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Paranthozela, a new Enarmoniini genus from the New World, with description of six new species (Lepidoptera: Tortricidae)

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ABSTRACT. New genus *Paranthozela* gen. n., and 6 species: *P. zopheria* sp.n., *P. stilbia* sp.n., *P. spiloma* sp.n., *P. polyasterina* sp.n., *P. calamistrana* sp.n., *P. lobulina* sp.n. are described from Ecuador.

KEY WORDS: Lepidoptera, Tortricidae, Enarmoniini, new genus, new species, Ecuador.

INTRODUCTION

Only three genera of Enarmoniini, Olethreutinae (*Ancylis* HÜBNER, [1825], *Hystrichophora* WALSINGHAM, 1879 and *Eucosmomorpha* OBRAZTSOV, 1951) were known until now from the New World. *Paranthozela* gen. n. is after *Ancylis* the second genus found in South America. All its species are described from Ecuador. The tribe is widely distributed in the Palaearctic, Afrotropical, Oriental and Australian regions.

The material was collected by Janusz WOJTUSIAK and Tomasz PYRCZ during three entomological expeditions to Ecuador in 1999, 2004 and 2005.

The holotypes of the newly described species are housed in the Zoological Museum of the Jagiellonian University (MZUJ), Kraków, Poland.

SYSTEMATICS

Paranthozela gen.n.

Type-species*: Paranthozela calamistrana* sp.n.

Diagnosis

Paranthozela is related to Tropical (Oriental, Australian and Afrotropical regions) *Anthozela* MEYRICK, 1913 and *Helictophanes* MEYRICK, 1881 known from the Oriental Region (India to Australia). *Paranthozela* differs from *Anthozela* in having sparsely, long hairy socii; their posterior parts are fused basally, proximal parts are long pending; there are no marginal pegs on the posterior parts; from *Helictophanes* the new genus differs in long caudal edge of cucullus, a development of ventroproximal lobe, lack of the pollex like subterminal spine, and the development of large lateral lobes of sterigma.

Description

Forewing with refractive lines and spots, with ill-defined ocellus. Venation (checked in *zopheria*): in forewing R5 to termen beneath apex; distance M2-M3 about twice M3-Cu1A; base of Cu2A opposite 1/4 of base of R1; chorda absent; M-stem fully developed, terminating anteriorly to base of M3; in hindwing Rr-M1 approximate in basal third; base of M3 closer M2 than Cu1A.

Male genitalia. Tegumen slender with long, slender pedunculi and distinct processes for muscle attachments; socii a pair of lobes from short base at top of tegumen and long, drooping ventral parts, both sparsely long hairy; gnathos arms weak; valva rather broad proximally; basal process strong; basal cavity long, with weakly sclerotized posterior edge; sacculus short, angulate, with small median group of long hairs; neck of valva broad; ventral incision small; cucullus with two types of caudal edge (1 - ventroproximal lobe broad with bristles continously extending towards median portion and weakly hairy terminal part; 2 - ventroproximal lobe small, separate from median part; caudal edge oblique, armed with a long comb of spines; areas of bristles of the two parts not connected with one another); aedeaus short, broad; caulis short; cornuti a compact group of strong spines.

Female genitalia. Papilla analis slender; apophyses slender, moderately long; sterigma broad consisting of large, rounded lateral lobes and median cup-shaped part; sclerite of antrum short; ductus bursae medium sized, broad beyond basal portion; sclerite of cigulum complete; signa pair, short.

Methods

Moths attracted to the mercury lamp (Philips MLW 160) were collected just after the dusk in the cloud forest at four collecting sites of West Cordillera and one site in East Cordillera in Ecuador.

Distribution

Six species included, all collected in Ecuador (provinces: Carchi - 2 species, Sucumbios - 1 species, Pichincha - 2 species, Cotopaxi - 1 species).

Etymology

The name refers to a relation to Anthozela; Latin: par - near.

