

Tortricinae and Chlidanotinae (Lepidoptera: Tortricidae) collected by B. LANDRY in Ecuador

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Abstract. Of thirteen species listed one genus, three Euliini species (*Pseudomeritastis emphanes*, *Netechnodes landryi*, *Thalleulia gracilescens*), three species of Archipini (*Clepsis parva*, *C. parassensus*, *C. assensiodes*), two species of Atteriini (*Sisurcana leptina*, *Anacrusis rubida*) and one of Chlidanotini (*Monortha procera*) are described as new. Female of *Henricus metalliferus* RAZOWSKI & PELZ is described.

Key words: Lepidoptera, Tortricidae, new taxa, Ecuador.

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I. INTRODUCTION

Recently the Tortricidae of Ecuador are efficiently studied thanks to intense collecting by V.O. BECKER, V. PELZ, J. WOJTUSIAK, and B. LANDRY who chiefly studied the Galapagos Islands. The project of was presented by RAZOWSKI and PELZ (2001) who successively are publishing on the Ecuadoran material. The present paper is a continuation of this project.

This paper is based on the material collected in the Pichincha, Northern Ecuador in which nobody collected tortricines to date (S00° 01.235' W078° 04.600').

All specimens were collected within three days, 8-10 May 2002 in a forest camp at an altitude of about 1300 m above sea level with the use of the ultra violet light by B. LANDRY and L. ROQUE. Only two specimens from other collection are included.

This sample (25 examples) comprises the representatives of all tortricine subfamilies, however, only the species of Tortricinae and Chlidanotinae were identified. Chlidanotinae are represented by a single new species and the olethreutines by the females of one *Bactra* species and one Olethreutini species. Another example of Olethreutini is a male most probably belonging to the Holarctic genus *Hedya* HÜBNER [1825]1816. All the olethreutine specimens require a further study. Among Cochylini one species is probably widely distributed in this part of the continent and the female of the other is described for the first time. Euliini are, as probably everywhere in this region, a tribe most abundant in species. Among Archipini the richest in the Neotropics are two genera, viz., *Clepsis* GUENÉE, 1845 in this collection represented by four species and *Argyrotaenia* STEPHENS, 1852 (here one indeterminable female). The number of species of Atteriini is enlarged by two new ones;

both *Sisurcana* POWELL, 1986 and *Anacrusis* ZELLER, 1877 are rich in species and widely distributed in this region. The area of distribution of *Monortha*, Chlidanotini is now extended to western part of the continent; all species known to this date were distributed from Costa Rica to S Brazil.

The holotypes are preserved in the collection of the Muséum d'histoire naturelle, Geneve if not mentioned otherwise.

A c k n o w l e d g m e n t s. The author is greatly grateful to Dr. Bernard LANDRY, Muséum d'histoire naturelle, Geneve for loan of the material for study and Dr. John RAWLINS, the Carnegie Museum, Pittsburgh for specimens of *Anacrusis rubida* included in this paper. I also thank Mr. Marek KOPEĆ, Kraków who photographed moths and genitalia and for digital arranged of the plates.

II. SYSTEMATIC PART

Tortricinae

Cochylini

Henricus metalliferus RAZOWSKI et PELZ, 2001

The specimen collected on 9. V. is the only female known to this date. It differs from the male in having a yellow creamy colouration of the front. Female genitalia (Fig. 16): Papilla analis broadest in median part, with indistinct anterior portion; sterigma short with very broad, short cup-shaped part; ductus bursae broad, sclerotized except for the distal portion; accessory bursa from about middle of this last, with rather well sclerotized ductus; corpus bursae densely spined, provided with postero-median sclerite and less strongly sclerotized elliptic distally open median ring.

Aphalonia praeposita (MEYRICK, 1917)

One male; 10. V. A Peruvian species already discovered in Ecuador (Macas, Prov. Morona-Santiago).

Euliini

Pseudomeritastis emphanes sp.n.

(Fig. 21)

D i a g n o s i s. Externally very similar to other species of this genus. Closely related with Colombian *P. clarkei* Obraztsov, 1966 but distinct in having the acute end of uncus, the much shorter anterior processes of gnathos, less convex sacculus and the presence of sharp dorsal prominence of aedeagus.

E t y m o l o g y. The species name refers to distinct genital characters; *emphanes* - visible.

D e s c r i p t i o n. Wing span 18 mm. Head and thorax greyish, labial palpus ca 2, slender, mixed brownish terminally. Forewing and colouration as in other species of this genus. Ground colour creamy white, grey in costal third, darker basally and apically, with a few brown-grey dashes. Dorso-median area of wing creamy rust, gradually darker costad, edged with dark rust, similarly suffused along costal edge. Cilia whitish, grey in costal third, with greyish basal line. Hindwing creamy, slightly tinged ochreous at apex; cilia whitish.

Male genitalia (Figs 4,5). Uncus very slender, somewhat broadening before end, acute terminally; socius reduced; gnathos armed with strong postbasal process terminating in a group of bristles, broad distally, with sharp process at base of terminal plate; sacculus weakly expanding beyond middle ventrally, with distinct sharp termination; distal part of aedeagus slender, broadening apically.

Female remains unknown.

Holotype, male: "Ecu[ador], Pichincha-Septimo Paraiso Reserve, uvl, primary forest camp S00° 01.235' W078° W078°64.600' 8. V. 2002, +- 1300m leg. B. LANDRY, L. ROQUE"; GS 20439. Paratype, male, same label, date: 10.V.

Netechmodes landryi sp. n.

(Fig. 22)

D i a g n o s i s. Distinct by straw yellow ground colour of the forewing and slender brown markings. It is most close to Ecuadoran *N. harpago* RAZOWSKI et PELZ, 2003 but easily distinguished by the presence of a large basal process of valva and a shorter terminal process of sacculus.

E t y m o l o g y. The species is named in honour of its collector Dr. Bernard Landry.

D e s c r i p t i o n. Wing span 13 mm. Head and thorax creamy; labial palpus 1.5, base of tegula pale rusty. Forewing weakly expanding posteriorly, costa slightly convex, apex sharp, termen oblique hardly concave beneath apex. Wing yellowish white; markings dark rust brown: Spot at base of costa; slender line from beyond 2/3 of dorsum to costal part of median fascia; this last reaching dorsum before tornus, very slender from median cell; a line from end of median cell to before apex; a few dots near mid termen. Cilia yellowish white. Hindwing whitish, cilia similar.

Male genitalia (Figs 6,7). Uncus long, slender gradually broadening basally; socius rather short, rounded terminally; arm of gnathos and its terminal portion simple, slender; terminal part of valva slender, subtriangular; base of costa of valva armed with very strong, curved sharp process, much smaller process near middle followed by distinct dorsal convexity; sacculus terminated in straight slender process; aedeagus thick.

Female unknown.

Holotype, male: "Ecu[ador], Pichincha-Septimo Paraiso Reserve, uvl, primary forest camp S00° 01.235' W078° W078°64.600' 9. V. 2002, +- 1300m leg. B. LANDRY, L. ROQUE"; GS 20446.

Thalleulia gen.n.

Type-species: *Thalleulia gracilescens* sp.n.

D i a g n o s i s. Facies similar to that in many Archipini, e.g. *Clepsis* Guenée, 1845 or *Argyrotaenia* Stephens, 1852.

E t y m o l o g y. The name refers to a relation with some other Euliini; thall - a branch or descendant.

D e s c r i p t i o n. Venation. In forewing distance between bases of R1-R2 twice large than those between R2-R3; R5 to termen; M2-M3 almost connate; bases of M3-CuA1 well separate. In hindwing Rs-M1 not connected basally; bases of M2-M3 approaching to one another, M3-CuA1 connate.

Male genitalia. Uncus rod like; socius large, drooping; arm of gnathos provided with long latero-terminal process; valva fairly broad with distinct costa; sacculus slender, with short free end; median portion of transtilla with a slender lobe directed distally; aedeagus short; coecum penis almost as long as postzonal part; caulis very short.

Female unknown.

Thalleulia gracilescens sp.n.

(Fig. 23)

D i a g n o s i s. As mentioned with the genus.

E t y m o l o g y. The epithet refers to the strongly tapering terminal parts of genitalia, viz., uncus and gnathos; gracilescens – tapered.

D e s c r i p t i o n. Wing span 17.5 mm; labial palpus ca 1.5 grey-brown, end of second joint, terminal joint, vertex and front dark brown. Forewing broad; costa distinctly convex, termen

slightly concave beyond apex, then weakly oblique and convex. Ground colour cinnamon brown, paler, mixed pearl grey in distal third; transverse strigulation and lines (anterior edges of reduced markings) brown, mostly marked with erect scales; a trace of discal spot present. Cilia orangeous, whitish beyond distinctly orange rust median line. Hindwing pale brown, paler basally; cilia brownish.

Male genitalia (Figs 8,9) as described with the genus.

Holotype, male: "Ecu[ador], Pichincha-Septimo Paraiso Reserve, uvl, primary forest camp S00° 01.235' W078° W078°64.600' 10. V. 2002, +- 1300m leg. B. LANDRY, L. ROQUE"; GS 20451. Paratype, male, similar label but dated 8.V.

Archipini

Clepsis parva sp.n.

(Fig. 24)

Diagnosis. Male genitalia comparable with those in *C. powelli* RAZOWSKI, 1979 from Mexico (Tamaulipas) and *C. penetralis* RAZOWSKI, 1979 from the U.S.A. (Utah); uncus slightly longer than in the two mentioned species but aedeagus membranous dorsally resembling that in *C. crinis* RAZOWSKI, 1979 from Mexico (Nuevo Leon).

Etymology. The name refers to small size of this species; parvus - small.

