

# Species Status Assessment

**Common Name:** Tennessee warbler      **Date Updated:** 12 March 2025

**Scientific Name:** *Leiothlypis peregrina*      **Updated By:** Angelena Ross

**Class:** Aves

**Family:** Parulidae

**Species Synopsis** *(a short paragraph which describes species taxonomy, distribution, recent trends, and habitat in New York):*

Formerly placed into the genus *Vermivora*, the Tennessee warbler was reclassified into the genus *Oreothlypis* in 2010. This warbler breeds only in Canada and the northernmost parts of the United States, where it nests in boreal forests. Wintering occurs in Central America, giving this warbler the “neotropical migrant” status that results in vulnerability to healthy populations.

In New York, the Tennessee warbler nests in the Adirondack Mountains in young mixed deciduous and coniferous forests with a boreal plant assemblage. The population is disjunct from the main distribution to the north. It is one of several warbler species whose occurrence is strongly linked to periodic outbreaks of the spruce budworm. The Breeding Bird Atlas (BBA) documented Tennessee warbler in fewer than 1% of survey blocks statewide. Occupancy shifted from 1980-85 to 2000-05 and the number of survey blocks with confirmed breeding dropped from 5 to 1. The six breeding records documented during the two BBA surveys represent the only known nesting of Tennessee warbler in the state since New York’s first record in 1926 (see Peterson 2008).

## I. Status

### a. Current legal protected Status

i. **Federal:** Not listed      **Candidate:** No

ii. **New York:** Not listed

### b. Natural Heritage Program

i. **Global:** G5

ii. **New York:** S2      **Tracked by NYNHP?:** Yes

### Other Ranks:

- NYS 2025 SGCN Status: Species of Greatest Conservation Need
- COSEWIC: Not listed in Canada
- IUCN Red List: Not assessed by IUCN Red List
- Northeast Regional SGCN: Not listed

### Status Discussion:

Tennessee warbler is a rare breeder in New York, occurring locally in the Adirondack Mountains region. There are fewer than ten breeding records in New York and a nest has never been found. It occurs cyclically as a very common to uncommon migrant. It is usually most common during spring in western and central New York.

## II. Abundance and Distribution Trends

Region	Present?	Abundance	Distribution	Time Frame	Listing status or S-Rank	SGCN?
North America	Yes	Increasing	Unknown	BBS 1966-2022 trend for US		
Northeastern US	Yes	Unknown	Unknown	Unknown		
New York	Yes	Unknown	Unknown	BBS 1966-2022 not credible trend		
Connecticut	Yes	Unknown	Unknown	Unknown	SNA	
Massachusetts	Yes	Unknown	Unknown	Unknown	S4N	
New Jersey	Yes	Unknown	Unknown	Unknown	S4N	
Pennsylvania	Yes	Unknown	Unknown	Unknown	SNA	
Vermont	Yes	Unknown	Unknown	BBS 1966-2022 not credible trend	S1B	
Ontario	Yes	Declining	Unknown	BBS 1966-2022 trend	S5B	
Quebec	Yes	Increasing	Unknown	BBS 1966-2022 trend	S5B	

*Column options*

**Present?:** Yes; No; Unknown; No data; (blank) or Choose an Item

**Abundance and Distribution:** Declining; Increasing; Stable; Unknown; Extirpated; N/A; (blank) or Choose an item

**SGCN?:** Yes; No; Unknown; (blank) or Choose an item

**Monitoring in New York** (*specify any monitoring activities or regular surveys that are conducted in New York*):

The Wildlife Conservation Society has conducted surveys for boreal breeding birds at a number of sites in the Adirondack Park since 2003 (Glennon 2010). Tennessee warbler is one of 12 target species.

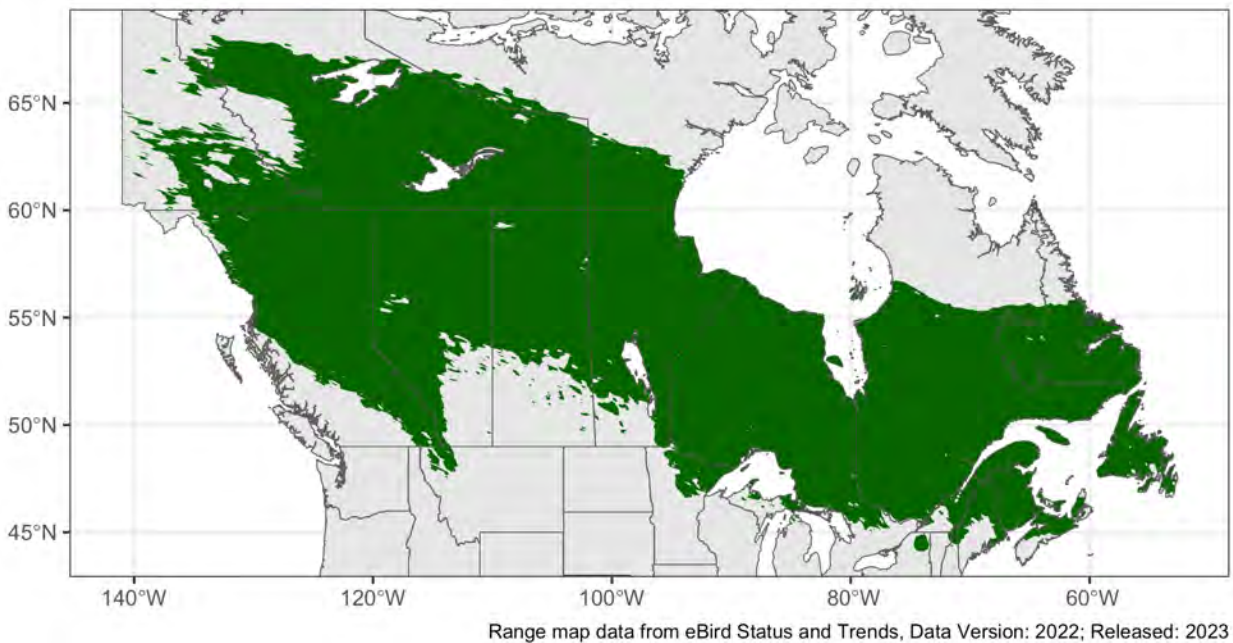
**Trends Discussion** (*insert map of North American/regional distribution and status*):

Short-term fluctuations in numbers and local distributions appear to be dictated by insect outbreaks in boreal forests, especially those of spruce budworms (see Rimmer and McFarland 1998).

Breeding Bird Survey data for North America, for Canada, and for the Eastern BBS all show a slight increasing trend of 0.3% per year from 2000 to 2010. The long-term trend for each of each of these regions is a slight decline of -0.5% per year (1966 to 2010). BBS data for New York are not sufficient to show a reliable trend.

