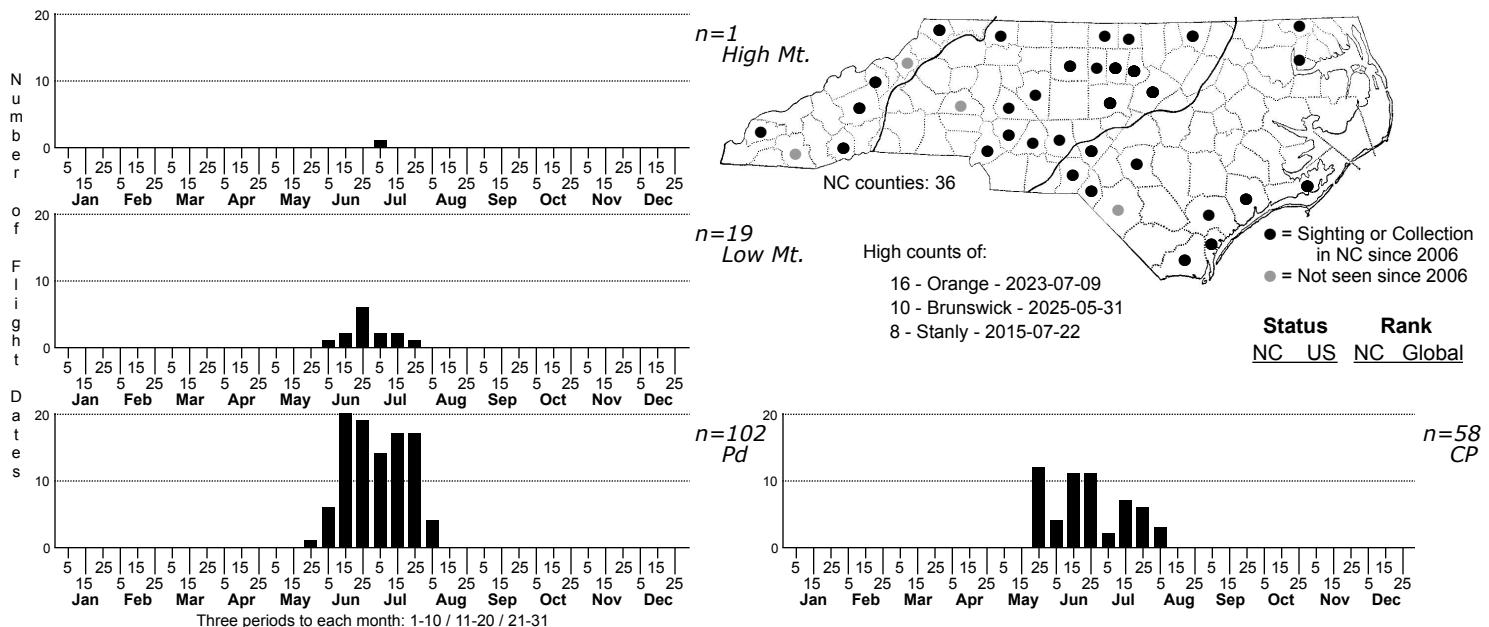


Acrolophus plumifrontella Eastern Grass Tubeworm Moth



FAMILY: Tineidae SUBFAMILY: [Acrolophinae] TRIBE: [Acrolophini]

TAXONOMIC COMMENTS: The genus *Acrolophus* is a mostly neotropical taxon with over 250 described species, including 54 that are currently recognized in North America. The labial palps on the males of many species are very elongated and densely hairy. The larvae of some species live in silk-lined burrows in the ground and feed on the roots and young shoots of grasses and herbs. However, the life histories of most species remain undocumented and in need of study. Members of this genus were previously placed in their own family (Acrolophidae), but they are now treated as a subgroup within the Tineidae based on molecular phylogenetic studies.

FIELD GUIDE DESCRIPTIONS: Covell (1984); Leckie and Beadle (2018)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Hasbrouck (1964)

TECHNICAL DESCRIPTION, IMMATURE STAGES: .

ID COMMENTS: This is one of the largest and most robust species in this genus in North America (Hasbrouck, 1964). The forewings are typically colored with a mixture of rubescent and maroon brown, and the males have prominent, densely scaled palps. The following detailed description is based in part on information in Hasbrouck (1964). The recurved, elongated labial palp of the male is heavily scaled and extends over the head before terminating near the posterior end of the thorax. The head, thorax, upper portions of the legs, and labial palps are covered with a thick, elongated vestiture of reddish brown hair-like scales with paler dusting near the ends. Collectively, they create a rather distinctive 'helmeted' appearance. The antenna of the male is brown and extends beyond the palps to about one-fourth the wing length. The ground color of the forewing varies from reddish tan to various shades of reddish brown, with grayish, blackish, and reddish brown scales intermixed. A wide, maroon, reticulate pattern often overlays much of the wing. It tends to be centrally located and extends from near the base to near the wing terminus. Individuals vary, and the reticulate pattern is sometimes represented as a series of darker zig-zagging blotches, or is even further reduced and largely missing. The fringe is grayish to dark brown and tends to be slightly darker than the forewing color. The hindwing is dusky brown. The females are generally similar, but the helmeted vestiture is reduced, the palps project forward, and the dark reticulation on the forewings is more subdued or missing.

DISTRIBUTION: *Acrolophus plumifrontella* is found across a large swath of the eastern and central US. The range extends from New Hampshire and Connecticut southward to southern Florida, and westward to Texas, Oklahoma, Kansas, and Nebraska. This species occurs statewide in North Carolina.

FLIGHT COMMENT: Adults have been documented from February through November in areas outside of North Carolina, with a seasonal peak in June and July. As of 2020, our records extend from early June to early August, with peak activity in June and July.

HABITAT: The specific habitat requirements are unknown due to the lack of information on the larval life history. We have records from both residential neighborhoods and more natural areas.

FOOD: The hosts are poorly documented. Robinson et al. (2010) list strawberries (*Fragaria* spp.) as a host, but we are uncertain of the source of this information. Heppner (2007) reports grasses are used as hosts, but it is unclear if this is based on actual observation or just inferred based on the hosts of other *Acrolophus* species.

OBSERVATION METHODS: The adults visit lights.

NATURAL HERITAGE PROGRAM RANKS: GNR [S4S5]

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

COMMENTS: This is a common and widespread species in the eastern US and appears to be secure.