

Ontario Species at Risk Evaluation Report for

Lesser Yellowlegs

Petit Chevalier

Tringa flavipes

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

Assessed by COSSARO as Threatened

September 2021

Final Report

Petit chevalier (*Tringa flavipes*)

Le petit chevalier (*Tringa flavipes*) est classé dans la catégorie des espèces menacées en Ontario par le CDSEPO.

Le petit chevalier (*Tringa flavipes*) est un petit oiseau de rivage qui possède un long cou, un plumage grisâtre et de longues pattes jaune vif. Bien que le petit chevalier ressemble morphologiquement au grand chevalier, il est reconnu comme une espèce distincte à la suite d'études phylogénétiques.

L'aire de reproduction du petit chevalier se situe en Alaska et au nord du Canada, et s'étend du Yukon à l'ouest du Labrador. En Ontario, le petit chevalier niche principalement dans la région de conservation des oiseaux 7 (RCO 7), Taïga du bouclier et plaine hudsonienne.

On estime que les populations de petits chevaliers ont décliné de 3,26 % par année au cours des 3 dernières générations dans la zone canadienne de la RCO 7 et de 2,4 % par an au cours des 3 dernières générations à l'échelle de leur aire de reproduction au Canada. Le petit chevalier est également estimé en déclin à l'échelle mondiale.

Le petit chevalier est classé dans la catégorie des espèces menacées en Ontario, conformément au critère A2bcd+4bcd de l'Union internationale pour la conservation de la nature (UICN). D'après les tendances du Relevé des oiseaux nicheurs (BBS) d'Amérique du Nord, les populations de l'Ontario ont décliné de 28,8 à 32,8 % au cours des trois générations précédentes. On prévoit un déclin de 20 à 60 % de la population au cours des trois prochaines générations.

Le classement du petit chevalier dans la catégorie des espèces menacées en Ontario est conforme à celui qui lui est attribué par le COSEPAC (2020). Le statut de cette espèce est conforme à la définition d'espèce menacée aux termes de la *Loi de 2007 sur les espèces en voie de disparition*.

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Executive summary

Lesser yellowlegs (*Tringa flavipes*) is a small shorebird that possesses a long neck, greyish plumage, and long, bright yellow legs. Although Lesser Yellowlegs is morphologically similar to Greater Yellowlegs, it is recognized as a distinct species based on phylogenetic studies.

The breeding range of Lesser Yellowlegs occurs in Alaska and Northern Canada, stretching from the Yukon to western Labrador. Within Ontario, Lesser Yellowlegs breed primarily within the Taiga Shield and Hudson Plains Bird Conservation Region (BCR7) Lesser Yellowlegs populations are estimated to have declined 3.26% annually over the last three generations in the Canadian extent of BCR7 and 2.4% annually over the last three generations across their breeding range in Canada. The Lesser Yellowlegs is also considered to be declining globally.

As a long-distance migrant, Lesser Yellowlegs faces numerous threats including sport and subsistence hunting during migration and on wintering grounds in the Caribbean and South America. Conversion of wetlands to agricultural land in wintering areas may have a significant impact on Lesser Yellowlegs populations over the next three generations.

Lesser Yellowlegs is classified as Threatened in Ontario based on meeting IUCN criteria A2bcd+4bcd. Ontario populations are inferred to have declined 28.8-32.8% over the last three generations (12 years, 2007-2019) based on Breeding Bird Survey (BBS) trends. A population decline of 20-60% is projected to occur over the next three generations. The classification of Lesser Yellowlegs as Threatened in Ontario is consistent with COSEWIC (2020). This status of this species is consistent with the definition of Threatened under the Endangered Species Act, 2007.

1. Eligibility for Ontario status assessment

1.1. Eligibility conditions

1.1.1. Taxonomic distinctness

Lesser Yellowlegs (*Tringa flavipes*) is recognized as a distinct species. Although it is morphologically similar to Greater Yellowlegs, phylogenetic studies suggest that Lesser Yellowlegs is more closely related to Willet (Pereira and Baker 2005; Gibson and Baker 2012).

