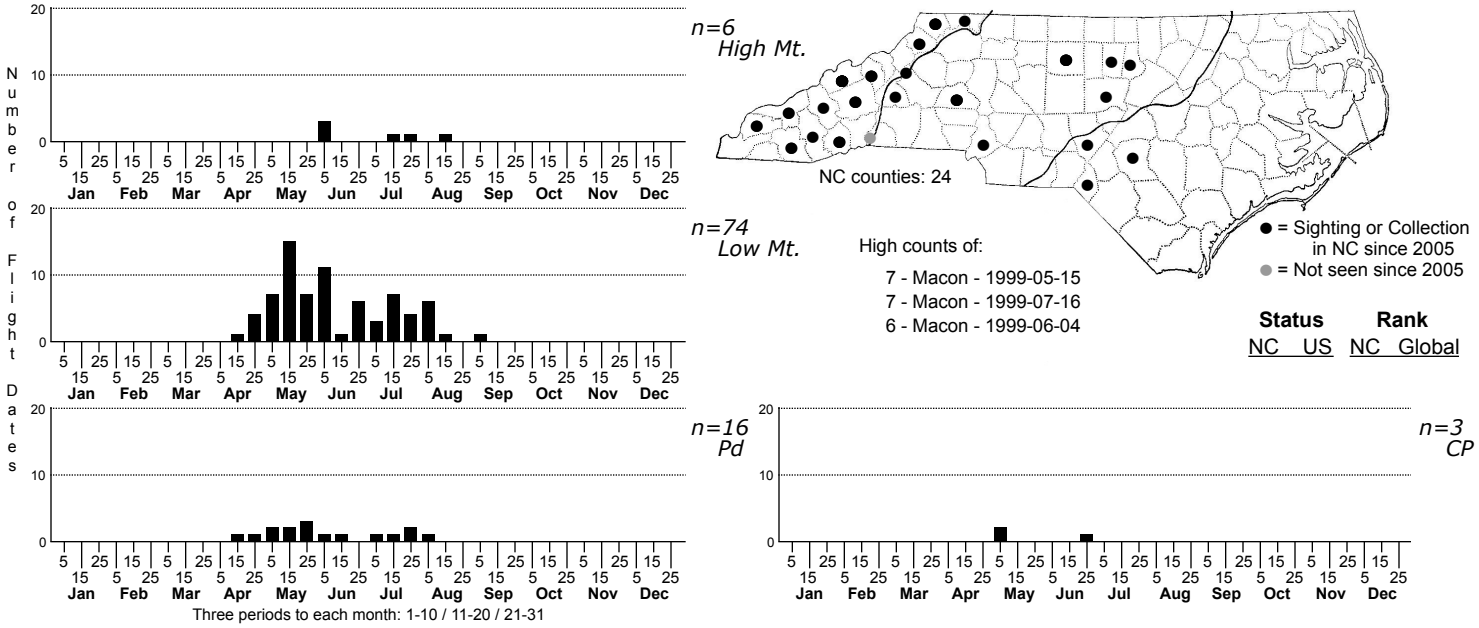
Ecdytolopha insiticiana Locust Twig Borer Moth



FAMILY: Tortricidae SUBFAMILY: Olethreutinae TRIBE: Grapholitini
TAXONOMIC_COMMENTS: The genus Ecdytolopha includes 14 described species that occur from southern Canada to Peru, with most found in Central and South America.

FIELD GUIDE DESCRIPTIONS: Covell (1984); Beadle and Leckie (2012)
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Soloman (1995)
TECHNICAL DESCRIPTION, IMMATURE STAGES: MacKay (1959); Soloman (1995)

ID COMMENTS: In this species the palps and antennae are brown and the head tuft brownish black. The thorax is mottled with brown and black and has a blackish scale tuft on the posterior half. The basal half of the forewing is dark brown to grayish brown with fine blackish mottling. The dark coloration extends from the base to about mid-way on the inner margin, then slants posteriorly towards the costal margin and adjoins a pronounced pale dirty white to pinkish white region that covers much of the remainder of the forewing. The whitish region has a small irregular black patch on the inner margin in the subtornal region. Smaller fine black specks and spots may extend from the black patch towards the costa. Just beyond four-fifths, a rather faint and slightly curved dark brown to blackish streak extends from above the costal margin to near the mid-point of the termen. The hindwings are uniformly gray. The adults can be easily identified by the rather distinctive patterning on the forewing. Ecdytolopha mana is similar, but lacks the black patch in the subtornal region and specializes on hackberries (Celtis).

DISTRIBUTION: Ecdytolopha insiticiana has been documented in Ontario and Manitoba, and occurs throughout much of the central and eastern US where the host plant occurs. It is generally either rare or absent in much of the Coastal Plain from Virginia southward. In the US the range extends from Maine southward to northern Florida and westward to Texas, Oklahoma, Colorado, Nebraska, and North Dakota. As of 2022, our records for North Carolina are all from the Blue Ridge and Piedmont, except for one Coastal Plain record from the Sandhills.

FLIGHT COMMENT: Local populations are univoltine at northern latitudes and bivoltine in the southern portion of the range. The adults have been observed from March through October in different areas of the range, with a seasonal peak from May through August. As of 2022, we have records of adults that extend from late April through early September, with populations in the Piedmont and lower elevations in the Blue Ridge appearing to be bivoltine.

HABITAT: Ecdytolopha insiticiana is strongly affiliated with Black Locust (Robinia pseudoacacia), which naturally occurs as a minor element in many hardwood forest communities in North Carolina. Black Locust is more common today along roadsides, in early successional forests, and in other sunny, disturbed habitats.

FOOD: Black Locust (Robinia pseudoacacia) is the primary host (Fernald, 1882; Forbes, 1923; Heinrich, 1926; Kimball and Jones, 1943; MacKay, 1959; Schaffner, 1959; Prentice, 1965; Harman and Berisford, 1979; Covell, 1984; Godfrey et al., 1987; Heppner, 2007; Lam et al., 2011; Gilligan and Epstein, 2014). The larvae may possibly use other species of Robinia, and on rare occasions may use Wisteria spp. (Harman and Berisford, 1979; Heinrich, 1926; Robinson et al., 2010). As of 2023, our only documented host in North Carolina is Black Locust.

OBSERVATION_METHODS: The adults are attracted to lights. Infected plants can be easily identified by the presence of frass clumps near the bases of the petioles, and by the elongated, swollen stem segments.

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 species appears to be common in the Blue Ridge and western Piedmont, but less so in the eastern Piedmont. We have not observed any evidence of recent population declines.