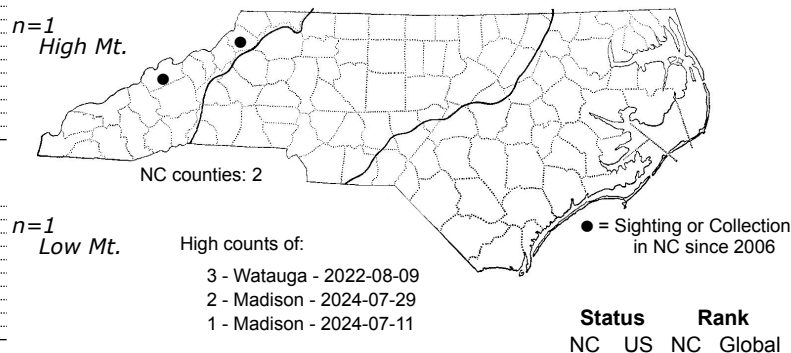
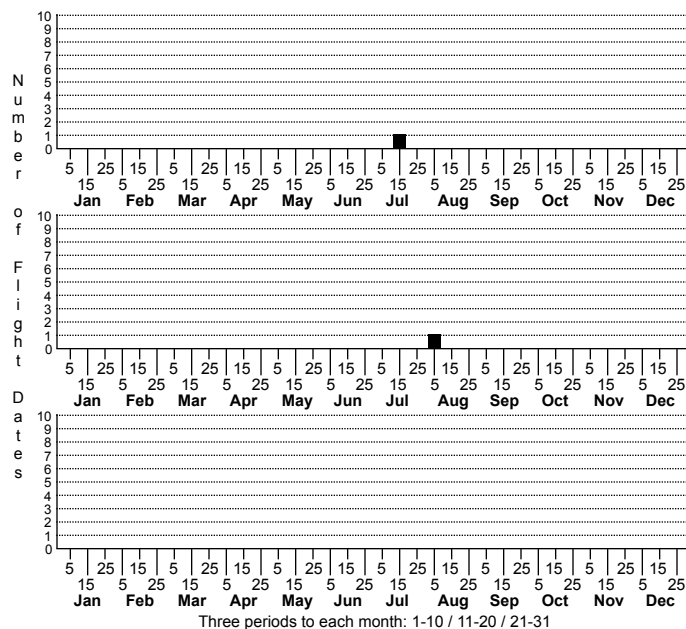


Phyllonorycter maestingella Beech Midget



FAMILY: Gracillariidae SUBFAMILY: TRIBE:
TAXONOMIC_COMMENTS:

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Braun (1939)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Eiseman (2022)

ID COMMENTS: *Phyllonorycter maestingella* is a small micromoth with a light golden-brown ground color on the forewing that is boldly marked with a series of white streaks with black margins anteriorly. The following detailed description is based on that of Braun (1939). The face and labial palps are silvery white, with the latter shaded with fuscous outwardly. The head tuft has a mixture of white and brown scales, and the antenna is mostly white with brownish coloration towards the tip. The thorax is golden-brown, with lateral and median white lines.

The forewing has a median longitudinal white streak from the base to one-third the wing length, and a short white streak along the inner margin near the base. A fine, dark-brown line extends along the costa from the base to the first white costal streak just before the middle. From there, it angles inward to form the inner dark margin of the streak. Opposite the first costal streak, there is a matching white, and rather broadly triangular, dorsal streak, with the apices of this pair separated by a small gap. Beyond the first pair of streaks there are three costal streaks, with the last two often united. There are also two dorsal streaks. The first is about the size and shape of the first dorsal streak, with its apex a little beyond that of the corresponding costal streak. The second is much smaller and between the last two costal streaks. All of the streaks are dark-margined of the anterior side, and there is an elongated patch of black scales near the apex. The fringe is whitish, with the marginal row of scales around the apex blue-tipped. The hindwing and fringe are grayish white and faintly tinged with ochreous. The legs are mostly silvery white, with the anterior pair fuscous inwardly, and the middle and posterior pair very faintly tinged with fuscous at the tips of the segments.

DISTRIBUTION: *Phyllonorycter maestingella* appears to be an introduced species from Eurasia and is mostly found at northern latitudes in the eastern US and southern Canada. Specimens have been observed in western North America in British Columbia, Washington and Oregon. In the East, the range includes portions of Ontario, Quebec, New Brunswick, Nova Scotia, and Prince Edward Island in Canada. In the US, populations have been documented in the New England states southward to New Jersey and westward through New York and Pennsylvania to Ohio and Michigan. Populations have recently been documented in the southern Appalachians in the Blue Ridge of North Carolina that appear to be disjunct from the main range to the north. As of 2025, our records are all from mid- to higher elevation sites in Madison and Watauga counties.

FLIGHT COMMENT: The adults appear to be active throughout most of the growing season depending on the latitude. As of 2025, our very limited records are from mid-July and early-August.

HABITAT: Populations in North Carolina are found in mesic forests in the Blue Ridge where American Beech is present.

FOOD: Larvae primarily mine the leaves of American Beech (*Fagus grandifolia*), although there are a few recent records of it using European Beech (*Fagus sylvaticus*) where it is planted as an ornamental tree (Eiseman, 2022; iNaturalist). A report of this species using American Chestnut (*Castanea dentata*) need additional verification. As of 2025, all of our records are for American Beech.

OBSERVATION_METHODS: The adults are attracted to lights and the tentiform mines are easy to spot on beech leaves.

NATURAL HERITAGE PROGRAM RANKS: GNR SNA

STATE PROTECTION:

COMMENTS: There appear to be populations of this species in the southern Appalachians that are geographic disjuncts from the main range in the northeastern US and southern Canada. Since this species appears to have been introduced from Europe, it is of no conservation concern. However, DNA barcoding would be worth conducting to assure that southern Appalachian populations are indeed introductions from Europe and not native.