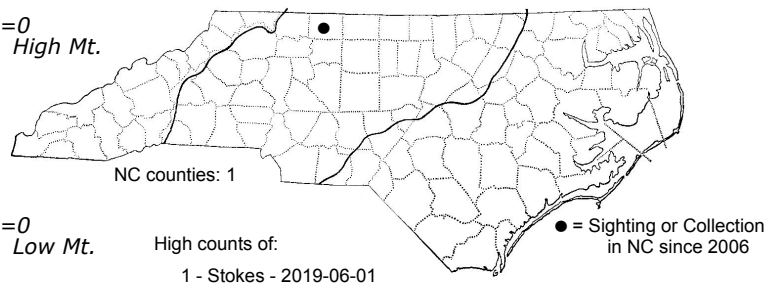
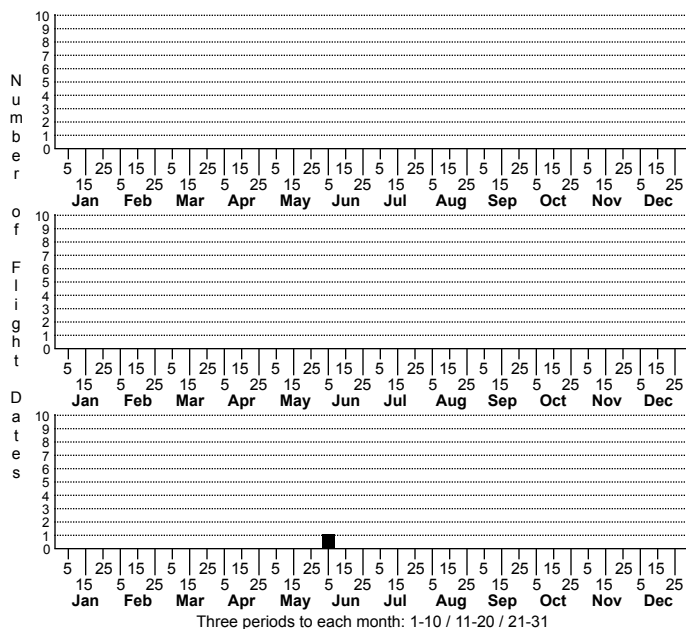


# *Zelleria haimbachi* Pine Needle Sheathminer Moth



Status	Rank
NC	US
NC	Global



FAMILY: Yponomeutidae SUBFAMILY: Yponomeutinae TRIBE: [Yponomeutinae]

TAXONOMIC\_COMMENTS: *Zelleria haimbachi* is very broadly distributed across North America and may be a sibling species complex, with populations from the Rocky Mountains westward constituting a separate BIN from those in eastern North America. Here, we mainly focus on the eastern populations.

FIELD GUIDE DESCRIPTIONS: Beadle and Leckie (2012)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Busck (1915); Forbes (1923)

TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: *Zelleria haimbachi* is a small moth that has a distinct pattern, with the bright white head and thorax contrasting with a golden-yellow to orange forewing that has a white longitudinal stripe down the center. The maxillary palp is orange, while the labial palp is white with a prominent, upturned scale tuft that often fuses with the adjoining white head tuft. The antenna is white with weak, brown annulations, and the thorax is white, except for orange scales on the lateral margins that merge with a concolorous patagia. The forewing is golden-yellow to orange and has a white longitudinal stripe down the center that often fades away just before reaching the outer margin. The outer fringe is dull-white to dusky-white, with a heavy sprinkling of dark-brown scales near the base. The hindwing and fringe vary from light or medium-brown to pearl-gray. The legs are mostly white, with a sprinkling of orangish scales sometimes present on the tarsi.

DISTRIBUTION: As currently recognized, *Z. haimbachi* is found in cool climates throughout North America where pines are present. The range includes much of southern Canada, the Pacific Northwest and California, the Rockies southward to Colorado and New Mexico, and portions of the eastern US. In eastern North America, this species occurs in southern Canada from Manitoba eastward to Nova Scotia, and in the US from Maine westward across the Great Lakes region to Minnesota, and southward through New York, Pennsylvania, West Virginia and southeastern Ohio to eastern Kentucky, eastern Tennessee, northwestern North Carolina and northern Alabama. As of 2025, we have a single record from Stokes County.

FLIGHT COMMENT: In eastern North America, the adults fly from June through August. As of 2025, our one record is from 1 June.

HABITAT: Local populations are generally found in areas with cool climates that support pine trees other than Eastern White Pine.

FOOD: The larvae feed on various species of yellow pines (Stevens, 1959; Freeman, 1960; Eiseman, 2022). The only reported hosts in eastern North America is Jack Pine (*Pinus banksiana*), although larvae will feed to some extent on other eastern yellow pines in nurseries, including Shortleaf Pine (*P. echinata*), Red Pine (*P. resinosa*), and Loblolly Pine (*P. taeda*) (Stevens, 1959). Busck (1915) originally described adults that were bred from "a short-needle pine", but did not specify the species. Those that occur at his collection site include Virginia Pine (*P. virginiana*), Shortleaf Pine and Pitch Pine (*P. rigida*). Populations in western North America (note: see taxonomic comments about these possibly being a cryptic, undescribed species), use numerous species, but rely primarily on Ponderosa Pine (*P. ponderosa*) and Jeffrey Pine (*P. jeffreyi*; (Stevens, 1959; Eiseman, 2022).

OBSERVATION\_METHODS: The adults are attracted to lights.

NATURAL HERITAGE PROGRAM RANKS: GNR [SU]

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

COMMENTS: As of 2025, we have a single record for this species from Hanging Rock State Park and it is uncertain if a breeding population is present within the park.