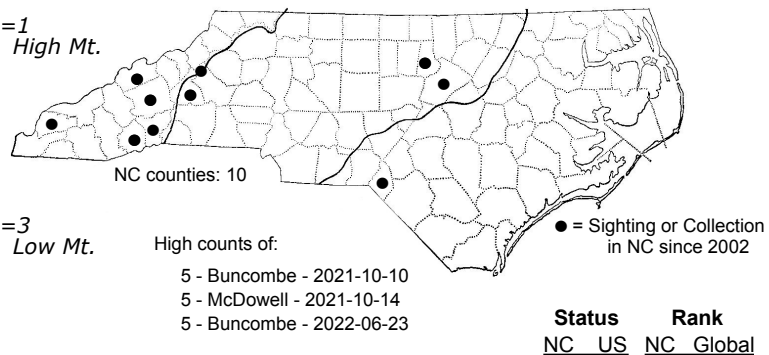
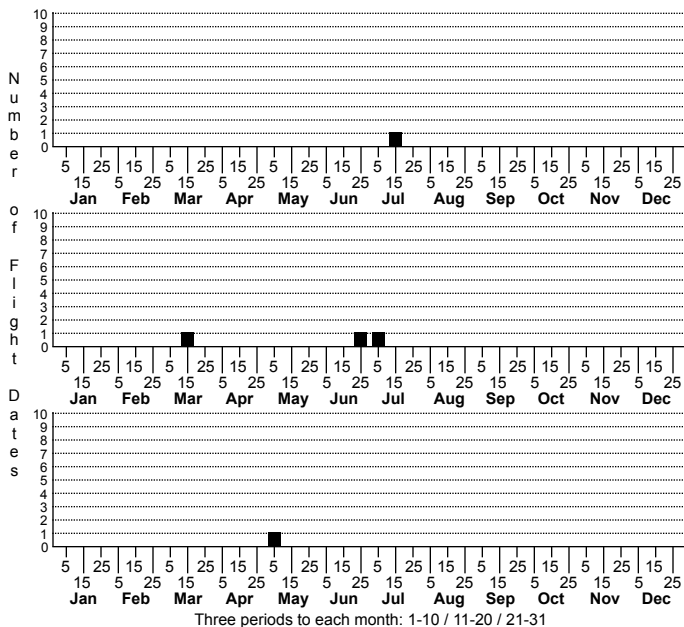


*Coptotriche castanaeella* No common name



FAMILY: Tischeriidae SUBFAMILY: TRIBE:

TAXONOMIC COMMENTS: *Coptotriche* is a genus of specialized leafminers that currently consists of 28 recognized Nearctic species. Most species fall within one of two major groups. Members of the first group typically have orangish to yellowish fore wings (rarely white) and specialize on oaks and chestnuts, while members of the second group have dark gray, brown, or blackish fore wings and mostly feed on members of the Rosaceae (Braun, 1972; Eiseman, 2019).

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS: BugGuide; Microleps.com, BOLD

TECHNICAL DESCRIPTION, ADULTS: Braun (1972)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Braun (1972)

ID COMMENTS: The following is from Braun's (1972) description based on studies of 29 specimens from throughout the range of the species. The face varies from whitish ochreous to pale straw-colored. The scales of the vertex and crown vary from straw-colored to deep ochreous, and project forward as a bifurcated tuft (often not evident in worn specimens). The scape of the antenna is straw-colored or ochreous, and the shaft becomes fuscous towards the tip. The thorax is concolorous with the head. The forewing is somewhat shining and the base is concolorous with the head and thorax. The base varies from whitish to ochreous (sometimes pale lemon yellow) and gradually shades to orange yellow. The tips of the scales in the apex are microscopically brownish, but do not produce a dusted effect. Rarely, the wing of the male shades to a deep reddish brown color in the apex and along the outer half of the costal margin. The underside is brownish and lacks sex scales, and the surface is dusted. The hindwing is less than half the width of the forewing in both sexes except at the extreme base. It is pale gray, but can be darker in dark males. The cilia vary from gray to ochreous with a faint reddish tinge. A costal tuft of brown scales is present near the base. The legs are ochreous and shaded with dark brown outwardly. The abdomen is ochreous above, with a little dusting on several terminal segments in the male. The underside of the abdomen is densely dusted with brownish fuscous scales, which may spread laterally and densely dust the posterior half of the abdomen above.

Braun (1972) noted that *Coptotriche castanaeella* is best recognized using the distinctive leaf mines. The forewing of the adults are extremely variable and small males are indistinguishable from *C. fuscomarginella*. However, small specimens may be separated from *C. fuscomarginella* by the gray and somewhat wider hindwing of *C. castanaeella*. Specimens that we have reared from North Carolina show varying levels of relatively dark and contrasting coloration on the apical fourth to third of the wing.

DISTRIBUTION: *Coptotriche castanaeella* is widely distributed in eastern North America from southern Canada (Ontario; Quebec) and the northeastern US to as far south as Florida. As of 2022, our North Carolina records are from the mountains and the eastern Piedmont and western Coastal Plain where collecting has been most concentrated.

FLIGHT COMMENT: As of 2022, our limited records suggest that there are at least two broods per year, with one around June and the second in late summer or early fall.

HABITAT: This species utilizes oaks and American Chestnut during the larval stage and is restricted to habitats with the host species. It presumably uses a variety of habitats with these species such as mixed pine-hardwood forests, hardwood forests, wooded roadside edges, urban landscapes, and early successional fields with oak saplings.

FOOD: The larvae of *C. castanaeella* mine the leaves of oak species and American Chestnut (*Castanea dentata*). The known oak hosts include Swamp White Oak (*Q. bicolor*), White Oak (*Q. alba*), Sand Post Oak (*Q. margaretiae*), Chestnut Oak (*Q. montana*), Blackjack Oak (*Q. marilandica*), Willow Oak (*Q. phellos*), Northern Red Oak (*Q. rubra*), Scarlet Oak (*Q. coccinea*), and Black Oak (*Q. velutina*). As of 2022, we have records for American Chestnut, Northern Red Oak, Sand Post Oak, and White Oak.

OBSERVATION\_METHODS: Direct searches for the leaf mines with their distinctive concentric crescent marks is the best way to document local populations. Since *C. castanaeella* appears to rarely visit lights -- and the adults can be confused with other *Coptotriche* species -- rearing of adults may be the best way to obtain reliably identified specimens.

NATURAL HERITAGE PROGRAM RANKS: GNR S2S4

STATE PROTECTION:

COMMENTS: