

## Appendix A: Birds

### Cape May Warbler

*Setophaga tigrina*

Federal Listing	N/A
State Listing	N/A
Global Rank	G5
State Rank	S3
Regional Status	High



Photo by Len Medlock

#### Justification (Reason for Concern in NH)

Populations of the Cape May Warbler declined across the species' range from 1966 to 2013 (-3.1%/year on BBS, Sauer et al. 2014), but in the last ten years (2003-2013) show near-significant increases (2.9%/year). For BCR 14, the long-term trend is a non-significant -1.04%/year, and the recent trend essentially stable. Trends for Maine and New Brunswick are significantly negative for 1966-2013, and more negative but not significant for 2003-2013. In Quebec, both trends are significantly positive, at 2.93%/year and 6.47%/year. Data from repeated Breeding Bird Atlases support these trends, with a stable distribution in Ontario (Cadman et al. 2007) and declines in New York and Vermont (McGowan and Corwin 2008, Renfrew 2013). Cape May Warbler is considered a Regional SGCN in USFWS Region 5.

#### Distribution

Breeds across boreal Canada from northeast British Columbia to Nova Scotia, and south to the extreme northern portions of Minnesota, Wisconsin, Michigan, New York, and New England (Baltz and Latta 1998). It winters in the Caribbean Basin, primarily in the Bahamas and Greater Antilles. In New Hampshire it breeds from the White Mountains north (Foss 1994).

#### Habitat

Cape May Warblers breed in intermediate-aged or mature boreal forests dominated by spruce or fir, including forested wetlands (Baltz and Latta 1998). A key – although not required – habitat element is the presence of spruce budworm (*Chloristoneura fumiferana*). Along with Tennessee and Bay-breasted Warblers, this is one of three species that are generally considered “budworm specialists,” in that they can increase in density very rapidly during a budworm outbreak, and even produce larger clutches (Venier et al. 2009). Budworm populations are highly cyclic in nature, and large outbreaks only occur at roughly 40-year intervals (Boulanger and Arseneault 2004), and these fluctuations may be responsible for much of the variation seen in population data for Cape May Warblers.

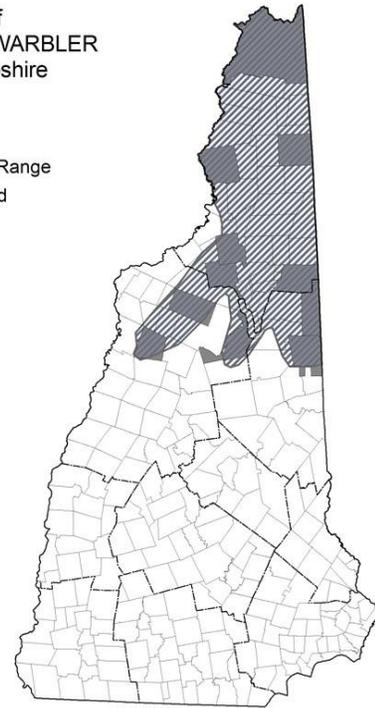
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### NH Wildlife Action Plan Habitats

- Lowland Spruce-Fir Forest
- Northern Swamps

Distribution of  
CAPE MAY WARBLER  
in New Hampshire

■ Current Range  
▨ Localized



Distribution Map

### Current Species and Habitat Condition in New Hampshire

Significant declines in the southern portion of its range (see Justification), but increasing in eastern Canada. A new budworm outbreak in southeastern Quebec (Natural Resources Canada 2015) is expanding south, and likely to move into Maine and New Brunswick within 10 years (Rankin 20130. Cape May Warblers are already anecdotally more common as migrants in southern New Hampshire, a pattern consistent with increasing populations associated with the Quebec budworm outbreak.

### Population Management Status

Management is not currently in place for this species.

### Regulatory Protection (for explanations, see Appendix I)

- Migratory Bird Treaty Act (1918)

### Quality of Habitat

Unknown, but since spruce budworm has been largely absent from the state for decades, most habitat is probably or relatively low quality at present.

### Habitat Protection Status

Highly variable

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### Habitat Management Status

Habitat management has not been implemented for this species

### Threats to this Species or Habitat in NH

*Threat rankings were calculated by groups of taxonomic or habitat experts using a multistep process (details in Chapter 4). Each threat was ranked for these factors: Spatial Extent, Severity, Immediacy, Certainty, and Reversibility (ability to address the threat). These combined scores produced one overall threat score. Only threats that received a “medium” or “high” score have accompanying text in this profile. Threats that have a low spatial extent, are unlikely to occur in the next ten years, or there is uncertainty in the data will be ranked lower due to these factors.*

### Habitat conversion from harvest practices that result in conversion of softwood to hardwood (Threat Rank: High)

Soil and other environmental conditions over extensive acreage in northern New Hampshire create the potential to support either spruce-fir or northern hardwood-conifer forest. Historical harvesting practices in some areas have resulted in conversion of former spruce-fir sites to northern hardwood-conifer forest, in turn reducing habitat for this species. See also the lowland spruce-fir forest habitat profile.

### Habitat conversion due to development (Threat Rank: Medium)

Ongoing residential and commercial development results in permanent loss of habitats for wildlife. This threat is ranked as “moderate” largely because it was ranked this way lowland spruce-fir habitat. In reality, many of the areas used by Cape May Warblers are probably at relatively low risk due to protected status or remote locations. See also the lowland spruce-fir forest habitat profile.

### Habitat degradation from harvest practices that prevent much of the forest from reaching later successional stages (Threat Rank: Medium)

Extensive, heavy cutting in recent decades has substantially reduced the distribution of mature spruce-fir forest in New Hampshire. Mahaffey (2014) reports that softwoods are being harvested far in excess of growth in the Androscoggin Valley-Mahoosuc Region of northern NH, which is further evidence of the imbalance of softwood age classes on private ownerships in NH. Note also that budworm outbreaks generally reach higher densities in older forest, and thus older forest is likely to support more Cape May Warblers in such situations. See also the lowland spruce-fir forest habitat profile.

### List of Lower Ranking Threats:

Habitat impacts and disturbance from control of insect pests (spruce budworm) that reduces prey

Habitat impacts and disturbance from acid deposition that can reduce prey

Disturbance from noise associated with recreational activity

Habitat impacts from road fragmentation

Habitat conversion and degradation from agriculture on winter grounds

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Habitat degradation from habitat shifting and changes in species composition

Habitat conversion due to development on winter grounds

### **Actions to benefit this Species or Habitat in NH**

See Lowland Spruce-Fir habitat actions

### **References, Data Sources and Authors**

#### **Data Sources**

Trend data from Breeding Bird Survey (Sauer et al. 2014, above).

NH distribution data from NHBR/NH eBird

#### **Data Quality**

Because of low densities, especially in recent years, New Hampshire data on this species during the breeding season are extremely limited.

#### **2015 Authors:**

Pamela Hunt, NHA

#### **2005 Authors:**

#### **Literature**

Baltz, M.E. and S.C. Latta. 1998. Cape May Warbler (*Setophaga tigrina*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu.bnaproxy.birds.cornell.edu/bna/species/332>  
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<http://www.forestsformainesfuture.org/fresh-from-the-woods-journal/spruce-budworm-coming-again-soon.html>

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