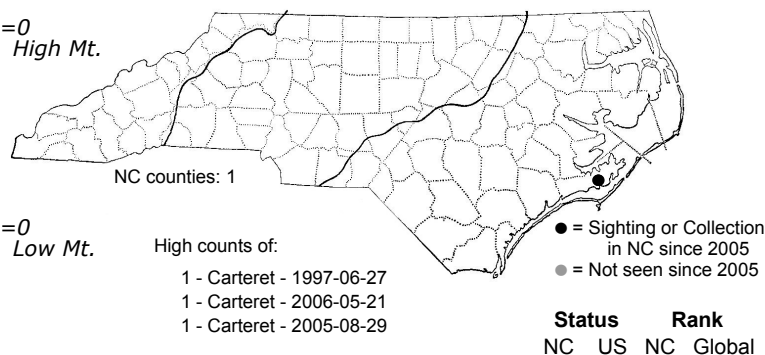


# *Donacula nitidellus* None



FAMILY: Crambidae SUBFAMILY: Schoenobiinae TRIBE:

TAXONOMIC\_COMMENTS: Members of the genus *Donacula* 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:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Martinez (2010)

TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: *Donacula nitidella* is similar in wing pattern and genitalia to *D. aquilella* and is best distinguished using the male genitalia. Martinez (2010) noted that the males have a hindwing with a longitudinal gray line on the outer third of vein A1, in contrast to *D. aquilella* that has a hindwing with two longitudinal, brown lines along veins CuA2 and A1.

The following description is based on that of Martinez (2010). For males, the frons, labial palps, and thorax are grayish-beige, while the antennae are yellowish-white. The forewing of the male is grayish-beige with a small discal spot. Some specimens have an oblique line formed by spots from the apex that are directed toward the middle of the inner margin and become indistinct near the middle of the wing. A line of terminal spots is present on the outer margin. Females resemble the males, but have an acute forewing apex and lack the oblique line. The hindwing of males is yellowish gray, and some specimens have a longitudinal gray line on the outer third of vein 1A+2A. A line of terminal spots is present along the outer margin between the veins. The hindwing of females is similar to the males, except the hindwing is yellowish-white and lacks both the longitudinal gray line on 1A+2A and the terminal spots on the outer margin. The abdomen is yellow and intermixed with yellowish-white, and the female anal tuft is yellowish-white.

DISTRIBUTION: *Donacula nitidellus* is commonly found in or near coastal marshes and other wetlands on the Atlantic and Gulf coasts. Martinez (2010) identified specimens from Connecticut, Massachusetts, New York, New Jersey, Maryland, North Carolina, South Carolina, Georgia, Alabama, Mississippi and Texas, as well as specimens from two sites in Alberta, Canada. As of 2023, we have a single record from Carteret County (Martinez, 2010).

FLIGHT COMMENT: The adults have been observed from February through November in different areas of the range. The southernmost populations in Texas, Georgia and Mississippi fly from March through November, while farther north the flight season is commonly from May through September. As of 2023, our one record is from late-June.

HABITAT: This species is commonly found in or near coastal marshes and other wetlands.

FOOD: The host plants are undocumented. Based on several life history studies to date, the larvae of *Donacula* species have consistently been found to be stem borers of Poaceae and Cyperaceae that grow in wetlands (Martinez, 2010). This strongly suggests that *D. nitidellus* uses wetland grasses or sedges as hosts.

OBSERVATION\_METHODS: The adults are attracted to lights. Information is needed on the larval life history.

NATURAL HERITAGE PROGRAM RANKS: GNR [S1-S3]

STATE PROTECTION:

COMMENTS: This species appears to be rare in North Carolina and possibly associated with salt marshes. More information is needed on its distribution, abundance, host plants and preferred habitats before we can accurately assess its conservation status within the state.