



Article

The Lepidoptera of White Sands National Monument 5: Two new species of Cochylini (Lepidoptera, Tortricidae, Tortricinae)

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Abstract

In 2006, 10-year studies of the moths in two park units of the U.S. National Park Service in southern New Mexico were initiated: White Sands National Monument in Otero County, New Mexico, USA; and Carlsbad Caverns National Park, in Eddy County, New Mexico, USA. Two new species of Cochylini, *Eugnosta brownana* Metzler & Forbes and *Cochylis yinyangana* Metzler, are described. Adults and male and female genitalia of both species are illustrated.

Key words: biological diversity, White Sands National Monument, Carlsbad Caverns National Park, Arizona, New Mexico, Texas, *Eugnosta*, *Cochylis*

Introduction

Prior to 2006 when Metzler was invited to conduct 10-year studies of moths at White Sands National Monument, almost nothing was known about the insect fauna of the white gypsum dunes ecosystem in the Tularosa Basin (Schneider-Hector 1993) in southern New Mexico, USA, and the same was true for the moths occurring in Carlsbad Caverns National Park. The dearth of research may be attributed to restricted access to both facilities. The white gypsum dunes, which cover 712.2 km², lie solely with the jurisdiction of the U.S. National Park Service's White Sands National Monument (controlling 40%) and the U.S. Army's White Sands Missile Range (controlling 60%). Carlsbad Caverns National Park, a World Heritage Site, that protects 295.42 km² of the northern Chihuahuan Desert, is under the control of the U.S. National Park Service. The studies were scheduled to last 10 years, 2006–2016. In 2007 through 2010, adults of a new species of *Eugnosta* Hübner, 1816-[1825], and a new species of *Cochylis* Treitschke, 1829 were collected.

Material and methods

Moths and other night flying insects were collected in U.S.D.A. type black light traps, as described in Smith *et al.* (1974), and at black light, sometimes with mercury vapor light and sheet, as described in Covell (1984), in diverse habitats in White Sands National Monument and in diverse habitats in Carlsbad Caverns National Park. A detailed description of the study methods is in Metzler *et al.* (2009).

Specimens of moths from black light traps were retained for further study. The specimens were sorted, spread, labeled, and identified. All non-lepidopterous insects from traps were placed in ethyl alcohol and deposited in the Museum of Southwestern Biology at the University of New Mexico, Albuquerque, New Mexico. Selected specimens of Lepidoptera and other insects from White Sands National Monument were collected at black light and sheet, after which they were pinned, spread, labeled, and identified for deposition in the Arthropod Collection at New Mexico State University, Las Cruces, New Mexico.