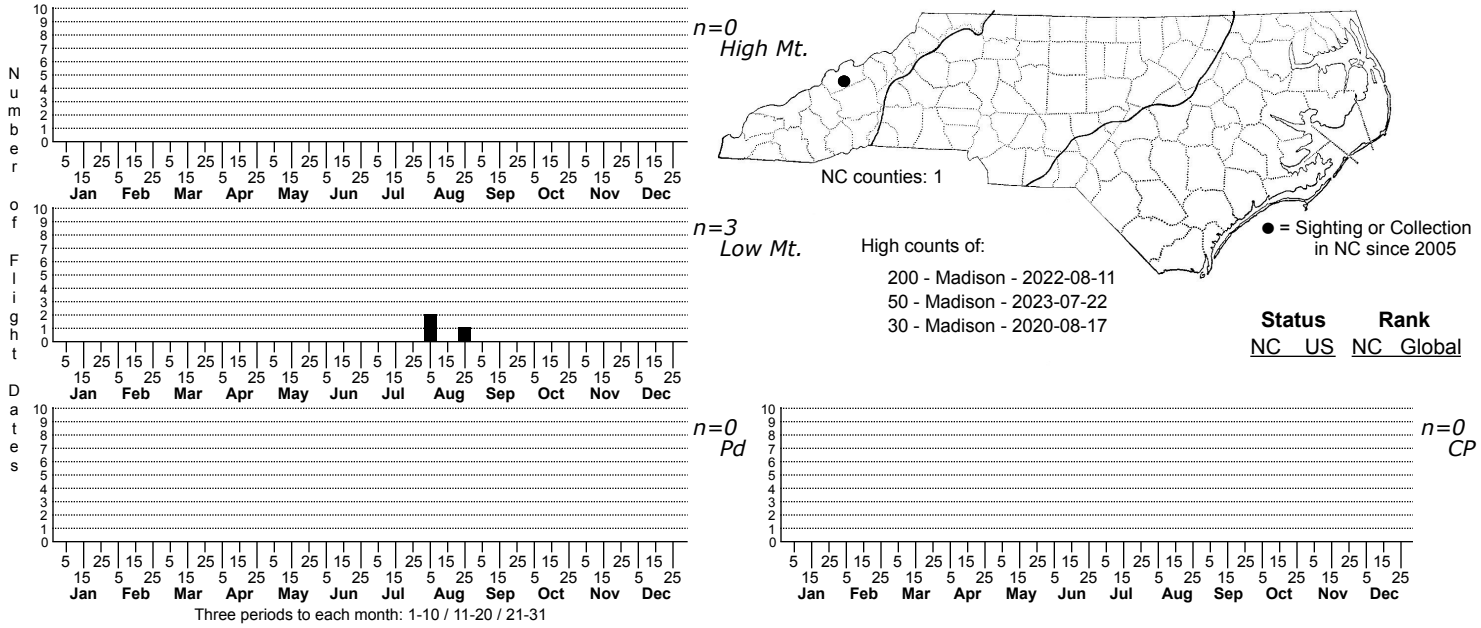
Macrosaccus uhlerella None



FAMILY: Gracillariidae SUBFAMILY: Lithocolletinae TRIBE:
TAXONOMIC_COMMENTS: Three Phyllonorycter species that occur in North Carolina were placed in a new genus, Macrosaccus, by Davis and De Prins (2011) based on differences in wing venation, genitalia, and life history traits. All are leafminers and have species-specific host plants.

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Davis and De Prins (2011)
TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The following is based on descriptions by Braun (1908) and Davis and De Prins (2011). The face and palps are whitish gray, and the antenna gray with dark brown annulations. The tuft is brownish. The thorax and inner margin of the forewing beneath the fold is dark brown, but more golden behind. The ground color of the remainder of the wing is golden brown to brownish orange. There are three whitish costal streaks and a median fascia that is complete or very nearly complete. The first costal streak is at about one-third the wing length, and is somewhat oblique and dark margined on both sides. A little nearer the base is the more perpendicularly placed first dorsal streak. About the middle of the wing is a curved or rearward angled white fascia that is dark margined. Beyond this are two nearly perpendicular white costal streaks with dark margins on the anterior side. The first is opposite a white dorsal streak that originates just before the tornus. A black streak is present in the fold between the middle fascia and this dorsal streak. A black apical spot is present that is sometimes elongated. The cilia is grayish with a blackish marginal line. The hindwing and cilia are brownish gray and the legs are mostly dark fuscous dorsally, with two or three dark annuli or bands on the tibia and tarsal region.

Macrosaccus uhlerella is morphologically similar to our other two Macrosaccus species. This species and M. morrisella have a complete fascia at mid-wing rather than two paired streaks as seen in Macrosaccus robiniella. As described at microleps.org, the basal part of the forewing of M. robiniella is solid gray, while in M. uhlerella and M. morrisella there is a small but distinct whitish patch near the dorsal margin at the outer limit of the basal gray area. In addition, M. morrisella also has a narrow white line that runs medially from the base of the forewing almost to the anterior edge of the white patch, thus creating a white marking that nearly encloses the basal gray area of the wing. Davis and De Prins (2011) noted that the forewing pattern of M. uhlerella is most similar to that of M. morrisella in having the basal strigulae less oblique than those present in M. robiniella. It differs from M. morrisella in lacking the distinct basal white streak that is typical of the latter.

DISTRIBUTION: Macrosaccus uhlerella appears to be an uncommon species with only a few scattered records across the US. Populations have been documented in Colorado, Illinois, Missouri, New York, North Carolina and Texas (Davis and De Prins, 2011). Our only records for North Carolina are from a single population in Madison Co.

FLIGHT COMMENT: The flight season is poorly documented. Most records in the US are from May-Sept. As of 2020, our two records are from August.

HABITAT: Populations are dependent on false indigo (Amorpha spp.) for successful reproduction. Our native species can be found in a variety of habitats ranging from riverbanks and the edges of wetlands, to dry or mesic wooded slope and thickets.

FOOD: The known hosts are Lead Plant (A. canescens), False Indigo-bush (A. fruticosa) and Mountain Indigo-bush (A. glabra). The only population that we have discovered in North Carolina as of 2020 was on A. glabra.

OBSERVATION_METHODS: We recommend searching Amorpha foliage for the mines, and rearing and photographing the adults.

NATURAL HERITAGE PROGRAM RANKS: GNR [S2-S3]

STATE PROTECTION:

COMMENTS: This species is dependent on Amorpha species for successful reproduction and appears to be rare in the state. Species of Amorpha in North Carolina tend to be uncommon, often with only a relatively small number of plants found locally at a given site. This may make it difficult to sustain local populations of M. uhlerella and explain its seeming rarity.