***Paranthozela zopheria* sp.n.**
(Figs 1, 7)

Diagnosis

Facies simiar to *stilbia* and *spiloma* from which this species differs in weakly concave caudal edge of cucullus and slender posterior lobes of socii.

Etymology

The specific name refers to dark colouration of forewing; Greek: *zopheria* – dark.

Description

Wing span 25 mm. Head brownish grey; thorax dark brown. Forewing slightly expanding terminad; costa gently convex; termen not oblique, hardly concave beneath apex. Ground colour brownish suffused dark brown; costal strigulae indistinct, followed by bluish silver lines and spots forming broad areas in basal, median and postmedian parts of wing; row of refractive spots along termen. Markings dark brown: basal blotch indistinct; median fascia extending from beyond mid-costa to tornus. Cilia brown. Hindwig brown; cilia paler.

Male genitalia (Fig. 7). Posterior lobes of socii slender, base distinct; proximal portions large, rather broad basally; ventroproximal lobe of cucullus large, oval, caudal edge slightly concave submedially.

Female not known.

Holotype male: "Ecuador, Prov. Cotopaxi, Vía La Maná, Pilaló, 2.09.2004, 2800 m, leg. WOJTUSIAK & PYRCZ.; GS 585 MZUJ.

***Paranthozela stilbia* sp.n.**

(Figs 2, 8)

Diagnosis

Very close and externally similar to *zopheria* but *stilbia* with paler hindwing, longer ventral edge of ventral lobe of cucullus, distinctly concave caudal edge of cucullus and broad posterior lobes of socii with very small basal portion.

Etymology

The specific ephithet refers to the refractive markings of forewing; Greek: stilbo – I shimmer.

Description

Wing span 16 mm. Head brownish; thorax brown. Forewing slightly expanding posteriorly; costa slightly contex; termen not oblique. Ground colour ochreous brownish suffused and dotted dark brown; costal strigulae and refractive markings as with zopheria. Markings dark brown, diffuse except for major part of median fascia; termen dark brown with row of refractive spots. Cilia brown. Hindwing brown with slight yellowish hue; cilia pale greyish brown.

Male genitalia (Fig. 8). Lobes of socii rather short, proximal parts moderate; ventral edge of ventral lobe of cucullus hardly convex, caudal edge distinctly concave.

Female not known.

Holotype male: "Ecuador, Prov. Carchi, Res. Forest. Golondrinas, West Cordillera, 28-30.01.2005, 2000 m, leg. J. WOJTUSIAK"; GS 567 MZUJ. Paratypes, two identically labelled males.

***Paranthozela spiloma* sp.n.**

(Figs 3, 9-10)

Diagnosis

Similar to *stilbia* and *zopheria* but with more chestnut brown colouration, pale bassal half of hindwing, long socii and more concave caudal edge of cucullus.

Etymology

The name refers to median marking of forewing; Greek: spilos – blotch.

Description

Wing span 22.5 mm. (Female: 27.5 mm). Head brownish; thorax dark brown. Forewing slightly expanding terminad; costa gently convex; termen not oblique, hardly concave beneath apex. Ground colour brownish; suffusions and strigulation darker; refractive markings consisting of costal lines and small spots chiefly in basal and postmedian parts of wing. Median fascia and terminal part of wing dark brown. Cilia dark brown. Hindwing pale brown, darker in apical portion; cilia concolorous with median part of wing.

Male genitalia (Fig. 9). Posterior lobes of socii slender, tapering terminad, proximal parts long, slender; valva moderately broad; ventroproximal lobe of cucullus broad, rounded; caudal concavity moderate.

Female genitalia (Fig. 10). Lobes of sterigma convex laterally; sclerite of osium almost fused with sclerite of antrum; ductus bursae moderate, broad proximally, with complete sclerite of cingulum; signa moderate.

Holotype male: "Ecuador, Prov. Sucumbios, Rio Chingual, La Bonita, 25.06.1999, 1500 m, Leg. J. WOJTUSIAK"; GS 401 MZUJ. Paratype female identically labelled as the male; GS 402 MZUJ.

***Parantozela polyasterina* sp.n.**
(Figs 4, 11)

Diagnosis

Similar to all preceding species (especially *stilbia* and *zopheria*) but polyastrina with slender forewing, convex termen, and strongly concave caudal edge of cucullus armed with distinct, dense spines.

Etymology

The name refers to the presence of refractive spots of forewing; Greek: polys – numerous, aster – star, Latin: -ina – diminution.

Description

Wing span 20 mm. Head brownish; torax dark brown. Forewing slender; costa uniformly convex; apex short, rounded; termen convex. Ground colour pale chestnut brown; suffusions dark brown; refraclive markings in form of costal lines and series of spots. Markings dark brown, incomplete. Cilia dark brown. Hindwing brown, cilia slightly paler.

Male genitalia (Fig. 11). Posterior lobes of lobes of socii broad, proximal parts long, slender; valva broad; ventroproximal lobe of cucllus large, rounded proximally, angulate distally; caudal edge of cucullus distinctly concave, with rather thick spines.

Female not known.

Holotype male: "Ecuador, Prov. Pichincha, Pacto, Rio Mashpi, 08.02.2004, 1150 m, leg. WOJTUSIAK & PYRCZ"; GS 204 MZUJ.

***Paranthozela calamistrana* sp.n.**

(Figs 5, 12a,b)

Diagnosis

Facies rather similar to *spiloma* but forewing slenderer. Male geitalia differing from all other species in having long comb of strong marginal spines of cucullus and weak neck of valva.

Etymology

The specific epithet refers to long row of spines of cucullus; Latin: calamistrum - comb.

Description

Wing span 17 mm. Head and thorax brown. Forewing slender; costa weakly convex; termen not oblique, straight beneath apex. Ground colour chestnut brown; suffusions dark brown; refractive markings in form of four postmedian lines from costa and some dots in remaining surface of wing. Marking dark brown, diffuse. Cilia brownish. Hindwing brown, paler towards base; cilia concolorous.

Male genitalia (Fig. 12a,b). Posterior lobes of socii fairly broad, proximal parts proportionally short; basal half of valva rather uniforly broad, with indistinct neck; sacculus weakly convex; cucullus tapering terminally, with oblique caudal edge marked by strong, dense spines.

Female not known.

Holotype male: "Ecuador, Prov. Pichincha, Pacto, Rio Mashpi, 10.02.2004, 1150 m, leg. WOJTUSIAK & PYRCZ "; GS 202 MZUJ.

***Paranthozela lobulina* sp.n.**
(Figs 6, 13)

Diagnosis

Facies distinct by brownish cream ground colour of forewing; more closely related to *calamistrana* than to all remaining known species of this genus; *lobulina* is also distinct by separate spiny lobe beyond sacculus and broadened terminal portion.

Etymology

The name refers to the presence of a small posterior lobe of cucullus.

Description

Wing span 17 mm. Head and thorax brownish, the latter with darker marks (worn); labial palpus grey, whitish ventroposteriorly. Forewing rather slender, somewhat expanding terminad; costa hardly convex; termen weakly oblique, gently concave medially. Ground colour pale brownish cream with numerous whitish dots; dorsum slightly suffused with brown and blackish; costal strigulae indistinct extending obliquely as short, pearl lines. Markings black-brown in basal part of costa and in dorsoposterior area paler; postbasal and median fasciae broad, atrophied dorsally, connected with one another and with tornal marking by means of weak lines; subapical blotch broad. Cilia brownish grey. Hindwing brownish cream, whiter basally; cilia concolorous with middle of wing.

Male genitalia (Fig. 13). Posterior lobes of socii small, with rather large base, proximal parts ill-defined; valva slender; sacculus angulate; ventral incision short followed by small, spiny lobe and hairless concavity before ventroproximal lobe of cucullus; cucullus slender, tapering terminally, with oblique, straight caudal edge armed with a comb of short, strong spines; terminal portion of valva slenderer than termination of cucullus.

Female not known.

