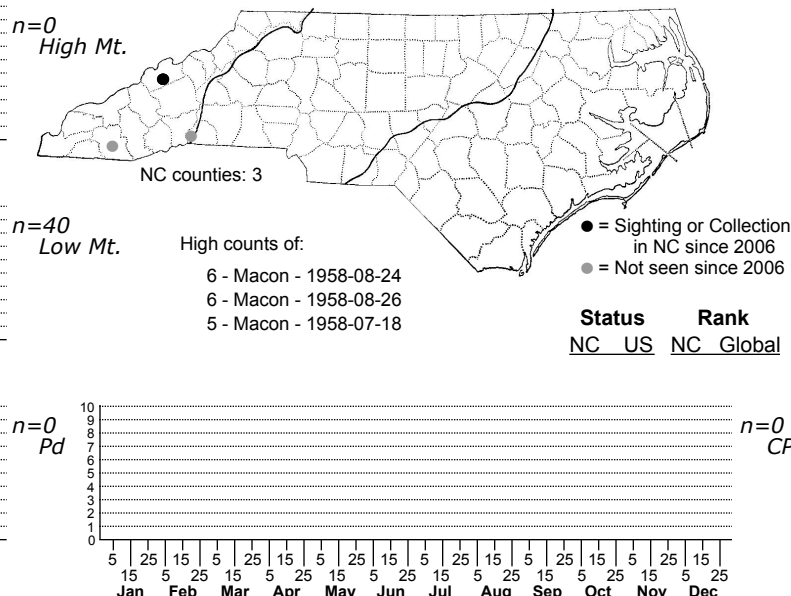
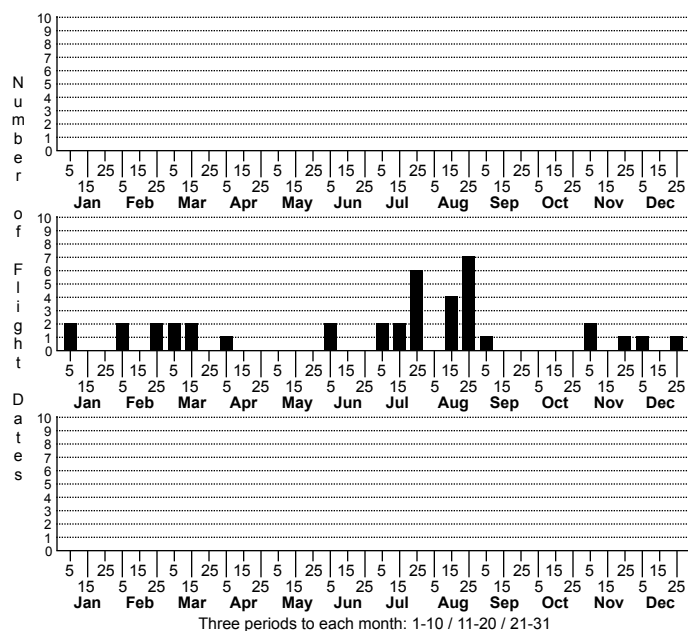


Chionodes adamas None



FAMILY: Gelechiidae SUBFAMILY: Gelechiinae TRIBE: Gelechiini

TAXONOMIC COMMENTS: The genus *Chionodes* is the most species rich genus of gelechiid moths in the Western Hemisphere, with 187 recognized species. Our knowledge of the diverse array of species in North America is largely due to the monumental work of Hodges (1999), who spend decades working on the group and described 115 new species (Powell and Opler, 2009). Many exhibit substantial variation within species and have drab coloration, typically with brown, dark gray, or blackish patterning on the forewings. These can only be confidently identified by examining secondary sexual characteristics and/or the genitalia of one or both sexes. Others are more boldly marked and can be identified by wing patterning. Many of our state records are based on Hodges (1999) database of over 19,000 specimens that he examined from major collections in the US. These include North Carolina specimens that he collected mostly from Highlands, and from a few other areas within the state.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Hodges (1999)

TECHNICAL DESCRIPTION, IMMATURE STAGES: (Marquis et al., 2019)

ID COMMENTS: The following is based on the description by (Hodges, 1999). The head and thorax are yellowish-gray, and the antenna is dark grayish brown. The labial palp is mainly dark grayish brown to blackish, with many scales with an orange-brown cast at the base of the second segment. The third segment is dark grayish brown to nearly black, with several yellowish-white scales on the distal one-half and apex. The forewing has a pale brownish ground color with mostly inconspicuous darker markings. An elongated and slightly oblique black spot is present near the middle at about one-half the wing length. A small blackish costal blotch is often present at about one-third and a second one at three-fourths. The latter has a pale blotch immediately behind it that is often part of a pale fascia that extends across the wing. The abdominal segments are medium to dark gray, and the posterior margins are shining pale yellowish gray. The scale tuft on tergum 8 is pale yellowish gray. The foreleg is mottled with very dark grayish brown and yellowish white on the upper sections, and is blackish with paler annulations on the tarsi. The middle and hindlegs tend to be paler than the foreleg. This drab species has variable markings and is best identified by either genitalia or rearing the adults. The caterpillars are distinctive, particularly when eliminating other species based on host plants.

DISTRIBUTION: *Chionodes adamas* is found in eastern North America in southern Canada (Manitoba; Ontario; Quebec) and in the US from Massachusetts and vicinity southwestward through the southern Appalachians to Alabama and Mississippi. The range extends westward to eastern Texas, Oklahoma, Missouri, Illinois, and Michigan. It is absent from the Atlantic Coastal Plain and much of the Piedmont. As of 2021, all of our records are from the lower elevations in the mountains.

FLIGHT COMMENT: The adults have been collected in areas from outside of North Carolina during almost all months of the year, with peak abundance in March through September (Hodges, 1999). As of 2021, our records are mostly from July and August, with scattered records from December through early April.

HABITAT: The larvae are oak specialists and feed on White Oak, Black Oak, and other species that occur in hardwood forests or mixed pine-hardwood forests in mesic to somewhat drier soil conditions. Our records are mostly from mesic hardwood forests at lower elevations in the mountains.

FOOD: The larvae feed on members of both the white oak and red oak groups (Hodges, 1999; Marquis et al., 2019). The known hosts include White Oak (*Quercus alba*), Scarlet Oak (*Q. coccinea*), Bear Oak (*Q. ilicifolia*), Shingle Oak (*Q. imbricaria*), Laurel Oak (*Q. laurifolia*), Chestnut Oak (*Q. montana*), Northern Red Oak (*Q. rubra*), Post Oak (*Q. stellata*), and Black Oak (*Q. velutina*).

OBSERVATION_METHODS: The adults come to lights and the larvae can be found in leaf rolls on fresh spring growth.

NATURAL HERITAGE PROGRAM RANKS: GNR SU

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

COMMENTS: We currently do not have sufficient information on the distribution and abundance of this species to assess its conservation status.