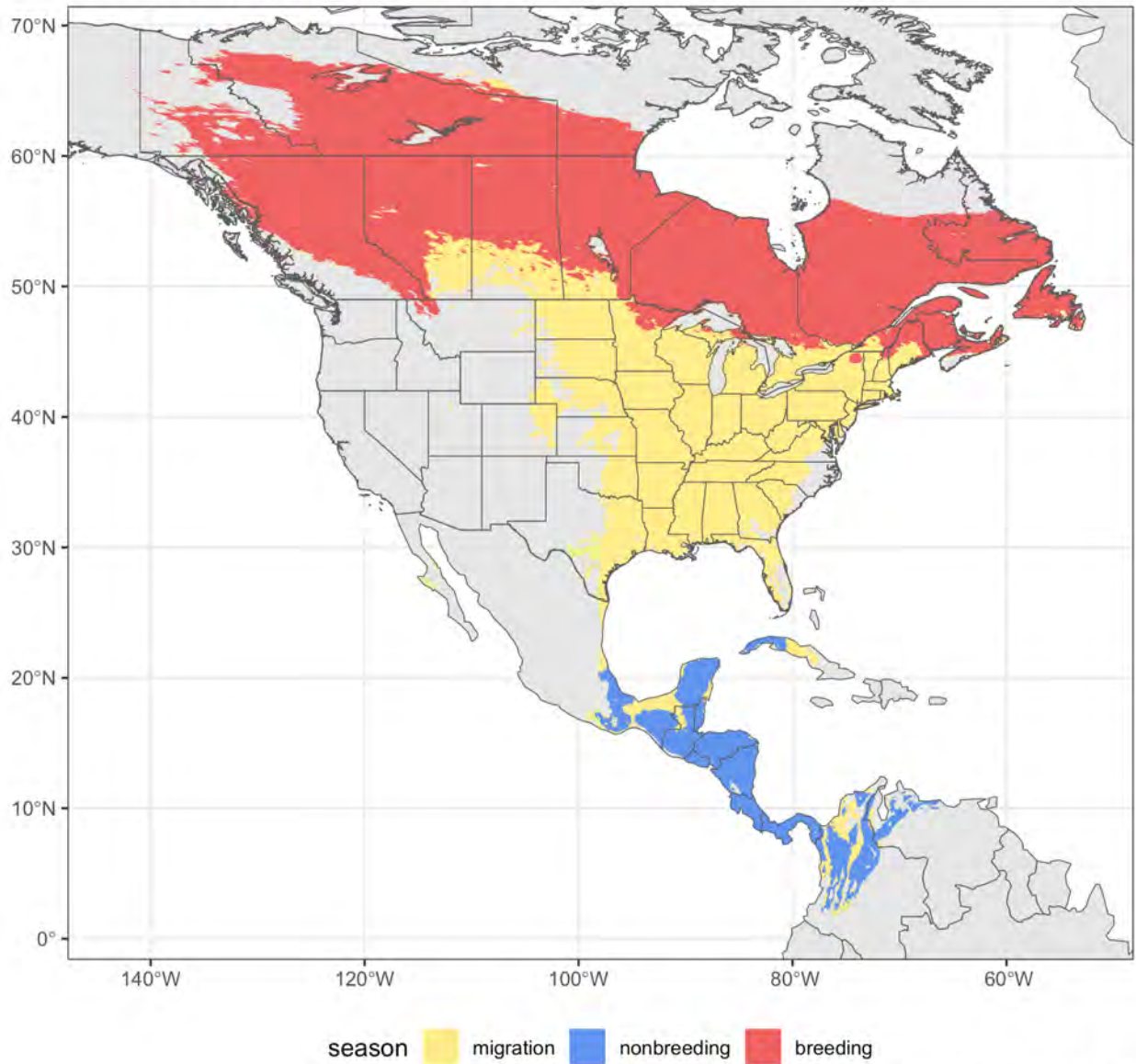
Tennessee warbler has always been a rare breeder in New York. The first confirmed nesting was documented in 1926 and breeding was not confirmed again until the first Breeding Bird Atlas surveys in 1980-85 when adults were observed feeding young in five different blocks. The second Atlas provided one additional breeding confirmation (feeding young), and still an actual nest has never been found in the state (Peterson 2008a). Breeding was confirmed again in 2008 via the observation of an adult feeding young (Peterson 2008b).

The Wildlife Conservation Society conducted point counts for 12 boreal species at 59 sites in the Adirondack Park from 2007-2011. Fewer than five detections were obtained for Tennessee warbler, which prevented occupancy modeling.



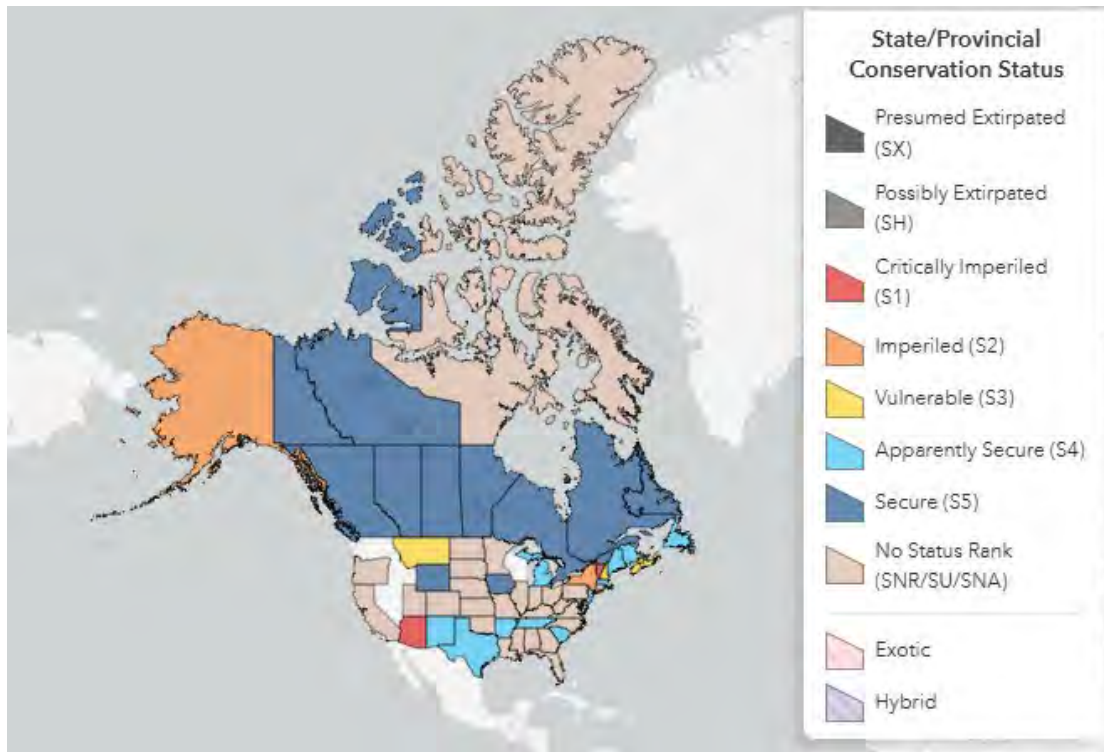
**Figure 1:** Breeding range for Tennessee warbler (eBird).

### Year-round range map for Tennessee Warbler



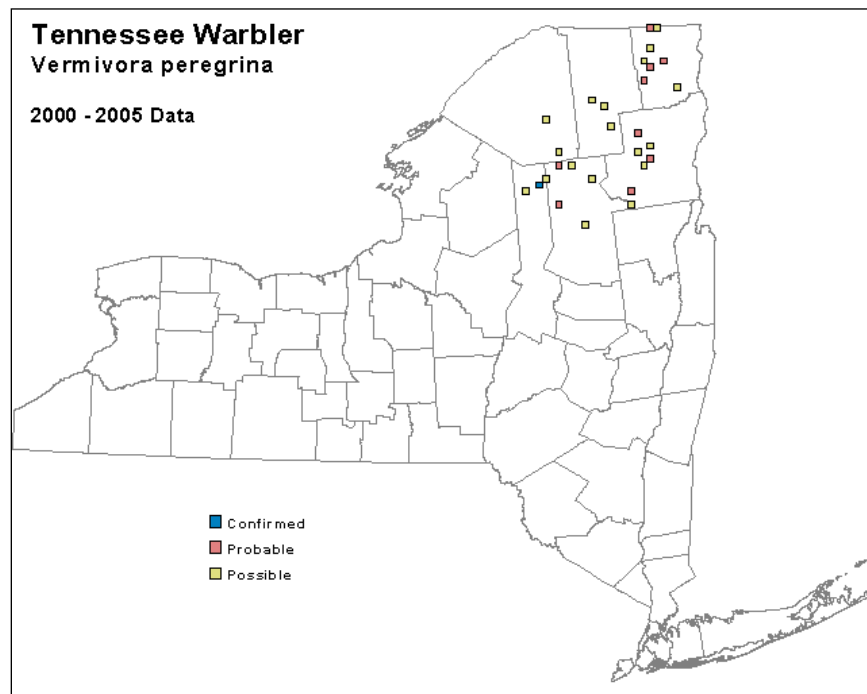
Range map data from eBird Status and Trends, Data Version: 2022; Released: 2023

**Figure 2:** Distribution of Tennessee warbler in North America (eBird).

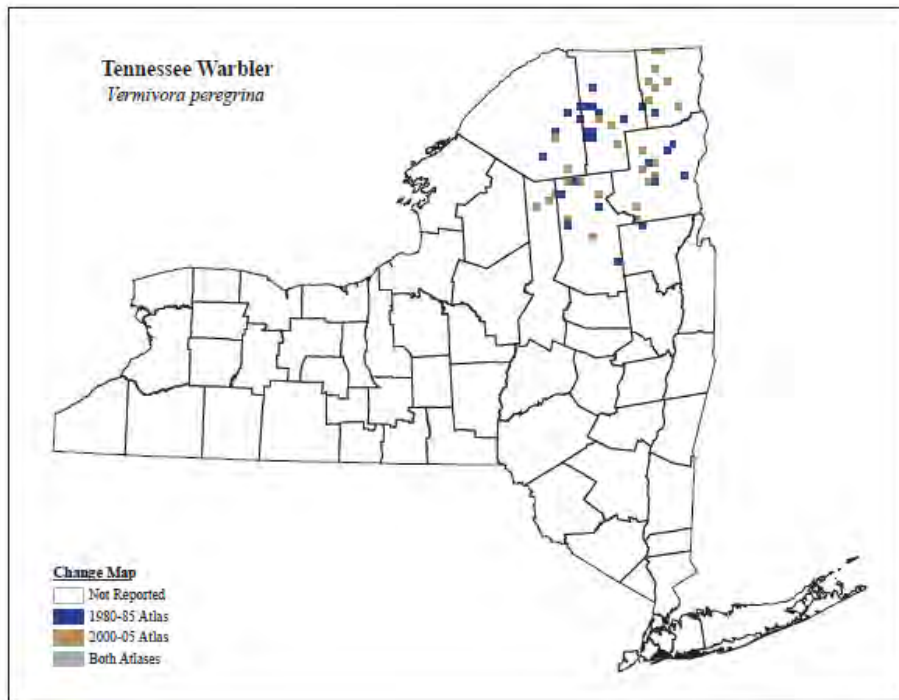


**Figure 3:** Conservation status of Tennessee warbler in North America (NatureServe 2025)

**III. New York Rarity** *(provide map, numbers, and percent of state occupied)*



**Figure 4.** Tennessee warbler occurrence in New York State during the second Breeding Bird Atlas (McGowan and Corwin 2008).



**Figure 5.** Change in Tennessee warbler occurrence in New York State between the first Breeding Bird Atlas and the second Breeding Bird Atlas (McGowan and Corwin 2008).

Years	# of Records	# of BBA Blocks	% of State
Pre-1980	_____	_____	_____
1980-1985	_____	27	4%
2000-2005	_____	28	4%
2020-2023	_____	_____	_____

**Table 1.** Records of Tennessee warbler in New York.

**Details of historic and current occurrence:**

First confirmed breeding in New York in 1926. Five more breeding confirmations were documented during the Breeding Bird Atlas (1980-85). Occupancy was documented in a total of 27 survey blocks.

