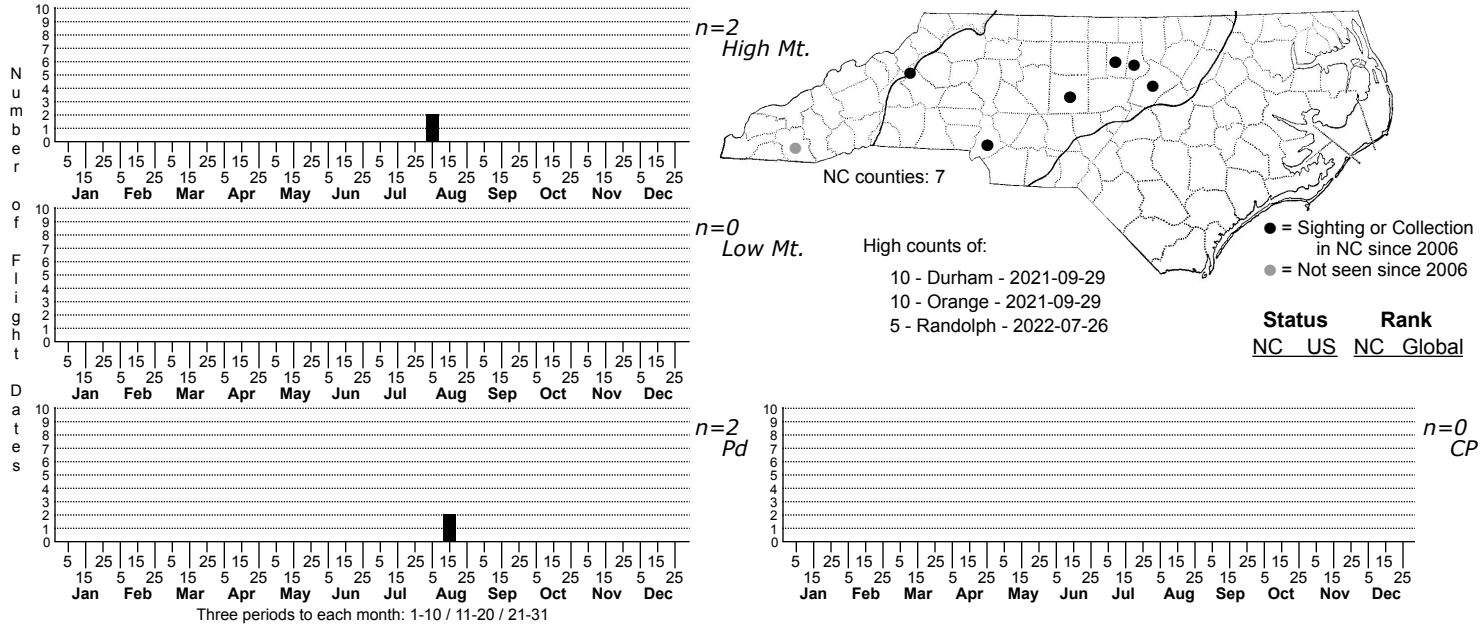
Coptotriche badiiella None



FAMILY: Tischeriidae SUBFAMILY: TRIBE:
TAXONOMIC_COMMENTS: Coptotriche is a genus of specialized leafminers that currently consists of 27 recognized Nearctic species. Most species fall within one of two major groups. Members of the first group typically have orangish to yellowish forewings (rarely white) and specialize on oaks and chestnuts, while members of the second group have dark gray, brown, or blackish forewings and mostly feed on members of the Rosaceae (Braun, 1972; Eiseman, 2019).

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
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 164 specimens from throughout the range of the species. The face and antennal scape are either white or faintly tinged with ocherous. The tuft is whitish, and the head ocherous in the posterior and lateral regions. The antenna is whitish, but fuscous beneath on the male. The lateral region of the thorax is more deeply colored than the head. The forewing varies from pale sulphur yellow to orange yellow, and shades to reddish or brownish orange along the costa and in the apical third of the wing. The apical third has scattered dark dusting that usually forms a distinct dark line around the apex at the base of the cilia. A patch of dark dusting is present at the tornus that is sometimes faint or obsolete, and is rarely large and conspicuous. The dorsal margin is darker than the general ground color, and has a few dark-tipped scales scattered along it. In some specimens, the reddish or brownish orange color may spread over the entire wing so that the wing appears uniformly colored and the tornal spot is obscured. The underside of the base of the costa of the male is fuscous. The hindwing and cilia are tinged with ocherous, especially toward the apex. The wing is very narrow in the male, and somewhat broader in the female toward base. The legs are pale ocherous and dusted with fuscous outwardly. The abdomen is pale ocherous above, with darker, but pale dusting beneath. Braun (1972) noted that the adults often vary substantially in terms of the ground color, the amount of dark dusting, the degree of development of the tornal patch (sometimes obsolete), and the degree of spreading of the darker orange brown color over the wing surface. Genitalia provide the most reliable characters for identifying this species. The pupa also has a pointed tubercle on the head that is a unique character for this species.

DISTRIBUTION: Most of our understanding of the distribution of Coptotriche badiiella is based on Braun's (1972) comprehensive study of museum and reared specimens. Local populations occur in Ontario, the Midwest, and the Northeast, then south and southwestward to Arkansas, Louisiana, Kentucky, and North Carolina. Populations are rather poorly documented in North Carolina, but include records from Macon Co. (Braun, 1972) and from several recent leaf mine records in the Piedmont.

FLIGHT COMMENT: Braun (1972) noted that there are two or three generations in a year.

HABITAT: This species relies heavily on White Oak and presumably is restricted to habitats with the host species, including urban landscapes and hardwood and mixed hardwood-pine forests.

FOOD: Records of mines -- or adults reared from mines -- are almost always from White Oak (Quercus alba), which is common throughout the state. Braun (1972) reported the use of Pin Oak (Q. palustris) in Indiana. In North Carolina, Q. palustris occurs as small, scattered populations in the Piedmont, and at a few localities in the Coastal Plain. As of 2021, all of our records are from White Oak.

OBSERVATION_METHODS: Most of the specimens in collections are from individuals that were reared from White Oak, suggesting that the adults rarely visit lights. We recommend searching for mines and rearing adults after the spring leaf-out. The distinctive beak on the pupa is also a good diagnostic trait.

NATURAL HERITAGE PROGRAM RANKS: GNR S2S4

STATE PROTECTION:

COMMENTS: We do not have sufficient data on the distribution and abundance of this species to assess its conservation status. It appeared to be rare in North Carolina, but recent searches for leaf mines have yielded several new county records.