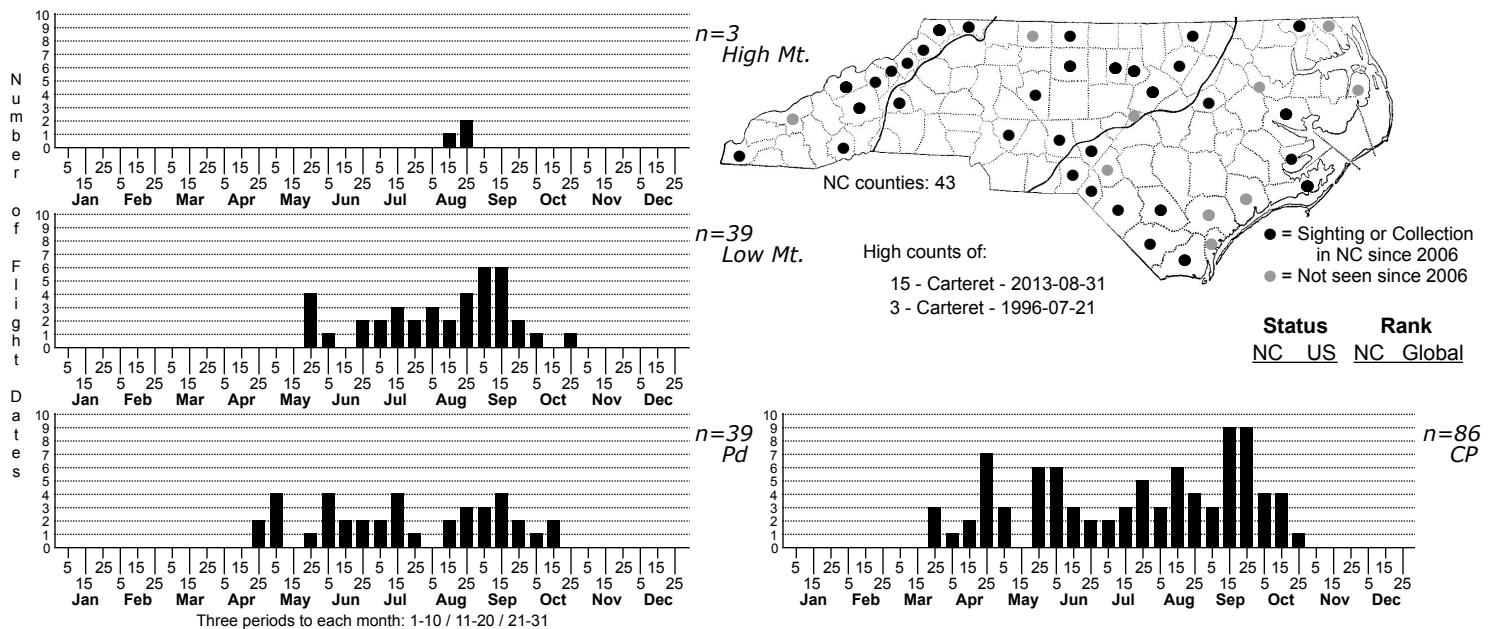


Synchlora aerata Wavy-lined Emerald



FAMILY: Geometridae SUBFAMILY: Geometrinae TRIBE: Synchlornini

TAXONOMIC COMMENTS: One of eight species in this genus that occur north of Mexico (Ferguson, 1985), two of which are found in North Carolina.

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

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Forbes (1948); Ferguson (1969, 1985)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Forbes (1948); Ferguson (1969, 1985); Wagner et al. (2001); Wagner (2005)

ID COMMENTS: This species and *Synchlora frondaria* are both small, bright green Emeralds, with narrow white antemedian and postmedian lines, a dorsal white stripe on the abdomen, and with little or no red on the wings (Ferguson, 1985). In *S. aerata*, the lines on the wings are fairly even, particularly on the forewing, and are usually only slightly dentate or waved, if at all. In *S. frondaria*, the lines are much more conspicuously dentate and there is a strong outward bulge in the postmedian of both wings located between M3 and Cu2 (some *aerata* show a slight offset in the postmedian on the hindwings but not on the forewings). *Nemoria bifilata* has a similar white abdominal stripe, but has a red terminal line that is absent in both of our *Synchlora* species.

DISTRIBUTION: Probably occurs statewide except possibly in the High Mountains

FLIGHT COMMENT: Flies throughout the growing season from March to October; no strong evidence of separate flights. Broadly overlaps with *Synchlora frondaria*.

HABITAT: Most of our records come from open, forb-rich habitats. These include old fields and disturbed areas but also natural habitats such as maritime dunes and marshes; Longleaf Pine savannas, flatwoods, and sandhills; and lake and river shorelines. Very few of our records come from deep within closed-canopy forests, especially where herbaceous species are scarce. Habitats used by *Synchlora aerata* strongly overlap with those used by *S. frondaria*.

FOOD: Both of our species of *Synchlora* are polyphagous, feeding on the flowers and seed heads of many species of herbaceous plants. Composites may be favored, with many species listed by Ferguson (1985) and Wagner et al. (2001). Specific hosts include yarrow (*Achillea*), asters, thoroughworts (*Eupatorium*), St. John's-wort (*Hypericum*), daisy (*Leucanthemum*), rose (*Rosa*), blackberry (*Rubus*), Black-eyed Susan (*Rudbeckia hirta*), sage (*Salvia*), and goldenrod (*Solidago*). No distinction has been reported between the host plants favored by our two species of *Synchlora*. In North Carolina, Charley Eiseman (BugGuide, 2018) has a record for a larva reared from Dog-fennel (*Eupatorium capillifolium*).

OBSERVATION METHODS: Comes well to blacklights but we have no records from bait or flowers. Wagner (2005) reports good success in looking for larvae on flowers, using anomalous collections of plant fragments as a cue.

NATURAL HERITAGE PROGRAM RANKS: G5 SNR [S4S5]

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

COMMENTS: This species is widespread, polyphagous on an extensive range of common plants, and occupies a broad set of habitats, including disturbed areas. Consequently, it appears to be secure within our state.