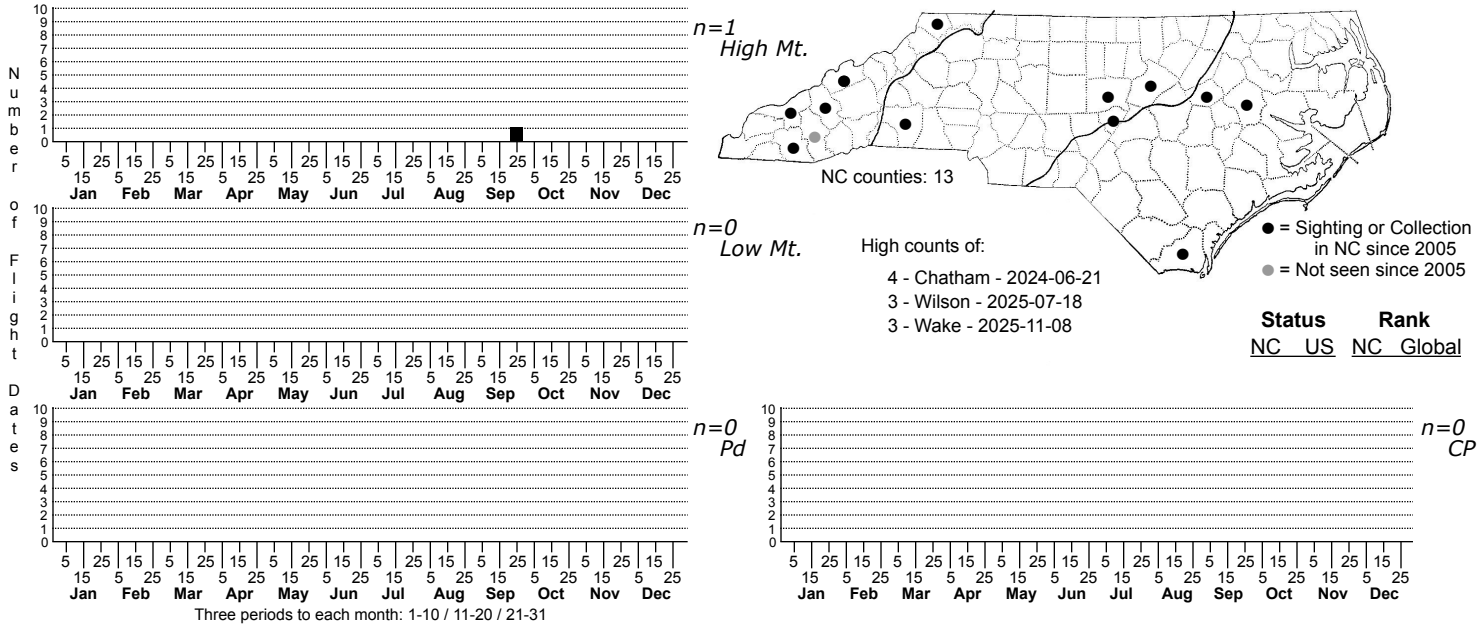
Stigmella corylifoliella None



FAMILY: Nepticulidae SUBFAMILY: Nepticulinae TRIBE: Nepticulini
TAXONOMIC_COMMENTS: Members of the genus Stigmella are a group of small leaf-mining moths that typically create linear mines, although a few species form linear-blotch or blotch mines. Newton and Wilkinson (1982) recognized 51 species in their revision on the North American fauna, and new discoveries have since raised the total to around 57 species. Almost all species are specialists and rarely use more than one genus of host plants. Host-specificity, mine characteristics, and genitalic differences are helpful in recognizing closely related forms that are externally similar.

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Wilkinson and Scoble (1979).
TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The following description of the adults is based on descriptions in Braun (1917) and Wilkinson and Scoble (1979). The palps are gray and lustrous, and the antenna is purplish gray and lustrous. The eye-cap is shining white and often has brownish purple shading around the edges. The collar varies from pale ochreous to gray-purple. The tuft on the front of head and vertex is pale ochreous to bright orange-ochreous. The thorax and abdomen are dark grayish purple. The ground color of the forewing is dark grayish brown to purplish black and sometimes has a bronze or purple reflection. There is a single broad, white, postmedial fascia that is shining silver. The fringe is gray and irrorate with brown. The legs are purplish gray to purplish black and lustrous, with pale ochreous patches that are most evident on the forelegs, midlegs, hind tarsi and tibial spurs. Stigmella corylifoliella is indistinguishable from S. ostryaefoliella and S. caryaefoliella based on external traits. It is best identified using genitalia, barcoding, or host plant affiliation.

DISTRIBUTION: Stigmella corylifoliella is broadly distributed across Canada from the Northwest Territories and Alberta eastward to Nova Scotia and Newfoundland (Pohl et al. 2018; Eiseman, 2019). In the US it occurs from Michigan and Ohio eastward to Maine and Massachusetts, and as far south as Mississippi and North Carolina. As of 2019, our records are from the Blue Ridge.

FLIGHT COMMENT: Local populations appear to be bivoltine. Braun (1917) first found larvae in southern Ohio in June and early July. A second brood was was present from late August until October.

HABITAT: Stigmella corylifoliella is unusual among the eastern Stigmella in being polyphagous. It is known to feed on members of five families of vascular plants that occupy a wide ranges of ecological conditions.

FOOD: Hosts that have been documented through DNA barcoding by Erik van Nieukerken (Eiseman, 2019) include members of the Betulaceae (Alnus, Betula, Carpinus, Corylus, Ostrya), Ericaceae (Gaylussacia, Lyonia, Rhododendron, Vaccinium), Myricaceae (Comptonia, Morella, Myrica), Rhamnaceae (Ceanothus), and Rosaceae (Amelanchier, Physocarpus). In North Carolina, mines have been recorded on Hazel Alder (Alnus serrulata), River Birch (Betula nigra), American Hornbeam (Carpinus caroliniana), hazel (Corylus), Maleberry (Lyonia ligustrina), Waxmyrtle (Morella cerifera), Northern Highbush Blueberry (Vaccinium corymbosum), Hillside Blueberry (V. pallidum), and Deerberry (V. stamineum).

OBSERVATION_METHODS: The adults appear to only occasionally visit lights and most records for the eastern US are based on either leaf mines, or adults that were reared from mines.

NATURAL HERITAGE PROGRAM RANKS: GNR SU

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

COMMENTS: We currently do not have sufficient information on the distribution and abundance of this species to assess its conservation status.