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New species and new combinations in Neotropical Euliini (Lepidoptera: Tortricidae)

J. Razowski & J. W. Brown

Abstract

One new genus, *Mexiculia*, and nine new species of Neotropical Euliini are described and illustrated: *Galomecalpa meridana* Razowski & Brown, sp. n., *Mexiculia chorisma* Razowski & Brown, sp. n., *Quasieulia jalsicana* Razowski & Brown, sp. n., *Anopina xicotepeca* Razowski & Brown, sp. n., *Odonthalitus mexicanus* Razowski & Brown, sp. n., *Hynhamia ochroleuca* Razowski & Brown, sp. n., *Gauruncus venezolanus* Razowski & Brown, sp. n., *Transtillaspis tucumana* Razowski & Brown, sp. n., *T. cinifera* Razowski & Brown, sp. n., and *T. anxia* Razowski & Brown, sp. n.. One new combination is proposed: *Galomecalpa defricata* (Meyrick).

KEY WORDS: Lepidoptera, Tortricidae, Euliini, *Galomecalpa*, *Quasieulia*, *Odonthalitus*, *Hynhamia*, *Gauruncus*, *Transtillaspis*, *Mexiculia*, Venezuela, Colombia, Argentina, Mexico

Nuevas especies y nuevas combinaciones en Euliini Neotropicales (Lepidoptera: Tortricidae)

Resumen

Se describen e ilustran un nuevo género, *Mexiculia* Razowski & Brown, gen. n. y nueve nuevas especies en Euliini Neotropicales: *Galomecalpa meridana* Razowski & Brown, sp. n., *Mexiculia chorisma* Razowski & Brown, sp. n., *Quasieulia jalsicana* Razowski & Brown, sp. n., *Anopina xicotepeca* Razowski & Brown, sp. n., *Odonthalitus mexicanus* Razowski & Brown, sp. n., *Hynhamia ochroleuca* Razowski & Brown, sp. n., *Gauruncus venezolanus* Razowski & Brown, sp. n., *Transtillaspis tucumana* Razowski & Brown, sp. n., *T. cinifera* Razowski & Brown, sp. n., y *T. anxia* Razowski & Brown, sp. n.. Se propone una nueva combinación: *Galomecalpa defricata* (Meyrick).

PALABRAS CLAVE: Lepidoptera, Tortricidae, Euliini, *Galomecalpa*, *Quasieulia*, *Odonthalitus*, *Hynhamia*, *Gauruncus*, *Transtillaspis*, *Mexiculia*, Venezuela, Colombia, Argentina, México

Introduction

Over the past two and half decades our knowledge of the tortricid tribe Euliini has increased dramatically with the descriptions of about 465 species and 117 genera; the development of hypotheses of phylogenetic relationships among some small putatively monophyletic groups within the tribe; the discovery of food plants and life histories; and the synthesis of pheromones for at least one genus (i. e., *Bonagota*). However, as is the case with most Neotropical groups, the more we discover, the more we realize how limited our knowledge is. It is possible that less than half of the species have been described - nearly 30% are known only from a single sex - and life history information is lacking for about 95% of the species. This paper represents one more contribution towards identifying and quantifying the diversity of the group through the description of 9 new species and one new genus.

Abbreviations

The following abbreviations are used in the text: MRSN = Museo Regionale di Scienze Naturali, Torino, Italy; BMNH = The Natural History Museum, London, England; GS = genitalia slide; INBio = Instituto Nacional de Biodiversidad, Santo Domingo de Heredia, Costa Rica; MK = Marek Kopeć; TL = type locality; UCB = Essig Museum of Entomology, University of California, Berkeley; USNM = National Museum of Natural History, Washington, D. C.

SYSTEMATICS

Galomecalpa Razowski, 1990

Galomecalpa Razowski 1990: 397; POWELL, *et al.* 1995: 144; RAZOWSKI, 1997: 89; RAZOWSKI & BECKER, 2002b: 19.

Type species: *Eulia megaloplaca* Meyrick, by original designation.

RAZOWSKI (1990) described *Galomecalpa* to accommodate *Eulia megalocalpa* Meyrick, 1932; he latter added *G. monogramma* Razowski (1977) and *G. secunda* Razowski & Becker (2002b). All three species are represented by single males. Two additional species (one new species and one new combination) are included below, also known only from holotype males. The genus occurs in the higher elevations of western South America, with species documented from Venezuela, Ecuador, Peru, and Bolivia.

Adults of *Galomecalpa* are relatively large, with a forewing length of 11-14 mm and a forewing pattern reminiscent of that of *Anopinella* Powell, *Seticosta* Razowski, and *Strophotina* Brown. The elongate labial palpus (ca. 2 times the horizontal diameter of the compound eye) also is similar to that of the aforementioned genera. Males lack the foreleg hair pencil, which is present in *Seticosta* and absent in *Anopinella* and *Strophotina*. Male genitalia are characterized by a comparatively short, slender uncus; a narrow tegumen; long, digitate socii that extend to or beyond the ventral-most extent of the gnathos; and a long slender tip at the distal junction of the gnathos arms. The slender, elongate socii are similar to those of *Strophotina*.

Galomecalpa meridana Razowski & Brown, sp. n.

Holotype male, Venezuela, Merida, Murcuy Fish Hatchery, 7 km E Tabay, 6600' [2100 m], 10-13 Feb 1978, J. B. Heppner, blacklight (USNM).

Diagnosis. *Galomecalpa meridana* is similar to *G. secunda* Razowski & Becker (from Ecuador) in the shape of the aedeagus and the submedian prominence of the gnathos arms. The shape of the valva is similar to that of most other described species, with a broad ventral excavation of the sacculus; however, in *G. meridana* there is a rounded lobe beyond the excavation, with a small tip as in *G. monogramma*. *Galomecalpa meridana* can be distinguished from *G. megaloplaca* by the more attenuate apex of the valva, the presence of a short thorn near the dorsal termination of the ventral incision of the sacculus, and its longer, more slender aedeagus. *Galomecalpa meridana* can be distinguished from *G. monogramma* (see RAZOWSKI, 1997) by its deeper incision of the sacculus and its longer socii.

Description (Fig. 23). Head: Fronts pale straw yellow, slightly tinged with brown, smooth scaled below mid-eye, roughened above. Labial palpus (all segments combined) ca. 2 times horizontal diameter of compound eye; pale straw yellow mesally, light tan laterally, darker in distal portion. Antenna with yellow-gold scales. Thorax: Nearly concolors with head, but slightly grayer, distal portion cream; tegula with brown anterior portion. Forewing length 12.0 mm (n = 1); weakly expanding terminally; costa somewhat convex; termen weakly oblique, slightly convex; ground colour pale whitish yellow with faint, sparse, brown marbling; irregular semicircular brown patch from costa ca. 0.35-0.70 distance from base to apex, with brown hook-shaped marking near apex of discal cell; irregular subrectangular brown band in subterminal region; termen and dorsum with faint brown striations. Fringe pale whi-

tish yellow. Hindwing cream white with faint light gray-brown marbling. Abdomen: Male genitalia (Figs 1, 2; drawn from GS USNM 69905; n = 1) with uncus slender, slightly curved, weakly expanded terminally; socius extremely elongate, digitate, with dense, fine, hairlike scales; gnathos well developed, with elongate, attenuate tip formed by union of distal portion of arms; small hooflike process dorsally midway between base and tip. Transtilla broad basally, weak mesally. Valva broad at base, attenuate apically, with broad, rounded, subbasal excavation ventrally; sacculus sinuate, with strong basal portion and small terminal lobe. Vinculum complete, straight. Aedeagus slender, bent, attenuate and sclerotized distally.

