

## Tortricidae collected in Ecuador in the years 1996–1999: Archipini and Atteriini (Lepidoptera)

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**Abstract:** This is the fourth paper treating the Tortricidae collected in Ecuador in 1996–1999. We list 14 species of Archipini and 12 species of Atteriini. 8 species of Archipini are described as new: *Argyrotaenia onorei* sp. n. (HT: ♀), *Argyrotaenia scotina* sp. n. (HT: ♂), *Clepsis lineata* sp. n. (HT: ♂), *Clepsis tassa* sp. n. (HT: ♀), *Clepsis brunneograptia* sp. n. (HT: ♂), *Clepsis browni* sp. n. (HT: ♂), *Clepsis fraterna* sp. n. (HT: ♂) and *Clepsis assensus* sp. n. (HT: ♂). 8 species of Atteriini are described as new: *Archipimima archipiforma* sp. n. (HT: ♂), *Sisurcana chromotarpa* sp. n. (HT: ♂), *Sisurcana topina* sp. n. (HT: ♂), *Sisurcana holographa* sp. n. (HT: ♂), *Sisurcana atterimima* sp. n. (HT: ♂), *Sisurcana margaritae* sp. n. (HT: ♂), *Sisurcana heredographa* sp. n. (HT: ♂), and *Sisurcana procidua* sp. n. (HT: ♂). New combinations for 3 species of Atterini are proposed: *Archipimima tylonota* (MEYRICK, 1932), n. comb., *Sisurcana aluminias* (MEYRICK, 1912), n. comb. and *Sisurcana citrochryta* (MEYRICK, 1926), n. comb. Holotypes of new species are at present in the collection of the Institute of Systematics and Evolution of Animals PAS, Kraków, Poland, but eventually will be deposited in the Senckenberg-Museum, Frankfurt am Main, Germany.

**Key words:** Lepidoptera, Tortricidae, Archipini, Atterini, Ecuador, new taxa.

### Tortricidae gesammelt in Ecuador in den Jahren 1996–1999: Archipini und Atteriini (Lepidoptera)

**Zusammenfassung:** Im vorliegenden vierten Artikel über die von 1996 bis 1999 in Ecuador gesammelten Tortricidae werden die Vertreter der Tribus Archipini und Atteriini behandelt. Es konnten 14 Archipini-Arten und 12 Atteriini-Arten nachgewiesen werden, von denen 8 Archipini- und 8 Atteriini-Arten neu beschrieben werden. Die Holotypen der neuen Taxa befinden sich zur Zeit in der Sammlung des Institute of Systematics and Evolution of Animals PAS, Kraków, Polen, und werden letztlich an das Forschungsinstitut und Natur-Museum Senckenberg, Frankfurt am Main, Deutschland, gelangen. In der Liste der neuen Taxa im englischen Abstract wird in Klammern das Geschlecht des Holotypus angegeben (siehe im Abstract).

### Tortricidae coleccionadas en Ecuador en los años 1996–1999: Archipini and Atteriini (Lepidoptera)

**Resumen:** En éste artículo, la cuarta parte de “Tortricidae de Ecuador”, se presenta datos de 14 especies de Archipini y 12 especies de Atteriini. Se describen 8 nuevas especies de Archipini y 8 nuevas especies de Atteriini. Los holotipos de las especies nuevas estan por ahora en la colección del Institute of Systematics and Evolution of Animals PAS, Kraków, Polonia, pero determinados ultimamente para el Senckenberg-Museum, Frankfurt am Main, Alemania. La lista de las taxas nuevas se encuentra en el resumen ingles.

## Introduction

This is the fourth in a series of papers dealing with Tortricidae collected in Ecuador by the second author in 1996–1999. The first (RAZOWSKI & PELZ 2001) treated Tor-

tricini and Cochylini; the second (RAZOWSKI & PELZ 2002) treated one species of Endotheniina (Olethreutini); the third (RAZOWSKI & PELZ 2003) Euliini. The purpose of this paper is to present data on Archipini and Atteriini, including the descriptions of 16 new species. General information on the study area, such as maps, list of collecting sites, etc., is included in the first paper.

Holotypes of the new species are at present in the collection of the Institute of Systematics and Evolution of Animals PAS, Kraków, Poland, and eventually will be deposited via CVPR in the Senckenberg-Museum, Frankfurt am Main, Germany.

**Note.** Numbers included in descriptions of the labial palpus refer to the proportion of their total length to the horizontal diameter of the compound eye.

### Abbreviations:

- > road from > to
- CREA Centro de Reconversión Económica del Austro (Azuay, Cañar y Morona-Santiago, Ecuador)
- CVPR Collection Volker PELZ, Ruppichteroth, Germany
- Gral. General
- GS Genitalia slide
- HT Holotype
- ISEZ Institute of Systematics and Evolution of Animals PAS, Kraków, Poland
- BMNH The Natural History Museum, London (formerly British Museum (Natural History))
- PAS Polish Academy of Sciences
- PN National Park
- Prov. Province
- Pto. Puerto
- PUCE Museo de Zoología, Centro de Biodiversidad y Ambiente, Pontificia Universidad Católica del Ecuador, Quito, Ecuador
- SMFL Lepidoptera collection of Forschungsinstitut und Naturmuseum Senckenberg, Frankfurt am Main, Germany
- spm. specimen[s]

## Acknowledgments

The authors thank Dr. J. W. BROWN, Smithsonian Institution, Washington, D.C., for edition of this paper, Mr. Krzysztof FIOLEK, Kraków, who kindly scanned the genitalia drawings, and Mr. Marek KOPEC, Kraków, who took some of the photographs of holotypes (the rest of photographs were taken by the second author, the black and white drawings of the genitalia by the first author). Further we thank Dr. Wolfgang A. NÄSSIG, Frankfurt am Main, for the final editing of the manuscript.

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## Systematics

### Archipini

Among the material were only two genera of Archipini, *Argyrotaenia* STEPHENS, 1851 and *Clepsis* GUENÉE, 1845, both of which are widely distributed and extremely species-rich in the New World. To date only five species of *Argyrotaenia* and one species of *Clepsis* have been reported from Ecuador. Sixteen genera of Archipini have been recorded from the Neotropics (RAZOWSKI 1997 and other papers), and it is likely that additional genera will be discovered in Ecuador.

### *Argyrotaenia* STEPHENS, 1851

The Neotropical species of *Argyrotaenia* recently were reviewed by RAZOWSKI & BECKER (2000). Currently 40 Nearctic and 56 Neotropical species have been placed in *Argyrotaenia*. Two additional species have been discovered by TREMATERRA & BROWN (2004) from the southern part of the Neotropics, and a two other species were discussed in that paper. Altogether the genus is represented by about 80 species, with only two Palearctic representatives. In the material collected by PELZ, we found seven species listed below. The systematic arrangement follows that of RAZOWSKI & BECKER (2000).

### *Argyrotaenia artocopa* (MEYRICK, 1932)

**Material examined:** 2 ♀♀: Ecuador, Morona-Santiago-Prov., Macas, Proaño > Alshi, 5 km SO Alshi, 1700 m, 5. vii. 1999 (CVPR).

Described from Costa Rica and subsequently recorded from Veracruz, Mexico, and Napo, Ecuador (RAZOWSKI & BECKER 2000).

### *Argyrotaenia sphaleropa* (MEYRICK, 1909)

**Material examined:** 2 ♂♂: Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 11.–23. xii. 1997 (CVPR).

A widely distributed species, described from Bolivia and reported from Brazil, Uruguay, and Argentina (RAZOWSKI & BECKER 2000).

### *Argyrotaenia* sp. near *sphaleropa* (MEYRICK, 1909)

**Material examined:** 3 ♂♂: Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 28.–30. vi. 1999 and 23.–26. iii. 1998 (CVPR).

Pale, rather ochreous brownish specimens.

### *Argyrotaenia citharexylana* (ZELLER, 1866)

**Material examined:** 1 ♀: Ecuador, Morona-Santiago-Prov., Macas, Gral Proaño, Río Jurumbaino, 1100 m, 19.–23. v. 1998 (CVPR).

Recorded from Costa Rica, Bolivia, and Ecuador (RAZOWSKI & BECKER 2000).

### *Argyrotaenia onorei* sp. n. (Figs. 1, 22, 28)

**Holotype:** ♀, “Ecuador, Morona-Santiago-Prov., Macas, Proaño > Alshi, 5 km SO Alshi, 1700 m, 5. vii. 1999, leg. Volker PELZ”; GS 960-V.P. (ISEZ, finally SMFL).

**Paratypes** (2 ♂♂, 2 ♀♀): 3 spm., same data as holotype (GS 963-V.P.), 1 ♀ Macas, Proaño > Inapula, CREA-Domono, 1100 m, 20.–23. iv. 1998, GS 821-V.P. (CVPR, ISEZ, PUCE).

**Etymology:** The species name is a patronym for Prof. Dr. Giovanni ONORE, Quito, Ecuador, who kindly facilitated obtaining permits to collect in Ecuador.

### Diagnosis

Close to *A. albosignata* RAZOWSKI & BECKER, 2000 from Brazil (Paraná and Santa Catarina) but without white postmedian interfascia of costal half of forewing and the terminal apically-tapering portion of aedeagus short. ♀♀ of the two species are also similar but in *A. albosignata* the blade of signum is smaller, and the cup-shaped part of sterigma more slender, and more expanding distad.

