



**Natural Heritage  
& Endangered Species  
Program**

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*Massachusetts Division of Fisheries & Wildlife*

**Heath Metarranthis  
*Metarranthis pilosaria***

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

**DESCRIPTION:** The Heath Metarranthis (*Metarranthis pilosaria*) is a geometrid moth with a wingspan of 29-35 mm (Rupert 1943). Both the forewing and the hind wing have a smoothly curved postmedial line that is dark brown to black proximally and light, pinkish-tan to white distally. Both the forewing and the hind wing are reddish-brown proximal to the postmedial line and pinkish-tan distal to it. The forewing has a light, pinkish-tan antemedial line. The reniform spot is absent, and the discal spot small and black. Both the forewing and the hind wing are peppered with black, and bright orange on the underside. The head and thorax are concolorous with the proximal portion of the wings; the abdomen is lighter, similar in color to the distal portion of the wings. The Barrens Metarranthis (*Metarranthis apiciaria*), an Endangered species in Massachusetts, has a similar wing pattern, but overall it is lighter brown above, and on the underside it is not bright orange like the Heath Metarranthis.



*Metarranthis pilosaria* • Specimen from MA: Plymouth Co., Plymouth, adult female collected 23 Jun 2002 by M.W. Nelson, reared from egg, adult emerged 10 Jun 2003

**HABITAT:** In Massachusetts, the Heath Metarranthis inhabits sandplain pitch pine-scrub oak barrens and heathlands, as well as acidic swamps and bogs.

**LIFE HISTORY:** In Massachusetts, adult Heath Metarranthis moths fly in June and early July. Larvae feed

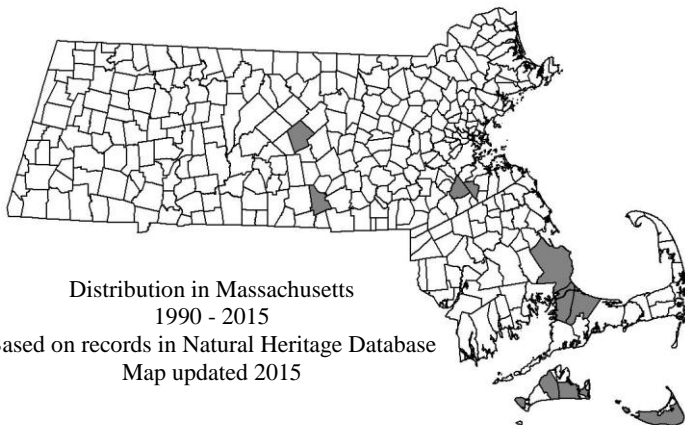
**Adult Flight Period in Massachusetts**

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

through the summer on blueberries and cranberries (*Vaccinium* spp.), and probably also leatherleaf (*Chamaedaphne calyculata*). Larvae pupate in September, and the pupa overwinters.

**GEOGRAPHIC RANGE:** The Heath Metarranthis is endemic to Massachusetts, Rhode Island, Long Island, New York, and southern New Jersey (NatureServe 2015). In Massachusetts it is found on the southeastern coastal plain and in a few inland bogs.

**STATUS AND THREATS:** The Heath Metarranthis is threatened by habitat loss and suppression of fire, which is needed to maintain the open structure of its habitat. Other potential threats include introduced generalist parasitoids, aerial insecticide spraying, non-target herbiciding, off-



Distribution in Massachusetts  
1990 - 2015  
Based on records in Natural Heritage Database  
Map updated 2015

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

**Massachusetts Division of Fisheries & Wildlife**

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

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road vehicles, and light pollution. In wetland habitat, hydrologic alteration, invasion by exotic plants, and eutrophication or other water pollution are potential threats.

### **Literature Cited**

- NatureServe. 2015. *NatureServe Explorer: An online encyclopedia of life*. Version 7.1. NatureServe, Arlington, Virginia. <http://explorer.natureserve.org>.
- Rupert, L.R. 1943. A specific revision of the genus *Metarranthis* (Lepidoptera, Geometridae, Ennominae). *Journal of the New York Entomological Society* 51(3): 133-159.

Updated 2019  
Authored by M.W. Nelson, NHESP Invertebrate Zoologist, April 2015

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