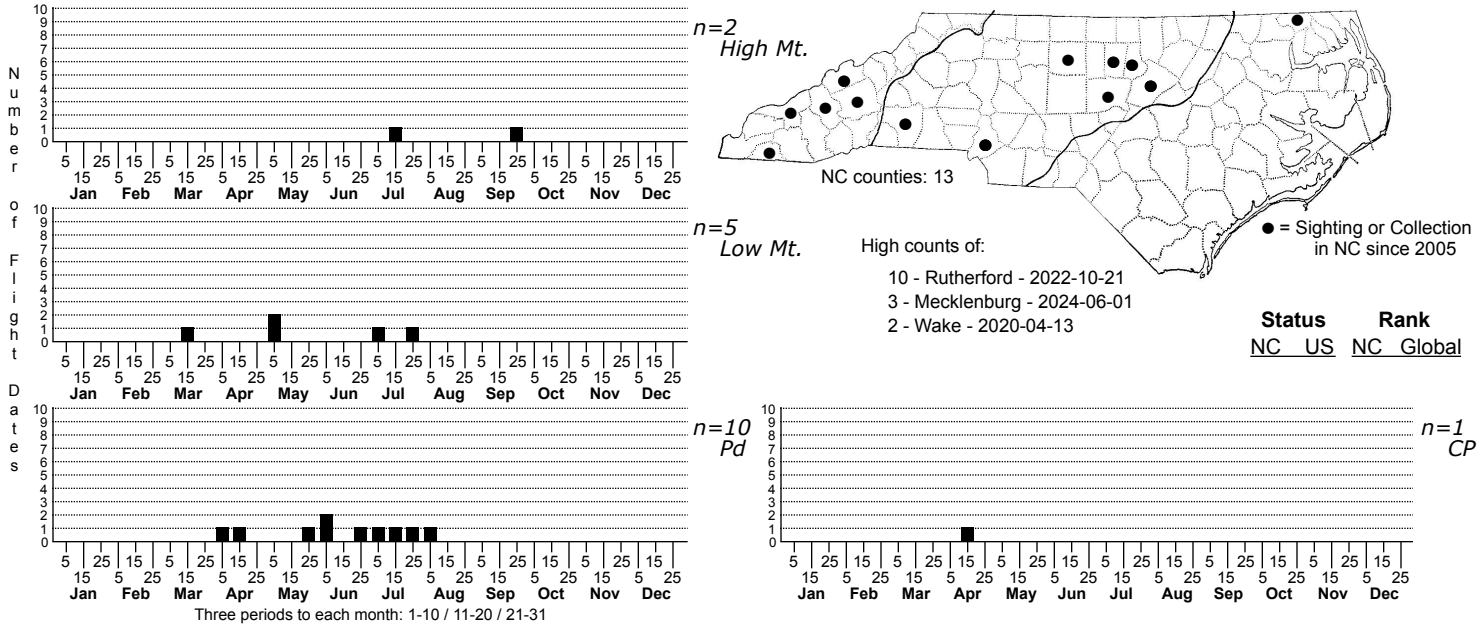
Phyllonorycter basistrigella None



FAMILY: Gracillariidae SUBFAMILY: Lithocolletinae TRIBE: [Lithocolletini]
TAXONOMIC_COMMENTS: Phyllonorycter is a genus of small and often colorful moths, with 79 described species in North America. The larvae of most form underside tentiform mines on woody plants and pupate within the mines.

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

ID COMMENTS: The following description is based in part on that of Clemens (1859). The antenna and front of the head are silvery, and the tuft is fulvous with a mix of silvery scales. The thorax is pale reddish golden, with a white streak on each side and one in the middle. The ground color of the forewing is shining ocherous saffron. There is a slender, straight, and unmargined white basal streak in the central portion of the wing that extends from the base to about one-third to one-half of the wing length. A narrow white line runs along the costa from near the base of the wing posteriorly (often faint along the costa). The line deflects inward at about one-half where it approaches a matching dorsal line that also extends from near the base and deflects inward. Posterior to where the costal and dorsal lines converge, there are typically three short white costal streaks and two dorsal streaks. The three costal streaks are aligned roughly perpendicular to the costa and are typically edged with dark scales on the anterior side. The first two are opposed and paired with two similar dorsal streaks. The first at the tornus is relatively large and triangular-shaped, while the second is greatly reduced in size and sometimes missing. This species lack an apical spot, but typically has a region of dark scales near the apex that extends forward to the apical and dorsal streaks to varying degrees (sometimes represented as two large patches). The cilia are pale fulvous with a blackish marginal line that is sometimes obscure or missing. The hindwing is gray, with cilia that are gray with a fulvous hue.

DISTRIBUTION: Phyllonorycter basistrigella is widely distributed across Canada, the eastern US, and as far west as California. Populations in the western US may represent an undescribed species. In eastern North America, this species occurs in southern Canada and throughout much of the eastern US from the Great Lakes region eastward to Maine and southward to North Carolina. We have records from all three physiographic provinces in North Carolina, although this species appears to be relatively rare in the Coastal Plain.

FLIGHT COMMENT: Local populations appear to have at least two broods each year. As of 2023, we have records from mid-March through late-September.

HABITAT: This species specializes on oaks and exploits members of both the white oak and red oak group. Populations occur in a wide variety of urban and natural habitats that support the host species. Examples include urban neighborhoods and parks, wet to dry hardwood forests, and mixed hardwood-pine forests.

FOOD: Host species that occur in eastern North America (Eiseman, 2019) include White Oak (Q. alba), Swamp White Oak (Q. bicolor), Scarlet Oak (Q. coccinea), Shingle Oak (Q. imbricaria), Bur Oak (Q. macrocarpa), Swamp Chestnut Oak (Q. michauxii), Chestnut Oak (Q. montana), Dwarf Chinquapin Oak (Q. prinoides), Northern Red Oak (Q. rubra), Post Oak (Q. stellata), and Black Oak (Q. velutina). As of 2023, we have records of this species using White Oak, Chestnut Oak, Swamp Chestnut Oak, and Northern Red Oak in North Carolina.

OBSERVATION_METHODS: The adults are attracted to lights and have been successfully reared from leaf mines with mature larvae or pupae.

NATURAL HERITAGE PROGRAM RANKS: GNR S3S4

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

COMMENTS: North Carolina appears to be at or near the southern limit of the range. We currently do not have sufficient information on the distribution and abundance of this species within the state as assess its conservation status.