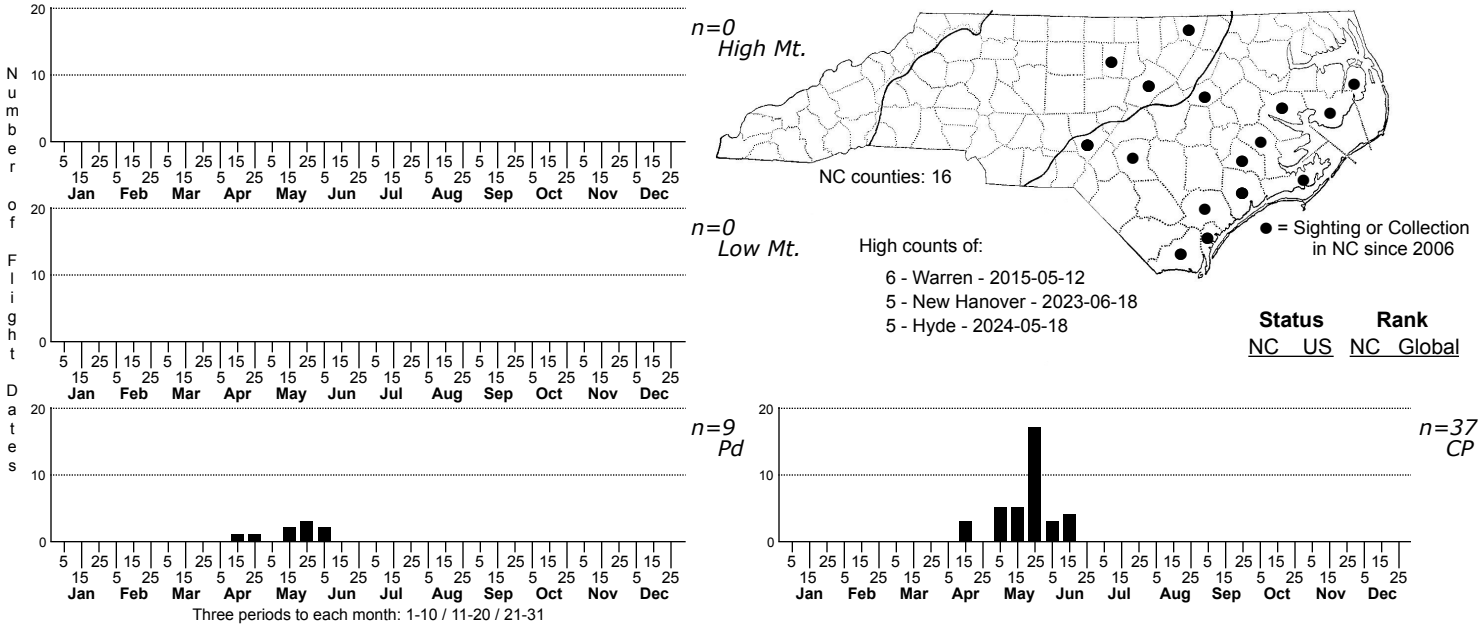
Cydia ingens Longleaf Pine Seedworm Moth



FAMILY: Tortricidae SUBFAMILY: Olethreutinae TRIBE: Grapholitini
TAXONOMIC_COMMENTS: Cydia toreuta and C. ingens are members of a species complex that includes several other described and possibly undescribed species (Gilligan and Epstein, 2014). The two species in this complex that occur in North Carolina can be distinguished using molecular markers, genitalia, and external morphology.

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS:
TECHNICAL DESCRIPTION, IMMATURE STAGES: Hedlin et al. (1980)

ID COMMENTS: Cydia ingens and C. toreuta are two externally similar forms that have short, sordid white palps and whitish brown coloration on the head, thorax, and wing base. The ground of the apical two-thirds of the forewing has brownish scales with sordid white tips that produce a bronzy stippled effect. It is overlain with several metallic bars that are edged inwardly and outwardly with black. A complete bar is present at mid-wing, along with a postmedial bar that is more oblique or angulated and sometimes broken into a dorsal and ventral bar of roughly similar size. A subterminal bar is present that parallels the termen, and one or two relatively short bars are present along the costa between the postmedial and subterminal bars. A conspicuous thin black terminal line is present at the wing tip that is followed by a dull, silvery white fringe. The hindwing is smoky fuscous with paler cilia that have a dark basal band.

Individuals of the two species that occur in North Carolina -- and in which their identify has been confirmed based on genitalia -- can be separated using a combination of traits (see illustration above). These include whether the postmedial bar is broken or complete, whether one or two costal bars are present between the postmedial and subterminal bars, and whether a gap is present between the subterminal bar and the black terminal line on the dorsal half of the termen (both species typically have a gap on the costal half of the termen). Cydia ingens usually has a broken postmedial bar (sometimes complete), one costal bar between the postmedial and subterminal bars, and little or no gap between the subterminal bar and the black terminal line on the dorsal half of the termen. The latter appears to be the most reliable trait for distinguishing between species. These species can also be readily identified using both male and female genitalia and molecular markers.

DISTRIBUTION: This species is associated with southern pines and is mostly found in the Coastal Plain and portions of the Piedmont and other adjoining uplands. Hedlin et al. (1980) show the range extending along the Coastal Plain from eastern Texas to southern Maryland. It extends inland to central Arkansas, southern Tennessee, and into the Piedmont of Alabama, Georgia, and South Carolina. As of 2022, populations in North Carolina appear to be largely restricted to Coastal Plain habitats, with two records from the eastern Piedmont.

FLIGHT COMMENT: The flight season of local populations occurs following the spring warm-up and renewed growth and expansion of second year cones on the host plants. Merkel and Fatzinger (1971) documented a flight season from mid-March through late May in northeastern Florida, with a peak from mid-April to mid-May. As of 2022, our records are all from May and June.

HABITAT: In North Carolina this species is associated with pine woodlands, particularly where Longleaf Pine and Loblolly Pine prevail.

FOOD: Merkel (1963) reported that Longleaf Pine (Pinus palustris) was the most important host at Coastal Plain sites that he surveyed from central South Carolina to southeastern Mississippi. Slash Pine (P. elliottii) was also used, particularly when it was intermixed with Longleaf Pine. Hedlin et al. (1980) also listed Loblolly Pine (P. taeda) as a host. Longleaf Pine and Loblolly Pine appear to be the most important hosts in North Carolina. Slash Pine does not appear to be an important host since it is non-native, relatively uncommon, largely restricted to the southern Coastal Plain, and often does not produce cones before being harvested where grown.

OBSERVATION_METHODS: The adult are attracted to lights and can be reared by gathering cones that are infected with larvae.

NATURAL HERITAGE PROGRAM RANKS: GNR S4S5

STATE PROTECTION:

COMMENTS: Populations appear to be secure; this species is often locally common in our coastal pine forests.