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

   \( \checkmark \) declining \( \_ \) increasing \( \_ \) stable \( \_ \) unknown

ii. Distribution:

   \( \_ \) declining \( \_ \) increasing \( \checkmark \) stable \( \_ \) unknown

Time frame considered: \( 2002-2012 \)

b. Regional

i. Abundance

   \( \checkmark \) declining \( \_ \) increasing \( \_ \) stable \( \_ \) unknown

ii. Distribution:

   \( \checkmark \) 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

___X___ declining ___increasing ___stable ___unknown

ii. Distribution:

___X___ 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

___X___ declining ___increasing ___stable ___unknown

ii. Distribution:

___X___ 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

___X___ declining ___increasing ___stable ___unknown

ii. Distribution:

___X___ declining ___increasing ___stable ___unknown

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

Listing Status: ________ Special Concern ________________ SGCN? __Yes__
ONTARIO

Not Present ______  No data ______

i. Abundance

X declining ___ increasing  ___ stable  ___ unknown

ii. Distribution:

X declining ___ increasing  ___ stable  ___ unknown

Time frame considered: _______1981-85 to 2001-05; BBS 2002-2014_____
Listing Status: _______ Special Concern ____________________________

PENNSYLVANIA

Not Present ______  No data ______

i. Abundance

X declining ___ increasing  ___ stable  ___ unknown

ii. Distribution:

X declining ___ increasing  ___ stable  ___ unknown

Time frame considered: _______ 2002-2012 __________________________
Listing Status: _______ Not Listed ____________________ SGCN? _Yes__

QUEBEC

Not Present ______  No data ______

i. Abundance

X declining ___ increasing  ___ stable  ___ unknown

ii. Distribution:

X declining ___ increasing  ___ stable  ___ unknown

Time frame considered: _______ 1984-89 to present; BBS: 2002-2012 _______
Listing Status: _______ Near threatened ____________________________
### VERMONT

Not Present ______

No data ______

<table>
<thead>
<tr>
<th>i. Abundance</th>
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<tr>
<td>X declining</td>
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<tr>
<th>ii. Distribution:</th>
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<tbody>
<tr>
<td>X declining</td>
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Time frame considered: __1976-81 to 2003-07________________

Listing Status: ______ Not Listed ________________ SGCN? Yes __

### New York

No data ______

<table>
<thead>
<tr>
<th>i. Abundance</th>
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<tr>
<td>X declining</td>
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<thead>
<tr>
<th>ii. Distribution:</th>
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<tr>
<td>X declining</td>
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</table>

Time frame considered: _Severe decline from 1980-85 and 2000-05_

**Monitoring in New York.**

The Cornell Lab of Ornithology completed a Golden-winged Warbler Atlas Project (GOWAP). While there is no ongoing monitoring activity, several researchers are investigating habitat use by golden-winged warbler and interactions between golden-winged and blue-winged warblers.

**Trends Discussion:**

The golden-winged warbler increased in abundance and expanded its distribution into New England more than a century ago and has continued to expand to the northward and northwestward in the north-central states and adjacent Canada during the last 100 years, yet it is declining in many areas and has disappeared from previously occupied regions (Confer et al. 2003, Buehler et al. 2007).

In New York, there was a 53% decline in occupancy from the first Breeding Bird Atlas in 1980-85 to the second Atlas in 2000-05. Breeding Bird Survey data show a significant declines of -5.3% for 1966-2012 and -4.3% for 2002-2012 (Sauer et al. 2014).

The Golden-winged Warbler Working Group (2010) provides this overview:
(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:

<table>
<thead>
<tr>
<th></th>
<th># of Animals</th>
<th># of Locations</th>
<th>% of State</th>
</tr>
</thead>
<tbody>
<tr>
<td>prior to 1970</td>
<td>______</td>
<td>______</td>
<td>_____</td>
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<tr>
<td>prior to 1980</td>
<td>______</td>
<td>______</td>
<td>_____</td>
</tr>
<tr>
<td>prior to 1990</td>
<td>______</td>
<td>577 blocks</td>
<td>10%</td>
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</table>

Details of historic occurrence:


<table>
<thead>
<tr>
<th></th>
<th># of Animals</th>
<th># of Locations</th>
<th>% of State</th>
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<tbody>
<tr>
<td></td>
<td>______</td>
<td>270 blocks</td>
<td>5%</td>
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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)  

<table>
<thead>
<tr>
<th></th>
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<th>Abundance (within NY distribution)</th>
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<tbody>
<tr>
<td>X</td>
<td>0-5%</td>
<td>_ abundant</td>
</tr>
<tr>
<td>__</td>
<td>6-10%</td>
<td>_ common</td>
</tr>
<tr>
<td>__</td>
<td>11-25%</td>
<td>_ fairly common</td>
</tr>
<tr>
<td>__</td>
<td>26-50%</td>
<td>_ uncommon</td>
</tr>
<tr>
<td>__</td>
<td>&gt;50%</td>
<td>_ X rare</td>
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**NY’s Contribution to North American range**

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<tbody>
<tr>
<td>__</td>
<td>0-5%</td>
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<tr>
<td>__</td>
<td>6-10%</td>
</tr>
<tr>
<td>X</td>
<td>11-25%</td>
</tr>
<tr>
<td>__</td>
<td>26-50%</td>
</tr>
</tbody>
</table>
Classification of New York Range

_X_ 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:

_X_ Declining ___ Stable ___ Increasing ___ Unknown

Time frame of decline/increase: Since 1960s

Habitat Specialist?
___ Yes X No

Indicator Species?
___ Yes X 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

_X_ Breeder in New York

_X_ 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 characteristic 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

___X___ 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.

<table>
<thead>
<tr>
<th>Conservation Actions</th>
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<tr>
<td><strong>Action Category</strong></td>
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<tr>
<td>Land/Water Protection</td>
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<td>Land/Water Protection</td>
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<td>Land/Water Management</td>
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<td>Land/Water Management</td>
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<td>Land/Water Management</td>
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<tr>
<td>Education and Awareness</td>
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<tr>
<td>Education and Awareness</td>
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<tr>
<td>Law and Policy</td>
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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


**Date last revised:** December 2014