The second Breeding Bird Atlas (2000-05) documented confirmed breeding in only one survey block. Occupancy was documented in a total of 28 survey blocks; none of the records were from the same blocks as during the first Atlas.

About 80% of the Tennessee warbler breeding population occurs in Canada, where it is one of the most abundant warblers. The nearest population to New York’s birds occurs in the Green Mountains of Vermont (about 100 miles to the east) where breeding has been infrequent and sporadic. The core breeding population lies about 250 miles to the north of the Adirondack population in southern Quebec.

Boreal bird surveys conducted by the Wildlife Conservation Society in the Adirondack Park since 2003 located Tennessee warbler in only six locations.

## New York's Contribution to Species North American Range:

Percent of North American Range in NY	Classification of NY Range	Distance to core population, if not in NY
1-25%	Disjunct	~250 miles

Column options

**Percent of North American Range in NY:** 100% (endemic); 76-99%; 51-75%; 26-50%; 1-25%; 0%; Choose an item

**Classification of NY Range:** Core; Peripheral; Disjunct; (blank) or Choose an item

## IV. Primary Habitat or Community Type *(from NY crosswalk of NE Aquatic, Marine, or Terrestrial Habitat Classification Systems):*

- a. Spruce-Fir Forest and Flats
- b. Conifer Forest Swamp
- c. Mixed Hardwood Swamp

### Habitat or Community Type Trend in New York

Habitat Specialist?	Indicator Species?	Habitat/Community Trend	Time frame of Decline/Increase
No	No	Stable	

Column options

**Habitat Specialist and Indicator Species:** Yes; No; Unknown; (blank) or Choose an item

**Habitat/Community Trend:** Declining; Stable; Increasing; Unknown; (blank) or Choose an item

### Habitat Discussion:

Tennessee warbler breeds in boreal habitats, favoring young second growth. In northernmost portions of the eastern U.S., it prefers coniferous bogs dominated by black spruce and tamarack, with some white cedar, birch, poplar, alder, and ericaceous shrubs (Palmer 1949, Bull 1974, Laughlin and Kibbe 1985, Brewer et al. 1991). Peterson (1988) described its habitat in the Adirondacks: "...somewhat wet areas of young deciduous growth, often aspen, with a mixture of balsam fir, spruce, or tamarack, northern shrubs and often a ground cover of sphagnum mosses." Relatively open areas are used, with edge provided by roads, power lines, or other forest clearings.

On wintering grounds, the Tennessee warbler has a strong affinity for coffee plantations.

## V. Species Demographic, and Life History:

Breeder in NY?	Non-breeder in NY?	Migratory Only?	Summer Resident?	Winter Resident?	Anadromous/Catadromous?
Yes	Choose an item.	Choose an item.	Yes	Choose an item.	Choose an item.

Column options

**First 5 fields:** Yes; No; Unknown; (blank) or Choose an item

**Anadromous/Catadromous:** Anadromous; Catadromous; (blank) or Choose an item

**Species Demographics and Life History Discussion** *(include information about species life span, reproductive longevity, reproductive capacity, age to maturity, and ability to disperse and colonize):*

From Rimmer and McFarland (1998): Very little is known of the demographics or life history of Tennessee warbler. Larger clutches may be produced during outbreaks of spruce budworm (Morse 1989). One nest in James Bay, Ontario is thought to have been depredated by skunk. Other possible nest predators include gray jay, red squirrel, pine marten, and weasel. Some site fidelity may occur but there have been few banding studies to document this. Individuals are known to return to the same wintering areas in successive years. Increased food supply seems to trigger population increases, both by immigration and by increase clutch sizes.

**VI. Threats** *(from NY 2015 SWAP or newly described):*

Peterson (2008a) suggested that forests replanted with black spruce and jack pine are less desirable for Tennessee warbler because these tree species are less preferred by spruce budworm, the warbler's primary food source.

Osborne et al. (2011) showed that the effects of mercury can be exacerbated in boreal species such as that use high-acid habitats such as peatlands such as Tennessee warbler.

As a boreal bird, the Tennessee warbler is susceptible to the predicted long-term reduction of the boreal forest in New York due to climate change. In an assessment of vulnerability to predicted climate change conducted by the New York Natural Heritage Program, Tennessee warbler was identified as a second-priority species whose sensitivity should be assessed in the future (Schlesinger et al. 2011).

Tennessee warblers have been killed during migration by collisions with TV towers and other tall lighted structures.

Aerial spraying for insect control that occurs in Canada reduces budworm populations. Spraying of insecticides can affect the foraging behavior of Tennessee warbler and perhaps affects clutch size and hatching rates (Rimmer and McFarland 1998).

<b>Threat Level 1</b>	<b>Threat Level 2</b>	<b>Threat Level 3</b>	<b>Spatial Extent</b>	<b>Severity</b>	<b>Immediacy</b>	<b>Trend</b>	<b>Certainty</b>
4. Transportation & Service Corridors	4.1 Roads & Railroads	Choose an item.	Restricted	Choose an item.	Choose an item.	Choose an item.	Choose an item.
5. Biological Resource Use	5.3 Logging & Wood Harvesting	Choose an item.	Small	Choose an item.	Choose an item.	Choose an item.	Choose an item.
7. Natural System Modifications	Choose an item.	Choose an item. (terrestrial animals)	Restricted	Choose an item.	Choose an item.	Choose an item.	Choose an item.
9. Pollution	9.5 Air-Borne Pollutants	9.5.1 Acid rain	Choose an item.	Choose an item.	Choose an item.	Choose an item.	Choose an item.
11. Climate Change	11.1 Habitat Shifting & Alteration	Choose an item.	Large	Choose an item.	Choose an item.	Choose an item.	Choose an item.

**Table 2.** Threats to Tennessee warbler

**Are there regulatory mechanisms that protect the species or its habitat in New York?**

Yes:

No:

Unknown:

**If yes, describe mechanism and whether adequate to protect species/habitat:**

Tennessee warbler is protected under the Migratory Bird Treaty Act of 1918.

**Describe knowledge of management/conservation actions that are needed for recovery/conservation, or to eliminate, minimize, or compensate for the identified threats:**

Maintenance or promotion of shade coffee plantations on wintering grounds, especially those maximizing structural and floristic diversity and avoiding intensive management, such as trimming and pesticide application, are likely to benefit Tennessee warbler. The NY Comprehensive Wildlife Conservation Strategy (CWCS; NYSDEC 2005) states the need for a management plan for high-altitude conifer forest birds that incorporates the results of the 2004 State Wildlife Grant study on boreal forest birds (Glennon 2010). Conservation actions following IUCN taxonomy are categorized in the table below.

The CWCS also includes recommendations for the following actions for boreal forest birds, which includes Tennessee warbler (NYSDEC 2005).

**Habitat management:**

Cooperate with private landowners to encourage land management strategies that favor spruce grouse, olive-sided flycatcher and other species dependent on early successional boreal forests.

**Habitat monitoring:**

Conduct field studies to determine causes for declines of species known to be declining.

**Habitat research:**

Complete an inventory and analysis of the distribution and abundance of boreal species.

**Population monitoring:**

Develop a long term monitoring program to determine population trends of boreal forest birds.

**State land unit management plan:**

Review Department wildfire management for Forest Preserve lands.

Action Category	Action	Description
B.5 Economic and Other Incentives	B.3.1.0.0 Outreach, communication, and distribution	Landowner involvement: provide voluntary BMPs
C.6 Design and Plan Conservation	C.6.2.2 Acquire title for conservation purposes	Habitat protection/management

Action Category	Action	Description
C.6 Design and Plan Conservation	C.6.2.3.1 Conservation easement	Habitat protection/management

**Table 3.** Recommended conservation actions for Tennessee warbler

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