

Revision of the Neotropical *Argyrotaenia* STEPHENS, with notes on *Diedra* RUBINOFF & POWELL (Lepidoptera: Tortricidae)

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Abstract. *Argyrotaenia* is characterized and the notes on *Diedra* are provided. 56 Neotropical species are discussed of which 16 (incl. one subspecies) are described as new.

Keywords: Lepidoptera, Tortricidae, *Argyrotaenia*, revision, new species, Neotropics.

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I. INTRODUCTION

The genus *Argyrotaenia* STEPHENS was described for three species of which *Tortrix politana* HAWORTH, 1811 (= *Tortrix ljugiana* THUNBERG, 1797) was designated for the type-species of this genus (FERNALD 1908). In the Palaearctic there described recently only one further species, whilst in the New World numerous taxa were found. In the Neotropics there are also some closely related genera (RAZOWSKI, 1997). This paper deals only with the species known from the Neotropical Region and Mexico. The Nearctic species are listed in the catalogue by the senior author (RAZOWSKI, 1998). These species are treated in several publications (cf. FREEMAN 1944, 1958; MACKAY 1962; OBRAZTSOV 1961; POWELL 1960, 1965; RUBINOFF & POWELL 1999 and others).

The Neotropical species of *Argyrotaenia* are arranged on basis of a comparison their external characters and genitalia. They form several indistinctly limited groups. Their characters are mosaic in distribution and hardly correlated with one the other. Also the differences to the close Neotropical genera of Archipini are rather slight. Recently RUBINOFF & POWELL (1999) erected a new genus *Diedra* to include five New World species. Their synapomorphies are discussed at the end of this paper. BROWN & CRAMER (2000) discussed the phylogeny of a small group of species from the USA and Mexico. The diagnosis of *Argyrotaenia* based on ca 20 species from the Holarctics (RAZOWSKI 1987) has not changed much after inclusion of numerous New World species. In that paper the author suggested that there is only one supposed autapomorphy of this genus: the presence of the proximal sclerite of ductus bursae. Now we are satisfied to add the second apomorphic character, viz., the shape of the cornuti and their arrangement in form of a dense, elongate cluster. However the two are in some species entirely reduced. In the "Genera of Tortricidae" RAZOWSKI

(1987) placed *Argyrotaenia* before *Archips* HÜBNER, 1825. It seems, however, that *Argyrotaenia* is more advanced as having more specialized base of ductus bursae (proximal sclerite), the arrangement of the cornuti, the strong reduction of the socii, the distinct reduction of pulvinus in the majority of species and the configuration of the dorso-basal portion of the valva on which a bunch of long scent scales occurs.

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A b b r e v i a t i o n s u s e d:

AMNH – American Museum Natural History, New York

CMNH – Carnegie Museum Natural History, Pittsburgh

CUB – California University, Berkeley

ISEZ – Institute of Systematics and Evolution of Animals PAS, Cracow

MRSN – Museo Regionale di Scienze Naturali, Torino

NHML – Natural History Museum, London

NHMW – Naturhistorisches Museum, Wien

NMNH – National Museum Natural History (Smithsonian Institution), Washington

ÜMB – Übersee-Museum, Bremen

VOBC – Vitor Osmar BECKER Collection, Museu Nacional, Universidade Federal, Rio de Janeiro

GS – Genitalia slide

T.l. – type locality

N o t e. The figures given in the descriptions of the labial palpus indicate the proportion of its total length to the diameter of the eye. The numbers in square brackets “[]” are the entry number of the specimens in the register book of V. O. BECKER.

The holotypes of the new described species are in the collection of the junior author (VOBC), except for those indicated otherwise. Examples of several species originating from VOBC have been donated to the Institute of Systematics and Evolution of Animals, PAS, Kraków, Poland (ISEZ).

II. SYSTEMATIC PART

Argyrotaenia STEPHENS, 1851

(RAZOWSKI 1987: 220, redescription)

Argyrotaenia STEPHENS, 1852, List Specimens Br. Animals Br. Mus., **10**: 67. Type species: [*Tortrix*] *politana* HAWORTH, [1811] = *Tortrix* *ljungiana* THUNBERG, 1797, by subsequent designation (FERNALD, 1908, Genera Tortricidae: 36). – *Subargyrotaenia* OBRAZTSOV, 1961, Am. Mus. Novitates, Nr. 2048: 38. Type species: *Tortrix purata* MEYRICK, 1932, by original designation (synonymized by POWELL & all. 1995).

M o r p h o l o g y is discussed in several papers, recently by RAZOWSKI (1987), some comments are by RUBINOFF & POWELL (1999). The larvae are treated by SWATSCHKE (1958, one Palaearctic species) and MACKAY (1962 – eight Nearctic species).

A s s e s s i o n of some characters. The uncus is variable but may be characteristic of some groups of species. It is parallel-sided, slender or fairly broad, broader in basal portion than in terminal half or third, or uniformly broad throughout. In many species it is dilated in distal part; the

cleft is very often reduced. The shape of valva is characteristic specifically and may be common to some groups of species. Its dorsal edge is more or less convex, straight or concave medially. The distal portion of valva may be tapered or broadly rounded. The sacculus is simple or with dents, thorns or projections, and in some species provided with a free end. The aedeagus is small, slender, terminating in a sharp or rounded process. In some species the aedeagus is slender, more or less curved. All these characters are variably distributed or characteristic to small groups of species and not correlated with other characters. The cornuti (absent in a few species) are broad postbasally, tapering distally, forming usually a longitudinal cluster. They are, with a few exceptions, short. The proximal flange of coecum penis is absent or represented by small lateral lobes. In only one species (*A. ponera*) this structure is more complicate resembling that in *Diedra*. However, in a closely related species, *A. pueblana*, the flange is reduced. Such sclerites occur convergently in various groups of Tortricinae, e.g. in Euliini.

In the female genitalia the sterigma is more or less flat, or its anteostial portion is distinct, sclerotized. It can extend proximally to form a cup-shaped structure. Between this and the sclerite of colliculum there is a membranous funnel-like area which may represent the most proximal part of the sterigma. The presence of proximal sclerite of ductus bursae is here treated as the autapomorphy of the genus and its absence as a secondary reduction. The signum is usually present but in several species is completely reduced. These characters are not correlated with other structures within the genus.

B i o l o g y. The data are dispersed in several small papers dealing with particular species. The best known is the Palaearctic *A. ljugiana* (THUNBERG) the data on which are gathered by KUZNETSOV (1994). Besides, three species of food-plants of *A. sphaleropa* larvae are known.

D i s t r i b u t i o n. The distribution of this genus is somewhat similar to that of *Archips* but the latter did not colonized Neotropic, whilst is well represented in the Oriental Region in which no *Argyrotaenia* species is found. The genus is known from Palaearctic (two species), Nearctic (40 species) and Neotropical (56 species) regions. The list of Neotropical species (incl. Nearctic Mexico) is by POWELL & all. 1995.

The areas of the particular species are little known. The largest is that of the type species (trans-palaearctic), some Nearctic species are spread all over the region. The Neotropical species are still little known. There are only the data on a few widely distributed of species. Of them *A. atima* (WALSINGHAM) is known from Panama and Brazil and *A. sphaleropa* (MEYRICK) occurs in Bolivia, Brazil, Uruguay, and Argentina.

Argyrotaenia montezumae (WALSINGHAM)

Tortrix montezumae (WALSINGHAM, 1914) Biol. Cent.-Amer. Lepid. Heterocera, 4: 280.

The nominate subspecies comes from Guerrero, Mexico (T.l.: Amula) and was discussed by OBRAZTSOV (1961). We examined several specimens from Lomas, Mexico, Federal District and Xicotepec, Puebla (coll. F. HARTIG, MRSN) which show slight external variability. The infrasub-specific differences in the genitalia (the shape of the uncus) are also slight. One specimen examined is from Santa Cruz (Turrialba), Costa Rica. OBRAZTSOV (1961) mentions also Honduras and POWELL (1965) Veracruz and Zacotecas, Mexico. We can thus suppose that this species is widely distributed in Central America and the OBRAZTSOV's inclusion of *Tortrix impositana* WALSINGHAM, 1914 from Guatemala was correct. *A. montezumae huachucensis* OBRAZTSOV, 1961 from Arizona, USA shows only the external differences to the nominate subspecies.

Argyrotaenia urbana (BUSCK)

Tortrix urbana (BUSCK, 1912), Proc. ent. Soc. Wash., 143: 86. T. l.: Mexico: Mexico City, Distrito Federal.

Our specimens from Lomas, Federal District (HARTIG coll., MRSN) and Xicotepec, Puebla (BECKER coll.) show slight variation in the shape of uncus which is more or less expanding terminally.

Argyrotaenia purata (MEYRICK)

Tortrix purata MEYRICK, 1932, Exotic Microlepid., 4: 254. Lectotype: "Costa Rica, Irazu, 2200-2500 m, 21-28.V. [19]30, Reimoser"; NHMW. – *Subargyrotaenia purata* OBRAZTSOV, 1961, Am. Mus. Novitates, Nr. 2048: 41, fig. 81 (moth), 83 (male genit.). – RAZOWSKI, 1964: 472.

This Costarican species was mistakenly interpreted by FREEMAN (1958) and mentioned as distributed in California and Arizona (the type localities after that author). OBRAZTSOV's figures (82,84) are incorrect and demonstrate a species of *Aethes* Billberg, Cochylini. On basis of the differences in the female genitalia he erected also a new genus, *Subargyrotaenia*. The right costa in the male genitalia in his figure is somewhat deformed and in fact is distinctly convex. This species is close to *urbana*.

Argyrotaenia venezuelana (WALKER)

Dichelia venezuelana WALKER, 1863, Cat., 28: 319. Type: "Venezuela"; GS 8643; NHML.

The female genitalia (Fig. 35) characterize with small basal sclerite of ductus bursae and very large, slender signum.

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

Argyrotaenia guatemalica (WALSINGHAM)

Tortrix guatemalica WALSINGHAM, 1914, Biol. Cent.-Amer.Lepid., Heterocera, 4: 280. T.l.: Guatemala: Totonicapam. Lectotype: "Totonicapam, 8500 – 10500 ft., Guatemala, Chmnpn, 18., 65969"; NHML.

Female genitalia (Fig. 36) similar to the preceding species differing only by a lack of the sclerite of ductus bursae. Known of two specimens; the lectoparatype lack the abdomen.

D i s t r i b u t i o n: Guatemala: type locality only.

Argyrotaenia confinis sp.n.

Wingspan 17.5mm. Head and thorax brownish ferruginous; labial palpus 2, brown-grey terminally. Forewing not expanding terminally, costa weakly sinuate postmedially; termen straight to middle, weakly concave. Ground colour pale cinnamon ferruginous, tinged grey along dorsum, creamy along marking edges. Markings rust: basal blotch dark rust brown distally, concave, with concolorous spots in middle; median fascia slender at costa, interrupted in median cell, with proximal edge concave near middle of wing, distal edge diffuse; subapical blotch extending to mid-term; proximal parts of median fascia and subapical blotch concolorous with outer part of basal blotch. Strigulation brownish rust, weak, developed mainly at dorsum and terminal third of wing. Cilia paler than ground colour, creamier in tornal half, tinged brownish beneath apex. Hindwing grey tinged ochreous creamy in apical third; cilia greyish creamy.

Female: Wingspan 23 mm. Basal blotch distinct in dorsal part where extending distally. Median fascia interrupted subcostally, mixed rust in dorsal half; subapical blotch not connected with subterminal marking. Cilia browner. Hindwing darker than in male, grey in proximal part, with larger ochreous orange apical area.

Male genitalia (Figs 1,2): Uncus fairly broad, slightly tapering terminally, rotundate at the apex; costa of valva and sacculus convex; distal part of aedeagus almost as long as the uncus, with minute sharp termination.

