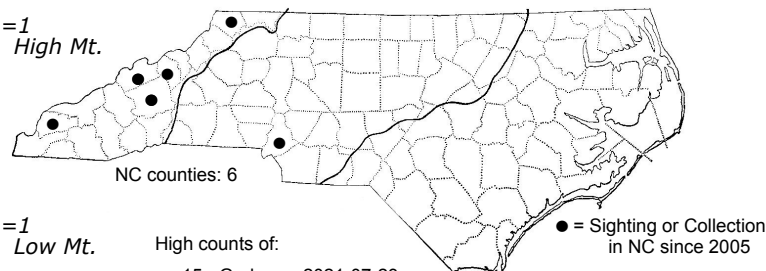
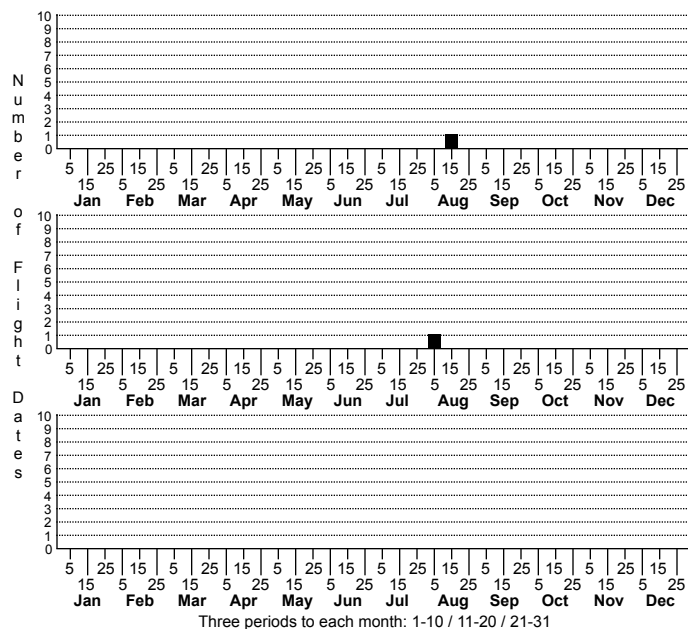


Astrotischeria heliopsisella None



High counts of:

15 - Graham - 2021-07-23
10 - Yancey - 2022-08-15
5 - Madison - 2020-08-17

Status Rank
NC US NC Global



FAMILY: Tischeriidae SUBFAMILY: TRIBE:

TAXONOMIC_COMMENTS: This is one of 13 described species of *Astrotischeria* in North America. Most species feed on members of the Asteraceae.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS:

TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The following is based primarily on the description by Braun (1972). The face is ochreous and the tuft has brown-tipped or brown scales. The antennal stalk of the male has long cilia versus fine short cilia on the female. The thorax and forewing is bright ochre to dull brownish ochre, with more or less brownish or blackish dusting. The costal margin is often heavily dusted with dark brown or blackish scales for its entire length. There is a median dark brown streak on the thorax and a similar streak over the tegula that extend onto the dorsal margin of the forewing for one-fourth its length. A short brown streak extends from the base of the forewing to about one-fourth. An oblique dark streak extends from the basal third of the costa across the wing that sometimes is broken on the fold, and sometimes meets a dark spot on the middle of the dorsum. There is a second oblique streak that is parallel to the first streak beginning at the apical third of the costa. It is broad on the costa, but on some specimens becomes reduced and broken towards the basal margin. In dusted specimens, dark scales may follow from the termen to the apex. Between these two streaks, a fine line of brown scales from the costa may be connected to them by broken longitudinal lines of scales. From the middle of the second oblique streak, there are two indistinct lines that run to the base of the apical cilia. The cilia are ochreous or brownish. In paler specimens there is a distinct line of dark-tipped scales projecting into them around the apex. The hindwing is fuscous to sometimes blackish. When blackish, the cilia are contrastingly paler. The fore and middle legs are brownish fuscous, and the hind legs ochreous. The tarsal segments are annulated at the joints, or sometimes entirely yellow. This species has wing markings that are very similar to those of *A. ambrosiaeella* and individuals often deviate substantially from the general description above. These two species are most reliably distinguished by using either genitalia or leaf mine characteristics. Both produce similar mines and use Giant Ragweed, but differ in the color of the pupation chamber (nidus). When viewed from the upper leaf surface, *A. heliopsisella* produces a bright white nidus, versus a greenish nidus for *A. ambrosiaeella*.

DISTRIBUTION: Scattered populations of *A. heliopsisella* have been found in the eastern US and California. In the East, populations have been found in the Midwest eastward to New Jersey, and as far south and west as North Carolina, Missouri, and Texas (Eiseman, 2019). As of 2021, our three records for North Carolina are from the Blue Ridge.

FLIGHT COMMENT: In Ohio, Braun (1972) found mines of the first brood in June, with the adults emerging in early July or sometimes as late as August. A second brood finished mining in late August or early September, with adults emerging in September and October. Some remained in the pupal state until the following spring, but others appear to overwinter as adults. As of 2021, our three records of occupied mines are from mid-July through early October.

HABITAT: Females most frequently oviposit on either Giant Ragweed (*Ambrosia trifida*) or Smooth Oxeye (*Heliopsis helianthoides*). These species are often found in moist, disturbed habitats such as floodplains, fields, the edges of forest roads, and a variety of other open and edge habitats.

FOOD: The known host plants include several species of ragweed (*Ambrosia*), at least one species of sunflower (*Helianthus* sp.), and Smooth Oxeye (*Heliopsis helianthoides*). As of 2024, we have records for this species using both Giant Ragweed (*A. trifida*) and Smooth Oxeye.

OBSERVATION_METHODS: The adults appear to only rarely visit lights and most records are for reared adults. We recommend searching for the mines on Giant Ragweed, Smooth Oxeye, and other suitable hosts.

NATURAL HERITAGE PROGRAM RANKS: GNR SU

STATE PROTECTION:

COMMENTS: We currently do not have sufficient information on the distribution and abundance of this species within the state to determine its conservation status.