### Description

♂ and ♀ (Fig. 28). Wing span 15 mm in ♀, 14 mm in ♂. Head brownish, upper part of thorax dark brown. Forewing with costa somewhat concave postmedially and apex short. Ground colour grey with pinkish violet hue, glossy and partly whitish along markings. Markings chestnut brown with blackish marks; basal blotch and median fascia with weak refractive spots; subapical and subterminal blotches much paler, brown rust. Cilia pale orange, cream at tornus, black at apex. Hindwing dark brownish grey, much paler in basal third; cilia grey, tinged black in apex area.

**Variation.** Ground colour more or less dark, occasionally brownish cream; markings with blackish suffusions.

♂ **genitalia** (Fig. 1). Uncus large, expanding terminally; valva short, broad; terminal apically-tapering part of aedeagus short.

♀ **genitalia** (Fig. 22). Cup-shaped part of sterigma broad; sclerite at base of ductus bursae fairly large; signum large, with long blade.

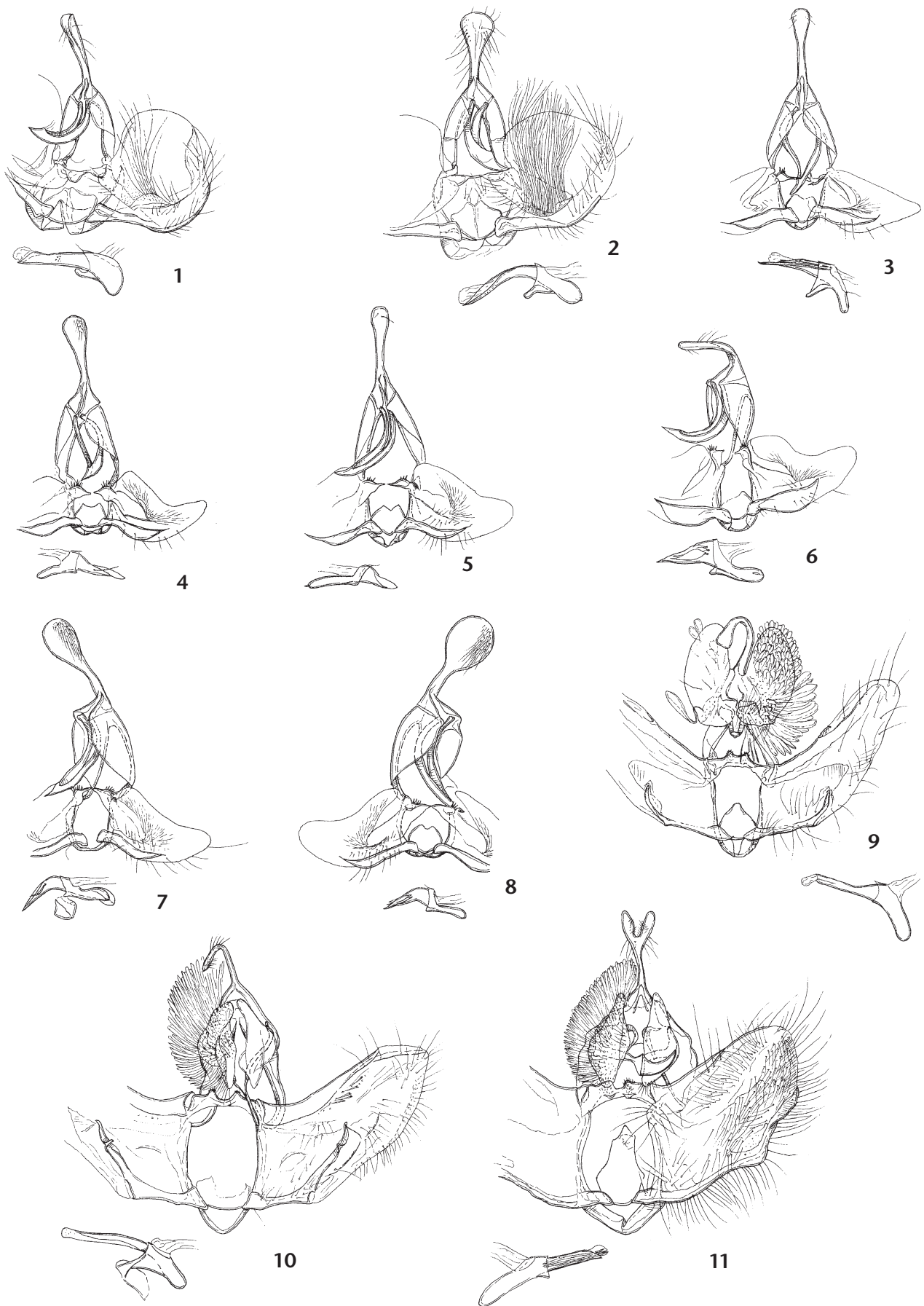
### *Argyrotaenia scotina* sp. n. (Figs. 2, 29)

**Holotype:** ♂, “Ecuador, Morona-Santiago-Prov., Macas, Proaño > Alshi, 5 km SO Alshi, 1700 m, 5. vii. 1999, leg. Volker PELZ”; GS 964-V.P. (ISEZ, finally SMFL).

**Etymology:** The species name refers to the dark colouration of the hindwing; *scotina* from Greek SKOTEINOS – dark. The name is defined as a noun in apposition.

### Diagnosis

Close to the preceding species, with similar valva, but quite different in the uncus and aedeagus. The aedeagus somewhat resembles that of *A. albosignata*, but the terminal apically-tapering portion is much longer (over half the length of postzonal part).



**Plate 1, Figs. 1–11:** ♂ genitalia (ventral view with aedeagus separated). **Fig. 1:** *Argyrotaenia onorei* sp. n., paratype (GS 963-V.P.). **Fig. 2:** *Argyrotaenia scotina* sp. n., holotype (GS 964-V.P.). **Fig. 3:** *Clepsia lineata* sp. n., holotype (GS 856-V.P.). **Fig. 4:** *Clepsia tassa* sp. n., paratype (GS 995-V.P.). **Fig. 5:** *Clepsia brunneograptia* sp. n., holotype (GS 661-V.P.). **Fig. 6:** *Clepsia browni* sp. n., holotype (GS 935-V.P.). **Fig. 7:** *Clepsia fraterna* sp. n., holotype (GS 656-V.P.). **Fig. 8:** *Clepsia assensus* sp. n., holotype (GS 670-V.P.). **Fig. 9:** *Archipimina tylonota* (MEYRICK, 1932) (GS 920-V.P.). **Fig. 10:** *Archipimina archipiforma* sp. n., holotype (GS 937-V.P.). **Fig. 11:** *Holoptygma lurida* (MEYRICK, 1912) (GS 748-V.P.).



## Description

♂ (Fig. 29). Wing span 14 mm. Head creamy rust, thorax concolorous, with rust marks. Costa of forewing slightly concave postmedially, termen almost straight. Ground colour pinkish cream, suffused with brownish pink, spotted and strigulated with similar colour. Markings dark rust brown: basal blotch indistinct, median fascia with blackish median streak; subapical blotch or a line from its proximal edge broader. Cilia ferruginous cream. Hindwing dark greyish brown, paler basad; cilia (worn) paler.

♂ **genitalia** (Fig. 2). Basal half of uncus slender, distal half strongly expanding terminally, apex gently rounded; valva broad, rounded; aedeagus slender, long, with long terminal apically-tapering portion.

♀ is unknown.

## *Argyrotaena* sp. near *albosignata* RAZOWSKI & BECKER, 2000

**Material examined:** 2 ♀♀: Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 30. iii.–2. iv. 1998, and Gral. Proaño, Río Jurumbaino, 1100 m, 11.–23. xii. 1997.

Externally very similar to the Brazilian *A. albosignata* RAZOWSKI & BECKER, 2000; the ♀ genitalia differ by having a distinctly broader cup-shaped part of the sterigma. However, the shape of the sterigma may be an artifact of slide mounting. The ♂ is unknown and therefore we refrain from describing these specimens as a new taxon.

## *Clepsis* GUENÉE, 1845

Neotropical *Clepsis* belong chiefly to the *peritana*-group of species described in *Smicrotes* CLEMENS, 1860. Data on their distribution, along with descriptions of new species, were presented by RAZOWSKI (1979) and RAZOWSKI & BECKER (2003). The two papers treat 22 and 29 species, respectively.

Differences among species are slight, especially in the genitalia. Some species form groups of very similar, perhaps infraspecific taxa. Unfortunately, our knowledge of them is still fragmentary. We suspect that differences in forewing pattern and colouration are in some cases of importance in determination.

Geographical distribution is also little known, and it is more common to find new taxa than to find new distribution records of described species. The systematic arrangement of the species presented below follows the two papers mentioned above.

## *Clepsis lineata* sp. n. (Figs. 3, 23, 30)

**Holotype:** ♂, "Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 20.–23. iv. 1998, leg. Volker PELZ"; GS 856-V.P. (ISEZ, finally SMFL).

**Paratypes** (1 ♂, 2 ♀♀): 1 ♂, same locality, 27.–30. iv. 1998, GS 859-V.P., and 2 ♀♀, one with the latter data and the other from Macas, Proaño > Alshi, Río Abanico, 1500 m, 17. ii. 1998, GS 855-V.P. (CVPR).

**Etymology:** The species name refers to the colouration of forewing; Latin: LINEATUS – with lines. The name is defined as a noun in apposition.

## Diagnosis

Judging from the genitalia, this species is close to *C. archidona* RAZOWSKI & BECKER 2003, also from Ecuador. It is distinguished by its shorter aedeagus, strongly tapering from beyond the zone. The ♀ genitalia are comparable with those of *C. penetralis* RAZOWSKI, 1979, from the U.S.A. (Utah), but differ in the possession of a signum. ♂♂ of all three species are similar, but in *C. penetralis* the uncus is the shortest. *C. lineata* sp. n. is externally distinct by the brown oblique lines, and the grey suffusion of the terminal part of the forewing.

## Description

♂ (Fig. 30) and ♀. Wing span 11 mm (in paratypes 12 mm). Head creamy brown, thorax darker. Ground colour of forewing creamy brownish, tinged grey in apical third; costal spots and strigulae brownish. Markings brownish with darker proximal edges; basal blotch atrophied, median fascia tinged grey medially, strongly expanding distally, with rather weak posterior edge; a line parallel to anterior edge of median fascia from  $\frac{2}{3}$  of costa, and weak subapical line present. Cilia concolorous with ground colour. Hindwing grey-brown, paler basad; cilia concolorous with mid-part of wing.

**Variation.** Ground colour cream or whitish, suffused and strigulated with brownish; lines representing edges of markings distinct except for the subapical one.

♂ **genitalia** (Fig. 3). Uncus slender, somewhat expanding in terminal third; labides connecting medially with short basal parts; aedeagus longer than uncus, tapering terminally, distinctly extending ventro-posteriorly; cornuti long, slender.

♀ **genitalia** (Fig. 30). Sterigma small, short, provided with sharp proximal processes; ductus bursae simple, long; signum well developed, with proportionally large capitulum.

## *Clepsis tassa* sp. n. (Figs. 4, 24, 31, 32)

**Holotype:** ♀, "Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 23.–26. iii. 1998"; GS 865-V.P. (ISEZ, finally SMFL).

**Paratypes** (1 ♂, 5 ♀♀): 1 ♀, same data as holotype, 1 ♂, same locality, 28.–30. vi. 1999 (GS 995-V.P.), and 4 ♀♀, same locality, 11.–23. xii. 1997 (2 spm.), 30. iii.–2. iv. 1998 and 28.–30. vi. 1999 (CVPR, ISEZ, PUCE).

**Etymology:** The species name refers to the systematic position of the species; Latin from Greek: TASSO – correctly placed. It is defined as a noun in apposition.

## Diagnosis

The ♂ genitalia are very similar to those of *C. peritana* (CLEMENS, 1860), but the broadened part of the uncus is somewhat larger, and the aedeagus is broader at the zone. ♀♀ differ markedly from *C. peritana* in genitalia:

in *C. peritana* the ductus bursae is short, and the cestum and signum are absent. Externally the new species is easily distinguished by the markings of the forewing, which consist of two oblique lines representing the proximal edges of the fasciae.

### Description

♂ and ♀ (Figs. 31, 32). Wing span 12 mm. Head and thorax grey-brown. Ground colour of forewing cream, tinged and finely strigulated with brownish. Markings grey-brown, darker along edges: median fascia interrupted subcostally or atrophying medially; subapical blotch large, subtriangular, reaching end of termen, accompanied by a small strip at apex. Cilia concolorous with ground colour. Hindwing pale brownish grey; cilia paler.

**Variation.** Base of wing more or less suffused brownish in one example, with ill-defined brown postbasal fascia; strigulation more or less distinct.

♂ **genitalia** (Fig. 4). Uncus club-shaped, expanding in posterior half, rounded terminally; basal parts of labis broad; aedeagus longer than uncus; cornutus very slender, spine like.

♀ **genitalia** (Fig. 24). Sterigma small, with distinct proximal processes; ductus bursae long, tightly coiled; signum a minute thorn.

### *Clepsis brunneograpta* sp. n. (Figs. 5, 33)

**Holotype:** ♂, "Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 30. iii.–2. iv. 1998, leg. Volker PELZ", GS 661-V.P. (ISEZ, finally SMFL).

**Paratypes** (25 ♂♂): same data as holotype (9 spm.) or 28.–30. vi. 1999 (5 spm.) and 23.–24. vi. 1999 (2 spm.); 1 spm., Río Shaimi, 350 m, 15.–16. v. 1998; Gral Proaño, 1100 m, Río Jurumbaino, 11.–23. xii. 1997 (6 spm.), and 2 spm., same locality, 18.–23. v. 1998. (CVPR, ISEZ, PUCE).

**Etymology:** The species name refers to the colouration of forewing; Latin: BRUNNEUS – brown, (from Greek:) GRAPTUS – marked. The name is defined as a noun in apposition.

### Diagnosis

Although the aedeagus is very similar to that of *C. fumosa* RAZOWSKI & BECKER, 2003 described from Rio de Janeiro, Brazil, the new species can be distinguished easily by its slender uncus. This latter is somewhat reminiscent of that of *C. carillana* RAZOWSKI & BECKER, 2003 from Costa Rica, but differs in its much shorter coecum penis, which in *C. carillana* is almost as long as the postzonal part.

### Description

♂ (Fig. 33). Wing span 11.5 mm. Head pale brownish cream, thorax browner, especially its anterior part. Forewing costa weakly convex, termen short, nearly straight. Ground colour cream, slightly tinged brownish; strigulation sparse, brown. Markings brown: basal blotch reduced to weak brownish postbasal fascia, marked with a few brown dots; median fascia concolorous, except for brown costal blotch and dorsal suffusion, with straight anterior edge; median portion of fascia ill-defined; subapical blotch triangular, reaching end of termen, mixed

grey subcostally; brown line along apical half of termen. Cilia cream. Hindwing creamy brownish, mixed with grey, paler basad; cilia creamy grey.

**Variation.** Wing span 11–12 mm. Ground colour of forewing more or less dark, strigulation and suffusions varying in size and shade, rarely greyish brown; basal blotch occasionally rather distinct, median fascia usually ill-defined medially and subcostally, subapical blotch divided into two parts.

♂ **genitalia** (Fig. 5). Uncus slender, gradually tapering terminally; distal part of aedeagus very short, broad immediately beyond zone.

♀ unknown.

### *Clepsis browni* sp. n. (Figs. 6, 25, 34)

**Holotype:** ♂, "Ecuador, Morona-Santiago-Prov., Macas, 1000 m, 11.–23. xii. 1997, leg. Volker PELZ"; GS 935-V.P. (ISEZ, finally SMFL).

**Paratypes** (4 ♂♂, 3 ♀♀): 1 ♀, same data as holotype, 2 ♂♂, 1 ♀, Macas, Proaño > Inapula, CREA-Domono, 1100 m, 27.–30. iv. 1998, one pair, same locality, 20.–23. iv. 1998 (♂ GS 911-V.P., ♀ GS 912-V.P.) and 1 ♂, Macas, Gral. Proaño, Río Jurumbaino, 11.–23. xii. 1997 (GS 910-V.P.) (CVPR, ISEZ, PUCE).

**Etymology:** The species name is a patronym for Dr. J. W. BROWN, Smithsonian Institution, Washington, D.C., who provided editorial assistance on our Ecuadorian papers.

### Diagnosis

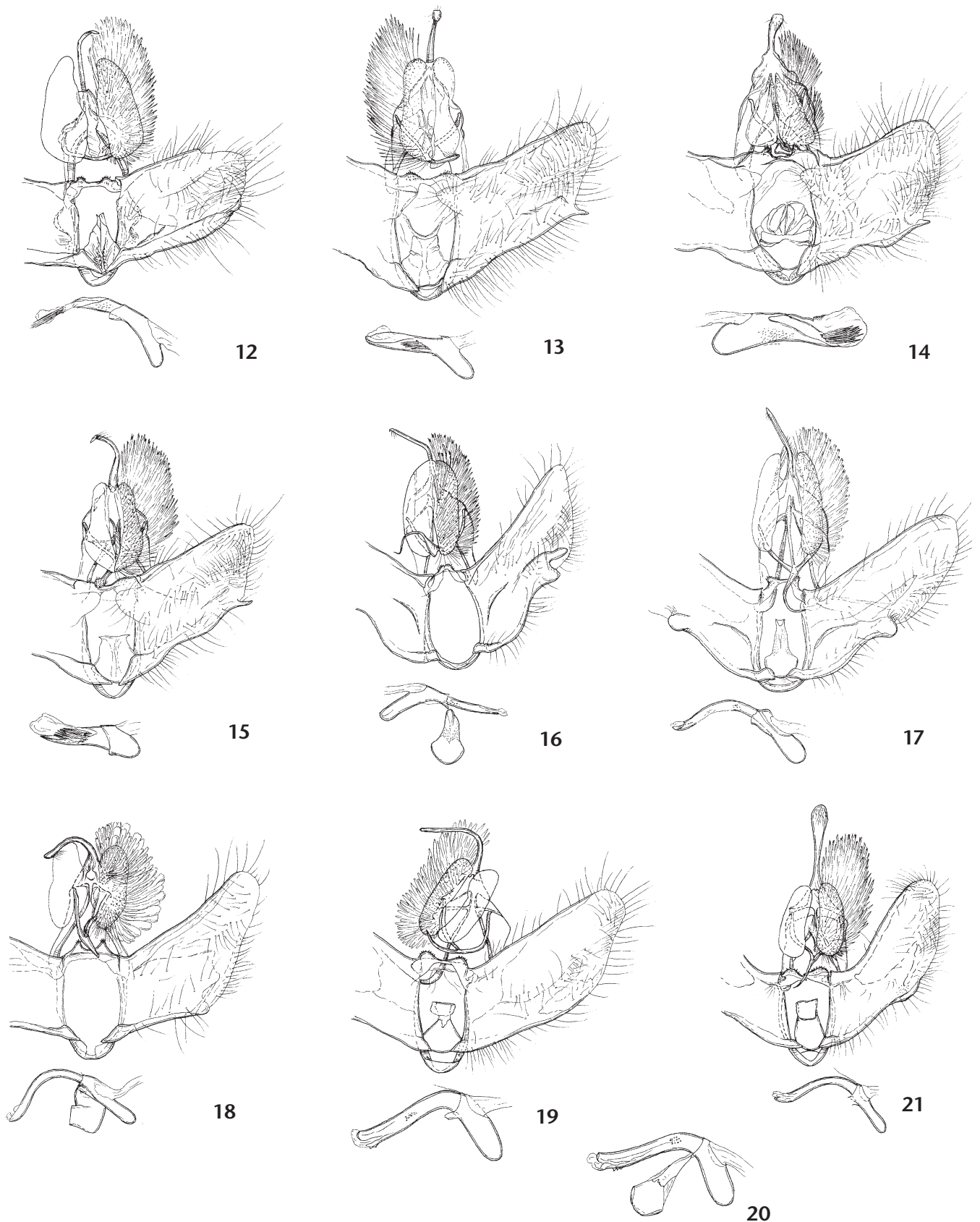
Similar to *C. camposana* RAZOWSKI & BECKER, 2003, from São Paulo and Minas Gerais, Brazil. It is easily distinguished by its rather slender uncus, perpendicularly elongate labis, and very large cornuti in the ♂ genitalia, and the larger number of coils in the ductus bursae (10 instead of 7) in the ♀ genitalia.

### Description

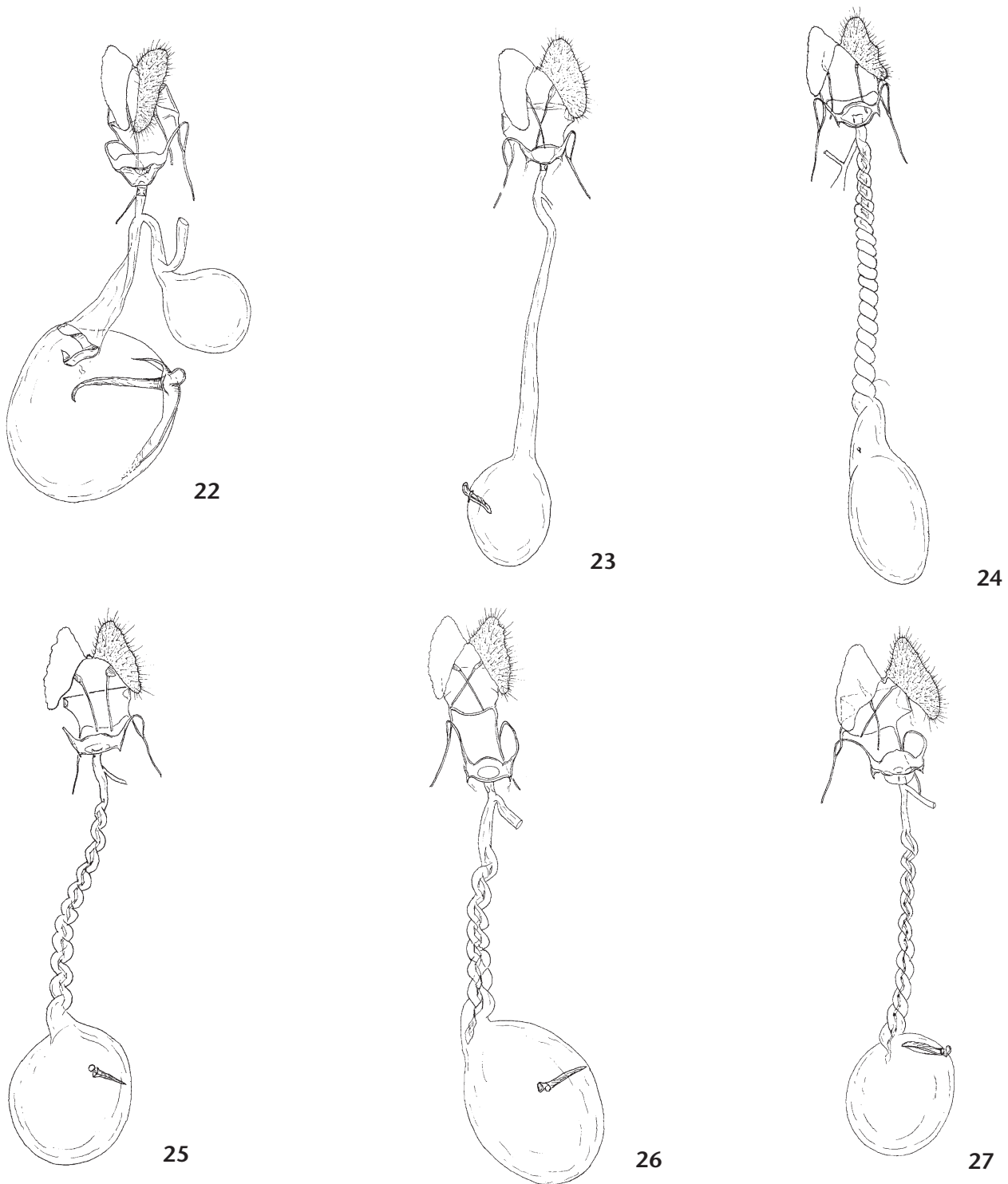
♂ (Fig. 34) and ♀. Wing span 10–11 mm. Head yellowish brown, thorax slightly darker. Costa of forewing convex to middle, then weakly concave, termen indistinctly convex. Ground colour yellowish brown, sparsely dotted, strigulated, and sprinkled with brown. Markings brown: traces of basal blotch subdorsal; median fascia distinct, broadening at costa and dorsum, with well defined, rather straight proximal finely pale edges; subapical blotch short, followed by small medio-subterminal marking arranged mostly vertically to termen. Cilia concolorous with ground colour. Hindwing brown-grey; cilia paler.

**Variation.** Ground colour more or less dark, markings occasionally yellowish brown; subterminal blotch in two examples rather large. Hindwing often paler than in holotype.

♂ **genitalia** (Fig. 6). Uncus much shorter than aedeagus, the latter wedge-shaped beyond zone; cornuti as long as coecum penis, very broad. Basal part of labis extending dorsally.



**Plate 2, Figs. 12–21:** ♂ genitalia (ventral view with aedeagus separated). **Fig. 12:** *Sisurcana chromotarpa* sp. n., holotype (GS 866-V.P.). **Fig. 13:** *Sisurcana topina* sp. n., holotype (GS 916-V.P.). **Fig. 14:** *Sisurcana holographa* sp. n., holotype (GS 838-V.P.). **Fig. 15:** *Sisurcana atterimima* sp. n., holotype (GS 938-V.P.). **Fig. 16:** *Sisurcana margaritae* sp. n., holotype (GS 956 -V.P.). **Fig. 17:** *Sisurcana heredographa* sp. n., holotype (GS 868-V.P.). **Fig. 18:** *Sisurcana procidia* sp. n., holotype (GS 955-V.P.). **Figs. 19, 20:** *Sisurcana aluminias* (MEYRICK, 1912), **Fig. 19:** Macas, CREA-Domono 27.–30. iv. 1998 (GS 723-V.P.), **Fig. 20:** only aedeagus, same locality, 23.–26. iii.1998 (GS 890-V.P.). **Fig. 21:** *Sisurcana citrochyta* (MEYRICK, 1926), San Vicente, Rio Yukipa, 6.–13. ii.1998 (GS 646-V.P.).



**Plate 3, Figs. 22–27:** ♀ genitalia. **Fig. 22:** *Argyrotaenia onorei* sp. n., holotype. **Fig. 23:** *Clepsid lineata* sp. n., paratype (GS 855-V.P.). **Fig. 24:** *Clepsid tassa* sp. n., holotype. **Fig. 25:** *Clepsid browni* sp. n., paratype (GS 912-V.P.). **Fig. 26:** *Clepsid fraterna* sp. n., paratype (GS 650-V.P.). **Fig. 27:** *Clepsid assensus* sp. n., paratype (GS 658-V.P.).

♀ genitalia (Fig. 25). Sterigma short, with elongate lateral parts and distinct proximal processes; ductus bursae with 10–11 coils; capitulum of signum very small.

***Clepsid fraterna* sp. n.** (Figs. 7, 26, 35)

**Holotype:** ♂, “Ecuador: Morona-Santiago-Prov., Macas, 1000 m, 11.–23. xii. 1997, leg. Volker PELZ”; GS 656-V.P. (ISEZ, finally SMFL).

**Paratypes** (8 ♂♂, 6 ♀♀): 2 ♀♀ same locality as holotype 11.–23. xii. 1997, GS 650-V.P., GS 886-V.P., 25. vi.–4. vii. 1999 and Macas, Proaño > Inapula, CREA-Domono, 1100 m,

23.–26. iii. 1998 (2 spm.), 30. iii.–2. iv. 1998 (1 ♂), 27.–30. iv. 1998, (1 ♀: GS 861-V.P.) and 28.–30. vi. 1999 (3 spm.) and Macas, Gral. Proaño, Río Jurumbaino, 1100 m, 11.–23. xii. 1997 (1 ♂: GS 909-V.P.) (CVPR, ISEZ, PUCE).

**Etymology:** The species name refers to the similarity with other species; Latin: FRATERNUS — fraternal. The name is defined as a noun in apposition.

**Diagnosis**

The ♂ genitalia are similar to several other species, but differ from *C. camposana* RAZOWSKI & BECKER, 2003 from



Peru, and *C. capnostica* RAZOWSKI & BECKER, 2003 from Brazil, in the shorter aedeagus; from *C. vitiana* (ZELLER, 1877) from Colombia in the longer, broader, and post-medially bent aedeagus, more narrow end of the uncus, and the spiny labis. The ♀ genitalia are similar to those of *C. camposana* and *C. vitiana*, especially in the shape and configuration of the ductus bursae, signum and sterigma.

### Description

♂ (Fig. 35) and ♀. Wing span 10.5 to 12 mm. Head and thorax brownish, front occasionally cream. Externally very similar to *C. browni* sp. n., but with more distinctly pale edged proximal parts of markings which are more blackish grey in hue and more strongly suffused or sprinkled with ground colour. Subapical blotch more or less distinctly separated from subterminal blotch, the latter distinctly extending proximally. Cilia concolorous with ground colour.

**Variation.** Markings usually very distinct, in ♀ browner than in ♂; median fascia showing a tendency to atrophy near middle.

♂ **genitalia** (Fig. 7). Terminal half of uncus broad, apical portion rounded; labis large, tapering towards end, densely spiny; postzonal part of aedeagus uniformly broad, then wedge-shaped; cornuti five slender curved spines.

♀ **genitalia** (Fig. 26). Sterigma fairly short with distinct processes of proximal corners; ductus bursae with seven coils and distinct cestum; signum consisting of small capitulum and long blade.

### *Clepsis assensus* sp. n. (Figs. 8, 27, 36)

**Holotype:** ♂, "Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 30. III.–2. IV. 1998, leg. Volker PELZ"; GS 670-V.P. (ISEZ, finally SMFL).

**Paratypes** (2 ♂♂, 2 ♀♀): one pair same data as holotype, another pair same locality, 27.–30. IV. 1998 (♀ GS 658-V.P.) (CVPR, ISEZ, PUCE).

**Etymology:** The species name refers to the similarity to two preceding species; Latin: *ASSENSUS* — echo. It is defined as a noun in apposition.

### Diagnosis

The uncus is similar to that of *C. vitiana* and *C. camposana*, but *C. assensus* sp. n. differs in having a much broader aedeagus; *C. assensus* sp. n. differs from *C. limana* RAZOWSKI & BECKER, 2003, from Minas Gerais in its spiny labis, and from *C. taima* RAZOWSKI & BECKER, 2003, from Rio Grande do Sul, Brazil, in its longer uncus (in the last the aedeagus was not studied). The ♀ genitalia of *C. assensus* sp. n. differ from those of *C. limana* and *C. camposana* in the larger number of coils in the ductus bursae; in *C. vitiana* the number of coils is much higher. It also differs from the latter species in its more ferruginous colouration.

### Description

♂ (Fig. 36) and ♀. Wing span ca. 12 mm. Head and thorax brownish, frons in ♂ yellowish cream. Forewing slightly concave subapically. Ground colour creamy ferruginous, more or less tinged brownish. Markings brownish ferruginous, partially edged with cream (especially the proximal, rather straight edge of median fascia). Basal blotch represented by one or two posterior elongate marks; median fascia slender, distinctly expanding dorsally; subapical blotch separate from subterminal blotch which extends proximally to form a slender process. Cilia ferruginous cream. Hindwing pale greyish brown, paler basad; cilia mostly concolorous with wing.

**Variation.** Basal blotch more or less distinct, in two specimens slightly pale edged.

♂ **genitalia** (Fig. 8). Terminal half of uncus very broad, rounded; aedeagus short, curved beyond zone; cornuti rather short, broad.

♀ **genitalia** (Fig. 27). Proximal processes of sterigma well developed; ductus bursae with 11 coils; signum large, with small capitulum and rather broad blade-shaped part.

### *Clepsis gelophodes* (MEYRICK, 1936)

**Material examined:** 3 ♂♂: Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 28.–30. VI. 1999 and 1 ♀: Ecuador, Morona-Santiago-Prov., Macas, Proaño > Alshi, Río Abanico, 1500 m, 17. II. 1998 (CVPR).

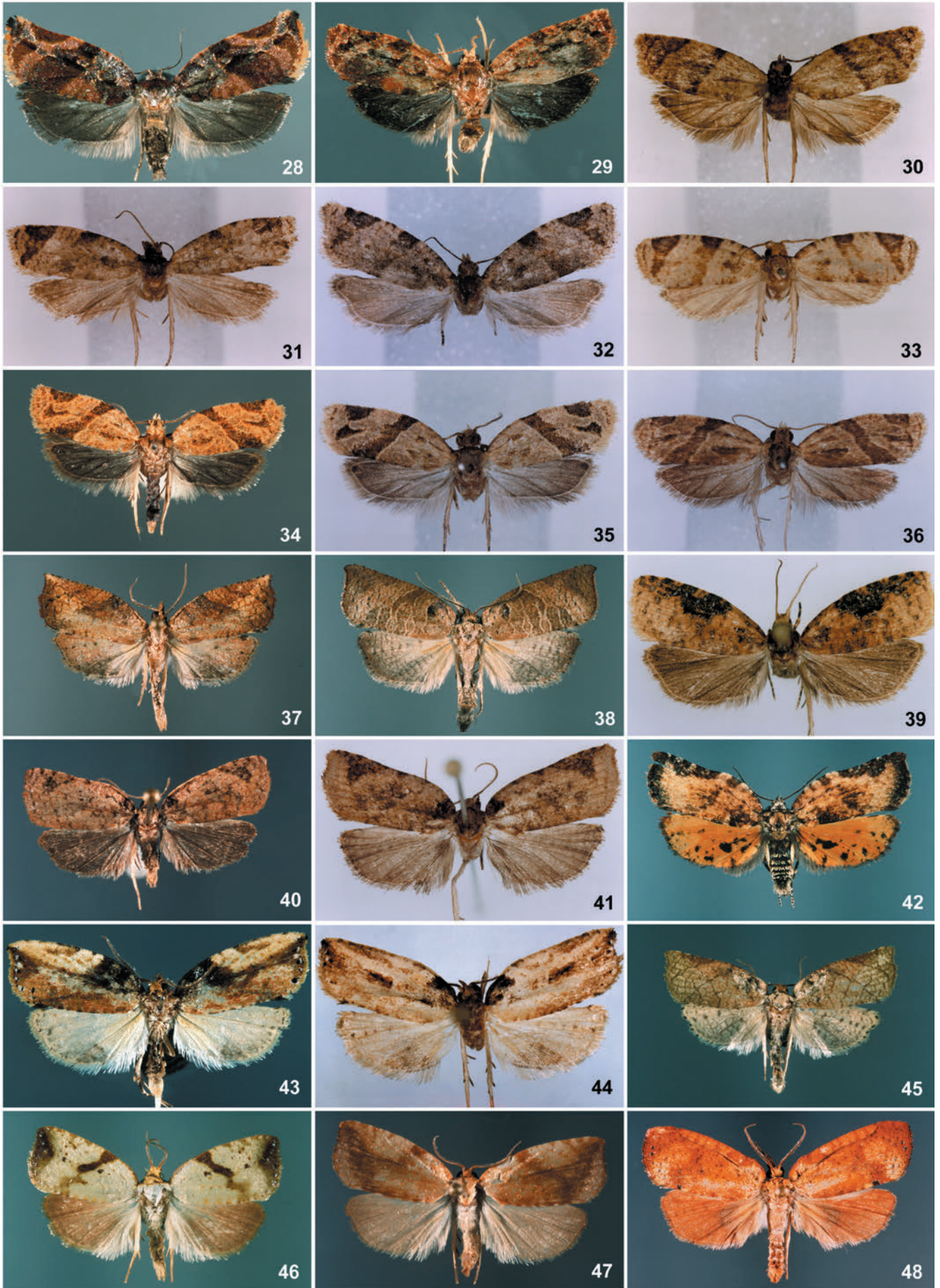
This species was described from Venezuela. Our specimens match the Venezuelan examples both in external habit and in genitalia.

