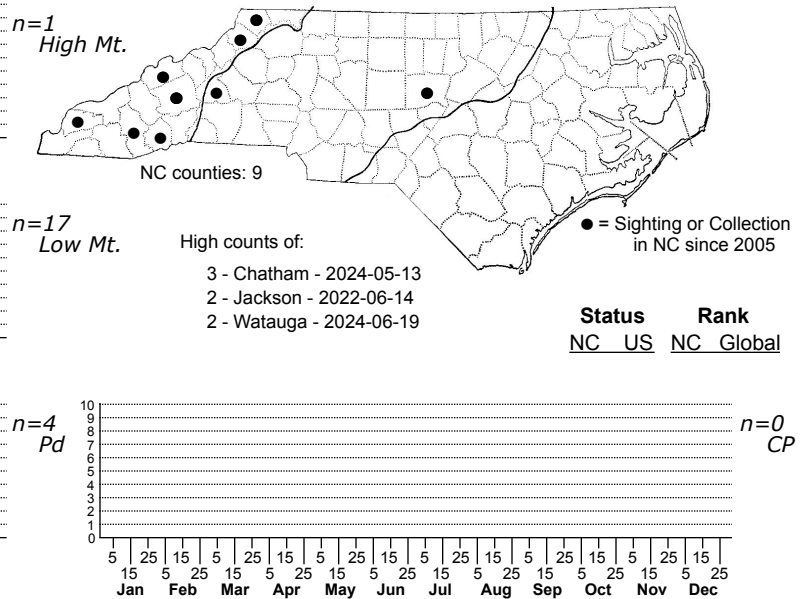
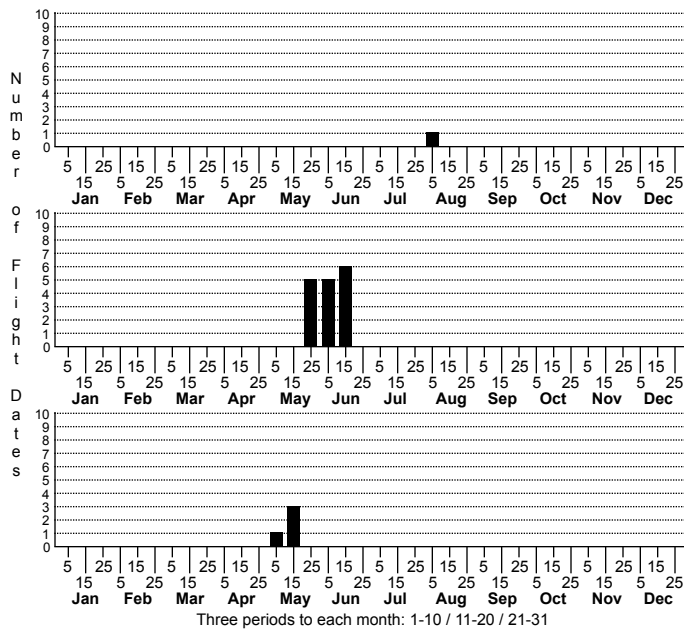


Olethreutes hamameliana Witch-hazel Olethreutes



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: *Olethreutes hamameliana* is best recognized by the reddish suffusion on the apical fourth of the forewing, by an oblique pale streak that extends from the subapical region along the costa to the inner margin on the basal third of the wing, and by the presence of a subapical patch that is not strongly marked with black scales.

In this species the head and thorax have a light olivaceous cast, while the palps are mostly dull white with a black terminal segment. The basal two-thirds of the forewing has a predominantly dull-white ground color that is overlain with light olivaceous patches, while the apical third has patches and marks that are rosy red or heavily suffused with rosy red scales. The basal two-thirds are usually lightly dusted with blackish scales, but some individuals can have the forewings more heavily suffused with black scales.

The forewing lacks many of the marks that are commonly seen on *Olethreutes* species, with the intact medial band replaced by less-defined patches. An oblique pale-whitish streak extends from the subapical region along the costa to the inner margin on the basal third of the wing, while a second and less obvious pale basal streak is often present that extends longitudinally from the wing base to meet the primary streak near the center of the wing. A dull, outwardly oblique, olivaceous patch parallels the basal margin of the primary streak, with one or two similar, but smaller patches on the costal third of the wing. Posterior to the primary whitish streak there are three large patches that are separated by leaden areas that are suffused with reddish scales. These include an outwardly oblique, olivaceous patch that extends from near the middle of the inner margin to the middle of the wing and parallels the primary streak, a subterminal patch that is usually suffused with reddish scales, and a postmedial bar that begins near the end of the primary streak and projects towards the dorsal half of the outer margin. The latter has streaks of blackish scales in the middle, but individuals that are heavily dusted with black scales overall may have a greater concentration of black scales in the patch. The apical fourth of the costal has four reddish, triangular marks that tend to increase in size apically, with the largest at the apex. The hindwing is smoky brown with a whitish fringe and a narrow, darker basal band.

Olethreutes hamameliana is similar to *O. merrickana*, but the latter has less reddish suffusion on the apical fourth of the forewing, a less prominent primary pale streak, and a prominent black subapical patch that is preceded basally by a smaller black spot (McDunnough, 1944a; Gilligan et al., 2008).

DISTRIBUTION: *Olethreutes hamameliana* is endemic to eastern North America where it occurs in southern Canada (Ontario; Nova Scotia), and in the US from Maine southwestward mostly through the Appalachian region to West Virginia, eastern Kentucky, eastern Tennessee, western and central North Carolina and central Alabama. The range extends westward through the Great Lakes region to Illinois and eastern Iowa, with additional records from western Tennessee and southeastern Oklahoma. As of 2024, most of our records are from the Blue Ridge, with the exception of a possible disjunct group in the eastern Piedmont.

FLIGHT COMMENT: The adults have been observed from April through July in different areas of the range, with a peak seasonal flight in June. As of 2024, our records are from early-May through early-August, with adults in the Piedmont flying 2-3 weeks earlier than those in the Blue Ridge.

HABITAT: Local populations are found in mesic forests and forest openings and edges where Witch-hazel is present.

FOOD: Larvae reportedly feed on American Witch-hazel (*Hamamelis virginiana*) (McDunnough, 1944; MacKay, 1959; Lam et al., 2011).

OBSERVATION METHODS: The adults are attracted to lights. More information is needed on the larval life history and ecology.

NATURAL HERITAGE PROGRAM RANKS: GNR S2S4

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

COMMENTS: This species can be locally common in the Blue Ridge where American Witch-hazel is present.