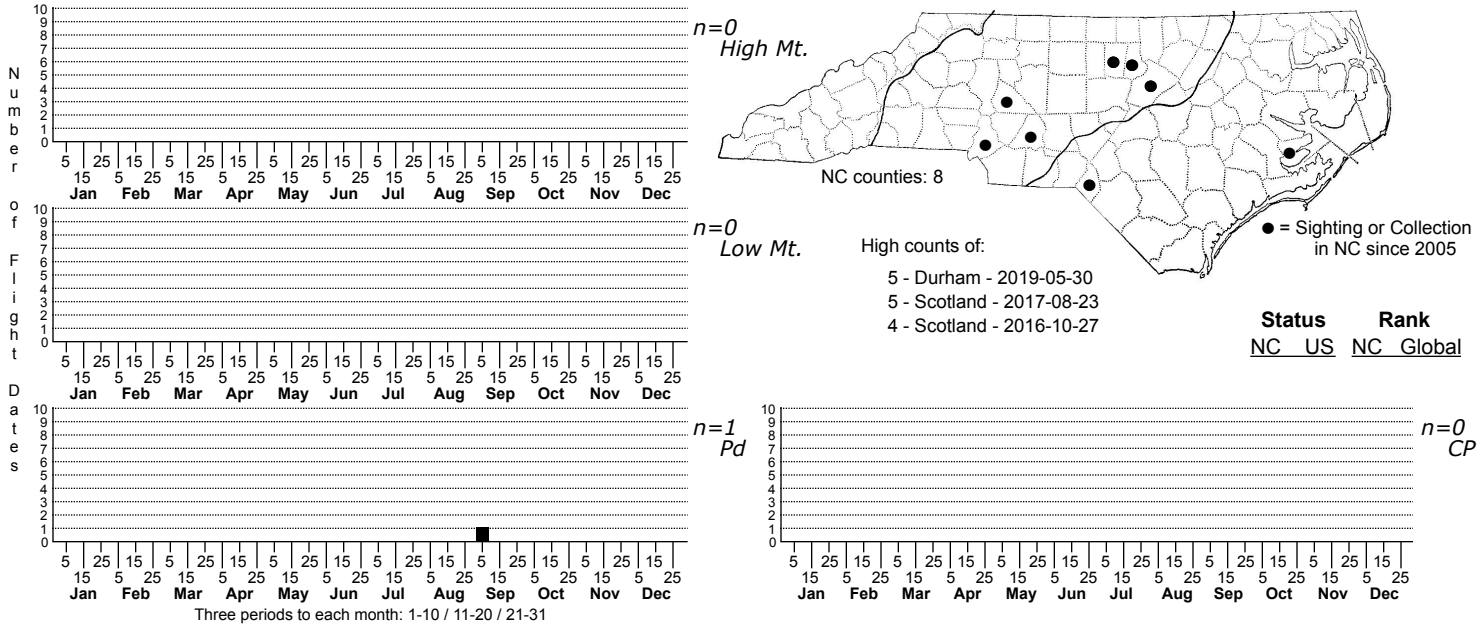
Stigmella apicialbella None



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, 1917.
TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The following description is based on Braun (1917) and Newton and Wilkinson (1982). The palps are whitish. The tuft is ochraceous, while the collar is creamy white. The eye-cap is white, and the antenna is dark brown and faintly annulated with a paler shade. The thorax is dark purplish brown. The forewing is dark brown with a faint purple to bronze luster that shines more strongly beyond the fascia. Beyond the middle of the wing there is a narrow, oblique white fascia that reaches the margin further from the base on the dorsum. A distinct whitish patch is present at the tip of the wing that is formed from white scales at the extreme tip of the wing, along with whitish apical cilia. The remaining cilia are gray, and the hindwing and hindwing cilia are dark gray. The legs are shining grayish ocherous. The hind femur is creamy white and the hind tarsi dark gray. The abdomen is dark purplish above and pale beneath. This species is easy to distinguish based on the combination of a yellow head, a white collar, a narrow medial white fascia on the forewing, and an apical triangular white spot that extends into the fringe (Nieukerken et al., 2018).

DISTRIBUTION: Stigmella apicialbella is widespread in eastern North America where the host species occur locally. It has been found in Canada (Ontario; Quebec; New Brunswick), and in the US from Illinois eastward to New England, then southwestward to Alabama and Mississippi (Nieukerken et al. 2018; Eiseman, 2019). As of 2019, we have records from the Inner Coastal Plain and the eastern Piedmont.

FLIGHT COMMENT: Braun (1917) noted that there are three generations in southern Ohio and vicinity. She found full grown larvae in mid-June, in late July, and in August and September.

HABITAT: Stigmella apicialbella is a specialist on several species of elms. These occupy habitats that range from swamp margins, bottomland forests, and moist, rich slopes, to drier slopes and rocky woods. They also occur in open, disturbed habitats such as fencerows and old fields. Elms show a general preference for nutrient-rich soils.

FOOD: Larvae feed on elms (Ulmus spp.), including Winged Elm (Ulmus alata), American Elm (U. americana), Slippery Elm (U. rubra), and Rock Elm (U. thomasii) (Eiseman, 2022). The HOSTS database (Robinson et al., 2010) also lists a variety of other trees, including maple, birch, ash, poplar, oak, and willow; these records are questionable and require verification. In North Carolina, mines have been recorded on Winged Elm, American Elm, and Slippery Elm.

OBSERVATION_METHODS: The adults rarely visit lights and almost all records are based on either leaf mines, or adults that were raised from mines.

NATURAL HERITAGE PROGRAM RANKS: GNR S2S3

STATE PROTECTION:

COMMENTS: We currently do not have sufficient data to assess the conservation status of this species within the state.