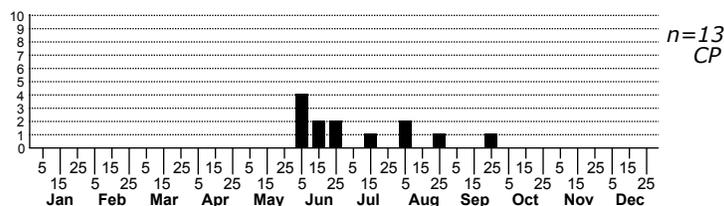
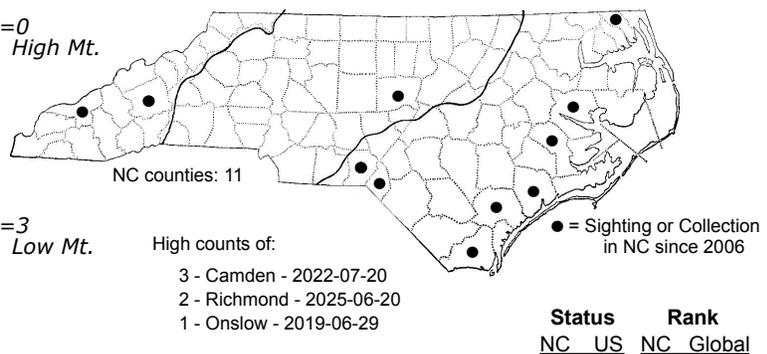
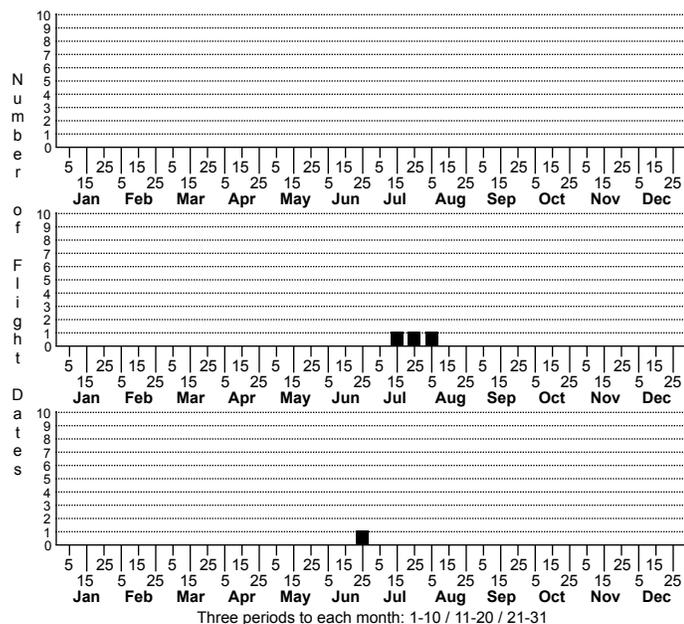


Olethreutes osmundana Fern Olethreutes



FAMILY: Tortricidae SUBFAMILY: Olethreutinae TRIBE: Olethreutini

TAXONOMIC_COMMENTS: *Olethreutes* is a large genus with over 130 recognized species worldwide. North America has around 80 recognized species, with at least 37 species occurring in North Carolina. Some species are very difficult to identify due to interspecific similarities in color and forewing pattern and only subtle differences in genitalia (Gilligan et al., 2008). In many instances, knowledge of the host plant is essential for a confident determination. All of the Nearctic species are leaf-tiers or leaf-rollers on deciduous trees and shrubs.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS:

TECHNICAL DESCRIPTION, IMMATURE STAGES: Eiseman and Feldman (2024)

ID COMMENTS: This species is distinctive in having an overall brownish to reddish-brown color, with a large central orangish patch with a thin margin of paler scales. The patch extends from the inner margin to just before the costa and takes up much of the area of the central portion of the wing. The head, thorax, and areas of the forewing other than the large patch have a mixture of orangish-red, dark-brown and leaden scales. A dark, subternal patch and postmedial bar may or may not be present.

DISTRIBUTION: *Olethreutes osmundana* is widely distributed across eastern North America. The range includes portions of southern Canada (Quebec; New Brunswick; Nova Scotia), and much of the eastern US from Maine and other New England states southward along the Atlantic Seaboard to southern Florida, and westward to southeastern Texas, Arkansas, Tennessee, Kentucky, Indiana, Michigan and Wisconsin. This species occurs in all three physiographic provinces in North Carolina, but is most common in the Coastal Plain.

FLIGHT COMMENT: The adults have been observed from March through November in different areas of the range, with populations in Florida and Alabama having a much longer flight period than those farther north, where individuals mostly fly from May through August. As of 2024, our records range from early-June through late-September.

HABITAT: Local populations are generally associated with moist or wet grounds where the host plants grow in abundance.

FOOD: The larvae specialize on ferns, including members of the Dennstaedtiaceae and Osmundaceae (Fernald, 1879; Heinrich, 1926; Eiseman and Feldman, 2024). The known hosts including Royal Fern (*Osmunda spectabilis*), Cinnamon Fern (*Osmundastrum cinnamomeum*) and Eastern Bracken Fern (*Pteridium latiusculum* = *P. aquilinum*). A Kearfott record on *Ambrosia* (ragweed) seeds reported by Heinrich (1926) is likely incorrect (Gilligan et al., 2008). In North Carolina, the only confirmed host is Royal Fern.

OBSERVATION_METHODS: The adults are attracted to lights. More information is needed on the larval life history and host plant use in North Carolina.

NATURAL HERITAGE PROGRAM RANKS: GNR [S2S3]

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

COMMENTS: This species is spottily distributed in North Carolina where local populations depend on ferns as hosts.