1.1.2. Designatable units

No designatable units are recognized for Lesser Yellowlegs in Canada (COSEWIC 2020).

1.1.3. Native status

Lesser Yellowlegs is considered native to Ontario (Natureserve 2021)

1.1.4. Occurrence

Lesser Yellowlegs is considered native to Ontario (Natureserve 2021)

1.2. Eligibility results

Lesser Yellowlegs (*Tringa flavipes*) is eligible for status assessment in Ontario.

2. Background information

2.1. Current designations

- GRANK: G5 (NatureServe 2021)
- IUCN: LC (2016)
- NRANK Canada: N4N5B, N5M
- COSEWIC: Threatened (November 2020)
- SARA: No Status
- ESA 2007: No Status
- SRANK: S3S4B, S5M (ranked in 2020)

2.2. Distribution in Ontario

The breeding range of Lesser Yellowlegs is limited to northern Ontario, including the Taiga Shield and Hudson Plains Bird Conservation Region (BCR 7) and the northern Boreal Softwood Shield (BCR 8) (Harris 2007). The number of locations for Lesser Yellowlegs in Ontario is currently unknown (COSEWIC 2020). The number of Element occurrences has not been evaluated for Ontario, but there are currently 195 EO candidates in the NHIC database (Figure 1).

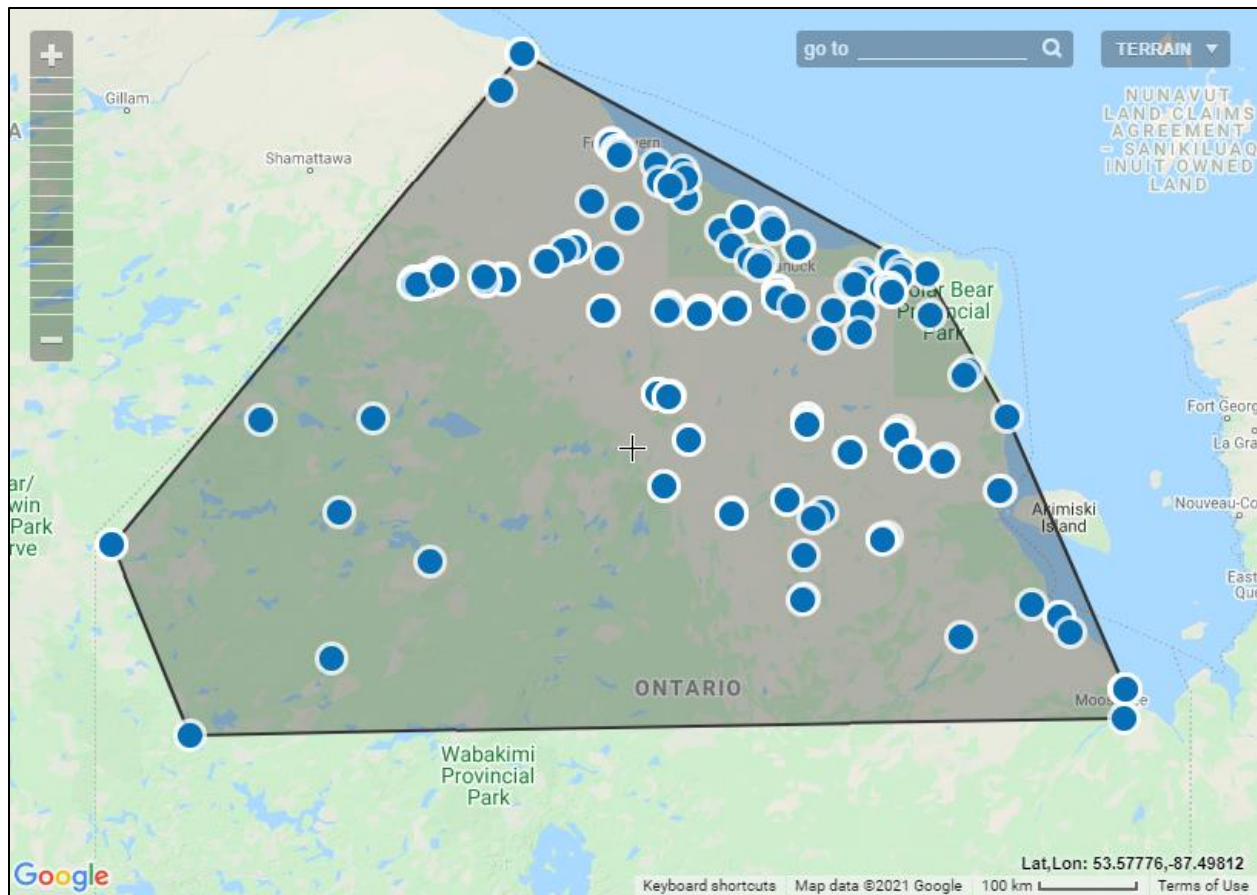


Figure 1. Candidate element occurrences for Lesser Yellowlegs in Ontario (EO occurrence data obtained from NHIC in September 2021).

2.3. Distribution, status and the broader biologically relevant geographic range outside Ontario

The breeding range of Lesser Yellowlegs is limited to Alaska and northern Canada (Yukon to western Labrador), with an estimated 80% of the total breeding range occurring within Canada (COSEWIC 2020). A total of 27,044 observations have been recorded in Ontario, with 195 of these representing potential element occurrences.

Lesser Yellowlegs breed primarily within the Taiga Shield and Hudson Plains Bird Conservation Region (BCR7) of Ontario (Harris 2007). Given the lack of population genetic studies of Lesser Yellowlegs, we consider the broader biologically relevant geographic range (BBGRR) to encompass the extent of BCR7 in Ontario and adjacent provinces (Table 1). Lesser Yellowlegs populations are estimated to have declined 3.26% annually over the last three generations in the Canadian extent of BCR7 (COSEWIC 2020). However, these estimates are of low reliability due to the small number of sample routes (3) within BCR7. BBS data for the breeding range of Lesser Yellowlegs in Canada suggest an annual decline of 2.4% annually over the last three generations. The Lesser Yellowlegs is also considered to be declining globally (BirdLife International 2016).

