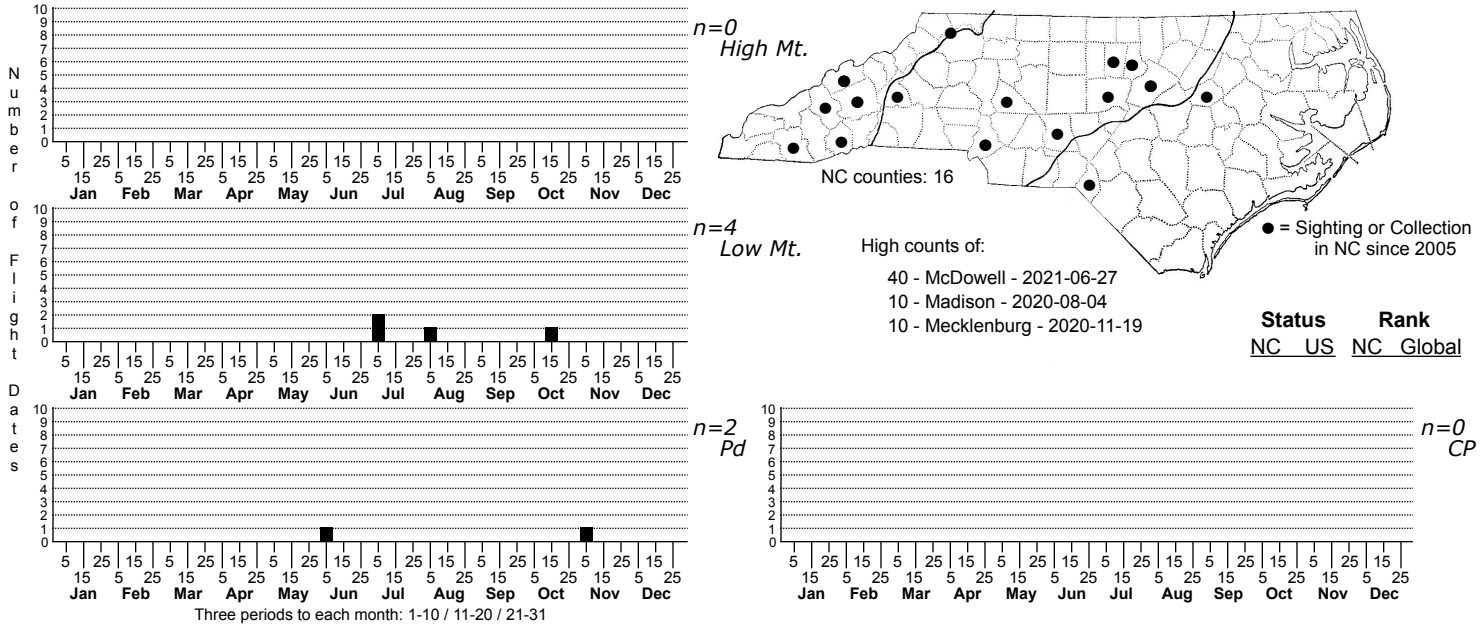
Stigmella prunifoliella None



FAMILY: Nepticulidae SUBFAMILY: TRIBE:
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: Braun, 2017; Wilkinson and Scoble (1979).
TECHNICAL DESCRIPTION, IMMATURE STAGES: Braun, 2017.

ID COMMENTS: The following description is based on Braun (1917) and Wilkinson and Scoble (1979). The palps are gray and lustrous, and the antenna are dark brownish gray. The tuft is orange-ochreous and the eye-cap shining creamy white. The collar is very dark gray. The thorax and base of the forewing to the first fascia are dark purple. Beyond the first fascia, the wing is dark brown to brownish black with bronzy reflections. There are two shining silver fasciae, one at one-third and the second at two-thirds of the wing length. The cilia are concolorous to gray, but become silvery at their tips. The hindwing and cilia are gray. The legs are dark gray with some purple reflections, while the tarsi are pale ocherous.

Stigmella prunifoliella is externally indistinguishable from S. ceanothi, which is not known to occur in North Carolina. This is a more western form that occurs as far east as Massachusetts and Connecticut. These two species can be reliably identified by either genitalia or by raising adults from the host plants.

DISTRIBUTION: Stigmella prunifoliella has been documented in southeastern Canada (Ontario; Nova Scotia,New Brunswick) and as scattered populations in the eastern US to as far west as Iowa, and as far south as Mississippi and North Carolina (Eiseman, 2019). As of 2020, we have records from all three physiographic provinces.

FLIGHT COMMENT: Local populations are trivoltine. Braun (1917) noted that this species is one of the earliest to appear in the spring. In the vicinity of southern Ohio and Kentucky, the larvae in the first brood become full grown by the middle of May. A second brood occurs in June and July and the last in September.

HABITAT: The larvae feed on Prunus spp. and appear to rely heavily on Black Cherry. This species is found throughout most of the state where it is common along forest edges and in other disturbed or early successional habitats. Black Cherry is also common in bottomlands and in rich, mesic hardwood forests.

FOOD: Larvae mine the leaves of Prunus species; Black Cherry (P. serotina) appears to be the primary host, but there are also records for Canada Plum (P. nigra), Fire Cherry (P. pensylvanica), and Peach (P. persica) (Eiseman, 2022). In North Carolina, mines have been recorded on Black Cherry and Chickasaw Plum (P. angustifolia).

OBSERVATION_METHODS: The adults appear to occasionally visit lights, but cannot always be reliably identified without examining genitalia. The leaf mines are readily visible on Black Cherry leaves, and we recommend raising adults from mines.

NATURAL HERITAGE PROGRAM RANKS: GNR S3S4

STATE PROTECTION:

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