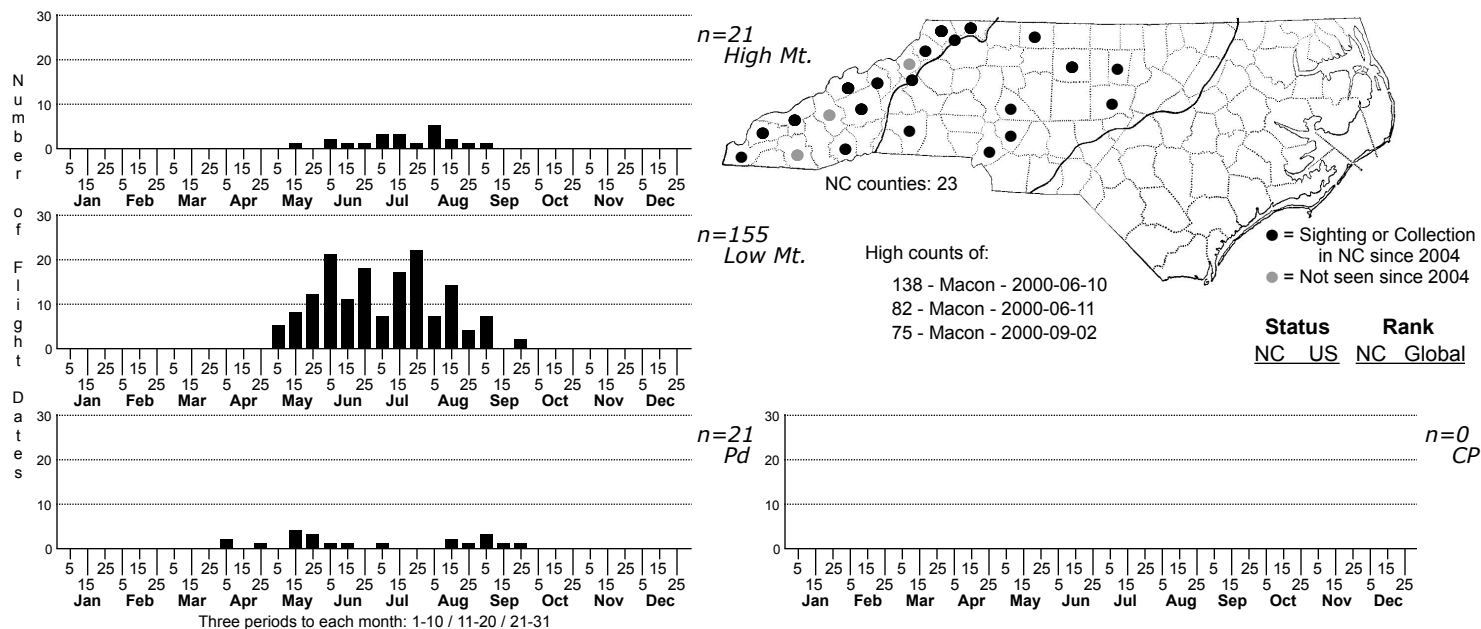


Macaria bisignata Red-headed Inchworm Moth



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 bisignata*); Beadle and Leckie (2012)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Ferguson (2008)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Ferguson (2008)

ID COMMENTS: A medium sized Geometrid with the angled hindwings and sub-falcate forewings typical of this genus; as in other members of the *bicolorata* species group, *bisignata* has a reddish to ochre head that contrasts with the paler gray thorax and abdomen. As in the closely related *M. bicolorata*, the lines are weakly developed, usually represented only by dark spots on the costa. A large, sub-rectangular, chestnut bar located at the costal end of the subterminal line is usually prominent and there is also often a dark spot present along the subterminal lower down where many members of this genus have a large blotch. Whereas *bicolorata* is usually clearly two-toned, with a paler medial and basal areas and a darker subterminal and terminal area, *bisignata* is usually more concolorous, with a dull white ground color that is variously shaded with pale grayish brown (Ferguson, 2008). The undersides of the wings in *bisignata* are pale like the uppersides rather than contrasting in color and tone as in *bicolorata*. The dark spot along the subterminal line is usually relatively well-developed in *bisignata*, but is usually missing or reduced in size in *bicolorata*.

DISTRIBUTION: Most of our records -- including all those that are based on specimens -- come from the Mountains or from Hanging Rock State Park, a range of monadnocks with montane-like habitats. Records from the eastern Piedmont and Coastal Plain need to be confirmed.

FLIGHT COMMENT: Adults fly throughout the growing season, from late spring to early fall.

HABITAT: Records from the Mountains come from both mesic forests, such as floodplains and coves, and from drier slopes and ridges.

FOOD: Stenophagous, feeding primarily on Eastern White Pine (Ferguson, 2008; Maier et al., 2011).

OBSERVATION_METHODS: Adults come well to 15 watt UV lights and we have at least a few records from building lights. We have no records from bait, however, or from 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 is at least somewhat geographically restricted in North Carolina, it feeds on a common host plant and occurs in a wide range of habitats and over a wide elevational range in the Mountains. It appears to be secure within the state.