Holotype male: "Ecuador, Prov. Cotopaxi, Ecuador, Prov. Cotopaxi, Vía La Maná, Pilaló, 2.09.2004, 2800 m, leg. WOJTUSIAK & PYRCZ"; GS 411 MZUJ.

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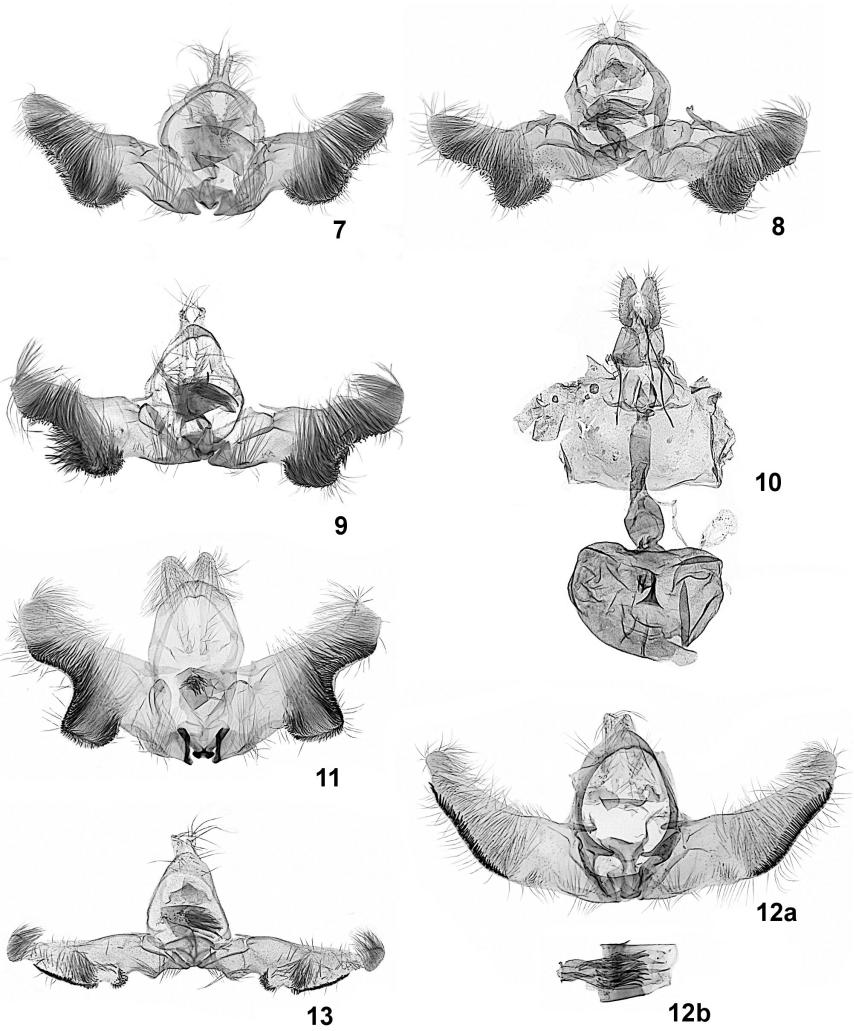
Figs 1-6. Adults of *Parnathozela* gen. n. 1 - *P. zopheria* sp. n., holotype; 2 - *P. stilbia* sp. n., holotype; 3 - *P. spiloma* sp. n., holotype; 4 - *P. polyasterina* sp. n., holotype; 5 - *P. calamistrana* sp. n., holotype; 6 - *P. lobulina* sp. n., holotype.



Figs 7-13. Male and femala genitalia of *Paranthozela* gen. n. 7 - *P. zopheria* sp. n., holotype; 8 - *P. stilbia* sp. n., holotype; 9 - *P. spiloma* sp. n., holotype; 10 - *P. spiloma* sp. n., paratype, female; 11 - *P. polyasterina* sp. n., holotype; 12 (a, b) - *P. calamistrana* sp. n., holotype; 13 - *P. lobulina* sp. n., holotype.

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