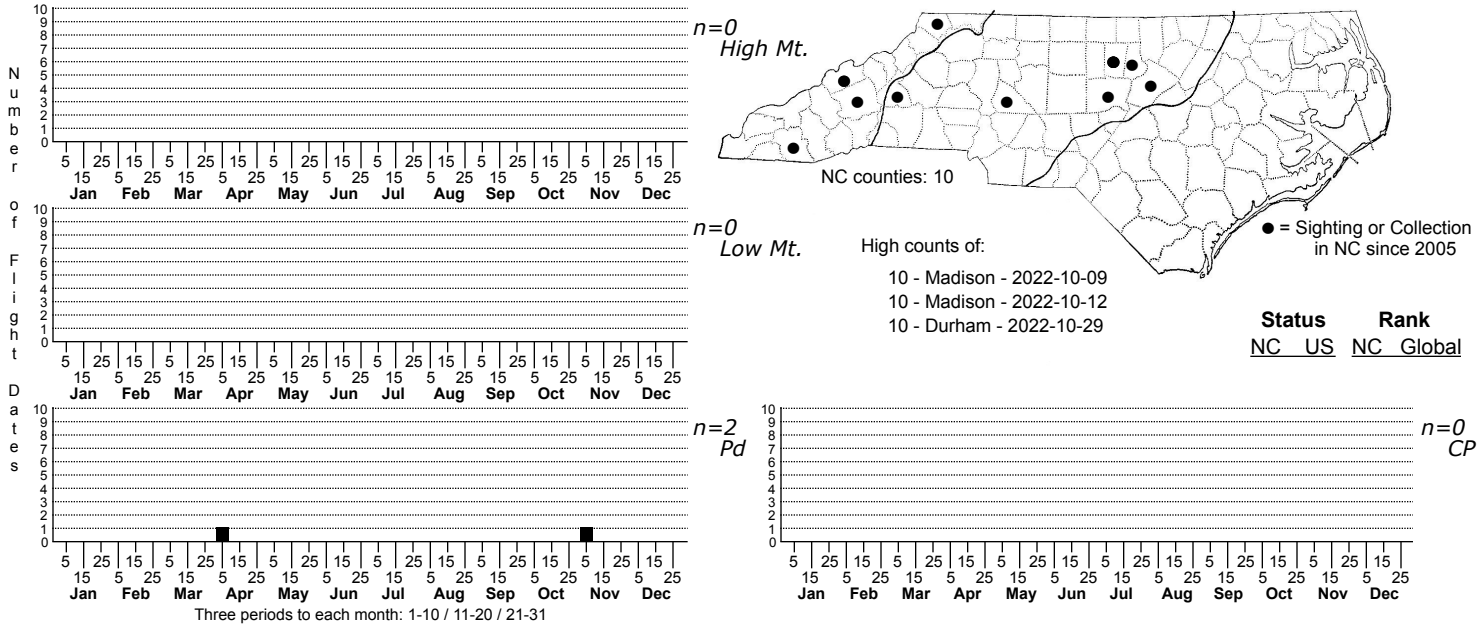
Bucculatrix polymniae None



FAMILY: Bucculatricidae SUBFAMILY: TRIBE:
TAXONOMIC_COMMENTS: Bucculatrix is a large genus of small leaf-mining moths, with around 300 species worldwide. A total of 103 Nearctic species have been described, and many others will likely be described in the future. Braun (1963) covered 99 species in her monograph, and four additional Nearctic species have been described since then.

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Braun (1963)
TECHNICAL DESCRIPTION, IMMATURE STAGES: Braun (1963)

ID COMMENTS: The following is based on the original description by Braun's (1963). The face is creamy white and the tuft has a mixture of creamy white, fulvous, and dark brown hairs. The eye-cap is creamy white and the stalk of the antenna is dark brown with narrow pale annulations. The thorax is brown, while the forewing ground color is brown with a series of streaks. The largest mark is a straight ocherous streak that extends from the base of the wing parallel to the fold for two-thirds of the wing length. A very oblique ocherous costal streak that begins near the base joins the longitudinal streak at about one-fourth the wing length and enclosing a small patch of ground color. Before the middle of the costa there is an oblique silvery streak that is followed by a less oblique silvery streak at two-thirds. Before the middle of dorsum there is a curved ocherous streak that is more or less overlaid with silvery scales and that is followed by a patch of blackish raised scales. Before the tornus there is a very oblique silvery spot, while at the tornus there is an inwardly oblique narrow streak whose apex is opposite the apex of the second silvery costal streak. A few silvery scales are present at the apex and a creamy white triangular patch is present in cilia above the apex. An apical pencil is present that consists of a line of black overlapping scales that extends obliquely from the apex to the tip of the cilia. The cilia are gray, with a line of dark-tipped scales extending through them from the tornus and curving in at the apex to the base of the line of black scales from the apex. The hindwing and cilia are gray, and the legs are dark brown overall. The hind tibia is whitish ocherous and clothed with whitish ocherous hairs except for the spurs and apical hairs.

Braun (1963) noted that the apical pencil of overlapping scales (easily lost) and the ciliary line incurving to the apex of the wing are unique and distinctive characters for this species. Bucculatrix polymniae does not appear to be attracted to lights and all records to date are based on individuals that have been reared from the host plant. This may be the easiest way to be certain about the identity of specimens.

DISTRIBUTION: Braun (1963) found a population in northeastern Kentucky, along with two other populations in adjoining areas of southern Ohio. Since 2022, several populations were discovered in North Carolina. These include several lower-elevation sites in the Blue Ridge and other sites in the eastern Piedmont.

FLIGHT COMMENT: Braun (1963) found that there are three generations in Kentucky and Ohio. Larvae that mine in June produce adults in early July. A second generation of larvae that appears in the latter part of August produces adults in early September. A final generation feeds in October then overwinters in the pupal state. The adults emerging soon after the spring leaf-out. As of 2023, our limited records for feeding larvae or pupae are from late June (adult emerging in early July), August, October, and early November.

HABITAT: Bucculatrix polymniae is a specialist on Hairy Leafcup. This species is typically found along shaded or partially shaded roadsides, and in mesic hardwood settings such as alluvial bottomlands, moist slopes, ravines, and cove forests.

FOOD: Hairy Leafcup (Smallanthus uvedalia) is the only known host (Eiseman, 2022), and all of our host records as of 2023 are for this species.

OBSERVATION_METHODS: The adults do not appear to be attracted to lights and local populations are best documented by searching for the mines, cocoons or larvae on Hairy Leafcup, particularly during late summer or early fall when larval numbers reach their seasonal peak.

NATURAL HERITAGE PROGRAM RANKS: GNR SNR [S2S3]

STATE PROTECTION:

COMMENTS: This seemingly rare species that was previously known from only three sites in the eastern US was recently discovered at several sites in western North Carolina and the eastern Piedmont. We currently have too little information to accurately assess its conservation status.