Female genitalia (Fig. 37): Sterigma fairly broad, with proximal portion forming a membranous cup; proximal sclerite of ductus bursae broad, moderate.

Holotype, male: "Mexico: Chiapas, San Cristobal de las Casas, 2300 m, 23-27.VI.1981, V. O. BECKER col."; [43762], GS 22205. Paratypes, an identically labelled female and one female from Mexico: Veracruz: Huatusco, 1300 m, 19-23.VIII.1981, and two males from Veracruz: Las Minas, 2200 m, 5 and 6.VI.1977; 3 males and 1 female from Tamaulipas: Gómez Farias, 2200 m, 29.V.1997. All collected by V. O. BECKER.

Argyrotaenia cupreographa sp.n.

Wingspan ca 14 mm. In male head, thorax pale ferruginous, this last creamer distally; labial palpus over 1.5 creamer terminally. Forewing not expanding terminally, broadest medially where tuft of scales extends; termen straight, not oblique. Ground colour creamy tinged pale ferruginous, suffused rust especially along dorsum; base of wing suffused ferruginous with subdorsal dark rust pale edged blotch; median fascia and apical spot ferruginous at costa followed by a pale, more grey suffusion extending to tornus marked rust along vein M2; subapical blotch connecting subapical fascia which is more rust. Cilia concolorous with ground colour, darker at apex. Hindwing ferruginous brownish, more orange, paler in apical third. Cilia paler than wing. Female: ground colour in distal third glossy whitish, fascia along M veins towards termen rust, subapical blotch more brownish black than median fascia.

Male genitalia (Figs. 3,4): Uncus rather uniform broad in distal half, long hairy; vala broad; terminal portion of aedeagus long, curved.

Female genitalia (Fig. 38): Anteostial portion of sterigma large, cup-shaped part proportionately short; proximal sclerite of ductus bursae very large.

Holotype, male: "Mexico: Veracruz, Est.[acion] Biol.[ogica] Tuxtlas, 11-16.VI.1981, V. O. BECKER col."; [42442]; GS 22207; VOBC. Paratype, an identically labelled female.

Argyrotaenia sagata sp.n.

Wingspan 16 mm. Head and tegulae cinnamon creamy, labial palpus over 2, somewhat darker, brown terminally; thorax rust brown; collar base darker. Forewing very broad, costa strongly convex, apex short, termen concave postapically, most strongly towards vein M2. Ground colour cinnamon creamy in distal area, with pinkish shine, creamy at torus, otherwise suffused cinnamon violet; basal blotch brown with similar hue; distal edge spotted brown edged ochreous; median fascia expanding towards tornus; proximal edge concolorous submedially, creamy edged; distal edge diffuse, costal part of median fascia slender. Subapical blotch rust, slender, distal edge extending in form of a fascia to 2/3 of termen accompanied by brown strigulation. Cilia brown-grey, at torus pale creamy. Hindwing creamy, darker and weakly strigulated with brownish at apex, tinged brown-grey in anal half; cilia pale brownish creamy.

Male genitalia (Figs 5,6): Uncus broadening basally and postmedially; gnathos delicate; valva fairly long, slender, tapering terminally, with costa concaving beyond middle.

Holotype, male: "Brasil R[io de] J[aneiro], P[ar]q Nat.[ional] Itatiaia, 2400 m, 18.X.1985, V. O. BECKER col."; [66336]; GS 21941; VOBC.

R e m a r k s. Systematic position uncertain; female genitalia unknown.

Argyrotaenia cibdela RAZOWSKI

Argyrotaenia ciblela RAZOWSKI, 1988, Acta zool. cracov., **31**(10): 409, figs 86-89 (male genit.). T.L.: Peru: Cusco: Tambomachay. NMNH.

This species is easily distinguished by a very slender, long uncus and elongate, uniformly broad valva.

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

Argyrotaenia digahthes (MEYRICK)

Eulia digahthes MEYRICK, 1932, Exotic Microlepid., **4**: 227. Holotype: "Orosi, 1500 m, Costa Rica", GS 4324; NHMW. – *Argyrotaenia oligahthes* [sic!]: RAZOWSKI, 1964, Annls zool., Warsz., **22**: 458, fig. 19 (female genit., type).

Female genitalia characterized with a shallow anteostial part of sterigma, strong signum and lack of proximal sclerite of ductus bursae.

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

Argyrotaenia felisana RAZOWSKI

Argyrotaenia felisana RAZOWSKI, 1999, Acta zool. cracov., **42**(2): 309, fig. 18 (female genit.). Type locality: Dominican Republic: Independencia: Sierra de Neiba: 5 km WNW Angel Felis. CMNH.

From *ceramica* it differs in longer ductus bursae and much smaller capitulum of signum; proximal sclerite of ductus bursae absent.

D i s t r i b u t i o n: Dominican Republic.

Argyrotaenia nuevana RAZOWSKI

Argyrotaenia nuevana RAZOWSKI, 1999, Acta zool. cracov., **42**(2): 309 fig. 19 (female genit.). Type locality: Dominican Republic: La Vega, 24 km SE Constanza. CMNH.

Originally compared with *felisana* but with larger membranous cups-shaped part of sterigma and sclerotized, broad anteostial part. Without proximal sclerite of ductus bursae.

D i s t r i b u t i o n: Dominican Republic.

Argyrotaenia dearmata sp.n.

Wingspan 20-21 mm. Ground colour cinnamon ochreous, suffusions cinnamon, markings rust cinnamon; median fascia and subapical blotch more brown. Cilia concolorous with tornal area. Hindwing grey, in apical half creamy grey tinged ochreous, strigulated grey. Cilia creamy grey with brownish grey median line.

Female genitalia (Fig. 39): Anteostial portion of sterigma well sclerotized, moderate, cup-shaped portion small, membranous; sclerite of colliculum fairly long; no proximal sclerite of ductus bursae; plate-shaped portion of signum forming a very long belt of minute thorns.

Holotype, female: "Curitiba, Paraná, Brasil – 920 m, 28.I.1975, V. O. BECKER col."; [5530], GS 22151; VOBC. – Paratypes, ten females, one labelled as above but dated 15.V., six from Santa Catarina: Brusque, dated IX.1970, 28.XII. 1969; three from Paraná: Morro de Meio, 8.I.1970.

Argyrotaenia ochrotona RAZOWSKI

Argyrotaenia ochrotona RAZOWSKI, 1999, Acta zool. cracov., **42**(2): 310, fig. 21 (female genit.). Type locality: Dominican Republic: Providenciales. CMNH.

Close to *nuevana* but with membranous cup-shaped portion of sterigma and without anteostial sclerite.

D i s t r i b u t i o n: Dominican Republic.

Argyrotaenia neibana RAZOWSKI

Argyrotaenia nuevana RAZOWSKI, 1999, Acta zool. cracov., **42**(2): 310, fig. 20 (female genit.). Type locality: Dominican Republic: Baoruco, Sierra de Neiba: Los Guineos. CMNH.

Compared with *digahthes*; female genitalia also similar to *nuevana* but sterigma with very slender anteostial sclerite, short distal sclerite of ductus bursae and absent cup-shaped portion of sterigma.

D i s t r i b u t i o n: Dominican Republic.

Argyrotaenia hemixia RAZOWSKI

Argyrotoxa hemixia RAZOWSKI, 1991, SHILAP Revta lepid, **19**(74): 139. Coll. UMB. T.I.: Brazil: Santa Catarina: Nova Teutonia. ÜMB.

Characterized by a rather uniformly broad rounded apically uncus und hardly concave dorsal edge of valva.

Female genitalia (unknown till now, Fig.40): Cup-shaped portion of sterigma large, weakly sclerotized, with distinct microsetulae; signum very large; proximal sclerite of ductus bursae absent.

D i s t r i b u t i o n: Brazil. Described from Santa Catarina; new material: three specimens from Santa Catarina: Rio Vermelho (leg. RAZOWSKI, ISEZ), two specimens from Brusque; one pair from Paraná: Curitiba (VOBC); one example from Rio de Janeiro: Parq National Itatiaia (leg. BECKER, VOBC).

Argyrotaenia bisignata RAZOWSKI

Argyrotaenia bisignata RAZOWSKI, 1999, Acta zool. cracov., **42**(2): 310, figs 7,8 (male genit.), 22 (female genit.); t.l.: Dominican Republic: Pedernales: 5 km NE Los Arroyos.

Male genitalia characterized by lateral prominences of distal portion of uncus and long, slender aedeagus. Female with a median lobe of median part of anteostial sterigma and minute, sharp proximal sclerite of ductus bursae.

D i s t r i b u t i o n: Dominican Republic only.

Argyrotaenia jamaicana sp.n.

Wingspan 16 mm. Head ferruginous, labial palpus 1.5, creamer; thorax rust. Forewing costa convex to beyond middle, strongly concave postmedially; apex short; termen slightly concave beneath apex, then convex. Ground colour ochreous, suffused rust; strigulation and terminal reticulation dark rust. Markings a little paler than strigulation, atrophying dorsally except for proximal edge of median fascia; subapical blotch slender. Cilia concolorous with ground colour, pale creamy in tornal third, tinged grey at tornus. Hindwing pale pinkish brown, more ochreous-ferruginous on peripheries; cilia creamer than distal part of wing.

Male genitalia (Figs 7,8) as in *bisignata* but with slenderer uncus, shorter aedeagus and much broader, not tapering terminally valva.

Holotype, male: "Greenhills, Hardwar Gap, Coll. by E. PAINE; March 27, 1936; Jamaica", GS 12274. CMNH.

R e m a r k. Despite the genitalia of this species little differ from those in *bisignata* this species is very distinct in the shape of the forewing. Genitally it also resembles Mexican *cupreographa* in which the markings are quite different.

Argyrotaenia parturita sp.n.

Wingspan 12.5 mm. Head and thorax ferruginous with slight reddish hue; labial palpus ca 2. Forewing not expanding posteriorly, costa slightly concave subapically; termen weakly oblique, almost straight. Ground colour much paler, termen suffused and dotted rust. Markings darker: Basal area suffused rust, median fascia slender, weakly concave proximally, slender in costal half; subapical blotch divided into two parts, apical marking, subterminal fascia slender. Cilia ochreous creamy, tinged brown-grey at tornus. Hindwing grey; cilia creamy grey with median line darker.

Male genitalia (Figs 9,10): Uncus strongly expanding distally, rounded apically; gnathos long; valva elongate, with hardly convex dorsal edge; sacculus convex at middle.

Holotype, male: "Mexico: Veracruz, Huatusco, 1300 m, 19-23. VIII. 1981, V. O. BECKER col."; [44815]; GS 22216; VOBC. Paratypes, a pair from "Mex[ico], Veracruz: Fortin de Las Flores, VII-7 to 12-74, Elev. 1010 m, J. A. CHEMSAK, E. & J. LINSLEY & J. POWELL at lights", coll. CUB;. Other material: a pair from: 'Costa Rica: Sta Cruz, Turrialba, 1500 m, VII.1981, V. O. BECKER col."

Argyrotaenia iopsamma (MEYRICK)

Tortrix iopsamma MEYRICK, 1931, Exotic Microlepid., 4: 150. T.l.: Brazil: São Paulo: Alto da Serra. NHMW. – RAZOWSKI, 1964, Annls zool., Warsz., 22(21): 472, fig. 58 (male genit.).

Known of the male only; in the genitalia uncus twice broader in the terminal part than at base, concave apically; terminal portion of gnathos broad, valva tapering terminally, aedeagus very small.

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

Argyrotaenia tristriata (MEYRICK)

Tortrix tristriata MEYRICK, 1931, Exotic Microlepid., 4: 151. T.l.: Brazil: São Paulo: Alto da Serra. NHMW. – RAZOWSKI, 1964, Annls zool., Warsz., 22(21): 465, figs 41, 42 (male genit.).

Male genitalia with very characteristic broad termination of uncus. Female unknown.

D i s t r i b u t i o n: Brazil: São Paulo (type locality only).

Argyrotaenia chroeca sp.n.

Wingspan 20 mm. Head brownish creamy, browner laterally; labial palpus ca 2; thorax creamy, brownish in proximal third. Forewing weakly expanding terminally, costa convex, termen somewhat oblique, concave beyond apex. Groundcolour creamy irregularly suffused pinkish brown. Base of wing suffused brownish, strigulate brown; median fascia dark brown consisting of small costal blotch and large median blotch extending distally; subapical blotch broad; subterminal markings atrophied. Cilia creamy, with traces of brown median line. Hindwing dirty creamy, densely strigulated pale brownish grey; cilia concolorous.

Male genitalia (Figs 11, 12) similar to that in *tristriata* but with broader, more stout uncus resembling rather than in *thamaluncus*, but longer. From these two species it differs also in having a distinct median process of sacculus.

Holotype, male: "Costa Rica, Cerro de Muerte, 3100 m, 5-7.VIII. 1981, V. O. BECKER col.; [45021]"; GS 22416. VOB.

Argyrotaenia thamaluncus RAZOWSKI

Argyrotaenia thamaluncus RAZOWSKI, 1999, Acta zool. cracov., 42(2): 311, figs 9, 10 (male genit.). T.l.: Dominican Republic: Peravia.

It differs from *tristriata* in having much broader and shorter uncus, slenderer valva, longer termination of aedeagus and presence of sublateral prominences of transtilla. Female remains unknown.

D i s t r i b u t i o n: Dominican Republic (t.l. only).

Argyrotaenia mesosignaria RAZOWSKI

Argyrotaenia mesosignaria RAZOWSKI, 1999, Acta zool. cracov., 42(2): 311, fig. 23. T.l.: Dominican Republic: La Vega. CMNH.

Known of female only; it is characterized by broad sterigma, broad membranous colliculum beyond its sclerite, absence of proximal sclerite of ductus bursae, and small signum.

D i s t r i b u t i o n: Dominican Republic (type locality only).

Argyrotaenia minisignaria RAZOWSKI

Argyrotaenia minisignaria RAZOWSKI, Acta zool. cracov., 42(2): 311. T.l.: Dominican Republic: Pedernales. Coll. CMNH.

Similar to *mesosignaria* but with minute signum. Male unknown.

D i s t r i b u t i o n: Dominican Republic (known from type locality only).

Argyrotaenia minisignaria chalarostium ssp.n.

Wingspan ca 18 mm. Externally very similar to nominate subspecies, but with somewhat more oblique termen. Wing ferruginous, without any strigulation, but with violet-pink hue rather distinct in terminal area of wing. Hindwing whitish, yellowish creamy on peripheries with trace of strigulae; cilia concolorous with distal part of wing.

Female genitalia (Fig. 41) as in nominate subspecies but with broader sterigma, slightly longer ductus bursae and without signum.

Holotype, female: "Blue Mt. Peak, Jamaica, Aug., Coll. by AVINOFF & SHOUMATOFF", GS 12273. CMNH.

Argyrotaenia artocopa (MEYRICK)

Tortrix artocopa MEYRICK, 1932, Exotic Microlepid., 4: 255. T.l.: Costa Rica: Orosi. NHMW. – RAZOWSKI, 1964, Annls zool., Warsz., 22(21): 470, figs 51,52 (male genit.).

Variable externally. Ground colour whitish to brownish, markings more or less brown, strigulation often distinct.

Male genitalia (Figs 13,14) characteristic by short, very broad uncus and elongate valva.

Female genitalia (Fig. 42) unknown till now, with fairly small sterigma provided with short anteostial sclerite.

D i s t r i b u t i o n: Costa Rica (Braulio Carrillo, 1100 m, coll. VO BECKER (VOBC), Puntarenas: Monteverde, 4600 ft, C. W. PALMER, (AMNH), Tuis (NMNH); Ecuador: Napo: Baeza (MRSN); Mexico: Veracruz: Huatusco, V. O. BECKER (VOBC).

Argyrotaenia heureta (WALSINGHAM)

Tortrix heureta WALSINGHAM, 1914, Biol. Cent.-Amer. Lepid. Heterocera, 4: 281, pl.8, fig. 19 (moth., colour). Lectotype, male : "Guiché Mts 7000-9000 ft. Guatemala, Chmpn. 1880, Gdm.Slvn. Coll. 67072"; GS 8334; NHML. – OBRAZTSOV, 1961, Am. Mus. Novitates, Nr.2048: 29 (part.).

Male genitalia (Figs 15,16): Uncus long, broad terminally; valva elongate-ovate; aedeagus broad, with sharp termination.

Female genitalia (Fig. 43): Anteostial part of sterigma well sclerotized, large, fusing with small cup-shaped part; sclerite of colliculum long; proximal sclerite of ductus bursae large; signum large, slender.

R e m a r k s. OBRAZTSOV (1961) illustrated female genitalia of a misidentified species from Mexico and his distribution data from that country are most probably wrong. The paralectotype of *heureta* is from San Geromino, Vera Paz, Guatemala (GS 8335, NHML) and its genitalia are illustrated in this paper.

Argyrotaenia dichroaca (WALSINGHAM)

Tortrix dichroaca WALSINGHAM, 1914, Biol. Centr.-Amer., Lepid. Heterocera, 4: 279. T.l.: Costa Rica: Rio Susio. Holotype (with abdomen missing); NHML. – OBRAZTSOV, 1961, Am. Mus. Novitates, No. 2048: 30, figs 55-59 (moths, genit.).

In the male genitalia the uncus rather uniformly broad, the sacculus with ventral process; the outer sclerite of signum very large.

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

R e m a r k. One specimen (from Braulio Carrillo, 1100 m, coll. V. O. BECKER) with broad, fairly short uncus may represent a distinct species, however, the female from the same locality has the signum similar to *dichroaca*.

Argyrotaenia brimuncus sp.n.

Wingspan 16 mm (male), 18 mm (female). Head and thorax brownish scaled creamy, labial palpus ca 2, creamer dorso-terminally. Forewing not expanding terminally, costa indistinctly, concave subapically; termen slightly sinuated postapically, weakly oblique. Ground colour pale cinnamon with violet admixture; base much darker, suffused with violet-grey, paler at costa where strigulated with brown; median fascia rustbrown consisting of small costal spot separate from large remaining blotch which is conconcave in its costal part, paler chestnut brown medially and towards dorsum, greyer towards tornus; proximal edge conve medially, edged creamy. Subapical blotch subtriangular, connected with costal part of median fascia. Cilia brownish rust, paler at torus. Hindwing pale brownish creamy, tinged ochreous in apical area, strigulated brownish grey; cilia brownish white. Female forewing as in male but with traces of markings and better developed brown rust strigulation and darker hindwing.

Male genitalia (Figs 17,18) as in *dichroaca* but uncus much longer, distinctly expanding terminally, dorsal edge of valva concave and ventral process of sacculus somewhat larger.

Female genitalia (Fig. 44) similar to those in the mentioned species but with smaller outer sclerite of signum.

Holotype, male: "Costa Rica, Braulio Carrillo, 1100 m, VII.1981, V. O. BECKER col."; [44808]; GS 22209. VOBC. Paratypes, male and female: V[olcan] Irazu, 6000-7000 ft., Costa Rica, W[a]ls[ingha]m coll. NHML.

Argyrotaenia haemothicta (MEYRICK)

Tortrix haemothicta MEYRICK, 1926, Exotic Microlepid.,3: 257; t.l. Colombia, Mt. Tolima; NHML. – *Eulia haemothicta*: CLARKE, 1958, Cat. MEYRICK Microlepid.,3: 127, pl. 63, figs 4-4b (moth, male genit., lectotype).

Uncus moderate, broadening terminally; sacculus with small subterminal process; aedeagus slightly expanding before end ventrally, provided with sharp termination.

Argyrotaenia lignaea (MEYRICK)

Tortrix lignaea MEYRICK, 1917, Trans. Ent. Soc. London, 1917: 9. T.l.: Ecuador: Huigra; NHML. – CLARKE, 1958, Cat. MEYRICK Microlepid.,3: 247, pl. 123, figs 1-1b (moth, male genit., lectotype).

Genitally close to *haemothicta* but with broader terminal portion of uncus and without subterminal process of sacculus.

D i s t r i b u t i o n: Ecuador only.

Argyrotaenia oriphanes (MEYRICK)

Tortrix oriphanes MEYRICK, 1930, Exotic Microlepid.,3: 608; t.l. Peru: Agualani; coll. NHML. – Clarke, 1958, Cat. MEYRICK Microlepid.,3: 248, pl. 124, figs 4-4b (moth, male genit., holotype).

Genitally very similar to *lignaea* but with more elongate valva and more curved aedeagus, provided with a series of small ventral thorns terminally.

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

Argyrotaenia dispositana (ZELLER)

Tortrix (Cacoecia?) dispositana ZELLER, 1877, Horae Soc. ent. ross.,13: 94, 488 (*dissioptana* in index), pl.2, fig. 31 (moth, colour). Holotype, female: "Bogota, N.[olcken]", GS 7853; NHML. – *Tortrix spoliata* ZELLER, 1877, ibid.,13: 96, pl. 2, fig. 32 (moth, colour). Holotype, male: "*Tortrix spoliata* Z., Bogota N.[olcken]", GS 8583; NHML. – *Argyrotaenia dispositana*: RAZOWSKI, 1999, Acta zool. cracov.,42(2): 329 (*spoliata* synonymized).

Male genitalia (Figs 19,20) with pointed apex of uncus, sacculus without free termination, and simple aedeagus.

Female genitalia (Fig. 45) characterize with large, sclerotized proximal part of sterigma terminating in a membranous cup; distal portion of sterigma small, lateral arms slender; sclerite of colliculum well developed in *spoliata*.

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

Argyrotaenia fragosa sp.n.

Wingspan 11 -12 mm. Head and thorax brownish, labial palpus ca 2. Forewing somewhat broadening medially, costa weakly concave beyond middle; termen straight beneath apex, not oblique. Ground colour pale ferruginous basally, greyish postmedially, silvery white or creamy along markings' edges, pale ferruginous grey at tornus. Markings: basal blotch brown, divided into two parts, the larger subdorsally; median fascia concolorous to cubital edge of median cell connecting with similarly coloured subterminal marking, cinnamon rust in dorsal half; subapical blotch rust brown; terminal marking (a line) rust brown. Cilia rust brown to beyond mid-termen, then ferruginous creamy. Hindwing greyish brown, pale in basal third; cilia brownish grey. Variation: one specimen with ground colour yellow-brown and markings much darker; one with creamy ground colour.

Male genitalia (Figs 21,22): Uncus broadening in terminal third; gnathos slender; valva long, membranous and concave dorsally; sacculus convex in median part; aedeagus with fairly broad termination.

Female genitalia (Fig. 47): Sterigma short, with well developed proximal corners; colliculum sclerite weak, proximal sclerite of ductus bursae absent; signum very strong, with very large capitulum.

Holotype, male: "Curitiba: Paraná, Brasil - 920 m, 25.X.1974, V. O. BECKER col."; [3599]; VOBC. - Paratypes: 9 males from Curitiba dated 21.XI.1974; 21.III.1970, 800 m; 18.IX.1974 - 920 m (2 specimens); 29.IX. 1971 (spns), 14.XII.1971, 1.X.1971, 30.VII.1971; 8.III.1970 - 920 m; 14.XII.1971; 4.II.1970 - 920 m; 20.III. 1970; 7.III.1970. 16 paratypes from Santa Catarina: Brusque 28.XII. 1969 and one dated 6.IX.1970; Rio Vermelho, 24.I. 1971; One paratype labelled: "Brasil: RS Rio Grande, Taim, 16.I.1989, V. O. BECKER". Minas Gerais: Sete Lagoas, 13.III.1969, 720 m, 15.V. 1974, 20.V.1974, 25.X.1974; Corumba, 20-22.IV.1985, 600 m. Other material: 32 specimens from Mato Grosso: Rio Brilhante, dated 25.I.1971, X.1970, and 28.XII.

