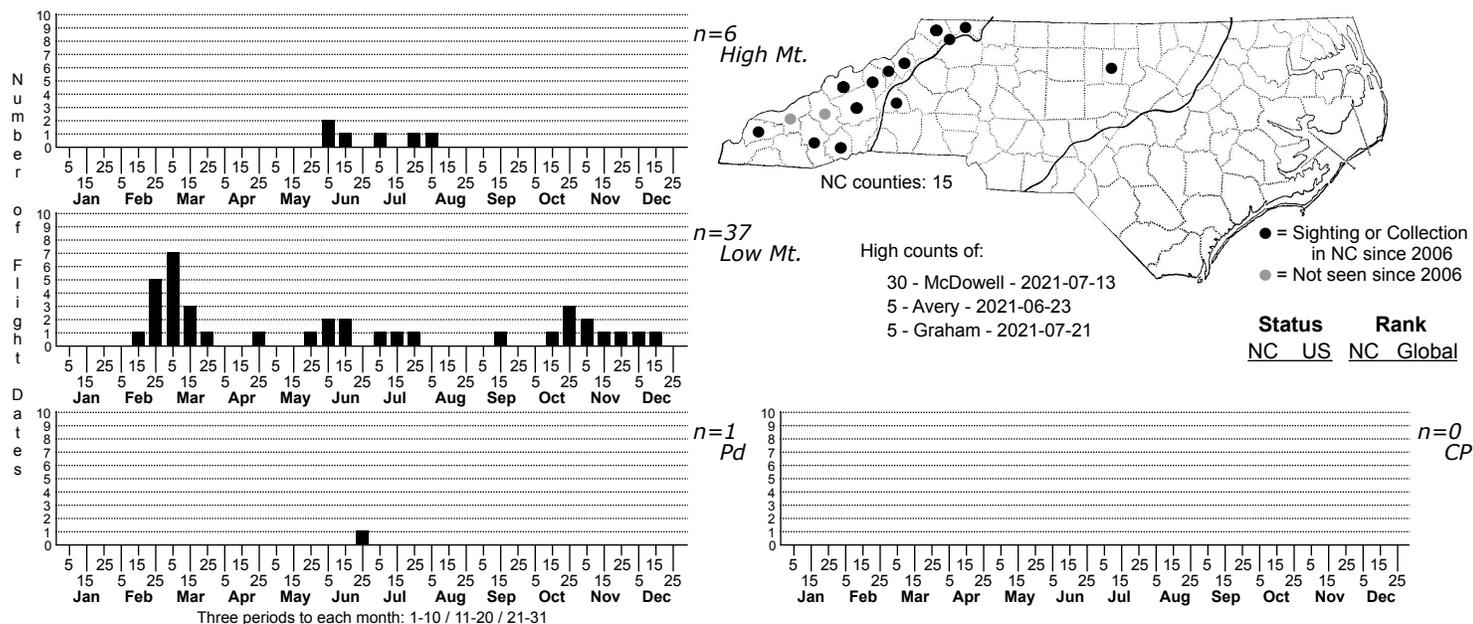


Caloptilia serotinella Cherry Leafroller Moth



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: Beadle and Leckie (2012)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: (Ely, 1910, Forbes, 1923).

TECHNICAL DESCRIPTION, IMMATURE STAGES: Ely (1910)

ID COMMENTS: The adults are readily identifiable by the dark brown to purplish-brown forewing that is boldly mottled with white. A large white costal patch with a dark center is usually evident just before the mid-point. The cilia on the forewing often has two or three yellowish-tan streaks that cut through the darker ground color. The antennae are dark with white annulations, except for the first three segments which are whitish. The femur and tibia of the front and middle leg are brown with fine white mottling, while the tarsi are whitish with heavy dusky markings. The rear leg is yellowish tan with darker markings concentrated on the lower half.

This species and *C. invariabilis* both mine cherry trees, with *C. serotinella* using Black Cherry and *C. invariabilis* preferring Fire Cherry. The latter makes a very indistinct, whitish, linear mine that ends in a small underside blotch. Here, we treat the conspicuous mines that are typically seen on Black Cherry as belonging to *C. serotinella*. Rearing efforts are needed to better delineate differences in mine characteristics and host plants in North Carolina, and we consider our identifications based on mines to be tentative.

DISTRIBUTION: *Caloptilia serotinella* is primarily found in the north-central and northeastern US, and in adjoining areas of southeastern Canada. Populations extend southward through the Appalachians to North Carolina and vicinity. Populations in North Carolina are mostly confined to the Blue Ridge at elevations that range from the low valleys to the highest peaks (Mt. Mitchell; iNaturalist). As of 2025, we also have one record from the eastern Piedmont.

FLIGHT COMMENT: In North Carolina, the adults are active during warm weather from March through early December. *Caloptilia serotinella* appears to be multivoltine based on data for adult records from throughout the eastern US, with local populations in North Carolina appearing to have two or three generations per year.

HABITAT: In North Carolina, *C. serotinella* appears to be almost entirely restricted to the Blue Ridge where it feeds on *Prunus serotina*. Black Cherry is found throughout most of the state where it is common along forest edges and in other disturbed or early successional habitats. It is also common in bottomlands and in rich, mesic hardwood forests, particularly where past disturbance has allowed seedlings to establish.

FOOD: The host plants are poorly documented. Although Robinson et al. (2010) reported that Black Cherry (*Prunus serotina*) is the only known host, it is possible that other cherries such as Fire Cherry (*P. pensylvanica*) are used in the North Carolina mountains. All of our records are from Black Cherry.

OBSERVATION_METHODS: The adults are attracted to UV lights. Data on the host plants is needed, and searches for folded leaf tips on *Prunus* species such as *P. pensylvanica* could produce new host data.

NATURAL HERITAGE PROGRAM RANKS: GNR [S4]

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

COMMENTS: