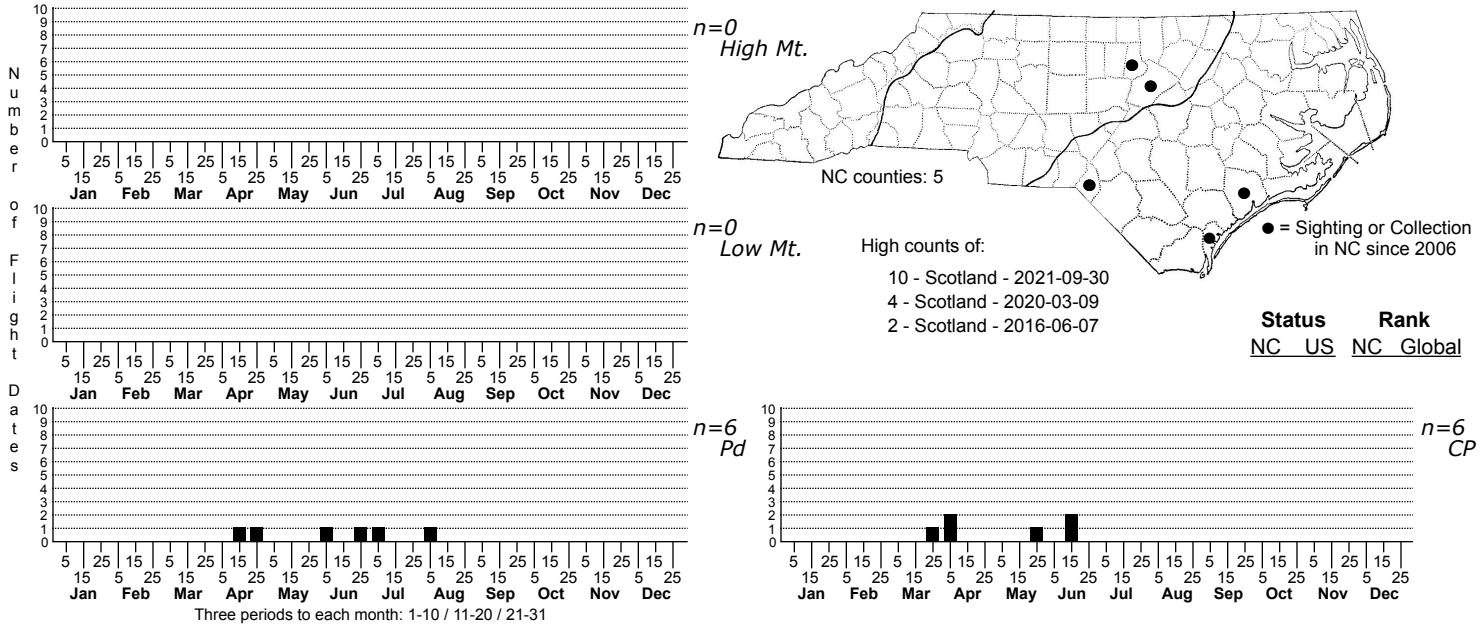
Cameraria quercivorella Rusty Oak Leafminer Moth



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: Leckie and Beadle, 2018.
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Braun, 1908.
TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The following description of the adults is based on Braun (1908). The face and palps are silvery white, while the tuft is white above and reddish orange on the sides. The antennae are whitish, with each joint spotted above with dark brown. The spots becoming small and indistinct toward the base. The thorax and forewings are reddish to golden, and there is a median white streak on the thorax that is continuous with a dorso-basal white streak on the forewing. The streak extends slightly beyond the middle of the dorsal margin, and its end is usually bordered with two or three fuscous scales. There are three costal white streaks. The first is oblique, occurs about one-third from the wing base, and is dark margined behind and sometimes anteriorly on the costa. The second is also oblique, is at the middle of the wing, and is dark margined behind and around the tip. The dark scales project rearward for a short distance. The third is a white costal spot or short streak before the cilia and is often dark margined on both sides. Opposite this is an elongated dorsal white streak that is densely margined with blackish scales that expand into the dusted apical part of the wing. Two small white marks (often connected to form a curved streak) adjoin the dark dusted area. The cilia are silvery ocherous and have a dark brown marginal line. The hindwings and cilia are silvery ocherous, and the abdomen is pale yellow. The fore and middle tarsi are annulate with black, but the hind tarsi are usually silvery white.

Cameraria quercivorella is closely related to C. ulmella and C. conglomeratella. It may be distinguished from both by the fact that the dorso-basal white streak on C. quercivorella extends only a short distance beyond the middle of the wing to produce a reddish gap between the dorso-basal streak and the oblique dorsal white streak.

DISTRIBUTION: This species is widely distributed in eastern North America from the Great Lakes region of Canada and the US, eastward to Maine, and south and southwestward to Florida and Texas. Our records for North Carolina as of 2019 are from Durham and Scotland Cos.

FLIGHT COMMENT: Populations in most areas appear to be bivoltine, but the southernmost populations may be trivoltine. The first brood occurs soon after the spring leaf-out, and the second brood occurs in late summer or early fall. Larvae in the second brood overwinter and pupate during the spring warm-up.

HABITAT: This species is a fairly generalist feeder on members of the red oak group, particularly Northern Red Oak (Eiseman, 2019). Populations occur in a variety of urban and forested landscapes with the host plants.

FOOD: Larvae specialize on oaks, with reported hosts including Southern Red Oak (Q. falcata), Bear Oak (Q. ilicifolia), Laurel Oak (Q. laurifolia), Sand Post Oak (Q. margarettae), Water Oak (Q. nigra), Pin Oak (Q. palustris), Northern Red Oak (Q. rubra), Post Oak (Q. stellata), and Live Oak (Q. virginiana) (Eiseman, 2022). In North Carolina, mines have been recorded on Southern Red Oak, Water Oak, Post Oak, Sand Post Oak, Live Oak, Willow Oak (Q. phellos), and Darlington Oak (Q. hemisphaerica).

OBSERVATION_METHODS: The adults are attracted to lights, and the adults can be reared from the upper-surface mines. The leaf mines are similar to those of C. conglomeratella, so adults should be reared to accurately document this species.

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: