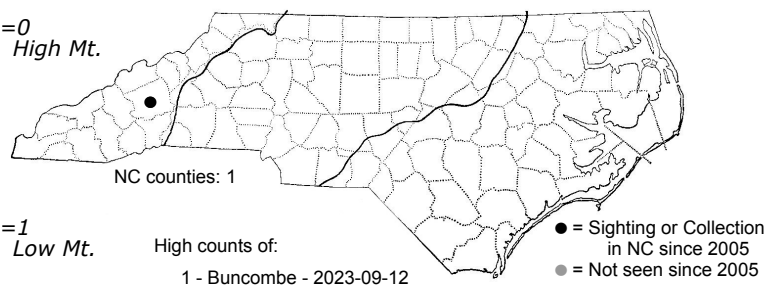
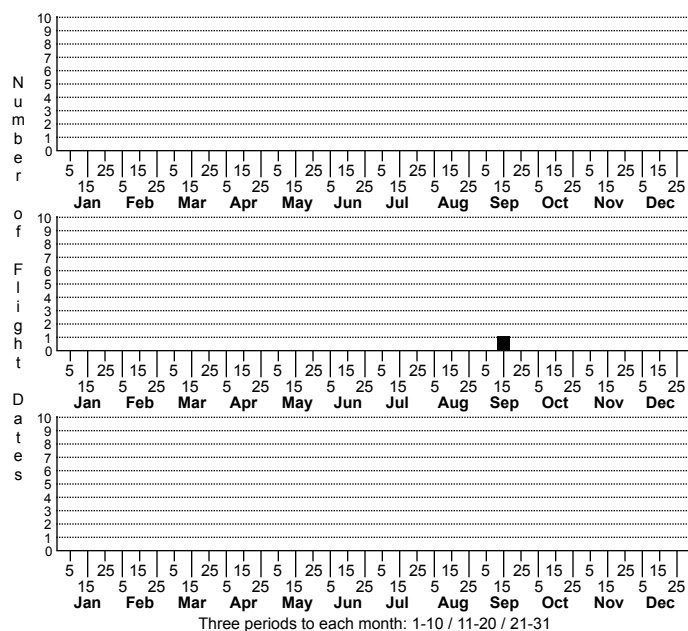


# *Alcathoe carolinensis* Clematis Borer Moth



Status	Rank
NC	US
NC	Global



FAMILY: Sesiidae SUBFAMILY: Sesiinae TRIBE: Synanthedonini

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 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: Eichlin and Duckworth (1988)

TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: *Alcathoe carolinensis* is a distinctive clearwing moth due to its large size and the long black tail of the male. The entire body of the male is bluish-black with a metallic-blue iridescence. The only exceptions are the antenna, which has a variable mix of yellowish and blackish scales, and the tarsi that have varying amounts of yellowish-orange coloration that is best developed on the forelegs and midlegs. Both wings are black and opaque except for the hindwing, which has an oval-shaped transparent window near the inner margin at the base of the wing, and one or more short, transparent streaks next to it towards the costa. The black tail is about 1.0-1.5 cm in length. Females are similar, but have a pure yellow antenna and lack the tail.

The males of our other *Alcathoe* species, *A. caudata*, can be readily distinguished by their yellow tail. The females are very similar to female *A. carolinensis*, but those of *A. caudata* usually have a reddish collar, palps that are yellowish below, legs with the tarsi more boldly marked with yellow, a large transparent region on the forewing, and a completely transparent hindwing.

DISTRIBUTION: *Alcathoe carolinensis* is found mostly in the southeastern US, where there are scattered records from Indiana, West Virginia, Tennessee, western North Carolina, Florida, Georgia, Alabama, Mississippi, and Arkansas. This species appears to be uncommon or rare throughout its range, including in North Carolina. It was originally described from an undated specimen collected by Beutenmuller in the Black Mountains, probably during one of his explorations during the early 1900's, and presumably from Buncombe County. It was recently rediscovered in 2023 by Kirstin Shrode at a site in Asheville, which constitutes our only recent record for the state.

FLIGHT COMMENT: The adults have been observed from June through October in different areas of the range, with a seasonal peak in September. As of 2024, our only dated record is from 12 September.

HABITAT: Local populations are commonly found in open habitats such as road corridors, fence lines, old-fields and other disturbed habitats.

FOOD: The host plants are undocumented, but are thought to be one or more species of *Clematis* given that other members of this genus specialize on *Clematis*.

OBSERVATION\_METHODS: The adults are diurnally active, but have occasionally been seen resting on vegetation or visiting flowers during the day. They have also been taken in pheromone traps.

NATURAL HERITAGE PROGRAM RANKS: GNR [S1?]

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

COMMENTS: This species appears to be uncommon or rare throughout its range, including in North Carolina. In addition to one historical record from the early 1900's, it was recently rediscovered in 2023 at a site in Asheville, which constitutes our only other record for the state.