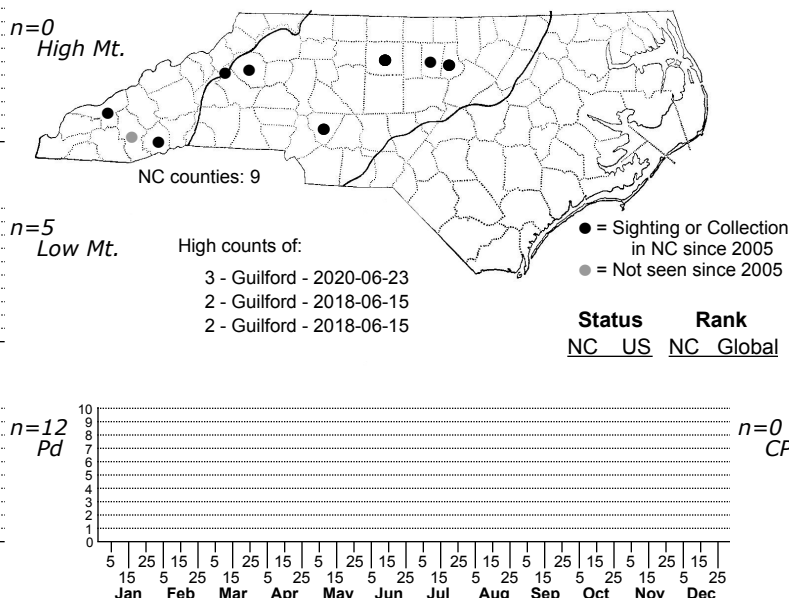
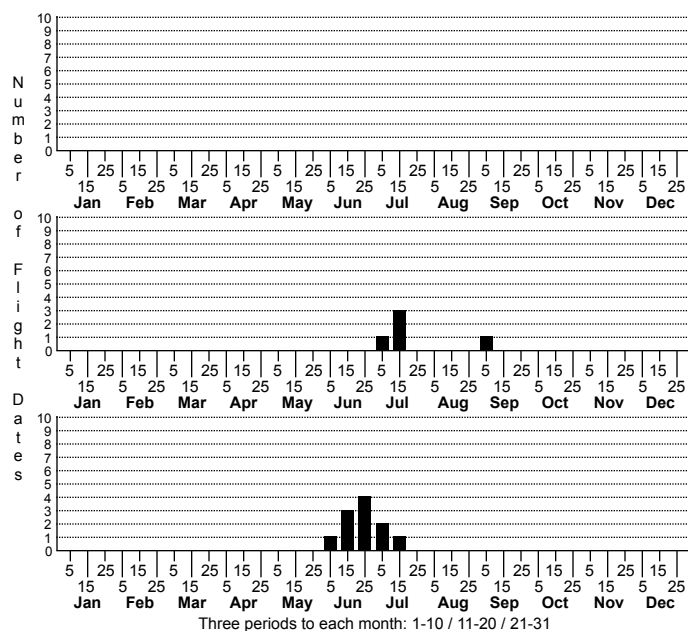


Carmenta ithacae No common name



FAMILY: Sesiidae SUBFAMILY: Sesiinae TRIBE:

TAXONOMIC COMMENTS: Of the 136 or more members of the Sesiidae that occur in North American north of Mexico, 37 have been recorded in North Carolina. Some sesiiids, 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: The following description is based primarily on that of Engelhardt (1946). In the males, the antenna is metallic black with a short area of whitish shading near the tip. The palp is whitish or pale yellow below and black above, while the head is lustrous bluish-black and the collar pale yellow. The thorax varies from black to bluish-black and has a long, thin yellow stripe along the sides, along with tufts of sordid yellow scales that extend from the metathorax. The abdomen is long and slender, with violaceous or coppery reflections, and with thin, whitish bands on segments 2, 4, 6 and 7, although North Carolina specimens usually lack the band on segment 6. The bands narrowly unite on the sides, and the one on segment 4 encircles the body. The large, fan-shaped anal tuft is mostly shiny black with whitish scales along the sides and through the center on the underside. The forewing is transparent, with a narrow, black border and black outer margin that has golden-yellowish rays between the veins. The discal mark is purplish-black and squarish to rectangular. The hind tibia and tarsi are mostly black, with the latter having whitish or light-yellowish coloration on both sides of the joints.

Females are generally similar, but the antenna has a larger whitish area before the tip and the abdomen is broader. Abdominal segments 2, 4 and 6 have narrow light-yellow or pale white bands, along with broad whitish patches on the sides. The anal tuft is less fan-shaped than that of the male and mostly shiny black with little or no whitish scaling along the outer margins.

Carmenta bassiformis is most easily confused with *C. ithacae*. The latter tends to have the light mark on the antenna, the bands on the abdomen, and the lateral fringe on the anal tuft more whitish or yellowish-white, although the antennal mark on female *C. bassiformis* is often whitish. Female *C. ithacae* lack the prominent yellowish tip of the anal brush as seen in female *C. bassiformis*, and the whitish region below the tip of the antenna is generally shorter than that of female *C. bassiformis*. Both sexes of *C. ithacae* have hind tarsi with long black bands that alternate with shorter yellowish or whitish bands. In *C. bassiformis*, males have yellow hind tarsi while the females have alternating dark and yellowish bands on the tarsi, with the dark bands less prominent and boldly contrasting than those of *C. ithacae*. Size differences for a given sex are also useful, with *C. bassiformis* being larger and having minimal size overlap with *C. ithacae*.

DISTRIBUTION: *Carmenta ithacae* occurs in the eastern US and in adjoining portions of southern Canada (Manitoba; Ontario; Quebec). In the US the range extends from Vermont, New York and Massachusetts southwestward to North Carolina and northern Georgia, and westward to western Tennessee, eastern Kansas, eastern Nebraska, and Minnesota. Apparent geographic isolates occur in northern Florida (Brown and Mizell, 1993) and eastern Texas, with the latter needing taxonomic clarification. As of 2024, all of our records are from the Piedmont and lower elevations in the mountains.

FLIGHT COMMENT: The adults have been observed from May through September in different areas of the range, with a seasonal peak commonly in June and July. As of 2024, our records extend from mid-June through early-September.

HABITAT: Local populations are patchily distributed across the landscape where the host plants are found and often in mesic forested sites with edge habitats that are partially sunny to sunny.

FOOD: The adults have been reared from Common Sneezeweed (*Helenium autumnale*) and Smooth Oxeye (*Heliopsis helianthoides*), with the latter appearing to be the primary host (Engelhardt, 1946). Reports of this species using *Parthenium* likely refer to an undescribed species (*Carmenta* sp. nr *C. ithacae*) from Mexico (Dhileepan and McFadyen, 2012). We do not have any feeding records in North Carolina.

OBSERVATION METHODS: The adults are not attracted to lights or bait. They are diurnal and can be found on flowers or resting on the upper surfaces of vegetation during the day. The males are attracted to pheromone traps.

NATURAL HERITAGE PROGRAM RANKS: GNR[S2S3]

STATE PROTECTION:

COMMENTS: This species appears to be somewhat uncommon in the state. It has probably been undercollected due to the fact that the adults are diurnally active and do not come to lights.