R e m a r k s. Externally similar to *albosignata* but easily distinguished by lack of white ground colour beyond the median fascia, subcostally. Genitalia very distinct by the shape of valva and very large capitulum.

Argyrotaenia sphaleropa (MEYRICK)

Tortrix sphaleropa MEYRICK, 1909, Trans. Ent. Soc. London, **1909**: 15. T.I.: Bolivia: Sapago. - *Argyrotaenia sphaleropa*; CLARKE, 1958, Cat. MEYRICK Microlepid., **3**: 56, pl. 28, figs 1-1b (phot., male genit., lecto-type).

Eulia fletcheriella KÖHLER, 1940, Anal. Soc. Cient. Arg., **128**: 371, fig. 3 (male & female genit.). T.I.: Argentina: Tigre.

Male genitalia (Figs 23,24): Uncus expanding terminally, slightly variable; subterminal part of gnathos broad; valva rather short, broad with large, hairy pulvinus; aedeagus slender, bent; cornuti missing.

Female genitalia (Fig. 46): Sterigma short, with well developed anteostial part, small proximal prominences and short cup-shaped portion; no proximal sclerite of ductus bursae; capitulum of signum large.

D i s t r i b u t i o n: Bolivia (type), Brazil (Federal District, Minas Gerais, São Paulo, Paraná, Santa Catarina (BECKER coll.), Uruguay (Montevideo, leg. B. Scatoni), and Argentina (Tigre, type of *fletcheriella*). A common species; over 60 specimens examined.

B i o l o g y. Food plants are: *Solanum bonariense*, *Baccharis salicifolia* and *Cosmos* (larvae on flower-heads).

Argyrotaenia citharexylana (ZELLER)

Teras (Rhacodia) citharexylana ZELLER, 1866, Stettin. Ent. Z., **27**: 138, pl. 1, fig. 2. T.I. Colombia: near Umbaque. NHML. – ZELLER, 1877, Horae Soc. Ent. ross., **13**: 77.

The genitalia of the Colombian specimens are not examined (two “syntypes” in the NHML; one labelled as the type, “Colombia, Cundinamarca: Ubaque, 27.III.1971, Nolcken”, GS 7837 has its abdomen glued). A rather variable species. The specimens illustrated by WALSINGHAM (1914) are from Costa Rica and are most probably conspecific with the Colombian specimens. The male genitalia of Costarican specimen is as on Figs 25, 26. They differ from those of *sphaleroptera* in having shorter aedeagus terminating in a spine and uncus slightly tapering apically. The female genitalia (Fig. 48; specimen from Ecuador) with cup-shaped, proximal portion of sterigma broad, weakly sclerotized and the lateral parts without proximal processes.

D i s t r i b u t i o n. Certainly widely distributed as found in Costa Rica (our specimens are from Braulio Carillo and Turialba, collected at the altitudes of 1100 and 1500 m, respectively), Ecuador (Napo, Charchi, Baeza, at altitudes 1500 – 2200 m), and Bolivia.

Argyrotaenia chillana RAZOWSKI

Argyrotaenia chillana RAZOWSKI, 1999, Acta zool. cracov., **42**(2): 329, figs 31, 32 (male genit.). T.I.: Ecuador: El Oro: 6 km N Chilla. CMNH.

Easily distinguished by presence of a series of thorns of postmedian half of sacculus.

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

Argyrotaenia atima (WALSINGHAM)

Tortrix atima WALSINGHAM, 1914, Biol. Cent.-Amer. Lepid. Heterocera, **4**: 292, pl. 8 fig. 35. Holotype, female: “V[al] de Chiriqui 2000-3000 ft, Panama, Chmpn. 1881, Gdm.Slvn. 66563”, GS 7948; NHML.

Wingspan: Males 12-14 mm, females 14-18 mm. Variation rather slight: Darker and paler examples with more or less distinct and complete markings.

Male genitalia (Figs 27, 28): Uncus very large, slightly broadening postmedially, tapering distally; valva somewhat expanding subterminally; aedeagus much shorter than uncus.

Female genitalia (Fig. 49): Proximal part of sterigma distinct, fusing with anteostial sclerite; proximal sclerite of ductus bursae large, with lateral convexity; signum somewhat variable.

D i s t r i b u t i o n: Panama (type), Costa Rica: Turialba, 600 m, Brazil: Santa Catarina (Brusque, Banhado Quatro Barras, 800 m -VOBC); Rio Vermelho – coll. RAZOWSKI (ISEZ); Nova Teutonia (ÜMB), Paraná: Marumbi, 500 m, coll. BECKER (VOBC).

R e m a r k s. This species was till now known from a single female (type, examined). The male genitalia are here described for the first time. Our Costarican and Brazilian specimens do not differ from the type neither externally nor genitally.

Argyrotaenia albosignata sp.n.

Wingspan 12-14 mm. Head and thorax brown, labial palpus ca 2; Male forewing broadest medially, somewhat concave before end, termen not oblique, rounded in dorsal half. Ground colour pink grey to middle, grey beyond median fascia and subapically, white between these last areas, tinged pink in tornal part. Base of wing with some rust brown spots, median fascia similarly coloured, browner in costal part proximally; subapical, apical and subterminal markings rust. Cilia orangeous, brown at apex. Hindwing brown-grey, cilia grey.

Male genitalia (Figs 29, 30): Valva very broad, rounded distally; sacculus convex postbasally; aedeagus weakly bent, with a row of minute thorns in ventro-terminal portion. Scent scales of disc dorsally to sacculus thinner and longer than in *lobata*.

Female genitalia (Fig. 50): Anteostial portion of sterigma well sclerotized, fused with short cup-shaped part; sclerite of colliculum indistinct; proximal sclerite of ductus bursae short; signum moderate.

Holotype, male: "Morro de Meio, S.J. Pinhais, Paraná, Brasil, 15.V.1970, BECKER, LAROCA"; [1338]; GS 22132. VOBC. Paratypes, 29 males and females labelled as above or dated 15.I.1970, 11.IV. 1970. Morro de Meio 15.I.1970; 8.I.1970, 11.IV.1970; 8. I. 1970 (10 specimens); 15.V.1970; 5.VI. 1970. Curitiba 30.VII.1971, O. MILKE Col. Banhado Quatro Barras, 800 m, 7.II. 1970 (2 specimens); 29.VIII.1971; 5.V.1970; 27.XI. 1970; 5.6.70; 1.VIII.1970. – Santa Catarina: Brusque 28.XII.1969 (1 specimen); Rio Vermelho, 968 m, 20.II.1973, A. & J. RAZOWSKI (1 specimen).

Argyrotaenia obvoluta sp.n.

Wingspan 15 mm. Head and thorax brownish. Forewing broad, costa strongly convex to middle, weakly sinuate subapically; apex rather short, termen concave postapically. Ground colour greyish brown, in basal half with purple-violet suffusion, remainders of median fascia and terminal markings darker. Cilia concolorous with ground colour. Hindwing brownish, cilia paler.

Female genitalia (Fig. 51): Anteostial part of sterigma distinctly sclerotized, broad, extending in middle proximally; sclerite of colliculum weak; no proximal sclerite in ductus bursae; outer sclerite of signum fairly small.

Holotype, female: "Curitiba, P[a]R[aná], 1.X.1971, O. MIELKE col."; [7426], GS 22156. VOBC. – Paratypes two females labelled as above but dated 23.IX.1971 and 25X.1971; one specimen from Banhado, Quatro Barras, 800 m 7.II.1970, col. V. O. BECKER (VOBC).

Argyrotaenia lobata RAZOWSKI

Argyrotaenia lobata RAZOWSKI, 1988, Acta zool. cracov., **31**(10): 408, figs 90-92 (male genit.). T.l.: Bolivia: Cochabamba, Incachaca. NMNH.

In male genitalia uncus rather short, distinctly broadening terminally, rounded apically; valva rounded; sacculus broadening in distal fourth; group of curved scent scales in a fold of disc above sacculus; aedeagus slender, smooth, with terminal thorn.

D i s t r i b u t i o n: Bolivia; known from the type locality only.

Argyrotaenia ceramica RAZOWSKI

Argyrotaenia ceramica RAZOWSKI, 1999, Acta zool. cracov., **42**(2): 309, figs 5,6 (male genit.), 17 (female genit.). T.l.: Dominican Republic: Pedernales, 8 km NE Los Arroyos. CMNH.

In male genitalia valva slightly concave dorsally, tapering terminally; sacculus slender, with small dorsal lobe medially. In female genitalia sterigma rather small, proximal sclerite of ductus bursae absent, capitulum of signum large.

D i s t r i b u t i o n: Hispaniola. New data: Cuba: Santiago: Serra Maestra: Pik Cuba, 1990 m, coll. BECKER (VOBC).

Argyrotaenia fortis sp.n.

Wingspan 21 mm. Head and thorax brownish yellow; labial palpus ca 2. Forewing hardly expanding terminally, costa indistinctly sinuate subapically; termen slightly concave postapically, rather distinctly oblique. Ground colour pale brownish yellow, more creamy in median and terminal areas; brownish strigulation along costa, some along dorsum. Markings brown: dorso-basal spots paler than remaining parts; median fascia at costa followed by greyish suffusion; median and dorsal parts of median fascia diffuse; subapical blotch and dorsal portion of median fascia ochreous; sub-terminal strigulation brown ochreous accompanied by brown dots below brownish medio-terminal suffusion. Cilia creamy, basal line to middle of termen and at tornus rust. Hindwing white creamy,

creamy on periphery, strigulation grey; cilia concolorous with middle of wing. Reverse strigulated grey-brown, with rows of distinct brown spots between median veins.

Female genitalia (Fig. 52): Similar to those in *ceramica* but with much larger anteostial sterigma and its cup-shaped portion; proximal sclerite of ductus bursae absent; signum twice larger than in *ceramica*.

Holotype, female: "Costa Rica, Cerro de Muerte, 3100 m, 5-7.VIII.[19]81, V. O. BECKER col.; Col. BECKER 45022"; GS 22203; VOB.

***Argyrotaenia polvosana* OBRAZTSOV**

Argyrotaenia polvosana OBRAZTSOV, 1961, Am. Mus. Novit., No. 2048: 31, figs 65, 69, 70. AMNH. T. 1.: Mexico: La Polvosa, Chihuahua.

Male genitalia characterized with weakly convex, serrate ventral edge of sacculus and terminal process; dorsal lobe of sacculus variable.

Female genitalia (Fig. 53) unknown till now: Anteostial sclerite of sterigma well developed; ductus bursae rather short, provided with proximal sclerite.

D i s t r i b u t i o n: A Mexican species described from one male from Chihuahua; our material is from the Federal District: Texcoco and Lomas (several specimens, leg. F. HARTIG, MRSN) and Durango: Tepalcates near Durango (leg. J. POWELL & all.; CUB), and New Mexico: Sandoval Co. (leg. T. J. DOYEN; CUB).

***Argyrotaenia ponera* (WALSINGHAM)**

Tortrix ponera (WALSINGHAM, 1914), Biol. Cent.-Am. Lepid. Heterocera, 4: 279. T. 1.: Mexico: Popocatepetl Park, Puebla. NMNH. – *Argyrotaenia ponera*: OBRAZTSOV, 1961, Amer. Mus. Novitates, Nr. 2048: 38, figs 77-79 (moth, male genit.); BROWN & CRAMER, 2000, J. Lepidopterist's Soc., (1999)53(3): 117 (redescription, figs).

***Argyrotaenia unda* BROWN & CRAMER**

Argyrotaenia unda BROWN & CRAMER, 2000, J. Lepidopterist's Soc., (1999)53(3): 119, figs. 5, 10, 16. T.1.: Mexico: Mexico: 7 air km WSW Juchitepec.

***Argyrotaenia spinacallis* BROWN & CRAMER**

Argyrotaenia spinacallis BROWN & CRAMER, 2000, J. Lepidopterist's Soc., (1999)53(3): 119, figs. 4, 11, 15. T.1.: Mexico: Veracruz: Canon de las Minas, 13 km NE Perote.

***Argyrotaenia octavana* BROWN & CRAMER**

Argyrotaenia octavana BROWN & CRAMER, 2000, J. Lepidopterist's Soc., (1999)53(3): 121, Figs. 6, 12, 17. T.1.: Mexico: Puebla: 10 km E Esperanza.

Known from Puebla (t.l.) and Veracruz (W Ciudad Mendoza). Our specimens are labelled "Mexico – Puebla dint Xicotepec de Juarez, Altire di Catalina m. 1800, 10.VIII.1953, Legit F. HARTIG"; GS 13644; MRSN. In one of them the ventral serration of sacculus is reduced. The male genitalia of our specimen as in Figs 31,32.

***Argyrotaenia bialbistriana* BROWN & CRAMER**

Argyrotaenia bialbistriana BROWN & CRAMER, 2000, J. Lepidopterist's Soc., (1999)53(3): 124, Figs. 8,13,18. T.1.: Mexico: Durango, 10 mi W El Salto.

Known from Mexico (Durango) and USA, Arizona (Chiricachua Mts.)

***Argyrotaenia glabra* sp.n.**

Wingspan 18 mm. Head and thorax brownish. Forewing not expanding terminally, costa gently sinuate postmedially, termen oblique, rather straight. Ground colour paler than thorax with delicate

but dense darker, more ferruginous strigulation and some black scales scattered in median and terminal areas; weak rust brown reticulation in this last; darker strigulae at costa; median fascia, suffusion at costa and indistinct suffusion subcostally and dorsally brownish grey; two blackish dots beyond end of median cell; subapical blotch indistinct followed by two brownish spots; fringes concolorous with suffusion, creamer towards tornus. Hindwing creamy white tinged yellowish at apex; cilia whitish. Female: wingspan ca 18 mm; Forewing more olive brownish especially in distal half, with strigulation and trace of brownish markings. Hindwing greyer than in male.

Male genitalia (Figs 33,34) as in *pueblana* but uncus shorter, less tapering terminally as in *lautana*; aedeagus large, strongly curved, provided with small subterminal dent; cornuti very long.

Female genitalia (Fig. 54): Medio-proximal part of sterigma elongate, forming a short cup. Close to *dichotoma* but with much shorter sclerite of colliculum and basal sclerites of signum.

Holotype, male: "Mexico: Chiapas, San Cristobal de las Casas, 2300 m, 23-27.VI. 1981, V. O. BECKER col."; [43763]; GS 22210. VOBC. Paratype, an identically labelled female.

Argyrotaenia dichotoma (WALSINGHAM)

Tortrix dichotoma WALSINGHAM, 1914, Biol. Centr.-Amer., Lepid., Heterocera, 4: 291. T.I.: Mexico: Guerrero: Omiteme. NHML. – OBRAZTSOV, 1961, Am. Mus. Novitates, Nr. 2048: 38, figs 60,63, 64 (female genit.).

Known from the female only; the genitalia characterize by deep cup-shaped portion of sterigma and very long basal sclerites of signum.

D i s t r i b u t i o n: Guerrero, Mexico; one specimen labelled as "co-type" from Totonicapam in NMNH.

Unplaced species

Argyrotaenia loxonephes (MEYRICK)

Eulia loxonephes MEYRICK, 1937, Exotic Microlepid., 5: 128. T.I. Argentina: no exact data; coll. F. BURQUIN, Buenos Aires. – CHIARELLI DE GAHAN, 1945, Publ. Inst. veg. Buenos Aires, (A)1(2): 6-9 figs., early stages.

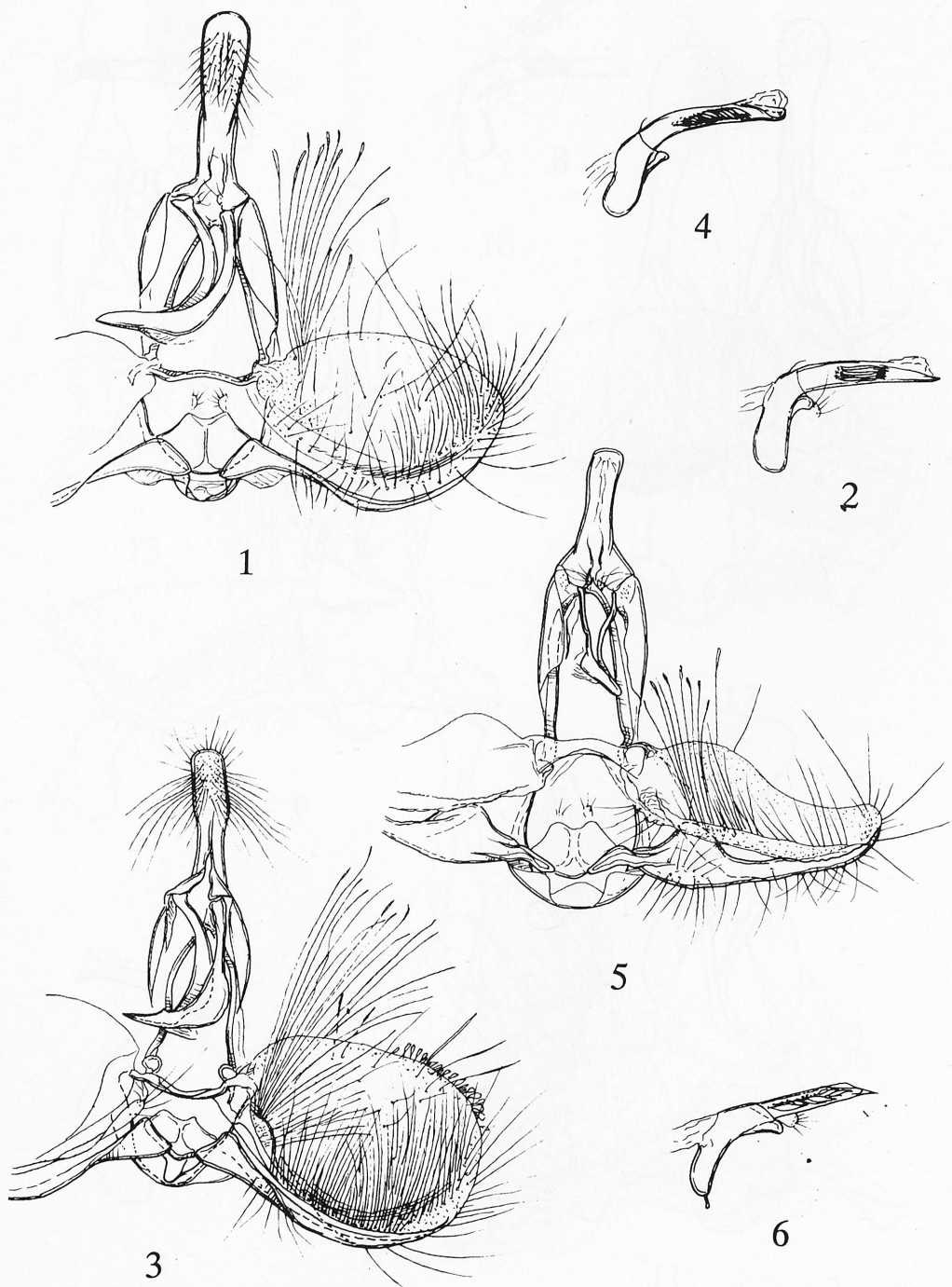
Diedra RUBINOFF & POWELL

Diedra RUBINOFF & POWELL, 1999, Ann. Entomol. Soc. Am., 92(4): 479. Type species: *Tortrix cockerellana* KEARFOTT, 1907, by original designation.

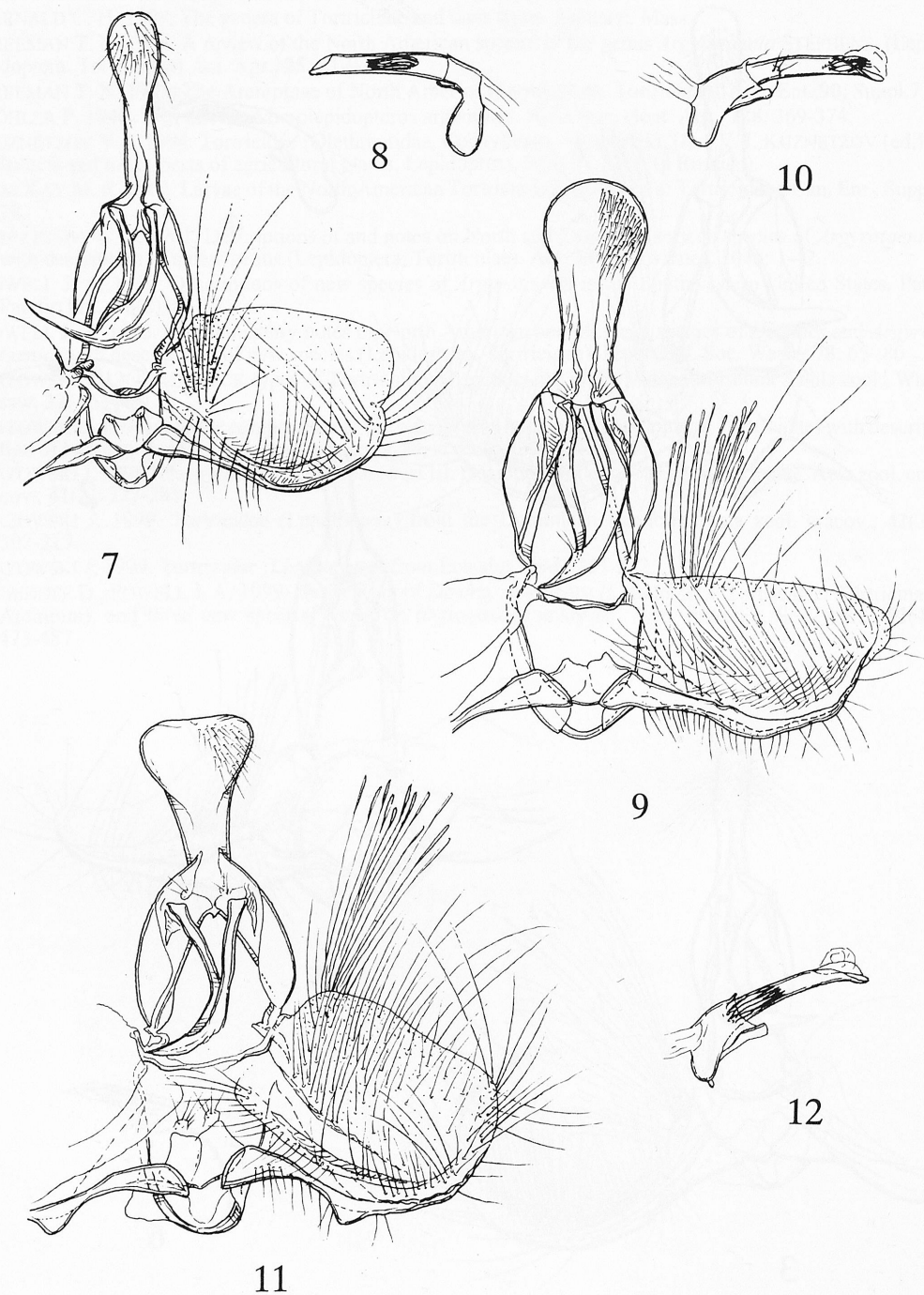
Described for five species (*Tortrix cockerellana* KEARFOTT, 1907, *Argyrotaenia wielgusi* CLARKE, 1989, *Diedra intermontana* RUBINOFF & POWELL, 1999, *Diedra leuschneri* RUBINOFF & POWELL, 1999, *Diedra calocedrana* RUBINOFF & POWELL, 1999) of the following supposed autapomorphies: 1) male genitalia heavily sclerotized, 2) uncus large, curved ventrally, parallel-sided, with dilated, cleft tip, 3) valva produced apically, 4) aedeagus elongate, slender, acutely curved, its tip strongly produced, and 5) a pronounced, distinct, dorsally flattened flange with darkened midrib extending from base of phallobase. When examining the material of *Argyrotaenia* we have found various stages of sclerotization of the male genitalia. The anterior half of uncus is in many species parallel-sided, with or without a cleft. The valva is very variable and in some groups of *Argyrotaenia* is identical with that in *Diedra*. Elongate, curved and slender aedeagus can be found in several species, and its tip is in them even more produced than in *Diedra*. Thus the flange is the only character (5) separating the two genera. It is developed in *ponera* but lacks in *pueblana*. However, the two species are similar externally and genitally. We are placing the two in *Argyrotaenia*.

