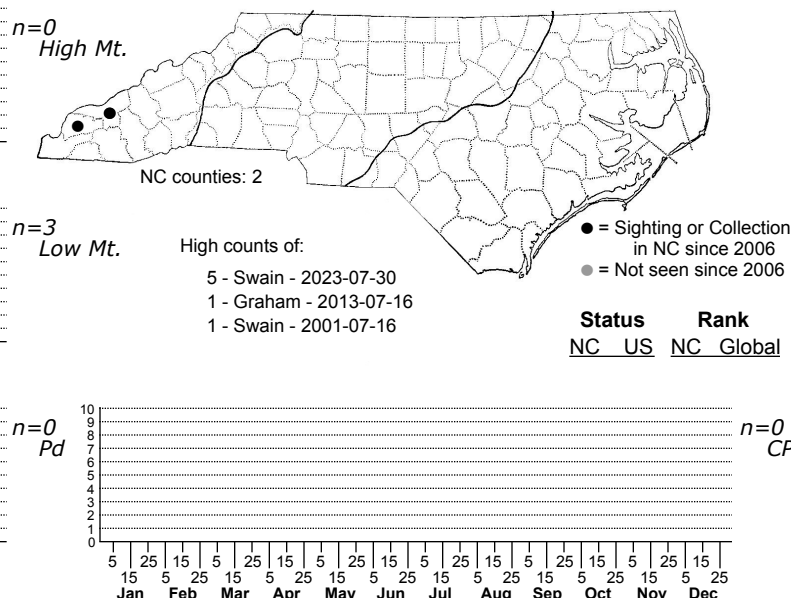
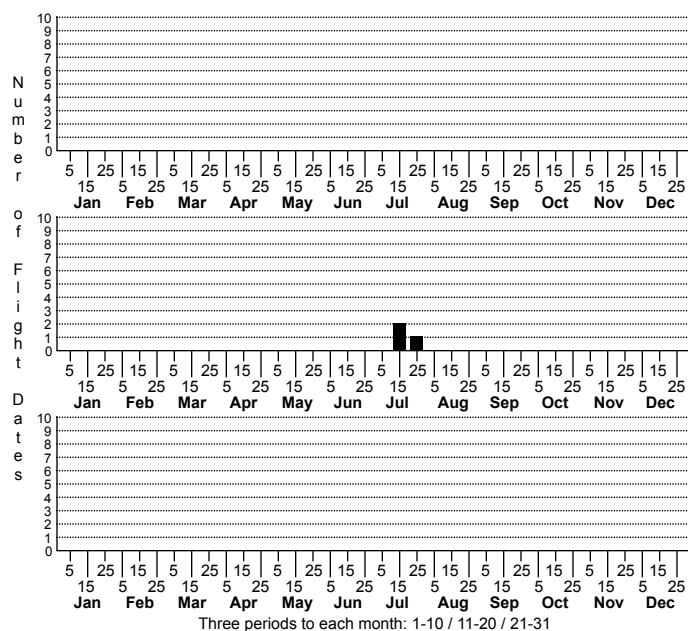


Olethreutes tilianum Basswood Olethreutes



FAMILY: Tortricidae SUBFAMILY: Olethreutinae TRIBE: Olethreutini

TAXONOMIC_COMMENTS: *Olethreutes* is a large genus with over 130 recognized species worldwide. North America has around 80 recognized species, with at least 37 species occurring in North Carolina. Some species are very difficult to identify due to interspecific similarities in color and forewing pattern and only subtle differences in genitalia (Gilligan et al., 2008). In many instances, knowledge of the host plant is essential for a confident determination. All of the Nearctic species are leaf-tiers or leaf-rollers on deciduous trees and shrubs.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS:

TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The forewing of this species has tawny to light grayish-brown interfascial regions that are reticulated with darker striations. The medial fascia and other larger marks tend to be dark brown to blackish-brown (sometimes lighter) and are margined with a line of pale scales. The medial fascia consists of three posterior projections that include a relatively large patch along the inner margin, an elongated tooth in the middle that gradually tapers to a fine point, and an elongated costal tooth that also tapers to a fine point. The costal and middle tooth are typically not joined at their bases as seen in many of our *Olethreutes* and the middle tooth is also often not joined to the patch along the inner margin. The other dark marks include an outwardly oblique basal patch that extends from the base of the inner margin before terminating near the center of the wing, a large pretornal patch along the inner margin, and an elongated, elliptical, postmedial bar. The area of the costal beyond the costal tooth has a series of 4-5 small, reddish to blackish, triangular spots that alternate with paler strigulae. The hindwing varies from brownish-gray to medium brown.

This species closely resembles *Olethreutes permundana*, *O. lacunatum*, and certain forms of *O. nigrum* (Heinrich, 1926; Gilligan et al., 2008). *Olethreutes permundana* is generally similar in patterning, but tends to be lighter-colored overall. The costal and middle teeth of *O. tilianum* are normally not joined at the base, or very weakly so, and are more finely tapered to a sharp point, while *O. permundana* typically has the two clearly joined at the base, with the middle tooth in particular, shorter and more bluntly rounded at the end. *Olethreutes lacunatum* also has the teeth joined at the base, with the middle tooth being more pointed than that of *O. permundana* and very similar to that of *O. tilianum*. These two species can be separated using genitalia (Gilligan et al., 2008). The light forms of *O. nigrum* are also similar, but the costal and middle teeth are shorter and normally joined at the base.

DISTRIBUTION: *Olethreutes tilianum* is found in eastern North America and is generally associated with cool climates. Specimens have been found in Canada in Manitoba, Ontario, Quebec and New Brunswick. In the US the range extends from Maine and other New England states westward through the Great Lake region to Minnesota, and southward to Iowa, Illinois, eastern Kentucky, eastern Tennessee, Pennsylvania and New Jersey. As of 2024, our only records are from Swain and Graham counties in the Blue Ridge.

FLIGHT COMMENT: The adults have been observed from May through September in different areas of the range, with a seasonal peak typically in July and August. As of 2024, both of our records are from mid-July.

HABITAT: Local populations are associated with rich, mesic forests that have American Basswood present.

FOOD: The larvae are thought to feed only on American Basswood (*Tilia americana*; Heinrich, 1926; Gilligan et al., 2008).

OBSERVATION_METHODS: The adults are attracted to lights. More information is needed on the larval life history, and we encourage individuals to seek out the larvae on basswood leaves.

NATURAL HERITAGE PROGRAM RANKS: GNR SU

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

COMMENTS: This species is questionable in terms of its occurrence in North Carolina, but likely does occur in the Blue Ridge in Swain County (see note above).