Description. Wing span 11 mm (10 mm in one of paratypes). Head and thorax creamy hardly tinged brownish. Forewing broadest in middle, then concave; termen weakly convex, somewhat oblique. Ground colour pale yellowish creamy sprinkled or suffused with grey especially in dorsal third of wing; costal parts of markings in form of small greyish blotches followed by rows or ochreous creamy spots representing the edges of fasciae. Cilia concolorous with ground colour. Hindwing whitish creamy, grey on periphery; cilia white creamy. Variation: Ground colour of forewing more or less pale, in one paratype pale brownish ochreous spots present.

Male genitalia (Figs 10, 11). Uncus slender, gradually expanding terminad, rather rounded apically; sacculus short, convex in middle ventrally; labis slender, well spiny dorsally; aedeagus slender, membranous dorsally, terminating in a small ventral tip; no cornuti found.

Holotype, male: "Ecu[ador], Pichincha-Septimo Paraiso Reserve, uvl, primary forest camp S00° 01.235' W078° W078°64.600' 10. V. 2002, +- 1300m leg. B. LANDRY, L. ROQUE"; GS 20453. Paratypes, three males: two labelled as above, one with date 8.V.

Clepsis sp. near *C. gelophodes* (MEYRICK, 1936)

One male collected 10.V. with the genitalia slightly different from the other specimens from Ecuador. *C. gelophodes* was described from Venezuela, another closely related species, *C. abscisana* (ZELLER, 1877) from Costa Rica and some specimens with similar male genitalia from other countries. The females of the two mentioned species distinctly differ from one another whilst the males are very similar (RAZOWSKI 1979). Thus a female of Ecuadoral taxon is required to decide about its systematic position.

Clepsis parassensus sp.n.

(Fig. 25)

D i a g n o s i s. Closely related with *C. assensus* RAZOWSKI & PELZ, 2004 also described from Ecuador. Externally it differs in having a subsquare subapical blotch. In the two species proximal edge of median fascia is convex in middle anteriorly. In the genitalia it is distinct by the slenderer uncus, much larger aedeagus and heavily spined, convex dorsal part of labis.

E t y m o l o g y. The name refers to the similarity with *C. assensus*; para - near, close.

Description. Wing span ca 11 mm in male, ca 15 mm in female. Head and thorax brownish. Costa of forewing concaving postmedially, termen weakly oblique in male, more strongly so in female. Ground colour pale brownish sprinkled with brown, creamy along markings. Markings brown: Basal blotch in form of a weakly preserved fascia along dorsal edge of median cell; median fascia convex in middle; subapical blotch subsquare or slightly tapering distad accompanied by elongate, broadening distally mark at vein M2; some three dots at apical part of termen in a somewhat paler ground. Cilia creamy with brownish scales. Hindwing pale brownish grey, paler in male than in female, with slightly paler cilia.

Male genitalia (Figs 12, 13). Uncus slender to middle with elongate broad distal part; aedeagus broad beyond zone; coecum penis long.

Female genitalia (Fig. 17). Sterigma small, rounded proximally; ductus bursae with 10 coils; signum fairly small.

Holotype, male: "Ecu[ador], Pichincha-Septimo Paraiso Reserve, uvl, primary forest camp SOO° 01253' W078°46.600' 10. V. 2002,+ - 1300m leg. B. LANDRY, L. ROQUE"; GS 20455. Paratypes, two females with similar labels, dated 8.V., one with GS 20456.

Clepsis assensiodes sp.n.

(Fig. 26)

D i a g n o s i s. Facies similar to that in *C. assensus* but markings dark brown, subapical blotch of forewing slightly tapering distally and subterminal marking divided into two parts, and median fascia hardly expanding proximally. In the genitalia also resembling *assensus* but characterized with broader sterigma, much longer ductus bursae and smaller signum

E t y m o l o g y. The epithet refers to a similarity with *C. assensus*; odes - shape.

D e s c r i p t i o n. Wing span 13 mm. Head and thorax brownish scaled creamy; labial palpus over 1. Forewing not expanding terminally, costa slightly concave beyond middle. Ground colour creamy in some parts suffused grey, sprinkled dark brown. Markings dark brown sparsely scaled creamy: basal marking in form of a stripe along anal veins; median fascia hardly concave proximally, pale edged, broad in dorsal third; subapical blotch connected with subterminal blotch reaching termen at tornus; some spots near termen. Cilia creamy; basal lobe brown. Hindwing creamy, greyish brown from beyond middle; cilia creamy.

Female genitalia (Fig. 18). Sterigma subsquare; ductus bursae with 13 coils; blade of signum slender; capitulum small, slender.

Holotype, female: "Ecu[ador], Pichincha-Septimo Paraiso Reserve, uvl, primary forest camp SOO° 01253' W078°46.600' 8. V. 2002,+ - 1300m leg. B. LANDRY, L. ROQUE"; GS 20445; paratype, an identically labelled female (with abdomen missing).

Atteriini

Sisurcana aluminias (MEYRICK, 1912)

One female (collected 9.V.) externally very similar to the holotype of this species and differing from some other specimens from Ecuador identified by RAZOWSKI et PELZ (in press). However, those specimens do not differ in the male genitalia. It is supposed that they represent two different but extremely close species. A comparison of the female from the type locality of *aluminias* (Costa Rica) with the Ecuadoran species is required. Another possibility is that the discussed specimen represents *Epagoge somatina* DOGNIN, 1912 the genitalia of which are unknown to me.

Sisurcana leptina sp.n.

(Fig. 27)

D i a g n o s i s. Facies similar to this in *S. holographa* RAZOWSKI & PELZ, 2004 from this country but distinguished by not oblique termen, the lack of terminal process of gnathos, the presence of submedian spiny prominences of transtilla and sharp termination of sacculus.

E t y m o l o g y. This name refers to the appearance of the moth; leptina - delicate.

D e s c r i p t i o n. Wing span ca 18.5 mm. Head brownish; labial palus ca 1.5; two posterior joints blackish terminally; thorax brownish, tegula black-brown. Forewing expanding terminally, costa rather straight from beyond base, apex short, termen, not oblique, hardly concave before middle. Ground colour brownish with cinnamon hue and blackish brown suffusions and lines; veins between middle and terminal area suffused with same colour. Markings black-brown consisting of basal blotch, remnants of median fascia (spots at costa and termen accompanied by a rounded median spot, and subterminal triangle with some paler phragments followed by a reticulation extending to tornus. Cilia rubbed, probably concolorous with ground colour, with blackish basal line. Hindwing grey-brown, cilia paler.

Male genitalia (Figs 14,15). Uncus very slender; gnathos slender without terminal plate; socius large, broad in ventral half, tapering distad; valva broad, short with almost straight caudal edge; sacculus slender, convex medially terminating in short, sharp free end; dorsum of transtilla with two submedian spiny prominences; aedeagus short, concave before end dorsally; cornuti lost.

Female unknown.

Holotype, female: "Ecu[ador], Pichincha-Septimo Paraiso Reserve, uvl, primary forest camp SOO° 01253' W078°46.600' 9. V. 2002,+ 1300m leg. B. LANDRY, L. ROQUE"; GS 20450.

Anacrusis rubida sp.n.

(Figs 29,30)

D i a g n o s i s. Male very similar to *A. aulaeodes* (MEYRICK, 1926) from Colombia but with orange rust forewing, more rusty suffusion replacing costal blotch, slender brownish white strigulate dorsum, and yellowish apical area of the hindwing. Female resembling Brazilian *A. stapi-ana* (FELDER et ROGENHOFER, 1875) but with almost completely reduced white mark at the end of brown postmedian blotch. In the genitalia it differs from them in slender subterminal part of uncus, broad median part of transtilla and the presence of postmedian sclerite of colliculum.

E t y m o l o g y. The name refers to colouration of the forewing; rubida - red.

D e s c r i p t i o n. Male: Wingspan 14 mm; head rusty, lower part of front creamy; labial palpus ca 2, rusty; thorax brownish, mixed with grey distally, collar dark rusty. Forewing slightly expanding posteriorly; costa beyond base almost straight not oblique, gently sinuate. Ground colour orangeous mixed yellow in distal area, suffused rust brown at base, broadly so along termen and weakly along costa; dorsal area sprinkled and strigulated whitish; silvery white line from beyond middle of median cell to apex. Cilia yellowish orange, tinged brownish at apex, rust brown in tornal third. Hindwing fairly dark, brownish, creamy yellowish in terminal area; cilia concolorous with adjacent parts of wing. Female: Wingspan 30 mm along costa, 35 mm along middle. Head dark purple brown; labial palpus ca 1.5 ochreous brownish; collar blackish, remaining parts of thorax creamy brown, paler distally. Forewing costa beyond base almost straight, termen concave postapically, strongly protruding near middle. Ground colour creamy brownish finely strigulated brownish, with transverse browner lines. Costal part of median fascia dark brown extending to black-brown, more posterior triangle along median cell and brownish to beyond mid-breadth of wing; blackish triangle finely edged white followed by a pair of rather concolorous spots just beneath mid-breadth of wing. Cilia concolorous with ground colour, browner in apex part. Hindwing brownish, cilia mixed pale orangeous creamy except for anal area of wing.

Male genitalia (Figs 1,2). Uncus slender, curved at terminal lobes; socius broad, with slender terminal half; arm of gnathos and terminal process slender; valva broad, tapering terminally, with oblique caudal edge; sacculus slender, directed obliquely towards 2/3 of valva; aedeagus slender, moderately large; 5 weak cornuti found; dorsal edge of transtilla gradually convex to form a thorny lobe.

Female genitalia (Fig. 3). Sterigma large provided with long medio-posterior lobes, concave towards ostium area; two rounded submedian prominences ventrally; colliculum minutely spiny; sclerite of cingulum postmedian; basal plate of signum slender, blade long.

Holotype, male: "Ecuador: Chimborazo, 11 km NE Pallatanga, 2800m. 1.Nov 1987, C. YOUNG, R. DAVIDSON, J. RAWLINS. Semiarid". Allotype, an identically labelled female. Paratype, males collected By B. LANDRY and L. ROQUE the 10. V.

Chlidanotinae

Chlidanotini

Monortha procera sp.n.

(Fig. 28)

D i a g n o s i s. In the male genitalia similar to all known species of this genus (e.g. in the shapes of aedaeagus, hami, valva, vestiture of socius) but most probably it is closest to *M. corusca* (MEYRICK, 1912) from Panama (similar socii). However it is quite distinct by the shape of uncus which is very slender, approximately half the length of socius. In all other species of *Monortha* RAZOWSKI and BECKER, 1981 but *M. pleodontia* RAZOWSKI, 1987 from Panama the uncus is short and rather broad. In the last mentioned species uncus is almost as long as the socius.

E t y m o l o g y. The name refers to the shape of uncus; procera – long.

D e s c r i p t i o n. Wing span 17.5 mm. Head creamy brownish, labial palpus 1.5, browner terminally; thorax similar in colour, more cream medioposteriorly, tegula more brownish, brown edged. Forewing expanding posteriorly; costa rather straight; termen weakly oblique. Ground colour pale ochreous brownish, more olive brown distally, with some creamy dots mainly along dorsum; costa spotted brown. Markings ochreous brownish with slight olive hue and browner edges; a fascia from 1/3 of costa connected in median area of wing with postmedian fascia forming a triangular blotch beneath median cell; subterminal markings rather weak; dark brown triangular blotch at base of dorsum accompanied by concolorous basal spot. Cilia concolorous with terminal markings; dividings brown. Hindwing grey brown with similar cilia.

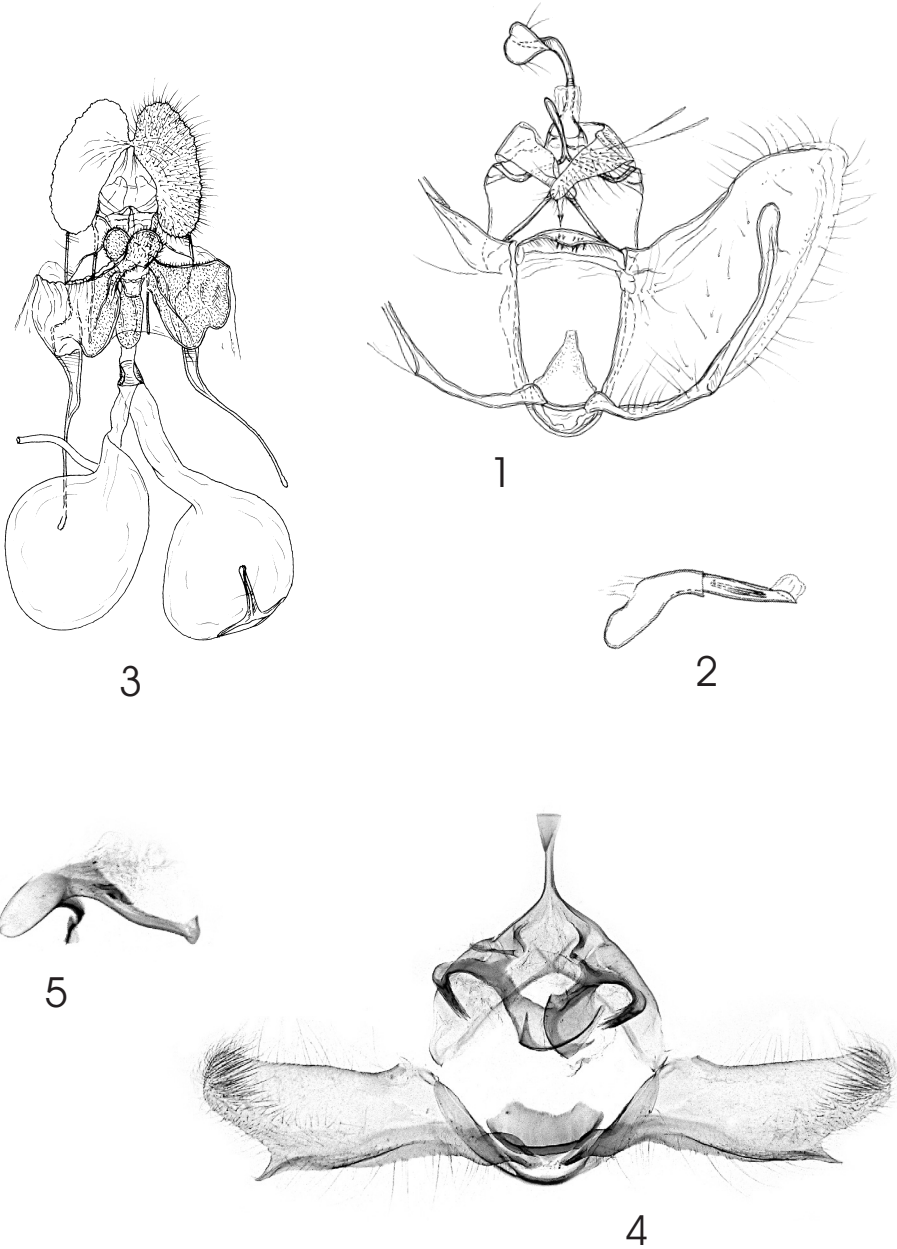
Male genitalia (Figs 16,17). Uncus slender, long, scarcely bristled; socius elongate, curved; hamus elongate, broadly rounded terminally; costa of valva convex postbasally; terminal thorn of sacculus small.

Female unknown.

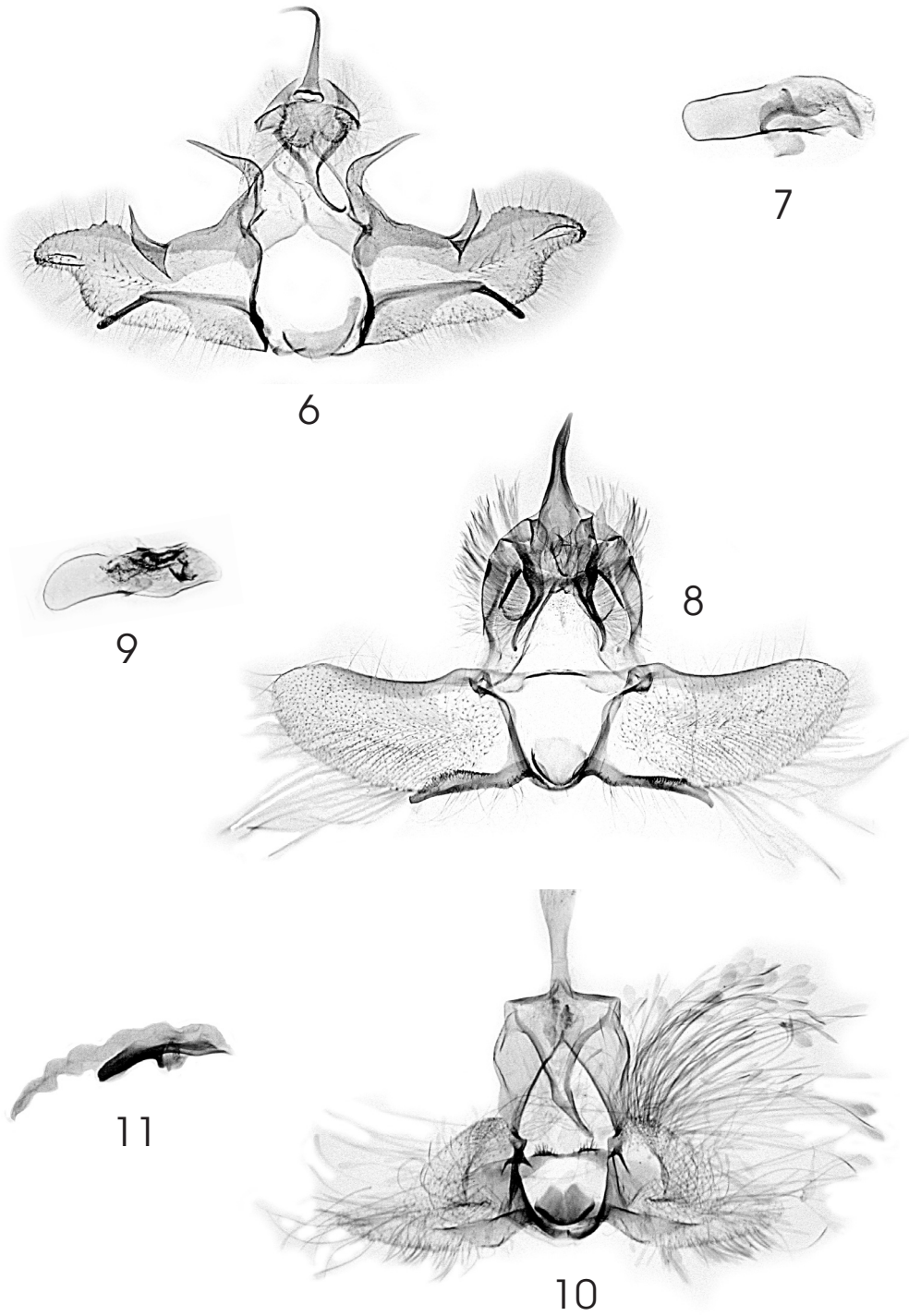
Holotype, female: "Ecu[ador], Pichincha-Septimo Paraiso Reserve, uvl, primary forest camp SOO° 01253' W078°46.600' 8. V. 2002,+ 1300m leg. B. LANDRY, L. ROQUE"; GS 20440.