Etymology. The specific epithet refers to the province of Merida, Venezuela.

Galomecalpa defricata (Meyrick, 1926), **comb. n.**

Eulia defricata Meyrick, 1926: 253; CLARKE, 1958: 123.

Sisurcana defricata; Powell 1986: 383; POWELL *et al.*, 1995: 148.

Holotype male, Colombia E[ast] Cordilleras, 12,500' [3800 m], Nov 1920 (BMNH).

Diagnosis. In overall facies, the holotype of *Eulia defricata* is similar to species of both *Sisurcana* Powell (Atterini) and *Galomecalpa*, providing few clues to its generic and/or tribal assignment. However, the slender uncus, well developed gnathos, and elongate, densely setose socius suggest that *defricata* belongs in *Galomecalpa*. The overall shape of the valva is most similar to that of *G. monogramma* among described species. The absence of long scales from the socius, the absence of a mesally spined transtilla, and the absence of an ovoid vinculum also argue for its transfer from *Sisurcana*. On the basis of these characters of the male genitalia, we provisionally transfer *defricata* to *Galomecalpa*. The females of nearly all Atteriini possess highly modified corythogyne scales on the venter of the last few abdominal segments; unfortunately no females of *Galomecalpa* are known.

***Mexiculia* Razowski & Brown, gen. n.**

Type-species: *Mexiculia chorisma* Razowski & Brown, sp. n. Gender: feminine.

Diagnosis. The new genus is related to *Quasieulia* Powell, 1981 and *Acroplectis* Meyrick, 1927 with which it shares a similar uncus, valva and gnathos. It also resembles *Anopina* Obraztsov, 1962 in the male genitalia. Putative autapomorphies of *Mexiculia* include the presence of a stout median part of the transtilla with well sclerotized, large lateral parts; the very broad ventral portion of the vinculum; and the atrophy of the caulis.

Description. Venation as in *Quasieulia*.

Male genitalia. Uncus well sclerotized, curved; socius drooping; gnathos arm short with large, sharp latero-median lobe; costa of valva fully developed; sacculus simple, rather long; disc of valva sparsely hairy; pulvinus absent; transtilla very broad, strongly sclerotized, with large lateral parts and a strong median part; juxta large, extending dorsally where a small fold developed; aedeagus stout, extending dorso-posteriorly; coecum penis very short; zone submedian; caulis absent.

Female genitalia. Unknown.

Distribution. Known only from Puebla, Mexico. The type species was collected at 1800 m in August.

Etymology. The name refers to the genus name *Eulia* and the country of origin of the type species.

***Mexiculia chorisma* Razowski & Brown, sp. n.**

Holotype male, "Mexico - Puebla dint Xicotepec de Juarez, Altura de Catalina, m. 1800, 10-VIII-1953. Legit F. Hartig"; GS MK 13655 (MRSN).

Diagnosis. As currently defined, *Mexiculia* is monotypic. Superficially, the single species *M. chorisma* is easily distinguished from *Acroplectis haemanthes* Meyrick, 1927 by the very different shape

and colour of the forewing. The genitalia are distinguished by the distinctive median part of the transtilla and other characters mentioned above in the diagnosis of the genus.

Description. Head: Medio-anterior part white; length of labial palpus ca. 2 times horizontal diameter of compound eye, broad, white, suffused brownish to middle. Thorax: Anterior half white. Forewing length 6 mm; costa hardly convex, termen indistinctly sinuate. Ground colour snow white to median fascia, along costa, and dorsum beyond middle, suffused brownish grey beyond median fascia medially and terminally, marked with a few brown lines. Markings grey, edged with brown; basal blotch oblique distally, proximal edge of median fascia deeply incised in middle, subapical blotch weak. Cilia greyish, white before and beyond apex, basal line weak. Hindwing cream, whiter in basal half, suffused brownish in distal part where brown strigulation present; cilia whitish tinged brownish, median line pale brown. Abdomen: Male genitalia (Figs. 3, 4) with uncus slender, without hair; socius fairly large, scarcely hairy; arm of gnathos with large ventro-lateral process; valva slender; costa long; sacculus simple; disc scarcely hairy; median part of transtilla strongly sclerotized, fairly long, ventro-lateral parts broad; aedeagus stout; coecum penis with ventral opening for ductus ejaculatorius; caulis extremely small.

Etymology: The name refers to separate position of the species (choris = separately).

Quasieulia Powell, 1986

Quasieulia Powell, 1986: 392; BROWN & POWELL, 1991: 5; POWELL *et al.*, 1995: 145; RAZOWSKI, 1997: 97.

Type species: *Quasieulia mcguffini* Powell, 1986, by original designation.

POWELL (1986) included three species in *Quasieulia*: *Q. hirsutipalpis* (Walsingham) and *Q. endela* (Walsingham), each known from single specimens from Guatemala, and *Q. mcguffini* Powell known only from Durango, Mexico. A fourth species is described below which apparently is widespread, ranging from the Mexican States of Jalisco, Mexico, and Puebla, south to Guatemala.

***Quasieulia jaliscana* Razowski & Brown, sp. n.**

Holotype male, Mexico, Jalisco, Parque Nacional Nevado de Colima, 8200', 19 Aug 1988 Norris Bloomfield (USNM).

Paratypes. MEXICO: Oaxaca: Mpio. Suchixtepec, Rio Guajolote, 2000 m, 9 Nov 1980 (1 female), E. Welling (UCB). Jalisco: same data as holotype (3 males) (USNM, SDNHM). Puebla: 6 mi N Chalco, 7000', 4 Oct 1975 (1 male), J. Powell, T. Eichlin & T. Friedlander (UCB). Mexico: 10 air km SE Amecameca, 2720 m, 23 Aug 1987 (4 females), J. Brown & J. Powell (UCB). Veracruz: 7 km SW Banderilla, 1680 m, 13 Jul 1974 (2 females), J. Chemsak (UCB). Cañon Las Minas, 13 km NE Perote, 2150 m, 19 Aug 1987 (1 male), J. Brown & J. Powell (UCB). 27 km W Ciudad Mendoza, 2330 m, 15 Aug 1987 (3 males), J. Brown & J. Powell (UCB). GUATEMALA: Volcan Santa Maria, July (2 females), Oct (1 female), Schaus & Barnes (USNM).

Diagnosis. Based on the male genitalia, *Q. jaliscana* appears to be most closely related to *Q. mcguffini* Powell. It can be distinguished by the brown colouration of the forewing, the broad submedian lobes of the gnathos, and the absence of a signum in the female genitalia.

Description (Fig. 24). Head: Brown, paler dorsally; length of labial palpus ca. 2 times horizontal diameter of compound eye. Thorax: Brown. Forewing length 6.8-7.3 mm (mean = 7.0; n = 5) in males, 5.9-7.8 mm (mean = 6.7; n = 6) in females; somewhat expanding posteriorly; costa curved outwards; apex sharp; termen oblique, distinctly sinuate; ground colour whitish with admixture of brown, suffused brown except for dorsoanterior area, finely strigulated with dark brown especially along costa; apical and terminal parts of wing brownish; a slender fascia from before mid-dorsum terminating in median cell, costal half of median fascia diffuse, subapical blotch ill-defined. Fringe brownish with dark brown basal line, cream at concavity of termen, with some brown terminal scales at tornus. Hindwing whitish, tinged cream on periphery, strigulated gray. Fringe cream white. In some specimens forewing colour slightly paler brown at dorsum and postmedially; dorsal fascia dark brown, pale edged prox-

mally, diffuse posteriorly, occasionally connected to median fascia; and subapical markings at costa rather weak. Abdomen: Male genitalia (Figs 5, 6; drawn from GS MK 20323) with uncus slender, long, without hairs; socius slender, hairy; arm of gnathos with large, broad submedian lobe; terminal plate of gnathos slender; valva slender, rounded terminally; sacculus simple; transtilla submembranous medially; juxta provided with dorsal process; aedeagus about as long as valva, slender, tapering ventro-terminally; cornuti absent. Female genitalia (Fig. 15; drawn from GS USNM 68600) with papillae anales broad; sterigma membranous, more distinctly sclerotized in ostial region; colliculum marked with small sclerites; signum absent.

Etymology. The specific epithet refers to the state of Jalisco, Mexico.

Anopina Obraztsov, 1962

Anopina Obraztsov 1962: 2, 1967: 2; POWELL, 1964: 118, 1983: 39, 1986: 374; POWELL *et al.*, 1995: 142; Brown & Powell 2000: 12.

Type Species. *Tortrix triangulana* Kearfott, 1908, by original designation.

Anopina includes 65 previously described species plus the one new described below. The genus ranges from Canada to Costa Rica, with the greatest species richness in the higher elevations of Mexico (Brown & Powell 2000). Adults of *Anopina* feature a grayish, pale brownish, or whitish ground colour, almost always with a well-defined, darker triangular or semicircular patch from the middle of the costa. Males have elongate antennal cilia (3-5 times the flagellomere diameter) and a foreleg hair pencil.

Anopina iturbidensis Brown & Powell, 2000

Anopina iturbidensis Brown & Powell, 2000: 67.

Anopina iturbidensis occurs in the Sierra Madre Oriental from Nuevo Leon to Hidalgo and in the Sierra Madre Occidental from Durango to Jalisco, Mexico. Three specimens from Mexico, Distrito Federal, Lomas, 30 June 1953, F. Hartig (MRSN) differ slightly from the type series in the shape of sacculus.

Anopina xicotepeca Razowski & Brown, sp. n.

Holotype male, Mexico, Puebla, Xicotepec de Juarez, Altura de Catalina, 1800 m, 10 Aug 1953, F. Hartig (MRSN).

Paratypes. Mexico: Puebla: same data as holotype (2 males, 3 females) (MRSN).

Diagnosis. Externally, *A. xicotepeca* is most similar to *A. potosiensis* Brown & Powell and *A. ru-siasana* Brown & Powell; it is clearly a member of the *potosiensis* species group as defined by BROWN & POWELL (2000). The male genitalia can be distinguished from other species in the group by the broad, rounded termination of the sacculus and the thicker, less curved aedeagus. The female genitalia resemble those of *A. silvertanana* Obraztsov, but have a broader colliculum.

Description. Head: Whitish or brownish cream, length of labial palpus > 2 times horizontal diameter of compound eye, pale brownish. Thorax: Whitish, tegula brownish gray. Forewing length 7 mm, ground colour whitish gray; suffusions and strigulation gray; markings dark gray with black spots: basal blotch weakly developed; costal triangle broad; subapical blotch reaching apex. Spots along termen more or less distinct. Cilia concolorous with ground colour, more or less mixed gray. Hindwing whitish; strigulation grayish; cilia cream white. Variation: In one male ochreous cream lines obliquely across the wing; one example with gray forewing ground colour and distinct markings. Abdomen: Male genitalia (Figs 7,8; drawn from GS MK 13655) with uncus slightly expanding subterminally; socius moderately large; gnathos slender; valva fairly broad provided with a row of long bristles in middle sub-costally; sacculus expanding near middle ventrally, then sinuate, terminating in a broad, rounded convexity; aedeagus slender, curved; finely dentate terminally. Female genitalia (Fig. 16; drawn from GS 13648) with sterigma broad, rounded ventro-laterally, densely spined; apophyses short; colliculum bro-

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ad, partially membranous, sclerotized terminally, with weaker sclerite dorsally; large areas of corpus bursae spiny.

Etymology. The specific epithet refers to the type locality of Xicotepec de Juarez, Mexico.

Odonthalitus Razowski, 1990

Odonthalitus Razowski, 1992: 208; POWELL *et al.*, 1995: 145; BROWN, 2000: 36.

Type species: *Odonthalitus lacticus* Razowski, 1991, by original designation.

Adults of *Odonthalitus* are virtually indistinguishable from those of *Lobogenesis* Razowski. They are characterized by a white, cream, or pale tan forewing ground colour with a simple pattern that includes a dark trapezoidal, triangular, or semicircular patch near the middle of the costa and a dark basal patch. As presently defined, *Odonthalitus* includes nine species: *O. lacticus* Razowski (type species) from Durango, Mexico; *O. bisetanus* Brown from Oaxaca, Mexico; *O. improprius* Brown from Oaxaca, Mexico; *O. conservanus* Brown from Jalisco, Mexico; *O. orinoma* (Walsingham) from Guerrero, Mexico; *O. fuscomaculatus* Brown from Michoacan, Mexico; *O. poas* Brown from Alajuela Province, Costa Rica; *O. viridimontis* Brown from Puntarenas Province, Costa Rica; and *O. regilla* (Walsingham) from Guatemala. We add a new species below, bringing the total to ten. *Odonthalitus* is known from montane oak-pine forest habitat from Durango, Mexico south to Costa Rica. *Odonthalitus* and *Lobogenesis* were revised by BROWN (2000) who concluded that although the monophyly of *Lobogenesis* was supported convincingly, *Odonthalitus* may be paraphyletic with regard to the latter. That is, no unique character or set of characters specifically defines *Odonthalitus*.

Odonthalitus mexicanus Razowski & Brown, sp. n.

Holotype female, Mexico, Puebla, Xicotepec de Juarez, Altura de Catalina, 1800 m, 10 Aug 1953, F. Hartig (MRSN).

Diagnosis. *Odonthalitus mexicanus* is most similar to *O. lacticus* Razowski, but differs in the shapes of the sterigma and the ostium bursae.

Description. Head: Brownish, frons yellow; length of labial palpus ca. 2 times horizontal diameter of compound eye. Thorax: Brown. Forewing length 7 mm, costa weakly convex, apex sharp, termen oblique, weakly sinuate in proximal half. Ground colour grayish, whiter towards basal blotch, tinged brown in distal area. Markings and spots brown, posterior edge of basal blotch weakly oblique, straight; costal part of median fascia subtriangular, extending in short line apically; subapical blotch consisting of three spots. Fringe brownish gray. Hindwing whitish, tinged gray beyond middle; strigulation weak, brownish gray. Fringe whitish, with indistinct, pale brownish gray median line. Male genitalia unknown. Female genitalia (Fig. 17, drawn from GS 13668) resembling those of *O. lacticus*, but with sterigma much longer and ostium area very long, minutely spined; ductus seminalis posterior.

Etymology. The specific epithet refers to the country of Mexico.

Hynhamia Razowski, 1986

Hynhamia Razowski 1987: 69; BROWN, 1990: 321; POWELL *et al.*, 1995: 144.

Type Species. *Tortrix hemileuca* Meyrick, 1932, by original designation.

Hynhamia includes 5 described species: *H. brunana* Brown from Peru; *H. cornutia* Brown from Colombia; *H. hemileuca* (Meyrick) from Colombia; *H. microsolia* Razowski from Ecuador; and *H. sciodyras* (Meyrick) from Colombia. Below we add a new species from Costa Rica. All species appear to be restricted to elevations above about 2200 m. Superficially, *Hynhamia* can be distinguished from all other euline genera by a combination of the following characters: extremely elongate, porrect labial palpi; reduction or absence of ocelli; and the nearly uniform orange or orange brown forewing colour. Putative autapomorphies for the genus include the triangular distal portion of the sacculus; swollen or modified basal or subbasal dorsal portion of the transtilla; sclerotized dorso-lateral portion of the juxta;

and short, thickened segment VII in the female. The assignment of *H. cornutia* to the genus is somewhat questionable because the shapes of the aedeagus and valva are moderately divergent from those of its putative congeners.

***Hynhamia ochroleuca* Razowski & Brown, sp. n.**

Hynhamia sp. B; BROWN, 1990: 326 (illustration of female genitalia and adult).

Holotype male, Costa Rica, Cartago Province, Parque Nacional Tapaní-Maziso de la Muerte, Estación de la Esperanza, 2600-2700 m, R. Delgado (INBio).

Paratypes. Costa Rica: Alajuela Province: Volcan Poas National Park, 2350 m, 19 Dec 1981 (2 males), 15 Dec 1982 (2 females), D. Janzen & W. Hallwachs (INBio). Cartago Province: El Guarco, R. F. Rio Macho, Macizo de la Muerte, 2600 m, Apr 2002 (1 female), R. Delgado (INBio); Parque Nacional Tapanti, Sector la Represa del Puente del Rio Porras, 1660 m, Feb 1999 (1 female), R. Delgado (INBio); Cerro la Muerte, 3100 m, 5-7 Aug 1981 (1 female), V. O. Becker (USNM); Pensione la Georgina, Cerro de la Muerte, 3000 m, 23-25 May 1985 (2&), J. Powell (UCB); Ojo de Agua, 13 km S Pulperia la Trinidad, 14 May 1993 (1 female), M. Chavarria & P. Montero (INBio). Heredia Province: ALAS transect, 6 km ENE Vara Blanca, 1950-2050 m, 10 Feb 2002 (1 female), 13 Feb 2002 (1 male), 17 Feb 2002 (1 male), 18 Feb 2002 (1 female), 20 Feb 2002 (1 male, 1 female), 21 Feb 2002 (2 males, 6 females), 12-20 Mar 2002 (4 males), 12 Apr 2002 (1 female), J. Brown, M. Epstein, J. Powell & D. Wagner (INBio). Limon Province: Parque Internacional la Amistad, Valle de Silencio, 2450 m, Jun 2001 (1 male), M. Alfaro (INBio).

Diagnosis. Superficially, *H. ochroleuca* can be distinguished from its congeners by the gray-brown blotch of the forewing in the terminal area midway between the apex and the termen. The species appears to be most closely related to *H. microsolia*, with a similar slender aedeagus, somewhat bent ventrally in the distal portion. It resembles *H. hemileuca* in size and in the shape of the socius. The male genitalia can be distinguished from those of its congeners by the elongate, slender valva with a tiny, narrow rectangular process near mid-venter, and the strong, bristled median part of the transtilla.

Description (Figs 25,26). Head. Cream; length of labial palpus ca. 3 times horizontal diameter of compound eye, densely scaled with brown laterally. Thorax: Cream; tegula yellowish brown. Forewing length 11.5-13.0 mm (mean = 11.9; n = 10) in males, 11.5-15.0 mm (mean = 13.7; n = 10) in females, weakly expanding posteriorly, costa somewhat convex, termen rather straight, indistinctly oblique. Forewing ground colour yellowish cream, with small irregular patches of darker yellow, densely sprinkled with ochreous brown, sparsely dotted with black, especially along dorsum; subterminal markings blackish, with a few concolorous spots at mid-termen; a subrectangular dark brown blotch near mid termen. Fringe concolorous with ground colour with blackish spots beyond veins. Hindwing cream, tinged pale brownish on periphery, strigulated with blackish gray. Fringe cream. Abdomen: Male genitalia (Figs. 9, 10; drawn from GS MK 20320) with uncus large, club-shaped; socius long, broadened subterminally; basal part of valva broad, postbasal portion very slender, spiny in ventral area, provided with slender, curved process beyond middle; transtilla broadening laterally, provided with very large median spiny part representing submedian lobes, and small median tip; aedeagus long, slender, bent. Female genitalia (Fig. 22; drawn from GS JWB 1301) with papillae anales large; sterigma broad, membranous proximally; dorsum of segment VIII with paired lateral lobes and wedge-shaped sclerotized patch divided mesally by a narrow longitudinal sinus; a row of strong setae along anterior edge of segment VIII tergum; ductus bursae slender, gradually broadening to pear-shaped corpus bursae; signa absent.

Remarks. This species was described and illustrated, but not named, by BROWN (1990) on the basis of a single female from Volcan Poas. This species appears to be restricted to the higher elevations of Costa Rica, from about 1660 to 3100 m. During a week (15-22 February 2002) of blacklight trapping at the ALAS transect site (6 km ENE Vara Blanca), J. Powell and J. Brown did not collect a single specimen at light (mercury vapor and UV), but Powell retrieved 11 specimens from malaise traps

in the general vicinity. Other investigators at the site before or after 15-22 February collected only a few specimens at light. The occurrence of this species in flight traps (malaise traps) indicates that the moth is active, but its rarity in light traps and at sheets suggest that it may be only marginally attracted to light.

Among the specimens listed above is a male from Parque Internacional la Amistad that was reared from a pupa found on the bark of *Quercus oleodites* (Fagaceae). This is the first evidence of the life history of *Hynhamia*, and the putative association with *Quercus* is consistent with its high elevation occurrence. The pupa is typically tortricine, with two distinct rows of spines on the dorsum of abdominal segments 3-8 and one row on 9; the cremaster is extremely short.

