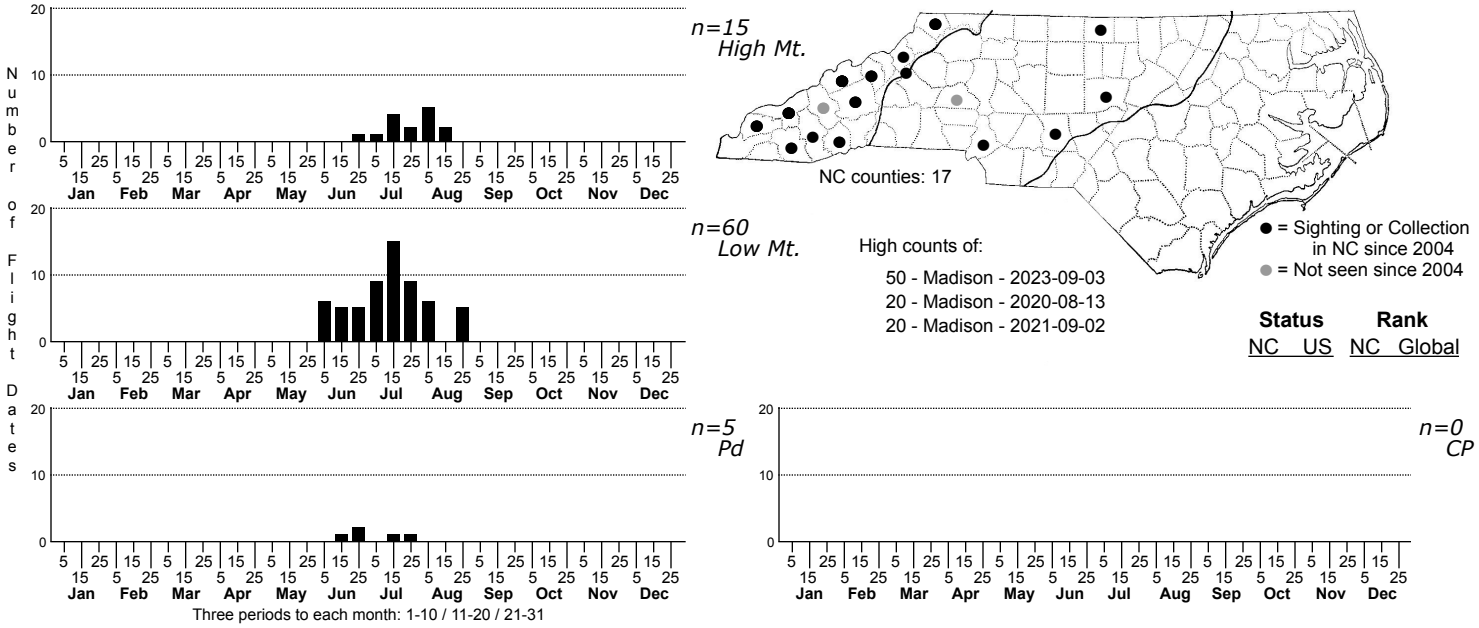
# ***Pantographa limata*** Basswood Leafroller Moth




FAMILY: Crambidae SUBFAMILY: Pyraustinae TRIBE: Spilomelini
TAXONOMIC_COMMENTS: Pantographa is a small genus of mostly neotropical moths, with only two described species in North America.

FIELD GUIDE DESCRIPTIONS: Covell (1984); Beadle and Leckie (2012).
ONLINE PHOTOS: MPG; BugGuide; BAMONA
TECHNICAL DESCRIPTION, ADULTS: Covell (1984); Beadle and Leckie (2012)
TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The adults are easily recognizable due to their distinctive coloration and wing patterning. The ground color of the forewing is straw-colored along the costal region and much of the basal area, and metallic purplish brown on the remainder of the forewing. The lighter ground color is overlain with a series of crisp lines and small spots or blotches with purplish brown margins, including the orbicular, claviform, and reniform spots. The entire wing has a faint light or metallic sheen. The hindwing is heavy dusted with purplish brown coloration near the basal region. This fades into lighter dusting apically. A scalloped double-line occurs near the subterminal region and a small white spot is present between the middle and the base of the hindwing.

DISTRIBUTION: Pantographa limata ranges across most of the eastern US and adjoining areas in extreme southern Canada. Populations extend as far south as Florida and Texas, and westward to eastern Texas, eastern Oklahoma, Missouri, and Iowa. This species is mostly absent from much of the Atlantic Coastal Plain from southern Virginia southward to southern Georgia. In North Carolina, P. limata is locally common in the mountains and western foothills of the Piedmont. It appears to be absent from much of the eastern Piedmont where basswood is less common, and has not been documented in the Coastal Plain as of 2023.

FLIGHT COMMENT: The adults have been observed from March through October in different areas of the range, with the seasonal peak in activity typically from May through August. As of 2023, our records range from early-June through late-August. Poplations in North Carolina are univoltine.

HABITAT: Local populations appear to be strongly dependent on American Basswood for successful reproduction. This species is generally found in areas with circumneutral soils with high nutrient content. Habitats include rich cove forests and mesic slopes in the mountains, rich forested sites in the Piedmont, and shell middens and/or marl-influenced sites in the Coastal Plain.

FOOD: American Basswood (Tilia americana) appears to be the primary host plant. Covell (1984) reported that P. limata uses oaks and Rock Elm (Ulmus thomasii). These taxa appear to be minor hosts, and Rock Elm does not occur in North Carolina. Tilia americana has had a complex taxonomic history, and was previously split into multiple species (T. heterophylla; T. caroliniana; T. floridana) and varieties. More recently, these forms have been treated as a single, geographically variable species (T. americana; Weakley, 2018).

OBSERVATION_METHODS: The adults are attracted to lights, and the rolled leaves on American Basswood are easy to spot in the field.

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: Pantographa limata is locally common in the mountains and foothills where stands of basswood occur. Populations in the Piedmont are more spottily distributed. Deforestation, along with the replacement of hardwood forests with managed pine forests, has likely adversely affected local populations of this species.