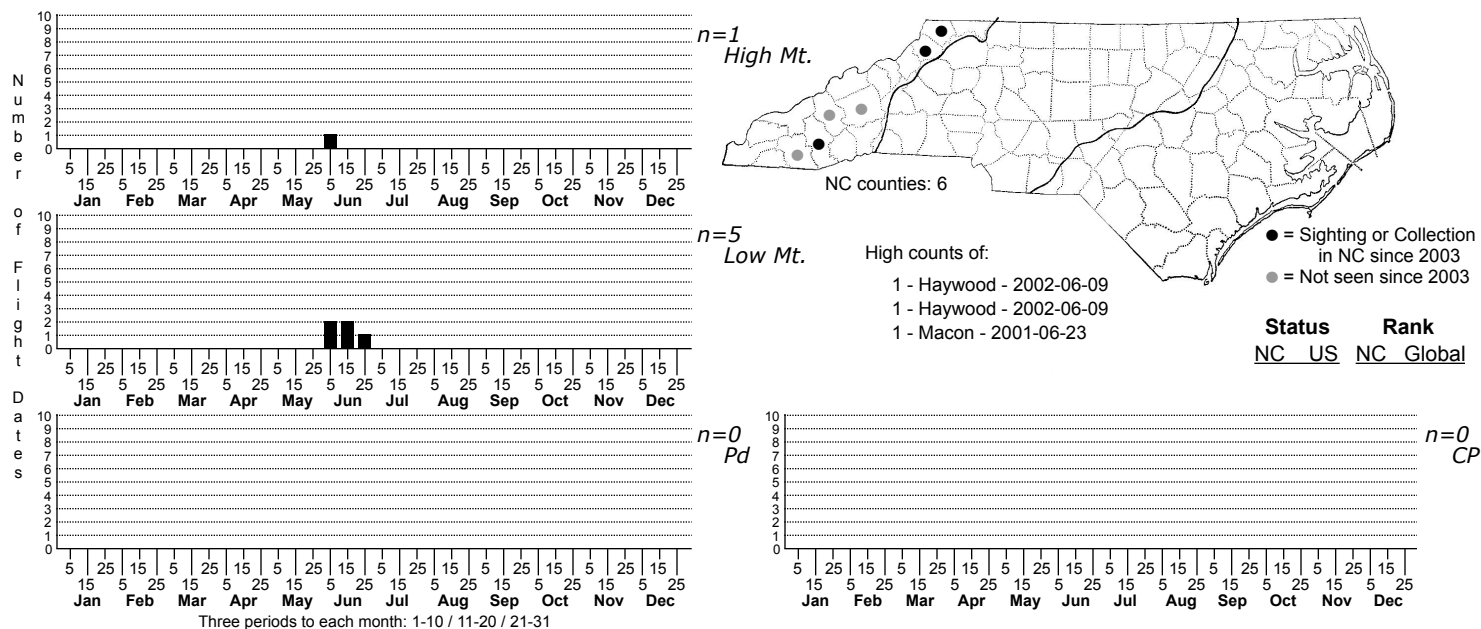


Sthenopsis auratus Gold-spotted Ghost Moth



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

TAXONOMIC_COMMENTS: *Sthenopsis auratus* is 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, the vast majority having northerly or westerly affinities. *S. argenteomaculatus* is one of four species currently recognized in the genus, and one of two found in North Carolina.

FIELD GUIDE DESCRIPTIONS: Beadle and Leckie (2012)

ONLINE PHOTOS: MPG, BugGuide

TECHNICAL DESCRIPTION, ADULTS: Forbes (1923)

TECHNICAL DESCRIPTION, IMMATURE STAGES: McCabe & Wagner (1989)

ID COMMENTS: The proportionally long forewings are narrow at the base, widen broadly just past the middle, then narrow again to pointed, slightly falcate tips. They are orange to orange-brown with umber shading along the inner margin and costa, and through the post-median area. In fresh condition the forewings show a variety of pale pink markings, including a wavy band that runs from the costa through the post-median area to the inner margin, and pink shading at the anal angle and along the costa. There is a prominent, sub-costal gold trapezoid at the mid-point of the forewing, one or two small gold spots at the base, a row of small gold spots along the outer margin, and a band of discrete but connected gold spots in the terminal area. Darker veins stand out on the forewing. When illuminated, the forewings reflect a strong gold iridescence. The thin forewings wear easily, quickly obscuring the coloration pattern, though the presence of gold spots and overall size and shape should permit relatively straightforward identification on worn individuals. The hindwings are uniformly light orange to tan, and are approximately the same shape and length as the forewings. This species is differentiated from *S. argenteomaculatus* by a less contrasting forewing pattern and the presence of gold rather than white spots.

DISTRIBUTION: *Sthenopsis auratus* occurs from the northeastern US southwestward along the Appalachians to northern Georgia. There is at least one apparently disjunct population in the Great Lakes region. In North Carolina, populations appear to be restricted to the Mountains.

FLIGHT COMMENT: All of our records are from June.

HABITAT: Habitat at the sites where this species has been recorded in North Carolina are undescribed. However, given the host plants used by this species, local populations likely inhabit mesic hardwoods, including cove forests and northern hardwood forests.

FOOD: The known hosts include the Ostrich Fern (*Matteuccia struthiopteris*), Marginal Wood-fern (*Dryopteris marginalis*), Mountain Wood-fern (*D. campyloptera*), and Lady Ferns (*Athyrium* spp.; McCabe & Wagner, 1989).

OBSERVATION_METHODS: Early literature erroneously reported that this family is not attracted to light. In North Carolina the species has been collected in traps and photographed at sheets that used ultraviolet and mercury vapor lights.

NATURAL HERITAGE PROGRAM RANKS: G3G4 [SU]

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

COMMENTS: Little is known about the true status of this species in North Carolina. It is likely uncommon to rare in the southern Appalachians. The dearth of records may be more an artifact of poor observer coverage, perhaps combined with the species crepuscular habits, rather than a reflection of its true status. Like other members of the family Hepialidae, much remains to be learned about it in the state.