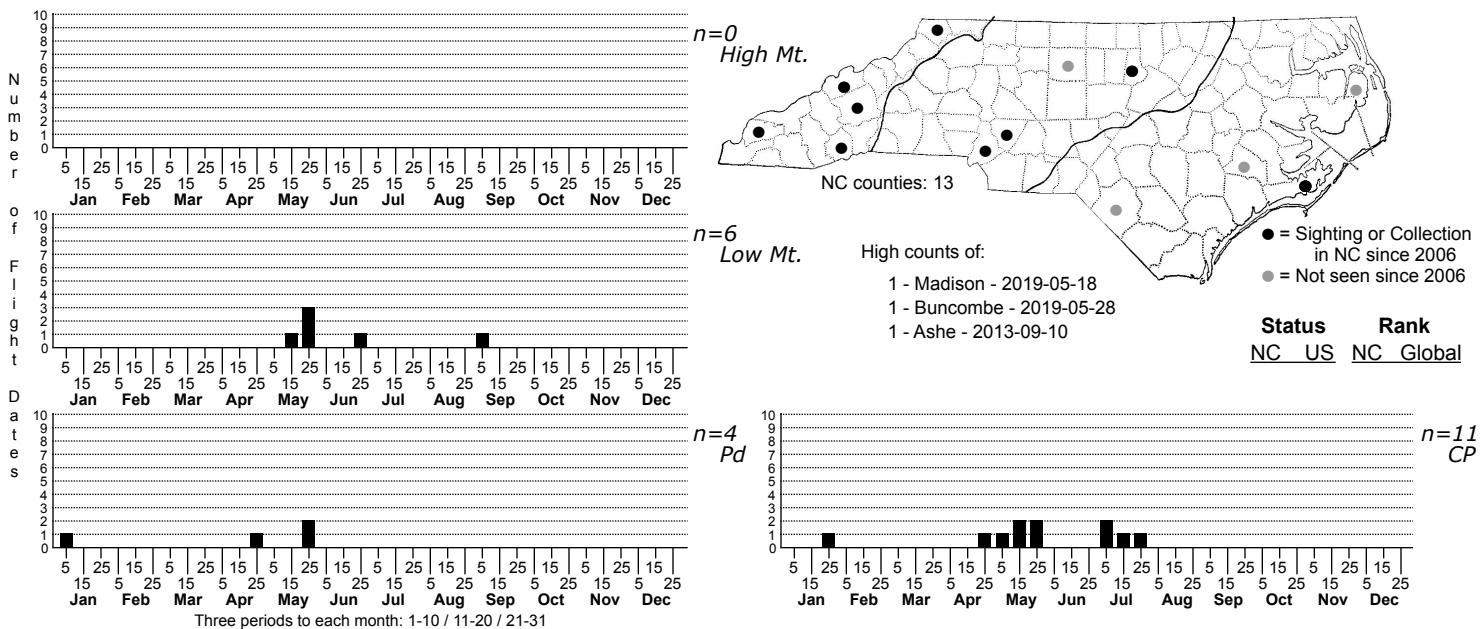


Donacaula melinellus Delightful Donacaula



FAMILY: Crambidae SUBFAMILY: Schoenobiinae TRIBE: [Schoenobiini]

TAXONOMIC COMMENTS: Members of the genus *< i>Donacaulis* are found worldwide, but reach their greatest diversity in the Nearctic region. The group has proven to be taxonomically challenging due to the fact that most of the species are sexually dimorphic, are very similar externally, and exhibit substantial variation within species. Genitalia have proven to be the most useful diagnostic characters for delineating species, but almost all of the species were originally described based on external coloration and patterning. Descriptions and illustrations of genitalia were also lacking for most species until Martinez (2010) undertook a major revision of the Nearctic species. Her work revealed that there were at least 10 undescribed species in addition to the 11 described species in the New World. Additional studies of DNA barcoding and genitalia, including for North Carolina material, indicate that additional undescribed species remain to be formally described. "Some of these are probably identifiable, but, even with the Martinez thesis, there is a great deal of variation, and especially sexual dimorphism that makes these difficult" (Scholtens, 2017).

FIELD GUIDE DESCRIPTIONS: Beadle and Leckie (2012)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Martinez (2010).

TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The following description of the males is based on that of Martinez (2010). The frons and labial palps are pale-yellow, the antennae yellowish-white, and the thorax pale-yellow. The forewing is pale-yellow and irrorated with brown. There is a brown spot near the end of the discal cell and a series of three spots on the fold, including one near the base of the wing, one at the middle of the wing, and one below the discal spot. In some specimens one or more of the spots on the fold may be indistinct. A brown, diffuse oblique line runs from the apex to the outer two-thirds of the inner margin and becomes indistinct just beyond the middle of the wing. Finally, there is a line of terminal dark spots on the veins that meet the outer margin. The forewings of the females are similar to those of the males, but have a diffuse, broad, longitudinal band in the subapical region that in some cases may extend from the base to near the apex. The hindwing of the males is yellowish-white, but turns yellowish-gray towards the outer margin. There is a terminal line of spots on the apical two-thirds of the outer margin. The hindwing of the females is yellowish-white throughout and lacks the terminal spots.

DISTRIBUTION: *< i>Donacaula melinellus* is widely distributed across the eastern U.S. and in Ontario. Martinez (2010) identified specimens from Maine, Connecticut, Massachusetts, New York, New Jersey, Delaware, Maryland, Pennsylvania, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Arkansas, Kentucky, Illinois, Indiana, Michigan, Nebraska and Arizona. This species is found statewide in North Carolina.

FLIGHT COMMENT: The adults have a long flight season in Florida and other southern localities where they have been observed during most months of the year. Populations in the northernmost part of the range often only fly during June and July. In general, the peak flight period is from May through August. As of 2023, we have records that range from late-April to early September, with an outlier from early January.

HABITAT: Many of our records are from bottomlands and wetlands.

FOOD: The hosts are undocumented. Where known, the larvae of *< i>Donacaula* species are stem borers of Poaceae and Cyperaceae that grow in wetlands (Martinez, 2010). This suggests that *< i>D. melinellus* uses wetland grasses or sedges as hosts.

OBSERVATION METHODS: The adults are attracted to lights.

NATURAL HERITAGE PROGRAM RANKS: GNR S3S4

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 somewhat uncommon within the state, but additional information is needed on its distribution, abundance, preferred habitats and host plants before we can accurately assess its conservation status in North Carolina.