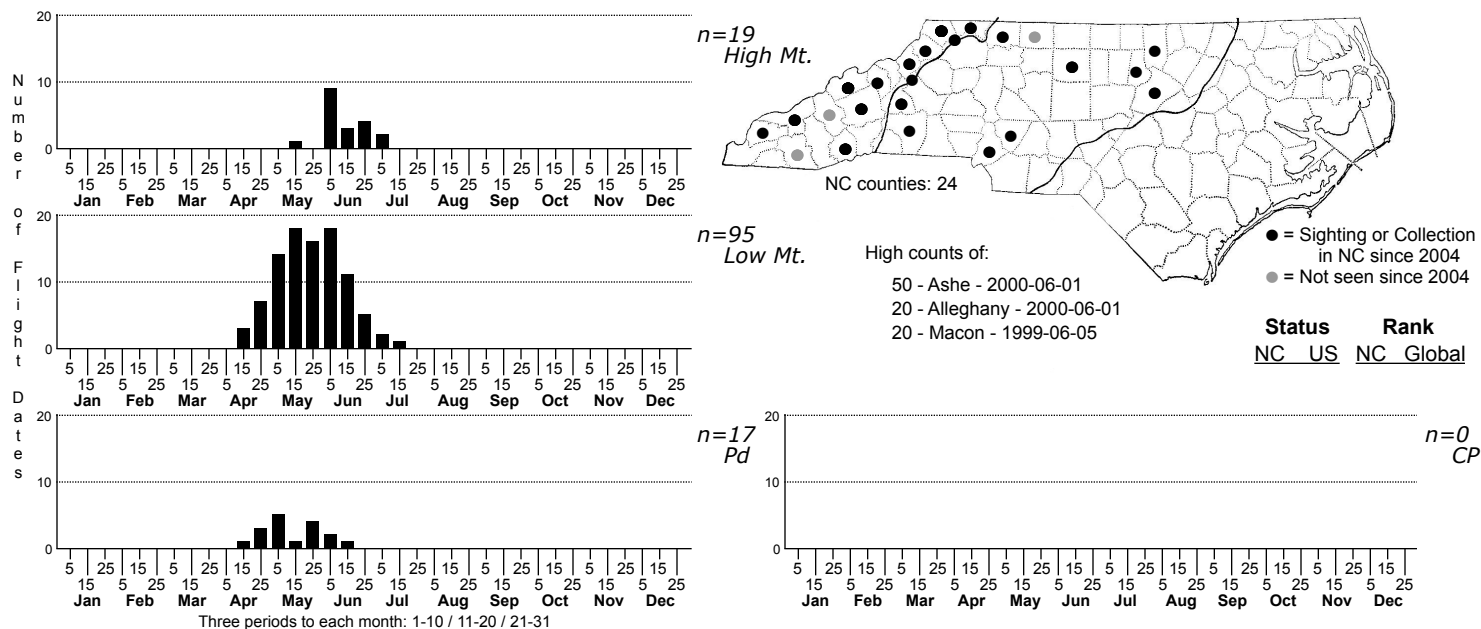


## *Heliomata cycladata* Common Spring Moth



FAMILY: Geometridae SUBFAMILY: Ennominae TRIBE: Macariini

TAXONOMIC\_COMMENTS: A small genus of 4 species of which three are North American and two occur in North Carolina. The remaining species is in central Europe. Ferguson (2008) moved this genus from the Abraxini to the Macariini.

FIELD GUIDE DESCRIPTIONS: Covell (1984); Beadle and Leckie (2012)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Forbes (1948); Ferguson (2008)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Forbes (1948); Wagner et al. (2001); Wagner (2005); Ferguson (2008)

ID COMMENTS: A small, black-and-white Geometrid that is likely to be confused with only a small number of other species. The overall pattern of dark and pale markings is most similar to *Heliomata infulata*, but the pale bands on both wings are usually white or only slightly tinged with yellow in *cycladata* but usually completely pale yellow in *infulata*. The pale patch on the hindwing is also much broader in *cycladata*, usually wider than the dark bands on either side, whereas it is narrower in *infulata*, usually occupying a third or less of the wing (Forbes, 1948; Ferguson, 2008). In some individuals of *infulata* but not *cycladata*, a faint yellow scaling may be present in the dark basal patch, often a thin line, usually on at least one wing (JBS, pers. obs). *Cycladata*, on the other hand, usually has a pale dorsal band at the base of the abdomen and a partially orange collar, both of which are missing in *infulata*; the outlines of the pale patches tend to be more irregular, whereas they are typically clean-cut in *infulata* (Ferguson, 2008).

Other black-and-white Geometrids, such as *Rheumaptera hastata* and *Trichodezia albiovittata*, lack the white patch on the hindwing and have only a single narrow white band on the forewing, whereas *Heliomata* has two distinct pale patches separated by a narrow black band. *Desmia funeralis* is similar in size and general markings to *H. cycladata* but has much narrower, more pointed wings. Sexes are similar but females tend to be larger and darker than males. Generally, a good quality photo should be sufficient to identify this species, but the foodplants in the vicinity will also help distinguish it, as *cycladata* feeds on *Robinia pseudoacacia* whereas *H. infulata* feeds on the *R. hispida* complex (including *R. nana*).

DISTRIBUTION: Occurs in both the Mountains and Piedmont but is absent from the Coastal Plain.

FLIGHT COMMENT: There is a single brood in May-June. The pupa overwinters (Wagner et al, 2001).

HABITAT: The majority of our records come from upland sites, probably mostly near pastures, old homesites, and other semi-disturbed habitats where Black Locust has become established. Black Locust was originally limited to the mountains and has been transplanted all over the state. The dense wood is prized as fenceposts and as fuel.

FOOD: Possibly monophagous, feeding primarily or exclusively on Black Locust (*Robinia pseudoacacia*) (Wagner et al., 2001; Ferguson, 2008). May also feed on other species of *Robinia* or possibly on Honeylocust, but those need to be confirmed (Ferguson, 2008). We have no evidence that *Gleditsia* (Honey Locust) is used in North Carolina.

OBSERVATION\_METHODS: Adults come readily to light traps and can be seen flying during the day. The bright pattern may indicate the adult is distasteful but no evidence has been presented to that effect and the foodplant is not known to be toxic.

NATURAL HERITAGE PROGRAM RANKS: G5 [S4S5]

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

COMMENTS: This species appears to be relatively widespread and common in the Mountains but sparse in the Piedmont, where it has probably only recently become established due to the spread of Black Locust. Appears to be secure within the state.