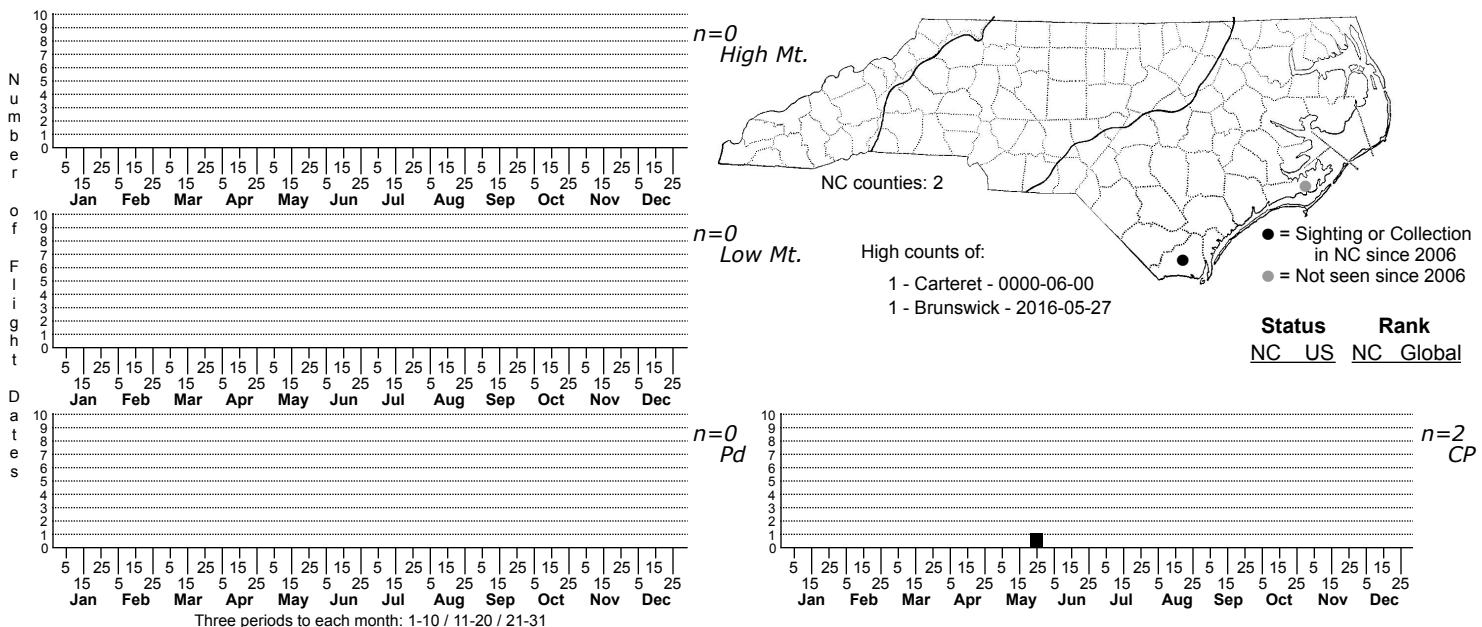


# *Nemoria outina* None



FAMILY: Geometridae SUBFAMILY: Geometrinae TRIBE: Nemoriini

TAXONOMIC COMMENTS: One of 35 species in this genus that occur in North America (Ferguson, 1985), nine of which have been recorded in North Carolina. Ferguson (1969) included *outina* within the Extramaria Species Group (Group IV), which in North Carolina also includes *elfa* and *tuscarora*.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Ferguson (1969, 1985)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Ferguson (1985)

ID COMMENTS: A small, intensely green Emerald with slightly waved, thin white lines. The following characters are distinctive: forewings are finely striated with white; the terminal line is red and continuous; the fringe is yellowish; and the abdomen is unspotted and green (Ferguson, 1985). The front is always red, not green, as is often true for *elfa* (Ferguson, 1985). Ferguson also notes that the forewing shape is distinctive, with the margins less convex but the apex and anal angle more pointed than other species of *Nemoria*.

DISTRIBUTION: Recorded from only two sites in North Carolina located in the Outer Coastal Plain.

FLIGHT COMMENT: Appears to fly throughout the year in Florida (Ferguson, 1985); the only North Carolina records are from late May and June.

HABITAT: Our records come from an area dominated by Longleaf Pine savannas and flatwoods, bordering and containing inclusions of pocosins.

FOOD: Possibly monophagous: larvae were collected from Florida Rosemary (<i>Ceratiola ericoides</i>) (Ferguson, 1985). That species occurs primarily in Florida but extends up the coast to northeast South Carolina. Although the plant is unknown in North Carolina, the xeric, sandbarrens habitats with which it is associated occur in the general area where the moth was collected in Carteret County. This suggests either that <i>Ceratiola</i> could occur in that area or that the moth also feeds on other plant species associated with that habitat type.

OBSERVATION METHODS: Too little data are available to determine how well this species comes to lights.

NATURAL HERITAGE PROGRAM RANKS: GNR SU [S1S2]

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

COMMENTS: This species is globally rare; Ferguson (1985) knew of only 30 specimens. It may also be an extreme habitat specialist, possibly feeding only on a single plant species that itself has a very small global range and tight habitat requirements. However, more surveys need to be conducted in North Carolina both to confirm its residency status and to determine its host plant and habitat relationships.