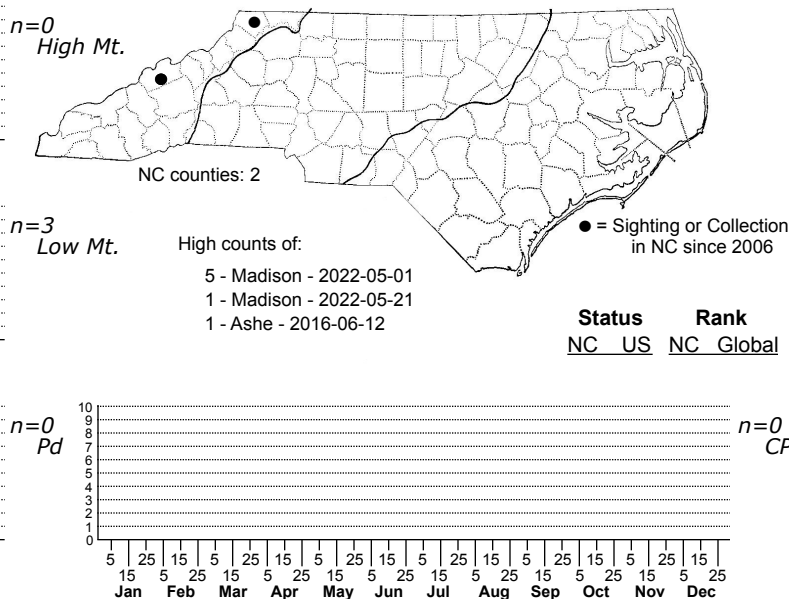
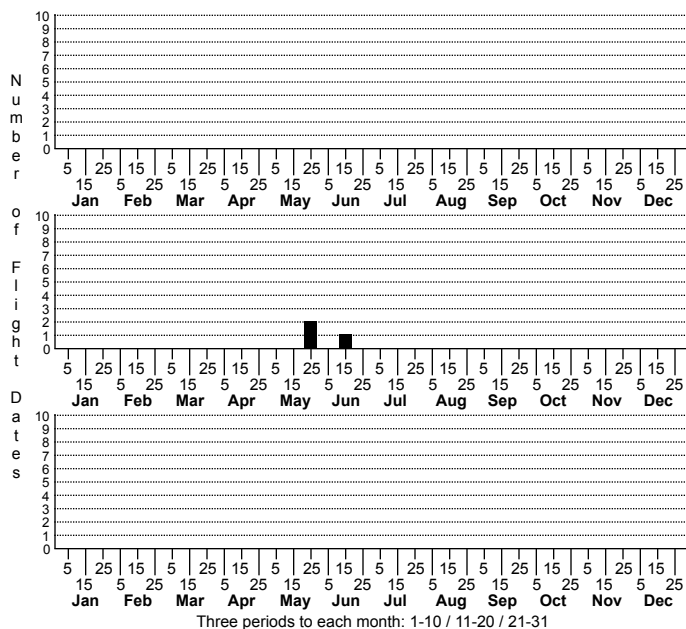


Olethreutes appalachiana None



FAMILY: Tortricidae SUBFAMILY: Olethreutinae TRIBE: Olethreutini

TAXONOMIC_COMMENTS: <i>Olethreutes</i> 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: Braun (1951).

TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: <i>Olethreutes appalachiana</i> is one of several <i>Olethreutes</i> species that feed on buckeyes. The medial fascia and patches on the forewing are brown and the areas between typically have a rosy-pinkish cast. The second segment of the palp has two black dots laterally, and the forewing base has a complete brown patch that extends across the wing. The following detailed description is based on that of Braun (1951).

The antenna is yellowish-brown with dark-brown to blackish coloration on the first two segments. The palp is whitish ochereous, with the second segment having brownish shading toward the apex and two brown or blackish fuscous spots on the outer side. The third segment is blackish fuscous, with the extreme tip whitish. The head is tawny to reddish-brown, with some darker brown shading, while the thorax varies from reddish-brown to dark brown and has a transverse darker bar. The tips of the tegulae are pale colored. The larger forewing marks, including the basal area, medial fascia, pretornal patch, outer costal spots and postmedial bar are all dark brown and thinly margined with dull-ochereous, reddish-ochereous, or reddish-brown.

The forewing has a mosaic of transverse leaden metallic scales, fuscous lines and fine blotches near the base that phase into a large, darker outer blotch. Although irregular and sometimes nearly fragmented and indistinct near the costa, the basal blotch is almost always complete and not divided longitudinally. The antemedial and postmedial pale areas that surround the medial fascia and larger dark patches are leaden metallic with a rosy tinge, and with blackish or reddish fuscous lines centrally. The antemedial pale area sometimes broadens and forks toward the inner margin and cuts off a triangular patch from the basal area, which may be reduced to a dorsal dash in some specimens. Both teeth on the medial fascia are short and widely separated, with the upper (costal) one narrower and the lower one broader and bluntly rounded. At the base of the sinus between them there is a circular and more or less clearly defined dark patch that is separated by a narrow line from the band itself. Below the teeth the median band is deeply indented or even separated from the costal half of the band by an intrusion of the pale postmedial area. The dorsal portion of the band is variously shaped and sometimes abruptly contracted near the dorsum to a mere stalk. In some specimens the medial fascia may be broken up by intrusions of the pale areas into a costal tooth, a detached lower tooth, and a dorsal patch. The pretornal patch and postmedial bar are variable in shape. The fringe is tawny to ferruginous-fuscous, with a dark basal line and blackish-fuscous bars, with the broadest at the apex.

The hindwing is pale brownish fuscous and paler towards the costa and base. The fringe is whitish ochereous, with more or less fuscous shading, especially at the apex and tornus, and has a dark basal band. The underside of the hindwing is whitish ochereous and more or less shaded with fuscous, especially towards the costa and apex, with the fuscous scales arranged in transverse bars between the veins. Only in the darkest specimens are the bars obscured by fuscous shading.

Braun (1951) noted that <i>Olethreutes appalachiana</i> is very similar to <i>O. hippocastanum</i>, but in the latter the dark basal patch is typically divided longitudinally into two or more fragments. In addition, the underside of the hindwing is mottled with fuscous shading in the costal and apical areas, as opposed to being conspicuously arranged in transverse bars, as seen in <i>O. appalachianum</i>. The presence of two brown to blackish spots of the outside of the second palp segment may be distinctive for this species since Kearfott (1907) did not mention these in his original description of <i>O. hippocastanum</i> that was based on six reared specimens from the Black Mountains in Buncombe County. Male and female genitalia are not very useful in separating the two species, but the length of the lobes on either side of the ostium may be useful in distinguishing between these species (Braun, 1951) and needs further verification.

DISTRIBUTION: <i>Olethreutes appalachiana</i> appears to be restricted to eastern Kentucky, eastern Tennessee and western North Carolina. As of 2024, we have only three site records from lower-elevation sites in the central and northern Blue Ridge.

FLIGHT COMMENT: Braun (1951) reared larvae that were collected during the latter half of April through early-May and obtained adults from late-May through early-June. As of 2024, our limited records are all from late-May to mid-June.

HABITAT: Local populations are found in mesic hardwood forests and along forest edges where Yellow Buckeye is present.

FOOD: Larvae appear to specialize on Yellow Buckeye (<i>Aesculus flava</i>) (Braun, 1951), which is the only recorded host in North Carolina. There is also a BugGuide record (George Smiley, 2020) from Texas of a larva on Red Buckeye (<i>A. pavia</i>).

OBSERVATION_METHODS: Records are most easily obtained by searching for wilted leaves on buckeyes shortly after leaf-out and rearing the adults.

NATURAL HERITAGE PROGRAM RANKS: [GMR] S2S3

STATE PROTECTION: Has no legal protection, although permits are required to collect it on state parks and other public lands. Detailed lateral and dorsal images are needed for identification.

COMMENTS: This species appears to be uncommon in North Carolina, with only three site records as of 2024. It is an Appalachian endemic and appears to reach its southern range limit in western North Carolina and eastern Tennessee.