



**Natural Heritage
& Endangered Species
Program**

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Massachusetts Division of Fisheries & Wildlife

**Chain-dotted Geometer
*Cingilia catenaria***

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

DESCRIPTION: The Chain-dotted Geometer (*Cingilia catenaria*) is a geometrid moth with a wingspan of 30-40 mm (Forbes 1948). Both the forewing and the hind wing are white with postmedial and terminal “chains” (lines) of black dots. The forewing also has an antemedial line of black dots, and a reniform spot consisting of a small, black dot. The discal spot on the hind wing is a similar black dot. There are bright yellow patches on the head and the thorax at the base of the forewing; the body is otherwise white. The larva is a bright yellow inchworm with thin black stripes; the spiracles are black, surrounded by white patches flanked with black; it grows to a length of 35 mm (Wagner 2005).

HABITAT: In Massachusetts, the Chain-dotted Geometer inhabits coastal plain shrublands, including sandplain grasslands and heathlands, dunes, bluffs, and maritime shrublands; occasionally also open pitch pine/scrub oak barrens.

LIFE HISTORY: In Massachusetts, adult moths fly in September and early October, with the peak flight in late September. Eggs overwinter and hatch in the spring. Larvae feed from late June through early August on a variety of shrubs, with an apparent preference for



Cingilia catenaria ▪ Specimen from MA: Barnstable Co., Sandwich, larva collected 4 Aug 2003 by K. Wilson, adult emerged 28 Sep 2003

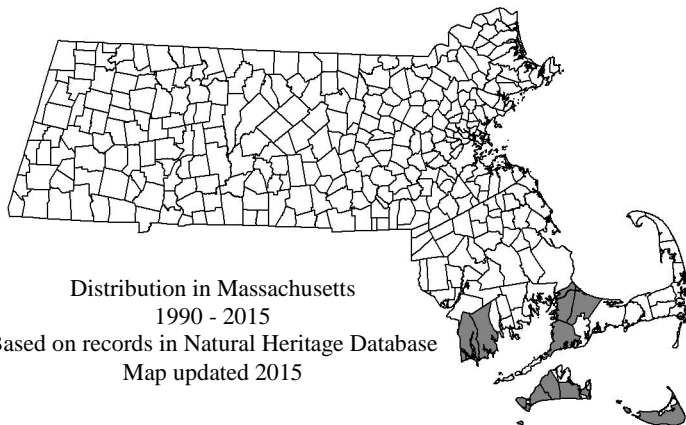
Adult Flight Period in Massachusetts

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

huckleberry (*Gaylussacia*), blueberry (*Vaccinium*), bayberry (*Morella pensylvanica*), and sweet gale (*Myrica gale*).

GEOGRAPHIC RANGE: The Chain-dotted Geometer is found from Nova Scotia and New Brunswick south to Maryland, and west to Alberta, Minnesota, and Ohio (Covell 1984, McGuffin 1987, Wagner 2005). Formerly more common and widely distributed in Massachusetts, this species is now restricted to locations near the coast in the southeastern part of the state.

STATUS AND THREATS: The Chain-dotted Geometer is threatened by habitat loss and fire suppression. Other potential threats include introduced generalist parasitoids, aerial insecticide spraying, non-target herbiciding, and off-road vehicles.



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

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for ‘endangered wildlife conservation’ on your state income tax form, as these donations comprise a significant portion of our operating budget.

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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.
- Forbes, W.T.M. 1948. *Lepidoptera of New York and Neighboring States*. Part II. Memoir 274, Cornell University Agricultural Experiment Station, Ithaca, New York. 263 pp.
- McGuffin, W.C. 1987. Guide to the Geometridae of Canada (Lepidoptera). Volume II. Subfamily Ennominae, part 4. *Memoirs of the Entomological Society of Canada* No. 138: 1-182.
- Wagner, D.L. 2005. *Caterpillars of Eastern North America*. Princeton University Press, Princeton, New Jersey. 512 pp.

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

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