

COSSARO Candidate Species at Risk Evaluation
for
Hooded Warbler (*Setophaga citrina*)

Committee on the Status of Species at Risk in Ontario (COSSARO)

Assessed by COSSARO as NOT AT RISK

May 2012

Final

PART 1

COSSARO Candidate Species at Risk Evaluation May 2012

Hooded Warbler (*Setophaga citrina*)

1.1 CURRENT STATUS AND DISTRIBUTION

Current Designations:

GRANK – G5 (NatureServe Explorer 2012; last reviewed 3 Dec. 1996)

NRANK Canada – N4B (NatureServe Explorer 2012; last reviewed 15 Nov. 2011)

COSEWIC – Not at Risk (May 2012)

SARA – Threatened (Schedule 1)

ESA 2007 – Special Concern

SRANK – S3B

Distribution in Ontario:

Nests mainly in the Carolinian region of southern Ontario, particularly in the Long Point, Grand Bend, and Niagara areas.

Distribution and Status Outside Ontario:

Breeds from southeastern Nebraska, eastern Kansas, and eastern Oklahoma, north to southern Great Lakes region and Connecticut, south to southeastern Texas, U.S. Gulf Coast, and northern Florida. Winters in lowland forest and scrub from eastern Mexico to Costa Rica, with Yucatan Peninsula of Mexico and Belize being a key wintering area. Also winters on several of the Greater (Cuba, Puerto Rico) and Lesser Antilles (Virgin Islands, Guadeloupe, Martinique, Netherlands Antilles) (Ogden and Stutchbury 1994). Population and distribution trends vary by location; local increases have occurred in parts of New York and New Jersey; local decreases elsewhere in New York; disappearance as a breeding bird in Massachusetts prior to early 1970s; distribution has remained stable in Ohio (Ogden and Stutchbury 1994). Listed as Threatened in Wisconsin, Special Concern in Michigan, Minnesota, and Indiana. The Hooded Warbler is ranked by NatureServe (2012) as G5 overall.

PART 2

ELIGIBILITY FOR ONTARIO STATUS ASSESSMENT

2.1 ELIGIBILITY CRITERIA

Taxonomic Distinctness

Yes

No dispute about taxonomic distinctness; no infraspecific taxa are recognized.

Designatable Units

There is a single DU in Canada.

Native Status

Yes

The Hooded Warbler was first recorded in Canada in the Hamilton area prior to 1860; the first specimen collected between 1878 and 1882 at Hyde Park, Middlesex Co. and the first nest was discovered in 1949 in Springwater Forest, Elgin Co.

Presence/Absence

Present

The species regularly occurs in Ontario.

2.2 ELIGIBILITY CRITERIA MET

1. The putative taxon or DU is valid. **Yes**
2. The taxon or DU is native to Ontario. **Yes**
3. The taxon or DU is present in Ontario, extirpated from Ontario or extinct? **Present**

PART 3

ONTARIO STATUS BASED ON COSSARO EVALUATION CRITERIA

3.1 APPLICATION OF PRIMARY CRITERIA (Rarity and Declines)

1. Global Rank

Not in any category

G5, secure (NatureServe 2012).

2. Global Decline

Not in any category

Statistically significant increases have been documented on BBS routes in several U.S. states and regions. A significant decline has been documented only in Florida (<http://www.mbr-pwrc.usgs.gov/bbs/bbs2007.html>).

3. Northeastern North America Ranks

Not in any category

21% of northeastern North American jurisdictions in which the species is ranked have ranks of S1, S2, SH or SX (below threshold for SC).

4. Northeastern North America Decline

Not in any category

No significant declines in northeastern North American range have occurred based on BBS data; limited breeding occurred in Massachusetts prior to early 1970s, but not recorded breeding since then (<http://www.mbr-pwrc.usgs.gov/bbs/bbs2007.html>; Ogden and Stutchbury 1994). Breeding Bird Survey population trends in the Eastern Region are as follows (Sauer et al 2011):

1966 to 2010 trend: 1.7%/year (95% C.I.: 1.1% to 2.3%)

2000 to 2010 trend: 3.3%/year (95% C.I.: 2.1% to 4.6%)

The Breeding Bird Survey trend map suggests that Hooded Warbler range is expanding northward through the northeastern US and receding northward in Florida to eastern Texas (Sauer et al 2011).

5. Ontario Occurrences

Not in any category

Data on 51 occurrences exist in Ontario's NHIC database (NHIC 2012). At least 423 breeding pairs, as of 2007 and 2008 surveys, in area encompassing 15 counties; up from estimated 144-300 pairs in 6-county area in 1998, and at least 300 pairs, estimated from 81 10 X 10 km squares during the Atlas of the Breeding Birds of Ontario period ending in 2005 (COSEWIC 2000, Cadman et al. 2007, Sutherland 2009). With > 50 occurrences in Ontario, the threshold for special concern status is not met (≤ 50).

6. Ontario Decline

Not in any category

Breeding Bird Atlas, migration monitoring, and dedicated survey data all show increasing trends (COSEWIC 2012). The species was reported from only two Breeding Bird Survey routes in Ontario and no trend data available. Community information provided by Credit Valley Conservation also suggests increasing numbers of Hooded Warblers in the Toronto area. The species was recorded in 21 of the 10 km by 10 km Ontario Breeding Bird Atlas squares surveyed in 1981-1985, and 81 of the squares surveyed in 2001-2005.

7. Ontario's Conservation Responsibility

Not in any category

The Ontario portion of species' range constitutes <10% of its global range. This does not meet the COSSARO criterion of ≥10% for threatened status.

3.2 APPLICATION OF SECONDARY CRITERIA (Threats and Vulnerability)

8. Population Sustainability

Not in any category

The Hooded Warbler population is increasing. There is no evidence of reproductive or recruitment failure either in Ontario or in adjacent jurisdictions. No Population Viability Analysis is available, but one is not needed, given continual increases over the past two decades.

9. Lack of Regulatory Protection for Exploited Wild Populations

Not in any category

This criterion applies to exploited populations. The Hooded Warbler is not exploited in Ontario. The species and its habitat are protected by a combination of the federal Migratory Birds Convention Act, the federal Species at Risk Act, and the provincial Endangered Species Act, 2007.

10. Direct Threats

Not in any category

Much of the habitat used by this species is situated on private land, although some of this has now been secured for conservation purposes. Continued habitat fragmentation and development pressure may constitute threats of unknown extent. However, there is also evidence that the Hooded Warbler population is very dynamic, and is characterized by high levels of immigration and emigration in response to habitat quality (COSEWIC 2012). Population is increasing, so threats appear to be minimal, at least in the short term. According to COSEWIC (2012), habitat supply, which may be increasing since historic lows, is probably not the primary limiting factor for the Hooded Warbler in Ontario. COSEWIC's review (2012) of the literature suggests the canopy gaps in mature forest preferred by the species for breeding can be created by natural tree fall or forest management that follows the single-tree selection or group selection silvicultural systems. These systems are applied commonly on Crown land in Ontario.

Loss and degradation of habitat at migration stopover sites and on the wintering grounds have been identified as potential threats but the magnitude of these threats is unknown (COSEWIC 2012).

11. Specialized Life History or Habitat-use Characteristics

Not in any category

Although Hooded Warblers will nest in small (e.g., 10 ha) forest patches, most nests in Ontario are in larger patches (> 100 ha; COSEWIC 2012), suggesting the species

requires relatively extensive tracts of forest. Mature deciduous or mixed hardwood forest with small, early successional gaps in the canopy containing dense shrub cover are preferred. However, there appears to be no shortage of suitable habitat, or at least, suitable habitat limitations have not yet been met, since the population of the Hooded Warbler has been continually increasing over the past two decades or more.

3.3 COSSARO EVALUATION RESULTS

1. Criteria satisfied in each status category

Number of primary and secondary criteria met in each status category.

ENDANGERED – [0/0]

THREATENED – [0/0]

SPECIAL CONCERN – [0/0]

Number of Ontario-specific criteria met in each status category (these are primary criteria numbers 5, 6 and 7)

ENDANGERED – [0]

THREATENED – [0]

SPECIAL CONCERN – [0]

2. Data Deficiency

No The number of criteria assessed as “insufficient information” is 0. Data on Ontario population size, trends, habitat trends, and threats are lacking.

3. Status Based on COSSARO Evaluation Criteria

The application of COSSARO evaluation criteria suggests that **Hooded Warbler is Not at Risk** in Ontario.

1.6 SUMMARY

A small insectivorous bird, the Hooded Warbler breeds throughout much of the eastern United States. It remains uncommon in Ontario and is still restricted to the southern portion of the province, and particularly the Carolinian forest region. However, it continues to expand its range in southern Ontario, now occurring in at least 15 counties, and extending north to the Midland Peninsula and east to the Kingston region. It breeds in patches of dense saplings and shrubs in mature deciduous or mixed forest.

Substantial increases in numbers of breeding pairs have occurred over the past two decades. Recent estimates suggest that there are more than 500 to 1000 breeding pairs in Ontario. Hooded Warblers are classified as Not at Risk (formerly Special Concern) because their population in Ontario is recovering strongly and the species is more abundant now than previously recorded in historical times.

PART 4

ONTARIO STSUS BASED ON COSEWIC EVALUATION CRITERIA

4.1 APPLICATION OF COSEWIC CRITERIA

Regional (Ontario) COSEWIC Criteria Assessment

Criterion A – Decline in Total Number of Mature Individuals

Not in any category

Does not meet criterion. Population has been increasing over the last three generations (COSEWIC 2012).

Criterion B – Small Distribution Range and Decline or Fluctuation

Not in any category

Does not meet criterion. Extent of Occurrence is greater than 20,000 km². IAO is less than 2,000 km², but population does not meet subcriteria (COSEWIC 2012).

Criterion C – Small and Declining Number of Mature Individuals

Not in any category

Does not meet criterion. Population is less than 2000 mature individuals, but no evidence of a continuing decline (COSEWIC 2012).

Criterion D – Very Small or Restricted Total Population

Not in any category

Population falls within the range of Threatened status, but there are numerous occurrences (at least 81 10 X 10 km squares in recent Breeding Bird Atlas) and the threat of imminent extirpation from human disturbance or stochastic events is very low. The population is greater than 1000 individuals, the IAO is greater than 20 km² and there are more than 5 locations (COSEWIC 2012).

Criterion E – Quantitative Analysis

Not in any category

No Population Viability Analysis has been conducted for the species in Ontario. Nevertheless, given that the population is still expanding in numbers and area occupied, the probability of extirpation is very low (COSEWIC 2012).

Rescue Effect

Yes. Populations in some adjacent jurisdictions are undergoing expansion (New York, Ohio, Pennsylvania) (COSEWIC 2012).

Special Concern Status

No. The range and abundance of this forest-nesting species has increased substantially since the species was last assessed. The species has also experienced a significant long-term increase in abundance in the core of its range in the US, so there is an outside source for rescue (COSEWIC 2012)

4.2 COSEWIC EVALUATION RESULTS

1. Criteria satisfied in each status category

ENDANGERED – [no]
THREATENED – [no]
SPECIAL CONCERN – [no]

2. Data Deficiency

No.

3. Status Based on COSEWIC Evaluation Criteria

The application of COSEWIC evaluation criteria suggests that **Hooded Warbler** is **Not at Risk** in Ontario.

A small insectivorous bird, the Hooded Warbler (*Setophaga citrina*) breeds throughout much of the eastern United States. It remains uncommon in Ontario and is still restricted to the southern portion of the province, and particularly the Carolinian forest region. However, it continues to expand its range in southern Ontario, now occurring in at least 15 counties, and extending north to the Midland Peninsula and east to the Kingston region. It breeds in patches of dense saplings and shrubs in mature deciduous or mixed forest. Substantial increases in numbers of breeding pairs have occurred over the past two decades. Recent estimates suggest that there are more than 500 to 1000 breeding pairs in Ontario. Hooded Warblers are classified as Not at Risk (formerly Special Concern) because their population in Ontario is recovering strongly and the species is more abundant now than previously recorded in historical times.

PART 5

ONTARIO STATUS DETERMINATION

5.1 APPLICATION OF COSSARO AND COSEWIC CRITERIA

COSSARO and COSEWIC criteria give the same result. **Yes**

5.2 SUMMARY OF STATUS EVALUATION

Hooded Warbler is classified as **Not at Risk** in Ontario.

Information Sources

1. Literature Cited

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Ogden, L. J. and B. J. Stutchbury. 1994. Hooded Warbler (*Wilsonia citrina*). The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online:

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Sutherland, D. 2009. Hooded Warbler (*Wilsonia citrina*) – addendum to James (2000). OMNR, NHIC, Peterborough. 2 pp.

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2. Community and Aboriginal Traditional Knowledge Sources:

Various observers on behalf of Credit Valley Conservation (CVC)

3. Acknowledgements

Appendix 1

NORTHEASTERN NORTH AMERICA RANK, STATUS AND DECLINE

Trend data from Sauer et al 2011. "NS" indicates no significant trend

State	S-Rank	Trend (1966 - 2010)
CT	S4B	NS
DE	S1B	NS
IL	S3S4	NS
IN	S3B	Increasing
IA	S1B, S2N	No data
LB	Not present	-
KY	S5B	Increasing
MA	SXB, S2N	No data
MB	Not present	-
MD	S4S5B	NS
ME	Not present	-
MI	S3	NS
MN	S3B	No data
NB	Not present	-
NF	Not present	-
NH	Not present	-
NJ	S3B	NS
NS	Not present	-
NY	S5	NS
OH	S5	Increasing
ON	S4B	NS
PA	S4B	Increasing
PE	Not present	-
QC	Not present	-
RI	S3B	No data
VA	S5	NS
VT	Not present	-
WI	S2S3B	NS
WV	S5B	NS

Occurs as a native species in 19 of 29 northeastern jurisdictions
 Srank or equivalent information available for 19 of 19 jurisdictions = (100%)
 S1, S2, SH, or SX in 4 of 19 = (21%)