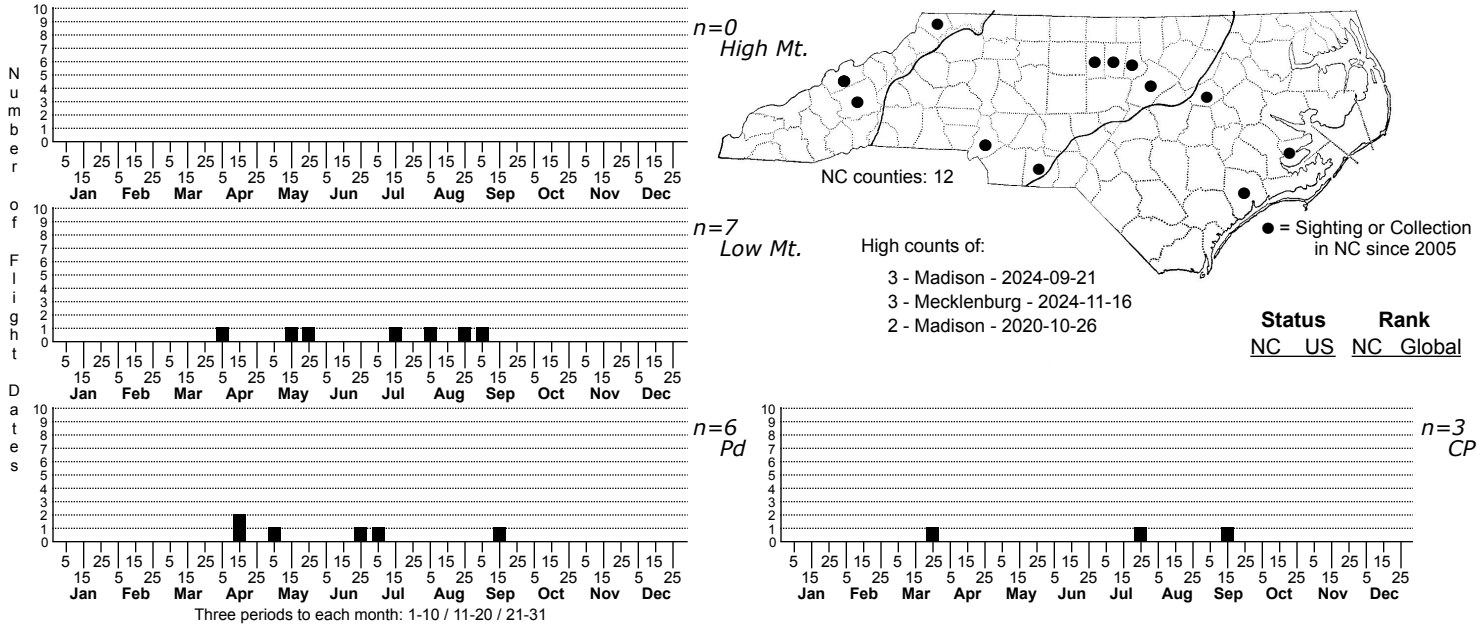
Cameraria ulmella Elm Leafminer Moth



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 following is based on descriptions in Braun (1908). The face and palpi are silvery white, while the tufts are white with intermixed golden scales. The antennae are silvery white, and the apical two-thirds are ringed with brown. The forewing is bright golden to orangish. A white streak extends along the dorsal margin from the base of the wing to the cilia, where it is deflexed and passes on to the dusted portion of the apex near the posterior margin. The dusted portion is dark brown to blackish on a white ground. There are three small silvery streaks along the costa. The first and second are near the middle of the costal margin, and the second one is the largest. The third streak is small and near the apex. The size of the third costal streak and the extent of the apical dusting varies among individuals, and the costal streaks are often faintly dark margined behind. The second streak is more likely to have a well-developed dark margin than the other two (often missing on these). The legs are whitish, and the forelegs often have pale golden to blackish spots on the tarsi.

This species closely resembles C. conglomeratella and is most easily differentiated by the antennae. In C. ulmella, the basal third is pure white, while the remainder of the antenna is annulated with brown. In C. conglomeratella, the annulations are present for the whole length of the antenna, although sometimes they are indistinct toward the base. C. quercivorella is also similar to C. ulmella, but in C. quercivorella the dorso-basal white streak extends only a short distance beyond the middle of the wing.

DISTRIBUTION: Cameraria ulmella is broadly distributed in eastern North America from the Great Lakes region eastward to Maine, and south and southwestward to Georgia, South Carolina, Oklahoma, and Texas. As of 2020, we have documented North Carolina populations statewide from the lower elevations in the mountains to the Coastal Plain.

FLIGHT COMMENT: Many local populations appear to be bivoltine, with a summer and autumn brood. Larvae from the autumn brood overwinter in the fallen leaves. As of 2020, we have adult records extending from late March through September.

HABITAT: Populations are generally found in wet to mesic forests that support either American Elm or Slippery Elm, or in mesic to drier habitats that support Winged Elm. These include bottomland forests, stream edges, rich woods with circumneutral soils, and field edges and thickets.

FOOD: The larvae mine the leaves of elms, including Winged Elm (U. alata), American Elm (Ulmus americana), and Slippery Elm (U. rubra). This species was recently reported to use oaks (Eiseman, 2019), which suggests the possible occurrence of a cryptic species that uses oaks. As of 2023, most of our leaf mine records are for Winged Elm, with one from Slippery Elm. Tracy Feldman also has records from White Oak (Quercus alba), Water Oak (Q. nigra), and Darlington Oak (Q. hemisphaerica) that Eiseman has placed in the C. ulmella account on BugGuide.

OBSERVATION_METHODS: The adults are attracted to lights. Little effort has been put forth searching for leaf mines and rearing adults. This may prove to be an effective way to document additional populations within the state.

NATURAL HERITAGE PROGRAM RANKS: GNR S3S4

STATE PROTECTION:

COMMENTS: