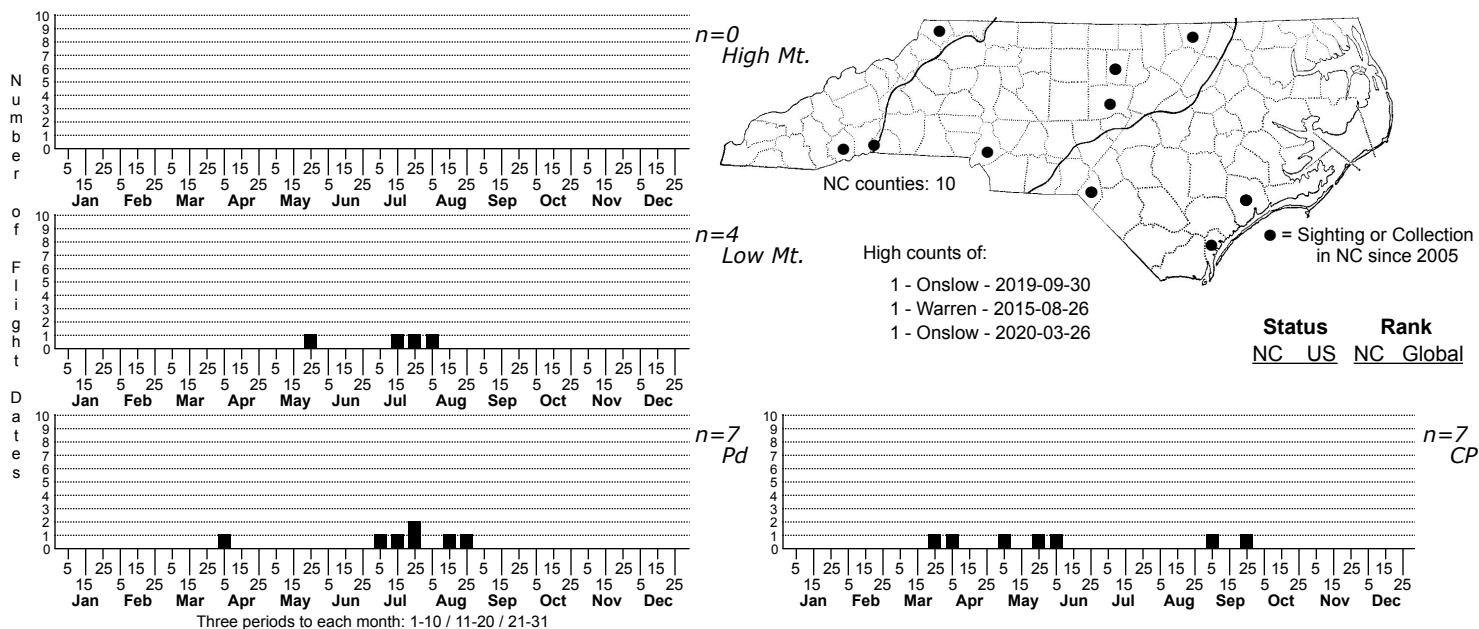


Caloptilia superbifrontella Witch-hazel Caloptilia



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: Covell (1984); Beadle and Leckie (2012)
 ONLINE PHOTOS:
 TECHNICAL DESCRIPTION, ADULTS: Chambers, 1860.
 TECHNICAL DESCRIPTION, IMMATURE STAGES: Chambers, 1860.

ID COMMENTS: The upper head and forewings have a light reddish-violet ground color. The remainder of the forewing consists of a pale yellow streak on the inner margin at the base, and a conspicuous pale yellow costal patch that extends from about one-quarter of the basal region to near the apex. The patch is widest near the median area and narrows posteriorly. The pale yellow streak at the base of the wings often continues to the thorax and head. Unlike many *Caloptilia*, this species lacks a row of minute dark dots along the costal margin within the yellow costal patch. The cilia are dark fuscous with two darker bands usually present. The femur and tibia of the front and middle leg are dark brown and contrast with the white tarsi below. Dark marks near the tarsal joints are either absent or weakly developed, and the rear leg is pale straw to whitish. The palps are whitish to pale yellow with dark tips. *Caloptilia azaleella* is somewhat similar but typically has conspicuous black spots near the tarsal joints, a row of minute dark dots along the costal margin, and lacks the yellow streak at the base of the forewing.

DISTRIBUTION: This species occurs from southern Ontario, Quebec, Nova Scotia and adjoining areas of the northeastern US southward to North Carolina and vicinity. Populations in North Carolina may be disjunct from the main range that occurs to the north. Our official records for North Carolina are from the Piedmont and Coastal Plain. A specimen from Buncombe Co. (iNaturalist) appears to be this species.

FLIGHT COMMENT: Please refer to the flight charts.

HABITAT: Adults oviposit on Witch Hazel, which occurs statewide in a variety of forested settings that range from moderately dry to mesic conditions. Examples include oak-hickory forests, mesic mixed hardwoods, pine-hardwoods, and floodplain forests.

FOOD: Larvae feed on Witch-hazel (*Hamamelis virginiana*). Tracy Feldman found mines that resemble those of this species on Coastal Witch-alder (*Fothergilla gardenii*) in North Carolina (Eiseman, 2019), which is also a member of the family Hamamelidaceae. Further observations and the rearing of adults would be helpful in confirming the use of *Fothergilla* in North Carolina.

OBSERVATION METHODS: Adults are attracted to UV-lights. Local population can be easily documented by searching for leaf rolls on Witch-hazel and *Fothergilla*. This is the only leaf-rolling species that feeds on these host plants.

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: