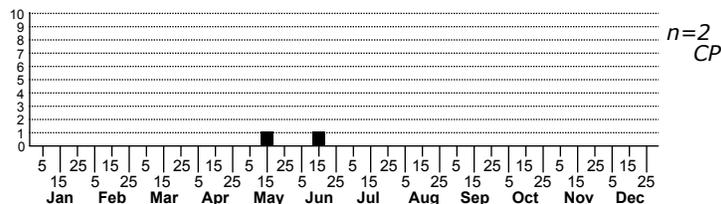
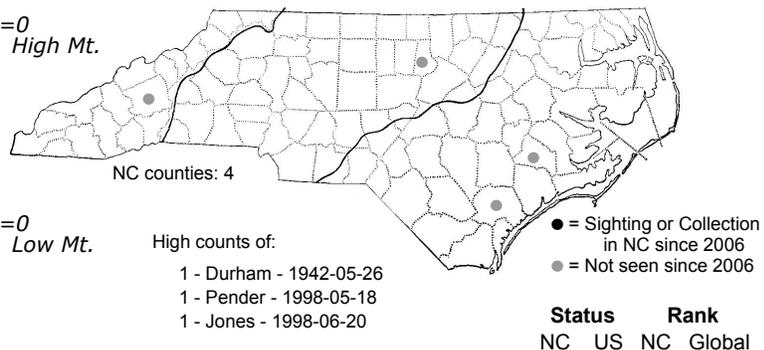
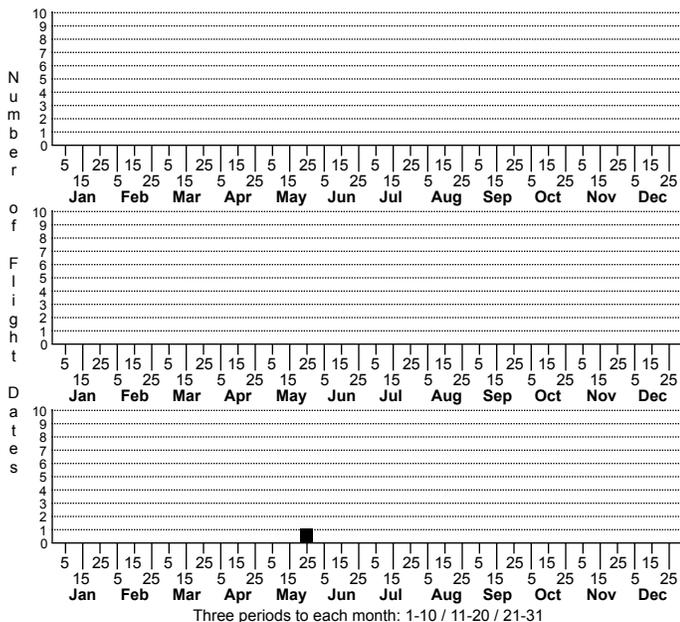


Olethreutes hippocastanum None



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: Kearfott (1907); Braun (1951).

TECHNICAL DESCRIPTION, IMMATURE STAGES: Braun (1951)

ID COMMENTS: *Olethreutes hippocastanum* is one of several *Olethreutes* species that feed on buckeyes and closely resembles *O. appalachiana*, another buckeye feeder. The median fascia and patches on the forewing are brown and the areas between typically have a tan, reddish-brown or pinkish-brown cast. The basal blotch is typically split longitudinally into two separate blotches, along with a third squarish blotch on the costa. The following detailed description is based on that of Kearfott (1907) and Braun (1951).

The antenna is brown and darker near the base. The palp is cream-colored, with the outside of the tuft on the second segment stained with blackish fuscous on the inner half of the upper edge, and on the lower outer end of the tuft. The apical segment is black with a tiny whitish dot on the extreme apex. The head is tawny to reddish- or olivaceous-brown, often with some darker blackish-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 patches, medial fascia, pretornal patch, outer costal spots and postmedial bar are all dark brown to reddish-brown and thinly margined with paler scales.

The basal area of the forewing has a background of reddish-brown scales and fine blackish or fuscous lines or specks, along with two or three larger and darker outer blotches. These include a squarish mark on the costa and two irregular marks inward that are split longitudinally by the general ground color. The antemedial and postmedial pale areas that surround the medial fascia and larger dark patches on the apical half of the wing are leaden metallic with an overlay of reddish-brown scales and blackish or reddish-fuscous center lines. The antemedial pale area sometimes broadens and forks toward the inner margin to cut 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 small, circular and more or less clearly defined dark patch. Below the teeth the medial 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 into a costal tooth, a detached middle tooth, and a dorsal patch near the inner margin. 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 somewhat paler towards the costa and base. The fringe is whitish ochreous, with more or less fuscous shading, and has a dark basal band. The underside of the hindwing is whitish ochreous and more or less shaded with fuscous, especially towards the costa and apex.

Braun (1951) noted that *O. appalachiana* is very similar to *O. hippocastanum*, 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 in *O. appalachiana*. The presence of two brown to blackish spots of the outside of the second palp segment of *O. appalachiana* may be distinctive for this species since Kearfott (1907) did not mention these in his original description that was based on six reared specimens of *O. hippocastanum* 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: The range is rather poorly documented because of the scarcity of records, but *O. hippocastanum* appears to primarily be found in the southeastern Piedmont and Coastal Plain from North Carolina southward to Florida and westward to Mississippi and eastern Texas. There are also isolated records from the Black Mountains in Buncombe Co. NC and in Letcher Co. in southeastern Kentucky.

FLIGHT COMMENT: The adults typically fly during the spring leaf-out. As of 2024, our records are from mid-May to mid-June.

HABITAT: Local populations are found in mesic woodlands and bottomland forests that support buckeyes.

FOOD: This species is a specialist on buckeyes (Braun, 1951; Kearfott, 1907), including Yellow Buckeye (*Aesculus flava*), Red Buckeye (*A. pavia*), and Painted Buckeye (*A. sylvatica*).

OBSERVATION_METHODS: The adults appear to only rarely visit lights; we recommend searching for the rolled leaves on buckeyes during the spring and rearing and photographing the adults.

NATURAL HERITAGE PROGRAM RANKS: GNR[S2S3]

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

COMMENTS: *Olethreutes hippocastanum* appears to be uncommon in North Carolina, but has likely been under collected due to the difficulty of identifying the adults.