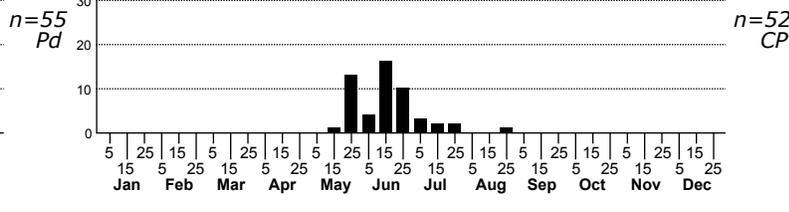
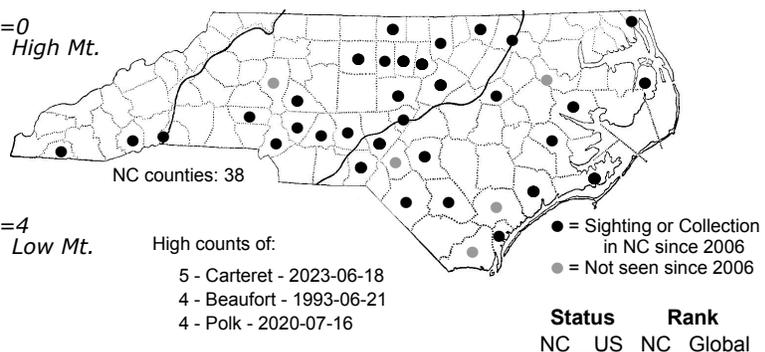
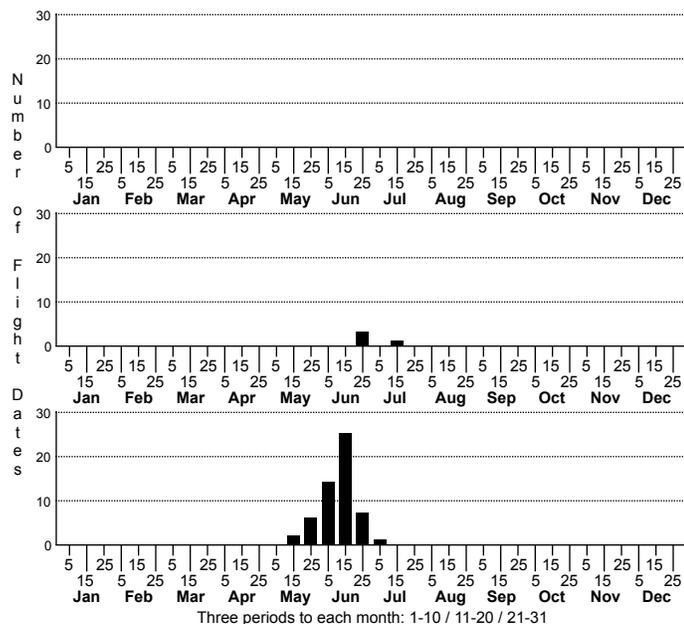


## *Cossula magnifica* Pecan Carpenterworm Moth



FAMILY: Cossidae SUBFAMILY: Cossulinae TRIBE: [Cossulini]

TAXONOMIC\_COMMENTS: A resident of the southeastern U.S., this is the sole representative of this genus in North America.

FIELD GUIDE DESCRIPTIONS: Covell (1984)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Barnes and McDunnough (1911)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Solomon (1995)

ID COMMENTS: *Cossula magnifica* is easily identified by two contrastingly white areas, with one on the thorax, and the second on the forewing at around three-fourths the wing length. The white region on the forewing is followed by a prominent, brownish oval mark. A more detailed description follows.

The head is dark-brown and contrast sharply with the thorax and tegula that are white with darker specks. The antenna is brownish-orange in the male and mostly brownish in the female. The ground color of the forewing varies from tannish-gray to brownish-gray and is overlain with numerous irregular, blackish, transverse strigulae that are most prevalent on the dorsal half of the wing. Scattered, diffuse, blackish spots are also present that are more concentrated on the costal half of the wing. A relatively large spot is present in the middle of the wing at around two-fifths the wing length from the base, and a prominent, white, irregular band is present at around three-fourths the wing length. The band often has two or three transverse strigulae within, and is followed by an oval-shaped, brownish mark that fills the apical fourth of the wing. The oval mark is irregularly edged with dark-brown or blackish scales, and often has one or two broad longitudinal bands near the tornus and middle. The terminal fringe is mottled with brownish and yellowish-brown patches, and has a brown sub-basal line that surrounds the oval patch. The hindwing is uniformly dark-brown with a white fringe that is checked with dark-brown marks.

DISTRIBUTION: *Cossula magnifica* is found in the southeastern US where it ranges from Maryland and Virginia southward to southern Florida, and westward through the Gulf Coast states to eastern Texas. The range extends north to southern Arkansas, northern Mississippi, northern Alabama, and southeastern Tennessee, with one isolated record from north-central Tennessee. As of 2025, we have numerous records from throughout the Coastal Plain and the eastern and central Piedmont. This species is rare in the Blue Ridge, where we have a few records from the southernmost tier of counties.

FLIGHT COMMENT: The adults have been documented from March through July in different areas of the range, with a seasonal peak in May and June. A few individuals also have been found during the winter months. Local populations in North Carolina are univoltine. As of 2025, our records range from mid-May to late-August, with a seasonal peak in May and June.

HABITAT: North Carolina records for this species come from a wide range of woody habitats, including maritime forest and scrub, xeric Carolina bay rims and sandhills, mesic hardwood slopes and ridges, reservoir shorelines, and wooded residential neighborhoods.

FOOD: The larvae are borers that prefer pecans and hickories (Solomon, 1995). They also commonly use oaks, and rarely use other hardwoods such as persimmons (Bailey, 1892; Covell, 1984; Kimball, 1965; Smith, 1990; Solomon, 1995). The reported hosts include Pecan (*Carya illinoensis*), hickories, including Mockernut Hickory (*Carya tomentosa*), American Persimmon (*Diospyros virginiana*), White Oak (*Q. alba*), Scarlet Oak (*Q. coccinea*), Southern Red Oak (*Q. falcata*), Cherrybark Oak (*Q. pagoda*), Post Oak (*Q. stellata*), Black Oak (*Q. velutina*) and Live Oak (*Q. virginiana*). In North Carolina, it has recently been reported from Common Hazel (*Corylus avellana*) (M. Bertone, BugGuide, 2017), which is not native to our state.

OBSERVATION\_METHODS: The adults are attracted to lights, but have rudimentary mouthparts and do not come to bait or visit flowers.

NATURAL HERITAGE PROGRAM RANKS: G5 [S4]

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

COMMENTS: This species is uncommon to locally common in the Coastal Plain and Piedmont, but rare in the Blue Ridge.