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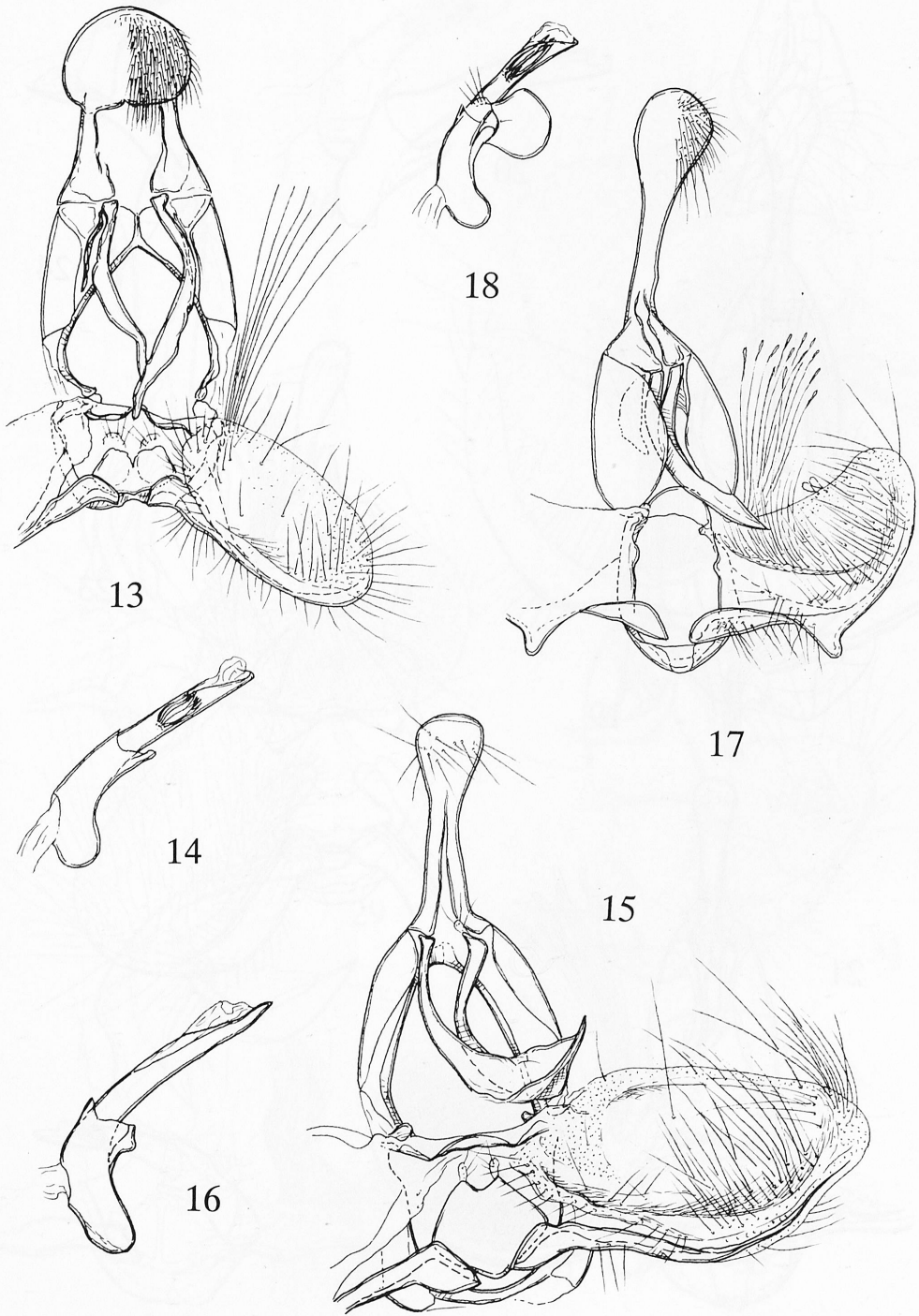
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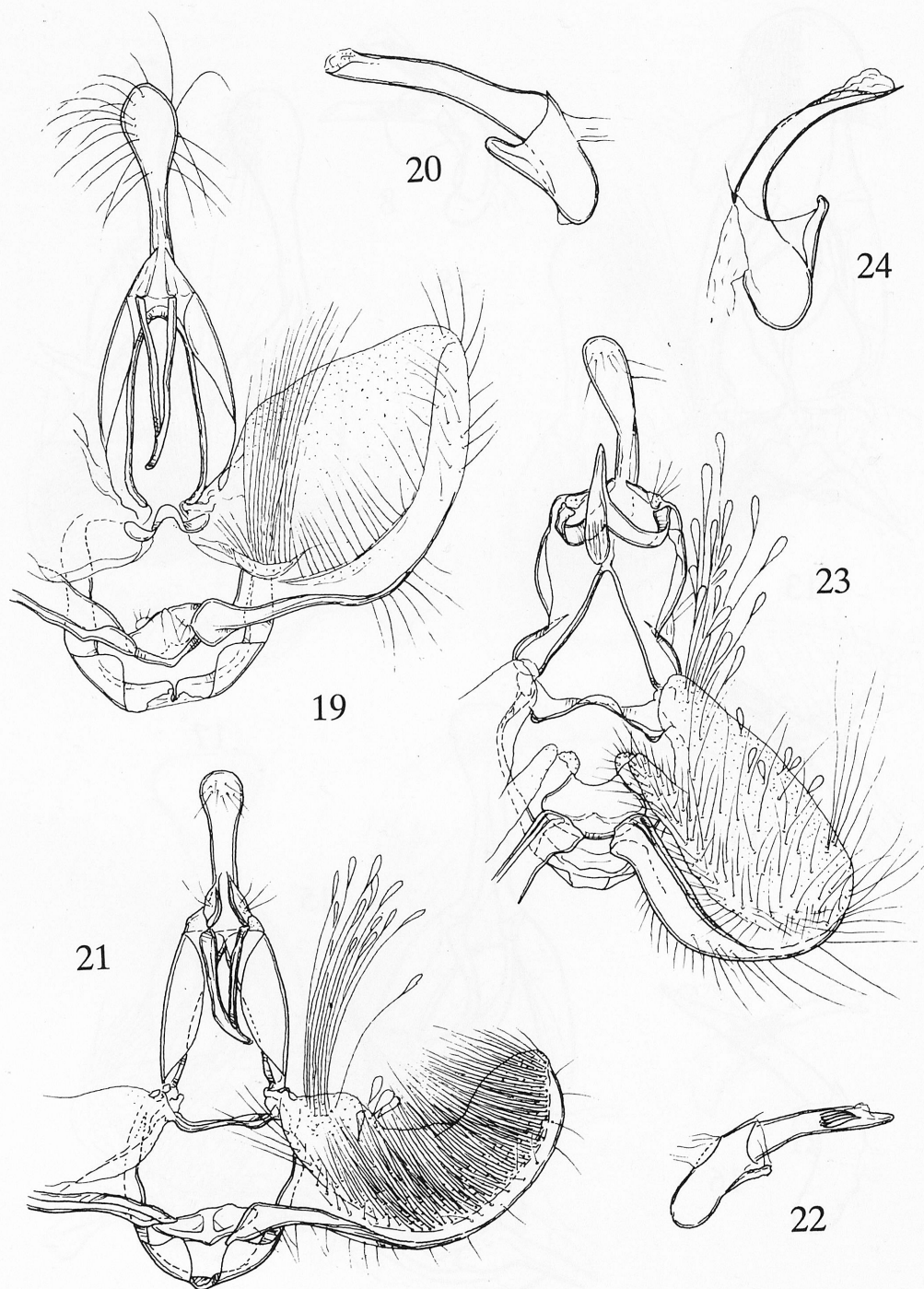
Figs 1-6. Male genitalia of *Argyrotaenia* STEPHENS: 1,2 - *A. confinis* sp.n., holotype; 3,4 - *A. cupreographa* sp.n., holotype; 5,6 - *A. sagata* sp.n., holotype.



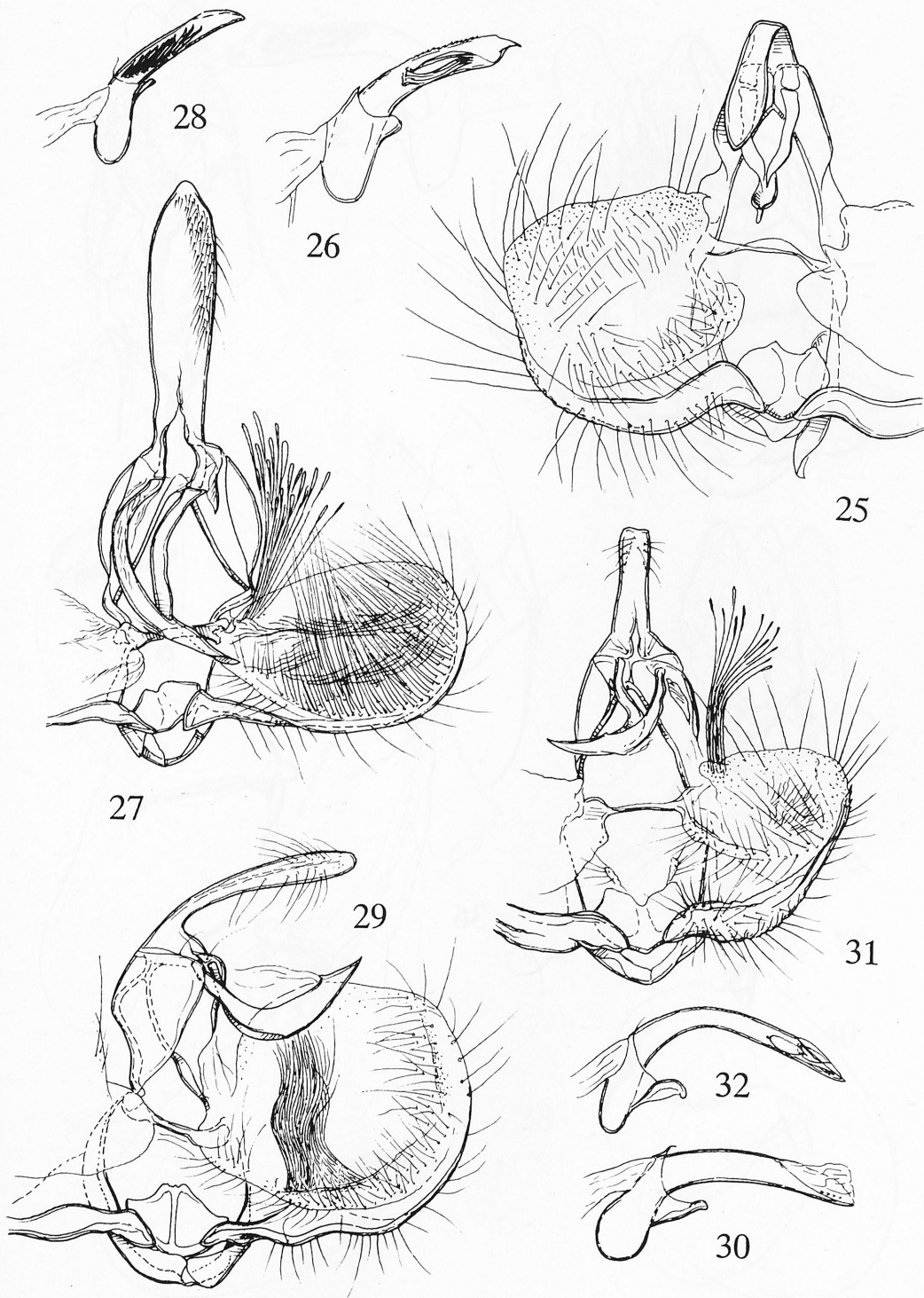
Figs 7-12. Male genitalia of *Argyrotaenia* STEPHENS: 7,8 – *A. Jamaicana* sp.n., holotype; 9,10 – *A. parturita* sp.n., holotype; 11,12 – *A. Chroeca* sp.n., holotype.



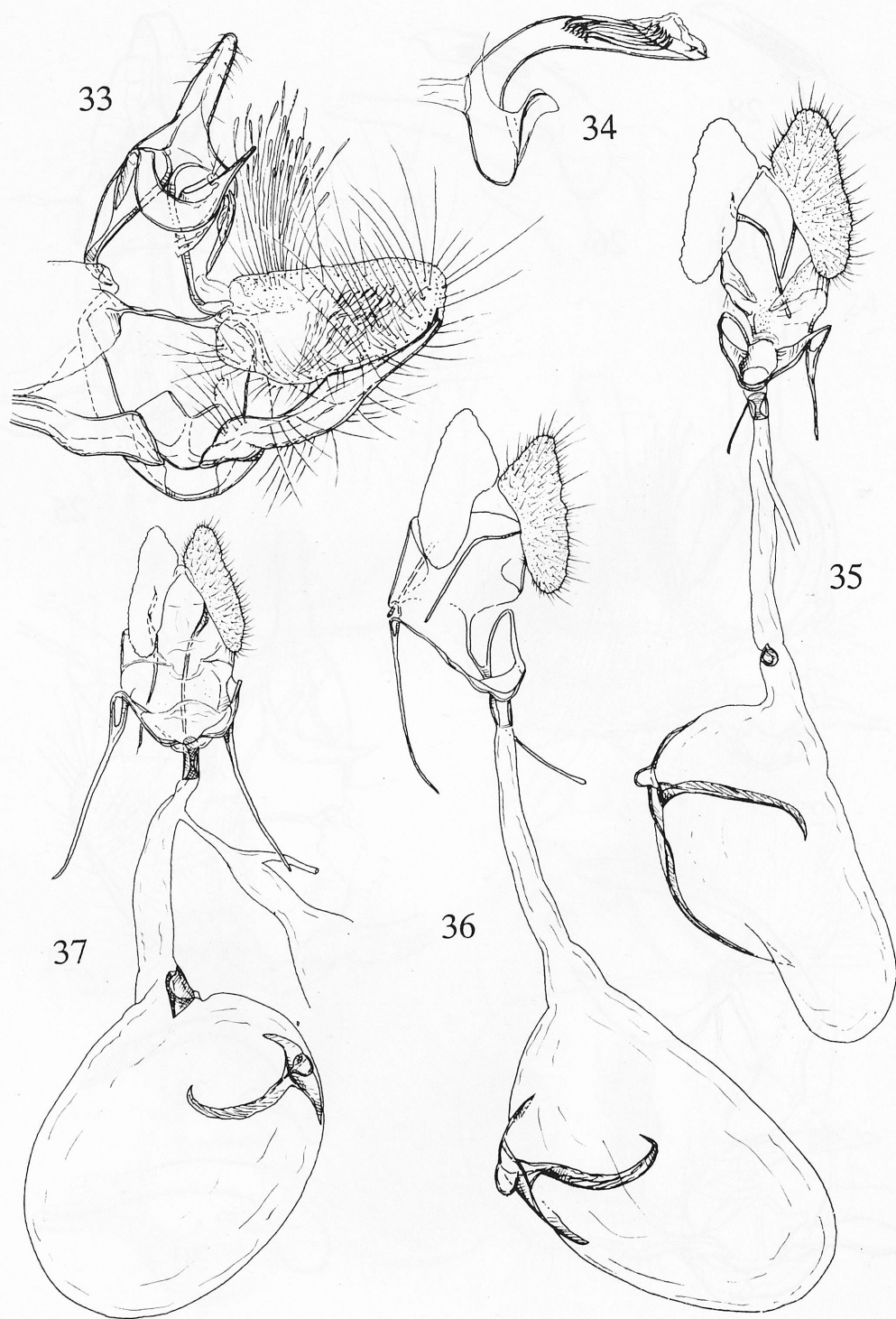
Figs 13-18. Male genitalia of *Argyrotaenia* STEPHENS: 13,14 – *A. artocopa* (MEYRICK), Costa Rica: Puntarenas: Monteverde; 15,16 – *A. heureta* (WALSINGHAM), lectotype; 17,18 – *A. brimuncus* sp.n., holotype.



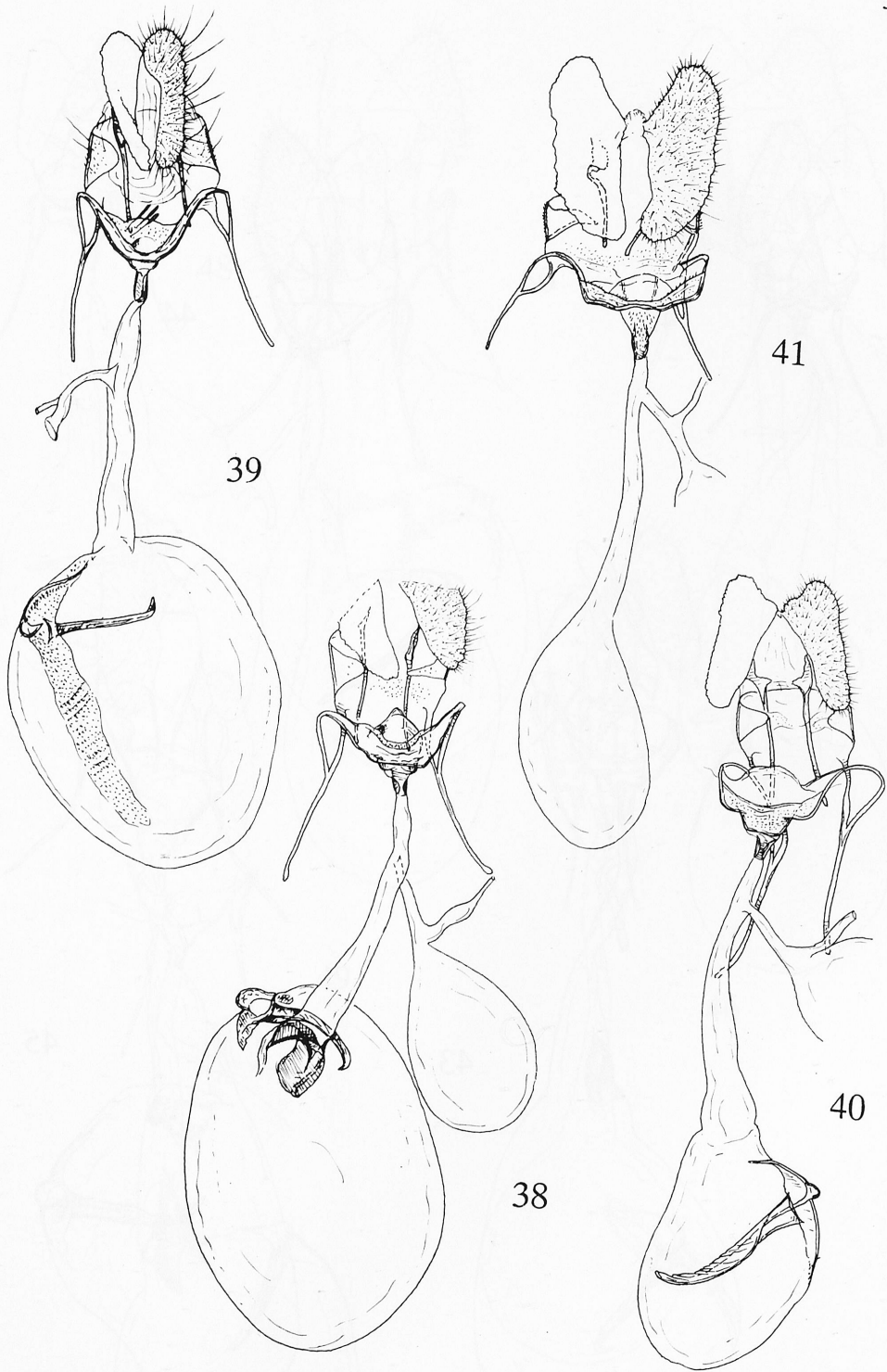
Figs 19-24. Male genitalia of *Argyrotaenia* STEPHENS: 19,20 – *A. dispositana* (ZELLER), holotype of *Tortrix spoliata* (ZELLER); 21,22 – *A. fragosa* sp.n., holotype; 23,24 – *A. sphaleropa* (MEYRICK), Brazil: Federal District: Planaltina.



