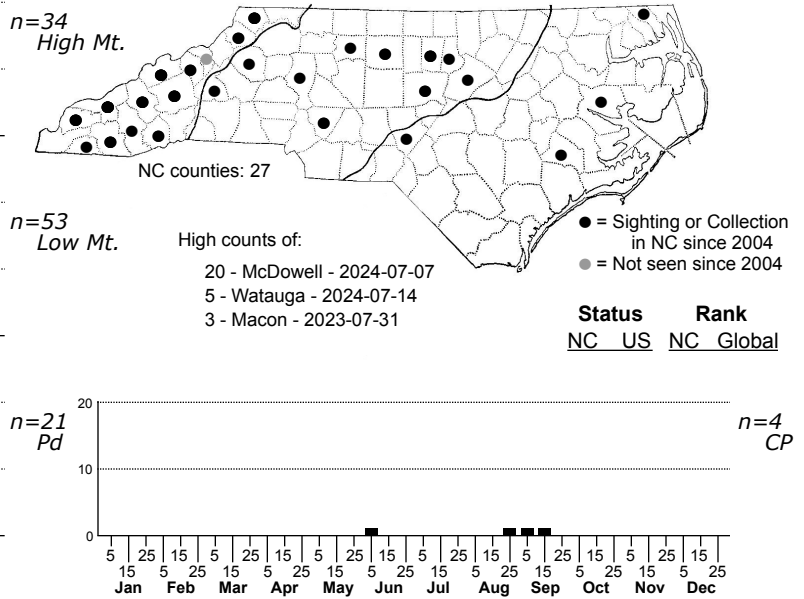
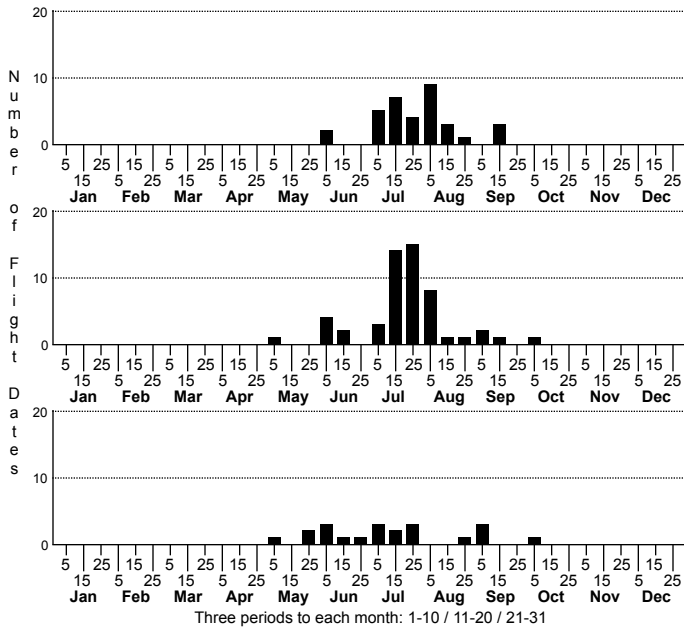


Herpetogramma thestealis Zigzag Herpetogramma Moth



FAMILY: Crambidae **SUBFAMILY:** Pyraustinae **TRIBE:** Spilomelini
TAXONOMIC_COMMENTS: Over 20 species of *Herpetogramma* have been described from North America that are based mostly on external morphology. The most recent treatment consolidates these into only nine species (Solis, 2010) and all nine occur in North Carolina. In particular, *H. abdominalis* is a previously recognized species that occurs in North Carolina, but is now treated as a junior synonym of *H. thestealis*.

FIELD GUIDE DESCRIPTIONS: Beadle and Leckie (2012)
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Solis (2010)
TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The following description is based in part on that of Handfield and Handfield (2021). The head, thorax, and abdomen are brown, with the abdomen having a narrow white crossband on the posterior margin of each segment. The ground color of the wings is white and is overlain with a complex pattern of dark-brown marks that are clean-cut. The costa of the forewing has a brown shading that extends from the base to the apex. The terminal line is dark brown, and the fringe varies from whitish to light brown with darker spotting near the base on each vein. A white patch is located between the dark-brown, round, orbicular spot and the dark-brown rectangular reniform spot, while a similar patch occurs between the reniform spot and the postmedial line. A short, brown, longitudinal dash is also usually evident between the orbicular and reniform, but displaced inward towards the middle of the wing.

The antemedial line is weakly sinuate and strikes the costa just anterior to the orbicular spot. The postmedial line projects inward from the costa at around three-fourths the wing length where it meets an outwardly bulged section with three blunt teeth. From there it projects basally towards the orbicular spot for a short distance, then sharply angles away after approaching the reniform spot and runs obliquely inwards to the inner margin where it sometimes joins the antemedial line. A prominent, toothed, dark-brown subterminal line follows the postmedial line and separates a whitish zone between the postmedial and subterminal lines from a zone of heavy brown dusting between the subterminal line and the outer margin. The hindwing has reduced brown dusting in the subterminal region, lacks the antemedial line, and has a discal spot. The postmedial line and subterminal lines are similar to the ones on the forewing. The fringe is white with brown spotting at the base, and there is a well-defined dark brown terminal line.

Handfield and Handfield (2021) reported that a light form exists that is similar to the dark form described above, except that the lines, markings, and wings are paler, especially in the subterminal area, which is yellowish-brown and contrasts with the gray-brown terminal line and deeply-scalloped subterminal line.

Herpetogramma pertextalis is similar to *H. thestealis* in terms of overall patterning, but the latter is darker overall, with a sharp contrast between the dark brown subterminal shade on the forewing and the whitish area between it and the postmedial line. The subterminal shade also noticeably widens as it approaches the costa, with the dark, inward-projecting tooth next to the costa often touching or nearly touching the postmedial line. *Herpetogramma thestealis* also has a whitish ground color, versus a more light yellowish-tan ground in *H. pertextalis*, and often has a violet or bluish iridescent sheen that is lacking in *H. pertextalis*. Finally, the inwardly projecting teeth on the subterminal line are finally tapered and less blunt than those of *H. pertextalis*. Size differences are also helpful, with *H. thestealis* being significantly larger than *H. pertextalis* (wingspan 30-35 mm versus 21-23 mm).

DISTRIBUTION: *Herpetogramma thestealis* is widely distributed across North America, including in California, the Pacific Northwest, the eastern U.S. and across most of southern Canada from British Columbia eastward to Prince Edward Island. In the eastern U.S., the range extends from Maine to southern Florida, and westward to Louisiana, eastern Oklahoma, eastern Kansas, eastern Nebraska, Iowa and Minnesota. This species occurs statewide in North Carolina, but is relatively uncommon in the Coastal Plain.

FLIGHT COMMENT: The adults have been observed from April through October in different areas of the range. As of 2024, our records extend from early-May through early-October, with a seasonal peak in July through mid-August.

HABITAT: Many of our records are from mesic hardwood forests, with coastal populations often associated with bottomland forests.

FOOD: This species is polyphagous and feeds mostly on woody species, but occasionally uses forbs (Forbes, 1923; Covell, 1984; Heppner, 2007; Solis, 2008, 2010; Handfield and Handfield, 2011, 2021; Robinson et al., 2010; Beadle and Leckie, 2012). The reported hosts include American Spikenard (*Aralia racemosa*), American Bittersweet (*Celastrus scandens*), Coastal Sweet-pepperbush (*Clethra alnifolia*), hazelnut (*Corylus* sp.), Mountain Silverbell (*Halesia tetraptera*), Common Winterberry (*Ilex verticillata*), American Ginseng (*Panax quinquefolius*), coneflowers (*Rudbeckia*) and American Basswood (*Tilia americana*). As of 2024, our only feeding record is for Spotted St. John's-wort (*Hypericum punctatum*).

OBSERVATION_METHODS: The adults are attracted to lights.

NATURAL HERITAGE PROGRAM RANKS: GNR [S3-S4]

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

COMMENTS: This polyphagous species is found statewide and appears to be reasonably secure.