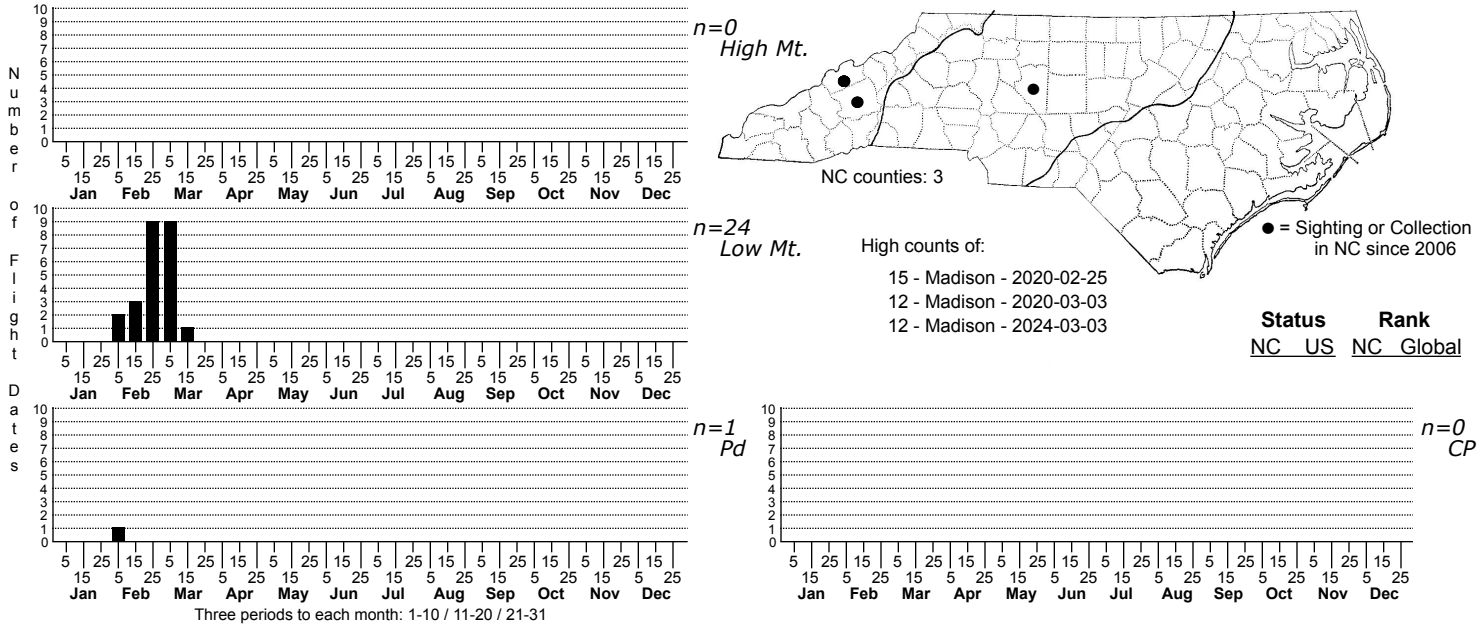
Rhyacionia granti Jack Pine Tip Moth



FAMILY: Tortricidae SUBFAMILY: Olethreutinae TRIBE: Eucosmini
TAXONOMIC_COMMENTS: The genus Rhyacionia is widespread in the Holarctic Region, ranging from Japan and Asia to the Caribbean Antilles and Mexico (Powell and Miller, 1978). There are 33 described species worldwide and 24 in North America. The larvae feed on the needles, buds, and growing tips of pines.

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Miller (1985)
TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The following is based in part on the original description by Miller (1985). For North Carolina specimens, the labial palps are grayish, while the crown of the head, the anterior portion of the thorax, and the tegula have reddish scales. The length of the second segment of the labial palp is subequal to the eye diameter, and the length of the third segment is one-fourth that of the second. The front of the head is brownish black. The antennal pecten length is at least twice that of the antennal segment length, which is diagnostic for this species. The forewing has brownish black scales with white-tips on the basal two-thirds that form faint, irregular, dark and pale crossbands. The remainder of the forewing has a reddish-yellow wash except for a red terminal band that often has an inward triangular projection near the middle of the wing. The fringe is predominantly gray with a darker basal band, while the hindwing is light gray with a fringe that is similar to that of the forewing.

Rhyacionia granti and R. busckana are two cryptic species that are most easily distinguished by the male antennae. In R. granti the pecten is coarser and at least twice as long as that in R. busckana. The length of the pecten on the basal third of the antenna greatly exceeds the length of the antennal segments. In R. busckana, the pecten is shorter than the length of the antennal segments (see structural photos below). These species can also be distinguished by the male and female genitalia. Specimens of R. granti in North Carolina most commonly have reddish scales on the upper head and anterior regions of the thorax.

DISTRIBUTION: Rhyacionia granti is found in eastern North America, but the range is rather poorly documented. Populations have been documented in extreme southern Canada (Manitoba; Ontario; Quebec) and in the US from Wisconsin, northern Indiana, and Michigan eastward to New York, Pennsylvania, and Maryland (Miller, 1985; Pohl et al., 2018). An apparent southern isolate occurs in Florida. As of 2021, all of our only records are from lower elevations in the western mountains. The North Carolina populations may be disjunct from populations farther north.

FLIGHT COMMENT: The adults fly in late winter or spring as the warm-up begins. Most records are from February through April in the US, and April and May in Canada. Records for adults in Florida include November and December. As of 2021, our records extends from early February through mid-March.

HABITAT: Local populations are dependent on yellow pines for reproduction and do not use White Pine (Pinus strobus). A site in Madison County where it is common is a mixed conifer-hardwood forest.

FOOD: This species uses Jack Pine (Pinus banksiana) in Ontario, and presumably other pines farther south (Miller, 1985). At a site in Madison County where the adults are common, the only suitable hosts that are present are Pitch Pine (P. resinosa) and Virginia Pine (P. virginiana).

OBSERVATION_METHODS: The adults are attracted to lights.

NATURAL HERITAGE PROGRAM RANKS: GNR SU

STATE PROTECTION:

COMMENTS: Our populations appear to be restricted to the Blue Ridge, and are perhaps isolated from more northern populations. As of 2021, we have only two site records. Additional information is needed on the distribution and abundance of this species in the state before we can assess its conservation status.