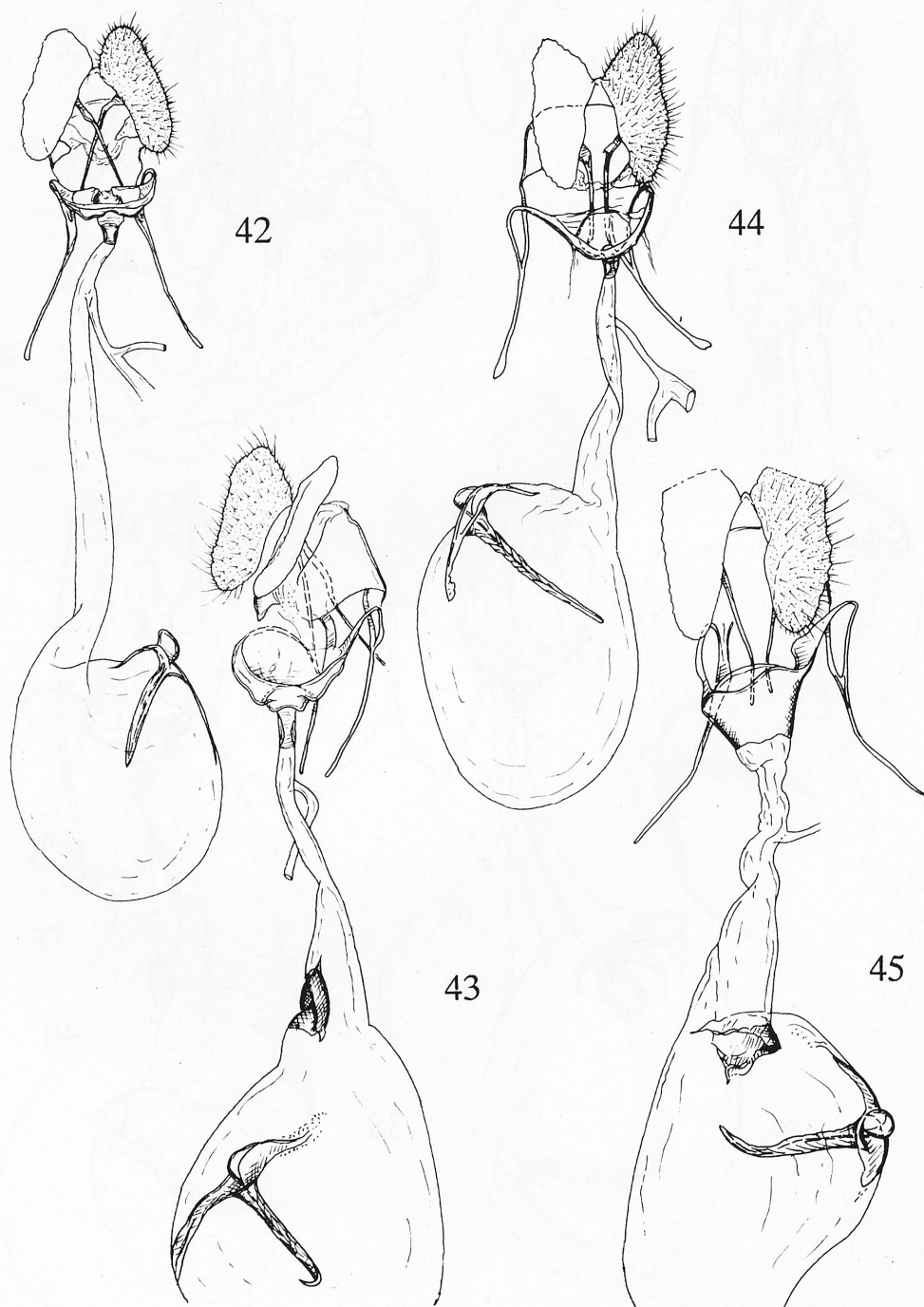
Figs 25-32. Male genitalia of *Argyrotaenia* STEPHENS: 25,26 – *A. citharexylana* (ZELLER), Costa Rica: Chace; 27,28 – *A. atima* (WALSINGHAM), Brazil: Santa Catarina: Brusque; 31,32 – *A. octavana* BROWN & CRAMER, Mexico: Puebla: Xicotepec de Juarez.



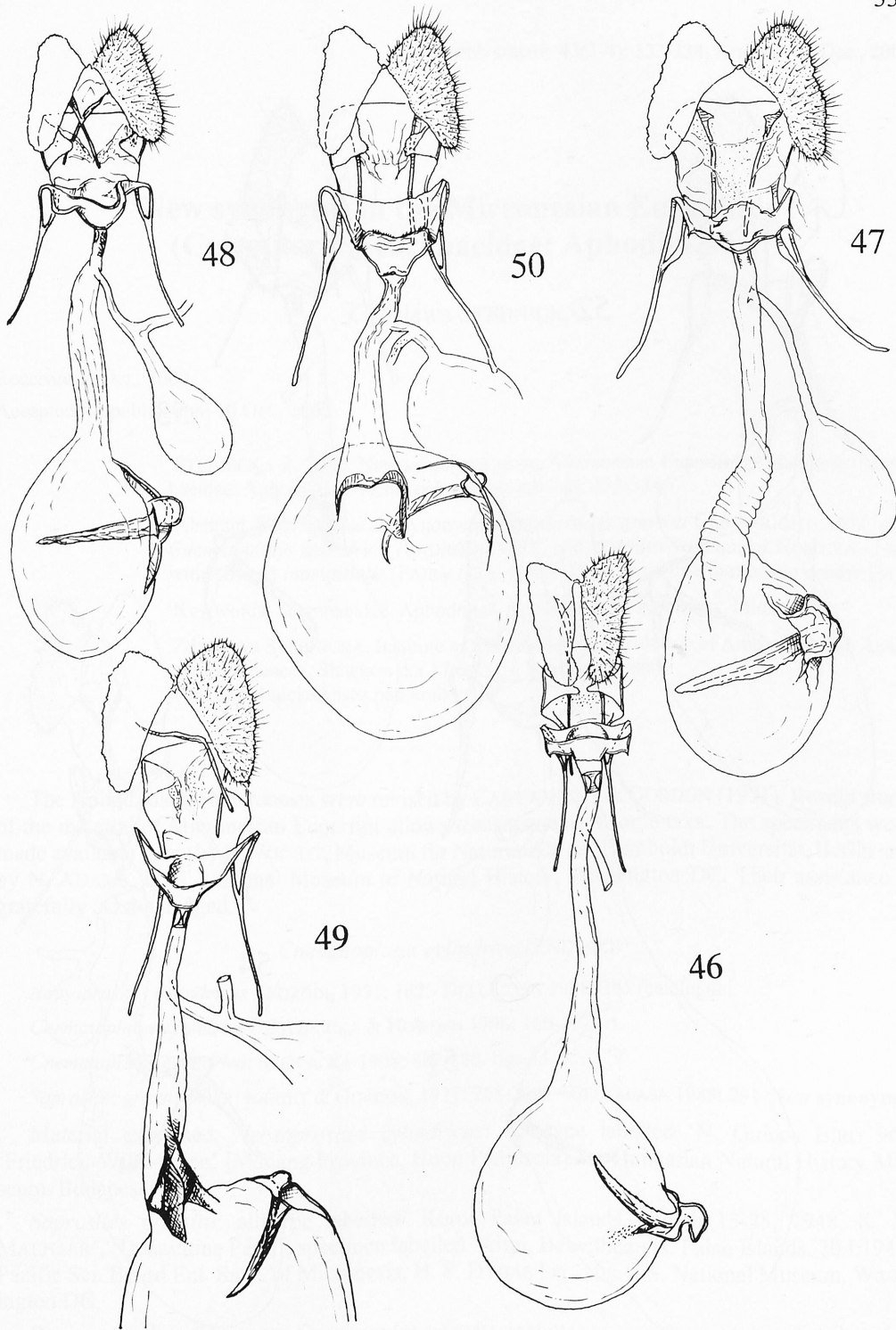
Figs 33-37. Male and female genitalia of *Argyrotaenia* STEPHENS: 33,34 – *A. glabra* sp.n., holotype; 35 – *A. venezuelana* sp.n., holotype; 36 – *A. guatemalica* (WALSINGHAM), lectotype; 37 – *A. confinis* sp.n., paratype.



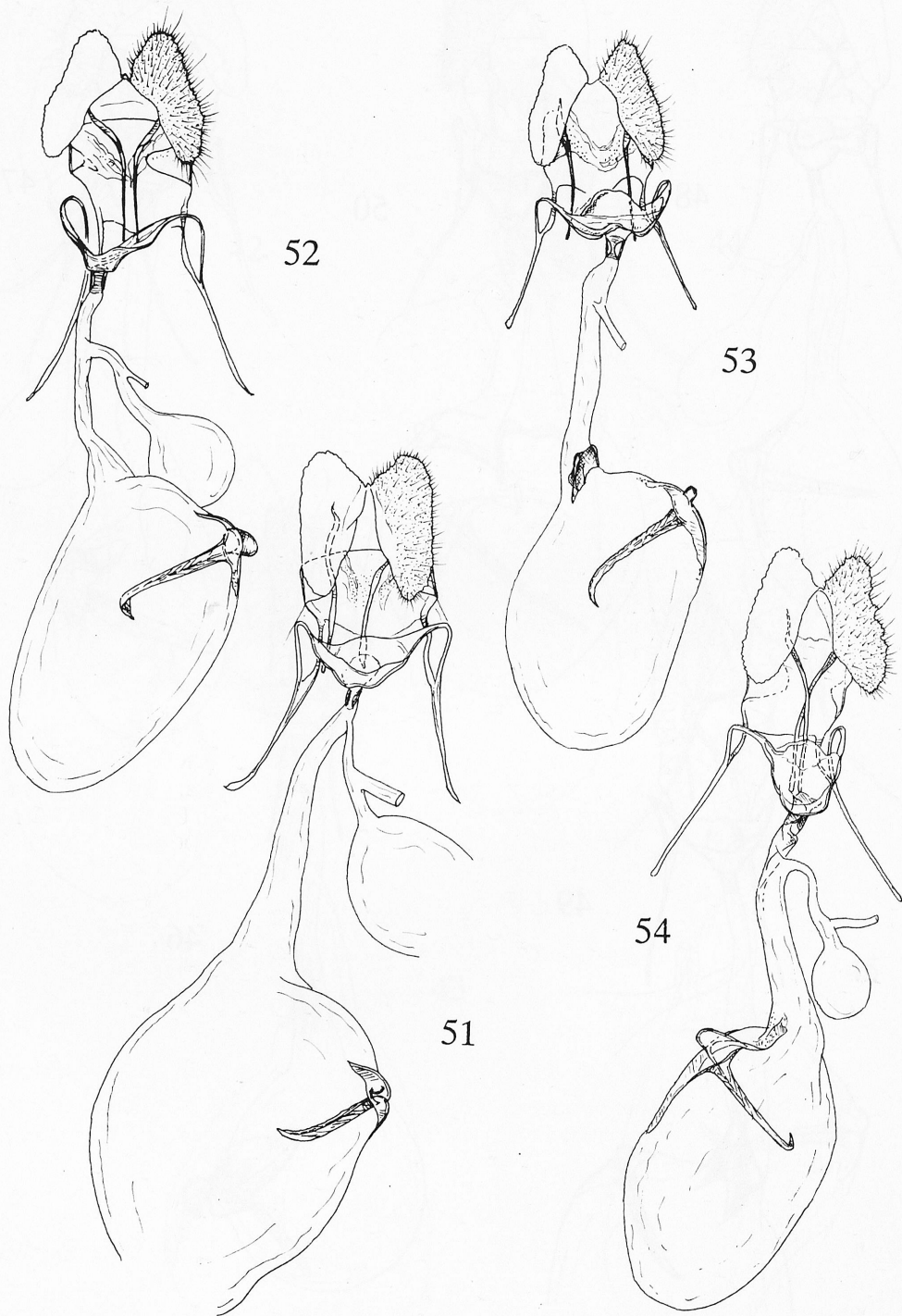
Figs 38-41. Female genitalia of *Argyrotaenia* STEPHENS: 38 – *A. cupreographa* sp.n., paratype; 39 – *A. dearmata* sp.n., holotype; 40 – *A. hemixia* RAZOWSKI, Brazil: Paraná: Curitiba; 41 – *A. minisignaria chalarostium* ssp.n., holotype.



Figs 42-45. Female genitalia of *Argyrotaenia* STEPHENS: 42 – *A. artocopa* (MEYRICK), Costa Rica: Puntarenas: Monteverde; 43 – *A. heureta* (WALSINGHAM), lectoparatype; 44 – *A. brimuncus* sp.n., paratype.



Figs 46-50. Female genitalia of *Argyrotaenia* STEPHENS: 46 – *A. spheropa* (MEYRICK), Uruguay; 47 – *A. fragosa* sp.n., paratype; 48 – *A. citharexylana* (ZELLER), Ecuador: Napo: Rio Verde; 49 – *A. atima* (WALSINGHAM), Brazil: Paraná: Banhado, Quatro Barras; 50 – *A. albosignata* sp.n., paratype.



Figs 51-54. Female genitalia of *Argyrotaenia* STEPHENS: 51 – *A. obvoluta* sp.n., paratype; 52 – *A. fortis* sp.n., paratype; 53 – *A. polvosana* OBRAZTSOV, Mexico: Federal District: La Venta; 54 – *A. glabra* sp.n., paratype.