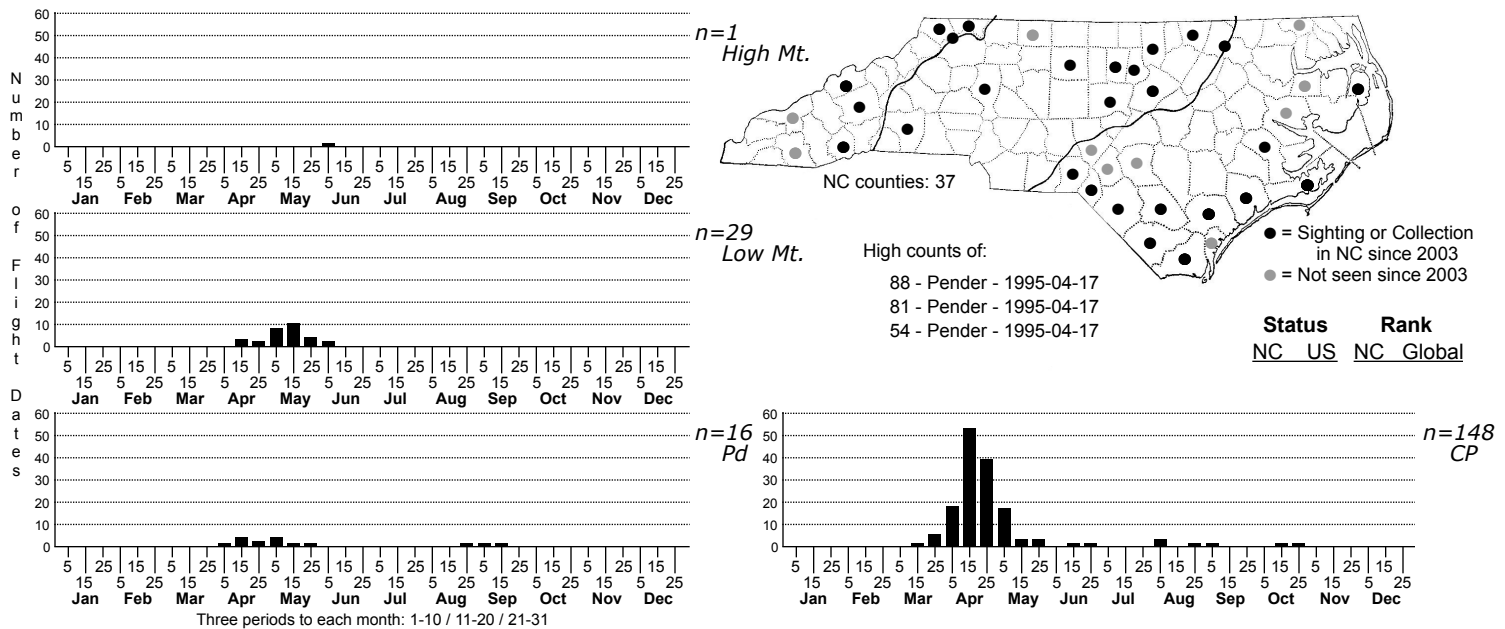


Hethemia pistasciaria Pistachio Emerald



FAMILY: Geometridae SUBFAMILY: Geometrinae TRIBE: Hemitheini

TAXONOMIC_COMMENTS: This genus contains just the single species that is found in North Carolina (Ferguson, 1985).

FIELD GUIDE DESCRIPTIONS: Covell (1984); Beadle and Leckie (2012)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Forbes (1948, as *Chlorissa pistasciaria*); Ferguson (1969, 1985)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Ferguson (1985); Wagner et al., (2001); Wagner (2005)

ID COMMENTS: A small Emerald with angled hindwings somewhat similar to those of *Chloropteryx tepperaria* but less strongly pointed (Ferguson, 1985). The ground color of the wings is olive to pistachio green in the males and a brighter sage-green in the females (Ferguson, 1985). The color of the males, however, is unstable and fades to yellowish in some individuals. The undersides of the males are a bright ocher color, which is also present in the females in populations south of New Jersey (Ferguson, 1985). Some of our specimens -- particularly from along the Coast -- are reddish-brown, which Ferguson considered typical of the southern subspecies, *insecutata* (see discussion above under Species Comments). As in *Chloropteryx*, the antemedian and postmedian lines are thin and often represented by separated spots. However, the postmedian is much more even in its course than in *Chloropteryx*. *Hethemia* also differs from *Chloropteryx* in lacking a terminal line and having solid-colored fringes, which are often reddish-brown in the males and green in the females (Ferguson, 1985). The costa is also usually a solid red or yellow, lacking the brown spots found in *Chloropteryx*. No brown abdominal spot is found in *Hethemia* and the collar is usually yellowish or brown, rather than green, as is true for *Chloropteryx*.

DISTRIBUTION: Probably occurs statewide

FLIGHT COMMENT: Single-brooded, with adults flying in the spring

HABITAT: The majority of our records come from the Coastal Plain, primarily from fairly open, shrubby areas, such as maritime scrub on the barrier islands and Longleaf Pine savannas and flatwoods further inland. In the savannas and flatwoods in particular, oaks and other hardwoods are scarce to absent but Blueberries and other heaths are abundant. Peatlands are also used, where heaths are again dominate and oaks are absent. On the barrier islands, on the other hand, heaths are uncommon and salt-tolerant shrubs and xerophytic oaks predominate. None of our Coastal Plain records include bottomland hardwoods or swamp forests, where oaks are dominant but heaths and other shrubby species are uncommon. Our few Piedmont records come primarily from dry, open woodlands that support Pine-Oak-Heath dominated communities. Only in the Mountains and primarily in the Great Smoky Mountains do we have records from stands of mesic hardwood communities, including cove forests.

FOOD: Polyphagous on woody trees and shrubs. Ferguson (1985) lists Blueberries, Oaks, Birches, Ironwood, and Basswood.

OBSERVATION_METHODS: Comes well to blacklights but we have no records from bait or from flowers.

NATURAL HERITAGE PROGRAM RANKS: G5 [S5]

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

COMMENTS: This species has a wide range within North Carolina and occupies a broad set of habitats; consequently, it appears to be fairly secure.