### Atteriini

The only systematic treatment of Atteriini was presented by POWELL (1986) who described 6 genera and 1 new species. The checklist of Atteriini by POWELL et al. (1995) consists of 7 genera and 39 species. The tribe is restricted

**Plate 4, Figs. 28–48:** Imagines. **Fig. 28:** *Argyrotaenia onorei* sp. n., holotype ♀, wing span 15 mm. **Fig. 29:** *Argyrotaenia scotina* sp. n., holotype ♂, wing span 14 mm. **Fig. 30:** *Clepsis lineata* sp. n., holotype ♂, wing span 11 mm. **Figs. 31, 32:** *Clepsis tassa* sp. n., **Fig. 31** ♀ holotype, wing span 12 mm, **Fig. 32** ♂ paratype, wing span 12 mm. **Fig. 33:** *Clepsis brunneograptia* sp. n., holotype ♂, wing span 11.5 mm. **Fig. 34:** *Clepsis browni* sp. n., holotype ♂, wing span 10 mm. **Fig. 35:** *Clepsis fraterna* sp. n., holotype ♂, wing span 10.5 mm. **Fig. 36:** *Clepsis assensus* sp. n., holotype ♂, wing span 12 mm. **Fig. 37:** *Archipimina tytonota* (MEYRICK, 1932) ♂, wing span 20 mm (GS 908-V.P.). **Fig. 38:** *Archipimina archipiforma* sp. n., holotype ♂, wing span 9 mm. **Fig. 39:** *Sisurcana chromotarpa* sp. n., holotype ♂, wing span 19 mm. **Fig. 40:** *Sisurcana topina* sp. n., holotype ♂, wing span 19 mm. **Fig. 41:** *Sisurcana holographa* sp. n., holotype ♂, wing span 16 mm. **Fig. 42:** *Sisurcana atterimima* sp. n., holotype ♂, wing span 23 mm. **Fig. 43:** *Sisurcana margaritae* sp. n., holotype ♂, wing span 17 mm. **Fig. 44:** *Sisurcana heredographa* sp. n., holotype ♂, wing span 16 mm. **Fig. 45:** *Sisurcana procidia* sp. n., holotype ♂, wing span 19 mm. **Fig. 46:** *Sisurcana aluminias* (MEYRICK, 1912), ♂, wing span 20 mm (GS 890-V.P.). **Fig. 47:** *Sisurcana citrochyta* (MEYRICK, 1926), ♂, wing span 20 mm (GS 939-V.P.). **Fig. 48:** *Holotygya lurida* (MEYRICK, 1912), ♂, wing span 22 mm (GS 748-V.P.).





to the Neotropical region. Only 2 species were described from Ecuador, but certainly several additional species that are recorded from Colombia and Peru could be found in this country. The geographical distribution of members of Atteriini is very poorly known and a sparse published data require confirmation. In the material we examined from Ecuador we identified 12 species. We illustrate the genitalia of all examined species because the formerly published ones are too superficial, and the differences among taxa are small. The systematic position of Atteriini is still provisional. In this paper we follow that presented by POWELL et al. (1995).

### *Archipimima* POWELL, 1986

POWELL (1986) erected this genus to comprise four Neotropical species and designated *Tortrix flexicostalis* DOGNIN, 1908 as the type-species. He characterized the genus by the absence of distinct sexual dimorphism and undifferentiated scaling of the socii, both of which distinguish it from *Anacrusis* ZELLER, 1877. However, these are plesiomorphic characters. The only apomorphic character we recognize is the structure of the valva complex, but this is shared with at least two other genera (e.g., *Anacrusis*). The shape of the forewing might represent an autapomorphy for this genus, but it is not consistent. We assign to *Archipimima* one new species and one new combination.

### *Archipimima tylonota* (MEYRICK, 1932) n. comb. (Figs. 9, 37)

**Material examined:** 2 ♂♂, Ecuador, Morona-Santiago-Prov., Macas, Gral. Proaño, Río Jurumbaino, 1100 m, 11.–23. XII. 1997, GS 908-V.P., and 19.–23. V. 1998, GS 920-V.P. (CVPR).

This species (Fig. 37) was described in *Capua* STEPHENS, 1834 from Columbia; CLARKE (1958) illustrated the type, and POWELL et al. (1995) placed it in Atteriini “incertae sedis.” The genitalia are characterized as follows.

♂ **genitalia** (Fig. 9). Uncus fairly broad, expanding terminally; gnathos short; socii broad with large distal parts and small proximal portions; valva elongate submembranous beyond costa and sacculus; the last slender, provided with long dorso-terminal portion; median part of transtilla concave medially, forming rather indistinct thorny processes; aedeagus small, slender.

### *Archipimima archipiforma* sp. n. (Figs. 10, 38)

**Holotype:** ♂, “Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 23.–24. VI. 1999, leg. Volker PELZ”, GS 937-V.P. (ISEZ, finally SMFL).

**Etymology:** The specific epithet refers to the similarity to the representatives of the genus *Archips* HÜBNER, [1822]. The name is defined as a noun in apposition.

### Diagnosis

The new species externally resembles *A. tylonota* n. comb., but is larger and more brownish grey in colour. In the genitalia it differs primarily in the presence of the processes of the sacculus and the much longer aedeagus.

### Description

♂ (Fig. 38). Wing span 21 mm. Head brownish, with vertex and end of labial palpus darker; thorax cream, brown anteriorly. Forewing somewhat expanding terminally; costa distinctly convex at base, then weakly so; apex sharp; termen slightly sinuate, convex at vein CuA1. Ground colour pale brownish, distinctly suffused with brownish in costal third, with brown in distal third of wing; dorsal suffusion brownish, interrupted by pale cream lines well developed in dorsal half of wing; brown transverse strigulation sparse. Markings: postbasal line represented by dark brown subcostal spot; median fascia slender, brownish, atrophying in dorsal half. Cilia brown, paler at tornus. Hindwing whitish cream, suffused grey from middle, brownish grey on periphery, distinctly strigulated dark brownish grey; cilia brownish grey, cream at anal part of wing.

♂ **genitalia** (Fig. 10). Uncus slender, slightly expanding terminally; socius large, broadest medially; gnathos rather short, strong; valva large, with short membranous terminal portion; sacculus to  $\frac{1}{3}$  of valva, then obliquely to middle of disc, marked with two short processes; transtilla provided with pair of submedian dorsal lobes; aedeagus slender, weakly curved.

♀ is unknown.

### *Holoptygma lurida* (MEYRICK, 1912) (Figs. 11, 48)

**Material examined:** 2 ♂♂, Ecuador, Morona-Santiago-Prov., Macas, Proaño > Alshi, 5 km SO Alshi, 1700 m, 5. VII. 1999, and Macas, San Vicente, Río Yukipa 900 m, 6.–13. II. 1996, GS 748-V.P. (CVPR).

♂ **genitalia** (Fig. 11). Illustrated by CLARKE (1958) and POWELL (1986); our figure shows some previously omitted details, e.g., the shapes of the socii, uncus, and sacculus.

**Distribution.** This species was described from Colombia and subsequently recorded from Cordillera de Carabaya, Peru (POWELL 1986).

### *Sisurcana* POWELL, 1986

*Sisurcana* was described without a diagnosis or comparison with other genera. Almost all characters are either of convergent or plesiomorphic importance. All five species originally included in the genus are characterized by plesiomorphic valva, but some apomorphic characters likely will be discovered to support the designation of this genus. We are placing in *Sisurcana* 9 additional species which are similar to the type-species of the genus, including two species treated by POWELL et al. (1995) as “unplaced Atteriini”.

### *Sisurcana chromotarpa* sp. n. (Figs. 12, 39)

**Holotype:** ♂, “Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 30. III.–2. IV. 1998, leg. Volker PELZ”, GS 866-V.P. (ISEZ, finally SMFL).

**Paratype** (1 ♂): Ecuador, Morona-Santiago-Prov., Macas, San Vicente, Río Yukipa, 900 m, 6.–13. II. 1996; GS 626-V.P. (CVPR).



**Etymology:** The species name refers to the intense colouration of forewing; Greek: *CHROMA* – colour, *TARPO* – saturate. The name is defined as a noun in apposition.

### Diagnosis

Reminiscent of *S. topina* sp. n. but distinguished by its weakly expanded forewing termen; shorter costa of the valva; absence of a median plate of the gnathos; large, broad socii; and presence of a small terminal lobe of sacculus.

### Description

♂ (Fig. 39). Wing span 19 mm. Head yellowish brown, labial palpus more ochreous distally; thorax darker than head, with brownish submedian fascia. Forewing somewhat expanding terminally with costa convex, provided with slender fold reaching beyond its 1/3; termen straight to middle, slightly convex. Ground colour pale ferruginous brown, with browner suffusions and strigulation. Markings brownish grey: subbasal fascia reaching median cell; median fascia fusing with subapical blotch, marked with blackish and grey; brown-grey spots along costa; groups of erect scales mainly on markings. Cilia paler than ground colour, slightly tinged orange. Hindwing brown; cilia cream brown, with brown basal line.

