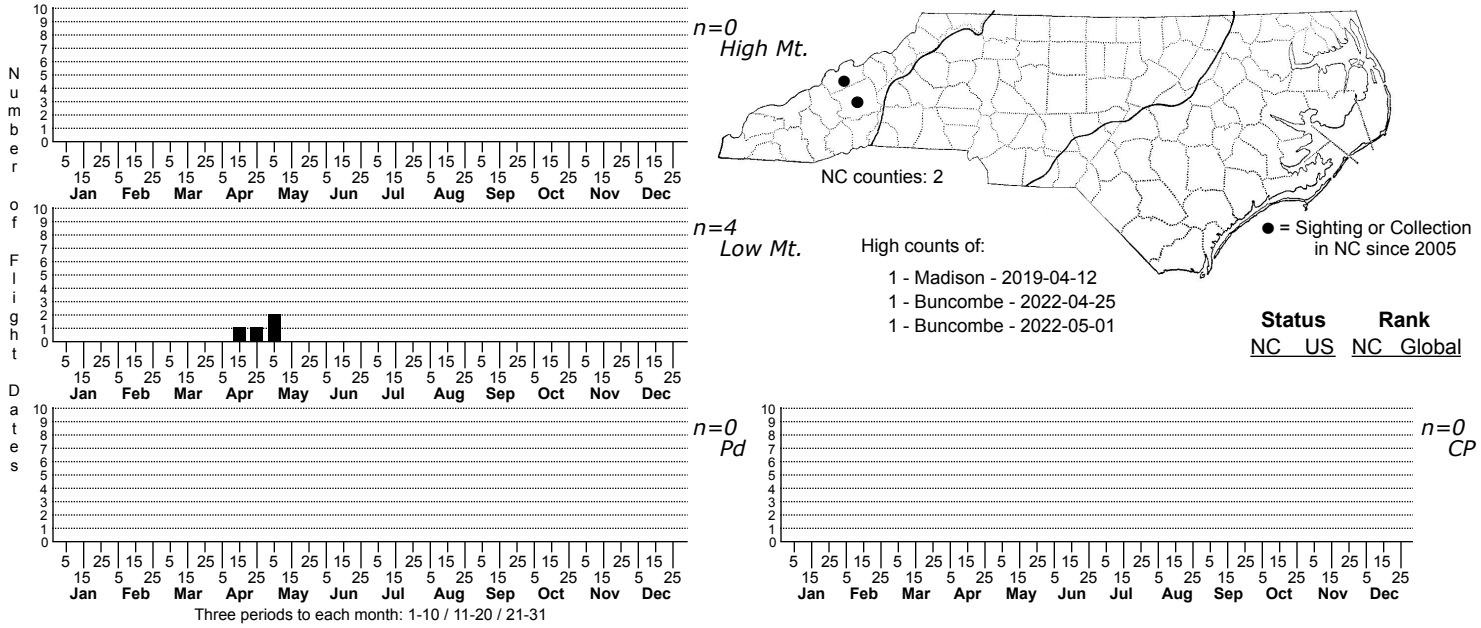
Cameraria macrocarpella None



FAMILY: Gracillariidae SUBFAMILY: Lithocolletinae TRIBE:
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: Braun, 1908.
TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The face and palpi are white, and the antennae are whitish with brown annulations above. The head tuft is white and mixed with brown and saffron scales. The dorsum of the thorax is brownish saffron, and more-or-less ringed with white. Sometimes almost the entire upper thorax is white. The forewings are brownish saffron. A broad, curved, white basal streak runs from the inner margin to the fold (occasionally as far as to the first fascia), and is densely dusted behind with blackish scales. There are two white fasciae that are angulated near the costa; one occurs at the basal third of the wing and the other at the middle of the wing. The dorsal arm of each is slightly curved rearward. Each fascia is margined on the anterior (basal) edge by a few black scales near the costal and the dorsal margins. On the posterior edge, the costal arm of each has a few black scales near the costa, while the dorsal arm is densely dusted with blackish scales that extend posteriorly at the angle. A white costal streak at two-thirds is dusted with blackish scales. Opposite it is an oblique curved dorsal streak, dusted behind with blackish scales that extend into the dusted apical portion. Before the apex is a white costal streak with a few black scales before it on the costa. The apical part of the wing is dusted with black on a white ground. In the cilia, there is a small pencil of dark brown scales that extend outwards from the apex. The marginal line in the cilia is brownish, with a few blackish scales intermixed. The hindwing is brownish gray, with somewhat lighter cilia. The Abdomen of the male is dark gray, while that of the female are lighter and somewhat ocherous. The legs and tarsi are whitish and spotted with dark brown to blackish marks.

Braun (1908) noted that this species most closely resembles C. cincinnatiella, but differs from C. cincinnatiella by being larger, by having a darker and less shiny ground color on the forewings, by having more oblique and slightly curved dorsal streaks, and by having a tuft of dark brown scales in the apical cilia, which is lacking in C. cincinnatiella. The mine of C. macrocarpella also differs from that of C. cincinnatiella in that it contains a single larva versus multiple larvae in C. cincinnatiella.

DISTRIBUTION: Populations of C. macrocarpella have been found at scattered localities in eastern North America from southern Ontario and Quebec, eastward to Vermont and Maine, and southwestward to as far south as Texas. This species appears to be absent from most of the southeastern US. Our one record as of 2022 is from a low-elevation site in the mountains.

FLIGHT COMMENT: Adults are active from the spring leaf-out until late summer.

HABITAT: This species is associated with a variety of mesic to dry hardwood forests that support American Chestnut.

FOOD: The only documented host plants are the American Chestnut (Castanea dentata) and Bur Oak (Quercus macrocarpa). Castanea is the presumed natural host In North Carolina, since Bur Oak is not native to the state. Bur Oak is occasionally planted as an ornamental in North Carolina and may function as a secondary host.

OBSERVATION_METHODS: The adults occasionally visit lights and can be reared from mines on the host plants.

NATURAL HERITAGE PROGRAM RANKS: GNR S1S3

STATE PROTECTION:

COMMENTS: In North Carolina, C. macrocarpella appears to be strongly dependent on American Chestnut for successful reproduction. It is likely that populations of C. macrocarpella have declined historically due to the decimation of American Chestnuts within the state. As a leaf miner, this species is likely to be able to make use of the foliage of sapling American Chestnuts, which remain fairly common in our mountains, dying due to Chestnut Blight only when they reach maturity.