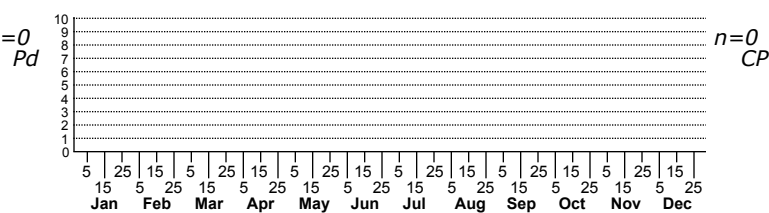
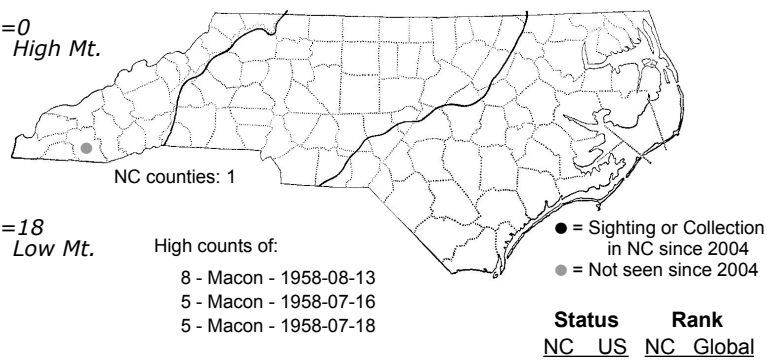
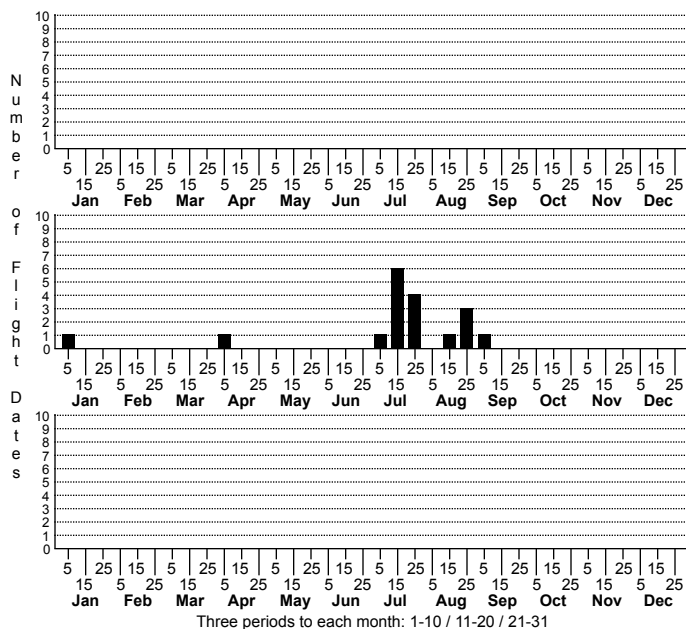


Chionodes soter No common name



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:

ID COMMENTS: The head and thorax are dusky colored with an overlay of pale orangish-gray scales. The labial palp varies from very dark gray to nearly black, and the third segment has white at the apex. The antenna is mainly very dark gray. The forewing ground color is dusky with scattered whitish and pale orangish-gray scales. An outwardly angulated, pale fascia is present at about four-fifths. There are two small blackish spots near the middle of the wing, with a few pale or whitish scales around the margin. A similar third spot is present just anterior to the first and slightly more dorsal. The abdomen is mainly dark gray, with the posterior margin and pleural region pale yellowish gray. The foreleg is lustrous and very dark gray to black, with yellowish gray annulations on the tarsi. Hodges (1999) noted that this species is similar to *C. obscurusella* and can be separated using the foreleg coloration. The coxa of the foreleg of *C. soter* is mainly very dark gray to black, whereas that of *C. obscurusella* is mainly yellowish gray to yellowish white. This species has distinct genital characters, and they provide the most reliably way to identify both species.

DISTRIBUTION: *Chionodes soter* is found in eastern North America from the New England states and adjoining areas of extreme southern Canada (Nova Scotia; Quebec; Ontario) southward to eastern Tennessee, western North Carolina, and northern Alabama. The range extends westward to Arkansas, Illinois, Michigan and southwestern Wisconsin. As of 2021, all of our records are from the Highlands area in the mountains.

FLIGHT COMMENT: Hodges (1999) reported that the adults fly from late June through late September, with a seasonal peak in July and August. As of 2021, most of our records are from early July through early September, with two isolated records from January and early April.

HABITAT: This species is associated with hardwood forests with oaks.

FOOD: Hodges (1999) reported that the adults have been reared from larvae feeding on oaks, including Northern Red Oak (*Quercus rubra*).

OBSERVATION_METHODS: The adults come to lights.

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.