♂ **genitalia** (Fig. 12). Uncus long, very slender; gnathos arms very slender, terminal plate absent; socii widely separated, broad in basal half ventrally, tapering distally; valva rather uniformly broad throughout; costa much shorter than sacculus, the latter rather broad, terminating in a subventral lobe; lateral parts of transtilla broadened, expanding dorsally, spiny; juxta tapering terminally, with short dorsal portion; aedeagus somewhat longer than costa of valva, sparsely spiny near middle, weakly bent; cornuti fairly long, basally-curved spines.

♀ is unknown.

### *Sisurcana topina* sp. n. (Figs. 13, 40)

**Holotype:** ♂, “Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 20.–23. iv. 1998, leg. Volker PELZ”, GS 916-V.P. (ISEZ, finally SMFL).

**Etymology.** The species name refers to the colouration of wings; Greek: *TOPINOS* – usual. The name is defined as a noun in apposition.

### Diagnosis

Externally similar to *Sisurcana furcatana* POWELL, 1986 from Venezuela and *S. umbellifera* (MEYRICK, 1926) from Colombia. Also very similar and closely related to *S. holographa* sp. n.

### Description

♂ (Fig. 40). Wing span 19 mm. Head creamy brownish, thorax somewhat browner. Forewing slightly expanding posteriorly; costa bent at base, then rather straight; termen delicately convex at vein M2; costal fold rudimentary, in form of a long up-curved margin of wing. Ground colour brownish, with some brownish dots and strigulae. Markings dark brown, rudimentary: distinct spot at base

of costa; remnants of median fascia in form of an agglomeration of diffuse spots and elongate-triangular subapical blotch (atrophied in left wing). Cilia (worn) brownish. Hindwing brown; cilia (worn) probably brownish creamy with brownish basal line.

♂ **genitalia** (Fig. 13). Uncus long, slender, slightly expanding terminally; socii broad, slightly tapering medially, rounded terminally, producing ventrally; gnathos slender; terminal part finely bristled; valva broad; sacculus long, with distinct terminal process; lateral parts of transtilla broad, fusing with pulvini, delicately thorny; aedeagus short, extending ventro-terminally; cornuti a group of short spines.

♀ is unknown.

### *Sisurcana holographa* sp. n. (Figs. 14, 41)

**Holotype:** ♂, “Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 20.–23. iv. 1998, leg. Volker PELZ”, GS 838-V.P. (ISEZ, finally SMFL).

**Paratype** (1 ♂): same locality as holotype, 28.–30. vi. 1999. (CVPR).

**Etymology:** The name refers to colouration of wings; Greek: *HOLOS* – entire, *GRAPHO* – to write. The name is defined as a noun in apposition.

### Diagnosis

Closely related to *S. topina* sp. n. but easily distinguished by having a brown head, less expanding forewing, a shorter uncus, and a broader aedeagus.

### Description

♂ (Fig. 41). Wing span 16 mm. Head brown, thorax somewhat darker. Forewing slightly expanding posteriorly, termen slightly concave beneath apex; costal fold slender, reaching mid-costa. Ground colour brownish; strigulation slightly darker. Markings brown, consisting of indistinct median fascia and large, subtriangular subapical blotch; blackish brown spot near base of costa. Cilia pale brownish. Hindwing greyish brown, paler basally; cilia paler than wing.

**Variation.** Paratype darker, more greyish brown than holotype, with large blackish blotch near base of costa, paler subapical blotch and ill-defined median fascia.

♂ **genitalia** (Fig. 14). Uncus rather short, somewhat expanding terminally; socius drooping, broadening terminally; end of terminal plate of gnathos broadening; valva broad with well developed costa and long sacculus, the latter provided with free termination and weak median concavity; dorsal lobes of transtilla with large groups of thorns; aedeagus stout.

♀ remains unknown.

### *Sisurcana atterimima* sp. n. (Figs. 15, 42)

**Holotype:** ♂, “Ecuador, Morona-Santiago-Prov., Macas, Proaño > Alshi, 5 km SO Alshi, 1700 m, 5. vii. 1999, leg. Volker PELZ”, GS 938-V.P. (ISEZ, finally SMFL).

**Etymology:** The species name refers to the colouration of the hindwing which resembles species of *Atteria* WALKER,



1863; *MIMESIS* (Greek) – imitation. The name is defined as a noun in apposition.

### Diagnosis

Externally similar to *Atteria pavimentata* MEYRICK, 1913, from Peru, but easily distinguished by the lack of white costal strigulation and by the maculate orange hindwing.

### Description

♂ (Fig. 42). Wing span 23 mm. Head whitish, scaled brown; labial palpus slender, brown; thorax creamy brown, brown posteriorly; base of tegula marked brown. Forewing weakly expanding terminally; costa curved to  $\frac{1}{3}$ , then slightly concave; apex short, sharp; termen weakly sinuate, distinctly convex at veins  $M_2$ – $M_3$ ; costal fold absent. Ground colour yellowish cream, slightly tinged with orange, more brownish orange and sprinkled and dotted with brown in basal half of wing; dorsum distinctly suffused brown; costa spotted with same colour. Markings brown: remnants of basal blotch at dorsum; median fascia consisting of costal spot followed by much paler median and dorsal parts; slender suffusion from beyond the latter, including short subapical blotch; apex and termen dark brown. Cilia concolorous with ground colour, but broadly suffused and strigulated blackish brown. Hindwing pale orange, much lighter in distal third, marked with some black spots, the largest along vein  $CuA_1$ ; cilia grey-brown, greyer in anal area.

♂ **genitalia** (Fig. 15). Uncus short, broadening terminally; gnathos arm slender, terminal plate short; socii large, drooping, expanding ventrally; valva broad; sacculus slender, long, provided with short free termination; transtilla with two submedian thorny prominences; juxta broad; aedeagus rather stout, short, minutely spiny near middle laterally.

♀ is unknown.

### *Sisurcana margaritae* sp. n. (Figs. 16, 43)

**Holotype:** ♂, “Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 23.–24. vi. 1999, leg. Volker PELZ”, GS 956 -V.P. (ISEZ, finally SMFL).

**Paratype** (1 ♂): same locality, 2. x. 2000, GS 2088-V.P. (CVPR).

**Etymology:** The species name is a patronym based on the Christian name of Mrs. Margarita PELZ, who helped in various ways in collecting in her native area in Ecuador.

### Diagnosis

Externally reminiscent of some Euliini, e.g., *Inape sinuata* BROWN & RAZOWSKI, 2003, from Bolivia. The ♂ genitalia are similar to several species of Atterini, e.g., *Sisurcana aluminias* (MEYRICK, 1912), n. comb. and *Sisurcana citrochryta* (MEYRICK, 1926), n. comb., especially in the shape and configuration of the gnathos and sacculus.

### Description

♂ (Fig. 43). Wing span 17 mm. Head brownish cinnamon, front with more cream scales, thorax more brown.

Forewing broadest medially with costa gradually convex, apex sharp, termen sinuate, somewhat oblique. In paratype incomplete costal fold to  $\frac{1}{3}$ . Ground colour creamy white, suffused brownish (with indistinct violet hue) along dorsum and termen and between distal venation; white dots accompanied by 2–3 black spots along termen; costa brownish grey to  $\frac{1}{3}$  marked with two large black spots extending towards median cell, followed by a weak brown postbasal fascia; brownish suffusion from end of the latter to apex of wing; costal spots brown; trace of subapical marking brownish. Cilia paler than suffusions, creamy white to apex of wing. Hindwing white, weakly tinged with creamy yellowish, suffused greyish before anal field on periphery, marked with a few blackish dots; cilia whitish.

♂ **genitalia** (Fig. 16). Uncus very slender with a few short ventro-apical setae; arm of gnathos slender, terminal plate very long, slender beyond base; socii elongate-ovate, rounded apically; valva broad in basal part, with well developed costa; sacculus convex anteriorly, expanding ventro-terminally, with slender posterior prominence dorsally; transtilla very small with single dorso-median lobe; dorsal part of juxta rather broad; aedeagus slender, straight beyond zone; coecum penis long.

♀ is unknown.

### *Sisurcana heredographa* sp. n. (Figs. 17, 44)

**Holotype:** ♂, “Ecuador, Morona-Santiago-Prov., Macas, San Vicente, Río Yukipa, 900 m (Cabañas ecológicas), 6.–13. ii. 1996, leg. Volker PELZ”; GS 868-V.P. (ISEZ, finally SMFL).

**Etymology:** The name refers to the similarity in colouration to *S. margaritae* sp. n.; Greek: HEREDO – to inherit, GRAPHO – to write. It is defined as a noun in apposition.

### Diagnosis

This species is similar to *S. margaritae* sp. n. but paler and with the forewing markings weaker. In the ♂ genitalia it differs primarily in having a shorter end of the terminal plate of the gnathos; a shorter, less convex sacculus; a longer, ovate terminal part of the valva; and a much longer, curved aedeagus.

### Description

♂ (Fig. 44). Wing span 16 mm. Upper part of head pale brownish cream, labial palpus long, cream; thorax pale brownish. Shape of forewing and colouration as in *S. margaritae* sp. n. Ground colour whitish cream with pale brownish suffusions, especially along dorsum and in posterior third of wing. Markings: costal part of base brownish, grey at costa, with black spot; median fascia rudimentary, brownish, with some brown dots along median streak; subapical part of costa and terminal area brownish, the latter with a few blackish and white dots. Cilia concolorous with ground colour, with darker suffusions. Hindwing cream, whiter basally, tinged grey in distal part of anal field, with a few brown dots; cilia concolorous with wing.

