

FAMILY: Sesiidae SUBFAMILY: Sesiinae TRIBE: Synanthedonini TAXONOMIC_COMMENTS: North America has 136 or more species in the family Sesiidae, and the large genus <i>Synanthedon</i>constitutes around half of the 37 species found in North Carolina, many being similar in appearance to one another. Some sesiids, known broadly as clearwing borers, are significant pests of commercial crops. Almost all are mimics of wasps and hornets.

FIELD GUIDE DESCRIPTIONS: ONLINE PHOTOS: TECHNICAL DESCRIPTION, ADULTS: Eichlin and Duckworth (1988) TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: <i>Synanthedon fulvipes<math></i> is best identified by its predominantly black body, hyaline wings, and bright orange legs that contrast sharply with the black body. The following detailed description of the male is based on those of Engelhardt (1946) and Eichlin and Duckworth (1988).

The antenna has short pectinations and is slender and black, with white or pale yellow before the tips. The labial palp is orange below, and black above and along the sides. The vertex and occipital fringe of the head are black, while the front is black with white laterally. The thorax is black with a large orange patch beneath the wings. The abdomen varies from lustrous coppery to black, with segments 2-4 orange along the sides, and segments 1-4 mostly orange below. Specimens occasionally have segment 4 with a complete orange band above. The anal tuft is wedge-shaped and uniformly blackish. The coxae and femora of the legs are brownish-black, while the tibia and first tarsal segment are orange, with the remaining segments blackish or with some orange, especially on the fore- and mid-tarsi. The forewing is hyaline, with the veins, costa, and very narrow outer margin black. The discal mark is narrow and outwardly edged with orange, and the wing base and costa are dusted with orange. The underside is pale yellow to orange along the costa to the wing base. The hindwing is hyaline with very narrow margins. It has a very small black discal mark, a costa that is often dusted with pale yellow to the wing base, and brownish-black fringes. The females are similar to the males, but have a simple antenna with the apical one-third pale yellow, and an anal tuft that is straight and blunt.

DISTRIBUTION: <i>Synanthedon fulvipes</i> is found in eastern North America and has northern affinities, with the range including portions of southern Canada (Manitoba; Ontario; Quebec; New Brunswick; Nova Scotia) and the northern US from southern Maine, New Hampshire, Vermont and New York southward to Pennsylvania. Possible geographic isolates are also known from northern Michigan, Minnesota, and western North Carolina. As of 2024, we have records for two specimens that were taken on different dates at a site in Ashe County.

FLIGHT COMMENT: The adults have a relatively brief flight period, with records from May through July in different areas of the range, and a seasonal peak commonly in June. As of 2024, both of our specimens are from late-May.

HABITAT: Our sole site record for this species as of 2024 comes from the crest of a north-facing slope that was covered with mesic hardwoods.

FOOD: The larvae appear to specialize on birches, including Paper Birch ($\leq i$ >Betula papyrifera</i>) (Eichlin and Duckworth, 1988). Our two records as of 2024 are from a site where Yellow Birch ($\leq i$ >B. alleghaniensis</i>) and Sweet Birch ($\leq i$ >B. lenta</i>) are both present, with one or both presumably serving as the host.

OBSERVATION_METHODS: The adults are diurnally active and are not attracted to lights or bait. They are occasionally seen resting on vegetation during the day and nectaring on plants, and can be collected using artificial pheromone traps.

NATURAL HERITAGE PROGRAM RANKS: GNR SNR [S1]

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

COMMENTS: This is a species that appears to be rare or uncommon throughout its range and that is associated with Northern Hardwood forests. The site where this species has been collected in North Carolina is hundreds of miles from the next known population in Pennsylvania.