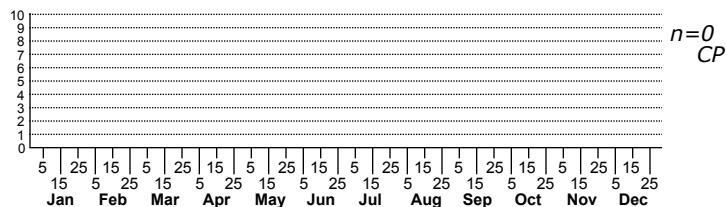
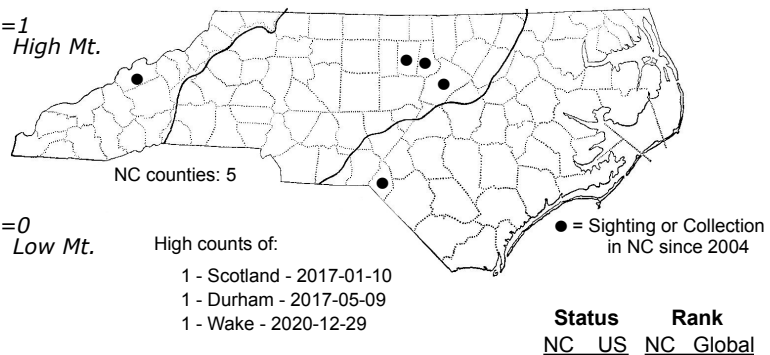
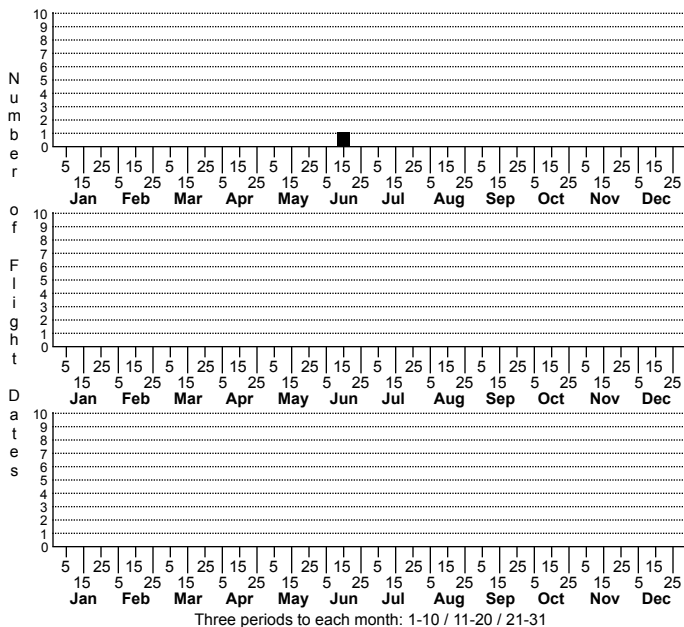


*Marmara serotinella* No common name



FAMILY: Gracillariidae SUBFAMILY: Marmarinae TRIBE:

TAXONOMIC COMMENTS: The genus *Marmara* contains 19 described species from North America and numerous undescribed species. Most species are monophagous, and the mines have been found on over 80 North American plant genera that belong to 40 families (Eiseman et al., 2017). Given the small number of described species relative to the large number of hosts, there appear to be dozens of undescribed species in the US. Many of the species are difficult to rear and are only known from leaf or stem mines. North Carolina appears to have numerous undescribed species based on host preferences and mine characteristics. We have included forms that we believe are probably undescribed species (ca. 30) and have listed these by their host plants. We encourage individual to submit any leaf or stem mines that they find based on the plant hosts in order to better document the distribution and relative abundance of these forms in North Carolina.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Busck, 1915.

TECHNICAL DESCRIPTION, IMMATURE STAGES: Eiseman, 2019

ID COMMENTS: The following is based on the description by Busck (1915). The labial palp is silvery white, and the second joint has a blackish brown apical annulation. The maxillary palp is dark fuscous. The face and front parts of the head are silvery white, and the top of the head dark brown. The antenna is white with blackish brown annulations, and the thorax is blackish brown. The forewing has a blackish brown ground color with silvery white markings. There is a broad, triangular, white fascia at the basal third that is broadest on the dorsal edge and attenuated on the costal edge. A second oblique white fascia occurs beyond the middle of the wing that is thinner on the middle and sometimes completely interrupted to form paired dorsal and costal streaks. At the apical fourth there is a small white costal spot and an opposing dorsal spot. Beyond this is a small white dash or a few white dots in the costal cilia. The cilia are dark fuscous. The hindwing is dark brownish fuscous, and the legs are silvery white with dark brown bands and blotches concentrated on the upper regions. This species is similar to *M. salicella*, but on *M. serotinella* the white fascia at the basal third is conspicuously much broader on the dorsal edge compared to the costal edge.

DISTRIBUTION: *Marmara serotinella* is found in eastern North America where scattered populations have been found in Ontario, Michigan, Ohio and the northeastern states southward to Virginia and North Carolina. As of 2022, our records are from the western Coastal Plain, eastern Piedmont, and a lower elevation site in the Blue Ridge.

FLIGHT COMMENT: The very limited data on adults indicate that local populations are univoltine, with the adults active in July and August.

HABITAT: This species is dependent on Black Cherry for reproduction. Black Cherry is common in hardwood and mixed-hardwood forests in the mountains and elsewhere. The seeds are dispersed by birds, and plants often become established in disturbed habitats such as fencerows, abandoned fields, forest edges and urban landscapes.

FOOD: Black Cherry (*Prunus serotina*) is the primary and perhaps exclusive host (Robinson et al., 2010). Eiseman (2019) found a mine on Fire Cherry (*P. pensylvanica*) that closely resembled that of *M. serotinella*, suggesting that this species is also a host. As of 2022, our records for North Carolina are all from Black Cherry.

OBSERVATION METHODS: The adults appear to very rarely visit lights and most records are based on stem mines. We encourage naturalists to search for the stem mines on Black Cherry.

NATURAL HERITAGE PROGRAM RANKS: GNR S2S3

STATE PROTECTION:

COMMENTS: As of 2020 we have only two state records, which likely reflects the fact that little effort has been put forth to document stem miners in North Carolina. We need additional data before the conservation status of this species can be accurately assessed.