



**Natural Heritage
& Endangered Species
Program**

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Massachusetts Division of Fisheries & Wildlife

**Sandplain Heterocampa
*Heterocampa varia***

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

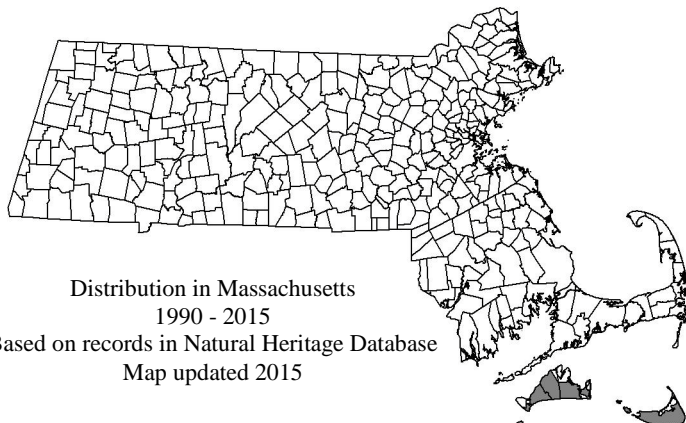
DESCRIPTION: The Sandplain Heterocampa (*Heterocampa varia*) is a sexually dimorphic notodontid moth. Males are smaller, with a wingspan of 37-42 mm, and have a white hind wing with a gray costal margin (figured at top right). Females are larger, with a wingspan of 42-46 mm, and have a hind wing that is light gray proximally and dark gray distally and along the costal margin (figured at bottom right). In both sexes, the anal angle of the hind wing has a black dot. The forewings of both sexes are similar: the ground color is gray to olive green, with a lighter apical patch ranging from pale green to cream-colored. Many individuals have reddish-brown shading distal to the pale apical patch, in the area of the reniform spot, and/or proximal to the antemedial line. There is a black, scalloped terminal line, and black dashes may be present in the subterminal area. Both postmedial and antemedial lines are black in color and consist of double, parallel lines; the postmedial line is jagged and the antemedial line is wavy. The basal line is black, single, and relatively straight. There is a black apical dash, and the reniform spot is reduced to an angled black dash. Both sexes have an olive green head and thorax, and a grayish-tan abdomen. The male of a common congener, the Oblique Heterocampa (*Heterocampa obliqua*), is so similar in wing pattern to the Sandplain Heterocampa that



Heterocampa varia, male • Specimen from MA: Dukes Co., Edgartown, adult female collected 29 Jul 2008 by M.W. Nelson and T. Simmons, reared from egg, adult emerged 26 Jul 2009



Heterocampa varia, female • Specimen from MA: Dukes Co., Edgartown, adult female collected 29 Jul 2008 by M.W. Nelson and T. Simmons, reared from egg, adult emerged 9 Jul 2010



Adult Flight Period in Massachusetts

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

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

Massachusetts Division of Fisheries & Wildlife

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Agriculture, Washington, DC. 517 pp.

examination of the genitalia may be necessary for definitive identification. The female of the Oblique Heterocampa may be distinguished from the Sandplain Heterocampa by the presence of a large brown to reddish-brown patch, often outlined with black, on the forewing between the reniform spot and the wing apex.

HABITAT: In Massachusetts, the Sandplain Heterocampa inhabits sandplain pitch pine-scrub oak barrens, as well as sandplain heathlands and grasslands with a scrub oak component, and occasionally open, savanna-like oak woodland.

LIFE HISTORY: In Massachusetts, adult Sandplain Heterocampa moths fly from late June through early August. Eggs are laid on the larval host plant, which is primarily scrub oak (*Quercus ilicifolia*) in Massachusetts, although dwarf chinquapin oak (*Quercus prinoides*), post oak (*Quercus stellata*), or other oaks may occasionally be used. Eggs hatch about a week after oviposition. Fully-grown larvae reach a length of 40-45 mm, after feeding for as few as four or as long as seven weeks, and then burrow into the soil for pupation. The pupa overwinters, and some moths emerge the following year; however, most individuals overwinter twice, emerging two years after the previous generation.

GEOGRAPHIC RANGE: The range of the Sandplain Heterocampa is limited to the Atlantic Coastal Plain, from Massachusetts in the north, to the south on eastern Long Island, New York and in the New Jersey pine barrens; and disjunctly on the coastal plain of the Carolinas, Georgia, and Florida (Schweitzer et al. 2011). In Massachusetts, the Sandplain Heterocampa only occurs on the offshore islands of Martha's Vineyard and Nantucket.

STATUS AND THREATS: The Sandplain Heterocampa 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-road vehicles, and light pollution.

Literature Cited

Schweitzer, D.F., M.C. Minno, and D.L. Wagner. 2011. *Rare, Declining, and Poorly Known Butterflies and Moths (Lepidoptera) of Forests and Woodlands in the Eastern United States*. Forest Service, U.S. Dept. of

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

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