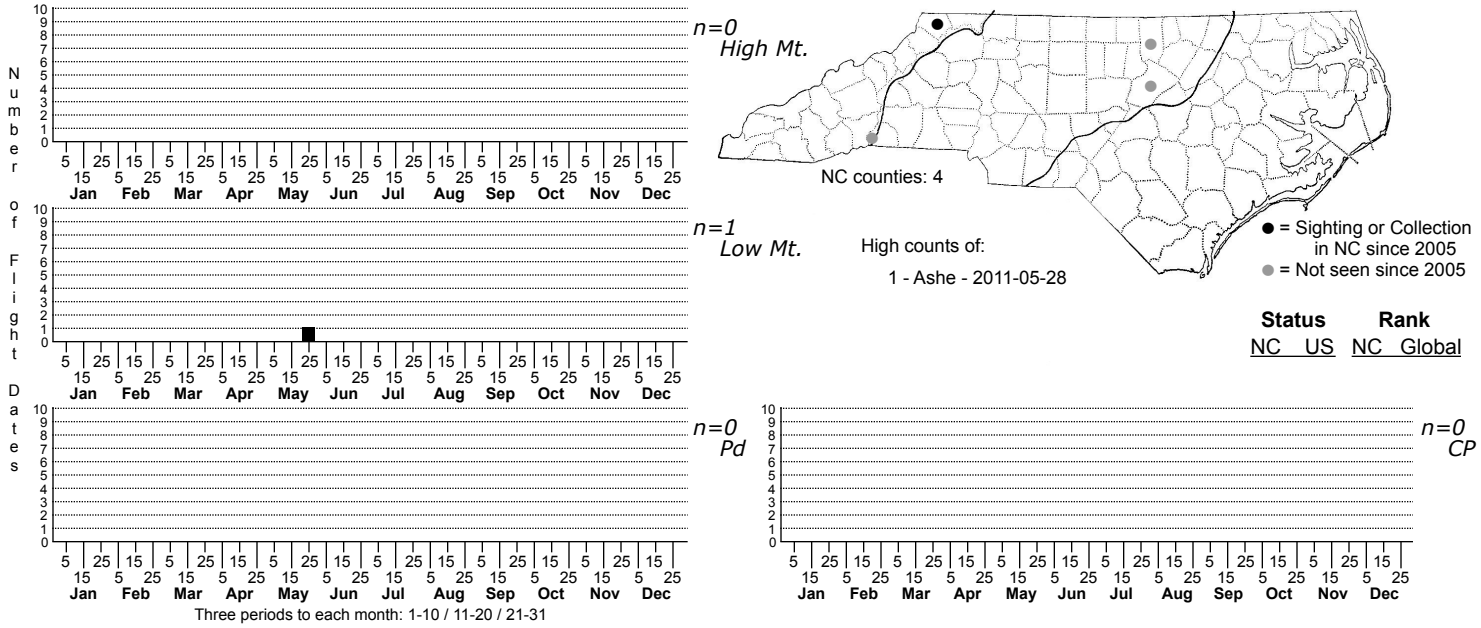
Ostrinia obumbratalis Smartweed Borer Moth



FAMILY: Crambidae SUBFAMILY: Pyraustinae TRIBE: Pyraustini
TAXONOMIC_COMMENTS: This genus was recently revised by Yang et al. (2021), with fifteen species now described worldwide. Four species occur in North America and all occur in North Carolina. As described by Yang et al. (2021), Ostrinia obumbratalis is included in their Clade I, the Obumbratalis Species Group. In North Carolina, this group also includes O. multispinosus, a closely related species that was described by Yang et al. (2021).

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Munroe (1976)
TECHNICAL DESCRIPTION, IMMATURE STAGES: Heinrich (1919)

ID COMMENTS: Ostrinia obumbratalis is similar in size and appearance to O. penitalis, but with a paler yellow or off-white ground color and brownish rather than reddish lines and shadings. Both the antemedian and postmedian lines are dentate. The postmedial line extends inward from the inner margin a short distance before bluntly projecting outwards as a large tooth that is often bifid. It then projecting inward to form a V-shaped notch. From there, it continues to the costa as an outwardly bowed line with smaller teeth. The subterminal line consists of a diffuse dentate or zig-zag line that is sometimes reduced to a diffuse shaded region. The reniform is represented as a dark line or bar that runs nearly perpendicular to the costa; it is often followed by faint dark shading. The hindwing is about the same shade as the forewing and has an even but dentate postmedial line that runs fairly straight across the wing, at least as far as the cell. A similarly even, dentate subterminal line is also present. The short discal bar or spot in the middle of the wing that is present in O. penitalis is missing (Scholtens, 2017).

According to Yang et al. (2021), O. multispinosa is very similar to O. obumbratalis in external appearance, but the forewing transverse markings and dentate subterminal band in the former are somewhat less defined. Specimens are often worn, and genitalia or barcoding may be required in many instances for a positive identification.

DISTRIBUTION: Ostrinia obumbratalis is broadly distributed across eastern North America, including southern Canada where it has been documented in Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, and Prince Edward Island. In the U.S., it occurs from Maine and New Hampshire southern to southern Florida, and westward to central Texas, Oklahoma, Kansas, Illinois and Wisconsin. As of 2023, our very limited records are from the Piedmont and northern Blue Ridge.

FLIGHT COMMENT: The adults have been observed from February through September in different areas of the range, with peak activity from May through September. As of 2023, we have only one dated record that is from late May.

HABITAT: We have one record from along the New River but with the exact habitat unrecorded. All of the rest of our records are historic (Brimley, 1938).

FOOD: The larvae are polyphagous and feed on several families of herbaceous plants, including members of the the Asteraceae, Poaceae, Polygonaceae and Rosaceae (Poos, 1926; Schopp, 1931; Munroe, 1976; Godfrey et al., 1987; Solis, 2008; Robinson et al., 2010; Beadle and Leckie, 2018). Some use is made of corn, but this species is considered to be only a minor pest of that crop. Smartweeds (Persicaria spp.) are the primary hosts, but other species are occasionally used that are often in close proximity to smartweeds. The reported genera and species that are used include Giant Ragweed (Ambrosia trifida), thoroughworts (Eupatorium), Common Morning Glory (Ipomoea purpurea), Common Apple (Malus domestica), Pale Smartweed (Persicaria lapathifolia), Spotted Lady's-thumb (P. maculosa), Pennsylvania Smartweed (P. pensylvanica), and cockleburs (Xanthium).

OBSERVATION_METHODS: The adults are attracted to lights.

NATURAL HERITAGE PROGRAM RANKS: GNR [S1S3]

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

COMMENTS: As of 2023 we have only one recent record, with all others being historical.