



Natural Heritage & Endangered Species Program

Massachusetts Division of Fisheries & Wildlife

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Chain Fern Borer

Papaipema stenocelis

State Status: **Threatened**

Federal Status: **None**

Description: The Chain Fern Borer (*Papaipema stenocelis*) is a noctuid moth with a wingspan of 30-38 mm. The forewing is bright orange in color, with darker, brownish-orange shading between the reniform and orbicular spots, and pink shading distal to the postmedial line. The postmedial line is doubled, the distal line thicker than the proximal; the median line and antemedial lines are thick and diffuse; all lines are the same dark, brownish-orange color as between the reniform and orbicular spots. The reniform spot is solid white and vertically elongate; the orbicular and claviform spots are also solid white, both smaller than the reniform, with either or both vertically elongate. The hind wings are a uniform tan, tinged with a shade of pink or orange. The head and thorax are concolorous with the bright orange of the forewings, and the abdomen is concolorous with the pink or orange-tinged tan of the hind wings.

Habitat: In Massachusetts, the Chain Fern Borer inhabits acidic wetlands on the coastal plain with Virginia Chain-fern (*Woodwardia virginica*), including wooded swamps, shrub swamps, and shrubby bogs.

Life History: In Massachusetts, the Chain Fern Borer flies in September and early October. Eggs overwinter, and larvae hatch in the Spring. The larvae bore into and feed on the stems and roots of Virginia Chain-fern (*Woodwardia virginica*), becoming fully grown and pupating by late August or early September.

Geographic Range: The Chain Fern Borer is currently known from seven sites in Massachusetts, all in the southeastern part of the state. This species is endemic to the coastal plain of eastern North America, ranging from Massachusetts south to Florida, and west along the Gulf Coast to Louisiana (Covell 1984).



Papaipema stenocelis ▪ Specimen from MA: Plymouth Co., West Bridgewater, collected 8 Sep 2002 by M.W. Nelson

Adult Flight Period in Massachusetts

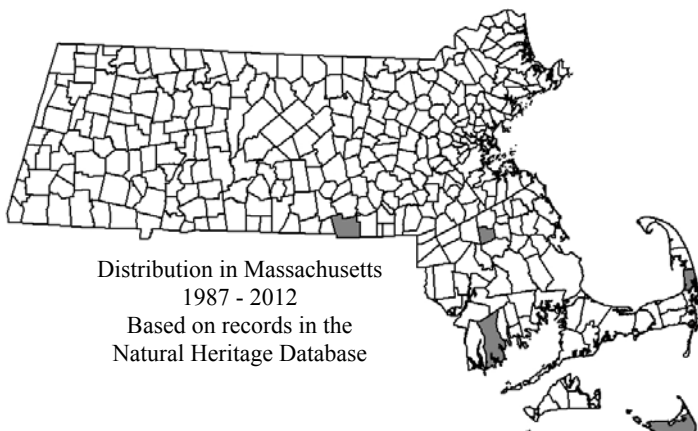
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Status and Threats: The Chain Fern Borer is threatened by habitat loss and hydrologic alteration that disrupts the natural seasonal flooding of its habitat. Other potential threats include invasion by exotic plants, insecticide spraying, and light pollution.

Literature Cited

Covell, C.V. 1984. *A Field Guide to Moths of Eastern North America*. Peterson Field Guide Series. Houghton Mifflin, Boston, Massachusetts. 496 pp.

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