascia, marked blackish along edges.

Male genitalia as described for the genus.

### ***Aethes* BILLBERG, 1820**

*Aethes* BILLBERG, 1820, Enumeratio Insect.: 90. Type-species: *Pyalis smeathmanniana* FABRICUS, 1781, by subs. design. (FERNALD, 1908: 51). Holarctic.

*Chlidonia* HÜBNER, [1825], Verz. bek. Schmett.: 393. Type-species: [*Phalaena*] *hartmanniana* CLERCK, 1759, by subs. design. (FERNALD, 1908: 17).

*Phalonidia* HÜBNER, [1825], ibid.: 393. Type-species: *Tortrix tessera* [DENIS & SCHIFFERMÜLLER], 1775, by subs. design. (FERNALD, 1908: 17).

*Dapsilia* HÜBNER, [1825], ibid.: 394. Type-species: *Tortrix rutilana* HÜBNER, [1817], by subs. design. (by FERNALD, 1908: 17).

*Lozopera* STEPHENS, 1834, Illustr. Br. Ent. *Haustellata*, **4**: 287. Type-species: *Pyalis francillana* FABRICIUS, 1794, by subs. design. (FERNALD, 1908: 17).

*Argyridia* STEPHENS, 1852, List Specimens Br. Animals Br. Mus.: 83. Type-species: *Tinea dipoltella* HÜBNER, [1813], design. by monotypy.

*Coecaethes* OBRAZTSOV, Mitt. Münch. Ent. Ges., **33**: 99. Type-species: *Lozopera mauritanica* OBRAZTSOV, 1943 not WALSINGHAM, 1898 = *Aethes amseli pamirana* RAZOWSKI, 1967, by orig. design.; established as subgenus of *Lozopera* STEPHENS.

*Cirriaethes* RAZOWSKI, 1962, Acta zool. cracov., 7: 414. Type-species: *Lozopera mauritanica* WALSINGHAM, 1898, by orig. design.; established as subgenus of *Aethes* BILLBERG. All Palaearctic. – Redescriptions: RAZOWSKI, 1970: 287; RAZOWSKI, 1987: 167 (based on Palaearctic taxa); the Neotropical species are listed by RAZOWSKI, 1986b.

Alar expanse 10-28 mm; labial palpus 1.5-4. Venation somewhat variable, in forewing all veins separate or *R*<sub>4</sub>-*R*<sub>5</sub> stalked, *R*<sub>5</sub> to costa, chorda, *M* and *Pcu* atrophied; in hindwing *Rr-M*<sub>1</sub> stalked (usually to middle), remaining veins separate. Coloration: pattern typical of the tribe, or two fasciae parallel to termen; refractive elements usually developed. Sexual dimorphism and seasonal dimorphism slight.

Male genitalia: Base of socii, a hairy broadening, slightly concave apically, seldom with apical projections; terminal parts of socii, a pair of slender, curved processes. Arms of vinculum usually separate ventrally, occasionally very broad apically. Median part of transtilla, shape of valva and aedeagus variable.

Female genitalia of general *Cochylini* character, with all parts varying from species to species, or characteristic of particular groups.

Early stages. Chaetotaxy described by SWATSCHEK (1958) based on 13 Palaearctic species.

**Biology.** In temperate areas there are two or more generations yearly. Hibernation in larval stage; hosts are mainly the *Compositae*. Larvae in various parts of plants, often in stems and roots. Biology of Neotropical species unknown.

**Distribution:** The genus is known from all regions but the Australian. The main bulk of species is Holarctic (ca 100) and in the Palaearctic subregion occur ca 60 species. There are three species common to Nearctic and Palaearctic subregions. The Nearctic species or at least groups of the closely related species (? or subspecies) are common to the Nearctic subregion and Neotropical region. 19 species are known from the area studied.

**Comments.** There are two closely related genera, *Aethes* and *Aethesoides* which are characterized by two synapomorphies: the presence of the slender, curved socii on the broad, hairy base and a rod-like sclerite coupling the tegumen with the valva. *Aethesoides* is more advanced, as shown in the comments on this genus. The New World species form similar genital groups as the Palaearctic taxa. Some groups are characteristic of the region in question. There are some groups of taxa differing slightly in genitalia (e.g. in the size and shape of the cornutus, valva or median part of the transtilla); their status is not yet elucidated.

The Neotropical data on *Ae. promptana* (ROBINSON, 1869) described from Texas (RAZOWSKI, 1986b) concern another, not determined species, and those on *Ae. angulatana* (ROBINSON, 1869) from Virginia, U.S.A. (WALSINGHAM, 1914) require confirmation. They are thus excluded from this paper.

### *Aethes monera* RAZOWSKI, 1986

*Aethes monera* RAZOWSKI, 1986, Annls zool., Warsz., 40(7): 387, figs 1-4 (male genit.). Type-locality: Mexico: Durango: 28 mi E El Salto. Type in CUB.

Alar expanse 21 mm. Head greyish, labial palpus 3.5, browner. Forewing not expanding terminally, slender, with termen strongly oblique. Unicolorous white-grey, with brownish dot at end of median cell; fringes concolorous.

Male genitalia: Median part of transtilla wedge-shaped; vinculum slender; valva broad, tapering distally, with apical group of bristles; large area of bristles in ventral part of disc; sacculus slender, without free termination; aedeagus short, curved, with ventral edge convex before termination; lateral lobes of anellus sharp, with setose prominences; cornutus 1/3 of length of aedeagus.

**Distribution:** Mexico: Durango (moths collected in August at altitudes of 8400-9200 feet).

**Comments.** The species belongs in the group of *promptana* abundant in species in the Nearctic subregion. Easily distinguished by setose valva and lateral processes of anellus.

### *Aethes sonora* (WALSINGHAM, 1884)

*Conchylis sonora* WALSINGHAM, 1884, Trans. ent. Soc. London, **1884**: 130. Type-locality: Mexico: Sonora. Type in NHML. – *Aethes sonora* RAZOWSKI, 1964, Annls zool., Warsz., **22**(16): 372, fig. 44 (female genit. of lectotype).

Alar expanse 14-15 mm; head yellowish cream; labial palpus 2, brownish. Forewing slender; termen distinctly oblique; pattern yellowish brown; dorso-basal blotch indistinct, slender; median fascia in the form of costal and submedian slender marks followed by subdorsal triangle and fascia to tornus; series of spots along dorsum.

Male genitalia (Figs 57,58): Median part of transtilla fairly broad, tapering terminally; costa of valva terminating in sclerotized, curved thorn; aedeagus large, less than twice as long as the strong, capitate cornutus.

Female genitalia: Distal half of corpus bursae and proximal part of ductus bursae sclerotized; sterigma with posterior, spined area.

**Distribution:** Mexico: Sonora.

### *Aethes ignobilis* sp.n.

Externally similar to *sonorae*.

Male genitalia (Figs 59,60) as in *sonorae* but median part of transtilla long, slender; thorn of end of valva short; sacculus more rounded distally; aedeagus slender; cornutus small, half as long as coecum penis, with very small capitulum.

**Holotype**, male: "Mex.[ico]: Durango, 8 mi W La Ciudad, 8700', VIII-17-72, MACNEILL & POWELL", G.S. 6092. Type in CUB.

### *Aethes olibra* sp.n.

Alar expanse 15-16 mm; similar to *sonorae*; head pale brownish cream, thorax darker. Forewing uniformly broad throughout; ground-colour cream, tinged and suffused brownish, pattern brown, with particular elements smaller than in *sonorae*, with only three terminal spots and without fascia between end of median cell and tornus.

Male genitalia (Figs 61,62) as in *sonorae* or *Ae. seriatana* (ZELLER, 1875) from Texas, but distal part of valva slender and saccular part shorter; aedeagus as in *sonorae* but cornutus larger.



**H o l o t y p e**, male: "Runaway Bay, Jamaica, 14.III.1905, Wlsm, 77129", G.S. 7165 [RAZOWSKI], in collection of NHML.

**C o m m e n t s**. Externally similar to the above mentioned species, but with more brownish coloration.

### *Aethes affinis* RAZOWSKI, 1967

*Aethes affinis* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 190, fig. 56 (female genit.), pl. 15, fig. 12 (forewing). Type-locality: Costa Rica: Palo Verde. Type in NHML.

Alar expanse 16-17 mm. Head and thorax cream, labial palpus 3, with terminal joint rust. Forewing slender; ground-colour glossy white, tinged ochreous; wing edges spotted brownish; median fascia almost interrupted subcostally, in remaining part V-shaped, brown; concolorous, subsquare blotch before termen from beyond dorsum to before costa; apical blotch rust; fringes brownish.

Female genitalia: Sterigma with rather short, sclerotized anteostial part and much longer postostial lamella; bursa copulatrix membranous, some spines on corpus bursae; ductus seminalis dorsal, from beyond middle of corpus, accessory bursa ventral, from end of corpus.

**D i s t r i b u t i o n**: Costa Rica, besides the type-locality also Cartago Province.

**C o m m e n t s**. To fix the systematic position of this species an examination of the male is needed.

### *Aethes tuxtlana* RAZOWSKI, 1986

*Aethes tuxtlana* RAZOWSKI, 1986, Annls zool., Warsz., **40**(7): 388, figs 5-7 (male genit.). Type-locality: Mexico: Chiapas: El Sumidero, 15 mi NW Tuxtla Gutierrez. Type in CUB.

Alar expanse 12 mm; head cream, labial palpus 2.5, thorax mixed ochreous. Forewing not expanding posteriorly, termen slightly sinuate; apex broad. Ground-colour whitish, slightly tinged cream on base and apex. Dorsal suffusion dark brown, suffused ochreous along inner edge; costa brown to middle.

Male genitalia: Median part of transtilla vestigial; valvae asymmetric; saccular half of valva bristled distally, rounded terminally, costal half somewhat longer; aedeagus with ventro-lateral, minutely spined process; cornuti absent.

**D i s t r i b u t i o n**: Mexico: Chiapas.

### *Aethes dentifera* RAZOWSKI, 1967

*Aethes dentifera* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 186, figs 45-48, 49 (female genit.), pl. 15, fig. 10 (forewing). Type-locality: Peru: Chauchahuaya. Type in NHML.

Alar expanse 14 mm. Head and thorax cream-brown, labial palpus 1.5. Forewing not expanding terminally; termen weakly convex; ground-colour cream, suffused and strigulated brownish; pattern brown-grey to brownish, consisting of dorso-basal fascia terminating at radial arm of median cell, atrophying at dorsum, median fascia, almost reaching tornus, subapical, diffuse spot and slender subterminal fascia extending from end of termen.

Male genitalia: Median part of transtilla fairly broad; valva tapering in distal half, with slender end; sacculus with numerous small prominences at distal end. Aedeagus stout, dentate ventro-postmedially; cornuti, a series of non-capitate spines.

**Female genitalia:** Antevaginal part of sterigma cup-shaped, sclerotized, postvaginal area rather membranous, densely spined and folded; ductus bursae large, with several longitudinal sclerites; corpus bursae with numerous spines and posterior sclerites extending from ductus. Accessory bursa from before middle of ductus bursae.

**Distribution:** Peru: Rio Napo and type-locality. Also Argentina (Santa Fé).

**Comments.** The male from Argentina not differing from the Peruvian specimens in genitalia. The female illustrated in the original description comes also from Argentina.

### *Aethes inexpecta* RAZOWSKI, 1967

*Aethes inexpecta* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 185, figs 41,42 (male genit.). Type-locality: Argentina: at Paraná River. Type in NHML.

Alar expanse 12 mm. Head and thorax pale brownish cream, labial palpus 2. Forewing slender, with oblique termen; ground-colour pale ochreous-cream; pattern brown; median fascia divided into costal and dorsal blotches, subapical pattern similar.

**Male genitalia:** Median part of transtilla, broad, tapering distally; saccular part of valva broad, rounded posteriorly, extending caudad; dorsal part larger; aedeagus with very long, slightly bent ventro-terminal part; cornuti, a series of non-capitate spines.

**Distribution:** Argentina.

**Comments.** Externally resembling *jonesi* and *mordax*; very distinct in male genitalia.

### *Aethes mordax* (MEYRICK, 1917)

*Phalonia mordax* MEYRICK, 1917, Trans ent. Soc. London, **1917**: 4. Type-locality: Argentina: River Parana. Type in NHML. – *Lozopera mordax*: CLARKE, 1963, Cat. Microlepid. MEYRICK, **4**: 20, pl. 10, figs 3-3b (wings, male genit. of lectotype). – *Aethes mordax*: RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 181, figs 36,37 (male genit.), 38 (female genit.), redescr.

Alar expanse 15-17 mm. Head and thorax brownish ochreous labial palpus over 2; forewing not expanding posteriorly; ground-colour pale ochreous-brown, suffusions browner. Pattern brown in the form of costal and dorsal parts of median fascia, subapical spot and tornal spot and dorso-basal fascia forming with costal spot analogical pair of marks.

**Male genitalia:** Median part of transtilla slender, broadening basally; saccular part of valva differentiated, extending caudad where bristled, provided with long process in middle of dorsal edge. Aedeagus stout; cornuti numerous, non-capitate.

**Female genitalia:** Sterigma coalescent with large, deeply incised subgenital plate, with small distal wart and rather asymmetric, ovate ostial area; corpus bursae with postmedian sclerites and circular series of small spines; accessory bursa ventral, from base of ductus bursae; ductus seminalis ventral, from middle of circle of spines.

**Distribution:** Brazil (Paraná), Argentina (type-locality).

### *Aethes jonesi* RAZOWSKI, 1967

*Aethes jonesi* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 183, figs 39,40 (male genit.), pl. 15, fig. 8 (forewing). Type-locality: Brazil: Paraná: Castro. Type in NHML.

Alar expanse ca 15 mm; head and thorax brownish, labial palpus 2; forewing as in *mordax*. Ground-colour pale ochreous-cream, suffusions and strigularion brownish, costa suffused brown; pattern in the form of two pairs on elongate marks at costa and dorsum: postbasal and median, subapical spot accompanied by dorso-subterminal fascia and spots along termen.

Male genitalia: Median part of transtilla broad basally, slender in distal third; saccular part of valva with ventral, sharp process and dorsal, longer lobe marked by some thorns ventrally; aedeagus broad, with sharp, lateral processes beyond zone; cornuti absent.

**D i s t r i b u t i o n :** Brazil: Paraná: Castro.

### *Aethes austera* RAZOWSKI, 1967

*Aethes austera* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 185, figs 43,44 (male genit.), pl. 15, fig. 9 (forewing). Type-locality: Brazil: Paraná, Castro. Type in NHML.

Alar expanse ca 15 mm; head and thorax brownish, labial palpus 1.5; forewing termen oblique; ground-colour ochreous-cream; suffusions large, brown; costa dark brown to middle; pattern in the form of a median spot at the end of basal area, slender fascia from mid-costa to base of vein  $M_3$ , accompanied by triangular blotch extending from before end of termen and a slender, triangular subapical blotch.

Male genitalia: Median part of transtilla very broad, with two apical thorns; sacculus slender, with long terminal process; vinculum arm very broad, rounded apically; aedeagus very broad, short; ca 20 strong, non-capitate cornuti present.

**D i s t r i b u t i o n :** Brazil: Paraná,

### *Aethes planaltinae* RAZOWSKI & BECKER, 1983

*Aethes planaltinae* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 444, figs 72,74 (male genit.). Type-locality: Brazil: Federal District: Planaltina.

Alar expanse 16 mm; head brown-cream, thorax darker, concolorous with palpus (2.5). Forewing termen oblique, slightly convex. Ground-colour cream, densely suffused and sprinkled brownish; pattern brownish with olive-grey hue, consisting of two costal spots, at 1/3 and middle, the latter being a remnant of median fascia, both extending towards dorsum by means of indistinct fasciae; subterminal spot small.

Male genitalia: Median part of transtilla very long, slender; valva asymmetric; left sacculus reduced, with short end; right sacculus long, curved, with long, ventral free termination.

**D i s t r i b u t i o n :** Brazil: Federal District.

### *Aethes annosa* RAZOWSKI, 1967

*Aethes annosa* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 189, figs 54,55 (male genit.), pl. 15, fig. 11 (forewing). Type-locality: SE Peru: Santo Domingo. Type in NHML.

Alar expanse 22 mm; head whitish, labial palpus 3, ochreous, thorax brownish white. Forewing broad, with broad apex and slightly convex termen; ground-colour brownish ochreous anteriorly, suffused rust, with brown-grey shade near middle, whitish in posterior area, mainly near costa; dorsal and tornal suffusions brownish; median fascia, rust-brown, broad, diffuse, atrophying dorsally; two brownish fasciae in posterior area, first rust towards termen; the latter edged brown.



Male genitalia: Base of socii with pair of sharp, apical processes; median part of transtilla bilobed, spined; valva long; sacculus without any process. Aedeagus slender, with lateral process; cornutus very long, thick.

**Distribution:** Peru.

**Comments.** This and two following species build a group characterised by the presence of apical, well sclerotized, often dentate processes and the strong process of the aedeagus; all these species have a white, diffuse blotch beyond a middle of the costa. This species has simple valva and cornutus present and seems to be the most generalised of all the three.

### *Aethes turialba* (BUSCK, 1920)

*Hysterosia turialba* BUSCK, 1920, Ins. Insc. Mens., 8(4-6): 86. Type-locality: Costa Rica: Juan Vinas. Type in NMNH. – CLARKE, 1968, Proc. U.S. natn. Mus., 125(3660): 6, fig. 3 (male & female genit.), pl. 1, fig. 1 (photogr., Guatemala specimen).

Alar expanse 24-28 mm; head cream, thorax and labial palpus (4) browner, terminal joint of palpus pale brownish. Forewing ground-colour cream to ochreous-cream, suffused and spotted brownish olive along costa and dorsum, with groups of erect scales, some of which (at base and middle) are yellow; white, diffuse blotch at costa postmedially; median fascia ill-defined, diffuse, marked with red subdorsally, black in middle; reddish fascia from end of median cell to tornus, accompanied by median black dots; subapical fascia olive-brown, black towards termen; reddish marks at apex. Variation: various colour elements more or less dark; occasionally ground colour glossy grey on large surfaces.

Male genitalia: Median part of transtilla rather short, slender; dorsal part of sacculus long, with numerous thorns arranged in two postmedian belts; process of aedeagus broad, tapering terminally; cornutus absent.

Female genitalia: Sterigma with postvaginal, lateral arms partially hidden by large, setose lateral lobes tapering terminally; colliculum fairly well sclerotized; corpus bursae with median sclerite extending into ductus bursae in the form of several belts; inceptions of ductus seminalis and accessory bursa in dorsal concavity of posterior part of the corpus.

**Distribution:** Costa Rica.

**Comments.** CLARKE (1968) records it from Guatemala but that material requires re-examination; I have examined some specimens from Guatemala and Colombia but they differ from the Costa Rica examples in the shape of the process of the aedeagus, sacculus and the length of the median part of the transtilla.

### *Aethes alphetopa* (CLARKE, 1968)

*Hysterosia alphetopa* CLARKE, 1968, Proc. U.S. natn. Mus., 125(3660): 7, fig. 4 (male & female genit.), pl. 1, fig. 2 (photogr. of paratype). Type-locality: Venezuela: Aragua: Rancho Grande. Type in NMNH.

Alar expanse 22-26 mm. Externally very similar to *turalba*, differing in more strongly and densely strigulated hindwing.

Male genitalia as in *turalba*, but aedeagus much slenderer, median part of transtilla shorter and saccular spines extending from basal convexity to before end.

Female genitalia with lobes of subgenital sternite slenderer and sclerite of corpus bursae extending almost to its proximal end.

**Distribution:** Venezuela.

## Unplaced species

*Aethes evanida* RAZOWSKI & BECKER, 1983

*Aethes evanida* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 445, fig. 125 (female genit.). Type-locality: Brazil: Paraná: banhado, Quatro Barras. Type in MNRJ.

Alar expanse 12 mm; head brownish cream, front cream, labial palpus 2, brownish. Forewing ground-colour grey-cream, cream in basal area, glossy in distal surface, where brownish strigulation present. Postbasal pattern vestigial, median fascia incomplete, brownish; subapical fascia not reaching termen, concolorous, dark edged.

Female genitalia: Ovipositor fairly long; distal part of sterigma strongly elongated, tapering, rounded terminally; antevaginal plate short, rounded proximally; ductus bursae slender terminally; ductus seminalis from middle of dorsal depression.

**D i s t r i b u t i o n :** Brazil: Paraná.

*Aethes grandaeva* RAZOWSKI & BECKER, 1983

*Aethes grandaeva* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 445, fig. 126 (female genit.). Type-locality: Brazil: Paraná: banhado, Quatro Barras. Type in MNRJ.

Alar expanse 16 mm; Thorax pale brownish; forewing ground-colour whitish, dorsum suffused pale brown-grey, costa spotted so, strigulation paler. Pattern indistinct in the form of brownish postbasal fascia, costal spot (part of median fascia) and subapical fascia.

Female genitalia: Cup-shaped part of sterigma broad, followed by a sclerite situated in membranous postvaginal part, both in membranous pouch; ductus bursae and distal half of corpus bursae with longitudinal sclerites, the former with dorso-lateral membranous lobe with inception of ductus seminalis; accessory bursa ventral, from slightly sclerotized median depression of corpus bursae.

**D i s t r i b u t i o n :** Brazil: Paraná.

*Aethes mirifica* RAZOWSKI & BECKER, 1983

*Aethes mirifica* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 446, fig. 127. Type-locality: Brazil: Federal District: Planaltina. Type in MNRJ.

Alar expanse 18 mm; head and thorax whitish, labial palpus 2. Forewing ground-colour greyish white; strigulation and suffusions olive-grey, costa spotted darker, the largest spot representing median fascia.

Female genitalia: Ovipositor fairly long; apophyses very long. Cup-shaped part of sterigma rather short, followed by antevaginal plate; ductus bursae with some sclerotized belts extending from distal half of corpus bursae, where lateral, spined sclerite present; ventral inception of accessory bursa beyond this last; ductus seminalis dorsal, just before sclerites.

