

Species Status Assessment

Class: Birds
Family: Parulidae
Scientific Name: *Vermivora chrysoptera*
Common Name: Golden-winged warbler

Species synopsis:

The golden-winged warbler is a bird of early-successional habitats. In New York, it is near the northern edge of its distribution. The North American distribution has expanded northward over the past 100 years, but populations in the Northeast have declined severely over the past 40 years. Golden-winged warbler is included on lists of conservation concern in the United States and Canada. Breeding Bird Atlas data for New York, where it is listed as a Species of Special Concern, show a 53% decline in occupancy from 1980-85 to 2000-05. The golden-winged warbler is most seriously threatened by competition and hybridization with the blue-winged warbler. Reversion and conversion of early-successional habitats to more mature forest types and developed habitats are also major threats.

I. Status

a. Current Legal Protected Status

- i. **Federal** Not Listed **Candidate:** No
- ii. **New York** Special Concern; SGCN

b. Natural Heritage Program Rank

- i. **Global** G4
- ii. **New York** S3B **Tracked by NYNHP?** No

Other Rank:

NY Natural Heritage Program – Watch List
USFWS – Focal Species
Partners in Flight – High Conservation Concern

Species of Northeast Regional Conservation Concern (Therres 1999)
Audubon Watch List – Extremely High Priority
COSEWIC – Threatened

Status Discussion:

Golden-winged warbler is a localized breeder throughout the state but is absent from Long Island and in higher elevations. It is sympatric with blue-winged warbler throughout this range, although hybridization may be reduced in areas of the St. Lawrence Valley and in the Sterling Forest area (Orange County) in the lower Hudson Valley.

II. Abundance and Distribution Trends

a. North America

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Time frame considered: 2002-2012

b. Regional

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Regional Unit Considered: Eastern BBS

Time frame considered: 2002-2012

c. Adjacent States and Provinces

CONNECTICUT **Not Present** _____ **No data** _____

i. Abundance

declining **increasing** **stable** **unknown**

ii. Distribution:

declining **increasing** **stable** **unknown**

Time frame considered: BBS: Severe decline 2002-2012 but with significant data deficiencies

Listing Status: _____ Endangered _____ SGCN? Yes _____

MASSACHUSETTS **Not Present** _____ **No data** _____

i. Abundance

declining **increasing** **stable** **unknown**

ii. Distribution:

declining **increasing** **stable** **unknown**

Time frame considered: BBS decline from 1999-2009 but with significant data deficiencies

Listing Status: _____ Endangered _____ SGCN? Yes _____

NEW JERSEY **Not Present** _____ **No data** _____

i. Abundance

declining **increasing** **stable** **unknown**

ii. Distribution:

declining **increasing** **stable** **unknown**

Time frame considered: BBS decline from 1999-2009 but with significant data deficiencies

Listing Status: _____ Special Concern _____ SGCN? Yes _____

(A) "Golden-winged warbler populations are declining throughout all of their range as early-successional habitats revert to forest and as upland and wetland habitats are lost to human development. These declines are resulting in extirpation of the species from areas that have supported golden-winged warblers for at least the last century (Georgia, South Carolina, Virginia, Massachusetts, Connecticut, Rhode Island, Vermont, New Hampshire, Indiana, Illinois, Ohio)."

(B) "The northern range in Ontario, Minnesota, Wisconsin, Michigan and Manitoba once seemed to provide a refuge for golden-winged warblers, but analyses of BBS data for 1998-2007 suggest a rapid rate of decline in the southern portion of the northern population (4.4% annually in Ontario, 2.4% annually in Wisconsin and 2.2% annually in Michigan), as well as the long-term decline of the southern portion."

(C) "Overall, golden-winged warblers showed stable or increasing populations for the entire BBS period (1966-2003) in the Boreal-Hardwood Transition region and neighboring Ontario. However, analyses of the last 10 yr of BBS data (1994-2003) show an annual decline of 9.0% in the FWS Region 3 (n.-central states of Minnesota, Wisconsin, and Michigan), an 11.3% decline annually in Ontario."

(D) "The northern range once seemed to provide a refuge for golden-winged warblers, but analyses of recent trends suggest a very rapid rate of decline in the southern portion of the northern population as well as long-term decline of the southern portion."



Figure 1. Range of the golden-winged warbler in North America (Birds of North America Online 2013).

