



**Natural Heritage
& Endangered Species
Program**

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Massachusetts Division of Fisheries & Wildlife

**Water-willow Borer
*Papaipema sulphurata***

State Status: **Threatened**
Federal Status: **None**

DESCRIPTION: The Water-willow Borer (*Papaipema sulphurata*) is a noctuid moth with a wingspan of 32-38 mm. The forewing is yellow, overlaid with darker, orangish-brown, with purplish-brown shading in the basal and terminal areas. The postmedial line is double (the distal line dark, purplish-brown, thicker than the orangish-brown proximal line), largely straight but curving in toward the costa distal to the reniform spot. An orangish-brown, diffuse and faint median line may be present. The antemedial line is orangish-brown in color and double, with the proximal line often obscured by the basal shading. The reniform spot is a large ring, outlined in orangish-brown and filled with yellow matching the ground color of the forewing. The orbicular and claviform spots are relatively large, the orbicular relatively round and the claviform elongate; like the reniform, both are outlined in orangish-brown and filled with yellow. The hind wing is tan, slightly tinged with orange; a faint discal spot may be present. The elongate scales of the head and thorax are a variable mixture of yellow, orangish-brown, and purplish-brown, matching the overall coloration of the forewing. The abdomen is tan, slightly tinged with orange, matching the color to the hind wing. The Burdock Borer (*Papaipema cataphracta*) is very similar, but the forewing is less saturated with the warm, orange tint of the Water-



Papaipema sulphurata ▪ Specimen from MA: Plymouth Co., Carver, collected 16 Sep 2001 by M.W. Nelson

Adult Flight Period in Massachusetts

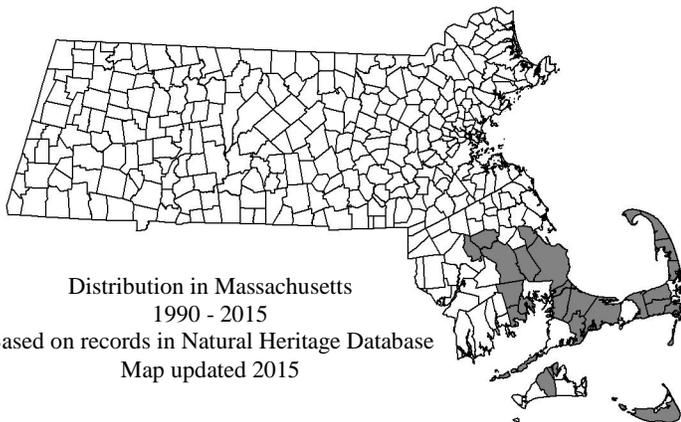
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

willow Borer (Forbes 1954).

HABITAT: The Water-willow Borer inhabits shallow portions of coastal plain wetlands (swamps, edges of lakes and ponds, riparian areas, abandoned cranberry bogs, vernal pools, etc.) where water-willow (*Decodon verticillatus*) grows.

LIFE HISTORY: In Massachusetts, adult Water-willow Borer moths fly in September and early October. Eggs overwinter, hatching in the spring. The larvae bore into and feed internally on the stems of water-willow (*Decodon verticillatus*), becoming fully grown and pupating in late August or early September.

GEOGRAPHIC RANGE: The Water-willow Borer is endemic to southeastern Massachusetts, occurring in



A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

Massachusetts Division of Fisheries & Wildlife

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eastern Bristol and Plymouth Counties and on Cape Cod and the offshore islands.

STATUS AND THREATS: The Water-willow 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, eutrophication or other water pollution, river bank stabilization, aerial insecticide spraying, non-target herbiciding, off-road vehicles, and light pollution.

Literature Cited

Forbes, W.T.M. 1954. *Lepidoptera of New York and Neighboring States*. Part III. Memoir 329, Cornell University Agricultural Experiment Station, Ithaca, New York. 433 pp.

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

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