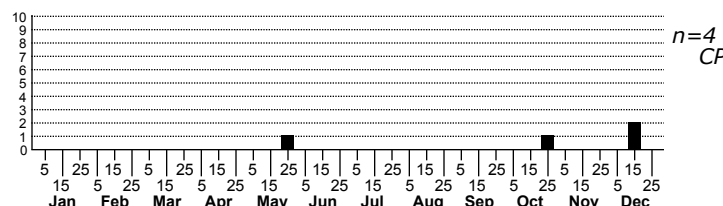
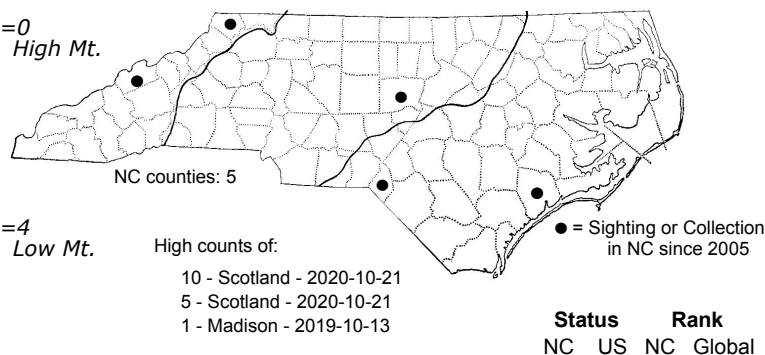
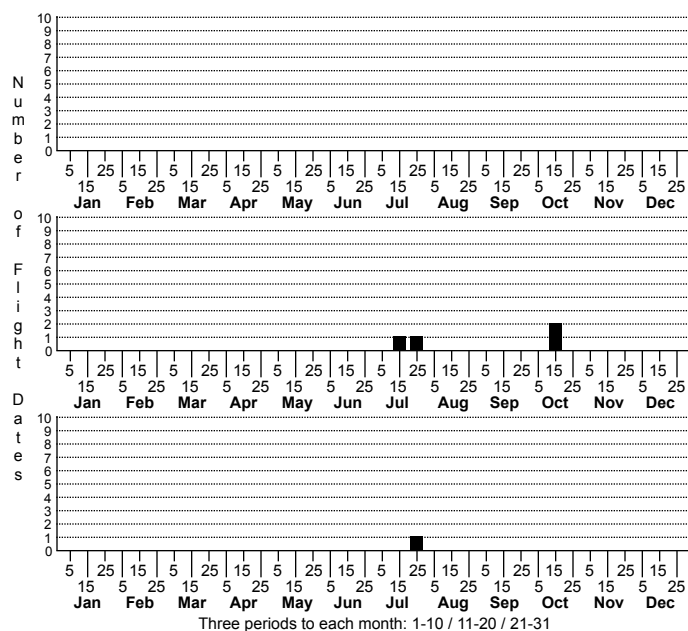


Caloptilia umbratella None



FAMILY: Gracillariidae SUBFAMILY: Gracillariinae TRIBE: [Gracillariini]

TAXONOMIC COMMENTS: *Caloptilia* is a large genus with nearly 300 described species; 64 species have been described in North America north of Mexico. The larvae begin as leaf-mining sap-feeders, but the latter instars usually exit the mines and feed within a conical roll that begins at the leaf apex or at the tip of a leaf lobe.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Braun (1927)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Braun (1927)

ID COMMENTS: The following is based on the description by Braun (1927). The maxillary palp is golden yellow. The second segment of the labial palp is also golden yellow, except for dark brown coloration on the apex. The third segment is golden-yellow on the lower half and tip, and dark brown elsewhere. The antenna is dark purplish fuscous with paler annulations. The face is golden, shading to brownish purple on the head. The forewing is dark crimson purple, with some golden brown reflection. There are two golden costal triangles. The first is a large mark just before one-half the wing length. Its anterior edge slants and curves apically before terminating at the fold. The posterior edge is often concave or indented, and has one or two black spots on the costa. The base of its outer edge on the costa does not quite reach the middle of the costa. The second costal triangle is much smaller and is separated from the first by about half its width. A few indistinct yellowish-brown spots are often evident beyond the second costal triangle. The first is small, the second nearly crossing the wing, and the third is at the tip of the wing and partly in the cilia. The cilia is gray on the dorsum, but otherwise brownish purple and marked with three dark lines around the apex and on the termen. The hindwing is dark brownish-gray. The upper region of the first and second pair of legs are brownish purple, while the tarsi are white, with dark tips. The hindleg, except for the dark brown outer halves of the femora, is yellow with brownish shading toward the tips of the segments. The underside of the abdomen is golden yellow.

Braun (1927) noted that the dark labial palp will help distinguish this species from all the other maple-feeding species that have a uniform ground color and one or more sharply defined costal triangles. Specimens that we have observed in North Carolina tend to have the second costal triangle greatly reduced in size and often represented as a yellowish spot. Our specimens somewhat resemble *C. stigmella*, but the latter tends to have a more uniformly brown palp and forewing, and a single triangular mark. As noted by Braun (1927), *C. umbratella* typically has a few indistinct yellowish-brown spots or blotches beyond the second costal triangle that create a more mottled appearance on the apical third of the forewing. *Caloptilia umbratella* is externally identical to an undescribed species of *Ribes* feeder (Microleps.org) that is known from Illinois. The range of the *Ribes* feeder in the US is poorly documented, and it has not been observed in North Carolina to date. If present, it would be confined to the mountains where *Ribes* occur. *Caloptilia umbratella* can be most confidently identified by either genitalia, the rearing of adults, or knowledge of the presence/absence of host plants locally.

DISTRIBUTION: *Caloptilia umbratella* is found in Maine and in adjoining areas of extreme southern Canada (Ontario; Quebec), southward to eastern Tennessee and North Carolina, and westward to Illinois, Iowa, and Minnesota.

FLIGHT COMMENT: Most adult records from areas outside of North Carolina are from May through October, with isolated records from January that likely reflect overwintering adults. As of 2021, we have a pupal record from late October, with an adult that emerged in mid-November.

HABITAT: Populations are found in hardwood or mixed pine-hardwood forests with maples.

FOOD: The known hosts include Sugar Maple (*Acer saccharum*) and Red Maple (*A. rubrum*) (Eiseman, 2022). In North Carolina, our only record is from Red Maple.

OBSERVATION_METHODS: The adults appear to only occasionally come to lights, and many records are based on reared adults from maples.

NATURAL HERITAGE PROGRAM RANKS: GNR S1S3

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

COMMENTS: This species is apparently rare within the state where it is at the southern limit of its range. However, more information is needed on its distribution and abundance before we can assess its conservation status.