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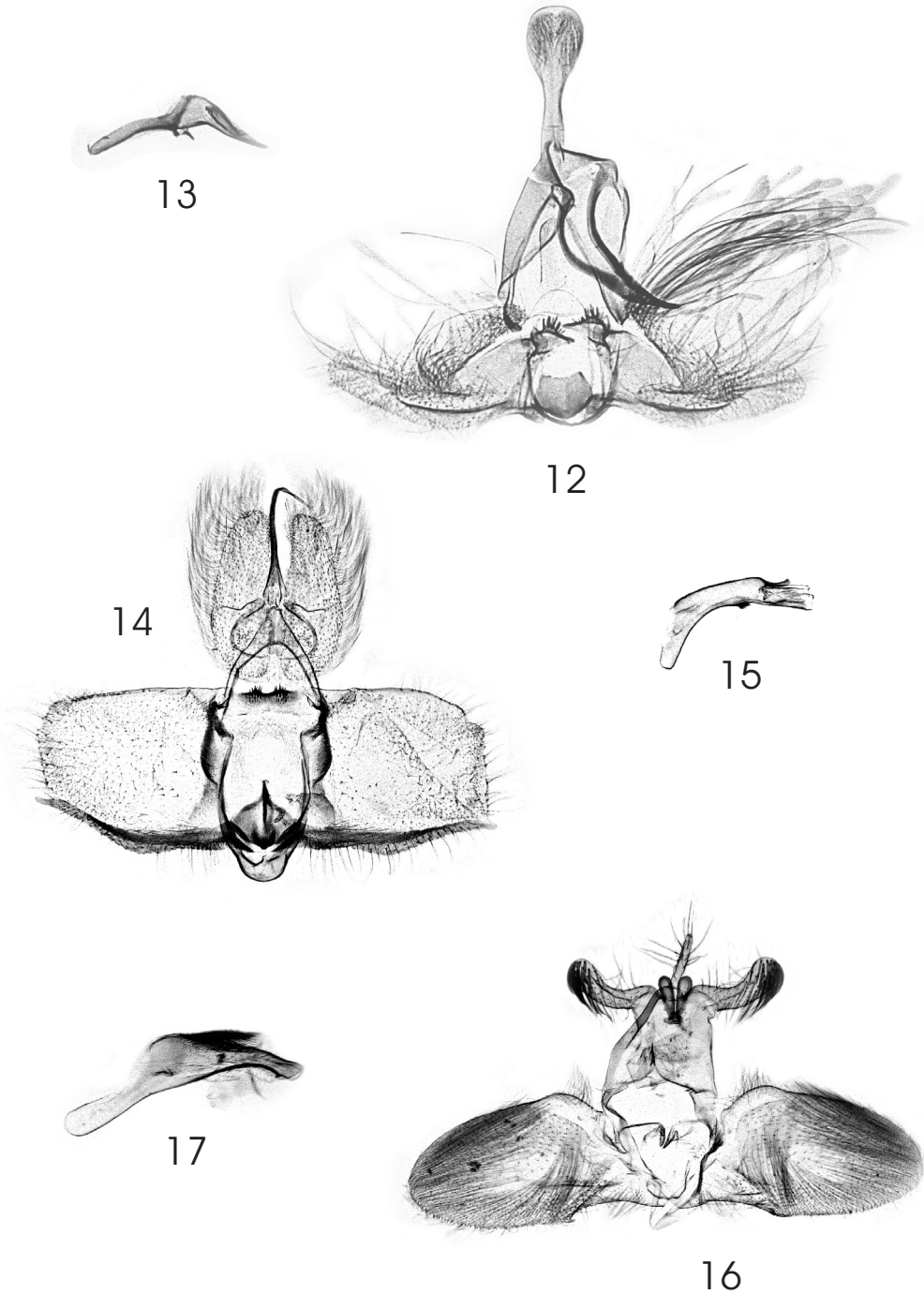
RAZOWSKI J., PELZ V. 2001. Tortricidae (Lepidoptera) collected in Ecuador in the years 1996-1999: Tortricini and Cochylini. *Nachrichten der entomologischen Verein Apollo, Neue Folge* **22**(1): 17-28.



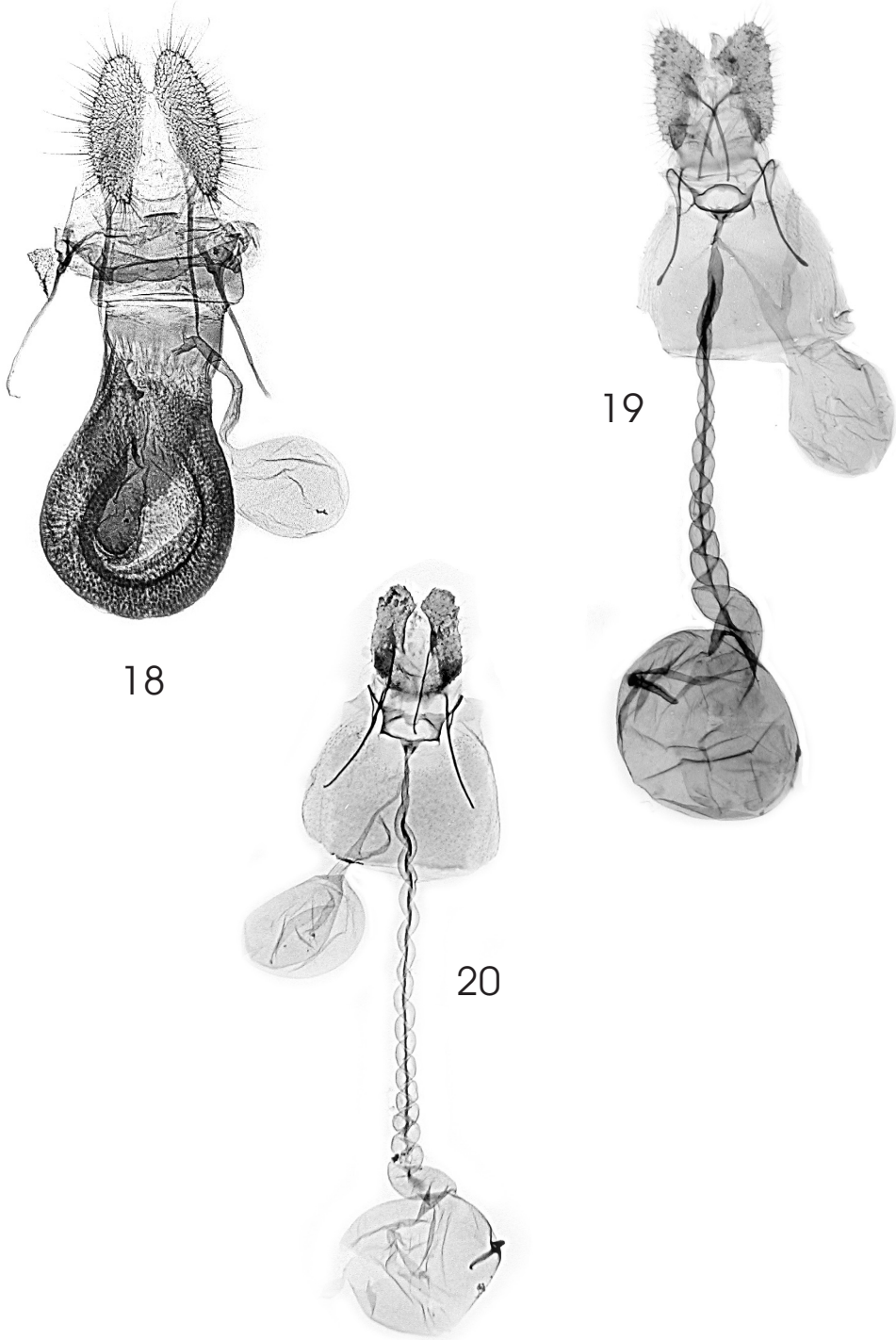
Figs 1-5. Male and female genitalia: 1,2 *Anacrusis rubida* sp.n., holotype; 3 – same species, allotype; 4,5 – *Pseudomeritatis emphanes* sp.n., holotype.



Figs 6-11. Male genitalia: 6,7 – *Netechmodes landryi* sp.n., holotype; 8,9 – *Thalleulia gracilescens* sp.n., holotype; 10,11 – *Clepsia parva* sp.n., holotype.



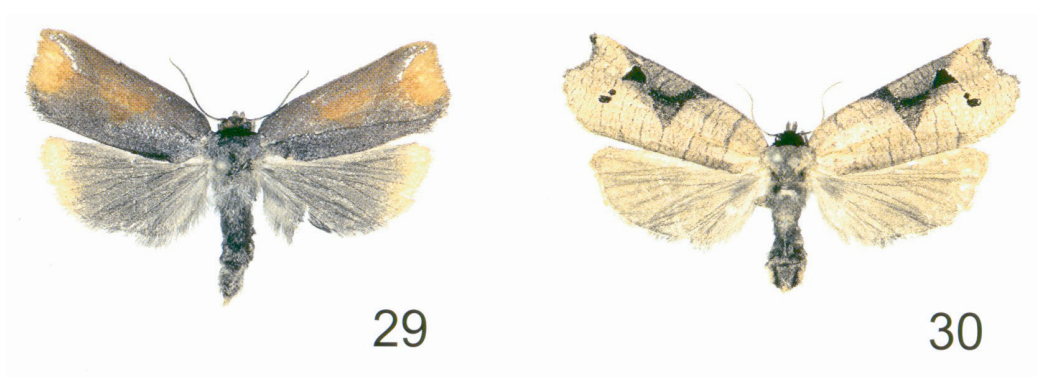
Figs 12-17. Male genitalia: 12,13 – *Clepsis parassensus* sp.n., holotype; 14,15 – *Sisurcana leptina* sp.n., holotype; 16,17 – *Monortha procera* sp.n., holotype.



Figs 18-20. Female genitalia: 18 – *Henricus metalliferus* RAZOWSKI et PELZ, Ecuador: Pichincha; 19 – *Clepsis parassensus* sp.n., holotype; 20 – *C. assensiodes* sp.n., paratype.



Figs 21-28. Adults: 21 – *Pseudomeritastis emphanes*, holotype; 22 – *Netechmodes landryi* sp.n., holotype; 23 – *T. gracilescens* sp.n., holotype; 24 – *Clepsis parva* sp.n., holotype; 25 – *C. parassensus* sp.n., holotype; 26 – *C. assensiodes* sp.n.,



Figs 29-30. Adults of *Anacrusis rubida* sp.n.: 29 – holotype; 30 – allotype.