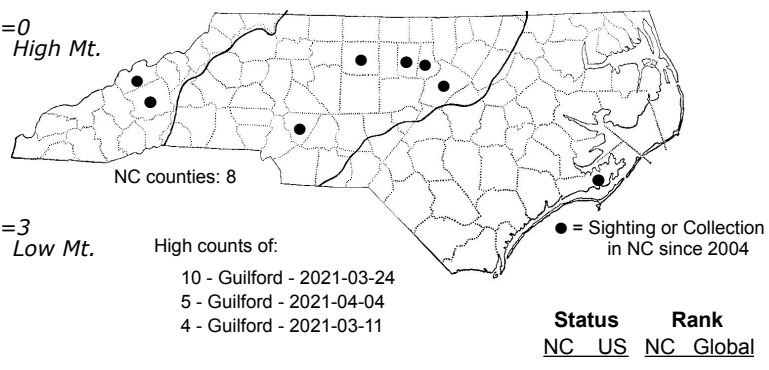
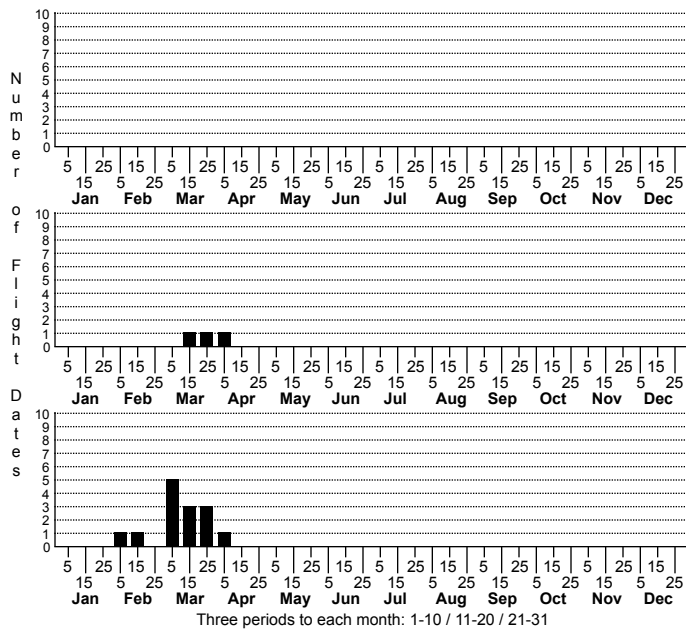


Pseudexentera cressoniana Shagbark Hickory Leafroller Moth



FAMILY: Tortricidae SUBFAMILY: Olethreutinae TRIBE: Eucosmini

TAXONOMIC COMMENTS: The genus *Pseudexentera* currently has 19 recognized species that are found primarily in North and Central America, with 17 recognized species in the US. They are typically found in forested settings and most fly very early in the year. Many are challenging to identify, particularly the species with fasciate forewing patterns that often show substantial intraspecific variation in patterning and have slight differences in genitalia (Miller, 1968; Gilligan et al., 2008). There has been a long history of misidentified species in the group (Miller, 1968) and there is still much confusion about external traits that are useful in sorting out certain closely related forms. DNA barcoding has not proven to be particularly useful in sorting out species since recognized species often have two or more BINS that contain multiple species names. This likely reflects weak genetic differentiation between certain forms and the large numbers of misidentified specimens in collections. Miller (1968) conducted a taxonomic revision and reviewed all of the recognized species in North America, but did not provide detailed descriptions of external coloration, patterning, or intraspecific variation within species. Here, we treat our assignment of the fasciate specimens to species as provisional since they are based on images or pinned specimens that have not been barcoded or dissected to examine genitalia. Even with the latter, specimens cannot always be confidently assigned to species.

FIELD GUIDE DESCRIPTIONS: Beadle and Leckie (2012)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: McDunnough (1940); Miller (1986)

TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The following description is based primarily on that of McDunnough (1940). The palps, head, thorax, antenna and basal area of the forewing are concolorous and a deep leaden to pale slate gray. A large basal patch is present that extends to one-third or more and is usually outwardly angled. Its oblique outer edge is well-defined on the inner half of wing but often rather obscure on the costal half. The ground color of the remainder of the wing is similar but contrastingly lighter primarily due to heavy white dusting. The median area is considerably paler than the basal patch, especially above the inner margin. A large, irregularly, dark patch that is often obscure is present before the anal angle and extends from the inner margin inward to about one-third the wing depth. The costa beyond the basal patch has numerous short posteriorly oblique dark streaks that are interspersed with pale ones, and a dark spot is present at the apex. The fringe is gray and darker both near the tips and at the base where a basal line is present and contrasts with the lighter median area. The hindwing is light smoky gray with a paler fringe that also has a dark basal line.

DISTRIBUTION: *Pseudexentera cressoniana* is restricted to eastern North America where its range roughly corresponds to that of the Eastern Deciduous Forest. The range extends from Maine and adjoining areas of extreme southern Canada westward through the Great Lakes region to Wisconsin and Minnesota. Populations occur as far south as central Florida and other Gulf Coast states, and westward to eastern Texas, eastern Oklahoma, and Missouri. This species is generally uncommon in the Coastal Plain. As of 2022 we have a few scattered records from all three physiographic areas.

FLIGHT COMMENT: Local populations are univoltine. Adults have been documented from February-June, but the seasonal peak is typically in March or April depending on the latitude. As of 2022, our records extend from early March through early April, with a seasonal peak in March.

HABITAT: Local populations are associated with hardwood or mixed hardwood-conifer forests, particularly where hickories and oaks are well-represented. Populations have been found in both natural communities and in residential settings with hardwood trees.

FOOD: The larvae feed on hickories, including Shagbark Hickory (*Carya ovata*; Brown et al., 2008; Miller, 1986). They also feed on Northern Red Oak (*Quercus rubra*) and other oaks (Heinrich, 1923). They have been reported to feed on *Kalmia* (Robinson et al., 2010), which needs additional confirmation.

OBSERVATION_METHODS: The adults are attracted to lights. We need observations on host use in North Carolina populations and detailed studies of the larval life history.

NATURAL HERITAGE PROGRAM RANKS: GNR S3S4

STATE PROTECTION: Has no legal protection, although permits are required to collect it on state parks and other public lands.

COMMENTS: We currently do not have sufficient information on the distribution and abundance of this species to accurately assess its conservation status.