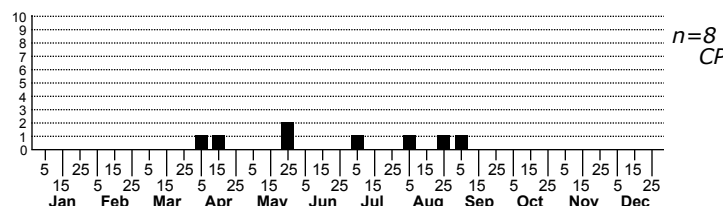
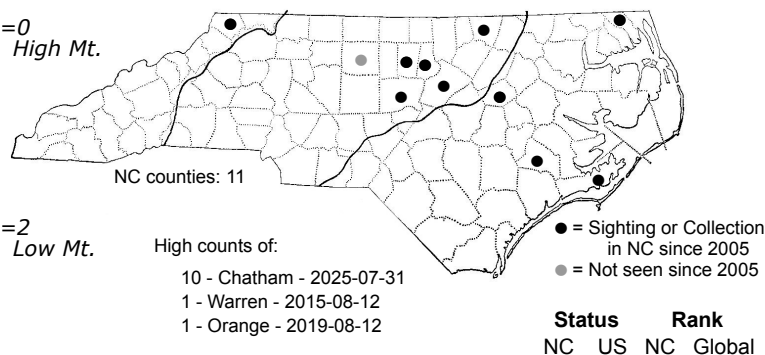
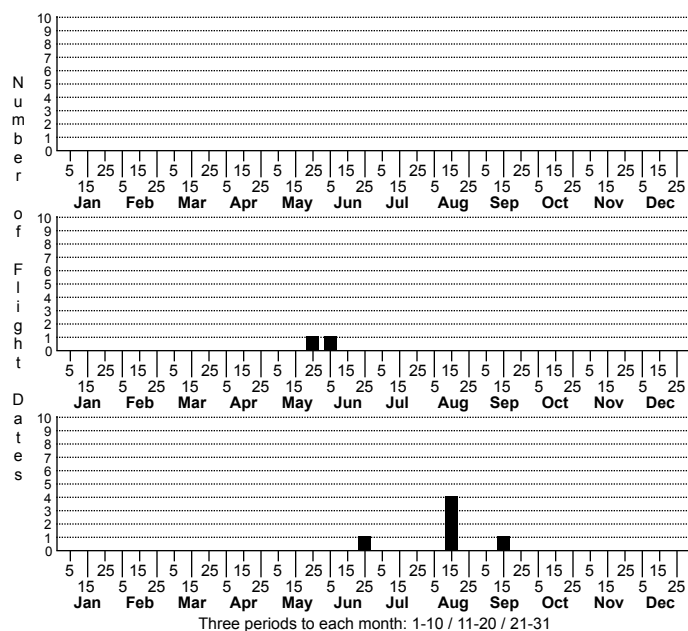


Ostrinia penitalis American Lotus Borer Moth



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 penitalis* is included in their Clade II, the Penitalis Species Group.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Forbes (1923); Munroe (1976)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Center et al. (2002)

ID COMMENTS: This is a medium-small moth with a pale yellow to yellowish-brown ground color on the forewing. The wing markings and dusting are reddish brown, and both the antemedial and postmedian lines are dentate. The postmedian line extends inward from the inner margin a short distance before bluntly projecting outwards as a large tooth, then projecting inward to form a V-shape. 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 dark shading. The hindwing is much paler and has a short discal bar or spot in the middle of the wing that is followed by an even but dentate postmedian line that runs fairly straight across the wing, at least as far as the cell. A similarly even, dentate subterminal line is also present.

Ostrinia obumbratalis is similar in size and pattern but has brownish rather than reddish markings. In addition, the short discal bar or spot in the middle of the wing that is present in *O. penitalis* is missing (Scholtens, 2017). *Ostrinia nubilalis* is also similar, but is brighter yellow and the face has two clear white lines on the sides of the front instead of straw yellow found in the other species (Forbes, 1923). *Crocidophora pustuliferalis* is also similar to *Ostrinia penitalis*, but the latter has a well-developed antemedial line and lacks a line of black dots on the termen. The males also lack a fovea.

DISTRIBUTION: *Ostrinia penitalis* is widely distributed across the U.S. where it occurs in the Pacific Northwest, California, and the eastern U.S. It also occurs across much of southern Canada from British Columbia eastward to Quebec, and on several Caribbean islands. In the eastern U.S., the range extends from New Hampshire and Connecticut southward to southern Florida, and westward to central Texas, central Oklahoma, Nebraska, South Dakota and eastern North Dakota. A few scattered records are also known from Colorado and Wyoming. As of 2023, we have records from all three physiographic provinces, with most from the northern half of the state.

FLIGHT COMMENT: The adults have been observed nearly year-round in Florida and mostly from April through September elsewhere. As of 2023, our records extend from mid-April to mid-September.

HABITAT: Our records include several sites where ponds, canals, or sluggish waters are known to be present.

FOOD: American Lotus (*Nelumbo lutea*) appears to be the primary host. *Ostrinia obumbratalis* is a closely related species that feeds on smartweeds and other plants. It was synonymized with *O. penitalis* in the past (the two are now treated as separate species), and this has been a source of confusion with regard to the actual hosts that are used by *O. penitalis*.

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: