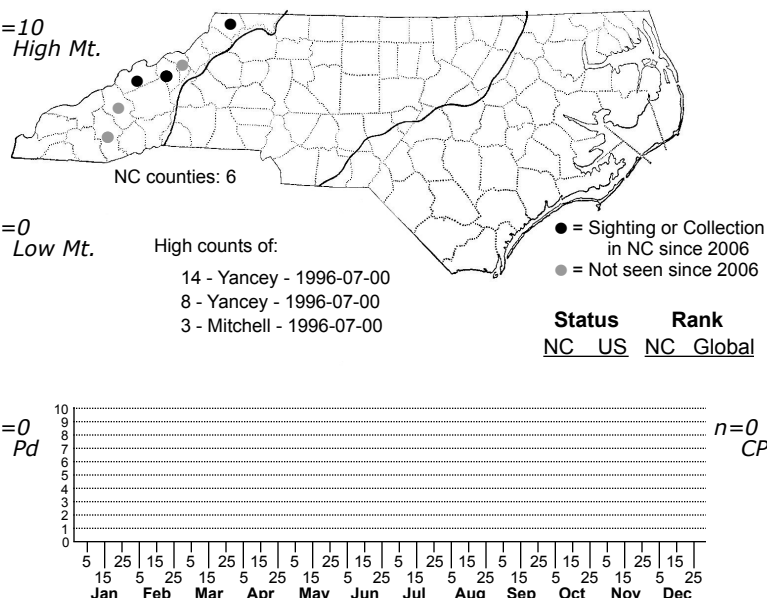
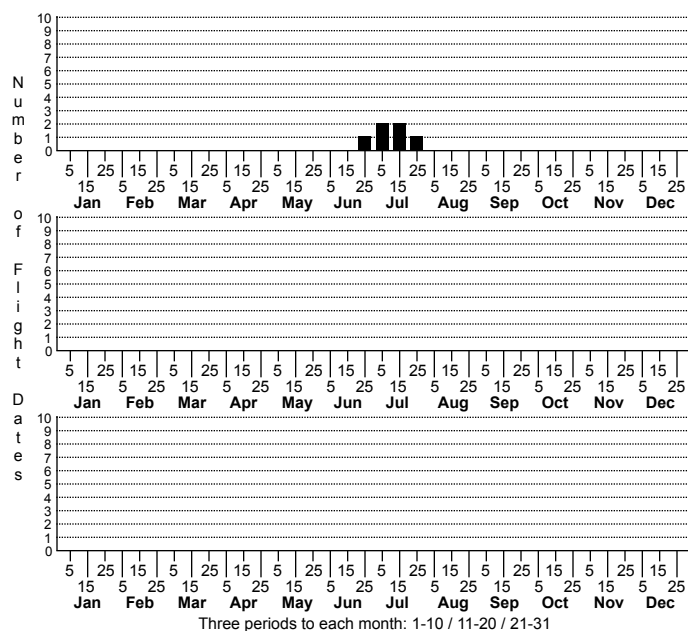


Gazoryctra sciophanes None



FAMILY: Hepialidae SUBFAMILY: [Hepialinae] TRIBE: [Hepialini]

TAXONOMIC_COMMENTS: *Gazoryctra sciophanes* a member of the Ghost Moth, or Swift family, a primitive group of over 500 species that is found worldwide. In North America, the family is made up of at least 20 species in four genera, with the vast majority of species having northern or western affinities. *Gazoryctra sciophanes* is one of at least 10 species in the genus, and the only one found in North Carolina. The taxonomy of the group remains in flux.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Ferguson (1979)

TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: This species has a rounded forewing with varying amounts of sooty black to dark brown coloration and diffuse gray, dark brown, or black mottling and streaking. It typically has an elongated white bar or patch with irregular, jagged edges that run obliquely across the lower half of the median area. There are also several small, elongated white spots at the base. It may also show white spotting in the subterminal area and along the costa, but these markings are subject to individual variation. Ferguson (1979) states that in half of the male specimens he collected, the large white forewing patch was reduced or obscured. Females appear to be lighter overall, perhaps with less distinct patterning (Ferguson, 1979; Grehan, 1998). Very worn individuals, or those with greatly reduced or obscured white maculations, may be hard to recognize or could be mistaken for other species, potentially including *Korscheltellus gracilis*, though that species is smaller than *Gazoryctra* (Ferguson, 1979)

DISTRIBUTION: *Gazoryctra sciophanes* appears to be restricted to the higher peaks of the southern Appalachians. Populations occur from Mt. Rogers, Virginia southwestward to Jackson Co., North Carolina, and at one location in West Virginia (Grehan, 1998).

FLIGHT COMMENT: Our records all come from late June and July.

HABITAT: All of our records come from Spruce-Fir Forests at elevations above 4,000 feet in elevation.

FOOD: Because most specimens have been taken in the spruce/fir zone, it was thought that the larvae most likely feed on the roots of Fraser Fir or other conifer species, or on other plants associated with spruce/fir forests (Grehan, 1998). However, *G. sciophanes* has also been collected on several high peaks and balds in North Carolina where spruce and fir are not found. It is currently thought that they are subterranean borers that probably feed on the roots of grasses (J. Bolling Sullivan, pers. comm.).

OBSERVATION_METHODS: Like other members of the family, this species appears to fly for just a short period right around dusk, and during a relatively short window in late June through mid-July. This species is at least somewhat attracted to lights.

NATURAL HERITAGE PROGRAM RANKS: GU S1S2

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

COMMENTS: *G. sciophanes* is a southern Appalachian endemic described by Ferguson (1979) from a series collected in Jackson County. Additional series were collected by Grehan (1998) in Yancey and Mitchell counties. While it also occurs in Virginia and West Virginia (Grehan, 1998), it may be most easily found in North Carolina, where it is likely uncommon. As a species restricted to the high mountains, it may be highly vulnerable to the effects of global climate change.