Partners in Flight estimates the Lesser Yellowlegs global population at 660,000 individuals (Partners in Flight 2020) and was included on the Yellow Watch List by the North American Bird Conservation Initiative (2016).

Table 1. Condition of the Species in Adjacent Jurisdictions and Broader Biologically Relevant Geographic Range

Adjacent Jurisdictions	Biologically Relevant to Ontario (n/a, yes, no)	Condition	Notes & Sources
Quebec	Yes	Vulnerable (S3)	Natureserve 2021
Manitoba	Yes	Apparently secure (S4) Population increasing at a rate of 2.22% over the last three generations (2007-2019) and decreasing at a rate of 0.49% over the long term (1970-2019) based on BBS data	Source: Natureserve 2021 Note: Population trends for both the short- and long-term in Manitoba are considered of low reliability Source: COSEWIC 2020
Michigan	No		
Minnesota	No		
Nunavut	No		
New York	No		
Ohio	No		
Pennsylvania	No		
Wisconsin	No		
Canadian breeding range	Yes	Population declining at an estimated rate of 2.4% annually over the last three generations (2007-2019) and 2.36% over the long term (1970-2019) based on BBS data	Note: Population trends for the short-term in Canada are considered of low reliability, while estimates for the long-term are considered of medium reliability Source: COSEWIC 2020
BCR7 (Canada)	Yes	Population declining at an estimated rate of	Note: Population trends for the short- and long-term in BCR 7 are based on a small number of routes and are

Adjacent Jurisdictions	Biologically Relevant to Ontario (n/a, yes, no)	Condition	Notes & Sources
		3.26% over the last three generations (2007-2019) and 2.41% over the long-term (1970-2019) based on BBS data	considered of low reliability Source: COSEWIC 2020

2.4. Ontario conservation responsibility

The estimated area extent of occurrence of Lesser Yellowlegs is estimated as 393,409 km² based on a minimum convex polygon constructed for 195 candidate EOs for Ontario. This corresponds to an estimated 4.5% of the global range. The percent of the global population that occurs within Ontario is unknown.

