



**Natural Heritage
& Endangered Species
Program**

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Massachusetts Division of Fisheries & Wildlife

**Ostrich-fern Borer
Papaipema sp. 2 near *pterisii***

State Status: **Special Concern**
Federal Status: **None**

DESCRIPTION: Not formally described in published scientific literature, the Ostrich-fern Borer (*Papaipema* sp. 2 near *pterisii*) is a noctuid moth with a wingspan of 32-36 mm. The forewing is bright, orange-yellow overlaid with darker, brownish-orange, sometimes with pink shading toward the outer margin. The terminal area is more uniformly brownish-orange, with a bright, orange-yellow subterminal line that is diffuse and irregular, widening toward the apex. The postmedial line is double, brownish-orange proximally and dark brown to black distally. There may be a single, straight median line and double, wavy antemedial and basal lines, all brownish-orange in color, but these are often obscured by the surrounding brownish-orange of the median and basal areas. The reniform spot is large and elliptical, white with an orange-yellow center; the orbicular spot is relatively round and white, often merged with the elliptical, white claviform spot immediately below. The hind wing is tan, slightly tinged with pink; a faint discal spot may be present. The elongate scales of the head and thorax are a variable mixture of brownish-orange to orange-yellow, matching the overall coloration of the forewing; the abdomen is tan, slightly tinged with pink, matching the overall coloration of the hind wing. The Bracken Borer (*Papaipema pterisii*) is very similar, but on average the Ostrich-fern Borer is



Papaipema sp. 2 near *pterisii* • Specimen from MA: Berkshire Co., Sheffield, larva collected 25 Jul 2009 by M.W. Nelson, adult emerged 6 Sep 2009

Adult Flight Period in Massachusetts

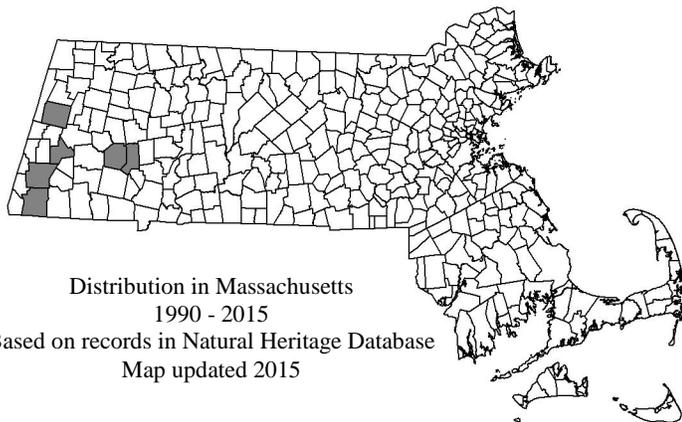
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

larger in size and darker in color (NatureServe 2015); the larval host plants and habitat preferences of the two species are also different.

HABITAT: The Ostrich-fern Borer inhabits floodplain forest and wooded swamps with ostrich-fern (*Matteuccia struthiopteris*).

LIFE HISTORY: In Massachusetts, adult Ostrich-fern Borer moths fly from late August through late September. Eggs overwinter, and larvae hatch in spring. The larvae bore into and feed on the stems and roots of ostrich-fern (*Matteuccia struthiopteris*), becoming fully grown and pupating by August.

GEOGRAPHIC RANGE: The Ostrich-fern Borer has a relatively small range that extends from Vermont south to



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Massachusetts Division of Fisheries & Wildlife

1 Rabbit Hill Road, Westborough, MA 01581; tel: 508-389-6300; fax: 508-389-7890; www.mass.gov/dfw

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Connecticut, and west to Pennsylvania and Wisconsin (NatureServe 2015). In Massachusetts, the Ostrich-fern Borer is known from Berkshire and western Hampshire and Hampden Counties.

STATUS AND THREATS: The Ostrich-fern Borer is threatened by habitat loss and hydrologic alteration that disrupts the natural seasonal flooding of its habitat. This species prefers mature floodplain forest with ostrich-fern in a shaded to partially shaded microhabitat, so clear-cut timber harvest may be a threat. Other potential threats include invasion by exotic plants, eutrophication or other water pollution, river bank stabilization, aerial insecticide spraying, non-target herbiciding, off-road vehicles, and light pollution.

Literature Cited

NatureServe. 2015. *NatureServe Explorer: An online encyclopedia of life*. Version 7.1. NatureServe, Arlington, Virginia. <http://explorer.natureserve.org>.

Authored by M.W. Nelson, NHESP Invertebrate Zoologist, March 2015

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