

***Mictopsichia* HÜBNER (Lepidoptera: Tortricidae) from Ecuador**

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ABSTRACT. Four species of *Mictopsichia* are described as new from Ecuador: *Mictopsichia janeae* sp.n., *Mictopsichia torresi* sp. n., *Mictopsichia rivadeneirai* sp. n., *Mictopsichia shuara* sp. n.

KEY WORDS: Tortricidae, *Mictopsichia*, new species, Ecuador.

INTRODUCTION

Although the area of distribution of *Mictopsichia* HÜBNER, [1825] is spread from Mexico to Brazil no species has been described or recorded from Ecuador. Until now only seven species were known from the western part of the continent viz. *M. guatemalae* RAZOWSKI, 2009 (described from Mexico, Guatemala, Panama, and Colombia), *M. mincae* RAZOWSKI, 2009 from Colombia, *M. chlidonata* RAZOWSKI, 2009, *M. ornatissima* (DOGNIN, 1909) and *M. pentargyra* MEYRICK, 1921 from Peru and *M. boliviae* RAZOWSKI, 2009 and *M. buenavistae* RAZOWSKI, 2009 from Bolivia. Additionally, one species of a closely allied genus, *Chamaepsichia rubrochra* RAZOWSKI, 2009 was described from Bolivia. The main bulk of *Mictopsichia* species is Brazilian and occurs chiefly in Para and Amazonas (14 species). The present record of four species from Ecuador confirms an opinion on a wide distribution of this genus.

The biology is practically not known except for a few data on the altitudes of the collecting stands. In Ecuador most species were collected at light between 1700 and 2300 m in upper montane and cloud forest habitats (meso- and submesothermic forest according to

ACOSTA SOLIS, 1968). Only *Mictopsichia rivadeneirai* sp. n. was found at 450 m a.s.l. in lowland forest. One habitat (Pichincha – Prov., 7 km SW Tandayapa, Bellavista Research Station, 2300 m) is presented in Fig. 6. Material studied was collected by the junior author in Ecuador and is preserved in his collection. The holotypes will be eventually deposited in the Senckenberg Museum, Frankfurt/Main, Germany.

Note. Numbers included in the 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

GU - genitalia slide

Prov. - Province

N, E, S, W - compass points

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SYSTEMATICS

Mictopsichia janeae sp.n.

(Figs 1,2)

Diagnosis

This species is similar and closely related with *M. cubilgruitza* RAZOWSKI, 2009 from Guatemala and *M. cubae* RAZOWSKI, 2009 from Cuba but the submedian belt of disc of valva of this species is slender with minute terminal prominence; sacculus of *janeae* sp.n. more strongly angulate than in the two mentioned species; from *cubilgruitza* it differs in much shorter aedeagus. Externally this species is distinct by blackish brown forewing markings and brown subanal fascia and apex of the hindwing.

Description

Wing span 13 - 14 mm. Labial palpus 1.5, yellow-orange. Remaining part of head and thorax brownish. Forewing typical of the genus. Ground colour cream consisting of numerous dots situated mainly in median and dorsal parts of wing; subapical costal fascia reduced except for a short refractive line; postmedian refractive line curved outwards medially, followed by a less curved subterminal line; other refractive markings weak. Cilia blackish brown, cream towards middle of termen. Hindwing orange yellow with apical area dark brown accompanied by a few more proximal paler spots; anal area with blackish and refractive spots and strongly reduced reticulate part.

Male genitalia (Figs 8,9). Posterior ends of socii sharp, fairly long, edges well sclerotized; end of gnathos arm broad; costa of valva strongly convex postbasally; sacculus convexly rounded posteriorly; submedian belt slender slightly expanding terminally; dorsal rib with a few small convexities; aedeagus moderately long; cornutus large, tapering post-medially.

Female not known.

Material examined

Holotype, male: "Ecuador, Pichincha-Prov., 7 km SW Tandayapa, Bellavista Research Station, 2300m, 0°0'41"S 78°41'17"W, 14.-16.XI.2006, leg. VOLKER PELZ"; GU-3467-V.P. Paratype: 1 male (GU-3901-V.P.): Ecuador, Pichincha-Prov., 6 km S Santa Rosa, Las Gralarias, Damuth Choco Research Station, 2270m, 0°1'59"S 78°42'33"W, 8.-9.XI.2007, leg. VOLKER PELZ.

Etymology

The specific epithet is a patronym for Dr. Jane LYONS, Mindo, Ecuador. It is defined as noun in apposition.

Mictopsichia torresi sp. n.

(Fig. 3)

Diagnosis

Facies of this species reminds *M. pentargyra* MEYRICK, 1921 from Peru but in *M. torresi* sp.n. subapical streak slender, subterminal refractive line slightly concave towards tornus, and markings of anal area of the hindwing without pale transverse line and with apical spots instead of broad fascia. Female genitalia of *torresi* sp.n. with large antrum expanding posteriorly, provided with pair of rounded sclerites in anterior part and with long blade of signum.

Description

Wing span 15 mm. Head yellowish brown; labial palpus 1.5, pale terminally; thorax brownish with yellowish parts. Forewing typical of the genus; termen not oblique, rather straight. Ground colour yellow cream preserved in costal area and medially where reticulate, suffused orange between markings. Markings brown, incomplete, at places tinged orange. Hindwing pale orange with weak brown spots in apical area, with red orange spots in anal and posterior area marked by black spots, and with small reticulate surfaces.

Male not known.

Female genitalia (Fig. 7). Sterigma submembranous; antrum expanding posteriorly with weak inner sclerites; ductus bursae rather broad; ductus seminalis originating before antrum; signum with small capitulum, slender, long basal plate, and long, strongly curved blade.

Material examined

Holotype, female: "Ecuador, Pichincha–Prov., 7 km NW Mindo, Sachatamia, 1700m, 0°1'35"S 78°45'34"W, 8.-11.XII.2004, leg. VOLKER PELZ"; GU-2520-V.P.

Etymology

The specific epithet is a patronym for Ing. SALAZAR TORRES, Mindo, Ecuador. It is defined as noun in apposition.

Mictopsichia rivadeneirai sp. n.

(Fig. 4)

Diagnosis

This species is externally similar to *M. torresi* sp.n. but subapical streak of *M. rivadeneirai* sp. n. broad and subterminal and postmedian refractive lines broad, posterior process of socius short, curved outwards, and cornutus short, bent.

Description

Wing span 11.5 mm. Head yellowish, thorax (worn) similar with brownish places; labial palpus 1.3, cream. Forewing somewhat expanding terminally with termen not oblique. Ground colour cream in costal and posterior half of wing mixed orange, reticulate brown. Markings browner with some orange spots; refractive lines broad, subterminal line convex. Cilia brown (rubbed). Hindwing orange yellow, apex orange with brown marks; double row of similarly coloured spots limiting apical area; anal area with orange and blackish partially confluent spots.

Male genitalia (Fig. 10). Uncus fairly long; distal part of socius curved, basal part broad, rounded; arm of gnathos long; costa of valva convex postbasally; submedian belt moderate, not extending mesad; sacculus convex caudally; aedeagus rather short with distinct dorso-terminal corner; cornutus broad, curved.

Female not known.

Material examined

Holotype, male: "Ecuador, Morona-Santiago – Prov., Jempeket, Loma de Shaimi, 450 m, 17.-18.V.1998, leg. VOLKER PELZ"; GU-832-V.P.

Etymology

The specific name is a patronym for Mr. FRANCISCO RIVADENEIRA, Macas, Ecuador. It is defined as noun in apposition.

Mictopsichia shuara sp. n.

(Fig. 5)

Diagnosis

This species is closely related with *M. chlidonata* RAZOWSKI, 2009 from Peru but *M. shuara* sp.n. with yellowish cream ground colour of wings, slenderer socius, rounded latero-terminal part of gnathos, and lack of cornutus.

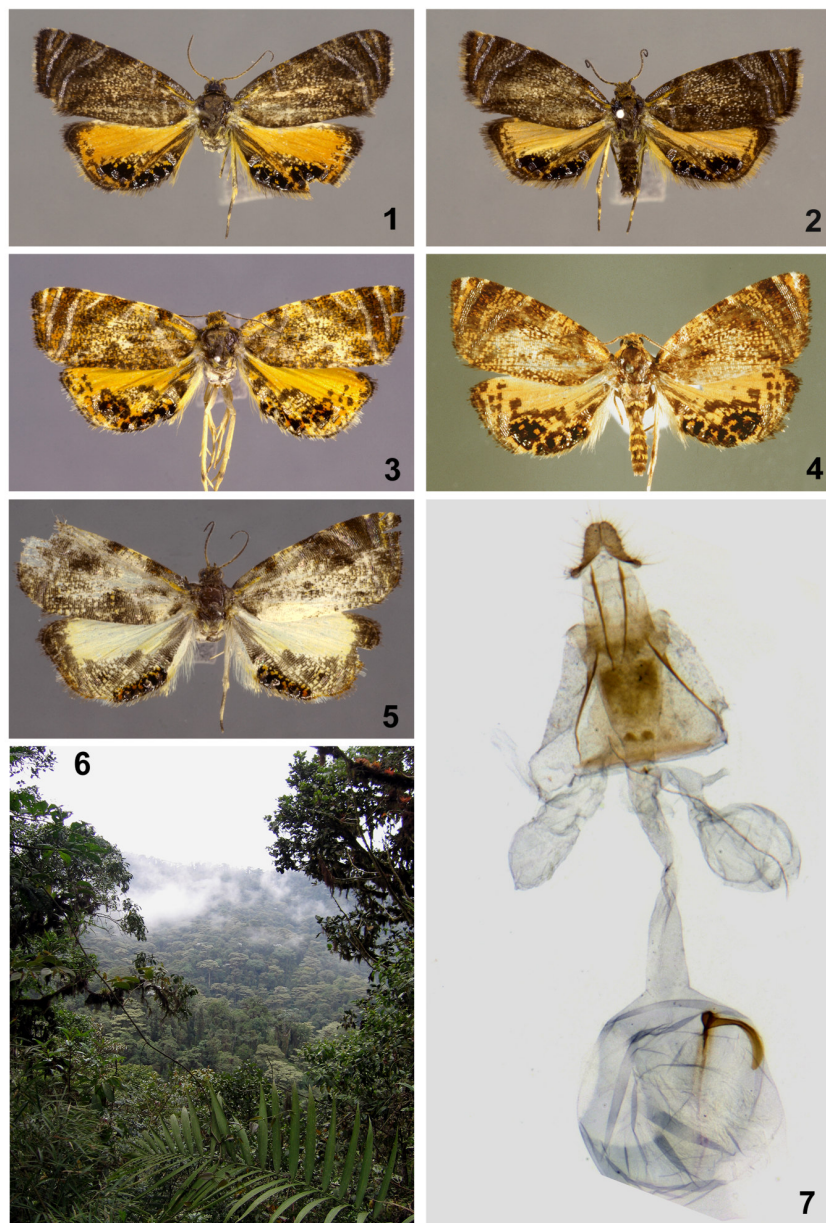
Description

Wing span 17 mm. Head and thorax brown, labial palpus 1.3, yellowish cream, last segment yellow basally dark brown terminally. Forewing weakly expanding terminally, costa hardly convex, termen not oblique. Ground colour yellowish cream, densely reticulate brownish, more yellow along costa; subapical streak slender; refractive lines as in *M. rivadeneirai* sp. n.; cilia worn. Hindwing yellowish cream tinged orange between markings posteriorly. Cubital and partly anal area reticulate greyish brown; outer margin of anal area spotted rust orange and black.

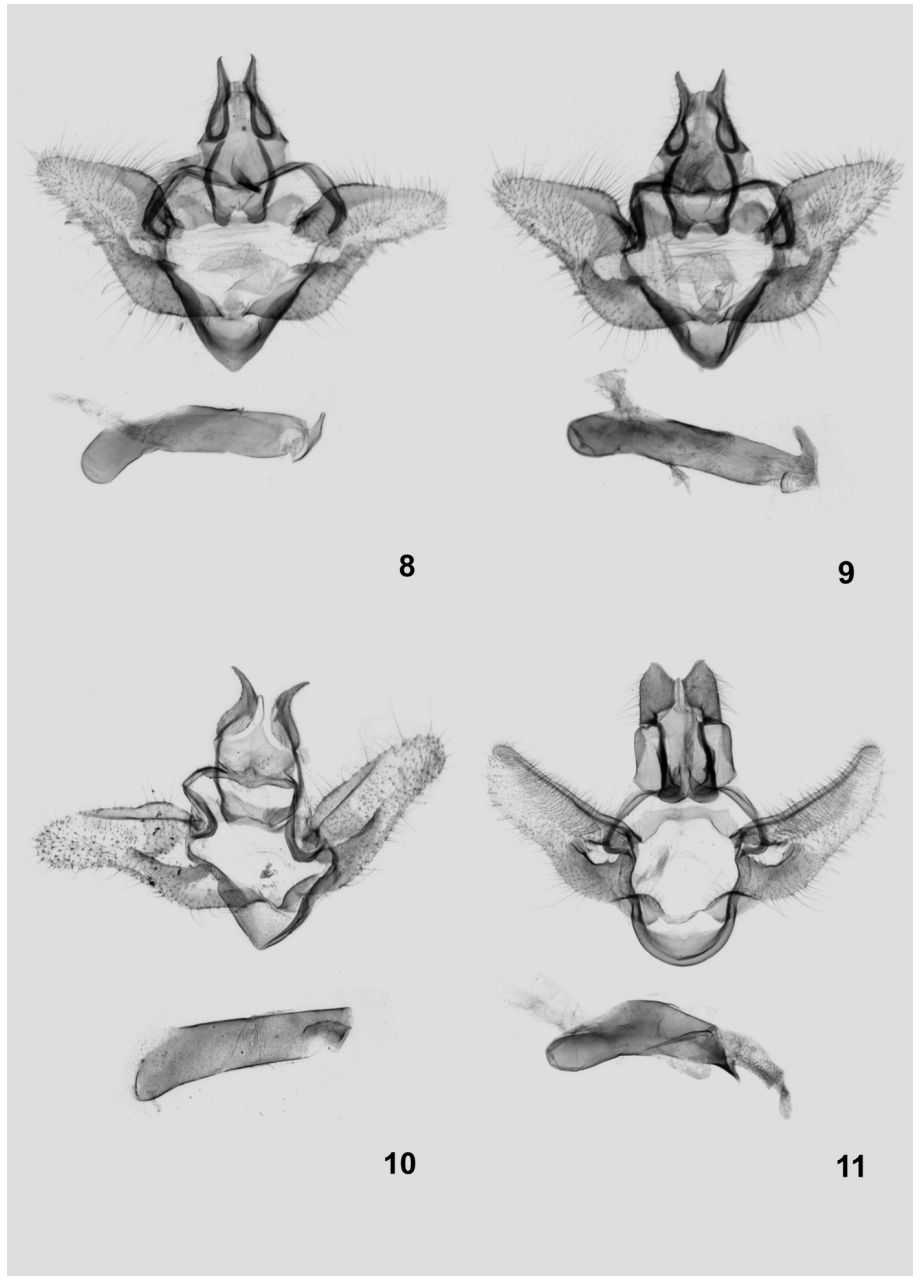
Male genitalia (Fig. 11). Uncus minute; socius broad, triangular posteriorly with minute tip; gnathos moderate, with broad posterior plate; vinculum broad; valva rather slender, sacculus convex basally, weakly angular caudally; aedeagus rather broad with distinct ventral process; cornutus absent.

Material examined

Holotype, male: "Ecuador, Morona-Santiago – Prov., Macas, Proaño > Alshi, 5 km SO Alshi, 1700 m, 27.IX-4.X.2000, leg. VOLKER PELZ"; GU-1173-V.P.



Figs 1-7. Adults, habitat and female genitalia of *Mictopsichia* HÜBNER, [1825]. 1,2 – *Mictopsichia janeae* sp.n.; 1 – holotype; 2 – paratype (GU-3901-V.P.); 3 – *Mictopsichia torresi* sp. n., holotype; 4 – *Mictopsichia rivadeneirai* sp. n., holotype; 5 – *Mictopsichia shuara* sp. n., holotype. 6 – Habitat of *Mictopsichia janeae* sp.n. at Bellavista Research Station, 2300m; 7 – *Mictopsichia torresi* sp. n., holotype, genitalia.



Figs 8-11. Male genitalia of *Mictopsichia* HÜBNER, [1825]. 8,9 – *Mictopsichia janeae* sp.n.; 8 – holotype; 9 – paratype (GU-3901-V.P.); 10 – *Mictopsichia rivadeneirai* sp. n., holotype; 11 – *Mictopsichia shuara* sp. n., holotype.

Etymology

The species is named for the indigenous group of the Shuar who live in the region around Macas. It is defined as noun in apposition.

REFERENCES

- ACOSTA SOLIS, M. 1968. Divisiones fitogeográficas y regiones geobotánicas del Ecuador. - Casa de la Cultura Ecuatoriana, Quito, 271 pp.
- RAZOWSKI J. 2009. Revision of *Mictopsichia* HÜBNER with descriptions of new species and two new genera (Lepidoptera: Tortricidae). Polish Journal of Entomology, **78(3)**: 223-252.
- RAZOWSKI J., PELZ V. 2001. Tortricidae (Lepidoptera) collected in Ecuador in the years 1996-1999: Tortricini and Cochylini. Nachrichten des Entomologischen Vereins Apollo, Frankfurt am Main, N.F.,**24**(4): 189 -207.

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