Etymology. The specific epithet refers to the pale ochreous colour or the forewings.

Gauruncus Razowski, 1988

Gauruncus Razowski 1988: 404; POWELL *et al.*, 1995: 144.

Type Species. *Gauruncus gampsognathos* Razowski, 1988, by original designation.

Gauruncus is represented by five described species: *G. gelastes* Razowski from Argentina; *G. gampsognathos* Razowski from Bolivia; *G. simplicissimus* Razowski & Pelz, 2003 from Ecuador; *G. intermedius* Razowski & Becker from Ecuador; and *G. laudatus* Razowski & Pelz, 2003 from Ecuador. Below we add a new species from Venezuela. Putative autapomorphies for the genus include the unusual bifurcate uncus, the shape of the plate at the termination of the gnathos, and the shape and configuration of the sterigma and subgenital plate.

Gauruncus venezolanus Razowski & Brown, sp. n.

Holotype male, Venezuela, Aragua, Rancho Grande, 1100 m, 21-25 Jan 1966, S. S. & W. D. Duckworth (USNM).

Paratypes. Venezuela: Aragua: Rancho Grande, 1100 m, 21-25 Jan 1966 (1 male, 1 female), 16-23 Oct 1966 (1 female), 24-31 Oct 1966 (1 female), S. S. & W. D. Duckworth (USNM), 8-14 Jun 1967 (1 female), 8-14 Jul 1967 (1 male), 22-31 Jul 1967 (1 male), 15-25 Aug 1967 (1 male, 1 female), R. W. Poole (USNM).

Diagnosis. Externally, *G. venezolanus* most resembles *G. gelastes*. The male genitalia are similar to those of *G. simplicissimus* in the weakly concave ventral edge of the sacculus, and to those of *G. intermedius* in the presence of long socii. *Gauruncus venezolanus* can be distinguished from its congeners by the short, rounded terminal arms of the uncus.

Description (Fig. 27). Head: Brown, labial palpus ca. 1.5 times horizontal diameter of compound eye. Thorax: Brown. Forewing length 8.0 mm ($n = 3$) in males, 8.5 mm ($n = 3$) in females; pattern as in other species of *Gauruncus*, almost unicolorous brownish, slightly more pale cream distally, where finely strigulated with brown; costa with a few tiny cream spots postmedially; traces of brown markings in median part of wing. Fringe brownish with dark brown basal line. Hindwing brownish, paler basally. Fringe concolorous with base. Abdomen: Male genitalia (Figs 11, 12; drawn from GS USNM 68614) with uncus arms short, rounded; socius large; ventral edge of sacculus slightly concave medially, rounded caudally; aedeagus stout. Female genitalia (Fig. 18; drawn from GS 68614; $n = 1$) as in *G. laudatus*, differing slightly in the presence of a median sclerite in corpus bursae.

Etymology. The specific epithet refers to Venezuela.

Transtillaspis Razowski, 1987

Transtillaspis Razowski, 1987: 73; POWELL, *et al.*, 1995: 144.

Type species: *Transtillaspis batoidea* Razowski, 1987, by original designation.

Transtillaspis includes 13 species distributed in the higher elevation of Colombia, Venezuela, Peru, Bolivia, and Brazil; three new species are added below. Putative autapomorphies for the genus in-

clude the expanded ventro-lateral portion of the transtilla and the basally fused group of cornuti in the vesica of the aedeagus (RAZOWSKI, 1987). On the basis of the complex cornutus and long-scaled, subbasally attached socii, *Transtillaspis* appears to be related to *Paraptila* Meyrick and *Terinebrica* Razowski.

***Transtillaspis tucumana* Razowski & Brown, sp. n.**

Holotype male, Argentina, Tucumán, Ciudad Universitaria, 800 m, 17 Feb 1959, J. F. G. Clarke (USNM).

Paratypes. Argentina: Tucumán: Ciudad Universitaria, 800 m, 17 Feb 1959 (3 males, 2 females), 20 Feb 1959 (1 male, 1 female), J. F. G. Clarke (USNM).

Diagnosis. *Transtillaspis tucumana* is externally most similar to *T. batoidea* Razowski. It can be distinguished from the latter by the simple uncus and unmodified sacculus, which in *batoidea* are armed with thorns or spines. *Transtillaspis tucumana* resembles *T. bebeli* Razowski from Colombia in the shape of juxta. However, it can be distinguished from that species by the broad gnathos arms, the overall shape of the transtilla, and the presence of a submedian convexity of the costa of the valva.

Description (Fig. 28). Head: Brown; length of labial palpus ca. 2 times horizontal diameter of compound eye. Thorax: Brown. Forewing length 8.2 mm in males, 10.5 mm in female; forewing expanded posteriorly; costa convex; termen rather straight, slightly oblique beneath apex. Male forewing with ground colour brownish; strigulation brown; markings darker, rather indistinct; basal blotch atrophied; median fascia expanding towards end of termen; subterminal fascia parallel. Female forewing more slender, with ground colour paler than in male; markings brownish; basal blotch well developed; median fascia atrophying in dorsal third; base of wing pale brownish cream. Fringe brown. Hindwing cream, suffused with grayish brown and darker strigulation. Fringe pale brownish cream. Abdomen: Male genitalia (Figs. 13, 14, drawn from GS USNM 68622) with uncus stout, tapering terminally; socius small; arm of gnathos short, strongly expanding and minutely thorny medially; costa of valva with distinct convexity; sacculus elongate-subtriangular; transtilla constricted medially, with spiny submedian lobes; two curved processes at dorsal corners of juxta; aedeagus rather broad terminating in a short prominence; vesica with two groups of cornuti: anterior group with seven thick spines, posterior with five slender spines. Female genitalia (Fig. 19, drawn from GS USNM 69902) with sterigma large with two rounded proximal lobes; ductus bursae with elongate sclerite; ductus seminalis from distal portion of corpus bursae.

Etymology. The specific epithet refers to the province of Tucumán, Argentina.

***Transtillaspis cinifera* Razowski & Brown, sp. n.**

Holotype female, Venezuela, Merida, 4 km S Santo Domingo, 18-23 Feb 1976, C. M. & O. S. Flint Jr. (USNM).

Paratype. VENEZUELA: Same data as holotype (1 female) (USNM).

Diagnosis. Superficially, *T. cinifera* resembles *T. bascanion* Razowski from Peru, but the ground colour of the forewing is darker brown. The female genitalia can be distinguished by the broad plate-shaped sterigma and long corpus bursae bearing an elongate posterior sclerite.

Description (Fig. 28). Head: gray, tinged with brownish dorsally; length of labial palpus ca. 2 times horizontal diameter of compound eye, brownish laterally. Thorax: Gray, tinged with brown. Forewing length 9.5-10.5 mm; forewing slender; costa bent medially; termen short, rather straight, oblique. Ground colour brownish gray, basal half suffused ash gray, apical third with dark gray; costal spots in apical part gray; strigulation brownish gray; suffusion of median veins dark brown. Markings brown, rather diffuse: median fascia tinged rust in costal third fused with dorso-postbasal indistinct fascia; brown suffusion at veins near dorsum at tornus. Fringe cream brownish, divisions and basal line brownish. Hindwing pale brownish cream, cream white in basal area. Fringe concolorous with median part of wing. Abdomen: Female genitalia (Fig. 20, drawn from GS MK 20319) with sterigma large, well

sclerotized; ductus bursae very short; ductus seminalis originating beyond mid-length of corpus bursae; elongate sclerite in central portion of corpus bursae. Male unknown.

Etymology. The species name (cinis = ash; ferro = carry) refers to the colouration.

***Transtillaspis anxia* Razowski & Brown, sp. n.**

Holotype female, Colombia, Bogotá, Chicó, 2900 m, 2 Feb 1959, G. F. G. Clarke, USNM

Diagnosis. *Transtillaspis anxia* is externally very similar to *T. cinifera*, but has the cream coloured hindwing densely strigulated with brownish gray. The female genitalia of *T. anxia* are distinguished by a smaller sterigma, the absence of a median sclerite of the corpus bursae, and the presence of a row of spines near the base of the ductus seminalis.

Description (Fig. 30). Head: Whitish gray with slight admixture of brownish; length of labial palpus ca. 2.5 times horizontal diameter of compound eye. Thorax: Mostly concolorous with head. Forewing length ca. 11 mm; pattern as in *cinifera*. Ground colour brownish cream with brownish suffusions, especially in distal third of wing; darker markings consisting of large dorsal blotch extending from beyond base to before tornus, with remnants of median fascia and weak subcostal blotch. Fringe cream white, basally spotted brownish. Hindwing cream, tinged pale brownish in apical area; strigulation fine, pale brownish gray. Abdomen: Female genitalia (Fig 21, drawn from GS USNM 26585) with sterigma rounded proximally with transverse fold beyond ostium bursae; corpus bursae large, with indistinct posterior sclerite; rather large submedian spines followed by ventral ductus seminalis. Male unknown.

Etymology. The name refers to a hesitation in identification of the taxon (anxius - timid).

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NEW SPECIES AND NEW COMBINATIONS IN NEOTROPICAL EULIINI

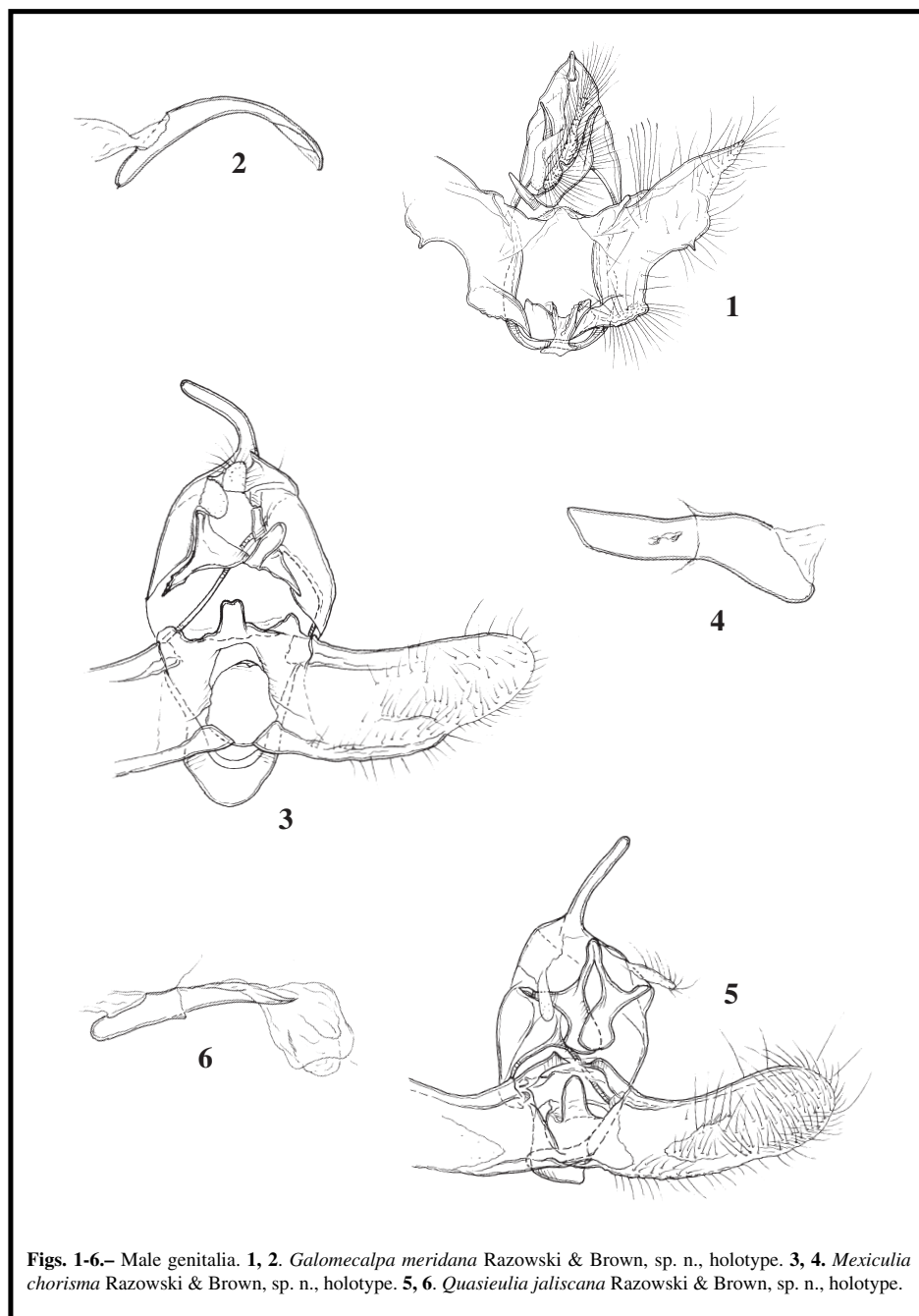
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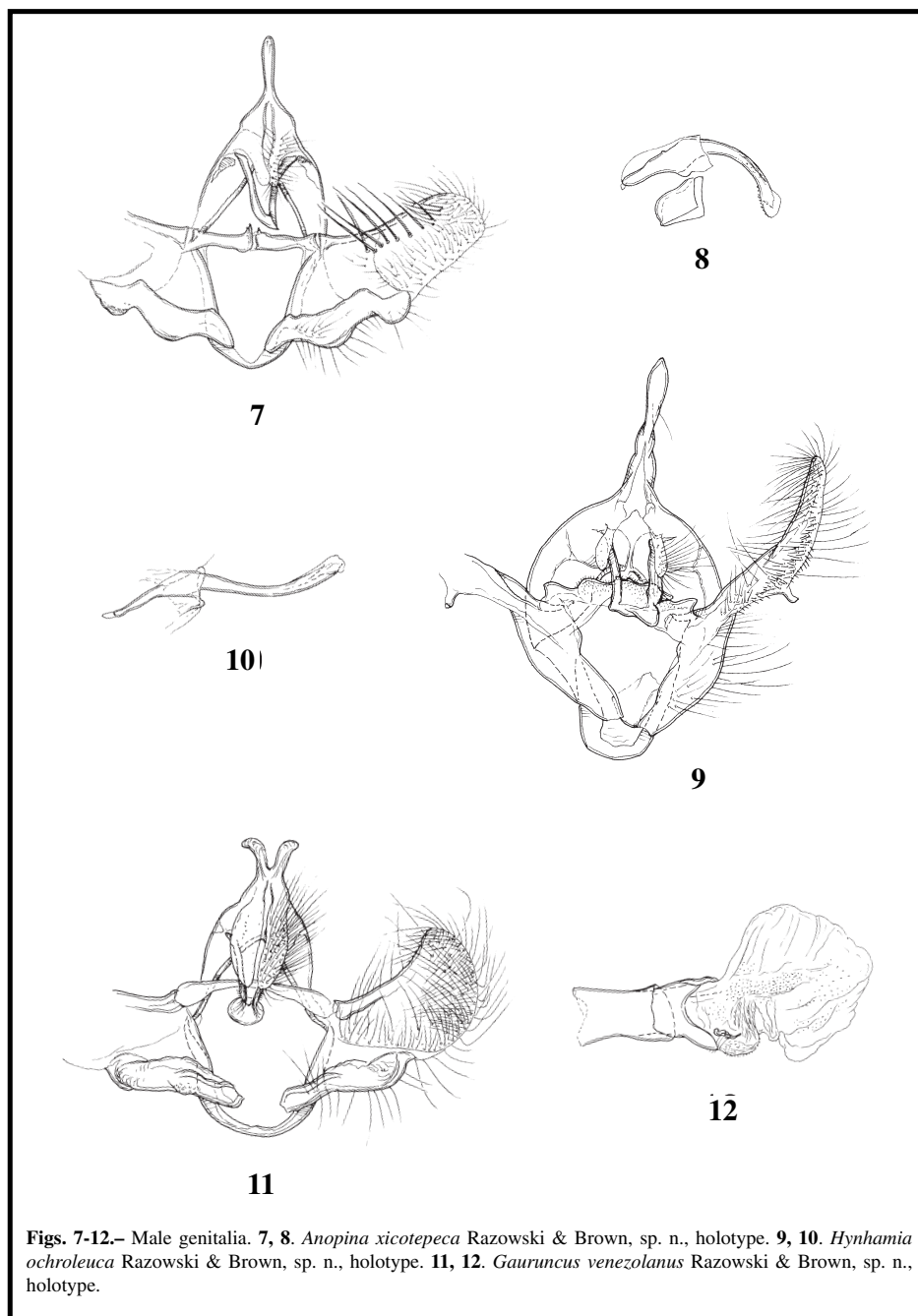
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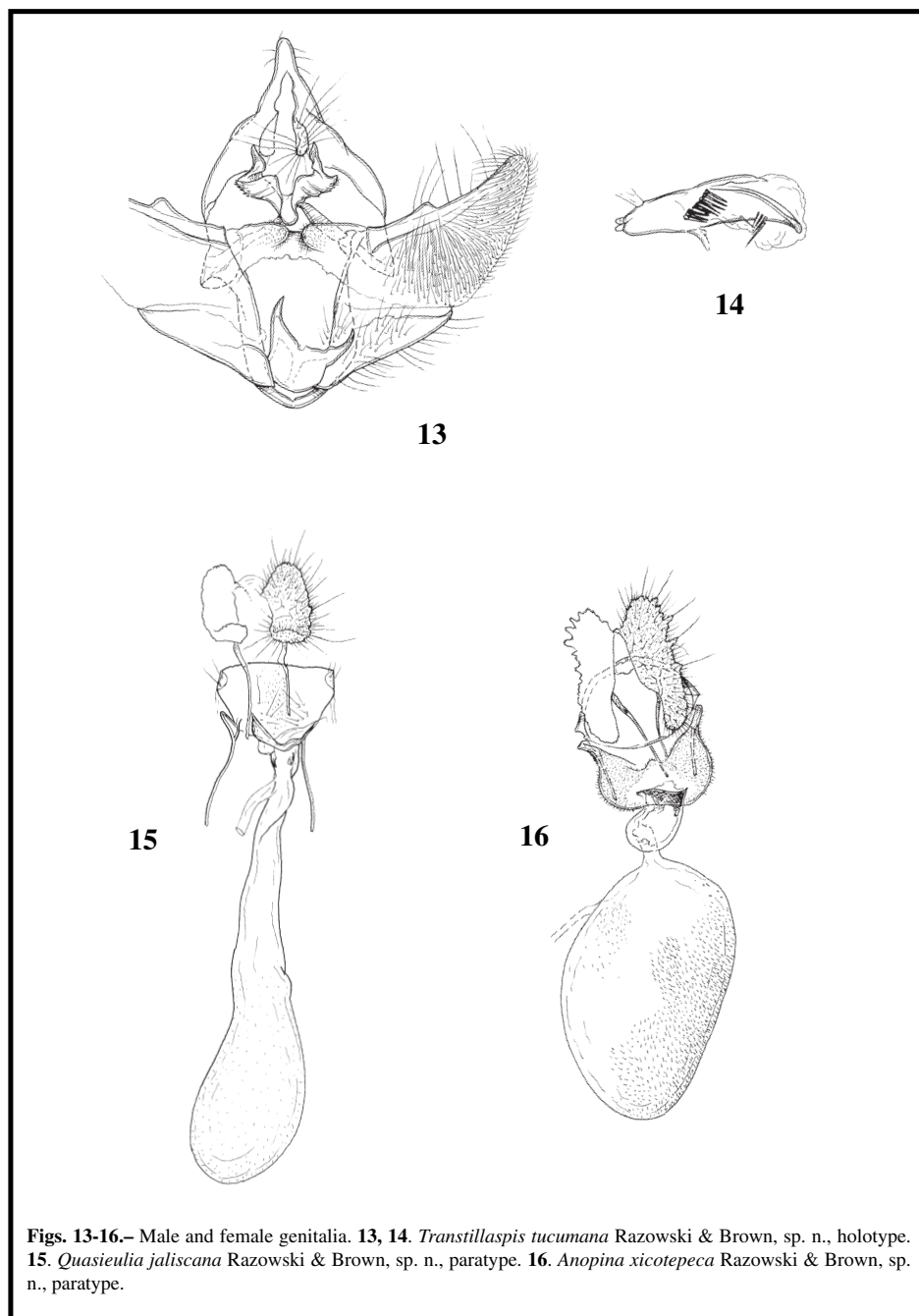
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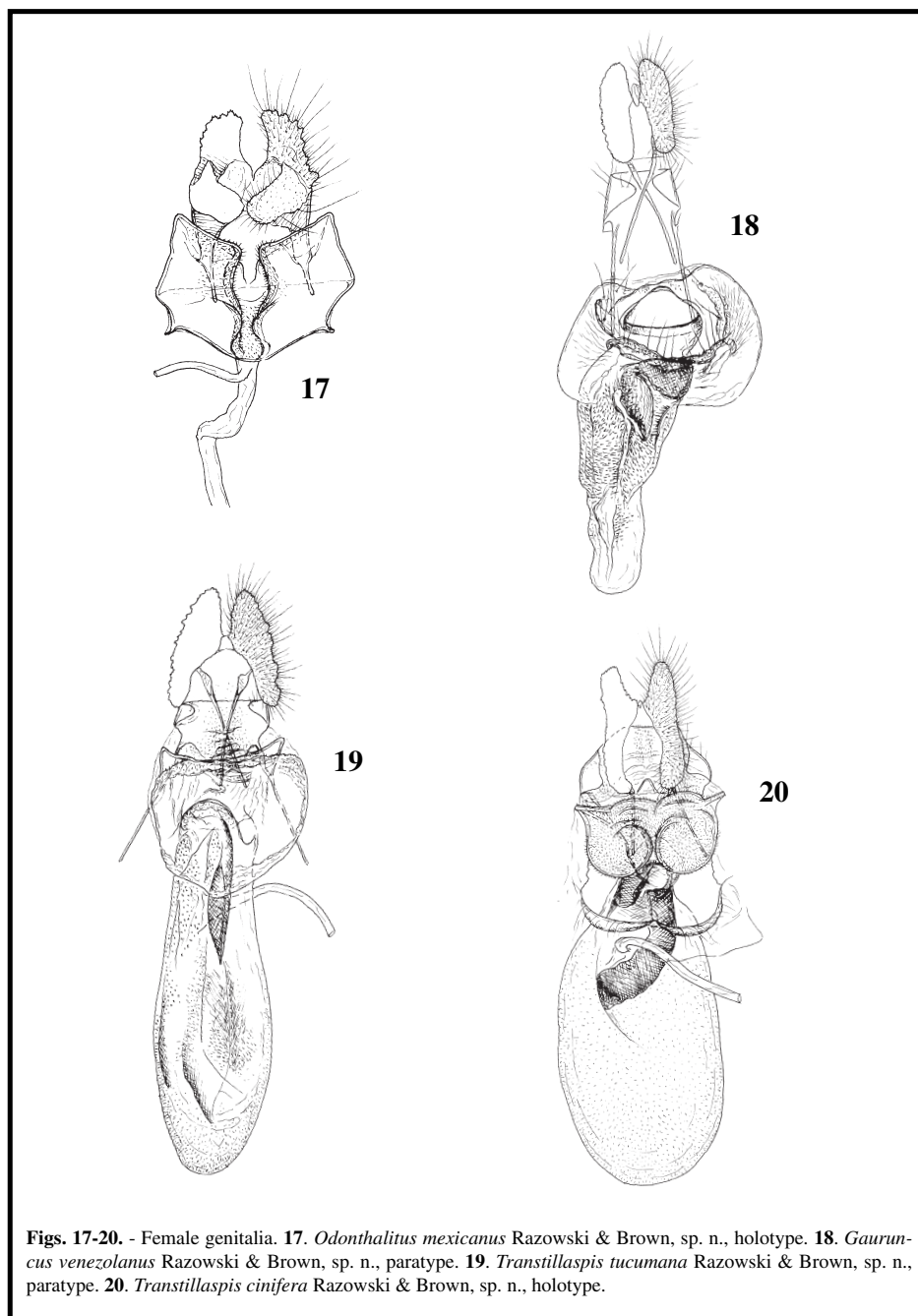


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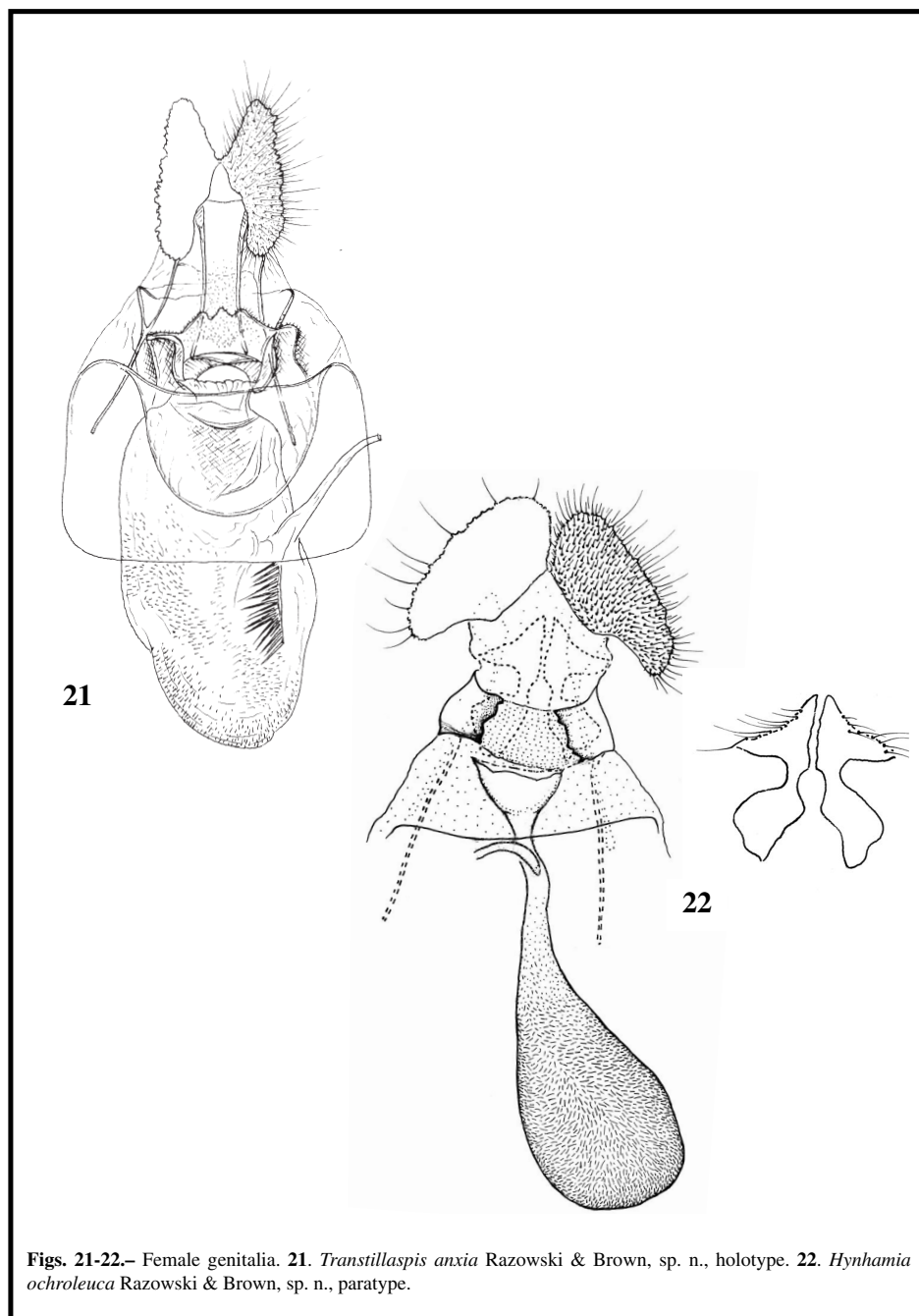




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