

A NEW SPECIES OF *PSEUDOCOMOTIS* FROM COSTA RICA, INCLUDING THE FIRST REPORTED FEMALE OF THE GENUS (LEPIDOPTERA: TORTRICIDAE: CHLIDANOTINAE)

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ABSTRACT.—*Pseudocomotis nortena* n. sp., is described and illustrated from Costa Rica, bringing to 6 the number of described species in the genus. The new species is the only member of the genus documented from Central America thus far; *Pseudocomotis* Brown previously was known from Ecuador, Venezuela, and Colombia. A female of the genus is described and illustrated for the first time. The unusual shape of the papillae anales are reminiscent of *Monortha* Razowski and some species of *Auratonota* Razowski; the short, stout ductus bursa is unique among Neotropical members of the tribe. *Pseudocomotis* appears to represent the sister group to *Monortha*; the monophyly of the genus is demonstrated convincingly by several characters of the male and female genitalia.

KEY WORDS: *Auratonota*, biodiversity, Central America, Chlidanotini, *Cnephasia*, Colombia, Ecuador, *Eulia*, Mesoamerica, *Monortha*, Neotropical, *Pseudocomotis nortena* n. sp., systematics, taxonomy, Venezuela.

Adults of *Pseudocomotis* Brown are among the largest New World tortricid moths, with forewing lengths up to 2.0cm (Brown, 1990). In spite of their large size, bright coloration, and moderately broad distribution (Ecuador, Venezuela, Colombia, and Costa Rica), they are extremely rare in collections. The 5 previously described species are represented by only 14 specimens, and females formerly were unknown. While studying the Chlidanotini of Costa Rica, I discovered both sexes of a previously unknown species of *Pseudocomotis*. The purposes of this paper are to describe and illustrate this new species, comment on the putative sister group relationship between *Monortha* Razowski and *Pseudocomotis*, and speculate on the global diversity of the tortricid tribe Chlidanotini.

MATERIALS AND METHODS

Material for this study was borrowed from the Instituto Nacional de Biodiversidad (INBio), Santo Domingo de Heredia, Costa Rica. Dissection methodology follows that presented in Brown and Powell (1991). Forewing measurements were made with a transparent millimeter ruler beneath low power of a dissecting microscope. Illustrations of the genitalia were drawn using a camera-lucida attachment. Terminology for genitalic structures follows Horak (1984). Abbreviations used in the description are as follows: FW = forewing; HW = hindwing; DC = discal cell; n = number examined or compared; ca. = circa (approximately).

Pseudocomotis nortena Brown, new sp.

Fig. 1-3

DESCRIPTION.—**MALE.**—*Head:* Frons with sparse, smooth, white scaling below mid-eye; slightly roughened above, brown mixed with white. Labial palpus dark brown, suffused with white or yellow apically. Antennal scaling yellow-brown. *Thorax:* Brown mixed with white, with brown subdorsal band. *FW:* Length 18.0mm (n = 1). Mostly brown with gold and white markings, entire surface rather shiny; costa with fine, transverse gold striae bordered by small white dots; irregular, diagonal gold dash from costa ca. 0.8 distance from base to apex, terminating near lower edge of DC; broad, irregular, undulate, gold line along hind margin, extending from base of wing to ter-



Fig. 1. Adult female of *Pseudocomotis nortena* n.sp.

men, then angled abruptly to DC; irregularly bordered by small white dots; a few charcoal dots just below termination of DC. Fringe checkered dark brown and gold. *HW:* Gray. *Abdomen:* Brown. Dorsal pits absent. Tergum VII bearing narrow, sclerotized, dorsoposterior region with narrow band of modified sex scaling. *Genitalia* (Fig. 2; drawn from JWB slide 290; n = 1): Uncus short, slender, with long strong spines arising from venter. Socius large, upright, with dense setae. Hami short, stout, straight, ca. 0.5 length of uncus. Gnathos reduced but present. Transtilla a subrectangular plate. Valva large, broad, with rounded excavation along outer edge; patch of strong spines from sclerotized disk along venter in basal one-third. Saccus large, squarish. Aedeagus large, broad, with subapical spur, densely dentate in distal one-fourth; cornutus in form of a small sclerotized plate.

FEMALE.—*FW* length 19.0-24.0mm (\bar{x} = 21.5mm; n = 2). Essentially as described for male (Fig. 1). *Genitalia* (Fig. 3; drawn from JWB slide 807; n = 1). Papillae anales together roughly heart-shaped, i.e., broad and rounded at base, tapering posteriorly. Apophyses anteriores only slightly longer than apophyses posteriores, slightly enlarged distally. Sterigma a broad bowl with row of strong setae at posterior edge. Ductus bursa rather broad, short; antrum weakly sclerotized. Corpus bursa oblong; an irregular-shaped sclerite present near junction of corpus bursa and ductus bursa at point of origin of ductus seminalis; signum comprised of bunch of spines with patch of sclero-

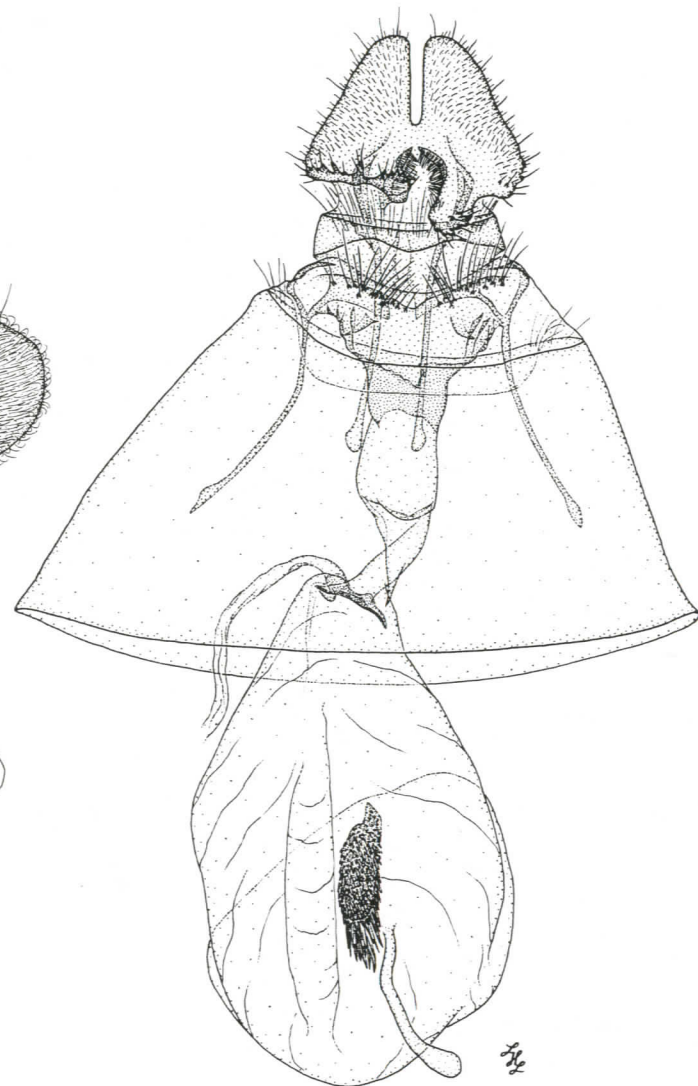
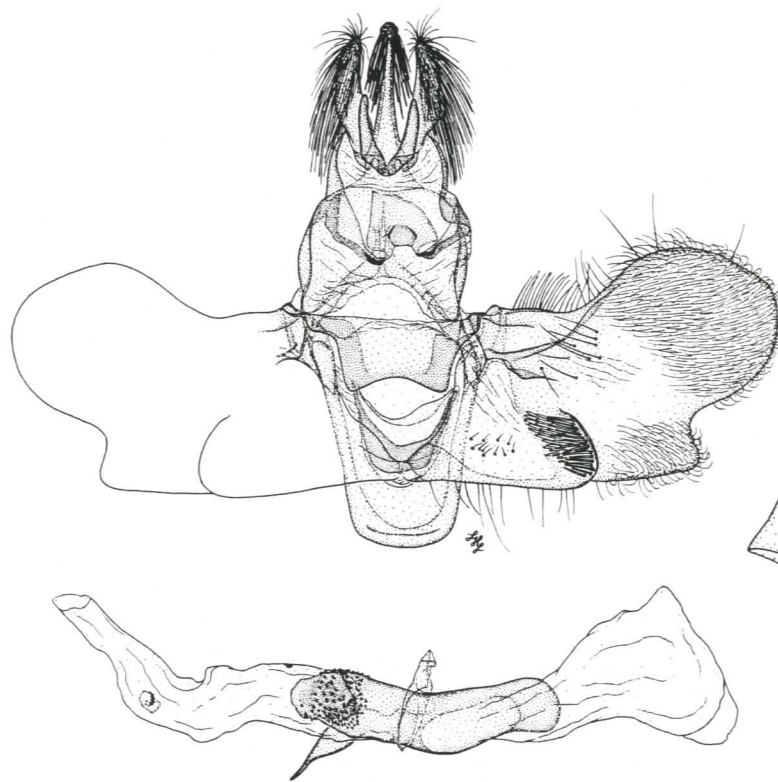


Fig. 2. Male genitalia of *Pseudocomotis nortena* n.sp., valva spread, aedeagus removed (above).

Fig. 3. Female genitalia of *Pseudocomotis nortena* n.sp. (right).

tized dimples posteriorly. Accessory bursa extremely short, arising near anterior portion of signum.

TYPE MATERIAL.—*Holotype* ♂: COSTA RICA: *Heredia*: El Angel waterfall, 8.2 km downhill [from] Vara Blanca, 1350m, 3 Jan 1981, D. Janzen & W. Hallwachs (INBio).

Paratypes 2 ♀: COSTA RICA: *Cartago*: Grano de Oro, Turrialba, A. C. Amistad, 1120m, 19/30 Jun 1993, 1 ♀ (P. Campos, INBio); Rio Grande de Orosi, desde Puente R. Dos Amigos hasta la Represa, 1400-1800m, Oct 1995 1 ♀ (R. Delgado, INBio).

ETYMOLOGY.—The specific epithet refers to the relatively northern distribution of this species.

DIAGNOSIS.—*Pseudocomotis nortena* differs from other species in the genus by the broad, poorly defined, undulating, gold and white band roughly paralleling the hind margin of the forewing; the holotype and paratype are identical in facies. Other species have a more narrow and well-defined line (see Brown, 1990). The male genitalia of *P. nortena* can be distinguished from its congeners by the short, stout hamus (ca. 0.5 times the length of the uncus), the overall shape of the

PHYLOGENY OF PSEUDOCOMOTIS

Although knowledge of New World Chlidanotini has increased dramatically over the last decade, there has been no attempt to reconstruct the phylogeny of the group or define relationships with Old World members of the tribe.

Pseudocomotis is probably the sister group to *Monortha* Razowski, also from the northern Neotropics. Characters in support of this hypothesis include a similar forewing pattern, strong spines from the uncus in the male genitalia, an extremely similar configuration of the signum including the shared possession of a patch of sclerotized dimples in addition to the usual bundle of long spines, and a similar location of the origin of the accessory bursa. The unusual, somewhat cordate shape of the paracymbia are reminiscent of *Monortha*.

DISCUSSION

Tuck (1981) included 37 species in his checklist of the Chlidanotini of the world, of which 16 were (and remain) undescribed. With the exception of a single species from the Ethiopian Region, the tribe was known only from the Indo-Australian and southern Oriental regions. It was not until 1987 that the tribe was recognized as occurring in the New World (Razowski, 1987). Razowski (1987) assigned 17 species to the tribe, most of which previously were described in older polyphyletic genera (e.g., *Cnephasia* Curtis, *Eulia* Hübner), and described 4 new genera to accommodate them. Over the past decade or so, a large number of Neotropical chlidanotines have accumulated in collections worldwide. Currently, there are 25 described species in the New World (Powell, Razowski and Brown, 1995) and an additional 50 or so undescribed species represented in collections (Razowski and Becker, pers. comm.). With approximately 75 species now known from the New World and 37 from the Old World (with many localities poorly collected), the Chlidanotini fauna of the world likely exceeds 125 species, approximately 2.5 times the described fauna.

ACKNOWLEDGMENTS

I thank Eugenie Phillips, Instituto Nacional de Biodiversidad, Santo Domingo de Heredia, Costa Rica; Jerry Powell, Essig Museum of Entomology, University of California, Berkeley, USA; Ronald Hodges, Systematic Entomology Laboratory, USDA, Washington, DC, USA; and Kevin Tuck, The Natural History Museum, London, England, for allowing me to examine material in their care. I thank Stuart McKamey, Systematic Entomology Laboratory, USDA, Washington, DC; Kevin Tuck, the Natural History Museum, London, England; and Richard Brown, Mississippi State University, Mississippi State, Mississippi, for helpful comments on the manuscript. The drawings of the male and female genitalia were skillfully prepared by Linda Lawrence, Systematic Entomology Laboratory, USDA, Washington, DC. The photograph of the adult was provided by Tomas Mustelin, San Diego, California, USA.

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