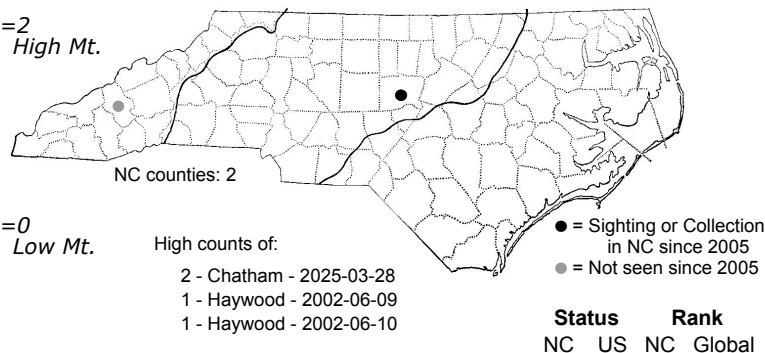
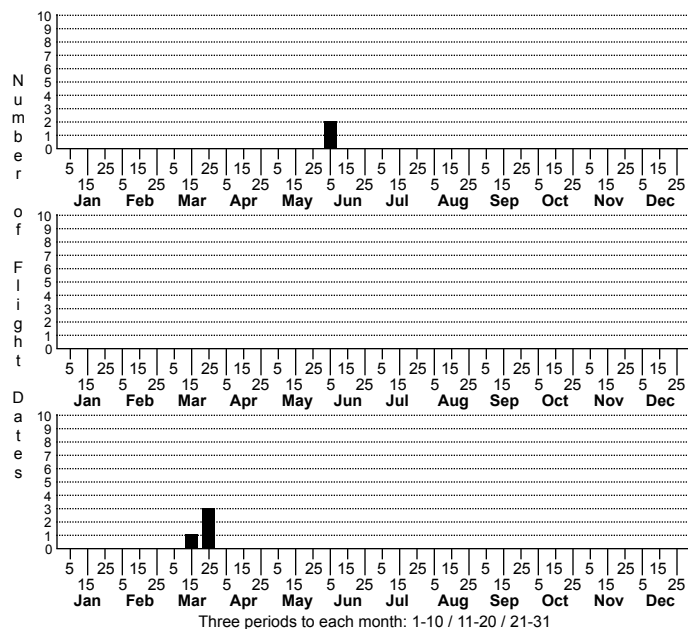


Gretchena concubitana None



FAMILY: Tortricidae SUBFAMILY: Olethreutinae TRIBE: Eucosmini

TAXONOMIC COMMENTS: *Gretchena* is a New World genus with 12 recognized species. Eleven species occur in North America, and eight of these are endemic to eastern North America.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS:

TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: This is one of several species of *Gretchena* that is best identified using genitalia. The following description is based in part on that of Heinrich (1923), but likely does not capture the full range of variation within this species. The adults have an overall pale slate gray ground that is heavily dusted with grayish fuscous, which produces an overall slaty fuscous color on the head, thorax and forewing. The face is similar except for the upper part that is dark brownish fuscous. The slaty fuscous color of the forewing is overlain with darker blackish or brownish-black dusting. The dusting is concentrated around two lighter inward bulges along the inner margin at around one-fourth and one-half the wing length. These tend to create an hourglass pattern when resting adults are viewed from above. The dark dusting often extends from the wing base into a faint, elongated, outwardly angulate streak that reaches nearly to the upper outer angle of the cell. A dark spot or area of dark dusting is also often present near the inner margin before the tornus. The ocellus is rather indistinct and does not have a region of heavy dark shading just anterior to it as seen in some *Gretchena* species. The subcostal region has varying levels of dark dusting, and there is a series of narrow faint whitish strigulae along the costa. The hindwing is glossy, smoky brown and often paler towards the base. The cilia are lighter with a dark basal band.

Gilligan et al. (2008) noted that this species is similar in size and coloration to *G. amatana* and *G. concitricana*, but the black forewing markings are considerably less distinct, particularly in the discal cell and anterior to the ocellus. The interfascial areas appear silvery gray, versus dirty whitish gray in *G. amatana* and brownish gray in *G. concitricana*. As mentioned above, genitalia provide the best way to differentiate this species from several other *Gretchena* species.

DISTRIBUTION: *Gretchena concubitana* is found in a large portion of the eastern US and in adjoining areas of Ontario, Quebec, Nova Scotia and New Brunswick. The range in the US extends from Connecticut southward to central Florida and westward to Louisiana, Arkansas, Missouri, and Illinois. As of 2024, we have two specimens from Purchase Knob in the Smokies.

FLIGHT COMMENT: The adults fly from February through July in different areas of the range, with the primary flight season from April through June. Our two records from Purchase Knob are both from early June.

HABITAT: Local populations are associated with hardwood forests.

FOOD: The holotype was reared from a hickory (*Carya* sp.; Heinrich, 1923), which is the only reported host that we are aware of as of 2024.

OBSERVATION METHODS: The adults are attracted to lights. Much more information is needed on the host plants and larval life history. We recommend looking for leaf shelters on the undersides of hickory leaflets and rearing the adults.

NATURAL HERITAGE PROGRAM RANKS: GNR[S1S3]

STATE PROTECTION: Has no legal protection, although permits are required to collect it on state parks and other public lands.

COMMENTS: This appears to be a relatively rare species in North Carolina, but more information is needed on its distribution, abundance and habitat preferences before we can accurately assess its conservation status.