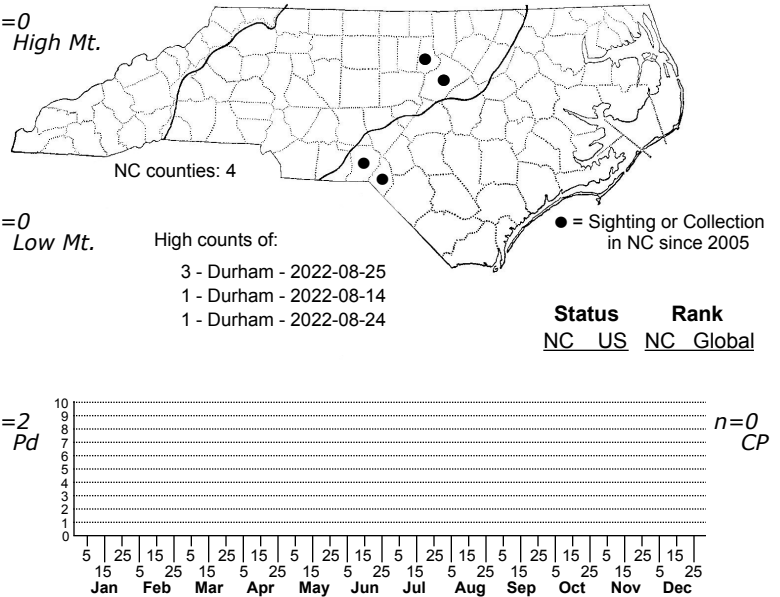
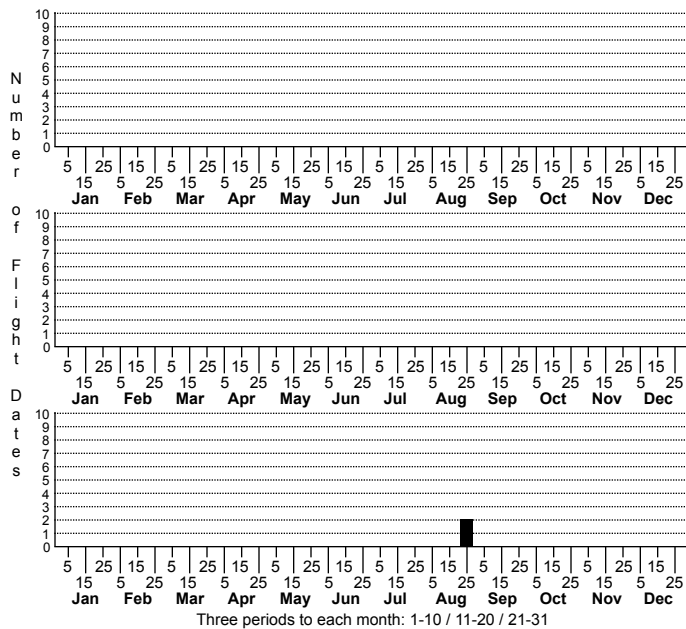


Marmara auratella None



FAMILY: Gracillariidae SUBFAMILY: Gracillariinae TRIBE: [Gracillariini]

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 (1915)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Braun (1915); Eiseman (2022).

ID COMMENTS: The following description is based on that of Braun (1915) based on two reared adults from Ohio. The head and thorax are dark brown and have a distinct bronzy luster, while the face is metallic gray. The antenna is dark brown and the labial palp bronzy, with the apical half of the third segment whitish. The forewing ground color is dark bronzy brown to blackish and has an almost golden luster under brilliant illumination. The forewing ground is overlaid with a series of brilliant silvery white marks. The first is a fascia at the basal fourth of the wing that is nearly straight on the inner margin, but broadens outwardly below the fold. At the middle of the wing there is a somewhat oblique costal streak, and nearly opposite it but a little farther back on the dorsal margin, an erect dorsal streak. The remaining marks include a triangular costal streak at the apical third that almost meets the apex of a similar, opposing dorsal streak, and a narrow costal streak just before the apex that nearly crosses the wing. The cilia are mostly dark brown, but shining white opposite the apex. The hindwing and fringe are dark brownish gray, and the legs are dark brown with broad silvery annulations. The lower side of the abdomen has segments that are silvery on the posterior half.

DISTRIBUTION: The range is poorly documented. As of 2024, records include southern Ohio and eastern North Carolina where we have records from the eastern Piedmont and western Coastal Plain.

FLIGHT COMMENT: Braun (1915) noted that there are two generations a year in southern Ohio, with the first pupating toward the end of July and produce adults in early August. The larvae of the second generation pupate in October and overwinter, with the adults emerging the following June. As of 2024, we have adult records from late-August, and records of occupied mines or pupae from August.

HABITAT: Local populations are generally found either in disturbed habitats such as weedy fields or roadsides, or in Sandhill communities with open canopies that support herbaceous species.

FOOD: The larvae mine the stems of composites, including a cultivated form of Cutleaf Coneflower (*Rudbeckia laciniata*) and ornamental *Dahlia* (Braun, 1915; 1922). Tracy Feldman has several records of this species feeding on Dog-fennel (*Eupatorium capillifolium*) and Yankeeweed (*E. compositifolium*) in North Carolina, with the former appearing to be the most commonly used host. These are the only native species that are used as hosts that we are aware of.

OBSERVATION_METHODS: Local populations are best documented by searching for the mines and bark flaps on *Eupatorium* species and rearing the adults.

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: