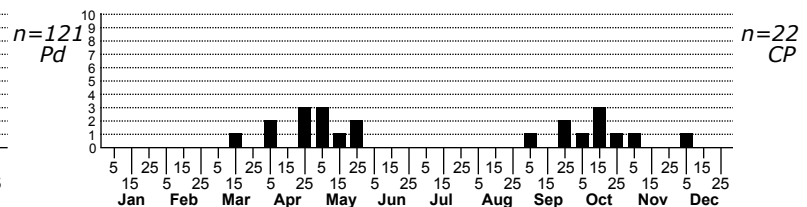
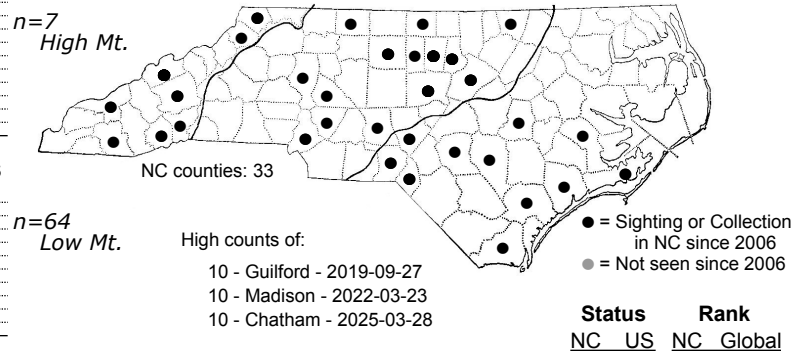
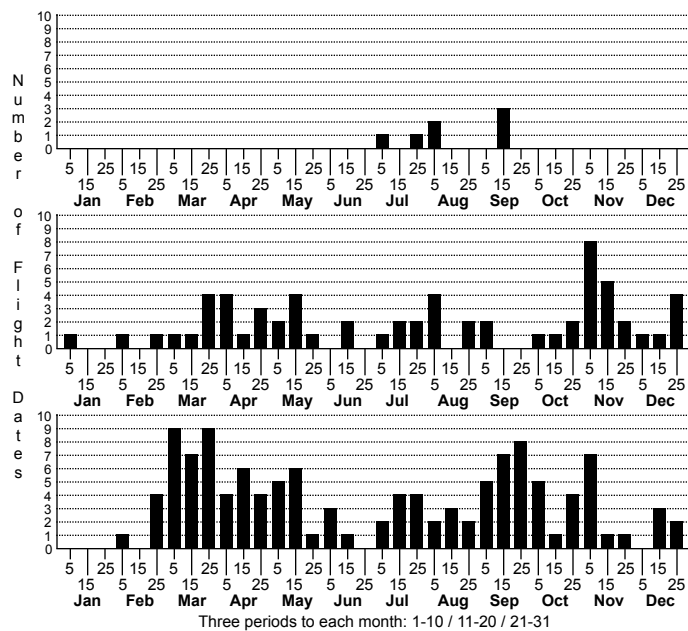


# Dichomeris ligulella Palmerworm Moth



FAMILY: Gelechiidae SUBFAMILY: Dichomeriinae TRIBE:

TAXONOMIC COMMENTS: *Dichomeris* is a large genus with several hundred species that occur throughout the world. Hodges (1986) recognized 74 species in North America north of Mexico, with 19 species groups. Most are leafrollers and they use a taxonomically diverse array of plant hosts, including members of 18 families of plants in North America. As of 2025, North Carolina has 35 documented species, and at least one undescribed species from the Sandhills.

FIELD GUIDE DESCRIPTIONS: Covell (1984); Beadle and Leckie (2012)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Hodges (1986)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Chapman and Lienk (1971)

ID COMMENTS: *Dichomeris ligulella* is rather easily recognized by its color patterning, elongated and narrow wings, a labial palp with a prominent scale tuft that projects forward, and a slender, upright third segment that curves rearward and tapers to an acute apex. The adults have two color morphs that occur in both sexes. The first, and here referred to as the 'light morph', varies from rather uniformly light brown to light grayish, and has varying degrees of scattered darker flecking. The forewing of fresh specimens has four dark spots that include a pair just before and beyond the middle. In the proximal pair the spot closest to the inner margin is slightly posterior to the other spot, while the reverse occurs for the distal pair beyond the middle. A row of dark spots is also present at the wing tip that begins in the subapical area and continues along the termen. The second color morph, here referred to as the 'dark morph', has a conspicuous dark brown to brownish-black longitudinal band that extends along the dorsal half from the wing base to the wing tip. The band tends to be somewhat jagged on the proximal half, with two small teeth on the outer edge of the band.

The dark morph can be confused with two other *Dichomeris* that are found in coastal areas (*D. bolize* and *D. pelta*). These species have a yellowish to cream-colored, longitudinal band along the costa that lacks the scattered dark flecking that is typically present in *D. ligulella*. In *D. bolize*, the light costal band terminates just before reaching the apex, while in *D. pelta* the band terminates at the apex, as is the case with *D. ligulella*. *Dichomeris pelta* also has a small black spot in the yellow band near the base of the forewing that the other two species lack. Both of these species lack the prominent, forward-projecting, scale tufts on the labial palps that are typical of *D. ligulella*. Worm specimens of all three can be distinguished using genitalia.

DISTRIBUTION: *Dichomeris ligulella* is a common species that is found throughout most of the eastern US and adjoining areas on southern Canada (Saskatchewan eastward to Nova Scotia). Isolated records are also known from British Columbia and Wyoming. In the eastern US the range extends from Maine to southern Florida, and westward to central Texas, central Oklahoma, eastern Kansas, eastern Nebraska, Minnesota, and northeastern North Dakota. This species occurs statewide in North Carolina, from barrier islands to higher elevation slopes in the Blue Ridge.

FLIGHT COMMENT: The adults have been found in every month of the year in different areas of the range. Populations in most areas appear to be univoltine, with the adults surviving in some cases for 9-10 months before breeding and laying eggs in the spring and early summer. As of 2025 we have records for all but the coldest months of the year, with the overwintering adults sometimes appearing at lights on warm fall and winter nights. Our phenology graphs suggest that many local populations in North Carolina produce two broods per year.

HABITAT: Our records come from a wide range of hardwood-containing habitats, including maritime forests, bottomland forests, and mesic slopes. The majority come from semi-wooded residential neighborhoods.

FOOD: The larvae feed on a wide range of hardwood species, with oaks appearing to be the primary hosts (Chapman and Lienk, 1971; Craighead et al., 1950; Prentice, 1966; Covell, 1984; Hodges, 1986; Linit et al., 1986; Godfrey et al., 1987; Heppner, 2007; Robinson et al., 2010; Marquis et al., 2019). The reported hosts include Silver Maple (*Acer saccharinum*), Sugar Maple (*A. saccharum*), Paper Birch (*Betula papyrifera*), Shagbark Hickory (*Carya ovata*), American Chestnut (*Castanea dentata*), hackberries (*Celtis*), hazelnuts (*Corylus*), Quince (*Cydonia oblonga*), American Witch-hazel (*Hamamelis virginiana*), Black Walnut (*Juglans nigra*), Sweet Crabapple (*Malus coronaria*), Common Apple (*M. domestica*), Sourwood (*Oxydendrum arboreum*), Bigtooth Aspen (*Populus grandidentata*), Quaking Aspen (*P. tremuloides*), American Plum (*Prunus americana*), pears (*Pyrus*), White Oak (*Quercus alba*), Scarlet Oak (*Q. coccinea*), Shingle Oak (*Q. imbricaria*), Bur Oak (*Q. macrocarpa*), Chinquapin Oak (*Q. muehlenbergii*), Northern Red Oak (*Q. rubra*), Post Oak (*Q. stellata*), Black Oak (*Q. velutina*), *Rhododendron*, goldenrods (*Solidago* spp.), American Basswood (*Tilia americana*), and Northern Highbush Blueberry (*Vaccinium corymbosum*). As of 2025, we do not have any feeding records for North Carolina.

OBSERVATION\_METHODS: The adults are attracted to lights. More information is needed on host use in North Carolina.

NATURAL HERITAGE PROGRAM RANKS: GNR S5

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

COMMENTS: This is a very common and widespread polyphagous species that appears to be secure within the state.