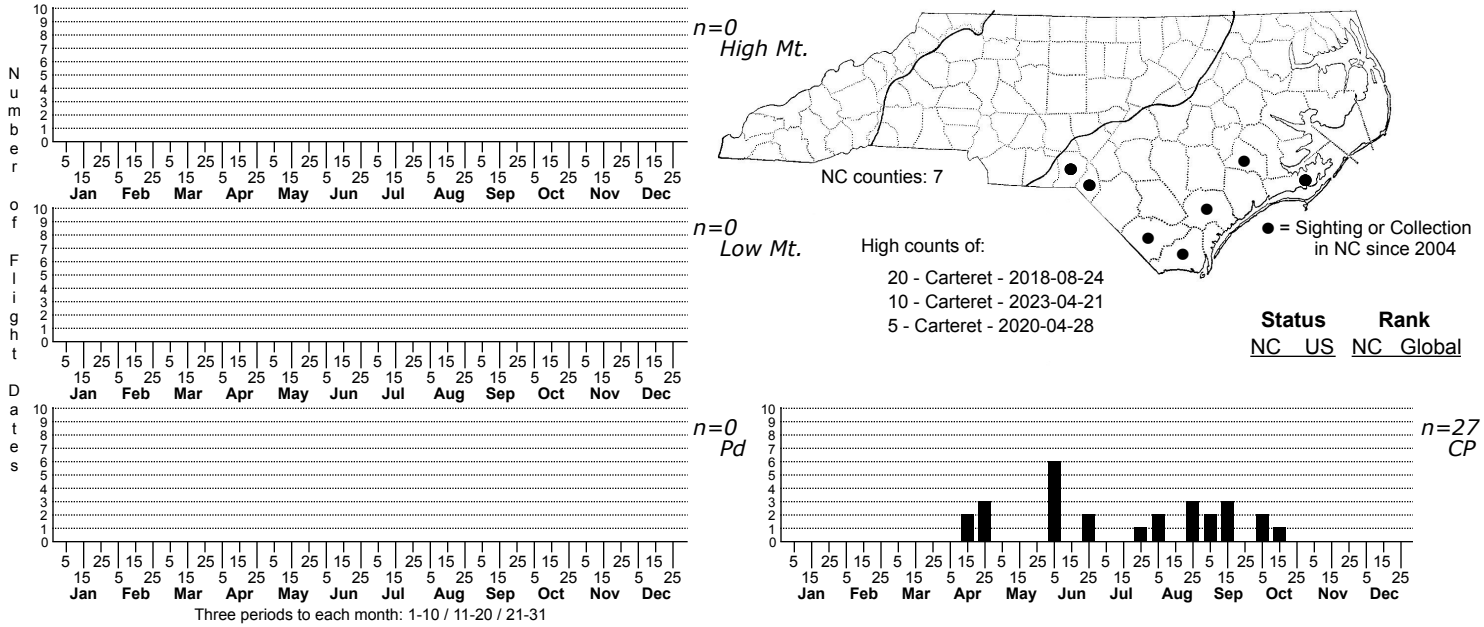
Parapoynx seminealis Floating-Heart Waterlily Moth



FAMILY: Crambidae SUBFAMILY: Acentropinae TRIBE: Nymphulini
TAXONOMIC_COMMENTS: The genus Parapoynx contains around 60 described species with a nearly worldwide distribution. Seven species occur in North America, with the center of distribution being eastern North America. North Carolina has four species. The larvae are aquatic feeders and can be recognized by the presence of branched gills on all body segments except the prothorax.

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Munroe (1972a)
TECHNICAL DESCRIPTION, IMMATURE STAGES: Forbes (1910); Buckingham and Bennett (2001)

ID COMMENTS: This is an easily recognized species that has boldly patterned wings with orange, black, and white barring. The adults are sexually dimorphic, with the males more boldly patterned overall due to differences in forewing patterning. The palps, head, and thorax of both sexes vary from brown to reddish-brown and are concolorous with similar coloration on the forewing. The forewings of the females are more or less uniformly reddish-brown, while those of the males have a series of broad orangish, white, and reddish-brown stripes on the terminal half of the wing. Females sometimes show very faint patterning on the apical half that resembles that of the males. One of the most conspicuous marks on the male forewing is a white bar at around three-fourths the wing length that resembles a hockey stick. Females also have shorter antennae that do not extend to the tip of the abdomen as is the case for the males. The patterning on the hindwings of both sexes is similar and consists of two transverse black stripes on a white ground color, along with a prominent orangish region along the hind margin (Munroe, 1972). The apical half of the hind margin also has three small blackish eyespots with orange centers. Females of P. obscuralis and P. seminealis are similar, but the former has a terminal orange band that extends the entire length of the hind margin, lack eyespots, and has less boldly patterned hindwings.

DISTRIBUTION: Parapoynx seminealis is found in the eastern US from New Hampshire and Vermont southward along the Coastal Plain to southern Florida, then westward along the Gulf Coast states to southeastern Texas. As of 2023, all of our records are from the southern Coastal Plain where the species occurs in the Sandhills and in coastal wetlands farther east. The distribution in North Carolina strongly parallels the distribution of the host plant within the state.

FLIGHT COMMENT: The adults have been observed year-round in Florida and from March through October in Texas and Louisiana. Buckingham and Bennett (2001) noted that there were three, or possibly four, peak adult emergence periods in north-central Florida. The flight season tends to be somewhat shorter for more northern populations. As of 2023, our records extend from mid-April through mid-October. Our limited data suggests that local populations probably producing two broods per year in North Carolina..

HABITAT: The larvae are aquatic and depend on wetlands that support the primary host plant, Big Floating-heart.

FOOD: Big Floating-heart (Nymphoides aquatica) appears to be the primary host throughout the range (Habeck, 1974; Buckingham and Bennett, 2001), but other species of Nymphoides such as Little Floating-heart (N. cordata) could potentially be used, particularly in the Northeast where N. aquatica does not occur. Buckingham and Bennett (2001) noted that the larvae would accept other plants in the laboratory, including Brazilian Waterweed (Egeria densa) and Hydrilla (Hydrilla verticillata) in the Hydrocharitaceae. However, there was no evidence that they used these species in the wild.

OBSERVATION_METHODS: The adults are occasionally attracted to lights, but are more commonly seen in vegetated shallows along the margins of wetlands. Information on host use and other aspects of the life history are needed for North Carolina populations.

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: Local populations are dependent on Nymphoides aquatica for successful reproduction, which greatly limits their distribution within the state.