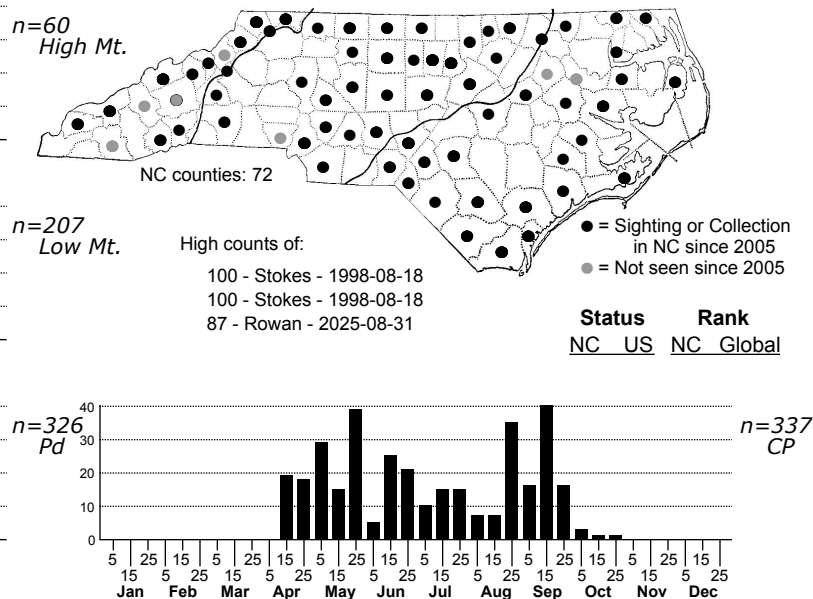
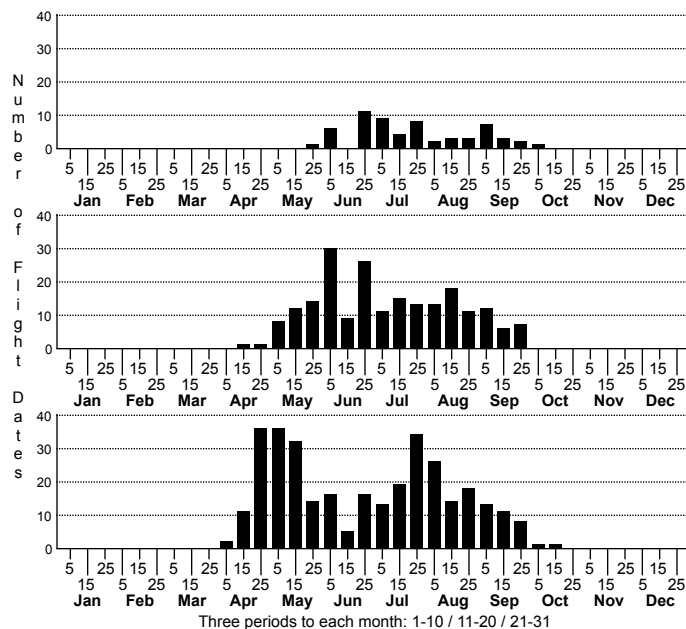


## *Hypagyrtis unipunctata* One-spotted Variant



FAMILY: Geometridae SUBFAMILY: Ennominae TRIBE: Bistonini

TAXONOMIC\_COMMENTS: This New World genus contains 7 species, 1 neotropical and 6 from North America, three of which occur in North Carolina (piniata may also be possibly present in the mountains -- Wagner et al., 2001). This genus shows a large range of variation, however, and its taxonomy still appears to be unsettled. Forbes (1948) stated that "the species or forms of this genus are completely confused and show no satisfactory differences in genitalia -- they may be merely races and strains, but breeding from known foods will be needed to make sure."

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

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Forbes (1948)

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

ID COMMENTS: This is a highly variable species. Forbes (1948) describes six different species that are now all included within unipunctata (Hodges et al., 1983). He describes most of these forms as having the ground color of the wings consisting of buff, yellow-brown, or luteous. In the case of triplipunctaria, the ground color is white or gray but dusted with black, producing a salt-and-pepper effect similar to that found in Hypagyrtis piniata, but differing in that its subterminal spot is triple rather than single. None show the even fuscous coloration of Hypagyrtis esther (or of brendae, which was not described until 1973), and the subterminal area is described as yellowish-brown rather than reddish as in esther. Sexes are dimorphic, with the females being larger, longer-winged, and having a more scalloped outer margin on the hindwing. Females can be extremely difficult to place for there is a form that looks very much like the females of H. esther.

DISTRIBUTION: Occurs statewide, including the Barrier Islands and High Mountains.

FLIGHT COMMENT: Found throughout the growing season, there appear to be three broods in the Coastal Plain and Piedmont and two in the mountains. Size varies by season and by altitude (Sullivan and Miller, 2007). First brood adults are dramatically different from subsequent broods in size and pattern which can be confusing.

HABITAT: We have records for this species from virtually all natural habitats in North Carolina, including maritime and estuarine evergreen forests; pocosins and other peatlands; longleaf pine savannas, flatwoods, and sandhills; brownwater and Piedmont river bottomlands and permanently flooded cypress swamps; mesic Piedmont and Mountain hardwood forests; dry glades and ridges in the Piedmont and Mountains; and cove forests and northern hardwoods in the Mountains. We do not, however, have any records from spruce-fir forests at the highest elevations in the Mountains.

FOOD: Larvae are polyphagous, feeding on a wide range of woody shrubs and trees, particularly broadleaf but possibly also pine (Forbes, 1948). Wagner et al. (2001) specifically list maple (<i>Acer</i>), alder (<i>Alnus</i>), serviceberry (<i>Amelanchier</i>), birch (<i>Betula</i>), American Hornbeam (<i>Carpinus caroliniana</i>), hazelnut (<i>Corylus</i>), ash (<i>Fraxinus</i>), American Sycamore (<i>Platanus occidentalis</i>), poplar (<i>Populus</i>), cherry (<i>Prunus</i>), oak (<i>Quercus</i>), willow (<i>Salix</i>), dogwood (<i>Swida</i>), American Basswood (<i>Tilia americana</i>), elm (<i>Ulmus</i>), and blueberry (<i>Vaccinium</i>). In North Carolina, larvae have been reared from or recorded feeding on Red Maple (<i>Acer rubrum</i>), Painted Buckeye (<i>Aesculus sylvatica</i>), River Birch (<i>Betula nigra</i>), hawthorn (<i>Crataegus</i>), Black Cherry (<i>Prunus serotina</i>), Bluejack Oak (<i>Quercus incana</i>), Water Oak (<i>Q. nigra</i>), Black Oak (<i>Q. velutina</i>), Live Oak (<i>Q. virginiana</i>), and blueberry.

OBSERVATION\_METHODS: Adults have short, non-functional mouthparts (Forbes, 1948); consequently, they do not come to bait or show up at flowers. They appear to come fairly well to blacklights with a maximum of 63 captured in a single trap.

NATURAL HERITAGE PROGRAM RANKS: G5 SNR [S5]

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

COMMENTS: Unless individual forms of this species are separated into more hostplant- or habitat-specific clades, <i>H. unipunctata</i> appears to be an extremely widespread habitat generalist in North Carolina and of no conservation concern.