

NEW RECORDS OF PHYCITINAE FROM MEXICO AND A
DESCRIPTION OF A NEW GENUS AND SPECIES
(LEPIDOPTERA: PYRALIDAE)¹

H. H. NEUNZIG

Department of Entomology, North Carolina State University, Raleigh, North Carolina 27695-7613.

Abstract. The following species are recorded from Mexico for the first time: *Difundella corynophora* Dyar; *Atheloca subrufella* (Hulst); *Caristanius decoloralis* (Walker); *Stylopalpia scobiella* (Grote); *Comotia torsicornis* Dyar; *Unadilla maturella* (Zeller); *Baphala homoeosomella* (Zeller); *Entmemacornis proselytes* Dyar. *Nefundella*, **new genus**, is established for three species: *N. distractor* (Heinrich) (type-species), **new combination**; *N. tolerata* (Heinrich), **new combination**; and *N. xalapensis*, **new species**, from SE of Xalapa, Vera Cruz, Mexico.

Heinrich (1956) included information on the species of Phycitinae then known to occur in Mexico. Since that time little has been added to our knowledge of the Mexican phycitine fauna. McGuffin (1967), and Hedlin et al. (1981), contributed information on Mexican *Dioryctria*, and a new species of *Acrobasis* was recently described from Mexico (Neunzig, 1983).

In this paper, based on adult phycitines collected recently in eastern Mexico, I list species previously not recorded from Mexico and describe a new genus and species. Except as noted, the specimens are deposited in the North Carolina State University Insect Collection (NCSU).

NEW RECORDS FOR EASTERN MEXICO

Difundella corynophora Dyar: One male of this distinctive species was collected on 25 July, 1984, 4 km south of Estacion Palenque, Chiapas. Previously recorded by Heinrich (1956) from Cayuga and Chejel, Guatemala; La Chorrera, Panama; and Cayenne, French Guiana.

Atheloca subrufella (Hulst): One male of this species was collected on 1 August, 1984, 5 km west of Pisté, Yucatan. Previous distribution records include Florida (throughout state); Pinal del Río, Cuba; and Kingshill, Virgin Islands (Heinrich, 1956). Kimball (1965) listed cabbage palm (*Sabal palmetto*) (Walter) Lodd ex. Schultes), and saw palmetto (*Serenoa repens* (Bartram) Small) as the larval food plants of *A. subrufella* in Florida. Various members of the palm family (Arecaceae) are probably utilized by *A. subrufella* as larval hosts in the Neotropics.

Caristanius decoloralis (Walker): Five males and two females of this species

¹ Paper No. 9968 of the Journal Series of the North Carolina Agricultural Research Service, Raleigh, North Carolina 27695.

were collected 5 km south of Vera Cruz, Vera Cruz, on 22 July, 1984. Heinrich (1956) listed only the southeastern United States as the range of this species, but did include Brownsville, Texas, adjacent to the Mexican border. Larvae of *C. decoloralis* feed on several species of *Cassia* (Fabaceae) in the southeastern United States (Neunzig, 1979), and most likely *Cassia* is also the host in Mexico.

Stylopalpia scobiella (Grote): *Stylopalpia scobiella* was found to be a relatively abundant species at a site located 5 km south of Vera Cruz, Vera Cruz. Eight males and five females were collected on 22 July, 1984. Previous distribution records for this species include several localities in Texas, and Glenwood Springs, Colorado (Heinrich, 1956). Heinrich's speculation that *S. scobiella* also occurred in Mexico proved to be correct.

Comotia torsicornis Dyar. (Fig. 7): Five males and four females were collected on 1 August, 1984, near Pisté, Yucatan. Heinrich (1956) based his treatment of this species solely on the male type, because no females were available from the type-locality or elsewhere that appeared to be conspecific. Because the female of *C. torsicornis* apparently has not been described, I illustrated the genitalia of one of the four females collected near Pisté. *C. torsicornis* has previously only been reported from Porto Bello, Panama (Heinrich, 1956).

Unadilla maturella (Zeller): Two males and one female of this species were collected 21 July, 1984, at Ciudad Valles, San Luis Potosi. Previous collections were from Colombia; Cayuga, Guatemala; and Baracoa and Havana, Cuba (Heinrich, 1956) and Dominica (Shaffer, 1978).

Baphala homoeosomella (Zeller): Two males and two females were collected 25 July, 1984, 4 km south of Estacion Palenque, Chiapas. According to Heinrich (1956), this species is apparently common, and widely distributed in tropical America. Previous records include Cuba; St. Croix, Virgin Islands; Barro Colorado Island, Para Iso, Tobago Island, and Rio Trinidad, Panama; Georgetown, Guyana; Honda, Columbia; and São Paulo, Brazil. The larvae of *B. homoeosomella* are predaceous on scale insects.

Entmemacornis proselytes Dyar: One male of this species was collected 15 km southeast of Xalapa, Vera Cruz, on 23 July, 1984. The only other specimens of this species reported in the literature belong to the type-series (2 males, 2 females; Cayuga, Guatemala).

Nefundella Neunzig, NEW GENUS

Type-species: Difundella distractor Heinrich, 1956.

Heinrich (1956) included four species in his treatment of *Difundella* Dyar. He was aware, however, that these species did not form a closely knit unit, and he tentatively divided the species into two distinct morphological groups of two species each. A new species recently collected in Mexico provided additional support for a more formal separation of these groups.

In the genus *Difundella* are retained the two species *corynophora* Dyar and *subsutella* (Schaus), which share the following morphological features: labial palpus reaching above vertex; hindwing with cell less than one-third length of wing; vein 2A of hindwing of male bent before middle and with a tuft of yellow, setae-like scales on its underside (within bend); gnathos greatly reduced, its apical projection fine, needle-like; costa of valva simple. To *Nefundella* are assigned *distractor* Heinrich, 1956, *tolerata* Heinrich, 1956, and the new species described

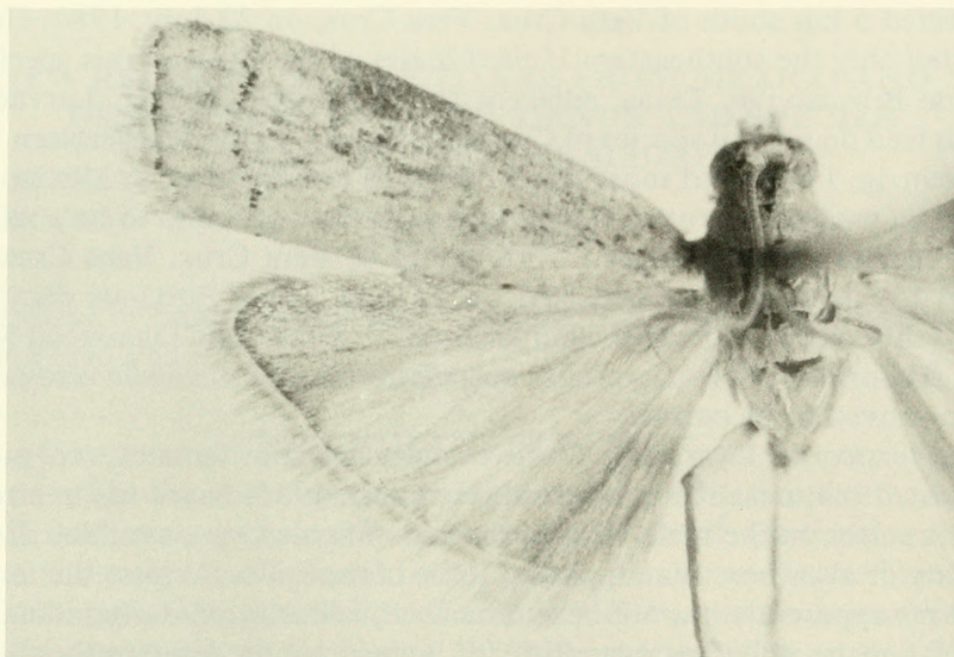


Fig. 1. *Nefundella xalapensis*, holotype.

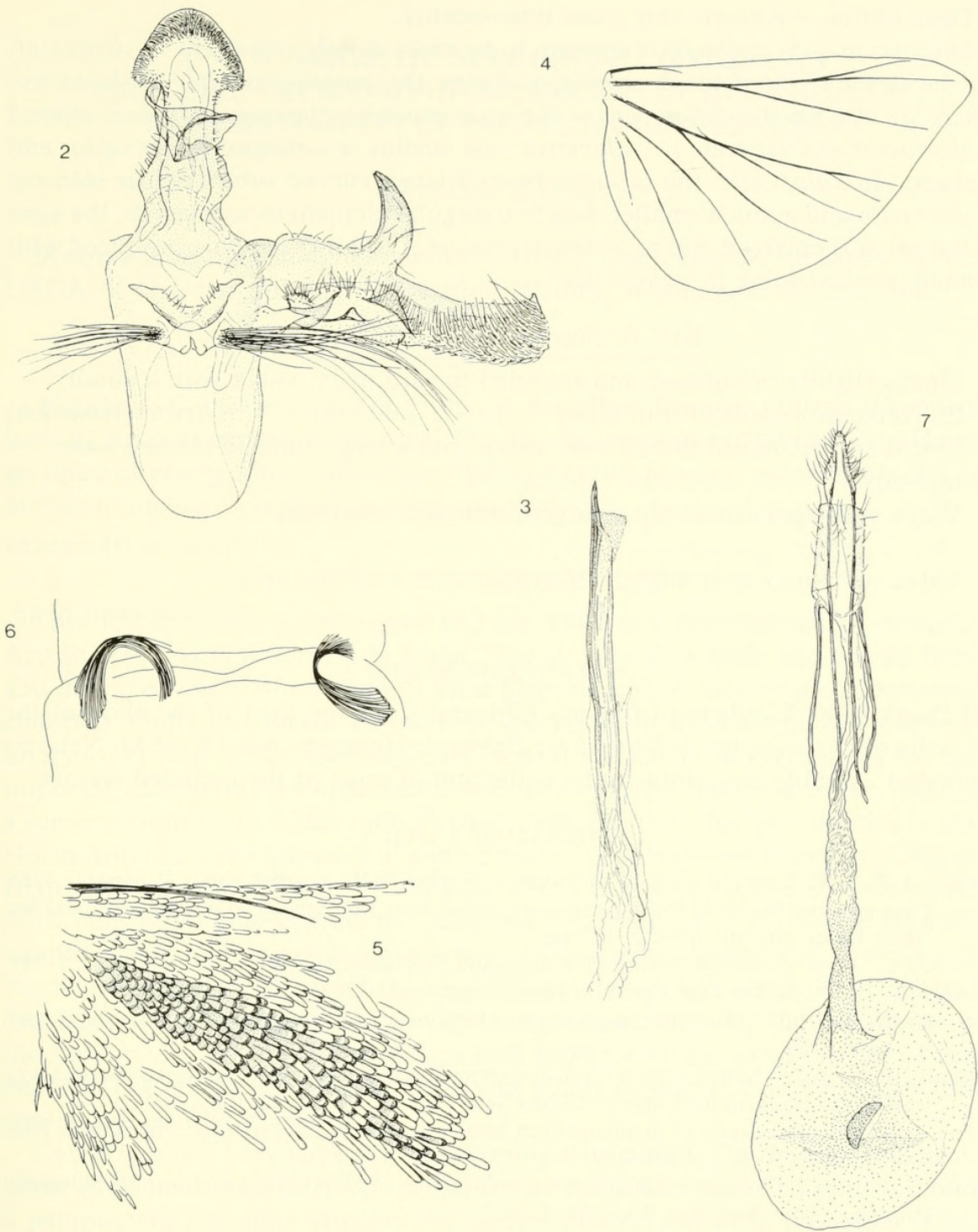
below. Diagnostic features of *Nefundella* include: labial palpus not reaching vertex or barely reaching vertex; hindwing with cell more than one-third (but less than half) the length of wings; vein 2A of hindwing of male not bent, without setae-like scales on its underside, but instead with a patch of decurved androconia (sex-scales) along base of Cu on underside; gnathos with apical process enlarged and strongly sclerotized; costa of valva with strongly sclerotized projection(s).

Difundella and *Nefundella* are both New World, neotropical elements. Nothing is known of the larval hosts of any of the included species.

***Nefundella xalapensis* Neunzig, NEW SPECIES**

Figs. 1–6

Description.—*Head*: Pale golden-brown with some reddish-brown on vertex. Labial palpus barely reaching vertex, pale golden-brown. Maxillary palpus squamous, pale golden-brown. Basal segment of antenna simple, pale golden-brown to reddish-brown, shaft filiform, with abundant, very short sensilla trichodea (cilia). *Collar*: Pale golden-brown dorsally, pale golden-brown ventrally with distinct row or patch of black scales. *Forewing*: Brown above, dusted with white, white most prevalent in basal and subbasal areas; a few scattered black scales in basal and subbasal areas, and to a lesser extent over rest of wing; antemedial line very weakly developed, pale golden-brown, without black border; discal spot pale golden-brown; postmedial line very pale golden-yellow, preceded by row of contrasting black scales. Terminal margin with row of black scales. Length of forewing 6.0–7.0 mm. *Hindwing*: Pale brown above, brown along margins. Undersurface with patch of golden scales (Fig. 5), distal margin of each scale forming patch curled toward wing. *Abdomen*: Lateral pockets and curved scale tufts (Fig. 6) between segments 2 and 3. *Genitalia* (Figs. 2, 3): Uncus broadly sagittate; apical process of gnathos greatly enlarged, sclerotized; sacculus of valva with a relatively short, nearly triangular process; costa of valva with large, bifurcate, spine at about



Figs. 2–6. *Nefundella xalapensis*. 2, Male genitalia, left valva and aedeagus removed. 3, Aedeagus. 4, Right hindwing. 5, Undersurface of base of left hindwing. 6, Ventral scale tufts between abdominal segments 2 and 3. Fig. 7, *Comotia torsicornis*, female genitalia, ventral aspect.

mid-costa, and very small conical spine at apex; anellus robust, shallowly V-shaped; aedeagus long, slender, tapering to a point; vinculum slightly longer than its greatest width.

Type material.—*Holotype*: ♂; Mexico: Vera Cruz, 15 km SE of Xalapa, 23-VII-84, H. H. and K. M. Neunzig: ♂ genitalia slide HHN 979: in NMNH. *Paratype*: One ♂; same collection data.

Distribution.—Known only from type-locality.

Discussion.—*N. xalapensis* appears to be most closely related to *N. distractor*, but lacks the distinct black scaling outlining the antemedial line of *distractor*. There are also several differences in the male genitalia: the uncus is spoon-shaped in *distractor* and sagittate in *xalapensis*; the anellus is u-shaped in *distractor* and v-shaped in *xalapensis*; the sacculus bears a large, curved subtriangular element in *distractor* and a much smaller, nearly triangular element in *xalapensis*; the apex of the valva is enlarged and rounded in *distractor* and more evenly produced with a small, conical spine in *xalapensis*.

KEY TO SPECIES OF *NEFUNDELLA*

1. Uncus slightly broadened and rounded toward apex; valva with a small, thornlike process near mid-costa *N. tolerata* (Heinrich)
- Uncus spoon-shaped or sagittate; valva with a large, hooked process near mid-costa 2
2. Valva with apex distinctly enlarged, rounded, unarmed *N. distractor* (Heinrich)
- Valva with apex only slightly enlarged, with a conical spine *N. xalapensis* n. sp.

ACKNOWLEDGMENTS

I thank J. K. Liebherr of Cornell University for the loan of the slide of the genitalia of the holotype of *Difundella distractor* Heinrich. Also, Kurt M. Neunzig provided valuable assistance in the collection of most of the included species.

LITERATURE CITED

- Hedlin, A. F., H. O. Yates, III, D. Cibrian-Tovar, B. H. Ebel, T. W. Koerber, and E. P. Merkel. 1981. Cone and seed insects of North American conifers. Can. For. Serv., USDA For. Serv., and Sec. Agric. Recur. Hidraul. Mexico. 122 pp.
- Heinrich, C. 1956. American moths of the subfamily Phycitinae. U.S. Natl. Mus. Bull. 207: 1–581.
- Kimball, C. P. 1965. The Lepidoptera of Florida. Gainesville. 363 pp.
- McGuffin, W. C. 1967. Immature stages of some Lepidoptera of Durango, Mexico. Can. Entomol. 99: 1215–1229.
- Neunzig, H. H. 1979. Systematics of immature phycitines (Lepidoptera: Pyralidae) associated with leguminous plants in the southern United States. USDA Tech. Bull. 1589. 119 pp.
- . 1983. A new species of *Acrobasis* from Mexico (Lepidoptera: Pyralidae: Phycitinae). Proc. Entomol. Soc. Wash. 85: 256–259.
- Shaffer, J. C. 1978. Bredin-Archbold-Smithsonian survey of Dominica: Phycitinae (Lepidoptera: Pyralidae). Proc. Biol. Soc. Wash. 91: 5–26.



Neunzig, H H. 1986. "New records of Phycitinae from Mexico and a description of a new genus and species (Lepidoptera: Pyralidae)." *Proceedings of the Entomological Society of Washington* 88, 122–126.

View This Item Online: <https://www.biodiversitylibrary.org/item/54986>

Permalink: <https://www.biodiversitylibrary.org/partpdf/56427>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Smithsonian

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Entomological Society of Washington

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.