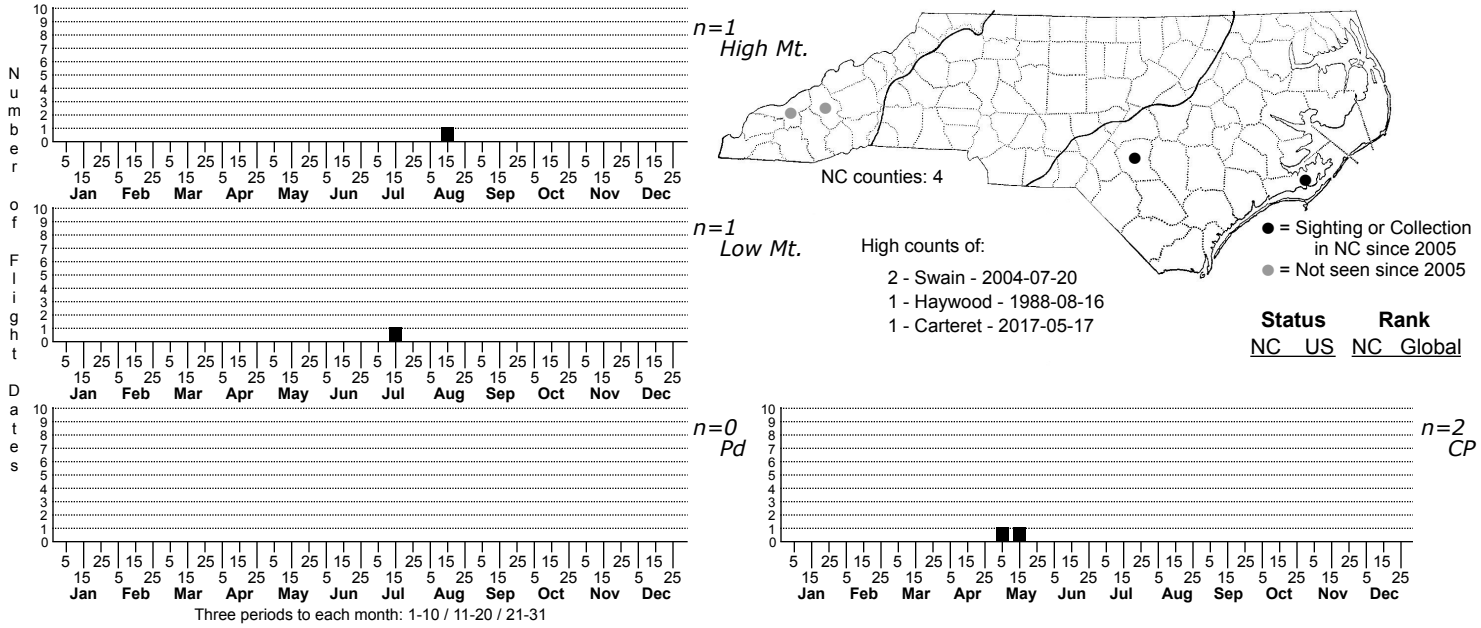
Synanthedon rubrofascia Tupelo Clearwing



FAMILY: Sesiidae SUBFAMILY: Sesiinae TRIBE: Synanthedonini
TAXONOMIC_COMMENTS: North America has 136 or more species in the family Sesiidae, and the large genus Synanthedon 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: This is an easily identified species due to its overall bluish-black body that contrasts sharply with a bold orangish-red band on abdominal segments 4 and 5. The following detailed description of the male is based on those of Engelhardt (1946) and Eichlin and Duckworth (1988).

The vertex, front, and occipital fringe of the head are all black, while the labial palp is smooth and black, with some pale yellow at the base. The thorax is bluish-black, and the abdomen bluish-black with segments 4 and 5 solid orangish-red. Lesser amounts of orangish-red coloration are also sometimes present on segments 6 and 7. The anal tuft is wedge-shaped and black, and usually thinly-edged with white scales to the tip. The legs are bluish-black except for very pale-yellow coloration on the tibial spurs and on the tarsi. The forewing is transparent with the veins, costa, fringe and very broad outer margin purplish-black. The discal mark is long and narrow, and the underside of the forewing is slightly shaded with straw color. The hindwing is narrowly margined and fringed with dull black. The females are similar to the males, except that the forewing is opaque and violaceous-black. In addition, the hindwing is more broadly margined with black, and the tibial spurs and tarsi are black.

The females of S. rubrofascia look like small females of S. exitiosa, but the latter normally have an orangish abdominal band that is restricted to segment 4, while the band of S. rubrofascia is more reddish, covers segments 4 and 5, and often portions of segments 6 and 7. In addition, the abdominal bands on S. rubrofascia completely encircle the segments, whereas those of S. exitiosa do not and have a gap on the underside.

DISTRIBUTION: Synanthedon rubrofascia is known from throughout much of the eastern US and in Ontario. In the US, the range is from Massachusetts, New Jersey and Pennsylvania southward to southern Florida, and westward to eastern Texas, Arkansas, Kentucky, Ohio and southern Michigan. As of 2024 we have only three site records, with two from the southern Blue Ridge and a third from the coast.

FLIGHT COMMENT: The adults have been observed from March through November in different areas of the range, with Florida populations flying most of the year except for the coldest months, and northern populations flying mostly from May through August. As of 2024 our very limited records are from mid-May to mid-August.

HABITAT: Coastal populations are commonly found in or near gum swamps and bayheads (Brown and Mizell, 1993), while populations outside of the Coastal Plain occur in mesic to drier forests with Black Gum.

FOOD: The larvae are borers that specialize on gum trees (Nyssa spp.) (Engelhardt, 1946; Eichlin and Duckworth, 1988; Solomon, 1995). The reported hosts include Black Gum (N. sylvatica) and probably both Water Tupelo (N. aquatica) and Swamp Tupelo (N. biflora) in coastal swamplands.

OBSERVATION_METHODS: The adults are occasionally seen resting on vegetation or debris, and are attracted to pheromone traps (Snow et al., 1985). Engelhardt (1946) reported that they also are attracted to flowers, particularly those of chinquapin along the edges of swamps.

NATURAL HERITAGE PROGRAM RANKS: GNR [S1S2]

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

COMMENTS: Synanthedon rubrofascia appears to be rare in North Carolina, with only three site records as of 2024. More information is needed on its distribution and abundance before we can accurately assess its conservation status within the state.