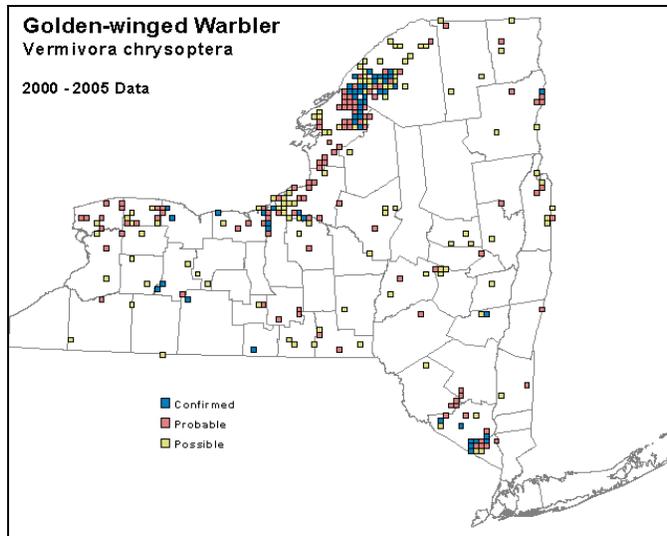


Figure 2. Golden-winged warbler occurrence in New York State during the second Breeding Bird Atlas (McGowan and Corwin 2008).

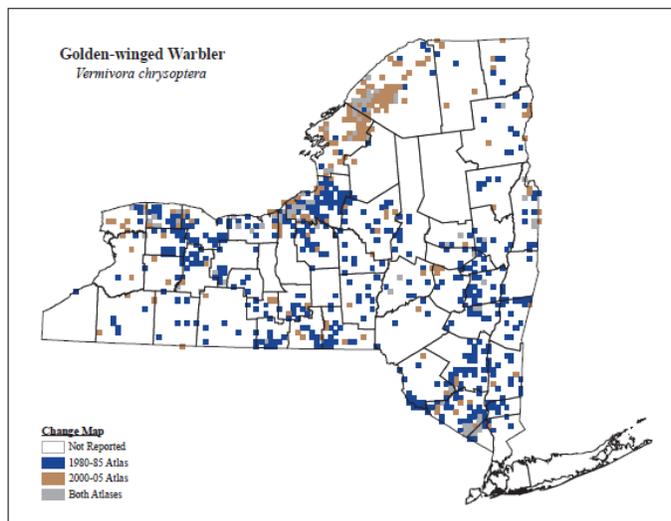


Figure 3. Change in golden-winged warbler occurrence in New York State between the first Breeding Bird Atlas and the second Breeding Bird Atlas (McGowan and Corwin 2008).

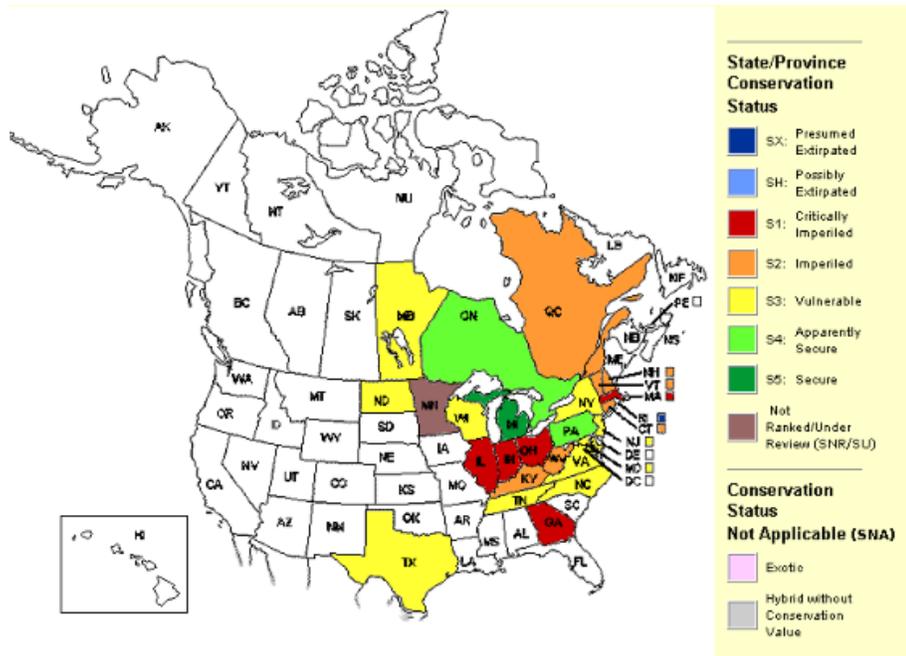


Figure 4. Conservation status of the golden-winged warbler in North America (NatureServe 2012).

III. New York Rarity, if known:

Historic	<u># of Animals</u>	<u># of Locations</u>	<u>% of State</u>
prior to 1970	_____	_____	_____
prior to 1980	_____	_____	_____
prior to 1990	_____	<u>577 blocks</u>	<u>10%</u>

Details of historic occurrence:

The first Breeding Bird Atlas (1980-85) documented occupancy in 577 survey blocks statewide (Andrle and Carroll 1988).

Current	<u># of Animals</u>	<u># of Locations</u>	<u>% of State</u>
	_____	<u>270 blocks</u>	<u>5%</u>

Details of current occurrence:

The second Breeding Bird Atlas (2000-05) documented occupancy in 270 survey blocks statewide, a decline of 53% since the first Atlas (McGowan and Corwin 2008).

New York’s Contribution to Species North American Range:

Distribution (percent of NY where species occurs)

- X 0-5%
- ___ 6-10%
- ___ 11-25%
- ___ 26-50%
- ___ >50%

Abundance (within NY distribution)

- ___ abundant
- ___ common
- ___ fairly common
- ___ uncommon
- X rare

NY’s Contribution to North American range

- ___ 0-5%
- ___ 6-10%
- X 11-25%
- ___ 26-50%

___ >50%

Classification of New York Range

Core

___ **Peripheral**

___ **Disjunct**

Distance to core population:

IV. Primary Habitat or Community Type:

1. Wet Meadow Shrub Swamp
2. Powerline
3. Hardwood Swamp
4. Non-native Shrublands
5. Riparian
6. Plantation and Disturbed Land Pioneer Forests

Habitat or Community Type Trend in New York:

Declining ___ **Stable** ___ **Increasing** ___ **Unknown**

Time frame of decline/increase: ___ Since 1960s _____

Habitat Specialist? ___ **Yes** **No**

Indicator Species? ___ **Yes** **No**

Habitat Discussion:

This warbler nests in habitat with dense herbaceous cover and patches of shrubs, often adjacent to a forest edge. Natural disturbance habitats include beaver glades, openings from natural fires, oak parklands, and swamp forests with partially open canopy. It also occurs in a variety of anthropogenic disturbance sites such as clearcuts, abandoned farmlands, reclaimed strip mines, and power line rights-of-ways.

Golden-winged warbler is considered a keystone species by the National Fish and Wildlife Foundation's Early Successional (ESH) Habitat Initiative.

V. New York Species Demographics and Life History

Breeder in New York

Summer Resident

Winter Resident

Anadromous

Non-breeder in New York

Summer Resident

Winter Resident

Catadromous

Migratory only

Unknown

Species Demographics and Life History Discussion:

Golden-winged warbler normally breeds by its second year (age 10-12 months), and every year thereafter. Second attempts at nesting usually occur if the first nest is unsuccessful, but if the first attempt is successful, production of a second clutch is unknown. Lifespan and survivorship are poorly sampled. In southern New York, one 7-year-old male was observed out of 28 males banded at least 6 years before the end of a field study; one 7-year-old female (banded as an after second year bird) and one 6-year-old female were observed out of 23 females banded at least 5 years before the end of a field study.

VI. Threats

Virtually all regions where golden-winged warblers have been extirpated or are currently declining have lost habitat due to extensive reforestation or urban sprawl (Confer et al. 2011). This loss of anthropogenic disturbance habitat is an important cause of the decline (Confer and Pascoe 2003).

In north-central New York with moderate density of brown-headed cowbirds (Sauer et al. 2008), nest parasitism lowered the fledging rate by 17% during a five-year survey (Confer et al. 2003). In southern New York with reduced agriculture and fewer cowbirds (Sauer et al. 2008), nest parasitism reduced fecundity by about 5% (JLC). Golden-winged warblers expanded into New England during the 1800s (Gill 1980) when agriculture, livestock, and probably cowbirds, were abundant and have recently expanded into north-central New York (Andrle and Carroll 1988, McGowan and Corwin 2008) where cowbirds remain moderately abundant (Sauer et al. 2008). Thus, the golden-winged warbler population is able to overcome effects of nest parasitism if other factors are suitable.

Extirpation has commonly occurred in areas where the blue-winged warbler has invaded the golden-winged warbler range, even where suitable habitat remains and is unoccupied by either species (Confer and Pascoe 2003). In almost all areas of blue-winged warbler intrusion, the golden-winged warbler phenotype is displaced within 50 years (Gill 1987) or less (Canterbury et al. 1993). The reciprocal displacement of the blue-winged warbler phenotype by the golden-winged warbler phenotype has never been observed. A blue-winged warbler competitive advantage may contribute to the golden-winged warbler decline (Will 1986, Confer et al. 2003), but it is hard to see this as a major factor because the golden-winged warbler is larger and dominates the majority of agonistic interactions (Confer and Larkin 1998), although not in all studies (Will 1986).

The influence of hybridization on the relative abundance of golden-winged warbler and blue-winged warbler is not clear. The breeding habitats utilized by the two species are so seemingly analogous that it is unclear what effects active management would have on the golden-winged warbler in parts of its range also occupied by the blue-winged warbler. More study is needed to determine if microhabitat characteristics exist between the two species that could guide or be utilized during active management for this species.

The potential effect of loss of winter habitat on populations is unclear, especially because the winter range remains poorly documented. The lack of any detectable difference in apparent winter range for populations in southern New York that are declining and in southern Ontario that have recently increased provides a weak suggestion that winter habitat is not a regulatory factor.

Arnold and Zink (2011) classified golden-winged warbler as one of top five North American landbird species that most frequently collides with towers.

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

No Unknown

Yes

Golden-winged warbler is protected under the Migratory Bird Treaty Act of 1918. In areas where golden-winged warblers nest in wetland habitats, some protection could be afforded through the Freshwater Wetlands Act, which provides protection for wetlands greater than 12.4 acres in size under Article 24 of the NYS Conservation Law.

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

Recommendations for habitat management are available in the recent status report by the Golden-winged Warbler Working Group (see Roth et al. 2012). The golden-winged warbler is one of seven focal species of the Working Lands for Wildlife initiative of the Wildlife Habitat Incentive Program (WHIP). Early-successional habitat management for golden-winged warbler within the core of its range will be part of a new State Wildlife Grant funded private landowner initiative through NYSDEC.

Conservation actions following IUCN taxonomy are categorized in the table below.

Conservation Actions	
Action Category	Action
Land/Water Protection	Site/Area Protection
Land/Water Protection	Resource/Habitat Protection
Land/Water Management	Site/Area Management
Land/Water Management	Invasive/Problematic Species Control
Land/Water Management	Habitat and Natural Process Restoration
Education and Awareness	Training
Education and Awareness	Awareness & Communications
Law and Policy	Policies and Regulations

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions overall, and for golden-winged warbler in particular.

Curriculum development:

- ___ Educate public to the benefits and need for early successional habitat including even-aged management.

Easement acquisition:

- ___ Implement a Landowner Incentive Project for early successional birds that will direct \$600,000 per year at conserving and creating habitat for early successional forest/shrub birds.

Habitat management:

- ___ Double the amount of early successional forest and shrub habitat on public and private land through sound planned management.
- ___ Increase early successional management on public and private lands.
- ___ Maintain, restore, and enhance fire adapted ecosystems. Increase use of prescribed fire in fire adapted ecosystems.

Habitat monitoring:

- ___ Precisely monitor trends of all species, in particular those that are not currently adequately monitored.
- ___ Monitor status and trends of golden-winged warblers in areas where they are common, and in particular, along the “front” of blue-winged warbler invasion northward.
- ___ Complete an inventory and analysis for high priority focus species that identifies core habitats (highest abundance) and geographic areas (where appropriate).

Habitat research:

- ___ Determine effects of viburnum leaf beetle on early successional forest/shrub habitats and species utilizing them.
- ___ Develop guidelines for habitat management for golden-winged warblers. Continue to fund John Confers’ work on this subject and expand to areas north of the blue-wing invasion front.
- ___ Determine if there are management techniques that can favor golden-wings over blue wings, and in a way where pure golden-wings can be maintained, and implement this management public, private land and on ROWs. Continue to fund John Confers’ work on this subject and expand to areas north of the blue-wing invasion front.

Population monitoring:

- ___ Encourage full completion of BBS routes.
- ___ Develop a long term monitoring program for golden-winged warblers.
- ___ Monitor status and trends of golden-winged warblers in areas where they are common, and in particular, along the “front” of blue-winged warbler invasion northward.

Statewide management plan:

- ___ Develop a management plan that provides guidance on maintaining, enhancing and restoring early successional forest/shrub bird species.
- ___ Develop guidelines for habitat management for golden-winged warblers.

Other actions:

- ___ Develop better mechanisms for directing federal (NRCS and USFWS) funding programs into early successional forest/shrub habitats.
- ___ Develop BMPs for forest management in riparian areas that recognize the critical need maintain, enhance and restore early successional forest/shrub habitat in these areas.

VII. References

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