♂ **genitalia** (Fig. 17). Uncus slender; gnathos with slen-

der arms and long, slender terminal plate; valva elongate, rounded posteriorly; sacculus convex, provided with ventral rounded termination; dorso-median part of transtilla large, slightly concave apically; dorsal part of juxta slender, long; aedeagus long, slender; cornuti deciduous (7 sockets present).

♀ is unknown.

***Sisurcana procidua* sp. n.** (Figs. 18, 45)

**Holotype:** ♂, "Ecuador, Morona-Santiago-Prov., Macas, Proaño > Alshi, 5 km SO Alshi, 1700 m, 5. vii. 1999, leg. Volker PELZ"; GS 955-V.P. (ISEZ, finally SMFL).

**Paratypes** (3 ♂♂): same locality, 27. ix.–4. x. 2000 (GS 1178-V.P., 2087-V.P.) (CVPR).

**Etymology:** The species name refers to the shape of dorsal lobes of the transtilla; Latin: PROCIDUUS — protruding. The name is defined as a noun in apposition.

**Diagnosis**

The new species is externally similar to *S. leprana* (FELDER & ROGENHOFER, 1875), but has a less concave termen and lacks whitish cream dots in the subterminal area. In the ♂ genitalia the new species differs from *S. leprana* primarily in having a much shorter and broader uncus, a broader terminal plate of the gnathos, and a much longer, more slender aedeagus.

**Description**

♂ (Fig. 45). Wing span 19–20 mm. Head pale ferruginous brownish; thorax cream, brown proximally. Forewing costa strongly convex to before middle, slightly concave subterminally, with costal fold broad, reaching  $1/3$ ; termen distinctly sinuate, convex near middle. Ground colour cream, partially suffused yellowish brown, sprinkled and strigulated with yellowish brown; some fine transverse lines, mainly in median area, the most distinct representing proximal edge of atrophied median fascia whose remnant in costal suffusion present; remaining markings in form of incomplete postbasal fascia, scaled blackish and slender, brownish subapical blotch. Cilia creamy brownish, cream at tornus. Hindwing yellowish cream, tinged grey near anal area, strigulated pale brownish grey. Cilia cream with some black spots.

♂ **genitalia** (Fig. 18). Uncus rather slender, slightly expanding terminally; socius elongate-ovate, hairy, with broad scales; gnathos with distinct terminal plate; valva somewhat expanding near middle, with long, oblique caudal edge; sacculus slender, without free termination; two subtriangular dorsal processes present on transtilla; aedeagus very slender, long, distinctly bent; cornuti deciduous, three sockets present in vesica.

♀ is unknown.

***Sisurcana aluminias* (MEYRICK, 1912), n. comb.**  
(Figs. 19, 20, 46)

**Material examined:** 5 ♂♂, Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 23.–

26. iii. 1998 (GS 890-V.P.), 30. iii.–2. iv. 1998, 27.–30. iv. 1998 (GS 723-V.P.) and 28.–30. vi. 1999 (CVPR, ISEZ, PUCE).

Described in the genus *Capua* STEPHENS, 1834 this species was treated as "unplaced Atteriini" by POWELL et al. (1995). Externally the specimens from Ecuador (Fig. 46) differ from the types in the BMNH in having glossy yellow ground colour of the forewing without transverse brownish strigulation. Their markings are brownish orange and consist of the costal half of the median fascia and a large terminal suffusion. This latter is slightly paler in the dorsal third subterminally (cf. photograph by CLARKE 1958).

♂ **genitalia** (Figs. 19, 20) are identical with those of the lectotype, except for subterminal position of ventral thorns of aedeagus, which in the lectotype are situated postmedially. However, the number, size, and position of such structures are rather variable in Tortricidae.

***Sisurcana citrochyta* (MEYRICK, 1926), n. comb.**  
(Figs. 21, 47)

**Material examined:** 3 ♂♂, 1 from Ecuador, Morona-Santiago-Prov., Macas, Proaño > Inapula, CREA-Domono, 1100 m, 28.–30. vi. 1999, GS 939-V.P., and 2 from San Vicente, Río Yukipa, 900 m, 6.–13. ii. 1996, GS 646-V.P., 750-V.P. (CVPR).

Described in *Philedone* HÜBNER, [1825], this species was treated as "unplaced Atteriini" by POWELL et al. (1995). The examined specimens (Fig. 47) match the type in the BMNH and show slight external variation in intensity of colouration and in the size of the terminal suffusion forming a subtriangular blotch. Two examples are pale, with ill-defined brownish orange suffusion in the distal half of the wing.

♂ **genitalia** (Fig. 21). Uncus slender, club-shaped distally; ventro-terminal part of sacculus broadening, expanding ventrally; aedeagus slender.

**Remarks.** Described from El Topo, Río Pastaza, E Ecuador; lectotype designated by CLARKE (1958), in BMNH.

**References**

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## Buchbesprechung

ASKEW, R. R. (2004): **The dragonflies of Europe (revised edition)**. — Great Horkesley, Colchester (Harley Books), ISBN 0-946589-75-5. 308 S., 30 gezeichnete Farbtafeln + 2 Tafeln mit Farbfotos im Text, 513 Schwarzweiß-Textfiguren und 114 Verbreitungskarten. 17 cm × 23 cm, laminierte Kartonbroschur. Preis 30 Britische Pfund (= ca. 46,80 €, je nach Wechselkurs), erhältlich im Fachbuchhandel.

Nach der ersten Auflage von 1987 (Buchbesprechung siehe R. THEUNERT, 1989, *Nachr. entomol. Ver. Apollo* N.F. 10 (2): 124) hat der Autor hiermit eine überarbeitete zweite Auflage seines Buchs abgeliefert. Leider hat man (der Verlag/der Autor?) dabei den alten Textkörper mehr oder weniger unverändert übernommen und neuere Erkenntnisse nur in angehängten Nachträgen zu einigen Kapiteln hinzugefügt. Dazu gehört natürlich auch, daß die Verbreitungskarten noch die politischen Verhältnisse von vor dem Zusammenbruch der Sowjetunion darstellen. Bedauerlich, aber hinnehmbar.

Im Gegensatz zu den britischen Tagfalterbüchern, in deren Titel mit der Bezeichnung „... of Britain and Europe“ (gemeint ist damit aber stets, wie es dann auch in den Übersetzungen richtigerweise heißt: „... Europas und Nordwestafrikas“) immer die Fiktion geweckt wird, daß Großbritannien nicht zu Europa gehöre, wird das bei den Odonatologen offenbar etwas nüchterner gehandhabt: „Europa“ schließt hier die Britischen Inseln ein, geht aber auf Nordwestafrika nur ganz am Rande ein.

Das Buch liefert, nach einem Geleitwort des Expräsidenten der Britischen und der Weltgesellschaft für Libellenkunde und den Vorworten des Autors zur 1. und zur 2. Auflage, zuerst eine gründliche mehrteilige Einleitung, in der die Biologie, Morphologie und Verbreitung der Libellen im allgemeinen angesprochen und erklärt werden. Der systematische Teil bringt gute und inhaltsreiche Abhandlungen in angemessener Länge (mit den Stichwörtern Beschreibung, Biologie, Flugzeit, Verbreitung) zu jeder einzelnen Art. Es folgt ein ausführlicher Schlüssel zur Determination der aus-

gewachsenen Larvenstadien, der auch für die häufig am Ufer zu findenden leeren Exuvien, aus denen die Adulten ausgeschlüpft sind, nutzbar ist. Danach folgt ein ausführliches Supplement mit Korrekturen zur ersten Auflage, Streueinflügen oder Einschleppungen amerikanischer und asiatischer Arten, neu gemeldeten europäischen Arten, Neunachweisen für die Britischen Inseln und Arealveränderungen in Europa (mit ausführlichen Literaturangaben!). Ein sehr umfangreiches Literaturverzeichnis mit Nachträgen rundet den Textteil ab. Es folgen die 30 sehr akkurat gezeichneten Farbtafeln zur Identifikation der Adulten. Ein Register beschließt das Buch.

Mit inzwischen 125 nachgewiesenen in Europa dauerhaft lebenden Arten (darunter eine, die erst 2001 aus Bulgarien beschrieben wurde!) zuzüglich einiger wandernder Arten, die nur gelegentlich einzeln gefunden werden, ist die Libellenfauna Europas nicht besonders artenreich (die Weltfauna der Odonata wird nach ASKEW auf nur etwas mehr als 5000 Arten geschätzt, davon bisher knapp 4900 beschriebene; die Schätzung könnte damit vielleicht noch zu niedrig angesetzt sein). Das Buch von ASKEW faßt die Kenntnisse über die europäischen Vertreter der Ordnung umfassend zusammen und bietet mit den umfangreichen Literaturangaben einen guten Einstieg in die Odonatologie.

Wer ernsthaft in die europäische Libellenkunde einsteigen möchte, wird nicht umhin kommen, sich das Buch von R. R. ASKEW zu kaufen.

Wolfgang A. NÄSSIG



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