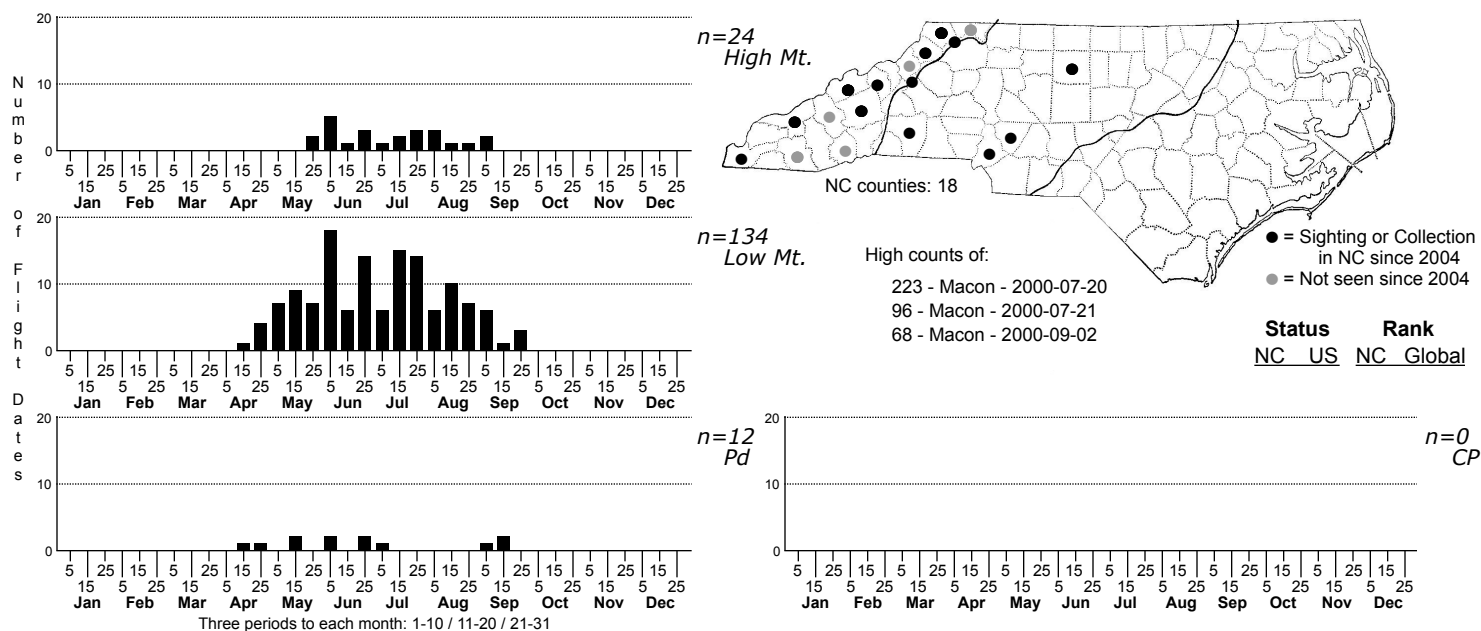


## *Macaria minorata* Minor Angle



FAMILY: Geometridae SUBFAMILY: Ennominae TRIBE: Macariini

TAXONOMIC\_COMMENTS: This is one of 73 species in this genus that occur in North America, with 17 species occurring in North Carolina. In the latest checklist of North American Lepidoptera (Pohl and Nanz, 2023), North American members of the genus *Speranza* and *Epelis* were treated as junior synonyms of *Macaria*.

FIELD GUIDE DESCRIPTIONS: Covell (1984; as *Semiothisa minorata*); Beadle and Leckie (2012)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Ferguson (2008)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Wagner et al. (2001)

ID COMMENTS: A small, brown Angle -- the smallest of our species of *Macaria* (forewing length typically 10-12 mm) -- with the angled hindwings and sub-falcate forewings typical of this genus. The lines on the forewing are typically weak or missing, usually represented only by dark spots on the costal margin; the spot patch on the subterminal at the end of the cell is also absent. The forewings are usually evenly shaded in brown, with a band of reddish brown located between the postmedian and subterminal lines. The reddish band is followed by a terminal zone that has the same ground color as the medial and basal areas. *Minorata* is similar in pattern and coloration to *transitaria*, but is noticeably smaller and usually has hindwings that are much paler than the forewings (Ferguson, 2008).

DISTRIBUTION: Restricted to the Mountains (the one Piedmont record was from a site where no White Pines occur and probably represents a mistaken *transitaria*).

FLIGHT COMMENT: Appears to have a single extended flight period covering the growing season from late spring to early fall.

HABITAT: Occurs in most montane habitats where White Pines grow, from riparian areas at fairly low elevations to the dry summits of Mount Jefferson and Grandfather Mountain.

FOOD: Stenophagous, feeding on hard pines, and probably mainly on Eastern white pine; Maier et al. (2011) also reported that it is rarely found on Jack, Red, and Pitch Pines, only the last of which occurs in North Carolina and only in the Mountains.

OBSERVATION\_METHODS: Comes well to 15 watt blacklights but we do not have any records from either bait or flowers.

NATURAL HERITAGE PROGRAM RANKS: G5 [S5]

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

COMMENTS: Although this species appears to be a host plant specialist, White Pine is itself a common species that is widespread in the Mountains and occurring in a variety of habitats and elevations. The distributional features also apply to the moth; consequently, it appears to be secure in North Carolina.