2.5. Direct threats

Sport and subsistence hunting during migration and on wintering grounds in the Caribbean and South America are considered the most significant threat to Lesser Yellowlegs populations (COSEWIC 2020). Conversion of wetlands to agricultural land is not considered to pose a significant threat in North America, but conversion of wetlands to agriculture in important wintering areas, such as the Argentinian Pampas, may have a significant impact on Lesser Yellowlegs populations over the next three generations.

Resource extraction, such as mining and quarrying, peat extraction, and renewable energy, may associated with minor loss or degradation of wetland habitats of BCR7 in Ontario, although the threat is low (COSEWIC 2020, Environment Canada 2013). Lesser Yellowlegs will likely also face emerging threats due to anthropogenic climate change, including potential habitat shifts and alteration associated with increased risk of drying of wetlands, flooding of intertidal habitat in stopover areas, and greater severity of hurricanes during migration (COSEWIC 2020).

The number of locations for Lesser Yellowlegs is currently unknown but assumed to be greater than 10 (COSEWIC 2020).

2.6. Specialized life history or habitat use characteristics

Within its breeding range, Lesser Yellowlegs typically nests on dry ground near wetland areas used for foraging (COSEWIC 2020). It migrates through the United States and the Caribbean to reach its wintering grounds, located mostly in coastal areas of South America. Individuals may migrate up to 30,000 km round-trip between breeding and overwintering areas. Lesser Yellowlegs is monogamous, and females typically lay a

single clutch of four eggs. Breeding adults may travel several kilometers from their nest to wetland forage areas, some home ranges may be up to several dozen km² in size.

2.7. Existing Conservation and Recovery Actions

Lesser Yellowlegs has been designated as threatened by COSEWIC (2020), though a federal recovery strategy has yet to be prepared for this species. Legal protection of Lesser Yellowlegs in Canada is provided through the Migratory Birds Convention Act (Government of Canada, 2017),

Some (non-legal) habitat protection for Lesser Yellowlegs may be offered through several existing conservation initiatives aimed at identifying and protecting important shorebird breeding and stopover areas including the North American shorebirds including: the North American Bird Conservation Initiative (NABCI), the Western Hemisphere Shorebird Reserve Network (WHSRN) (Morrison et al. 1994), the Eastern Habitat Joint Venture (EHJV) and the Important Bird Area (IBA) program (Aubry and Cotter 2007).

3. Ontario status assessment

3.1. Application of endangered/threatened status in Ontario

3.1.1. Criterion A – Decline in total number of mature individuals

Threatened (A2bcd+4bcd). Meets criteria A2bcd with an inferred decline of 28.8-32.8% over the last three generations (12 years, 2007-2019) based on annual BBS trends for the Canadian breeding range and BCR7 (COSEWIC 2020). Also meets criteria A4bcd with an inferred and projected decline of 20-60% over three generations.

3.1.2. Criterion B – Small distribution range and decline or fluctuation

Does not apply.

3.1.3. Criterion C – Small and declining number of mature individuals

Does not apply. The number of mature individuals in Ontario is unknown but likely well above thresholds.

3.1.4. Criterion D – Very small or restricted total population

Does not apply. The number of mature individuals in Ontario is estimated at ~30,000 individuals, well above thresholds.

3.1.5. Criterion E – Quantitative analysis

Does not apply. No quantitative analysis has been conducted for Canadian populations.

3.2. Application of Special Concern in Ontario

Does not apply.

