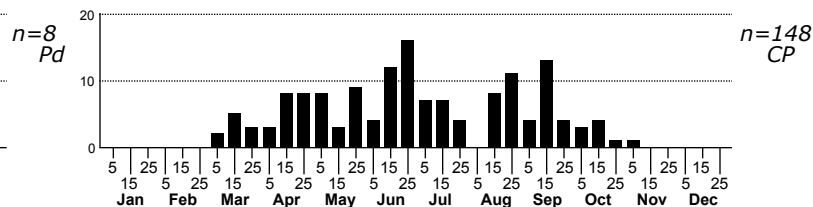
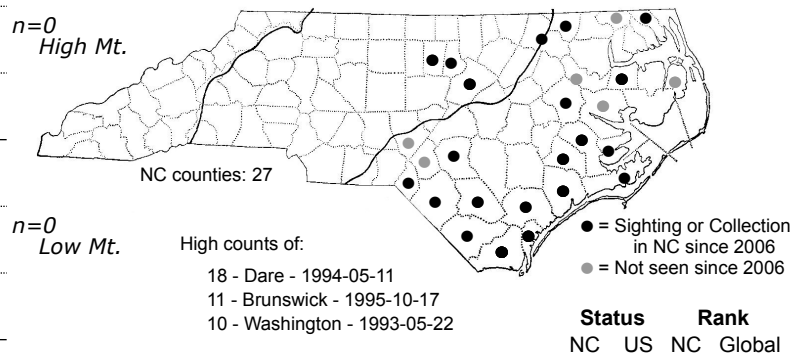
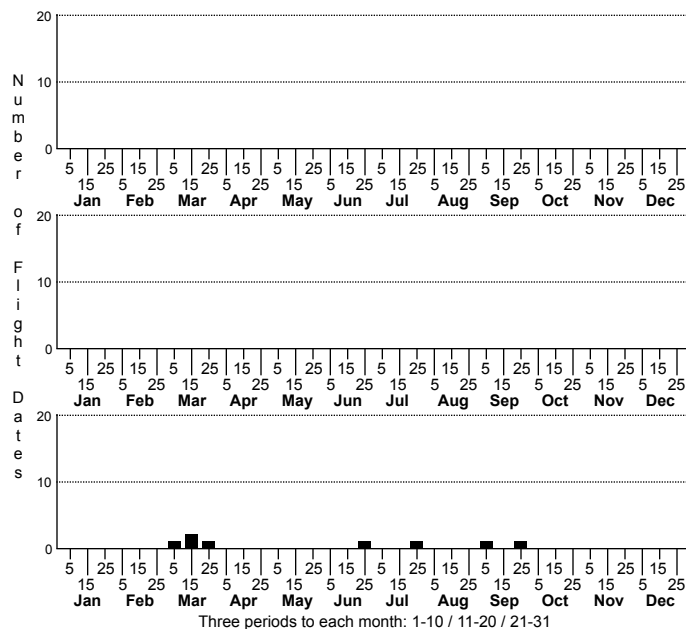


Nemoria elfa Cypress Emerald



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 *elfa* within the Extramaria Species Group (Group IV), which in North Carolina also includes *tuscarora* and *outina*.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Ferguson (1985)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Ferguson (1985); Wagner (2005; photograph but no description)

ID COMMENTS: A small Emerald, with both a reddish-brown cool season form and a green warm season form. The abdomen is unspotted and concolorous with the wing color. The transverse lines are thin, white, and slightly waved to crenulate. Other markings are variable: the terminal line may be present or absent; fringes may be white or pink; the front and interantennal fillet may also be marked with red or can be green (Ferguson, 1985). *Nemoria outina* is similar in size to *elfa*, but is darker green, has fine white striations on its wings, and has a yellowish fringe. A continuous red terminal line is also present in *outina*, which is absent or broken in *elfa*, and the front is always red, not green, as is often true for *elfa* (Ferguson, 1985).

DISTRIBUTION: Restricted to the Coastal Plain, including the Fall-line Sandhills. A record from the Mountains needs to be verified but may represent *N. tuscarora*, not *elfa*.

FLIGHT COMMENT: Adults fly essentially continuously from early March to early November

HABITAT: Our records all come from Cypress-containing habitats, including riverine, non-riverine, and tidal swamp forests dominated by Bald Cypress, and cypress savannas, Carolina Bays, and other shallow impoundments where where Pond Cypress is present but not Bald Cypress.

FOOD: Larvae are probably stenophagous, feeding on Bald Cypress (*Taxodium distichum*) and Pond Cypress (*T. ascendens*) (Wagner, 2005). In North Carolina, our only feeding record is for Bald Cypress.

OBSERVATION_METHODS: Comes well to blacklights

NATURAL HERITAGE PROGRAM RANKS: G4? SNR [S3S4]

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

COMMENTS: This species is a habitat specialist, but cypress-containing habitats are still fairly widespread in the state and this species currently seems fairly secure. However, both the vast non-riverine swamps on the Albemarle-Pamlico Peninsula and most examples of Tidal Cypress Gum Forests are highly threatened by sea level rise and salt-water intrusion. Many Carolina Bays have been converted to agriculture or silviculture and even deeply-flooded riverine stands of Bald Cypress are subject to logging. Due to these threats, we recommend that populations of this species and other characteristic of cypress habitats be monitored for changes in their status.