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A new species of *Eucosma* Hübner and two new species of *Cydia* Hübner (Lepidoptera: Tortricidae) from the United States

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Abstract

Three new species of Olethreutinae (Lepidoptera: Tortricidae) from the United States are described and illustrated. *Eucosma paregoria* Brown, n. sp., is associated with prairies and glades, primarily in midwestern U.S. *Cydia marita* Brown, n. sp., is common in southeastern U.S., ranging from Texas to Florida and north along the eastern seaboard to Virginia. *Cydia timara* Brown, n. sp., occurs in the southwestern U.S. (Arizona and New Mexico). Both species of *Cydia* are associated with habitats that support *Pinus* species, the probable larval hosts.

Key words: Disjunct distributions, glades, new species, Olethreutinae, *Pinus*, prairie

Introduction

The tortricid fauna of the Nearctic Region is among the best known on the planet, nonetheless, a large number of species remain to be described, especially in the genera *Eucosma* Hübner, *Pelochrista* Lederer, *Epiblema* Hübner, and *Epinotia* Hübner (all Eucosmini) and *Cydia* Hübner (Grapholitini).

Eucosma Hübner has been redefined based on a combination of female character states (Gilligan et al. 2013) that include the following: lamella postvaginalis rectangular in shape, lamella antevaginalis ring-like, sternum VII with posterior margin deeply emarginated and approximate to lateral margins of lamella postvaginalis, and papillae anales facing laterally.

Cydia Hübner is defined by an autapomorphic character of the male hindwing: the possession of small, setiform scales with enlarged sockets along 3A, first reported by Kennel (1908-1921) and more recently confirmed by Komai & Horak (2006). A second character defining *Cydia* is the presence of an appendix or tubular outgrowth of the posterior end of the corpus bursae (Danilevski & Kuznetsov 1968, Komai & Horak 2006). A similar appendix is present in some species of *Grapholita* Treitschke and *Crocidosema* Zeller, but the homology of the structure in these various genera is unknown. A third apomorphy is the subdivision of the female sternum VII into three plates separated by two weakly sclerotized lines that often form ridges. The subdivision of sternum VII is present in most *Cydia* and a few species of *Grapholita*.

The new species of *Eucosma* described here has been collected in disjunct localities, mostly associated with glades and prairies, from Louisiana north to Illinois and in North Carolina. Of the two new species of *Cydia*, one occurs in many eastern states, but is especially common in the Southeast, and the second is known from Arizona and New Mexico.

Methods

In addition to specimens deposited in the Mississippi Entomological Museum (MEM), additional material was obtained from George J. Balogh, Vernon A. Brou (Abita Springs, LA), Edward C. Knudson (Bellaire, TX), Northeastern Illinois University, Louisiana State Arthropod Museum, University of California, Berkeley (Essig

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deposited in collections of Mississippi Entomological Museum, U. S. National Museum of Natural History, and University of California, Berkeley.

Hosts. Unknown, probably *Pinus*, as discussed for *C. marita*.

Etymology. The name "*timara*" is an anagram of "*marita*."

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