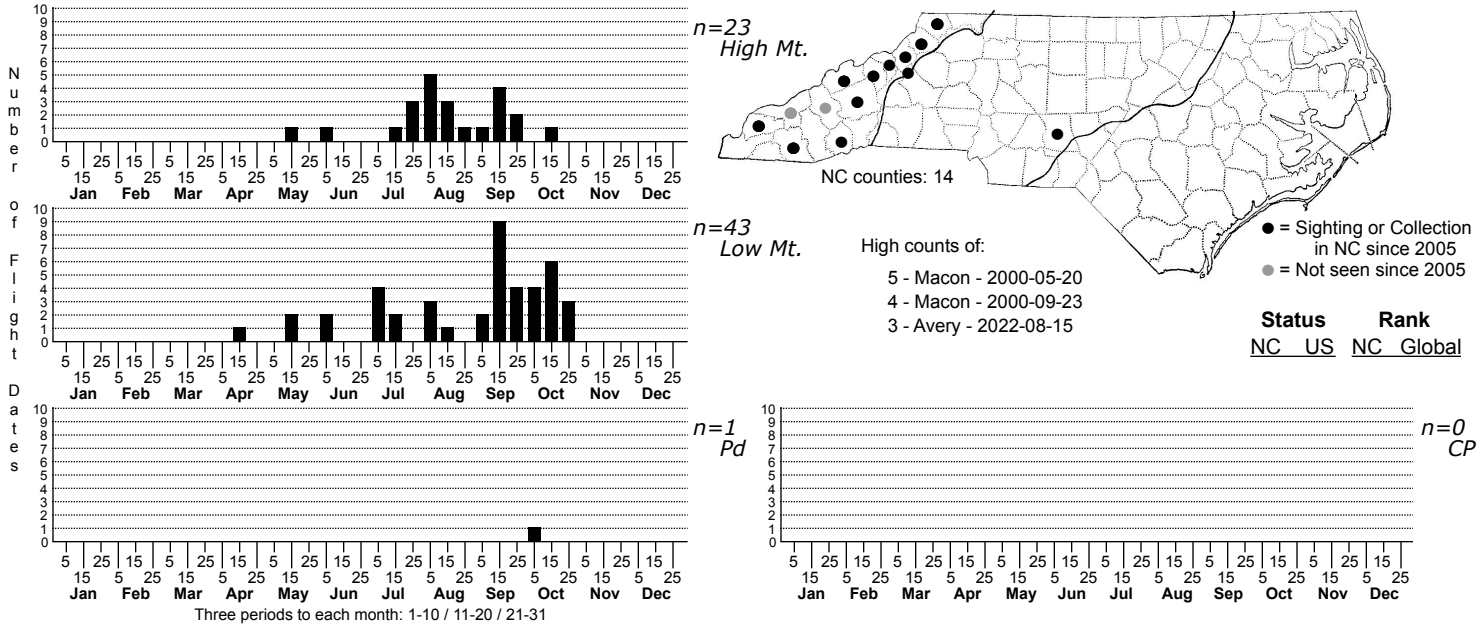
Lambdina fiscellaria Hemlock Looper Moth



FAMILY: Geometridae SUBFAMILY: Ennominae TRIBE: Ourapterygini
TAXONOMIC_COMMENTS: One of nine members of this genus that occur in North America, four of which have been recorded in North Carolina.

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); Maier et al. (2013)

ID COMMENTS: A medium-sized Geometrid. Variable in color, with both yellowish and gray forms similar to L. fervidaria and pellucidaria, with similar dusting with darker gray. Possesses a more angular outer margin than other species of Lambdina, with points at M3 on the fore- and hindwings . The lines are dark brown and clean-cut, usually edged with yellow on the sides away from the median area (Forbes, 1948). The postmedian is characteristically sharply bent at M3. Could be confused with Besma endropiaria, which is similar in color and in its angulate wings. The postmedian line in that species, is more smoothly curved in endropiaria and a submedian line is usually present, which is absent in species of Lambdina.

DISTRIBUTION: Almost all of our records come from the Mountains, but with one anomalous record from the eastern Piedmont that suggests that it could be much more widespread.

FLIGHT COMMENT: Appears to be bivoltine in the Mountains, with the second brood extending later into the fall than is true for the other species of Lambdina. The one Piedmont record we have is from October, well after the last dates for L. fervidaria in that region.

HABITAT: All but one of our records come from mesic forests in the Mountains, including riparian and cove forests at lower elevations and northern hardwoods and spruce-fir forests at high elevations. Our one record from the Uwharrie Mountains area in the eastern Piedmont is aberrant enough but even more anomalous in coming from a stand of dry hardwood forest, although one that contains an extensive seepage slope. No Hemlocks are known from that area and the pines at that site are a mixture of Coastal Plain and Piedmont species, including Pond, Longleaf, Shortleaf, and Loblolly.

FOOD: Larvae are polyphagous, feeding primarily on fir (Abies), hemlock (Tsuga), spruce (Picea), pine (Pinus) and other conifers, but also on hardwood trees and shrubs, at least during outbreaks (Wagner et al., 2001; Maier et al., 2011).

OBSERVATION_METHODS: Appears to come well to 15 watt UV lights but not recorded at flowers or bait.

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: This species is regarded as a pest of Hemlock forests in Canada and is subject to suppression efforts using Bacillus thurengiensis and other biological controls (Hebert and Brodeur, 2013). We have only a moderate number of records for this species in North Carolina, however, almost all from the Mountains; the North Carolina Forest Service does not list this species as a forest pest in this state. Given that it has several alternative larval hosts, it is uncertain how threatened fiscellaria might be due to decimation of two of its most important host species, Fraser Fir by the Balsam Wooly Adelgid and of Hemlock by the Hemlock Wooly Adelgid.