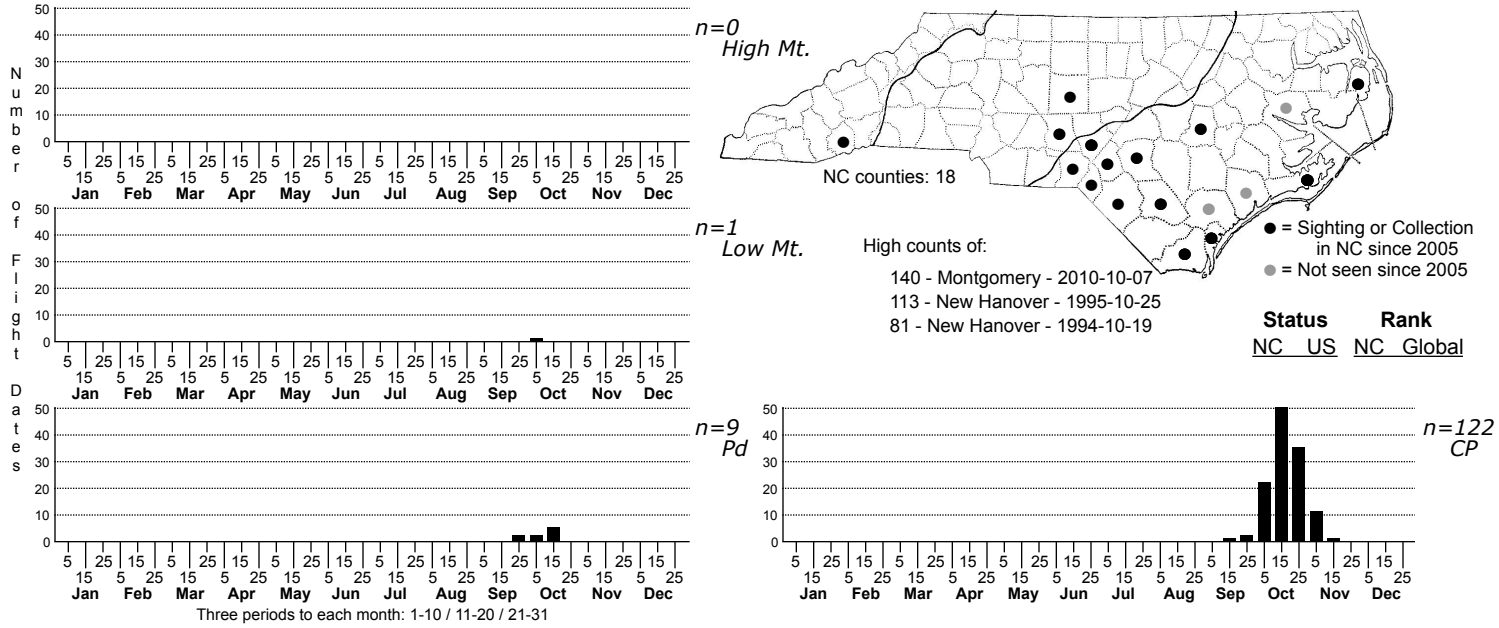
Cymatophora approximaria Giant Gray Moth



FAMILY: Geometridae SUBFAMILY: Ennominae TRIBE: Angeronini
TAXONOMIC_COMMENTS: This genus contains three species; two are neotropical, one occurs in North Carolina.

FIELD GUIDE DESCRIPTIONS: Not in either Covell (1984) or Beadle and Leckie (2012)
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Forbes (1948; as Stenotrachelys approximaria)
TECHNICAL DESCRIPTION, IMMATURE STAGES: Forbes (1948; as Stenotrachelys approximaria)

ID COMMENTS: Cymatophora is one of our largest Geometrids, similar in wingspan to Epimecis hortaria and the Lytrosis species and much larger than the other species loosely termed the Grays. Likely to be confused only with Epimecis, with which it barely overlaps in its fall flight period. Both species have broadly bipectinate antennae in the males, possess a similar gray ground color shaded with brown and darker striations, and have scalloped outer margins on their wings. Cymatophora is narrower-winged, however, and holds its wings more horizontally at rest, with the costa running at right angles to the body; Epimecis, in contrast, usually holds its forewings projecting forward at rest, with the costa running at an angle from the body. Both species possess well-marked lines on the wings, but these are black and single in Cymatophora and usually doubled in Epimecis and filled with white. The postmedian is strongly bent in both species but more dentate in Epimecis. The median line in Cymatophora is also sharply bent, coverging with the postmedian in the lower part of the wing; it is much straighter in Epimecis, although also coverging with the postmedian lower down. A strong, but diffuse subterminal line is usually present in Epimecis but lacking in Cymatophora.

DISTRIBUTION: Principally a denizen of the Coastal Plain but also getting into the eastern Piedmont (Montgomery County).

FLIGHT COMMENT: Has a single flight in the fall. Howerver, a single adult was taken on May 1 in Carteret County -- clearly its biological clock was broken.

HABITAT: Occurs in a variety of habitats, but usually in habitats where hardwoods -- particularly oaks -- are present.

FOOD: The majority of our records come from maritime forest and maritime scrub habitats on the Barrier Islands or from similar mainland communities adjacent to the sounds; in all these habitats, evergreen oaks are likely hosts, including Live Oak (Quercus virginiana), Sand Live Oak (Q. geminata) and Sand Laurel Oak (Q. hemisphaerica). Sand Laurel Oak is the only one of these three that occurs farther inland, following the range of Cymatophora into the Fall-line Sandhills. However, we have recently documented Cymatophora in the Uwharrie Mountains region of the eastern Piedmont, beyond the range of Sand Laurel Oak. Other members of the Laurel Oak group could be used there (and elsewhere), including Willow Oak (Q. phellos) or Water Oak (Q. nigra). Those species, however, extend even farther to the west, leaving some other explanation (perhaps climate) as necessary to account for the restriction of Cymatophora strictly to the eastern part of the state. Greenbriers (Smilax spp.) have also been reported (Forbes, 1948) as host plants, and at least one species -- Smilax laurifolia -- has a range in North Carolina that is similar to that of Cymatophora. That species, however, occurs primarily in peatlands and swamp forests, areas where we have not found the moth, and other species are either more restricted or more widespread than the moth. Clearly, more work is needed to determine both the host plants used by this species and its exact habitat requirements.

OBSERVATION_METHODS: Adults come to lights but none have been seen at baits. At lights males are far more numerous than females. The life history of this species should be described. Captive females will probably lay eggs readily. Beating for caterpillars in the spring has not produced this species which is odd given its abundance in the fall.

NATURAL HERITAGE PROGRAM RANKS: G4G5 SNR [S3S4]

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

COMMENTS: Locally common to abundant in Maritime Forests and other types of hardwood forests in the Coastal Plain and eastern Piedmont. Although somewhat specialized in terms of its habitats, it occurs over a broad area and in multiple habitat types and seems relatively secure in the state.