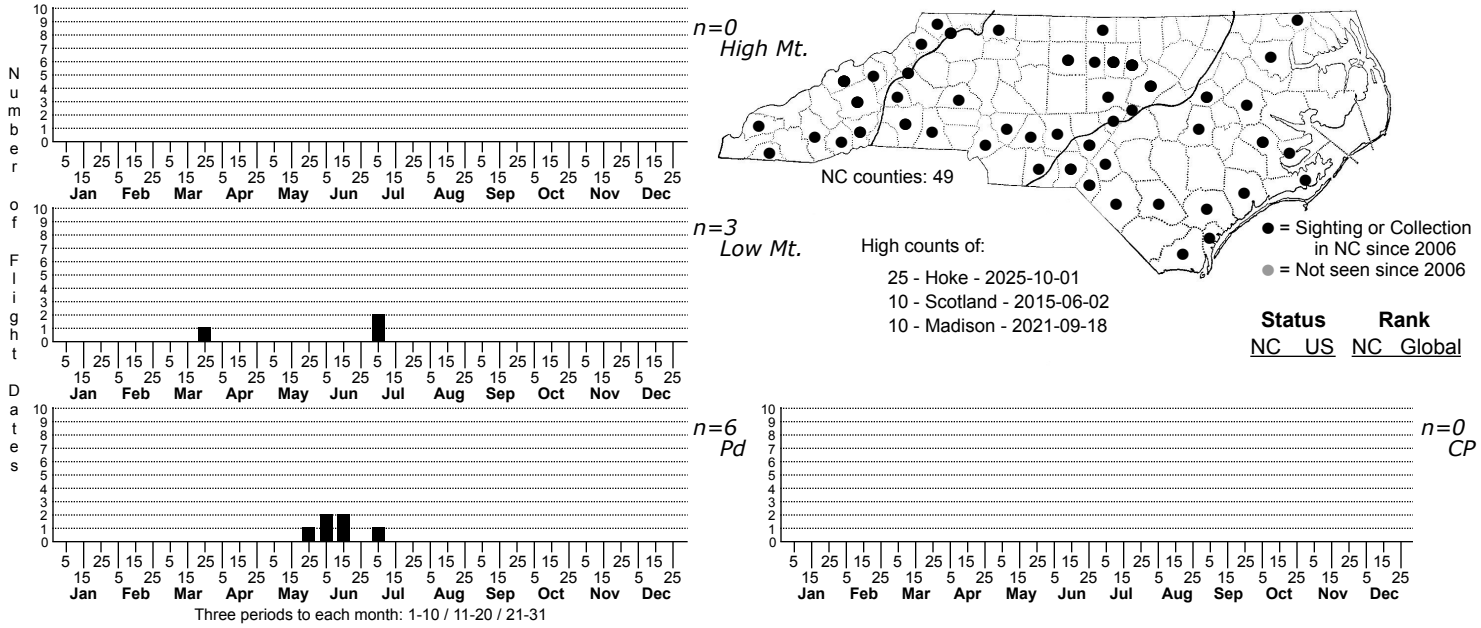
Cameraria caryaefoliella Pecan Leafminer Moth



FAMILY: Gracillariidae SUBFAMILY: Lithocolletinae TRIBE: [Lithocolletini]
TAXONOMIC_COMMENTS: Cameraria is a genus of leaf-mining micromoths. Many species are stenophagous and specialize on a small number of closely related host species. There are currently more than 50 described species in North America.

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Clemens, 1860.
TECHNICAL DESCRIPTION, IMMATURE STAGES: Braun, 1908.

ID COMMENTS: The following is based in part on Clemens' (1860) original description. The antenna is silvery with black annulations. The face is silvery and the tuft and thorax reddish orange. The forewings are reddish orange with three curved, silvery bands that have black margins on the posterior margin (these are sometimes interrupted, with the pairs referred to as costal and dorsal streaks by some authors). The second band is near the middle of the wing and is angulated near the costa. The first band is about midway between the second band and the base of the forewing, is angulated, and is sometimes interrupted. The third band is often interrupted in the middle and is about the same distance from the second band as is the first band. The dorsal portions (streaks) of all three bands run parallel to one another. The apical portion of the wing is whitish, but covered with dispersed black markings. There are two marginal lines - one black at the apical margin, and the second brownish in the cilia. The hindwing is pale brownish gray. Braun (1908) noted that the adults vary greatly in the distinctness of the bands and the degree of dark dusting, and that the first band often does not extend to the costa. Cameraria guttifinitella is similar, but the bands are straight rather than curved as in C. caryaefoliella. The larva is dorso-ventrally depressed (almost flat), with the sides of the segments projecting outward to give the larva a beaded appearance.

DISTRIBUTION: Cameraria caryaefoliella is widely distributed across much of the eastern US and adjoining areas of southern Canada. Populations occur as far south as Florida, to as far west as central Texas, Oklahoma, and Wisconsin. It occurs in all three physiographic provinces in North Carolina, but is most commonly encountered in the Piedmont and lower elevations in the mountains.

FLIGHT COMMENT: Local populations appear to be bivoltine or multivoltine, with adults first becoming active in North Carolina during May or later. Larvae from the last brood appear to overwinter in fallen leaves and pupate the following spring or early summer.

HABITAT: The larvae are specialists on hickories and walnuts, and are found through the state where the hosts occur. Habitats range from alluvial forests and stream edges to upland hardwood forests.

FOOD: Eiseman (2019) lists the following documented hosts: Bitternut Hickory (Carya cordiformis), Pignut Hickory (C. glabra), Pecan (C. illinoensis), Shagbark Hickory (C. ovata), Black Hickory (C. texana), Mockernut Hickory (C. tomentosa), Black Walnut (Juglans nigra), and Butternut (J. cinerea). As of 2024, we have records from Pecan, Bitternut Hickory, Mockernut Hickory, Pignut Hickory, Red Hickory (C. ovalis), Sand Hickory (C. pallida), Shellbark Hickory (C. laciniosa), and Shagbark Hickory, along with one record from Black Walnut.

OBSERVATION_METHODS: Local populations are easily documented by searching for the conspicuous leaf mines, and the adults are relatively easy to rear from the mines. The adults are also attracted to lights.

NATURAL HERITAGE PROGRAM RANKS: GNR S4S5

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

COMMENTS: