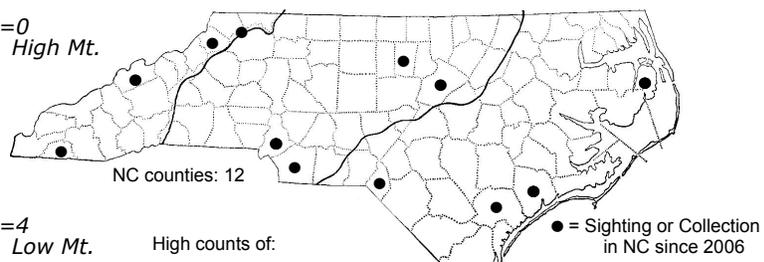
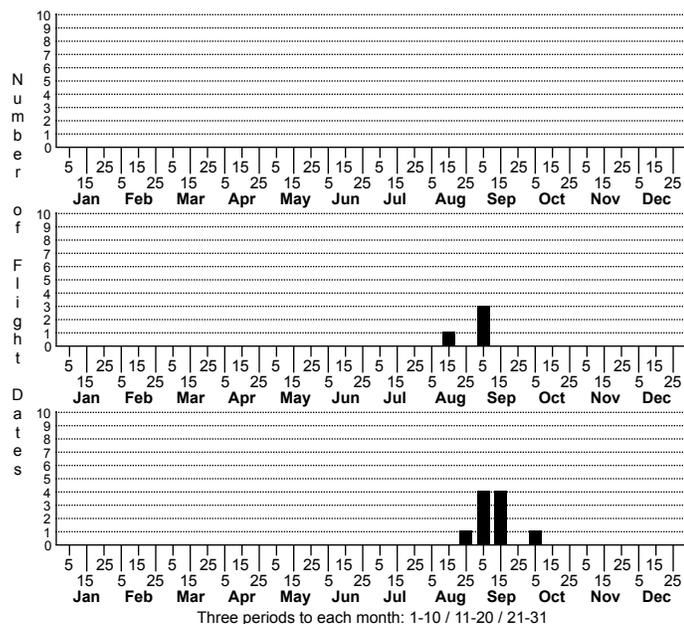
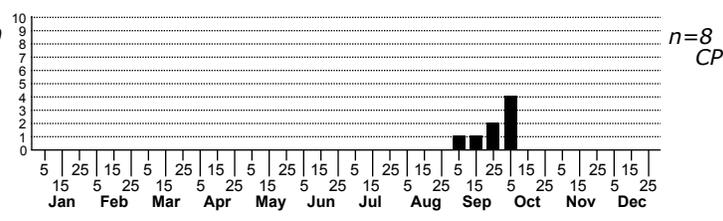


# *Carmenta pyralidiformis* Boneset Borer Moth



High counts of:  
 1 - Mecklenburg - 2018-09-05  
 1 - Madison - 2018-09-04  
 1 - Onslow - 2022-09-27

Status		Rank	
NC	US	NC	Global



FAMILY: Sesiidae SUBFAMILY: Sesiinae TRIBE: Synanthedonini

TAXONOMIC\_COMMENTS: Of the 135 or more members of the Sesiidae that occur in North America north of Mexico, 37 have been recorded in North Carolina. Some sesiids, known broadly as clearwing borers, are significant pests of commercial crops. The great majority are mimics of wasps and hornets.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Engelhardt (1946)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Engelhardt (1946)

ID COMMENTS: *Carmenta pyralidiformis* is a relatively small clearwing moth that is predominantly black, but with a prominent yellow band on segment 4 of the abdomen, and a thin yellow band on segment 7 (absent on the females). The collar is yellow, the labial palp is golden yellow with a black tip, and the thorax has a subdorsal yellow stripe on each side. The following detailed description of the male is based on those of Engelhardt (1946) and Eichlin and Duckworth (1988).

The antennae is stout and purplish black, while the labial palp is golden yellow with a black tip. The head is uniformly purplish-black and the collar golden-yellow. The thorax is black with a purple luster, with a subdorsal yellow stripe on each side and a yellow patch beneath the wing base. The abdomen is lustrous violaceous or bronzy-black, with a broad yellow band on segment 4 and a narrow band on the posterior margin of segment 7. The anal tuft is short, halberd- or wedge-shaped, and entirely black. The tibia of the hindleg is rough throughout and mostly black, but mixed with yellow at and between the spurs. The tarsi have the first joints slightly thickened and black, while the posterior joints are sordid yellow. The forewing is opaque and lustrous violaceous-black, except for a small hyaline spot both before and beyond the discal spot that is sometimes present, and that is marked with a few pale-yellow scales. The underside is heavily dusted with yellow on the basal half, while the hindwing is transparent, narrowly margined, and broadly fringed with brownish-black. Females are very similar to the males, but are larger, have a heavier body, and lack the narrow yellow band on segment 7. The black anal tuft is rounded with a short brush projecting on each side.

DISTRIBUTION: *Carmenta pyralidiformis* is found throughout much of the eastern US and in adjoining areas of southern Ontario and Quebec. The range in the US extends from southern Maine, New Hampshire and Vermont southward to central Florida, and westward to eastern Texas, central Oklahoma, central Kansas, eastern Nebraska and Minnesota. This species occurs statewide in North Carolina.

FLIGHT COMMENT: The adults have been observed from March through October in different areas of the range, with a seasonal peak typically in July through September. As of 2024, our records are from early-September through early-October.

HABITAT: Local populations are commonly found in open settings, including early-successional fields, road and power line corridors, fencerows, pine savannas and sandhills.

FOOD: The larvae are root borers that use species of *Eupatorium* (Engelhardt, 1946). The reported hosts include White Thoroughwort (*E. album*), Common Boneset (*E. perfoliatum*), and Upland Boneset (*E. sessilifolium*). We do not have any feeding records in North Carolina.

OBSERVATION\_METHODS: The adults are diurnally active and are occasionally seen resting on vegetation. They commonly visit flowers, particularly *Eupatorium* and other composites. The males can be trapped using artificial pheromone lures.

NATURAL HERITAGE PROGRAM RANKS: GNR [S3S5]

STATE PROTECTION:

COMMENTS: *Carmenta pyralidiformis* occurs statewide and appears to be secure. It has probably been undercollected due to the fact that the adults are diurnally active and do not come to lights.