



**Natural Heritage
& Endangered Species
Program**

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Massachusetts Division of Fisheries & Wildlife

**Hessel's Hairstreak
*Callophrys hesseli***

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

DESCRIPTION: Hessel's Hairstreak (*Callophrys hesseli*) is a lycaenid butterfly with a wingspan of 26-28 mm (Opler 1998). Like most gossamer-wings, Hessel's Hairstreak rests with wings folded above its back. The upper side of the wings, hidden in this position, are uniform dark brown in color. On the underside, the wings have a reddish-brown ground color overlaid with bright, bluish-green scales and white spot lines; the costal white spot on the forewing is set outward. The reddish-brown ground color is not overlaid with bluish-green adjacent to the white spot lines. Hessel's Hairstreak is similar to the Juniper Hairstreak (*Callophrys gryneus*); however, the green scales of the Juniper Hairstreak are lighter, yellowish-green, and the costal white spot on the forewing is not set outward. Also, the green scales of the Juniper Hairstreak are more extensive, touching the white spot lines, or nearly so, without reddish-brown patches adjacent to the white spot lines as in Hessel's Hairstreak.

HABITAT: Hessel's Hairstreak inhabits Atlantic white cedar swamps and associated shrub swamps and bogs.

LIFE HISTORY: In Massachusetts, adult Hessel's Hairstreak butterflies fly from early May through early June. Eggs are laid on branch tips of Atlantic white cedar

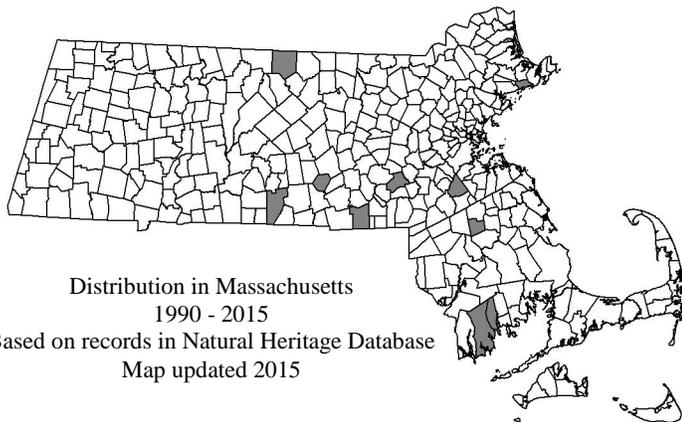


Callophrys hesseli ▪ MA: Norfolk Co., Canton ▪ 19 May 2001 ▪ Photo by M.W. Nelson

Adult Flight Period in Massachusetts

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
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(*Chamaecyparis thyoides*). Larvae feed on new growth of the host plant, pupating by July; pupae overwinter. Hessel's Hairstreak is often observed while nectaring. Though the butterflies typically remain in the cedar swamp and nectar at flowers of highbush blueberry (*Vaccinium corymbosum*) or chokeberries (*Aronia*), butterflies may be seen near the swamp in nearby fields, yards, and roadsides, nectaring at other flowers. Usually no more than one to a few Hessel's Hairstreaks are encountered, though dozens of individuals may be seen in exceptional circumstances (Beck & Garnett 1983).



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

Massachusetts Division of Fisheries & Wildlife

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GEOGRAPHIC RANGE: Hessel's Hairstreak is spottily distributed along the Atlantic Coastal Plain from southern Maine south to the Florida Panhandle; areas most densely inhabited by this species include southeastern Massachusetts and Rhode Island, southern New Jersey, and southeastern North Carolina (Schweitzer et al. 2011). In Massachusetts, most colonies are concentrated in southern Worcester, Norfolk, and Bristol Counties.

STATUS AND THREATS: Hessel's Hairstreak 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, introduced generalist parasitoids, aerial insecticide spraying, clear-cut timber harvest, and excessive deer browse of Atlantic white cedar.

Literature Cited

- Beck, A.F. and W.J. Garnett. 1983. Distribution and notes on the Great Dismal Swamp population of *Mitoura hesseli* Rawson and Ziegler (Lycaenidae). *Journal of the Lepidopterists' Society* 37(4): 289-300.
- Opler, P.A. 1998. *A Field Guide to Eastern Butterflies*. Peterson Field Guide Series. Houghton Mifflin, Boston, Massachusetts. 486 pp.
- 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 Agriculture, Washington, DC. 517 pp.

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

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