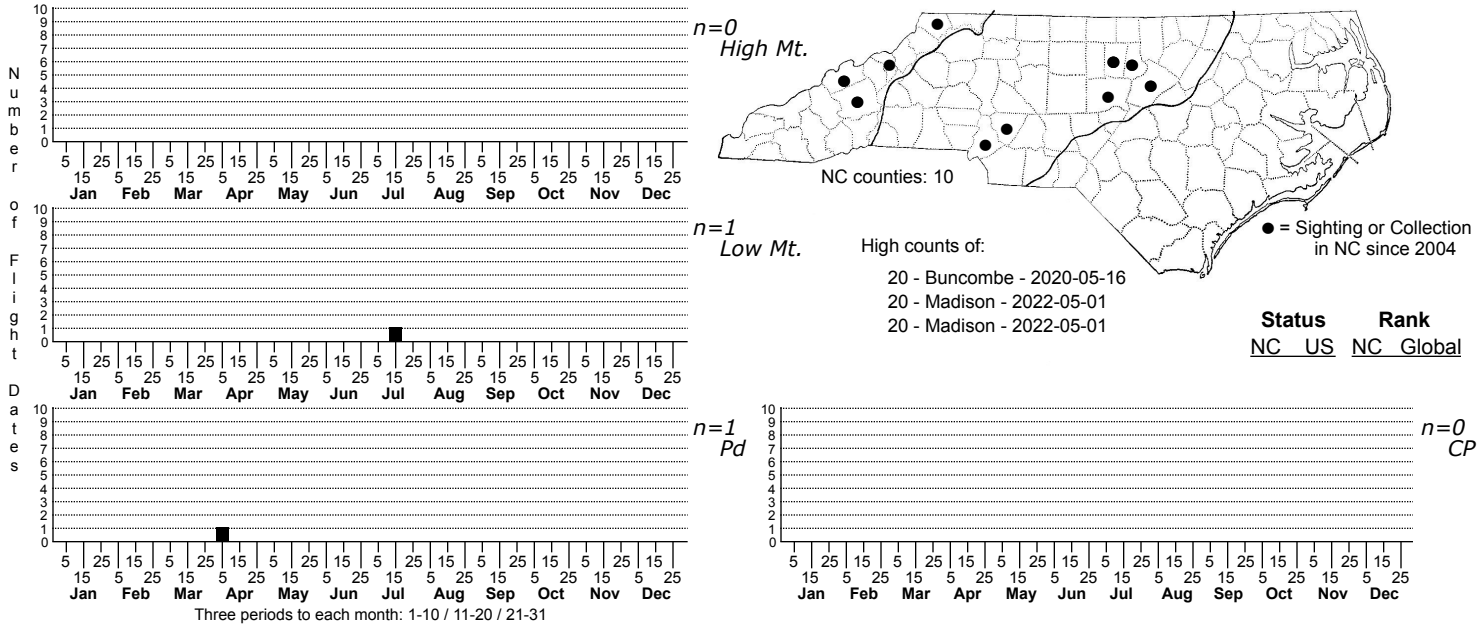
Zeiraphera claypoleana Buckeye Petiole Borer Moth



FAMILY: Tortricidae SUBFAMILY: Olethreutinae TRIBE: Eucosmini
TAXONOMIC_COMMENTS:

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Forbes, 1923.
TECHNICAL DESCRIPTION, IMMATURE STAGES: Lintner, 1897.

ID COMMENTS: The following description is from Forbes (1923). The forewing is pale brownish gray and shaded heavily with sage green. The inner half towards the base is green and has a well-defined outer boundary that is crossed by a black dash which fades out at the base. A black bar is present at the base of the inner margin. A green shade occurs from the tip of the basal area to below the apex, and is crossed by one from the middle of the costa almost to the anal angle. Both are irregular and diffuse, and shaded with blackish where they meet. The blackish area extends outwardly almost to the outer margin. The hindwing is mouse gray with a pale fringe. The adult patterning is variable and can include varying mixtures of whitish, black, and greenish coloration. One color morph has a broad black zone that extends along the inner margin from the wing base to about two-thirds. Many of our records are based on larvae that feed in buckeye petioles and cause leaf wilting. Proteoteras aesculana also feeds on buckeyes and can cause leaf wilting, so care should be taken to carefully inspect the position of bore holes in order to not confuse the two.

DISTRIBUTION: Zeiraphera claypoleana occurs in the eastern US, and is most abundant in an area that extends from Ohio, Kentucky, and West Virginia southward to eastern Tennessee and western North Carolina. Scattered populations have been reported from Iowa, Missouri, Texas, and northern Florida (MPG; BugGuide; Solomon 1995). As of 2023 our North Carolina records are from lower to middle elevation sites in the mountains where it feeds on Yellow Buckeye, and from the Piedmont (recently discovered in 2023) where it feeds on Painted Buckeye.

FLIGHT COMMENT: The flight season extends from March-August, depending on the latitude and elevation. Wilted leaves are evident in March, April and May in North Carolina, and the adults likely emerge 1-2 months later. As of 2023 we have one adult record from July.

HABITAT: Yellow Buckeye appears to be the primary host of this species in the Blue Ridge and is one of the most characteristic plants of Rich Cove Forests. Although it grows as high as 6,000' in Northern Hardwood Forest, the larvae as of 2023 have been found almost entirely at lower elevations in the mountains. Painted Buckeye appears to be the primary host in the Piedmont.

FOOD: The larvae appear to feed on Ohio Buckeye (Aesculus glabra) throughout much of their range, and also use Sugar Maple (Acer saccharum) in some areas (Litner, 1897; Robinson et al., 2010). There is one record of a local population using Red Buckeye (Aesculus pavia) in Texas. This species has been observed using Yellow Buckeye (A. flava) at several sites in western North Carolina, as well as a planted Painted Buckeye (Aesculus sylvatica) in a native plant garden. Ohio Buckeye does not occur in North Carolina, so Yellow Buckeye is presumed to be the primary host in the Blue Ridge. This species was found recently in the Piedmont where it uses Painted Buckeye.

OBSERVATION_METHODS: The adults only occasionally come to lights, and many adult records are based on individuals that were reared from buckeyes. Populations are easy to document by searching for the wilted leaves of buckeyes during April and May. The larvae can be found by splitting the petioles along their length. The adults can be reared by collecting freshly withered leaves that hold the larvae and pupae. Proteoteras aesculana is a closely related species that bores in the shoots of buckeyes and maples and causes leaf wilt. This species typically kills the entire shoot rather than single leaves as seen in Z. claypoleana.

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