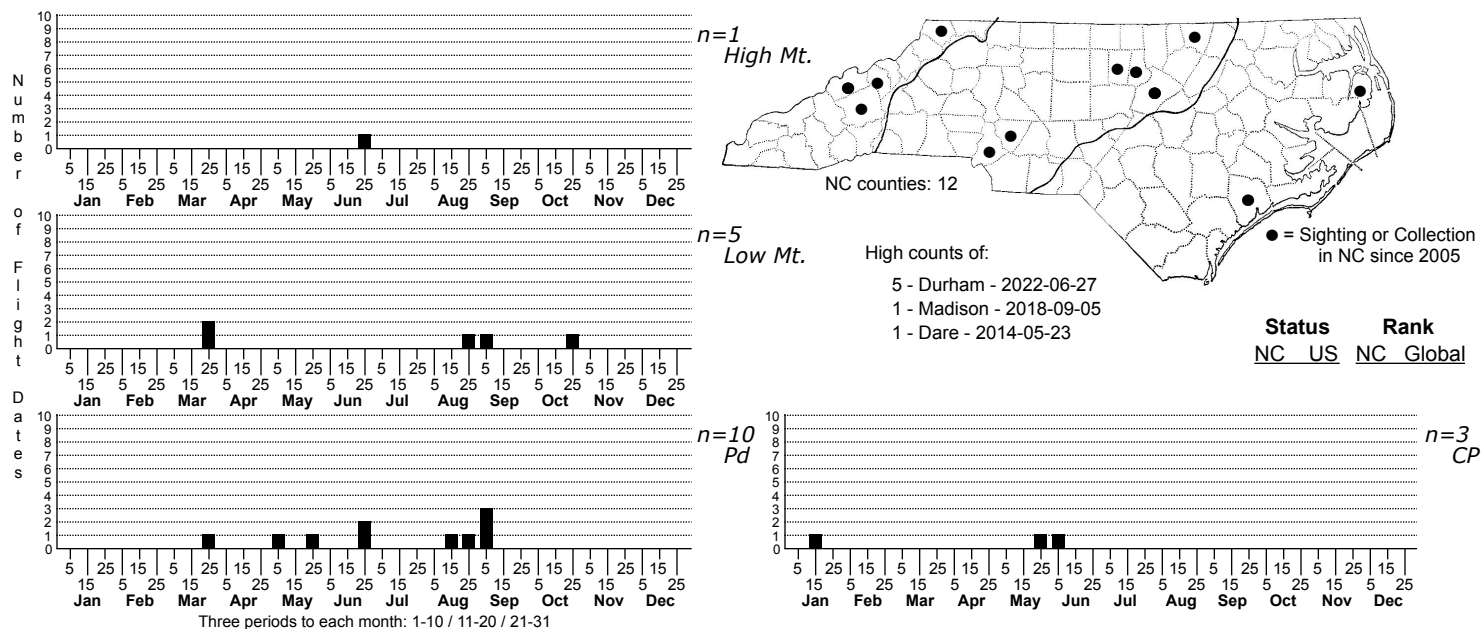


Caloptilia stigmatella Willow Leafcane Caterpillar Moth



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: Chambers, 1872.

TECHNICAL DESCRIPTION, IMMATURE STAGES: Eiseman, 2019.

IDENTIFICATION COMMENTS: The antennae, palps, upper head, thorax, and forewings have a rich, dark brown ground color. Each forewing has a light yellow to yellowish white, triangular costal patch that is usually hooked backwards near the tip. A series of fine dark brown spots are normally present along the costa. The femur and tibia of the front and middle leg are dark brown, while the tarsi are whitish, with darker marks at the tarsal joints. The rear legs are pale, with varying amounts of brown dusting and blotching. This species is variable and was previously treated as two separate species, *C. purpuriella* and *C. stigmatella* (Forbes, 1923). Forms that conform to *C. purpuriella* are grayish brown with a purple iridescence. The triangle is relatively narrow and is concave on both sides. *C. stigmatella* (sensu stricto) is similar, but has a paler reddish ground color. In addition, the triangle is larger, is not as hooked near the fold, is less concave on the sides, and has less conspicuous dark spotting. Forbes (1923) recognized these as separate species, but most treat them as being conspecific. We have both forms in North Carolina and they tend to sort out seasonally, with 'purpuriella' types flying from October through March, and 'stigmatella' types flying from May through September. It is uncertain whether these reflect seasonal forms of the same species, or two distinct species. Here we treat these as a single species.

DISTRIBUTION: *Caloptilia stigmatella* is widely distributed in the Holarctic Region, including most of Europe, and eastern and western North America. In eastern North America, it occurs throughout much of southeastern Canada and the eastern US, with populations becoming more scattered towards the southern areas of the range. This species appears to occur statewide in North Carolina.

FLIGHT COMMENT: Our records extend from late May through October, with a peak in activity during the summer months.

HABITAT: Populations are general found in settings that support either poplars or willows. These include alluvial floodplains, the sunny margins of bogs, ponds, lakes, and swamps, and wet thickets, ditches, and other hydric habitats.

FOOD: The larvae feed on species of poplar (*Populus* spp.) and willows (*Salix* spp.). Reported hosts include native Eastern Cottonwood (*P. deltoides*) and Black Willow (*Salix nigra*), along with introduced species such as White Poplar (*P. alba*) (Eiseman, 2022). Swamp Cottonwood (*P. heterophylla*) is a likely candidate, but the use of this species as a host has not been verified to date. In North Carolina, mines have been recorded on Black Willow.

OBSERVATION_METHODS: This species is attracted to lights and local populations can be documented by raising adults from leaf folds and rolls.

NATURAL HERITAGE PROGRAM RANKS: GNR S3S4

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

COMMENTS: