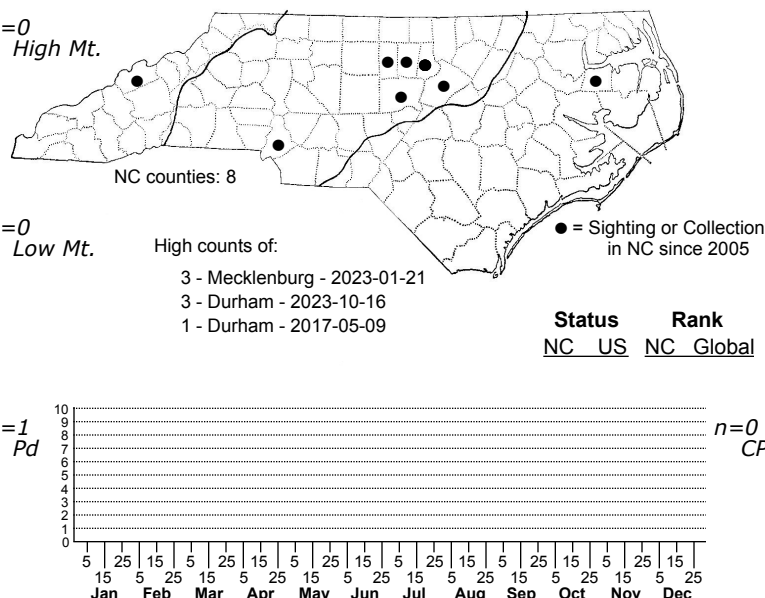
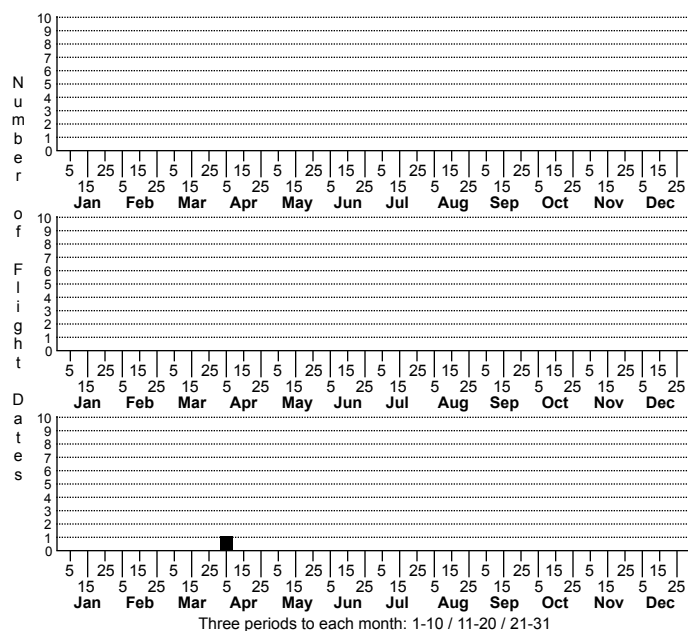


Marmara fraxinicola None



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: Braun, 1922.

TECHNICAL DESCRIPTION, IMMATURE STAGES: Braun, 1922; Fitzgerald and Simeone, 1971; Fitzgerald, 1973; Eiseman, 2019.

ID COMMENTS: The following is based on the description by Braun (1922). The maxillary palp is white inwardly and black outwardly. The labial palp is white, except for the black outer side of the second segment and a black spot near the tip of the third segment. The antenna is white and the pecten black. The head, thorax and ground color of the forewings are shining white. At the extreme base of the costa there is a small brown spot that is outwardly margined with dark brown scales. Immediately following it, and connected with it by minute brown dusting, is a large brown blotch that extends to near the mid-point of the wing. Near the middle of wing there is a posteriorly angulated fascia that is broad and brown. Following this at two-thirds, there is an oblique brown fascia that begins at the costa and forks about midway. The inner fork continues to the dorsum, while the outer fork curves to the dorsum at the tornus. Between the forked fascia and the apex there is an oblique and slightly curved brown fascia that extends to the fringe. There is a minute brown apical spot, and two oblique brown lines that run into the white cilia on either side of the apex. The cilia has a brown line that runs through the base. The hindwing and cilia are dark brown. The front and middle legs are white, with the femora brown. The lower portions have banding or spotting on the tarsi. The hind leg has oblique brown streaks.

DISTRIBUTION: *Marmara fraxinicola* is found in eastern North America, but the range is poorly defined because of the scarcity of records. Adults or mines have been found in Ontario, Minnesota, Ohio, Vermont, Massachusetts, Connecticut, New York, Pennsylvania, North Carolina and Texas. As of 2024, most of our records are from the Piedmont, with one from a lower-elevation site in the Blue Ridge.

FLIGHT COMMENT: Local populations are univoltine and the adults are active following the spring warm-up, typically between May through July.

HABITAT: Local populations are dependent on ash trees for successful reproduction. These are found in a variety of hardwood and mixed-hardwood forests that occur in floodplains and bottomlands, as well as on more mesic to drier slopes.

FOOD: The documented hosts are White Ash (*Fraxinus americana*) and Green Ash (*F. pennsylvanica*), but other ashes may be used (Braun, 1922; Fitzgerald and Simeone, 1971; Fitzgerald, 1973; Eiseman, 2019). In North Carolina, we have recorded mines on White Ash, Green Ash, and Pumpkin Ash (*F. profunda*).

OBSERVATION_METHODS: The adults appear to rarely visit lights and many records are based on the stem mines. We encourage naturalists to search for stem mines on ashes to document local populations that occur within the state.

NATURAL HERITAGE PROGRAM RANKS: GNR SNR [S1S3]

STATE PROTECTION:

COMMENTS: As of 2023, this species is only known in North Carolina from a few sites in Durham and Mecklenburg County, but probably still occurs in other regions of the state. *Marmara fraxinicola* has a High Endangerment Risk due to the widespread destruction of ashes by the Emerald Ash Borer (Wagner and Todd, 2016). The threat status alone merits a high conservation concern both within the state and globally.