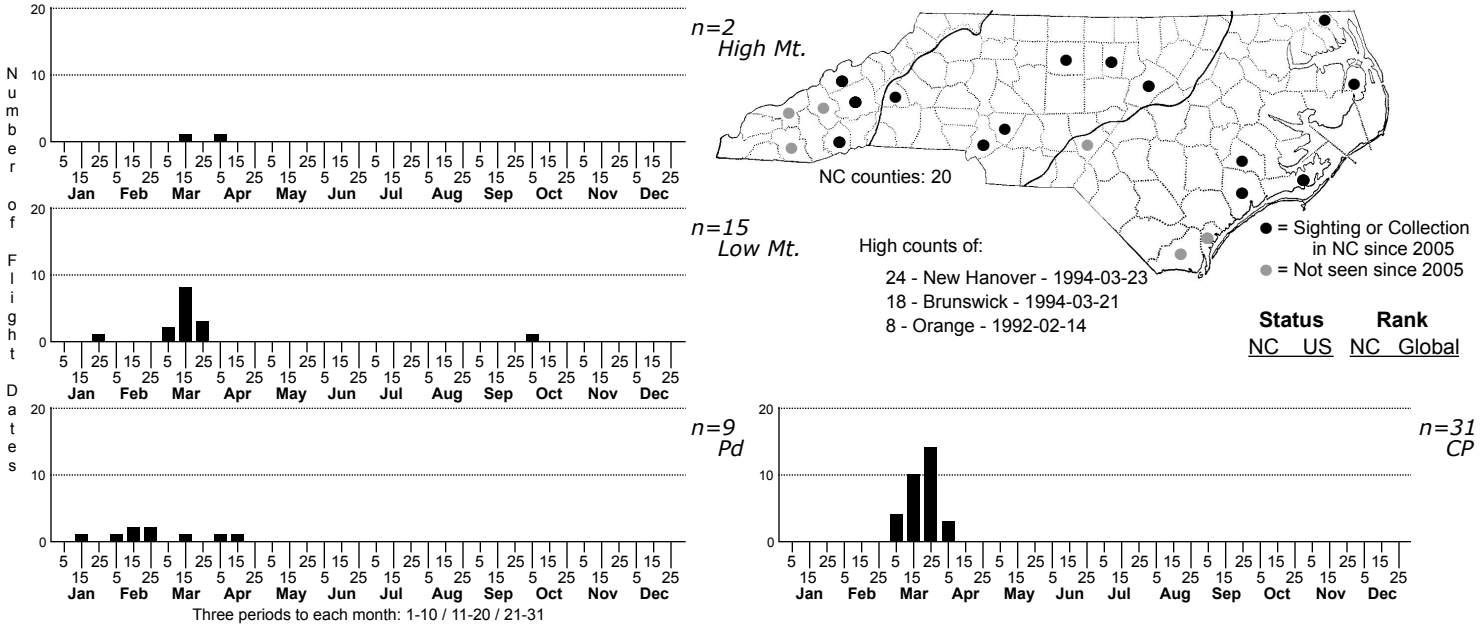
Phigalia titea Half-wing Moth



FAMILY: Geometridae SUBFAMILY: Ennominae TRIBE: Bistonini
TAXONOMIC_COMMENTS: One of four members of this genus that occur in North America, three of which are found in North Carolina

FIELD GUIDE DESCRIPTIONS: Covell (1984); Beadle and Leckie (2012)
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Forbes (1948); Rindge (1975)
TECHNICAL DESCRIPTION, IMMATURE STAGES: Forbes (1948); Wagner et al., 2001; Wagner, 2005

ID COMMENTS: Phigalia are among the very few geometrids that fly during mid-winter to early spring. They can be distinguished from Alsophila and Paleacrita, which also fly during this period and are similarly pale gray, by their blackish antemedian, median, and postmedian lines. In Phigalia titea, the ground color is whiter than in the other two Phigalia, particularly in the median area, and more strongly contrasts with the clean-cut black lines (Forbes, 1948; Rindge, 1975); there is also, however, a melanic form that is more uniformly dark across the entire wing. The postmedian line is less scalloped or toothed than the other two species, although there may be dashes or thickenings at the veins that produce at least a slight jaggedness in an otherwise smoothly sinuous line. As in P. denticularia, the postmedian makes a bend towards the median line in the lower part of the wing but diverges from it at the inner margin. Females of all three species of Phigalia have stubby, non-functional wings (which are virtually absent in female Alsophila and Paleacrita). Females are grayish brown -- bronwer than in the males -- and with pale gray wings that often have a single dark cross bar (Rindge, 1975).

DISTRIBUTION: Probably occurs statewide, including both the Outer Banks and High Mountains. The lack of records over most of the state is probably due to its early flight period.

FLIGHT COMMENT: Single-brooded with adults flying only in the early spring. Emerges somewhat later than P. denticulata and strigataria but overlaps with them.

HABITAT: Most of our records come primarily from fairly dry habitats, including maritime forests and sandhills in the Coastal Plain, and dry ridges in the Mountains. However, we also have records from more mesic habitats, including lakeshores and peatlands; more sampling during the early part of the year will be needed to clarify its habitat associations.

FOOD: Larvae are polyphagous on woody trees and shrubs. Wagner et al. (2001) specifically list apple (Malus), basswood (Tilia), birch (Betula), blueberry and cranberry (Vaccinium), elm (Ulmus), hickory (Carya), maple (Acer), oak (Quercus), and poplar (Populus). In North Carolina, we have probable feeding records from hawthorn (Crataegus), Live Oak (Quercus virginiana), and Post Oak (Q. stellata). J.B. Sullivan reared larvae from Bluejack Oak (Quercus incana), Turkey Oak (Q. laevis), Live Oak, and Sparkleberry (Vaccinium arboreum).

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 large numbers occasionally captured in a single trap.

NATURAL HERITAGE PROGRAM RANKS: G5 SNR [S3S4]

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

COMMENTS: Given its wide range of larval host plants, broad habitat associations, and extensive occurrence across the state, this species appears to be secure.