**D i s t r i b u t i o n :** Brazil: Federal District.

*Aethes portentosa* RAZOWSKI & BECKER, 1983

*Aethes portentosa* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 447, fig. 127 (female genit.). Type-locality: Brazil: Federal District: Planaltina. Type in MNRJ.

Alar expanse 8 mm; head and thorax brownish, front more ochreous, labial palpus 2, brownish. Forewing cream, tinged ochreous; pattern brownish ochreous, consisting of postbasal fascia, broad median fascia scaled brown distally and, the darkest, broad subterminal fascia; fringes ochreous.

Female genitalia: Papilla analis short bristled, apophyses broad. Cup-shaped part of sterigma small, followed by rather weakly sclerotized postvaginal plate; ductus bursa very long, broadest subterminally where ventral accessory bursa originates; ductus seminalis dorsal, more anterior; corpus bursae, a small membranous bulb.

**D i s t r i b u t i o n :** Brazil: Federal District: Planaltina.

**C o m m e n t s .** I have some doubts as to the subdivision of the bursa copulatrix.

### *Aethesoides* RAZOWSKI, 1964

*Aethesoides* RAZOWSKI, 1964, *Annls zool.*, Warsz., **22**(61): 357, figs 4,5 (head, venation). Type-species: *Phalonia distigmatana* WALSINGHAM, 1895, by orig. design. – RAZOWSKI, 1986, *Annls zool.* Warsz., **40**(7): 395 (list of species). – *Aethesiodes* [sic!], OBRAZTSOV, 1967, *J.N Y. ent. Soc.*, **75**(1):2 (incorrect subsequent spelling of *Aethesoides* RAZOWSKI).

Externally similar to *Aethes*; alar expanse 10-14 mm; labial palpus usually 2. Pattern as in some species of that genus, e.g. *jonesi*. Basal blotch reduced to a pair of posterior blotches at dorsum and costa, the latter being often atrophied; second pair of blotches represents median fascia, and is followed by subapical spot or fascia. Occasionally median fascia more complete.

Male genitalia: Costal part of valva, rod-like, well sclerotized; saccular part long; small caudal lobe between these elements. One cornutus, if present. Lobes of anellus attached to aedeagus developed in some species.

Female genitalia as in *Aethes* but corpus bursae often with long, ventral sac (a transformed accessory bursa?).

**D i s t r i b u t i o n :** Neotropical region, from Mexico to Colombia.

**C o m m e n t s .** The valva of this genus is characterised by rod-like costal portion, long sacculus and short, partially membranous median part, with convex caudal edge which may form a small lobe. These characters are treated as autapomorphies. Ten species included.

### *Aethesoides timia* RAZOWSKI & BECKER, 1986

*Aethesoides timia* RAZOWSKI & BECKER, 1986, *Acta zool. cracov.*, **29**(20): 443, figs 8,9 (male genit.), 138,139 (female genit.). Type-locality: Mexico: Veracruz: biol. station Los Tuxtlas. Type in MNRI.

Alar expanse 14 mm; head and thorax cream, labial palpus 2. Forewing ground-colour cream, strigulation brown; pattern brown, fully developed (see the description of the genus), with subapical blotch connected with slender subterminal fascia.

Male genitalia: Median part of transtilla helmet-shaped; sacculus asymmetric, rounded terminally; aedeagus stout; cornutus very long, bent.

Female genitalia: Sterigma weakly sclerotized except for cup-shaped part and short postvaginal sclerite; sclerites of ductus bursae terminating in small ventral lobe; sac-like process not extending beyond corpus bursae.

**D i s t r i b u t i o n :** Mexico: Veracruz (moths collected in June and September).



***Aethesoides inanita* RAZOWSKI & BECKER, 1986**

*Aethesoides inanita* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 444, figs 10, 11 (male genit.), 140 (female genit.). Type-locality: Mexico: Veracruz: Huatusco. Type in MNRJ.

Alar expanse 14 mm; head and thorax brownish cream, the latter dotted brown-grey; labial palpus over 2. Forewing ground-colour dirty cream, strigulation brown; pattern brown, postbasal dorsal blotch absent, otherwise as in *timia*.

Male genitalia as in *timia* but sacculi symmetric, with sharp ends.

Female genitalia as in *timia* but cup-shaped part of sterigma brader, concave proximally. Ductus seminalis from beyond base of ductus bursae, ventrally.

**Distribution:** Mexico: Veracruz.

**Comments.** I have examined one specimen from Peru which has no important characters differing from this species.

***Aethesoides columbiana* RAZOWSKI, 1967**

*Aethesoides columbiana* RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 193, figs 60, 61 (male genit.), 62 (female genit.), pl. 16, fig. 4 (mistakenly as *Spinipogon trivius*). Type-locality: Colombia: Valparaiso. Type in NHML.

Alar expanse as in preceding species; forewing ground-colour cream, suffused and sprinkled ochreous and brown; pattern brownish, similar to that in *timia*, but median fascia broad, interrupted beneath median cell; subapical fascia reaching end of termen.

Male genitalia as in *inanita* but ventral edge of sacculus straight and cornutus S-shaped.

Female genitalia figured in the original paper come from a specimen from Peru and require further study.

**Distribution:** Colombia.

**Comments.** The specimens from Peru should be re-examined. The differences between this and two preceding species are rather slight and the status of these taxa requires further study.

***Aethesoides chalcospila* (MEYRICK, 1932)**

*Phalonia chalcospila* MEYRICK, 1932, Exotic Microlepid., **4**: 265. Type-locality: Costa Rica: Rio Reventazon, N. Hamburg. Type in NHMW. – RAZOWSKI, 1964, Annls zool., Warsz., **22**(21): 478, figs 74, 75 (male genit. of holotype), transferred to *Aethesoides*.

Alar expanse 10 mm. Externally similar to all preceding species.

Male genitalia as in *columbiana* but median part of transtilla slender, not tapering apically, sacculus slenderer, aedeagus much smaller, without cornutus.

Female genitalia: Sterigma membranous except for short, ring-shaped anterior part; ductus bursae with longitudinal sclerites; accessory bursa dorsal, from 2/3 of the last; ductus seminalis ventral, from anterior portion of corpus bursae.

**Distribution:** Costa Rica.

***Aethesoides hondurassica* RAZOWSKI, 1986**

*Aethesoides hondurassica* RAZOWSKI, 1986, Annls zool., Warsz., **40**(7): 392, figs 16, 17 (male genit.), 18 (female genit.). Type-locality: Honduras: Siguatepeque. Type in CUB.

Alar expanse 10 mm; head, thorax and forewing ground-colour cream; pattern brownish, marked brown, paler at places; median fascia interrupted medially.

Male genitalia: Median part of transtilla rounded apically; sacculus more bent than in *distigmatana*, aedeagus without cornutus.

Female genitalia as in *chalcospila* but sclerotized antevaginal part of sterigma broader and shorter.

**D i s t r i b u t i o n :** Honduras.

**C o m m e n t s .** The differences between this species and *chalcospila* are very slight and so I suppose it is only its synonym. I preserve it, however, as a distinct taxon until some additional material has been studied.

### *Aethesoides distigmatana* (WALSINGHAM, 1895)

*Phalonia distigmatana* WALSINGHAM, 1895, Proc. zool. Soc. London, **1895**: 137. Type-locality: West Indies: Granada: Balthazar (Windward Side). Type in NHML. – *Aethesoides distigmatana*: RAZOWSKI, Annls zool., Warsz., **22**(16): 375, figs 55,56 (male genit. of type), 6 (female genit.). – RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 192, data from Cuba and Trinidad.

Alar expanse 10 mm; Externally similar to all preceding species; ground-colour more yellowish cream, pattern complete, ochreous, dark brown along edges, subapical blotch small, followed by pale ochreous fascia reaching mid-termen.

Male genitalia as in *chalcospila*, but median part of transtilla broader, helmet-shaped and aedeagus larger, with short, thin cornutus.

Female genitalia: Anterior edge of cup-shaped part of sterigma concave; bursa copulatrix as in *chalcospila*.

**D i s t r i b u t i o n :** Granada, S. Vincent, Trinidad and Cuba.

**C o m m e n t s .** The median part of the transtilla is probably variable as can be seen in the specimens from Cuba (smaller, rounded apically) and S. Croix (almost straight apically).

### *Aethesoides enclitica* (MEYRICK, 1917)

*Phalonia enclitica* MEYRICK, 1917, Trans. ent. Soc. London, **1917**: P 3. Type-locality: Ecuador: Alausi. Type in NHML. – CLARKE, 1963, Cat. Microlepid. MEYRICK, **4**: 27, pl. 13, figs 2-2b (photogr. of lectotype, male genit.). – *Aethesoides enclitica*: RAZOWSKI, 1967, Acta zool. cracov., **12**(8): 193, figs. 58,59 (male genit.).

Alar expanse 14 mm; head cream, thorax more ochreous; forewing ground-colour white-cream, suffusions and terminal pattern brownish; pattern pale greyish brown, dorso-basal blotch accompanied by weak costal suffusion; median fascia darkest at costa, interrupted medially.

Male genitalia: Sacculus very long, bent, with some terminal spines; aedeagus short, broad, twice as long as cornutus. Anellus with lobes attached to aedeagus.

**D i s t r i b u t i o n :** Ecuador.

### *Aethesoides allodapa* RAZOWSKI, 1986

*Aethesoides allodapa* RAZOWSKI, 1986, Annls zool., Warsz., **40**(7): 390, figs 10,11 (male genit.), 12 (female genit.). Type-locality: Mexico: Guerrero: Amula. Type in NHML.

Alar expanse 12 mm; head and thorax brownish cream, collar browner. Forewing ground-colour yellowish cream, strigulated brown at tornus and in distal area, concolorously spotted along costa, suffused at base. Pattern as in *enclitica*, brownish; terminal elements indistinct.

Male genitalia as in *enclitica* but sacculus much longer, minutely spined, with small ventral thorn before middle, and terminal bristles; costal part of valva very slender.

Female genitalia: Sterigma densely spined; long sclerite from middle of corpus bursae to ostium, partially spined. Subgenital sternite spined.

**D i s t r i b u t i o n :** Mexico: Guerrero.

### *Aethesoides mexicana* RAZOWSKI, 1986

*Aethesoides mexicana* RAZOWSKI, 1986, Annls zool., Warsz., **40**(7): 392, figs 12-15 (male genit.). Type-locality: Mexico: Michoacan: Tuxtpan. Type in CUB.

Alar expanse 12 mm; head cream, thorax ochreous-cream. Forewing as in *allodapa*, but termen straight, ground-colour more yellow; pattern dark ochreous, spotted black along edges.

Male genitalia with ventral edge of sacculus strongly convex postmedially.

**D i s t r i b u t i o n :** Mexico: Michoacan.

### *Aethesoides stellans* RAZOWSKI & BECKER, 1994

*Aethesoides stellans* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., fig.30 (female genit.), Type-locality: Brazil: Santa Catarina: Brusque. Coll. MNRJ.

Alar expanse 11 mm. Labial palpus 1.5, ochreous white terminally; remaining parts of head ochreous but front whitish. Forewing somewhat expanding terminally, apex rounded, termen rather straight, distinctly oblique. Almost unicolorous, finely strigulated and sprinkled with refractive silver scales and with some scattered brown scales.

Female genitalia: Anterior part of sterigma membranous, postostial part rather distinctly sclerotized medially; ductus bursae large, with numerous sclerotic folds, colliculum short, membranous, with very large ventral sac directed to the right; ductus seminalis and ductus of accessory bursa extending from before colliculum, dorsally.

**D i s t r i b u t i o n :** Brazil: Santa Catarina.

**C o m m e n t s .** This species is the only monochrome member of *Aethesoides* and resembles some *Phalonidia* species.

### *Lincicochylis* RAZOWSKI, 1986

*Lincicochylis* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 384. Type-species: *Phalonia argentifusa* WALSINGHAM, 1914, by orig. design.

Alar expanse 13-16 mm; labial palpus 1.5.

Male genitalia: Tegumen slender, arch-shaped, with small apical process probably representing the uncus; vinculum arms separate, ventrally fusing with ventro-basal portions of sacculus; valva large with very slender, rigid dorsal part; sacculus folded on valva, with very long ventro-caudal process, extending dorsally into well-sclerotized edge terminated in small process; base of sacculus extending proximally, ovate; transtilla with broad median part and strongly reduced lateral portions; juxta with very broad median



part and strongly reduced lateral portions; coecum penis broad, rather short; caulis postmedian; cornutus large, capitate.

Female genitalia: Sterigma coalescent with colliculum, sclerites with pair of inner lobes; distal portion of sterigma membranous, hairy; ductus bursae short; ductus seminalis extending from ductus bursae, accessory bursa originating from proximal part of colliculum; corpus bursae with weak sclerite.

**B i o l o g y** unknown.

**D i s t r i b u t i o n**: Mexico.

**C o m m e n t s**. The supposed autapomorphies of *Lincicochylis* include the very slender, arch-shaped tegumen, a small median prominence of the tegumen top representing probably the uncus, the complete reduction of the socii, presence of the split of the proximal surface of the costal valva part, the very long sacculus folded on the discal surface of valva, the elongate-ovate projection of the base of the sacculus, fusion of this last with the vinculum arm and the shape of the sterigma-colliculum complex described above. Monotypical.

### *Lincicochylis argentifusa* (WALSINGHAM, 1914)

*Phalonia argentifusa* WALSINGHAM, 1914, Biol. Cent.-Am., Lepid., *Heterocera*, 4: 297. Type-locality: Mexico: Guerrero: Tierra Colorada. Type in NHML. – RAZOWSKI, 1964, Annls zool., Warsz., 22(16): 382, figs 79,80 (male genit. of holotype). – *Lincicochylis argentifusa*: RAZOWSKI, 1986, Acta zool. cracov., 29(16): 384, figs 62-65 (male genit.), 78,79 (female genit.), redescr.

Head cream, thorax darker, labial palpus pale ochreous. Forewing ground-colour cream to yellowish cream, glossy fasciae along pattern; pattern brownish yellow, tinged brown at costa; base of wing concolorous; median fascia convex medially, marked blackish near middle, often interrupted postmedially; subapical fascia pale towards tornus.

Male and female genitalia as described for the genus.

**D i s t r i b u t i o n**: Mexico: Guerrero, Nayarit and Veracruz.

### *Cochylidichnium* RAZOWSKI, 1986

*Cochylidichnium* RAZOWSKI, 1986, Acta zool. cracov., 29(16): 381. Type-species: *Cochylidichnium amulanum* RAZOWSKI, 1986, by orig. design.

Alar expanse 10 mm; labial palpus 2; venation not examined.

Male genitalia: Tegumen short; socius long, broad basally, with spined terminal part; valva short, with costal part very slender and saccular part rounded, provided with subapical thorn; median part of transtilla long; aedeagus slender; coecum penis moderate; caulis median; cornuti, a series of non-capitate spines.

Female genitalia and biology unknown.

**D i s t r i b u t i o n**: Mexico.

**C o m m e n t s**. In male genitalia this monotypical genus resembles in the male genitalia Palaearctic *Cochylidia* Obraztsov in having highly specialised costal part of the valva. Judging by the peculiar socii, one can suppose that the specialised valva developed in this genus convergently inside the *Cochylis*-group of genera. The form and arrangement of the cornuti are treated as their synapomorphies.

***Cochylidichnium amulanum* RAZOWSKI, 1986**

*Cochylidichnium amulanum* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 381, figs 46,47 (male genit.).  
Type-locality: Mexico: Guerrero: Amula. Type in NHML.

Head grey-cream, labial palpus pale ochreous, thorax cream with grey tegula. Forewing ground-colour cream, suffused grey at bases of costa and dorsum, with brownish ochreous more distally; dorsal part of median fascia long, ferruginous, costal part dark grey; subapical fascia grey costally, then ochreous.

Male genitalia as described for the genus; ventral termination of aedeagus long, some thorns at its base laterally.

**D i s t r i b u t i o n :** Mexico: Guerrero.

***Revertuncaria* RAZOWSKI, 1986**

*Revertuncaria* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 377. Type-species: *Revertuncaria spathula* RAZOWSKI, 1986, by orig. design.

Alar expanse 8 mm; venation as in preceding genera.

Male genitalia: Tegumen with fairly large lateral membranisation; uncus strong, flattened laterally, directed proximally; socii at uncus base; vinculum as in *Geitocochylis* with even stronger outer ridge; dorsal part of valva long, slender; strong caudal process from dorso-postbasal area of disc above distal angulation of sacculus; median part of transtilla minute; no sublateral funnel-like pits of transtilla; cornuti, extremely small spines.

Female genitalia unknown.

**B i o l o g y** unknown.

**D i s t r i b u t i o n :** Northern Mexico.

**C o m m e n t s .** A monotypical genus. Its supposed autapomorphies are the strong, curved, directed proximally uncus; stout process of the disc of valva and the slender, expanding terminally dorsal part of the valva. The basal position of the apodemes of muscle 2 on the transtilla and complete vinculum are of plesiomorphic importance. This genus is probably closest to *Geitocochylis* and because of the more differentiated dorsal part of the valva is treated as an off-shot of the mentioned genus. In the structure of the transtilla there are some analogies between its type-species and *Geitocochylis paromala*.

***Revertuncaria spathula* RAZOWSKI, 1986**

*Revertuncaria spathula* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 377, figs 12-18 (male genit.).  
Type-locality: Mexico: Sonora: Bahía de San Carlos. Type in CUB.

Alar expanse 8 mm; head and thorax damaged, probably cream; forewing not expanding terminally with termen oblique; ground-colour cream; base yellow-brown; remnants of median fascia paler inside median cell; subapical and terminal pattern paler.

Male genitalia as described for the genus; socius broad, attached to broad part of tegumen (?base of uncus); sacculus convex postbasally and above middle of caudal edge; discal process of valva hook-shaped; aedeagus slender, with slender termination and ventral median plate.

**D i s t r i b u t i o n :** Mexico: Sonora (moth collected in June).

***Geitocochylis* RAZOWSKI, 1984**

*Geitocochylis* RAZOWSKI, 1984, Bull. Pol. Acad. Sci. (Biol. Sci.), **32**(7-8): 273. Type-species: *Geitocochylis gustatoria* RAZOWSKI, 1984, by orig. design.

Alar expanse 12-16 mm; labial palpus 1.5. Externally resembling the species of *Cochylis*, eg. *argentinana* or Palaearctic *C. hybridella* (HÜBNER). Venation as in *Cochylis*.

Male genitalia: Tegumen rather elongate, with lateral parts membranised before termination; socii, small latero-terminal, hairy patches or hairy lateral surfaces of the tegumen; distinctly sclerotized, directed proximad, uncus-like process on tegumen apically; vinculum uniform; valva broad, with rather weakly differentiated dorsal part; sacculus strong, angulate or with dorso-caudal process; median part of transtilla slender, long, exceptionally (*paromala*) atrophied; pair of submedian funnel-like processes, the apodemes of muscles *M*<sub>2</sub> present; juxta large; aedeagus of *Cochylis* type, with ventral termination varying from species to species; cornuti, 2 or 3 compact groups of non-capitate spines.

Female genitalia: Sterigma large, rounded, with main part convex medially, followed by two plates fused medially; ostium broad, sclerotized part of long ductus bursae large; corpus bursae membranous; ductus seminalis ventral, originating in middle of corpus bursae or in ductus bursae; accessory bursa lateral. Intersegmental membrane between sterigma and subgenital segment large.

Biology unknown. Moth collected from July to October, probably occurring in 2-3 generations yearly.

Distribution: Mexico.

Comments. Small genus comprising 4 species. The supposed autapomorphies of *Geitocochylis* are the presence of short, distinctly sclerotized, uncus-like process situated on the tegumen subapically, broad fusion of the valva with the lateral lobe of the transtilla, deep, funnel-shaped concavities of the last directed proximally, secondary flexure area in the postbasal part of the costa of valva and distinctly sclerotized, broad bucklet-shaped sterigma. The genus is close to *Cochylis* and their synapomorphies are the shape of the valva and aedeagus and the non-capitate cornuti forming clusters. The socii are less specialised than in the mentioned genus, and the distal part of the tegumen is less specialised. The vinculum is complete and that is a plesiomorphic character, but a stronger sclerotization of its outer edge speaks of its specialisation; however, such characters are to be found in other *Cochylini* and are treated here as convergent.

***Geitocochylis gustatoria* RAZOWSKI, 1984**

*Geitocochylis gustatoria* RAZOWSKI, 1984, Bull. Pol. Acad. Sci. (Sci. Biol.), **32**(7-8): 274, figs 1-4 (male genit.), 23, 24 (female genit.). Type-locality: Mexico: Durango: 11 mi E Revolcaderos. Type in CUB.

Alar expanse 14 mm; head and thorax whitish, labial palpus mixed with ochreous. Forewing ground-colour white, sprinkled brown-grey, tinged pink in terminal area; pattern brownish grey spotted darker along wing edges, in apex area suffused rusty; median fascia diffuse. Variability: Ground-colour tinged pink, pattern more or less distinct, in female median fascia brown medially; terminal pattern varying from brown to yellow-brown with reddish hue.

Male genitalia: Median part of sterigma slender; valva short, with dorsal part broad, as long as sacculus, separate from it by small lobe; aedeagus with dorso-lateral thorn subterminally.



Female genitalia: Median part of sterigma almost straight proximally, distal lobes approaching medially; ductus bursae broadest near middle.

**D i s t r i b u t i o n :** Mexico: Durango (moth collected in August at 7800 feet).

***Geitocochylis gyrantrum* RAZOWSKI, 1984**

*Geitocochylis gyrantrum* RAZOWSKI, 1984, Bull. Po. Acad. Sci. (Biol. Sci.), **32**(7-8): 278, figs 7-11 (male genit.), 25, 26 (female genit.). Type-locality: Mexico: Nuevo Leon: 4 mi W Iturbide. Type in CUB.

Alar expanse 12 mm; externally very similar to the preceding species, but with somewhat shorter forewing termen, more grey ground-colour, grey suffusions, median fascia broadening dorsally, marked brown in middle, and terminal suffusions yellowish pink.

Male genitalia asymmetric (accidental case?): Right valva with terminal part subtriangular and two caudal convexities; sacculus convexly rounded beyond base; apical part of aedeagus right-curved, fairly long.

Female genitalia: Median part of sterigma smaller than in *gustatoria*, concave medially, with two large distal lobes; ductus seminalis extending from middle of corpus bursae.

**D i s t r i b u t i o n :** Mexico: Nuevo Leon (moth collected in September at 5500 feet).

***Geitocochylis tarphionima* RAZOWSKI, 1984**

*Geitocochylis tarphionima* RAZOWSKI, 1984, Bull. Acad. Pol. Sci. (Biol. Sci.), **32**(7-8): 278, figs 12-18 (male genit.). Type-locality: Mexico: Chihuahua: 25 mi W Hidalgo Del Parrel. Type in CUB.

Alar expanse 16 mm; head and thorax white cream, base of tegula and antenna brownish (palpus missing). Forewing termen more strongly oblique than in two preceding species; ground-colour white, suffusions ferruginous, median fascia darker, ill-defined, grey at costa, orange medially and dorsally; distal third of wing orange-ferruginous with black suffusions on median veins.

Male genitalia: Dorsal part of valva with short tip and rounded caudal convexity, bristles stronger than in *gyrantrum*; sacculus longer, with ventro-terminal prominence; termination of aedeagus strongly curved.

**D i s t r i b u t i o n :** Mexico: Chihuahua (moth collected in July).

***Geitocochylis paromala* RAZOWSKI, 1984**

*Geitocochylis paromala* RAZOWSKI, 1984, Bull. Acad. Pol. Sci. (Biol. Sci.), **32**(7-8): 279, figs 19-22 (male genit.). Type-locality: Mexico: Veracruz: 10 mi N Puente Nacional. Type in CUB.

Alar expanse 10-12 mm; Forewing ground-colour white, base and costa suffused grey; median fascia dark grey at costa, pale at dorsum; distal pattern grey, marked brown in middle. Variation: Forewing white-grey, median fascia atrophied, distal area ferruginous cream.

Male genitalia: Transtilla constricted medially, without median part; dorsal part of valva short; sacculus convex, with sharp caudal angle and large terminal process extending into a median fold; aedeagus small, symmetric distally.

**D i s t r i b u t i o n :** Mexico: Veracruz (moth collected in October at an altitude of 1000 feet).

**C o m m e n t s .** This species distinctly differs from other members this genus in the absence of the median part of transtilla. A similar reduction has been found in the

Palearctic *Cochylis discerta* RAZOWSKI. In both cases the remaining characters support their present generic assignment.

### ***Gryposcleroma* RAZOWSKI, 1986**

*Gryposcleroma* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 383. Type-species: *Gryposcleroma schidia* RAZOWSKI, 1986, by orig. design.

Alar expanse 13, labial palpus 1.5. Venation as in *Cochylis*.

Male genitalia: Tegumen somewhat elongate, tapering terminally towards large uncus, sharp terminally, with emarginate ventral lobes and with large medio-lateral lobes connecting with transtilla by means of sharp ends; socii absent; vinculum fully developed, with strengthened margins; transtilla, a broad plate without median part; dorsal part of valva slender; sacculus without free termination; aedeagus slender; cornuti, small spines forming a cone-like structure.

Female and biology unknown.

**D i s t r i b u t i o n :** NE Mexico.

**C o m m e n t s .** The genus is monotypical, close to *Geitocochylis* and *Revertuncaria*. The direction of the tip of the uncus, the elongate distal part of the valva and the shape of the transtilla are probable synapomorphies with *Revertuncaria*. The secondary membranisation of the costal part is of the valva as in *Geitocochylis*. The autapomorphies of this genus are the presence of large lobes membranously connected with the tegumen and transtilla, the margins of the ventral parts of the uncus base and the long, horizontal basal process of the valva.

### ***Gryposcleroma schidia* RAZOWSKI, 1986**

*Gryposcleroma schidia* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 384, figs 56,57 (male genit.). Type-locality: Mexico: Nuevo Leon: Chipinque Mesa. Type in CUB.

Alar expanse 13 mm; Head and thorax whitish, labial palpus tinged ochreous to middle. Forewing ground-colour whitish mixed with ochreous basally and postmedially; costa yellow-brown to middle; median fascia ochreous brown at costa, edged grey in dorsal half; subapical blotch concolorous with fascia, brown scaled.

Male genitalia: End part of valva bristled; sacculus short, with ventro-terminal thorn. Otherwise as described for the genus.

**D i s t r i b u t i o n :** Mexico: Nuevo Leon.

### ***Monoceratuncus* RAZOWSKI, 1992**

*Monoceratuncus* RAZOWSKI, 1992, Misc.Zool., **14**(1990): 102, nom. n. for *Ceratuncus*. Type-species: *Ceratuncus lugens* RAZOWSKI, 1986, hereditarius. New combinations introduced. – *Ceratuncus* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 382, nom. praeocc. by *Ceratuncus* PETERSEN, 1957, in Tineidae. Type-species: *C. lugens* RAZOWSKI, 1986, by orig. design.

Alar expanse 7-10 mm; labial palpus 1.5. Venation: In forewing *R*<sub>5</sub> to costa, *M*<sub>3</sub>-*Cu*<sub>1</sub> connate; in hindwing *R*-*M*<sub>1</sub> forked, *M*<sub>3</sub>-*Cu*<sub>1</sub> separate.

Male genitalia: Uncus broad, more or less tapering basally, with slender distal hook directed upwards or backwards; socii absent; vinculum fully developed, with vestigial or small saccus; dorsal part of valva elongate; basal process long; disc with spines or thorns;

sacculus without free termination; transtilla constricted medially, usually without trace of median part; aedeagus slender with small, non-capitate cornuti, forming a more or less distinct 'cone'.

Female genitalia: Sterigma large, concave beyond ostium, terminating with more or less distinct lateral prominences between which is a rounded scobinate sclerite with median concavity; ductus bursae differentiated from corpus bursae, both without sclerites; subgenital membrane forming a sac or two shallow pockets; ductus seminalis originating at base of ductus bursae, ventrally; accessory bursa dorsal, from distal part of the latter. Anterior apophyses short, coalescent with sterigma.

**Biology** unknown.

**Distribution**: Known from Mexico (6 species) and Peru (1 species) but certainly widely distributed in this region.

**Comments**. Eight species included. There are two groups of species within this genus, one characterised by a stout uncus having elongate apex and the other (*eriodens*, *cristatus*) with a small, constricted basally uncus. In the former the valva is bristled along the costa subdorsally, in the other a group of strong spines is developed. The synapomorphy with latter genera of the *Cochylis*-group is the presence of non-capitate cornuti forming a more or less compact group. The synapomorphies with *Geitocochylis* and *Gryposcleroma* are the flexory membranous area of the postbasal part of the valva and the fully developed vinculum; that with *Gryposcleroma* and *Revertuncaria* is the form of the uncus. Its autapomorphies are the convex dorsal part of the uncus, large hook-like process of its end part and rounded sclerite in the distal portion of the sterigma with a characteristic median hole.

### *Monoceratuncus lugens* (RAZOWSKI, 1986)

*Ceratuncus lugens* RAZOWSKI, 1986, Acta zool. cracov., 29(16): 382, figs 48-51 (male genit.). Type-locality: Mexico: Puebla: 2 mi SW Tehuacan. Type in CUB.

Alar expanse 10 mm; head dark grey, labial palpus and thorax brown-grey. Forewing with costa straight and termen oblique. Ground-colour cream, suffusions ochreous-grey; median fascia indistinct, ochreous-grey in middle, brown-grey at costa, atrophying at dorsum, fusing with dark posterior part of wing (brownish grey with cream places and refractive scales); subapical blotch and diffuse spots posterior to median cell dark brown.

Male genitalia: Top part of tegumen large, elongate; distal portion of valva slender, subdorsal path of bristles long; sacculus gently convex; aedeagus fairly broad.

**Distribution**: Mexico: Puebla (moth collected in October at an altitude of 5200 feet).

### *Monoceratuncus autolytus* (RAZOWSKI, 1986)

*Ceratuncus autolytus* RAZOWSKI, 1986, Acta zool. cracov., 29(16): 383, figs 52-55 (male genit.). Type-locality: Mexico: Sinaloa: near Mazatlan. Type in CUB.

Alar expanse 7 mm; head and thorax damaged, probably cream. Ground-colour of forewing cream, slightly mixed with ochreous; median fascia and subapical fascia (reaching termen) pale brownish ochreous, scaled brown at edges.

Male genitalia: Dorsal part of uncus small, rounded; distal part of valva as in *lugens*; subcostal row of spines long; angulation of sacculus distinct; aedeagus as in mentioned species.



**Distribution:** Mexico: Sinaloa.

***Monoceratuncus tantulus* (RAZOWSKI & BECKER, 1986)**

*Ceratuncus tantulus* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 470, figs 118-121 (male genit.), 181, 182 (female genit.). Type-locality: Mexico: Guerrero: Villa Ayala. Type in MNRJ.

Alar expanse 9 mm; head and thorax black-grey, labial palpus 1; forewing termen weakly oblique, convex; ground-colour cream in basal half except wing edges which are like the distal half of the wing grey; median fascia brown at costa, otherwise rusty; subapical blotch large reaching termen; ochreous suffusion distal to median cell.

Male genitalia as in *lugens* but dorsal prominence of uncus slenderer, distal part of valva broader, less tapering terminally, subcostal row of spines not reaching base of valva; from the two preceding species differing in sacculus which is more strongly angulate distally and the aedeagus right-curved, broadest in middle.

Female genitalia: Posterior lobes of sterigma indistinct; rounded sclerite with asymmetric cavity; concave median area beyond ostium; ductus bursae slender.

**Distribution:** Mexico: Guerrero (moth collected in June).

***Monoceratuncus peltatus* RAZOWSKI & BECKER, 1993**

*Monoceratuncus peltatus* RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **21**(84): 238, fig. 12 (female genit.). Type-locality: Mexico: Guerrero: Villa Ayala. Holotype MNRJ.

Alar expanse 10 mm. Head brownish grey, thorax browner; length of labial palpus and forewing as in *tantulus*. Ground-colour pale ochreous-cream suffused with brownish at base and postmedially, with yellowish ferruginous beyond median fascia and at apex; median fascia at costa brown, yellow-brown otherwise; subapical fascia vivid brown, broad almost reaching termen.

Female genitalia as in *tantulus* but the ovate posterior plate of sterigma smaller, convex proximally, with the median opening rounded; submedian protecting lobes large.

**Distribution:** Mexico: Guerrero. Moth collected in June.

***Monoceratuncus convivus* (RAZOWSKI, 1990) comb.n.**

*Cochylis conviva* RAZOWSKI, 1990, SHILAP Revta lepid., **18**(72): 340, fig. 8 (female genit.). Type-locality: Mexico: Guerrero: 16 km NW Iguala. Type in CUB.

Alar expanse 8 mm, head grey, labial palpus over 1; thorax brownish grey. Forewing ground-colour pale ochreous cream, preserved in basal area, mixed with ochreous towards middle; median pattern diffuse, blackish grey, postmedian surface slightly paler, with rounded olive area near middle, sprinkled black, ochreous spots along distal part of costa.

Female genitalia: Posterior lobes of sterigma large, extending to middle of rounded sclerite; ductus bursae broad.

**Distribution:** Mexico: Guerrero (moth collected in July).

***Monoceratuncus eriodens* (RAZOWSKI, 1986)**

*Ceratuncus eriodens* RAZOWSKI, 1986, Acta zool. cracov., **29**(16): 383, figs 56, 57 (male genit.). Type-locality: Mexico: Tabasco: Teapa. Type in NHML.

Alar expanse 8 mm, head and thorax cream, labial palpus tinged ochreous. Forewing ground-colour white-cream tinged yellowish posteriorly and dorsally; suffusions yellow-brown; median fascia browner, darker near middle, interrupted subcostally; subapical fascia paler.

Male genitalia: Base of uncus slender, dorsal prominence small, hook-like process long; row of strong spines parallel to costa of valva; hairy wart below base of transtilla; median part of the transtilla very small.

**D i s t r i b u t i o n :** Mexico: Tabasco.

### ***Monoceratuncus cryphalus* RAZOWSKI, 1993**

*Monoceratuncus cryphalus* RAZOWSKI, 1993, Acta zool. cracov., **36**(1): 173, figs 36,37 (male genit.). Type-locality: Peru: Dept. Lima: 12 km SE Chosica, Zárate. Coll. ZMK.

Alar expanse 10 mm; head grey-white, labial palpus over 1, grey to before end; thorax grey. Forewing ground-colour white, suffusions greyish, the darkest extending from tornus; median fascia grey, marked black medially; subapical fascia reaching termen at tornus.

Male genitalia: Uncus hook-like, slender; row of strong spines of valva more dorsal and oblique than in *eriodens*.

**D i s t r i b u t i o n :** Peru: Lima Dept.

### ***Monoceratuncus cristatus* (RAZOWSKI & BECKER, 1986)**

*Ceratuncus cristatus* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 471, figs 122-126. Type-locality: Mexico: Veracruz: Huatusco. Type in MNRI.

Alar expanse 10-11 mm; head and thorax whitish, labial palpus grey except termination. Forewing ground-colour whitish, suffusions grey, black scaled; median fascia ochreous, black-grey at costa, strigulated black, with ochreous colour atrophying on dorsum; subapical blotch ochreous, paler suffusion posterior to median cell.

Male genitalia as in *eriodens* but valva slenderer and spines coalescent basally, forming a small group, not reaching its caudal edge; aedeagus slenderer and longer.

**D i s t r i b u t i o n :** Mexico: Veracruz.

### ***Enallcochylis* RAZOWSKI & BECKER, 1986**

*Enallcochylis* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 469. Type-species: *Enallcochylis enochra* RAZOWSKI & BECKER, 1986, by subs. design.

Alar expanse 10 mm; labial palpus 1; externally resembling other genera of the *Cochylis*-group.

Male genitalia: Tegumen short, without larger membranous parts; uncus absent; socii, a pair of hairy lobes on elongate base; vinculum arms not coalescent ventrally, slender; valva with long dorsal part and distinct pulvinus; sacculus long, with free termination curved ventrad; transtilla slender, broad basally; aedeagus very long, with lateral lobes at zone; caulis distal; coecum penis long; cornuti, numerous short, non-capitate spines arranged in very long, double row.

**Female genitalia:** Eighth tergite fused with sterigma that forms a broad sclerotic complex resembling sterigma in some *Cochylis*-species, with a pair of submedian convexities; colliculum broad; ductus bursae slender; ductus seminalis extending from proximal end of corpus bursae; accessory bursa originating at base of colliculum, laterally.

**Biology** unknown.

**Distribution:** Costa Rica.

**Comments.** The synapomorphies with *Cochylis* are the non-capitate, numerous cornuti forming a compact group, the shape of the distal part of the aedeagus (broad orifice and slender ventro-terminal process). *Enallcochylis* shares also some synapomorphies with *Empedcochylis* (for further characters see its description, below). The socii are more primitive than in *Cochylis*, and their base is indistinctly separated from the tegumen. The supposed autapomorphy of *Enallcochylis* is the presence of a flat pocket the ventral wall of which is linked with the juxta formed by large valvellae fused with one another ventrally. Two species were described in this genus originally, the second is now excluded as the type-species of the following genus.

### *Enallcochylis enochra* RAZOWSKI & BECKER, 1986

*Enallcochylis enochra* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 469, figs 111-114 (male genit.), 180 (female genitalia). Type-locality: Costa Rica: Turrialba. Type in MNRJ.

Alar expanse 8; head and thorax black-grey, labial palpus 1; forewing with apex rounded; ground-colour cream, preserved in basal area, suffused grey along wing edges, paler in distal half; median fascia brown at costa, ferruginous medially; subapical blotch rusty; fringes ochreous at apex.

**Male genitalia:** Base of sacculus broad; pulvinus large; distal cornuti short, thick.

**Distribution:** Costa Rica (the type-locality only; moth collected in August (holotype) and July at an altitude of 600 m).

### *Empedcochylis* gen.n.

Type species: *Enallcochylis empeda* RAZOWSKI & BECKER, 1986.

Alar expanse 9; labial palpus 1. Venation not examined.

**Male genitalia** as in *Enallcochylis* but tegumen convex dorsally, with large, apical lobe; socii missing; vinculum slender, membranously coalescent ventrally; pulvinus minute.

**Female** unknown.

**Biology** unknown.

**Distribution:** Costa Rica.

**Comments.** This monotypical genus is described on the basis of the presence of a very large apical lobe of the tegumen, supposed to be autapomorphy. The socii are completely atrophied, but a few hairs are situated on dorsal surface of the tegumen lobe. This genus and *Enallcochylis* show the following synapomorphies: Long aedeagus with caulis subterminal, very long row of cornuti terminating in proximal, plate-shaped sclerite,



structure of the valvellae (discussed for *Enallcochylis*), curved sacculus terminating in ventral process and the presence of the pulvinus.

***Empedcochylis empeda* (RAZOWSKI & BECKER, 1986) comb.n.**

*Enallcochylis empeda* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 470, figs 115-117 (male genit.). Type-locality: Costa Rica: Turrialba. Type in MNRJ.

Alar expanse 9 mm; head and thorax cream, labial palpus 1; forewing ground-colour cream, tinged pale ochreous; costal remnant of diffuse median fascia and subapical fascia reaching termen ochreous; brown-grey spot at dorsum postbasally; fringes cream.

Male genitalia: Terminal lobe of tegumen rounded laterally; distal third of median part of transtilla tapering; aedeagus longer than costa of valva; distal cornuti slender.

**D i s t r i b u t i o n :** Costa Rica (moth collected in September (type) and February at an altitude of 600 m).

***Mimcochylis* RAZOWSKI, 1985**

*Mimcochylis* RAZOWSKI, 1985, Nota lepid., **8**(1): 61. Type-species: *Mimcochylis planola* RAZOWSKI, 1985, by orig. design.

Alar expanse 9-13, labial palpus 1; venation as in *Cochylis* and its allies.

Male genitalia: Tegumen with large, lateral, membranous areas and well-sclerotized apical part slightly prominent at the top, with small dorsal prominence before end; vinculum arms not coalescent ventrally; valva short, with very slender dorsal part and shorter, rounded saccular portion; transtilla with median part; juxta short; aedeagus long, slender, with coecum penis small and caulis anterior; no cornuti in examined species.

Female genitalia: Ovipositor long; sterigma deeply incised proximally, with postvaginal part broad, followed by pair of slender, hairy patches connected with anterior apophyses, extending from pair of rounded sclerites of postostial sterigma; membranous subgenital pocket present; ductus bursae in major part well sclerotized with large, tongue-like sac at base; ductus seminalis subdorsal, originating in median area of corpus bursae; ductus of accessory bursa dorsal, extending from distal part of ductus bursae.

**B i o l o g y** unknown.

**D i s t r i b u t i o n :** Northern part of the Region.

**C o m m e n t s .** The genus comprises 4 species, of which 1 is known from a male and 3 from females. It belongs to the *Cochylis* - group of genera as indicated by the shape of its valva, the position of the accessory bursa, bristled distal patches of the sterigma and the presence of the membranous subgenital pocket. The shape of the anterior portion of the sterigma resembles that in *Geitocochylis*. The dorsal part of the valva is very slender and resembles that in the Palaearctic *Cochylidia* OBRAZTSOV. It is, however, less specialised, arranged rather horizontally, without terminal setae. The autapomorphies of *Mimcochylis* are as follows: the top of the tegumen with three small prominences, the presence of subapical, dorsal prominence of the tegumen, and a large sac at the end of the ventral surface of the corpus bursae directed distally.

***Mimcochylis planola* RAZOWSKI, 1985**

*Mimcochylis planola* RAZOWSKI, 1985, *Nota lepid.*, 8(1): 61, figs 1-4 (male genit.). Type-locality: Mexico: Baja California Norte: Arroya Catavina: 35 mi S El Progreso. Type in CUB.

Alar expanse 13 mm; head and thorax ash-grey, labial palpus mixed with brownish, middle of thorax tinged black. Ground-colour of forewing greyish; distal part of wing (posterior to median cell) pale ochreous, darker at apex; dorsal fascia indistinct, ferruginous.

Male genitalia as described for the genus; caudal portion of valva concave; elongate fold in distal half of sacculus; median part of transtilla slender, hook-shaped; aedeagus very slender, with long terminal part.

**D i s t r i b u t i o n :** Mexico: Baja California Norte (moth collected in April).

***Mimcochylis plagiusa* RAZOWSKI, 1985**

*Mimcochylis plagiusa* RAZOWSKI, 1985, *Nota lepid.*, 8(1): 62, figs 5,6 (female genit.). Type-locality: Mexico: Durango: 30 km W Durango. Type in CUB.

Alar expanse 11 mm; head and thorax cream-grey, labial palpus and base of tegula brownish. Forewing ground-colour dirty cream with ochreous hue and grey suffusions; median fascia ferruginous, interrupted subcostally.

Female genitalia: Proximal lobes of sterigma deep incised; distal edge of colliculum (at ostium level) straight ventrally.

**D i s t r i b u t i o n :** Mexico: Durango (moth collected in August at an altitude of 8400 feet).

***Mimcochylis plasmodia* RAZOWSKI, 1985**

*Mimcochylis plasmodia* RAZOWSKI, 1985, *Nota lepid.*, 8(1): 62, figs 7-9 (female genit.). Type-locality: Mexico: Sinaloa: 8 mi W El Palmito. Type in CUB.

Alar expanse 11 mm; head greyish, thorax cinnamon brown, greyish medially. Forewing ground-colour cream-grey with pink hue, in distal third ochreous pink; wing base suffused yellowish brown; dorsal blotch elongate, darker.

Female genitalia as in *plagiusa* but proximal incisure of sterigma small, lobes short, rounded, distal portion of colliculum convex.

**D i s t r i b u t i o n :** Mexico: Sinaloa.

***Mimcochylis ochroplasta* RAZOWSKI, 1985**

*Mimcochylis ochroplasta* RAZOWSKI, 1985, *Nota lepid.*, 8(1): 64, fig. 10 (female genit.). Type-locality: Mexico: Sinaloa: 8 mi W El Palmito. Type in CUB.

Alar expanse 9 mm; head greyish; thorax dark grey. Forewing ground-colour brownish grey, distal portion suffused ferruginous, less so at base; dorsal blotch ferruginous.

Female genitalia: Proximal incisure of sterigma shallow; distal edge of colliculum slightly convex; ductus bursae broader and shorter than in preceding species, hardly tapering in distal portion.

**D i s t r i b u t i o n :** Mexico: Sinaloa (moth collected in October at an altitude of 6000 feet).

*Cochylis* TREITSCHKE, 1829

*Cochylis* TREITSCHKE, 1829, Schmett. Eur., 7: 233. Type-species: [*Tortrix*] *rubellana* HÜBNER, [1823] = *Tortrix roseana* HAWORTH, 1811, by subs. design. (CURTIS, 1834, Br. Ent., explanat., pl. 491). *Conchylis* SODOFFSKY, Bull. Soc. imp. Naturalistes Mosc., 6: 93, unjustified emend.

*Pontoturania* OBRAZTSOV, 1953, Mitt. münchn. ent. Ges., 33: 97. Type-species: *Cochylis defessana* MANN, 1861, by orig. design.

*Cochylischroa* OBRAZTSOV & SWATSCHKE, 1958 [in:] SWATSCHKE, Abh. Larvalsyst. Insekten, 3: 233. Type-species. *Eupoecilia atricapitana* STEPHENS, 1851, by orig. design.

*Longicornutia* RAZOWSKI, 1960, Polskie Pismo ent., 30(17): 314. Type-species: *Cochylis phaleratana* HERRICH-SCHÄFFER, 1851 = *Cochylis epilinana* DUPONCHEL, 1842, by orig. design.

*Neocochylis* RAZOWSKI, 1960, ibid.: 316. Type-species: *Conchylis calavrytana* REBEL, 1906 = *Cochylis molliculana* ZELLER, 1847, by orig. design. Established as subgenus of *Cochylis* TREITSCHKE.

*Paracochylis* RAZOWSKI, 1960, ibid.: 316. Type-species: *Cochylis amoenana* KENNEL, 1899, by orig. design. Established as subgenus of *Cochylis* TREITSCHKE.

*Brevicornutia* RAZOWSKI, 1960, ibid.: 317. Type-species: *Cochylis pallidana* ZELLER, 1847, by orig. design. Established as subgenus of *Cochylis* TREITSCHKE.

Monograph of Palaearctic *Cochylis* is by RAZOWSKI (1970), redescription and comments by same author (RAZOWSKI, 1987: 171). The genera *Thyraylia* WALSINGHAM, 1897 and *Acornutia* OBRAZTSOV, 1914 listed in the synonymy of this genus in the above-mentioned paper of 1987 are excluded as they require reconsideration.

Alar expanse 8-19 mm; labial palpus 1-2. Venation: In forewing all veins separate, chorda, *M* and *PCu* missing; in hindwing *Rr* - *M*<sub>1</sub> stalked to middle, other veins separate.

Male genitalia: Tegumen short, with small terminal part coalescent with the socii; socius with very short or atrophied terminal portion; uncus absent or in the form of a vestigial convexity; occasionally an uncus-like prominence present; vinculum with arms separate ventrally, often expanding apically, or strongly reduced. Valva broad in basal portion, with rather well differentiated costal part; sacculus varying in shape from species to species. Occasionally various processes, spines or thorns present and some parts of disc concave. Sacculus often with free termination or processes. Median part of transtilla well developed; juxta usually large. Aedeagus often broad postmedially, with long ventral termination; caulis short; cornuti: numerous non-capitate spines arranged in one or more groups from large to small, and a compact group of minute thorns forming a cone-like cluster.

No specialised abdominal scent organ.

Female genitalia: Ovipositor short or moderate (in Palaearctic species occasionally telescopic). Sterigma variably developed, often with broad sclerites and pair of distal, hairy lobes extending towards apophyses anteriores; proximal part of sterigma small, fusing with elaborate sclerites of distal part of ductus bursae; ostium bursae large or very broad; remaining part of bursa copulatrix broad, with ductus rather short; accessory bursa originating usually in distal part of ductus bursae, dorsally; ductus seminalis often extending from middle of corpus bursae, both usually dorsal. In some species, however, ductus bursae slender, membranous or with sclerotized distal part and with sterigma less complicated. Positions of the accessory bursa and ductus seminalis may vary in some groups of species. No sclerites in corpus bursae except for minute spiculation. Intersegmental membrane between sterigma and subgenital sternite forming more or less distinct pocket.



Early stages and biology of Neotropical species unknown except for *caulocatax*.

**Distribution.** The genus is known from the Holarctic, Oriental and Neotropical regions.

**Comments.** Twenty five species (9 unplaced) known from this region. The groups of species are discussed in an above-mentioned paper of mine (RAZOWSKI, 1987: 173); some other may be distinguished in the New World fauna, but all require re-consideration. The genus was compared in that paper with Palaearctic *Diceratura* Djakonov, 1923 and *Cochylidia* Obraztsov, 1956 (supposed synapomorphies: the presence of the non-capitate cornuti and cone-like cluster of short spines in the vesica, the sac of intersegmental membrane attached to the sterigma, the shape of the sterigma, the position of the accessory bursa. The two mentioned genera are, however, more advanced as having a specialised, rod-like costal part of the valva. The autapomorphies of this genus have not been found.

### *Cochylis caulocatax* RAZOWSKI, 1984

*Cochylis caulocatax* RAZOWSKI, 1984, Annls zool., Warsz., **38**(13): 278, figs 12-14 (male genit.). Type-locality: Venezuela: Bolivar, Morichal Tauca, 22 km E Rio Caura. Type in NMNH.

Alar expanse 7 mm; head and thorax white-cream, labial palpus over 1, ochreous-cream, collar pinkish. Forewing ground-colour cream with weak pinkish hue; base of costa and pattern yellow-ferruginous, median fascia convex distally, mixed rust subcostally; subapical spot weakly developed, paler; distal part of wing suffused ferruginous; grey spots at tornus and end of median cell.

Male genitalia: Median part of transtilla slender; vinculum arm very broad distally; juxta large, short; distal part of valva subtriangular, ventro-basal portion strongly sclerotized, with very large subterminal spine directed distally; aedeagus slender, with postmedian process on right side.

Female genitalia (after Pogue & Friedlander, 1987): Sterigma broad, with anterior, rounded lobe and pair of slender distal hairy patches; colliculum with sclerite; bursa copulatrix minutely spined.

Early stages, biology and parasites discussed by same authors. The larva feeds in seed pods of *Eustoma grandiflorum* (Raf.) Shinnars, *Gentianaceae*, first in stamens then in ovaries.

**Distribution:** Venezuela, USA: central to central east, NC Kentucky, SE Texas, E Mississippi, SC Florida.

### *Cochylis methoea* RAZOWSKI & BECKER, 1986

*Cochylis methoea* RAZOWSKI & BECKER, 1986, Acta zool. cracov., **29**(20): 466, figs 100-102 (male genit.), 176 (female genit.). Type-locality: Mexico: Veracruz: Huatusco. Type in MNRJ.

Alar expanse 9 mm; head and thorax whitish, the latter mixed with grey proximally and medially, labial palpus 2, brownish grey. Forewing ground-colour white, transversely strigulated brownish, spotted black-brown along costa. Median fascia diffuse, brownish grey, blackish at costa and medially, tinged rust subdorsally; subapical fascia similar in colour, accompanied by greyish apical suffusion.

Male genitalia: Dorsal part of valva broadest medially, concave, sculptured in ventral area; ventral edge of sacculus rounded, minutely dentate, row of thorns from middle of caudal edge; basal prominence of sacculus indistinct; vinculum small, very slender; aedeagus broadening distally, with slender ventral termination and 5 groups of cornuti.

Female genitalia: Distal part of sterigma broad, rounded, concaving medially, rather asymmetric; antrum broad, with two elongate ventral sclerites; long, minutely spined, lateral sclerite (right side) reaching top of corpus bursae.

**Distribution:** Mexico: Veracruz (moth collected in August at an altitude of 1300 m).

### *Cochylis erromena* RAZOWSKI, 1984

*Cochylis erromena* RAZOWSKI, 1984, Bull. Pol. Acad. Sci. (Biol. Sci.), 32(7-8), fig. 29 (female genit.). Type-locality: Mexico: Guerrero: Taxco. Type in CUB.

Alar expanse 12 mm; head and thorax white, labial palpus 1.5, brownish. Forewing ground-colour white, spotted grey-cream along edges, more ferruginously so in distal area. Median fascia interrupted subcostally, ferruginous in dorsal part, marked dark brown medially, grey-brown at costa; terminal pattern brownish; brown spots on brownish terminal suffusion.

Female genitalia as in *methoeca* but sterigma smaller, less sclerotized distally and sclerites of distal part of ductus bursae very large, with somewhat asymmetric lateral lobes.

**Distribution:** Mexico: Guerrero.

### *Cochylis exomala* RAZOWSKI, 1984

*Cochylis exomala* RAZOWSKI, 1984, Bull. Pol. Acad. Sci. (Biol. Sci.), 32(7-8): 281, figs 1-3 (male genit.). Type-locality: Mexico: Puebla: 7 km SE Morelos: Canada. Type in CUB.

Alar expanse 16 mm; head and thorax cream, vertex and labial palpus (over 1.5) mixed with ochreous. Forewing not expanding terminally; ground-colour pale grey sprinkled brown-grey, ochreous cream distally to median cell where diffusely spotted; median fascia ferruginous.

Male genitalia: Median part of transtilla large; vinculum arm very slender, weak; valva large, with caudal edge minutely dentate beyond sacculus; the latter strongly convex just beyond base, with top of convexity directed proximally; termination of aedeagus long; cornuti numerous.

**Distribution:** Mexico: Puebla.

### *Cochylis argentinana* RAZOWSKI, 1967

*Cochylis argentinana* RAZOWSKI, 1967, Acta zool. cracov., 12(8): 202, figs 77, 78 (male genit.), 79 (female genit.), pl. 16, fig. 8 (forewing). Type-locality: Argentina: Alto Garcia. Type in NHML.

Alar expanse 10-12 mm; head and thorax whitish, labial palpus ca 2, ochreous-grey. Forewing ground-colour white, costa and dorsum strigulated grey, postmedian area tinged pink. Median fascia interrupted 2-3 times, brownish grey, blackish at costa and dorsum, with some almost concolorous spots in median area; posterior third of wing rust-brown with some brown spots and pinkish hue; fringes ochreous-brown. Variation: Ground-colour with cream hue, base tinges ochreous, grey shade posterior to median cell.

Male genitalia: Median part of transtilla tapering in distal half; dorsal part of valva fairly broad; ventral edge of sacculus serrate, convexly rounded distally; large plate-shaped sclerite with acute dorso-caudal tip and convex ventro-basal edge originating in basal half of valva.

Female genitalia: Postvaginal part of sterigma short, well sclerotized followed by soft lobes; antevaginal part fused with ductus sclerite, broad, short, with short, dorsal, wedge-shaped sclerite near middle; ventral surface of sclerite with two submedian folds.

**D i s t r i b u t i o n :** Argentina: Tucuman, Corientes, Ato Garcia; Brazil: Paraná.

**C o m m e n t s .** There are also some specimens from Brazil, Mato Grosso which hardly differ from the Argentinian population.

### *Cochylis telephora* RAZOWSKI & BECKER, 1994

*Cochylis telephora* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., 22(85): 40, figs 17,18 (male genit.), 31 (female genit.). Coll. MNRJ.

Alar expanse 10 mm. Labial palpus ca 1; head and thorax whitish cream. Forewing slightly expanding terminally, similar in shape to that in *argentinana*. Ground-colour white cream, suffusions and strigulation brownish; costal portion of median fascia concolorous, dorsal blotch ochreous, marked brown; terminal area distinctly suffused brownish, marked with blackish subterminal blotch.

Male genitalia as in *argentinana* but median part of transtilla slender, valva longer and slenderer, sacculus much shorter, with basal lobe extending beyond its dentate edge; aedeagus much larger.

Female genitalia as in *argentinana* but colliculum very broad, without wedge-shaped sclerite of ventro-anterior edge and anterior portion of sterigma forming a pair of lateral shallow lobes.

**D i s t r i b u t i o n :** Brazil: Minas Gerais.

**C o m m e n t s .** This species is closely related to *argentinana*.

### *Cochylis mystes* RAZOWSKI, 1990

*Cochylis mystes* RAZOWSKI, 1990, SHILAP Revta lepid., 18(72): 341, figs 11,12. Type-locality: Mexico: Guerrero: 32 km W Iguala. Type in CUB.

Alar expanse 9-12 mm; head and thorax white-grey, labial palpus over 1, grey, white terminally, tegula grey. Forewing ground-colour whitish, strigulation (in anterior half) grey, suffusions at tornus, apex and terminal areas grey with ferruginous shades; median fascia grey, marked black at costa and dorsum, ferruginous in median part where black and grey streaks; subapical fascia to mid-termen rust-brown, mixed with black in middle, spotted rust at wing edges. Variation: Ground-colour may be pale and pattern weakly developed, or apical area mixed with rust-ochreous and subapical pattern variable.

Male genitalia: Median part of transtilla slender; ventral edge of sacculus concave medially, caudal angulation rounded, outer, serrate lobe in dorsal half of caudal edge; basal process of valva slender, weakly convex ventrally. Aedeagus rather short, with slender, curved termination.

**D i s t r i b u t i o n :** Mexico: Guerrero (moth collected in September at an elevation of 1350 m).



*Cochylis anerista* RAZOWSKI, 1984

*Cochylis anerista* RAZOWSKI, 1984, Bull. Pol. Acad. Sci. (Biol. Sci.), **32**(7-8): 291, figs 30,31 (female genit.). Type-locality: Mexico: Puebla: 2 mi SW Tehuacan. Type in CUB.

Alar expanse 19 mm; head and thorax whitish, base of tegula and labial palpus (1.5) brown-grey. Forewing ground-colour white, with indistinct grey hue and grey distal suffusion, pearly shine terminally. Median fascia grey atrophying dorsally and subcostally, marked black medially; terminal pattern brown-grey; two ferruginous spots at termen near apex. Fringes dark grey.

Female genitalia: Antevaginal parts of sterigma broad, with lateral sacs, coalescent with sclerites of ductus bursae located in collar-like membrane; ductus of accessory bursa ventral, originating in middle of corpus bursae.

**D i s t r i b u t i o n :** Mexico: Puebla.

**C o m m e n t s .** Externally resembling *eupacria*, but with darker palpus and rather grey suffusions of the forewing ground-colour.

*Cochylis eureta* RAZOWSKI, 1984

*Cochylis eureta* RAZOWSKI, 1984, Bull. Pol. Acad. Sci. (Biol. Sci.), **32**(7-8): 290, figs 18,19 (female genit.). Type-locality: Mexico: Durango: 4 mi W El Palmito. Type in CUB.

Alar expanse 12 mm; head cream, labial palpus 1.5, brownish; thorax brownish yellow, tegula more ochreous. Forewing expanding terminally, termen straight; ground-colour pale ochreous-cream, base suffused brownish; median fascia brownish, bent subcostally; terminal pattern elongate, concolorous, pearl edged, accompanied by black suffusion.

Male genitalia: Dorsal part of valva slender, serrate from beyond distal process of sacculus to before end, thorns above postsaccular concavity large.

**D i s t r i b u t i o n :** Mexico: Durango.

*Cochylis sagittigera* RAZOWSKI & BECKER, 1983

*Cochylis sagittigera* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(12): 435, figs 48,49 (male genit.). Type-locality: Brazil: Mato Grosso: Rio Brilhante.

Alar expanse 11 mm; head and thorax whitish, labial palpus 1.5. Forewing ground-colour white, suffusions weak, greyish, mainly in basal area; median pattern in the form of costal blotch and dorsal fascia, brown, oblique; distal pattern rust-brown on ochreous suffusion.

Male genitalia: Valva slender; sacculus not differentiated, with distal half serrate; long, ventral process of basal part of valva; aedeagus broad postmedially; cone-shaped structure distinct.

**D i s t r i b u t i o n :** Brazil: Mato Grosso.

**C o m m e n t s .** Darker than *securifera*, with more oblique median fascia; distinct in slender basal process of valva.

*Cochylis securifera* RAZOWSKI & BECKER, 1983

*Cochylis securifera* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(12): 434, figs 41-44 (male genit.), 104,105 (female genit.). Type-locality: Brazil: Pananá: Banhado (Quatro Barras). Type in MNRJ.

Alar expanse 11 mm, head and thorax whitish, labial palpus, 1.5, mixed with ochreous; ground-colour of forewing white, sprinkled and suffused greyish mainly basally, mixed with ochreous posterior to median cell. Pattern brownish, scaled brown, similar to *sagittigera* but less oblique; subterminal blotch rather triangular, accompanied by some brown spots. Fringes cream to brownish cream. Variation: Some specimens pale, with ill-defined pattern; in dark specimens suffusions and marginal spots distinct; apical area occasionally ochreous with brown marks.

Male genitalia distinct in serrate convex caudal part of sacculus and sharp postbasal process; ventro-basal process of valva horizontal, rather parallel to ventral edge of sacculus, both variable in shape. Shape and size of postbasal process of the sacculus also variable.

Female genitalia as in *argentinana* but with much longer sclerotized part of ductus bursae, with weaker and longer ventral folds and very short dorsal process.

**D i s t r i b u t i o n :** Brazil: Paraná.

### *Cochylis eutheta* RAZOWSKI, 1984

*Cochylis eutheta* RAZOWSKI, 1984, Bull. Pol. Acad. Sci. (Biol. Sci.), **32**(7-8): 283, figs 4-6 (male genit.). Type-locality: Mexico: Veracruz: Fortin de las Flores. Type in CUB.

Alar expanse 8 mm; head and thorax brownish grey, labial palpus 1.5, brownish. Forewing expanding terminally, with termen oblique; ground-colour greyish, with oblique lines made up of blackish scales; basal and tornal suffusions grey; costal remnant of median fascia black-grey; hindwing whitish, mixed brown. Variation: There are specimens with whitish ground-colour mixed or sprinkled with brown or ochreous; pattern brownish grey to ochreous; median fascia complete or in the form of a dorsal blotch.

Male genitalia: Dorsal part of valva broad with ventral, serrate convexity; base of sacculus with curved process and some caudal thorns; basal lobe of valva short, rounded distally. Thorns of caudal edge of valva and sacculus variable in size and number.

Female genitalia: Antevaginal part of sterigma and sclerotized portion of ductus bursae rather short, plicate.

**D i s t r i b u t i o n :** Mexico: Veracruz (moth collected in June and October).

**C o m m e n t s .** Variation in this species is little known, thus the determination of the specimen from Honduras (Siguatepeque) is uncertain (it is distinct in the shape of the valva and sacculus and much larger aedeagus).

### *Cochylis eupacria* RAZOWSKI, 1984

*Cochylis eupacria* RAZOWSKI, 1984, Bull. Pol. Acad. Sci. (Biol. Sci.), **32**(7-8): 284, figs 9-15 (male genit.), 27 (female genit.). Type-locality: Mexico: Nuevo Leon: 4 mi W Iturbide. Type in CUB.

Alar expanse 13 mm; head and thorax whitish, labial palpus 1.5, brownish, base of tegula brown. Forewing weakly expanding posteriorly; ground-colour whitish, mixed brownish, costa and dorsum suffused grey to middle; median fascia with costal part brownish grey, and dorso-median fascia brownish; subterminal pattern brown-grey, spots brown; fringes ochreous. Variation: Head, thorax and ground-colour of forewing grey or white, without suffusions; pattern grey, in terminal part of wing dark brown to black-grey, in one specimen suffused yellowish.

Male genitalia: Ventro-basal process of sacculus large, broad, sharp terminally; caudal part of sacculus rounded, with some thorns; basal lobe of valva submedian. All these elements distinctly variable.

**D i s t r i b u t i o n** : Mexico: Nuevo Leon and Puebla (moths collected in August – October at an altitude of 3500-6000 feet).

**C o m m e n t s** . The species is variable both externally and genitally. A pair from Durango differs from the type in having very slender, long basal process of the sacculus and its caudal edge much less convex (original description: figs 16,17, as *Cochylis* sp.). The originally described female corresponds rather with the above-mentioned male. Characteristics of its genitalia are as follows: similar to *erromena*, but with large sclerite of the left side of the ductus bursae extending into the corpus bursae.

### *Cochylis eutaxia* RAZOWSKI, 1984

*Cochylis eutaxia* RAZOWSKI, 1984, Bull. Pol. Acad. Sci. (Biol. Sci.), **32**(7-8): 290, fig. 28 (female genit.). Type-locality: Mexico: Baja California Norte: Arroyo Catavina, 5 mi S El Progreso. Type in CUB.

Alar expanse 10 mm; head and thorax white-grey, labial palpus over 1, grey. Forewing expanding terminally; ground-colour whitish, strigulation to middle weak, grey, beyond it ferruginous; suffusions grey, in distal third of wing ochreous-pink. Dorsal fascia pale ochreous-orange; terminal pattern paler, a black-brown median suffusion.

Female genitalia: Sterigma less sclerotized than in preceding species, with postvaginal funnel-like sclerite in middle and short antevaginal sclerite; membranous sac before ostium incised medially.

**D i s t r i b u t i o n** : Mexico: Baja California Norte (moth collected in April).

**C o m m e n t s** . This species certainly belongs in the group of the species with the broad distal part of the ductus bursae but distinctly differs from them in the presence of the funnel-like sclerite of the sterigma. The examination of a male will allow the correct positioning of *eutaxia*.

### *Cochylis rosaria* RAZOWSKI & BECKER, 1993

*Cochylis rosaria* RAZOWSKI & BECKER, 1993, SHILAP Revta lepid., **21**(84): 236, figs 7,9 (male genit.). Type-locality: Mexico: Guerrero: Villa Ayala. Coll. MNRJ.

Alar expanse 10 mm. Head and thorax white, labial palpus 1.5, pink to middle. Forewing termen oblique; basal half of wing white, remaining area and basal half of costa pink, some darker spots subapically; fringes pink.

Male genitalia: Stout process near base of distal, slender part of valva, ventrally; basal part of valva broad, sacculus with sharp process at end of ventral edge and very large dorso-basal process; median part of transtilla slender; cornuti minute.

**D i s t r i b u t i o n** : Mexico: Guerrero.

### *Cochylis philypna* RAZOWSKI & BECKER, 1994

*Cochylis philypna* RAZOWSKI & BECKER, 1994, SHILAP Revta lepid., **22**(85): 41, figs 19,20 (male genit.). Type-locality: Brazil: Minas Gerais: Sete Lagoas. Coll. MNRJ.

Alar expanse ca 14 mm. Labial palpus over 2, cream; remaining parts of head, thorax and ground-colour whitish cream. Forewing broad with costa and termen almost straight.



Basal part of costa suffused brownish, dorsal blotch and remainders of subapical blotch brown.

Male genitalia: Socius fairly large; dorsal portion of valva broad, ventral part much smaller; distal part of sacculus, long, curved subterminally. Median part of transtilla very broad, expanding apically, armed with a row of terminal thorns and small median process; vinculum arm long. Aedeagus slender, with long bunch of small cornuti.

**D i s t r i b u t i o n :** Brazil: Minas Gerais.

**C o m m e n t s .** The systematic position of this species requires reconsideration as the female is unknown. In male genitalia it is characterised by a peculiar bunch of the cornuti. A similar compact bunch was already observed in one Palearctic species (*C. epilinana* DUPONCHEL, 1842). The shape of the median part of transtilla is also peculiar.

#### Unplaced species

##### *Cochylis tephrodrypta* RAZOWSKI, 1984

*Cochylis tephrodrypta* RAZOWSKI, 1984, Bull. Pol. Acad. Sci. (Biol. Sci.), 32(7-8): 282, figs 22, 23 (female genit.). Type-locality: Mexico: Sonora: 44 mi NW Caborra. Type in CUB.

Alar expanse 14 mm; Head and thorax whitish, labial palpus 1.5, greyish. Forewing slender, expanding terminally, termen oblique. Ground-colour pale grey, strigulation grey, cream at base where costa ochreous; remnants of median fascia: two yellow-brown dorso-median spots; distal part of wing pale brown tinged ochreous, fringes concolorous.

Female genitalia: Posterior apophyses fairly long; sterigma rounded, convex medially, membranous anteriorly, with two postmedian concavities; colliculum short, sclerotized.

**D i s t r i b u t i o n :** Mexico: Sonora.

**C o m m e n t s .** This species differs from all preceding taxa and, similarly to *typhilinea*, has a rather separate position in this genus. Unfortunately the males of both these species remain unknown.

##### *Cochylis typhilinea* RAZOWSKI, 1984

*Cochylis typhilinea* RAZOWSKI, 1984, Bull. Pol. Acad. Sci. (Biol. Sci.), 32(7-8): 282, figs 24-26 (female genit.). Type-locality: Mexico: Veracruz: Cordoba. Type in CUB.

Alar expanse 8 mm; head and thorax greyish; forewing broad; ground-colour greyish to beyond middle, tinged yellow and brownish in distal part; subapical blotch diffuse, brownish; median fascia ill-defined, dark grey.

Female genitalia: Apophyses anteriores very short, coalescent with sterigma; distal part of the latter broad, convex, extending ventrally; pair of concavities beyond ostium; large membranous sac before sterigma; ductus bursae slender terminally; ductus seminalis ventral, from base of this last.

**D i s t r i b u t i o n :** Mexico: Veracruz.

**C o m m e n t s .** This species has a separate position. The female genitalia show some similarity to those of *Monoceratuncus*.

*Cochylis flabilis* RAZOWSKI, 1993

*Cochylis flabilis* RAZOWSKI, 1993, Polskie Pismo ent., **62**: 123, fig. 11 (female genit.). Type-locality: Mexico: Baja California Sur: 16.3 mi NE El Arco. Holotype SDNHM.

Alar expanse 11 mm. Head white, labial palpus 3; thorax creamer, tegula more ochreous-pink at base. Forewing apex rounded, termen slightly oblique. Ground-colour whitish, base and terminal part suffused ochreous. Median fascia perpendicular to dorsum, broad, grey at costa, brownish ochreous medially and dorsally; two ochreous, grey-edged spots representing subapical blotch.

Female genitalia: Ovipositor fairly long; sterigma, a sclerotic ring around ostium, with lateral lobes directed medially; small sclerite in prominence of ductus bursae; accessory bursa from base of sterigma.

**D i s t r i b u t i o n** : Type-locality only; moth collected in March.

*Cochylis disputabilis* (WALSINGHAM, 1914)

*Phalonia disputabilis* WALSINGHAM, 1914, Biol. Cent.-Am. Lepid. Heterocera, **4**: 295, pl.9, fig. 3 (moth). Type-locality: Mexico: Guerrero: Omilteme. Type in NHML. – *Cochylis disputabilis*: RAZOWSKI, 1964, Annls zool., Warsz., **22**(16): 377, fig. 62 (female genit. of holotype).

Alar expanse 13 mm; head and thorax cream, labial palpus over 1.5, ferruginous. Forewing ground-colour cream, glossy white near median fascia, suffused rust at base, mainly at costa; distal third of wing rust-brown, termen and subapical blotch much darker, blackish brown before mid-termen, grey at end of median cell. Median fascia uniformly broad throughout, rust-brown, browner at costa and on dorsum; fringes concolorous with pattern.

Female genitalia: Distal part of sterigma as two lateral, bristled plates coalesced medially; proximal portion broad, strongly sclerotized, subtrapezoid; colliculum short, sclerotic; accessory bursa extending from the colliculum; corpus bursae weakly differentiated from ductus bursae.

**D i s t r i b u t i o n** : Mexico: Guerrero.

**C o m m e n t s** . As in the case of the two preceding species the systematic position is difficult to determine until the males have been examined.

*Cochylis insipida* RAZOWSKI, 1990

*Cochylis insipida* RAZOWSKI, 1990, SHILAP Revta lepid., **18**(72): 342, figs 9,10 (female genit.). Type-locality: Mexico: Baja California Sur: Las Barracas, ca 30 km E Santiago. Type in CUB.

Alar expanse 14 mm; head damaged; forewing not expanding terminally; ground-colour cream slightly mixed with ochreous; costa suffused grey, strigulated brown, brownish suffusion to cubital arm of median cell, then pale ochreous, atrophying dorsally. Subapical blotch ill-defined, ochreous, accompanied by paler suffusions.

Female genitalia similar to those in *disputabilis* but without bristled posterior arms and with elongate antevaginal sclerite; ductus seminalis dorso-lateral, accessory bursa ventral, extending from distal part of ductus bursae.

**D i s t r i b u t i o n** : Mexico: Baja California Sur.

***Cochylis obtrusa* RAZOWSKI & BECKER, 1983**

*Cochylis obtrusa* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 436, fig. 108 (female genit.). Type-locality: Brazil: Paraná: Morro de Meio. Type in MNRJ.

Alar expanse 16 mm; head missing; thorax yellowish. Forewing ground-colour yellowish cream suffused ochreous and brownish; median fascia dark brown, consisting of subtriangular dorsal blotch and slender costal fascia; subapical and praeternal blotches brown, connected by pale, ochreous brown fascia.

Female genitalia: Sterigma large, with rounded lateral lobes at ostium level followed by smaller posterior lobes; ductus bursae long, rather well sclerotized except for proximal portion; ductus seminalis and accessory bursa ventral.

**D i s t r i b u t i o n :** Brazil: Paraná.

***Cochylis torva* RAZOWSKI & BECKER, 1983**

*Cochylis torva* RAZOWSKI & BECKER, 1983, Acta zool. cracov., **26**(13): 436, figs 109, 110 (female genit.). Type-locality: Brazil: Paraná: Banhado (Quatro Barras). Type in MNRJ.

Alar expanse 14 mm; head and thorax olive-brown, labial palpus 2, tinged ochreous. Forewing not expanding posteriorly; ground-colour olive-cream sprinkled brown, suffusions ochreous; pattern brown-grey, consisting of postbasal and median fasciae followed by black-brown streak at end of median cell; subapical pattern consisting of spots.

Female genitalia: Sterigma membranous, with sclerotized median pit followed by two groups of setae; ductus bursae long, sclerotized except proximal part, with large dorsal sac sclerotized basally; ductus seminalis dorsal, originating at sterigma pit.

**D i s t r i b u t i o n :** Brazil: Paraná.

***Cochylis hospes* WALSINGHAM, 1884**

*Cochylis hospes* WALSINGHAM, 1884, Trans ent. Soc. London, **1884**: 131. Type-locality: U.S.A. North Carolina. Type in NHML. – RAZOWSKI, 1964, Annls zool., Warsz., **22**(16): 2, fig. 84 (female genit. of holotype).

Alar expanse 12-14 mm; head and thorax yellowish, tinged ochreous, labial palpus 2; costal suffusion ochreous; median fascia brown, diffusely spotted black followed by slightly paler suffusion atrophied at costa, then rusty suffusion to blackish brown subapical blotch.

Male genitalia: Tegumen short with minute remnant of uncus; median part of transtilla stout; valva short, broad, slender in dorso-terminal part where marked by 1-2 thorns; sacculus spined, with long, curved free end; aedeagus typical of the genus; cornuti short.

Female genitalia: Sterigma large, densely spined, rounded proximally, with proximal pocket and lateral lobes; ductus bursae slender, sclerotized medially; ductus seminalis ventral, extending from end of corpus bursae; accessory bursa from sclerite of ostium region.

**B i o l o g y .** Food-plant in U.S.A. in sunflower.

**D i s t r i b u t i o n :** U.S.A. (Arizona, Colorado, Illinois, Iowa, Massachusetts, Michigan, New Jersey, New York, North Carolina, Utah, New Mexico) and Mexico: Chihuahua.

**C o m m e n t s .** The male from Mexico (Figs 63, 64) slightly differs from the specimens from the U.S.A. The shape of the transtilla is probably variable (? clinal variation)



and that of the Mexican specimen is slenderer. This species may be synonymous with *Cochylis straminoides* (Grote, 1873) distributed in Canada and U.S.A., but there are some external differences in the breadth of the forewing and the postmedian suffusion. The female genitalia (Figs 97,98) of the Mexican specimen illustrated. Further study of a more extensive material is needed to solve this question.

### *Cochylis pimana* (BUSCK, 1907)

*Phalonia pimana* BUSCK, 1907, J. N.Y. ent. Soc., **15**: 24. Type-locality: U.S.A.: Arizona: Baboquiviera Mts.: Pima Co. Type in NMNH.

Alar expanse 14-16 mm in male, 18 mm in female; head and thorax cream, labial palpus 1.5, tinged brownish, collar and tegula brownish proximally. Forewing expanding terminally, ground-colour cream, slightly variable; pattern rusty: median fascia slender, subterminal blotch variable, with tendency to atrophy; basal half of costa concolorous.

Male genitalia (Figs 65-67): Median part of transtilla expanding postmedially; costal part of valva small; sacculus slightly larger, expanding terminally; very long, curved process of caudal part of valva being probably a part of sacculus; aedeagus large, bent; cornuti very small.

Female genitalia (Figs 98,99): Sterigma, a pair of scobinate, bristled patches beyond ostium; the latter small, in terminal part of long sclerite of ductus bursae; proximal part of ductus forming two small lobes and membranous sac on right side; ductus seminalis extending from membranous part of the ductus bursae, accessory bursa more distal, both dorsal.

**D i s t r i b u t i o n** : U.S.A.: Arizona, Lower California; Mexico.

**C o m m e n t s** . The species is probably variable, showing several forms whose systematic importance is unclear. The differences in female genitalia are rather distinct (specimen from Dominican Republic (Fig. 100) with fairly long sclerite of ductus bursae and Mexican specimen: Tamaulipas: Cd. Victoria (Fig. 101), with very short ductus bursae). As can be seen from the drawings in a paper by POGUE & MICKEVICH (1990) this species represents a new genus (POGUE in litt.). The following species, *yuccatana*, is certainly congeneric. I place the two species in *Cochylis* until a description of the new genus is published.

### *Cochylis yuccatana* (BUSCK, 1907)

*Phalonia yuccatana* BUSCK, 1907, J.N.Y. ent. Soc., **15**(1): 23. Type-locality: U.S.A.: Texas: Nuecestown. Type in NMNH.

Alar expanse 14-16mm; head, forewing ground-colour and thorax white-cream; strigulation of wing blackish; median fascia narrowing (or interrupted) subcostally and subdorsally, yellowish-olive, edged and strigulated black.

Male genitalia (Figs 68-71) as in *pimana* but transtilla smaller and caudal process of valva much shorter, less curved.

Female genitalia of American specimen not examined. The Mexican example from Baja California Sur (La Paz) differs from *pimana* in much broader sclerotized part of ductus bursae, the shape of its proximal lobes and in larger membranous sterigma, without scobinate patches.

**B i o l o g y** . Host is *Yucca baccata*.

**D i s t r i b u t i o n** : U.S.A.: Texas, California; Mexico: Baja California Sur.

Unplaced *COCHYLINI* (the species arranged alphabetically)*Phalonia arizela* WALSINGHAM, 1914

*Phalonia arizela* WALSINGHAM, 1914, Biol. Cent.-Am. Lepid., *Heterocera*, **4**: 295, pl.9, fig. 4 (moth). Type-locality: Panama: Volcan de Chiriqui. – RAZOWSKI, 1964, Annls zool., Warsz., **22**(116): 383, fig. 81 (female genit of type). Type in NHML.

Alar expanse 20 mm; head straw-white, labial palpus rust-brown to middle; thorax ferruginous. Forewing broadest medially; ground-colour straw-yellowish; pattern rust brown: small basal blotch, median fascia extending from mid-costa to before tornus, slender medially, followed by some concolorous spots, last ones in a subapical row.

Female genitalia: Sterigma with postvaginal arms slender and cup-shaped part short, well sclerotized; ductus bursae short; corpus bursae with lateral plicate sclerite in postmedian area, accompanied by belt of spines.

**D i s t r i b u t i o n** : Panama.

**C o m m e n t s** . The re-examination of this species is needed; judging from the female genitalia its tribal position is not certain.

*Phtheochroa arrhostia* CLARKE, 1968

*Phtheochroa arrhostia* CLARKE, 1968, Proc. U.S. natn. Mus., **125**(3660): 56, fig. 30 (female genit.), pl. 3, fig. 5 (photogr.). Type-locality: Peru: Cusco: Machu Picchu. Type in NMNH.

Alar expanse 10-11 mm; head and thorax white, labial palpus 1.3, greyish. Forewing ground-colour glossy white with yellowish cream hue; suffusions brownish or ochreous; costa suffused brownish grey, median fascia darker, preserved in costal half; subapical fascia slender, concolorous, both darkest at costa. Variation: Thorax and forewing may be more ochreous-olive, sprinkled black.

Female genitalia: Interpretation of the original drawing impossible.

**D i s t r i b u t i o n** : Peru: Cusco (moth collected at an altitude of 2385 m.)

*Saphenista bunteoides* FORBES, 1931

*Saphenista bunteoides* FORBES, 1931, J. Dept. Agric. Porto Rico, **4**: 353, pl. 42, fig. 3 (forewing). Type-locality: Puerto Rico: Cioamo Springs. Type in CU. – *Conchylis bunteana*: WALSINGHAM, 1891, Proc. zool. Soc. London, **1891**: 501; 1897, *ibid.*, **1897**: 139 as *Thyraylia*; misidentif.

Alar expanse 10 mm; head and thorax cream, labial palpus over 1, more brownish to before end. Basal half of forewing cream, distal part suffused rust, with refractive marks; median fascia brown at costa interrupted (paler) subcostally and beyond middle, with brown median streak and black-brown dorsal blotch; brown spot at end of median cell; subapical fascia brown, atrophying costally; fringes yellow.

Genitalia and **b i o l o g y** unknown.

**C o m m e n t s** . The above redescription is based on the specimen from Puerto Rico: Utuado (coll. NMNH), which well matches the figure in the original description.

*Cochylis caesiata* CLARKE, 1968

*Cochylis caesiata* CLARKE, 1968, Proc. U.S. natn. Mus., **125**(3660): 18, fig. 9, pl.3, fig.4. Type-locality: Venezuela: Aragua: Rancho Grande. Holotype in coll. NMNH.

This species is most probably transferable to *Euliini*, however, as long as the male remains unknown it is impossible to decide as to its generic position.

*Phtheochroa calyptrophanes* MEYRICK, 1932

*Phtheochroa calyptrophanes* MEYRICK, 1932, Exot. Microlepid., 4: 266. Type-locality: S. Peru: Madre de Dios. Type in NHMW. – RAZOWSKI, 1964, Annls zool., Warsz., 22(21): 478, fig. 79 (female genit. of holotype).

Alar expanse 18 mm; head and thorax whitish, labial palpus 2, distal part of thorax tinged ochreous. Forewing broad with basal half brownish, diffusely spotted brown; distal area white, glossy, with indistinct brownish lines; subapical fascia and terminal spots brownish.

Female genitalia: Sterigma membranous with pair of rounded scobinate areas beyond a broad cup-shaped formation (sterigma or colliculum); antevaginal margin small; ductus bursae with some sclerites and spines extending to middle of corpus bursae; dorsal sac originating from middle of sclerite.

**D i s t r i b u t i o n :** Peru.

*Phalonia charma* CLARKE, 1968

*Phalonia charma* CLARKE, 1968, Proc. U.S. natn. Mus., 125(3660): 16, fig. 8 (female genit.), pl. 3, fig. 7 (photogr. of holotype). Type-locality: Argentina: Tucuman: Ciudad Universitaria. Type in NMNH.

Alar expanse 14 mm; head and thorax whitish, labial palpus 2, greyish to before end; forewing costa distinctly convex. Ground-colour whitish, costa grey to middle, more brownish towards apex where spotted brown-grey; median fascia as a short costal blotch and subtriangular dorsal blotch, brownish grey spotted brown-grey.

Female genitalia: Cup-shaped part of sterigma broad, postvaginal part transversely convex at the end; ductus bursae shorter than cup-shaped part; accessory bursa ventral, ductus seminalis probably lateral, both originating in corpus bursae.

**D i s t r i b u t i o n :** Argentina: Tucuman (moth collected at 800 m, in February).

*Cochylis constantia* CLARKE, 1968

*Cochylis constantia* CLARKE, 1968, Proc. U.S. natn. Mus., 125(3660): 22, fig. 11 (female genit.), pl. 4, fig. 8 (photogr. of holotype). Type-locality: Peru: Cusco: Machu Picchu. Type in NMNH.

Alar expanse 17 mm; head grey, thorax fuscous grey, labial palpus 1.5, blackish. Forewing slender; ground-colour white, in basal half slightly tinged cream; strigulation grey; pattern darker, spotted black, consisting of basal blotch connecting costal spot, broad dorsal blotch coalesced with tornal blotch extending to subapical fascia; apex area white; hindwing whitish with brown-grey strigulation.

Female genitalia: Anteostial sterigma, a slender margin connected with cup-shaped part, rather well sclerotized ventrally; ductus bursae short; accessory bursa dorsal, extending from end of the former; sclerites in ductus bursae and posterior half of corpus bursae, spines mainly in its median part.

**D i s t r i b u t i o n :** Peru: Cusco (moth collected in February at 2700 m).

*Phtheochroa deltochlaena* MEYRICK, 1930

*Phtheochroa deltochlaena* MEYRICK, 1930, Exotic Microlepid., 3: 591. Type-locality: Bolivia: Department Santa Cruz: Rio Suruta; lectotype in coll. NHML.

This species is known from two examples, the type lacks the abdomen. The systematic position is unclear.



***Phalonia embrithopa* MEYRICK, 1927**

*Phalonia embrithopa* MEYRICK, 1927, Exotic Microlepid., **3**: 366. Type-locality: Colombia: Mt. Tolima. Lectotype in coll. NHML.

This species requires re-examination. It probably represents a distinct genus related to *Tambomachaya*. Its male genitalia are figured by CLARKE, 1958: 27.

***Phtheochroa ersodes* MEYRICK, 1927**

*Phtheochroa ersodes* MEYRICK, 1927, Exot. Microlepid., **3**: 367. Type-locality: Colombia: San Antonio. Type in NHML. – *Aethes ersodes*: CLARKE, 1963, Cat. Microlepid. MEYRICK, **4**: 3, pl. 1, figs 1-1b (photogr., male genit. of holotype).

Alar expanse 22 mm; head white, thorax yellower. Forewing apex broad, rounded; ground-colour cream; costal strigulation brownish, distal area more yellow-grey, with brownish and grey spots and fasciae, the subapical fascia to termen; median fascia, a costal blotch browner; spot at end of median cell.

Male genitalia: Socius broad basally, with long, very slender remaining part; median part of transtilla slender; valva up-curved, slender; sacculus without free termination; aedeagus longer than valva; caulis subterminal; cornutus more than half its length.

**D i s t r i b u t i o n** : Colombia (moth collected in February at 6600 feet).

***Lasiothyris hemitephras* CLARKE, 1968**

*Lasiothyris hemitephras* CLARKE, 1968, Proc. U.S. natn. Mus., **125**(3660): 51, fig. 27 (male genit.), pl. 3, fig. 1 (photogr. of holotype). Type-locality: Mexico: Tehuacan. Type in NMNH.

Alar expanse 16-18 mm; head and thorax dirty cream, front paler, labial palpus 2, more brownish. Forewing slender, in proximal 2/3 greyish, strigulated blackish; median fascia indistinct, ochreous-cream; distal third of wing cream-ochreous, strigulated darker, dotted blackish.

Female genitalia: Sterigma probably membranous; ostium broad; membranous sac before the ostium; ductus bursae broad, sclerotized, with two ventral folds; ductus seminalis extending from corpus bursae.

**D i s t r i b u t i o n** : Mexico: Federal District.

**C o m m e n t s** . The presence of the subgenital sac and broad, sclerotized ductus bursae may speak of its affinity with *Cochylis*. Unfortunately other features are insufficiently well seen in the genitalia, and the original drawing is poor.

***Cochylis prolectana* MÖSCHLER, 1890**

*Cochylis prolectana* Möschler, 1890, Abh. Senck. naturf. Ges., **16**: 332. Type-locality: Puerto Rico. – *Conchylis prolectana*: WALSINGHAM, 1891, Proc. zool. Soc. London, **1891**: 500; 1892, *ibid.*, **1882**: 543. – *Phalonia? prolectana*: WALSINGHAM, 1897, *ibid.*, **1897**: 138. – WOLCOTT, 1923, J. Dept. Agr. Porto Rico, **7**: 201. – FORBES, 1930, Insects of Porto Rico **12**(1): 94 (synonymy).

***Cochylis tectoniana* MÖSCHLER, 1890**

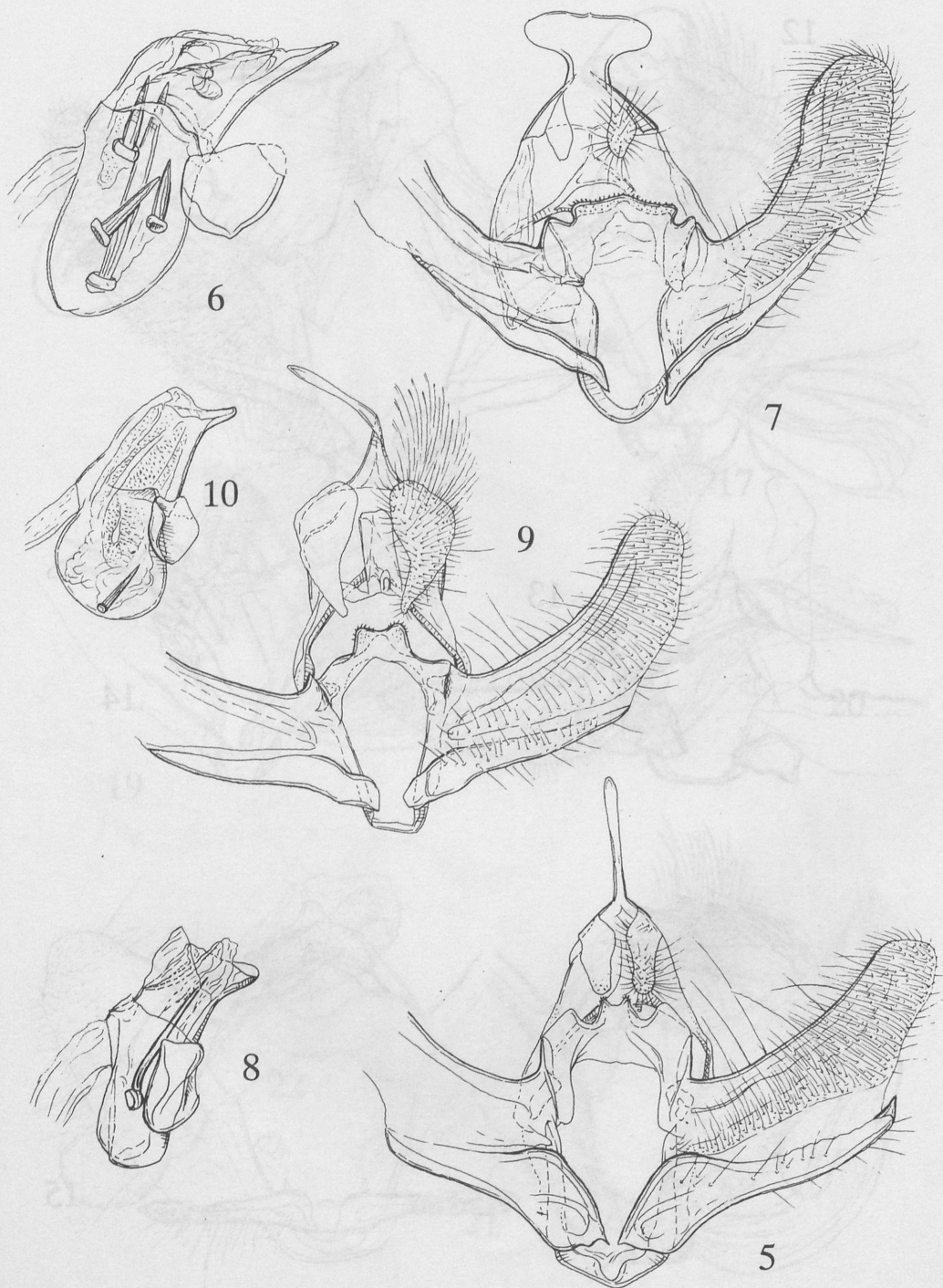
*Cochylis tectoniana* MÖSCHLER, 1890, Abh. Senck. naturf. Ges., **16**: 332. Type-locality: Puerto Rico. – WALSINGHAM, 1891, Proc. zool. Soc. London, **1892**: 501; 1892, *ibid.*, **1892**: 543. – *Phalonia tectoniana*: WALSINGHAM, 1897, *ibid.*, **1897**: 138; WOLCOTT, 1923, J. Dept. Agr. Porto Rico, **7**: 201. – FORBES, 1930, Insects of Porto Rico **12**(1): 95 (redescription).

*Cochylis vicinitana* MÖSCHLER, 1890

*Cochylis vicinitana* MÖSCHLER, 1890, Abh. Senck. naturf. Ges., **16**: 137. Type-locality: Puerto Rico. – *Conchylis vicinitana* WALSINGHAM, 1891, Proc. zool. Soc. London., **1891**: 501; 1892, *ibid.*, **1892**: 543. – *Phalonia vicinitana*: WALSINGHAM, 1897, *ibid.*, **1897**: 138. – WOLCOTT, 1923, J. Dept. Agr. Porto Rico, **7**: 201. – FORBES, 1930, Insects of Porto Rico, **12**(1): 96 (redescription).

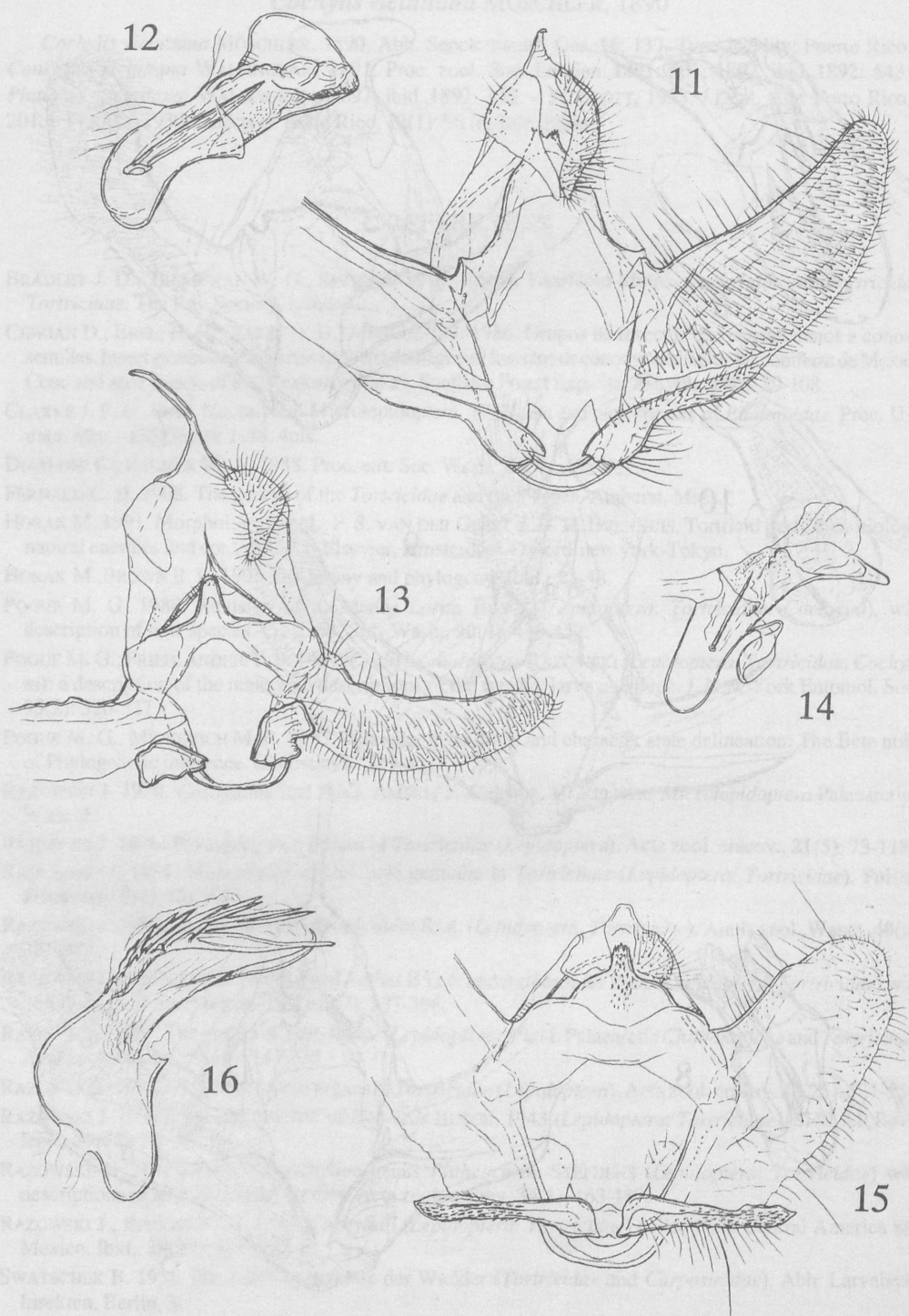
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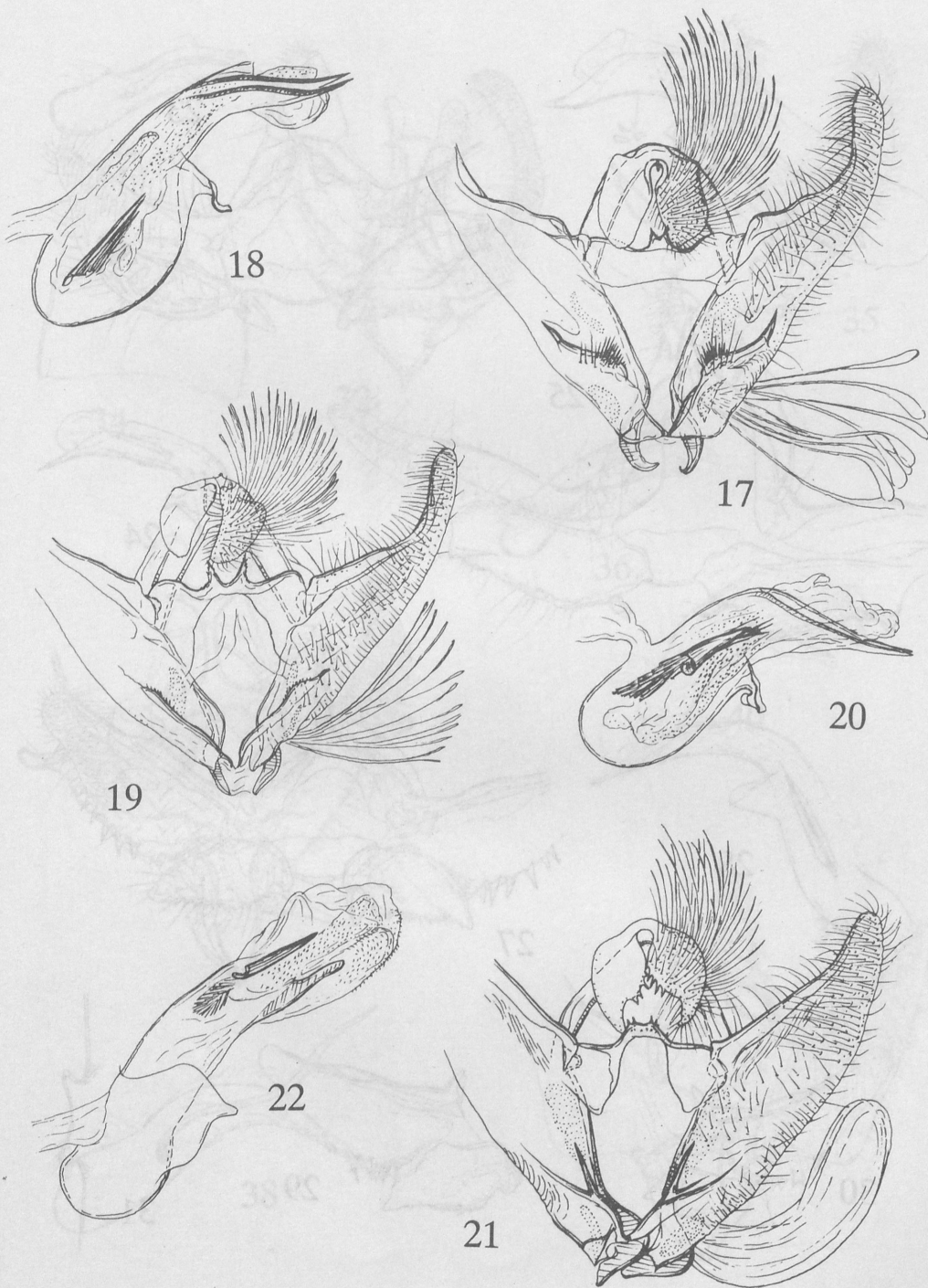


Figs 5-10. Male genitalia of *Phtheochroa* STEPHENS: 5,6 – *Ph. meraca* (RAZOWSKI), Mexico: Puebla; 7,8 – *Ph. chlidantha* sp.n., holotype; 9,10 – *Ph. amphibola* sp.n., paratype, Mexico: Puebla.

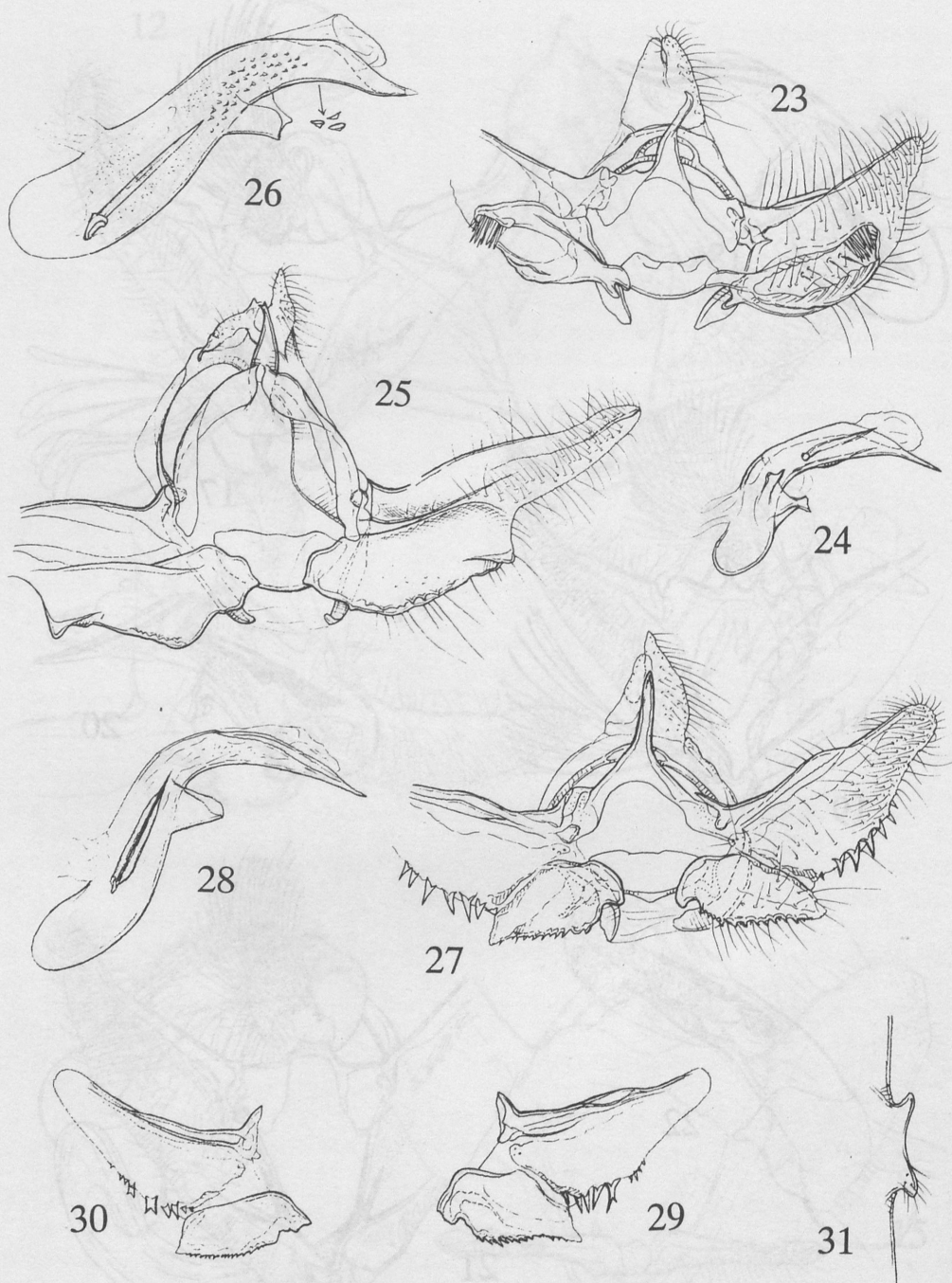




Figs 11-16. Male genitalia of *Phtheochroa* STEPHENS: 11,12 – *Ph. haplidia* RAZOWSKI, Mexico: Zacotecas; 13,14 – *Ph. sp.* near *superbissima* RAZOWSKI, Mexico: Juchitepec; 15,16 – *Ph. thaumantias* sp.n., holotype.

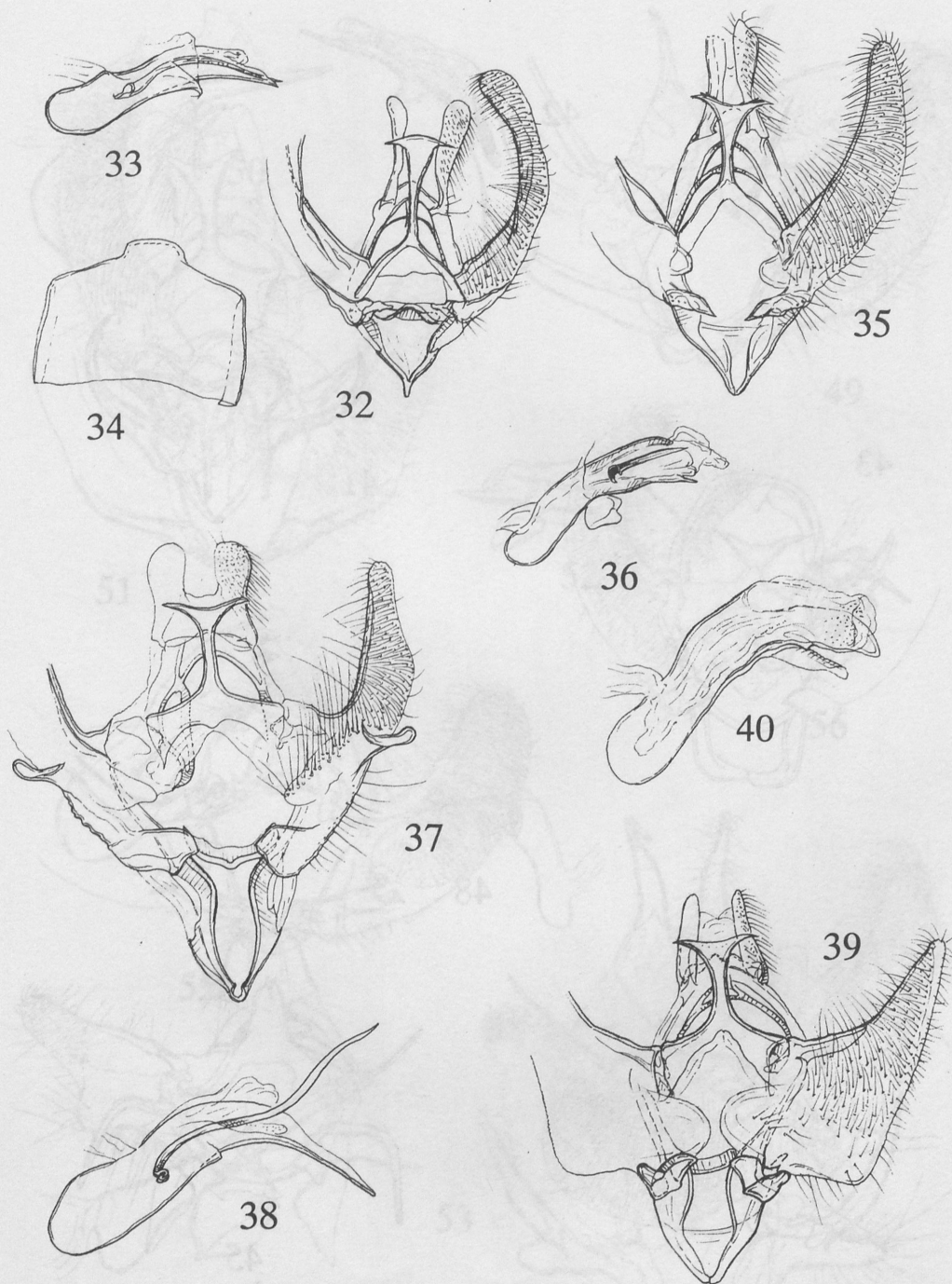


Figs 17-22. Male genitalia of *Henricus* BUSCK: 17,18 – *H. exsanguis* sp.n., holotype; 19,20 – *H. generosus* sp.n., holotype; 21,22 – *H. flebilis* sp.n., holotype

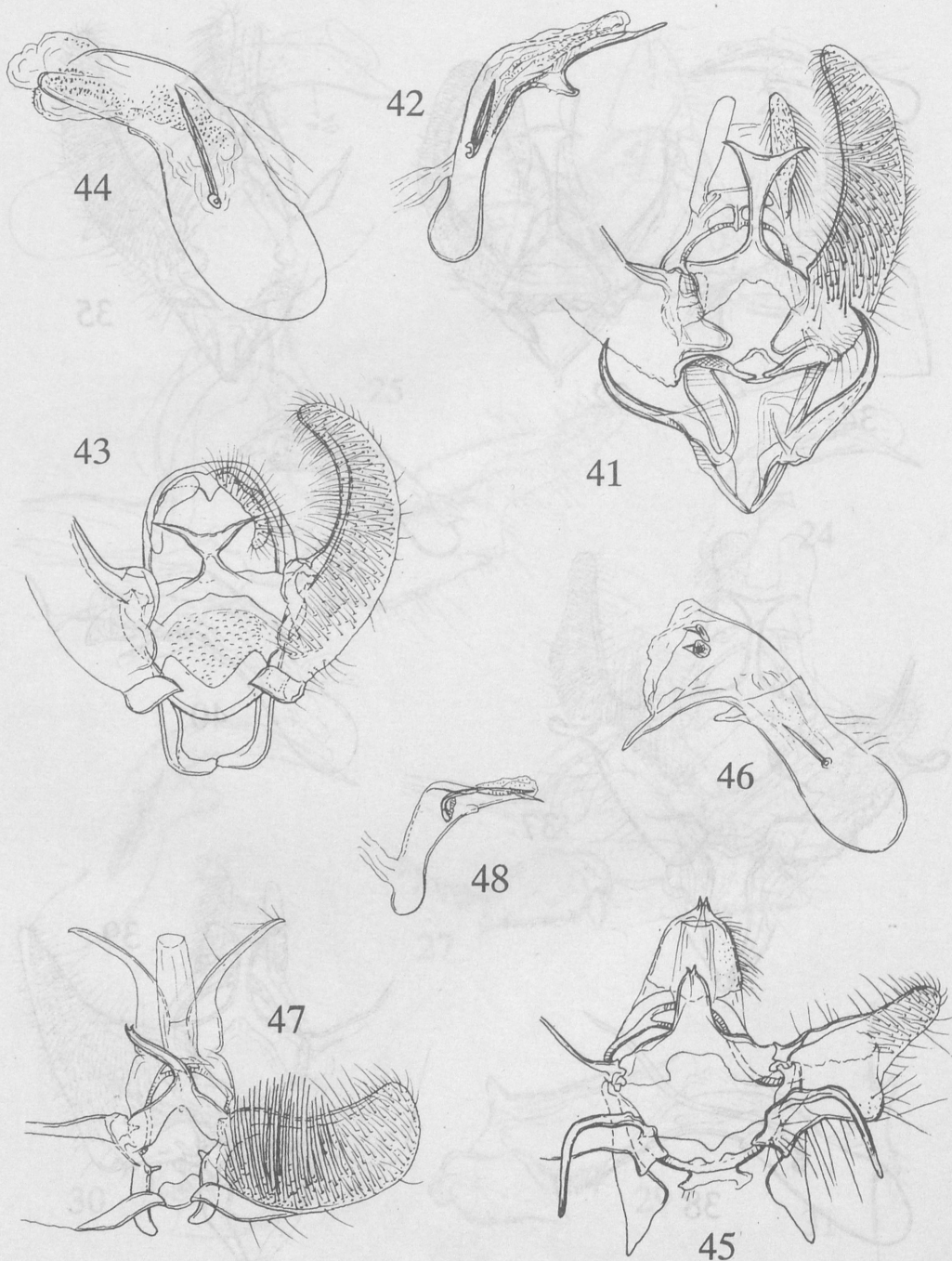


Figs 23-31. Male genitalia and scent organ of *Phalonidia* LE MARCHAND: 23,24 – *Ph. aetheria* RAZOWSKI, Brazil: Santa Catarina; 25,26 – *Ph. loipa* sp.n., holotype; 27,28 – *Ph. nonaxyra* sp.n., holotype, 29,30 – valvae of same species, paratype, 31 – scent organ of same specimen.

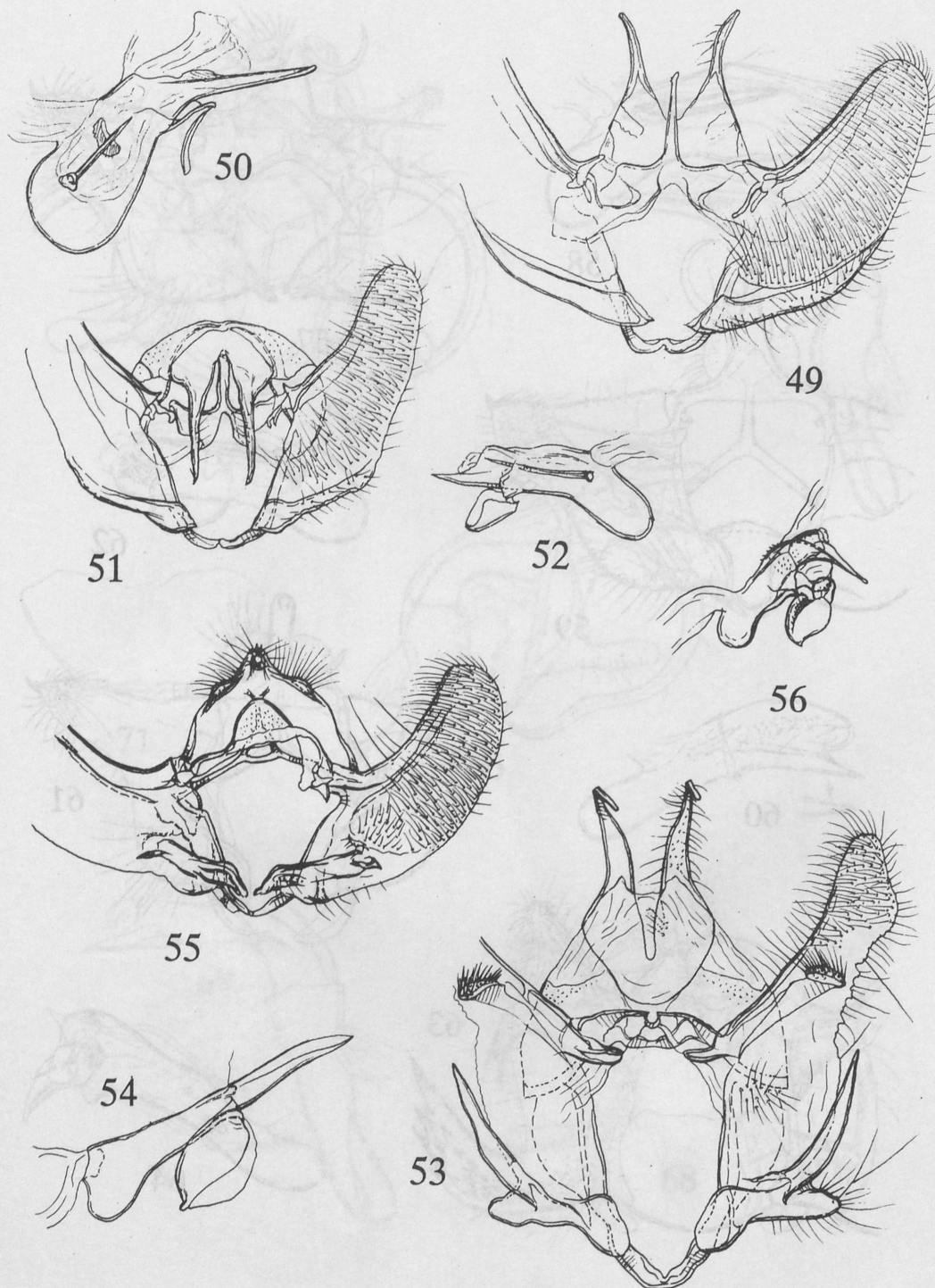




Figs 32-40. Male genitalia and scent organ of *Saphenista* WALSINGHAM: 32,33 – *S. discrepans* sp.n., holotype;  
 34 – scent organ of same specimen; 35,36 – *Ph. phenax* sp.n., holotype; *Ph. rawlinsiana* sp.n., holotype;  
 39,40 – *Ph. solda* sp.n., holotype.

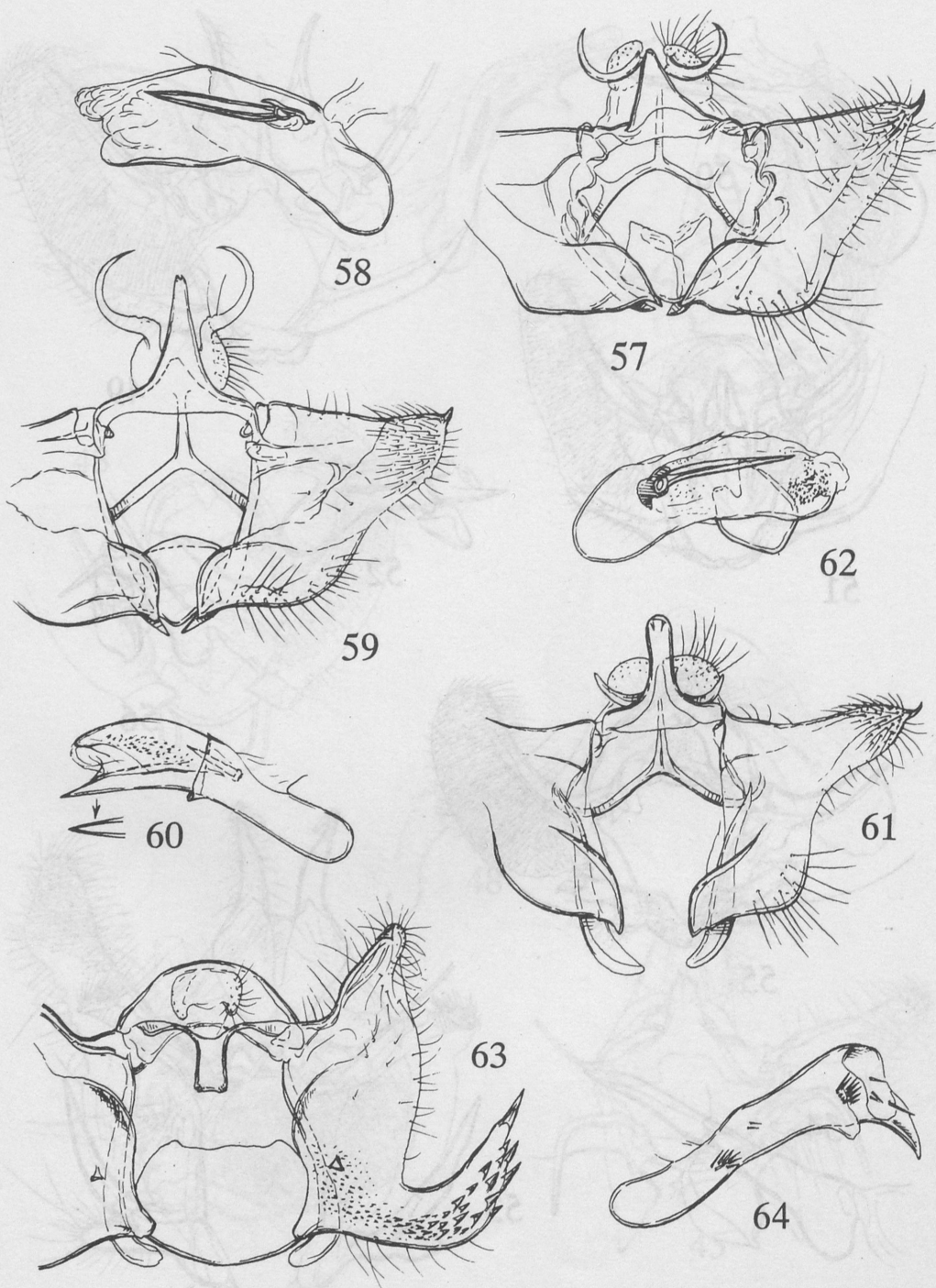


Figs 41-48. Male genitalia: 41,42 – *Saphenista* ?*cnemiodota* sp.n., Mexico: Veracruz; 43,44 – *Amallectis* *devincta* MEYRICK, holotype; 45,46 – *Mourecochylis* sp. near *affecta* (RAZOWSKI), Costa Rica; 47, 48 – *Mimeugnosta* *chascax* sp.n., holotype.

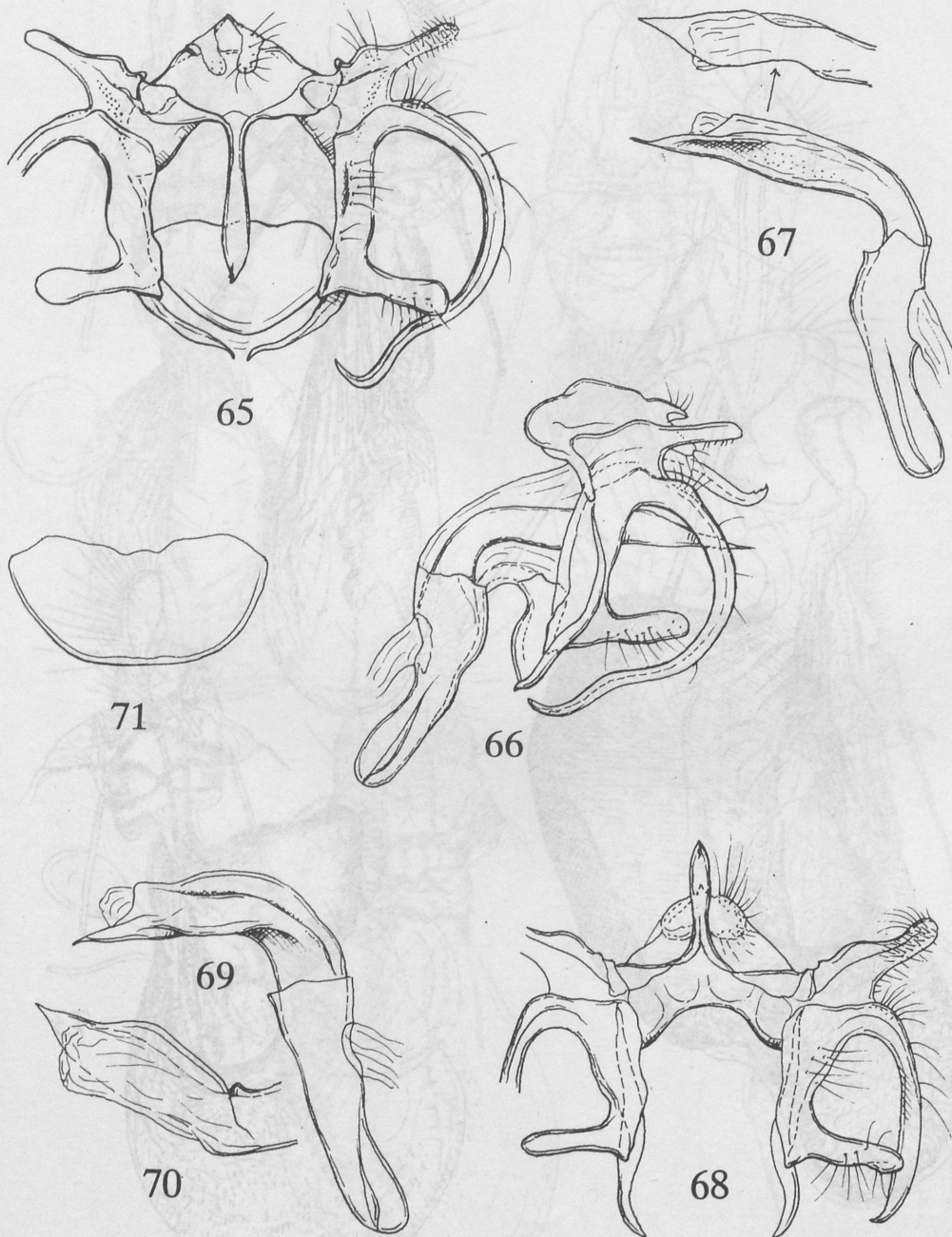


Figs 49-56. Male genitalia: 49,50 – *Eugnosta sebasta* sp.n., holotype; 51,52 – *E. chromophanes* sp.n., holotype; 53,54 – *Acarolella gentilis* sp.n., holotype; 55,56 – *Tenoa curicoana* sp.n., holotype.

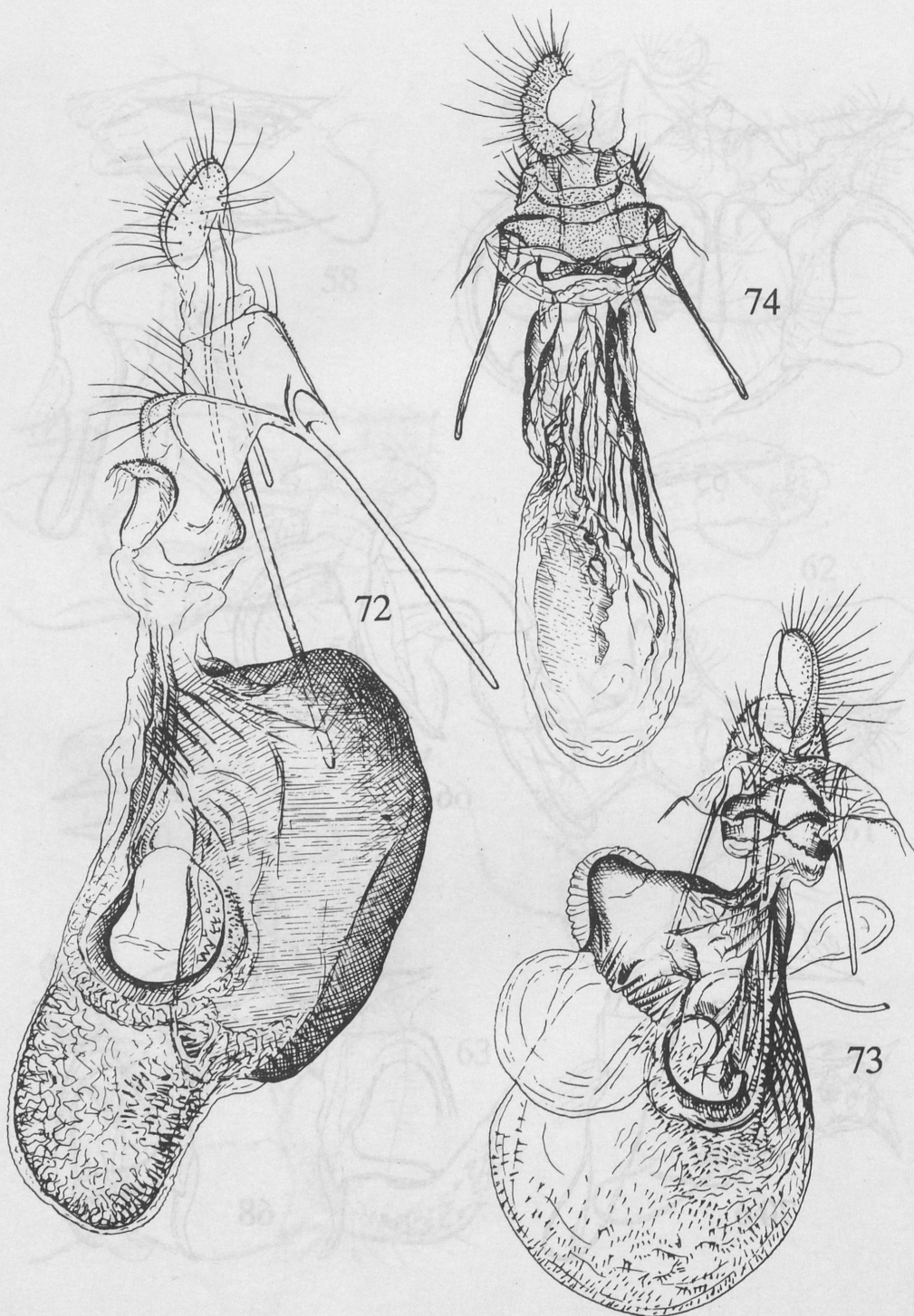




Figs 57-64. Male genitalia: 57,58 – *Aethes sonorae* (WALSINGHAM), holotype; 59,60 – *Ae. ignobilis* sp.n., holotype; 61,62 – *Ae. olibra* sp.n., holotype; 63,64 – *Cochylis hospes* (WALSINGHAM), Canada: Ottawa.

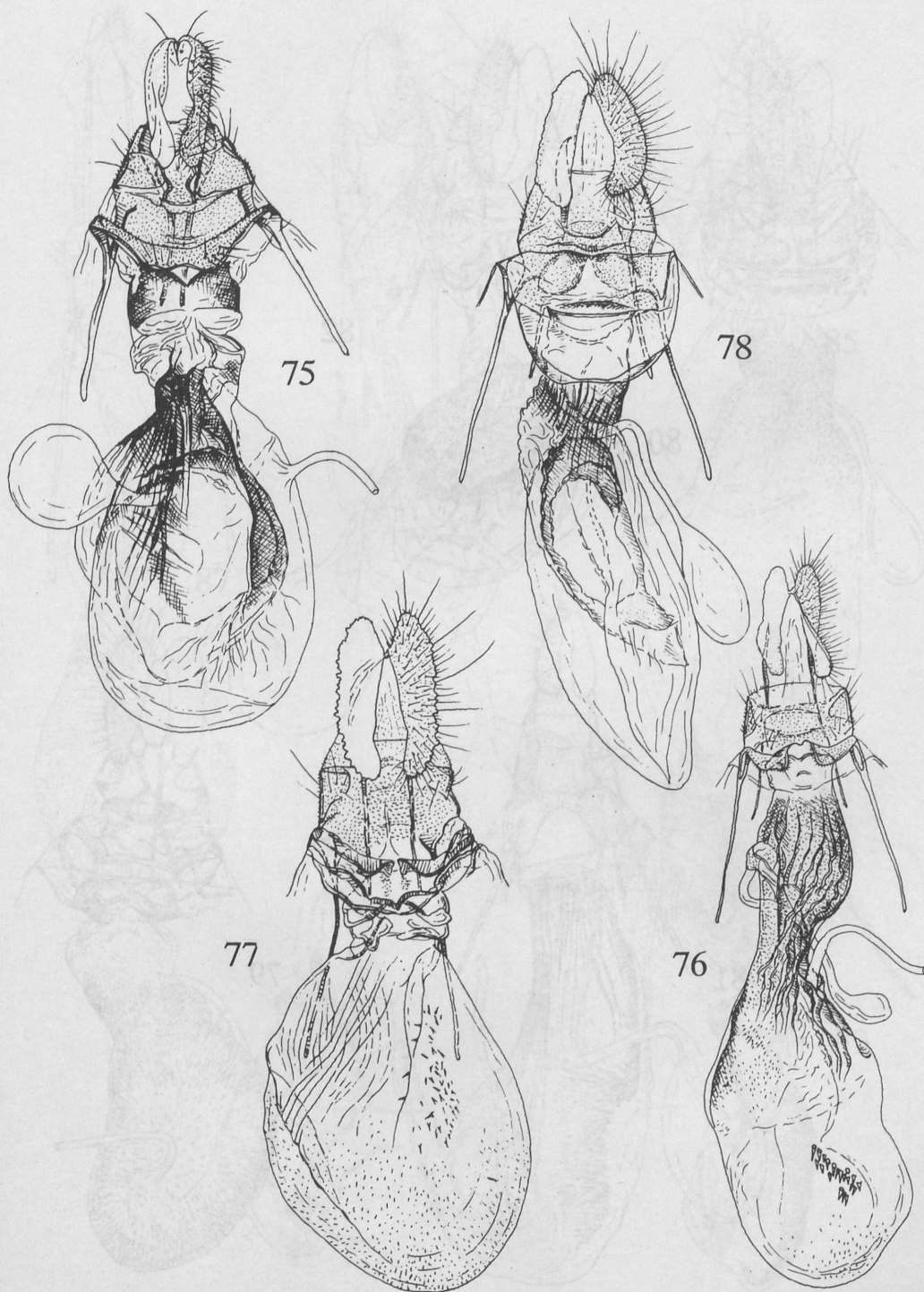


Figs 65-71. Male genitalia: 65-67 – *Cochylis pimana* (BUSCK), USA: Arizona: Rita Mts; 68-71. *C. yuccatana* (BUSCK), USA: California: San Diego Co.

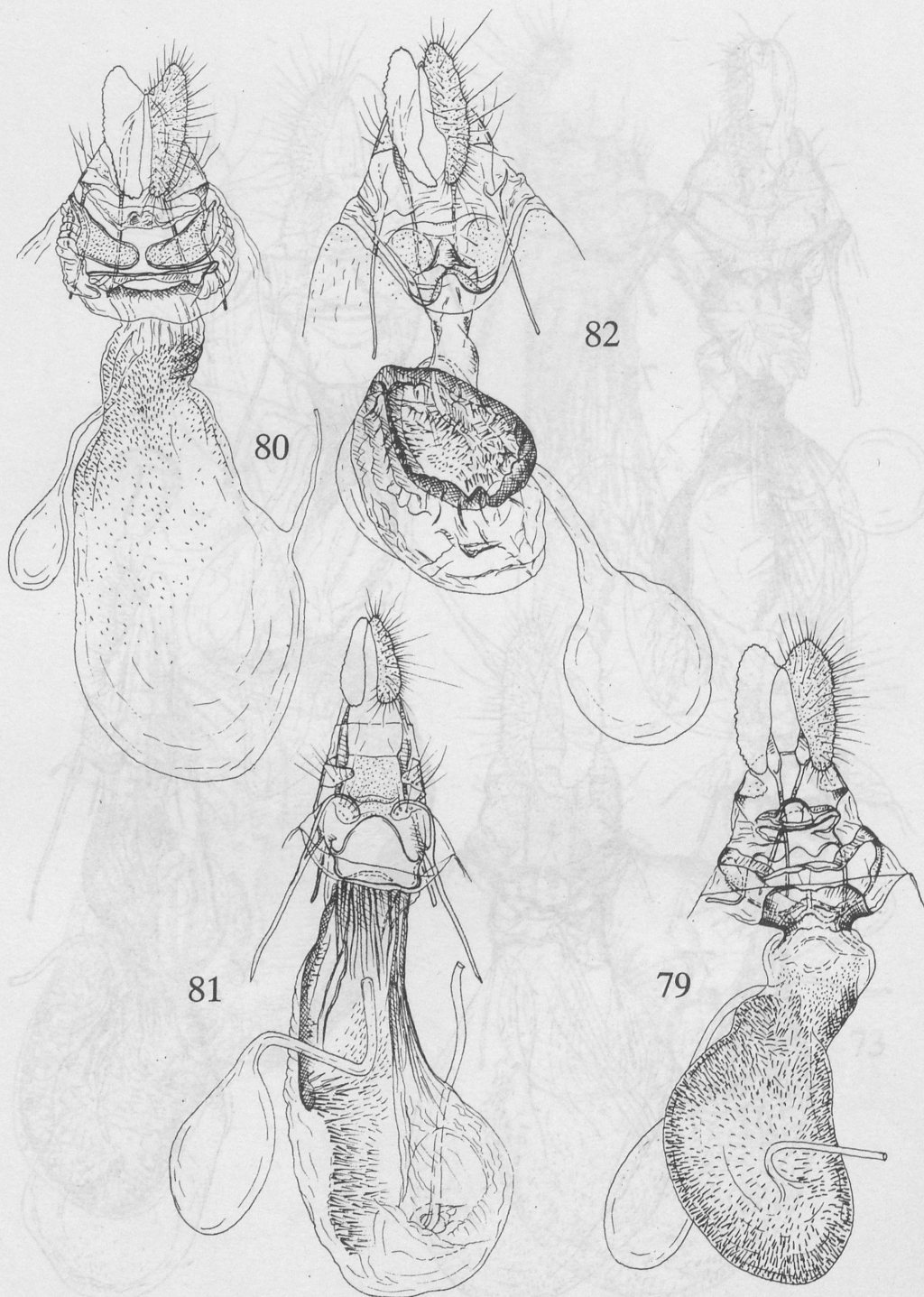


Figs 72-74. Female genitalia of *Phtheochroa* STEPHENS: 72 – *Ph. gigantea* (BUSCK), holotype; 73 – *Ph. meraca* (RAZOWSKI), Mexico: Puebla; 74 – *Ph. amphibola* sp.n., paratype.

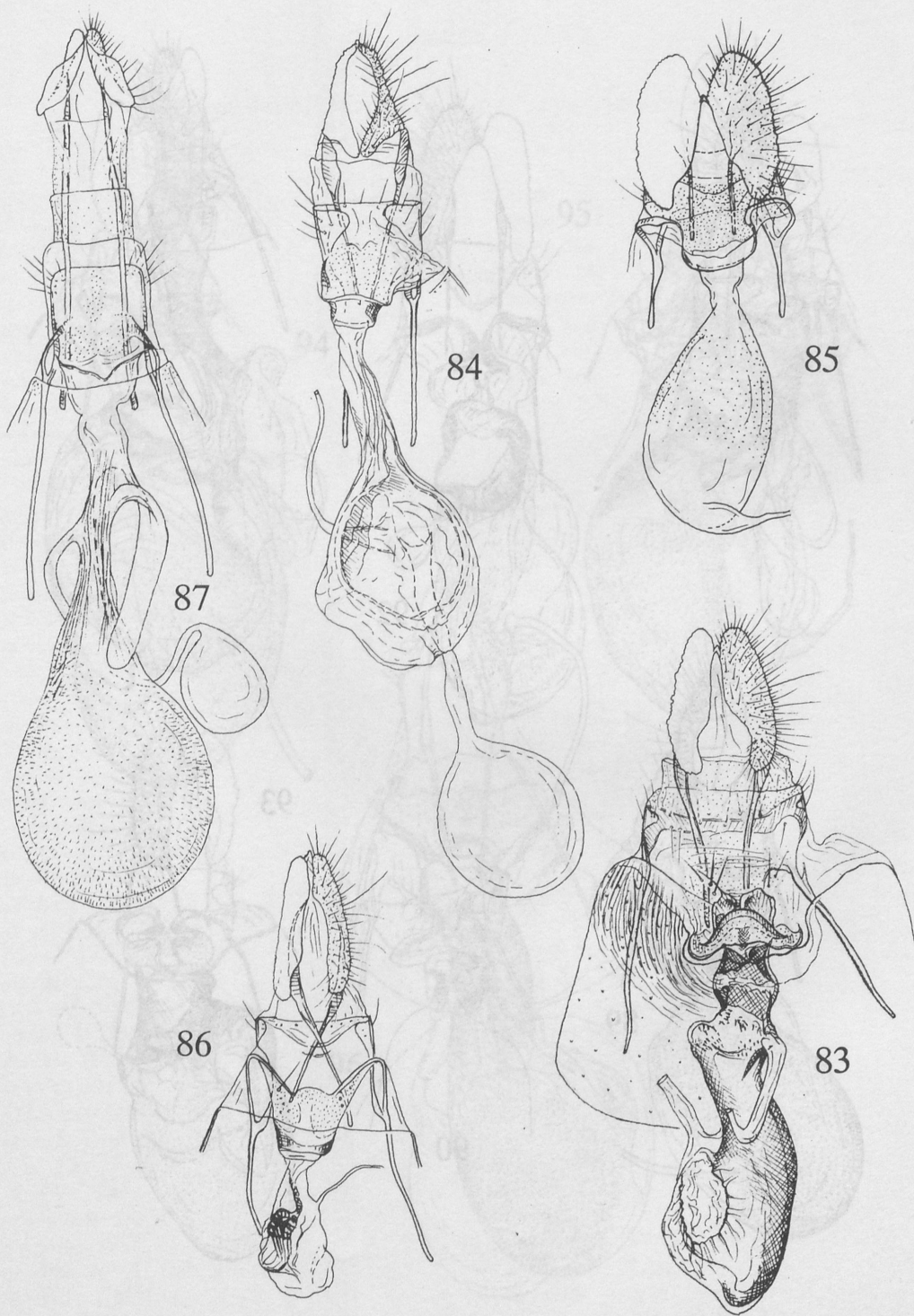




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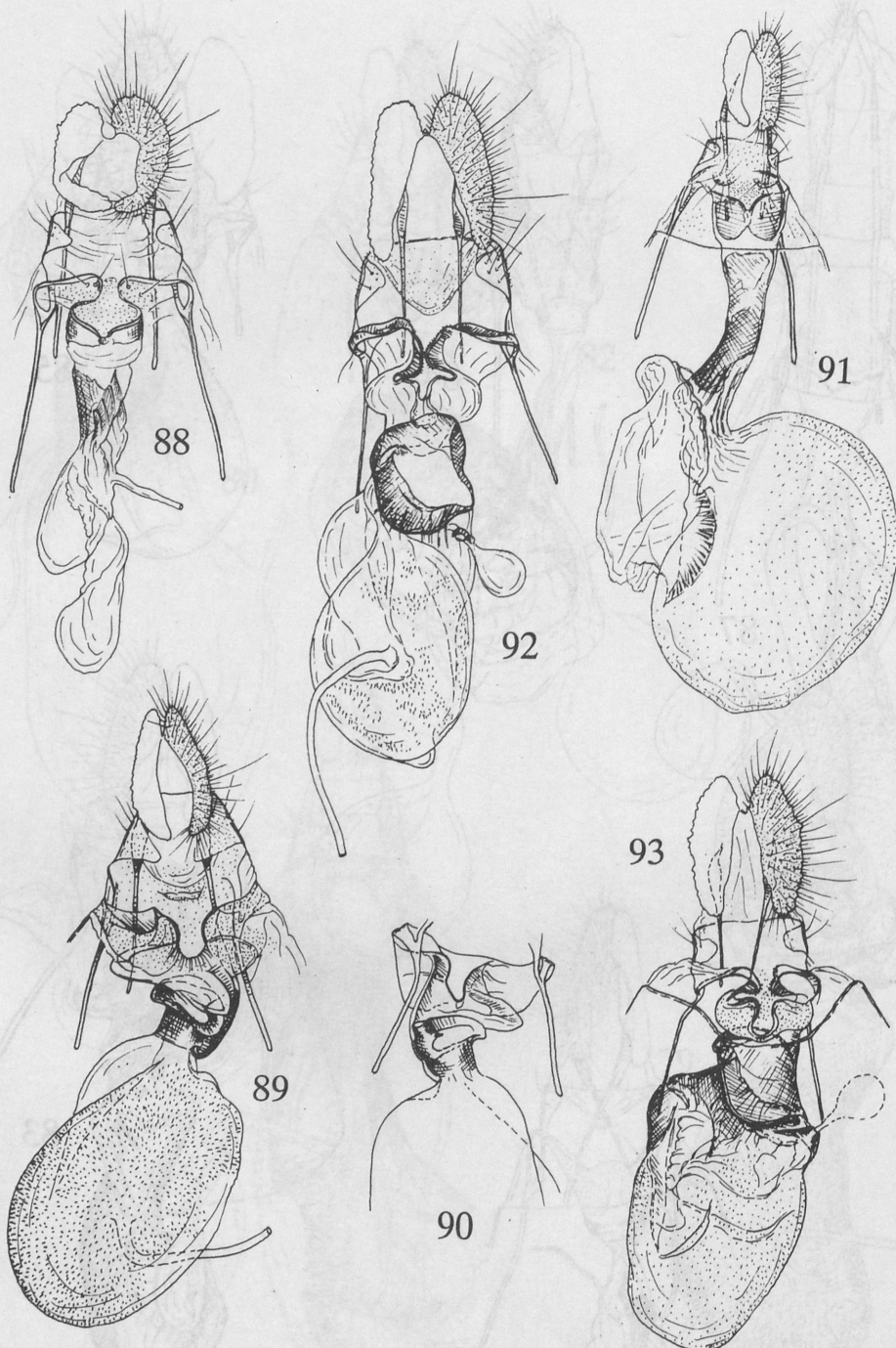


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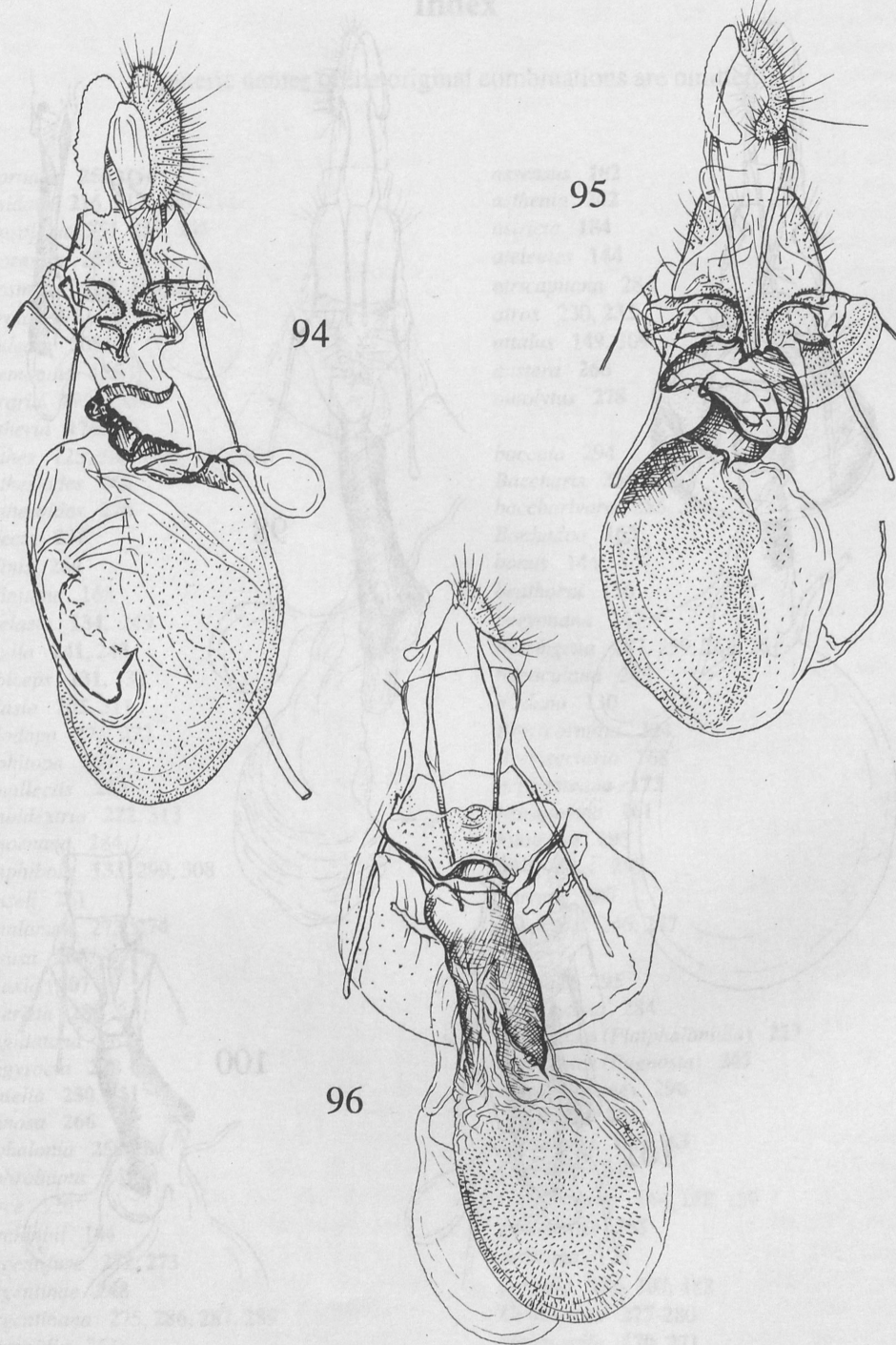
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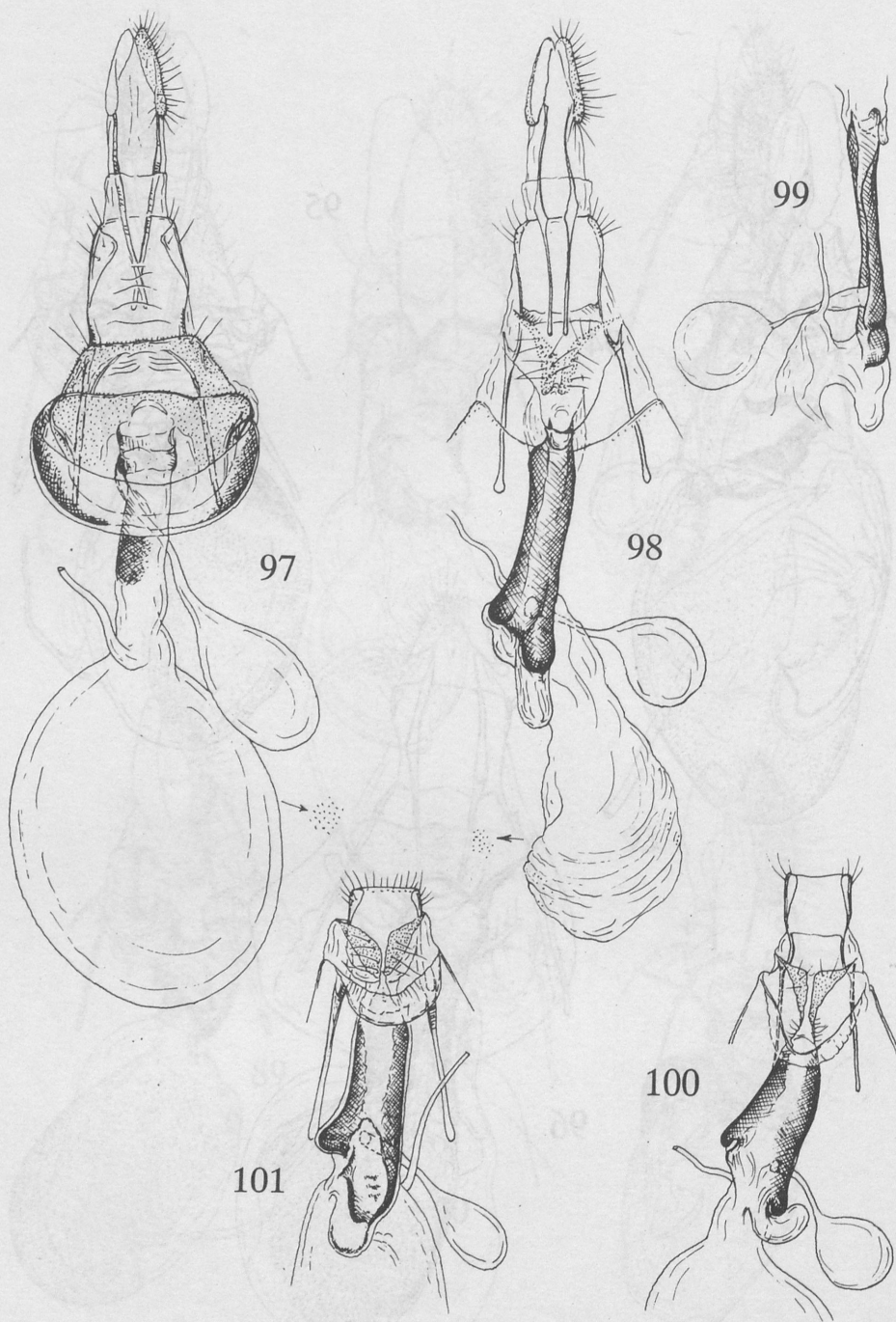


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Chapter: OSBORN J. W. 1978. Morphogenetic gradients: fields versus clones. In: P. M. BUTLER and K. A. JOYSEY (Eds.) – Development, function and evolution of teeth. Academic Press, London-New York-San Francisco. Pp: 171-201.

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