3.3. Status category modifiers

3.3.1. Ontario's conservation responsibility

Does not apply. The species is not at risk globally and Ontario's conservation responsibility is <25%.

3.3.2. Status modification based on level of risk in broader biologically relevant geographic range

Does not apply. Populations are declining across adjacent regions of BCR7 and most of Canada (COSEWIC 2020).

3.3.3. Rescue Effect

Does not apply.

3.4. Other status categories

3.4.1. Data deficient

Does not apply.

3.4.2. Extinct or extirpated

Does not apply.

3.4.3. Not at risk

Does not apply.

4. Summary of Ontario status

Lesser Yellowlegs (*Tringa flavipes*) is classified as Threatened in Ontario based on meeting criterion A2bcd+4bcd. This classification is consistent with COSEWIC (2020).

This status of this species is consistent with the definition of Threatened under the Endangered Species Act, 2007.

5. Information sources

Aubry, Y., and R. Cotter. 2007. Québec Shorebird Conservation Plan. Environment Canada, Canadian Wildlife Service, Québec Region, Sainte-Foy, Québec. xvi + 196 pp.

Bird Studies Canada, Environment Canada's Canadian Wildlife Service, Ontario Nature, Ontario Field Ornithologists and Ontario Ministry of Natural Resources. 2006. Ontario Breeding Bird Atlas Website. <http://www.birdsontario.org/atlas/index.jsp>. Accessed September 17, 2021.

Environment Canada. 2013. Bird Conservation Strategy for Bird Conservation Region 7 in Ontario: Taiga Shield and Hudson Plains. Canadian Wildlife Service, Environment Canada. Ottawa, ON. 87 pp + appendices.

Harris, R. 2007. Lesser Yellowlegs. Pp 226-227 in Cadman, M.D., D.A. Sutherland, G.G. Beck, D. Lepage, and A.R. Couturier (eds.). Atlas of the Breeding Birds of Ontario, 2001-2005. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature. Toronto, Ontario. xxii + 706 pp

Morrison, R.I.G., A. Bourget, R. Butler, H.L. Dickson, C. Gratto-Trevor, P. Hicklin, C. Hyslop, and R.K. Ross. 1994. A preliminary assessment of the status of shorebird populations in Canada. Canadian Wildlife Service Progress Notes 208:1-19.

North American Bird Conservation Initiative. 2016. The State of North America's Birds 2016. Environment and Climate Change Canada: Ottawa, Ontario. 8 pages. www.stateofthebirds.org. Accessed September 21, 2021.

Partners in Flight. 2020. Population Estimates Database, version 3.1. Available at <http://pif.birdconservancy.org/PopEstimates>. Accessed on September 21, 2021.

Appendix 1: Technical summary for Ontario

Species: Lesser Yellowlegs (*Tringa flavipes*)

Demographic information

Demographic attribute	Value
Generation time. Based on average age of breeding adult: age at first breeding = X year; average life span = Y years.	4 years
Is there an observed, inferred, or projected continuing decline in number of mature individuals?	Yes, inferred based on BBS data
Estimated percent of continuing decline in total number of mature individuals within 5 years or 2 generations.	At least 18% over two generations (2011-2019), inferred from the average annual BBS decline in Canada
Observed, estimated, inferred, or suspected percent reduction or increase in total number of mature individuals over the last 10 years or 3 generations.	28.8-32.8% decline over three generations (2007-2019) inferred from annual trends in Canada and BCR7 based on the BBS
Projected or suspected percent reduction or increase in total number of mature individuals over the next 10 years or 3 generations.	3-70% decline projected over three generations (2020-2032) based on assessment of overall medium to high threat impact (COSEWIC 2020)
Observed, estimated, inferred, or suspected percent reduction or increase in total number of mature individuals over any 10 years, or 3 generations, over a time period including both the past and the future.	Approximately 20-60% decline inferred and projected over three generations (COSEWIC 2020)
Are the causes of the decline (a) clearly reversible, and (b) understood, and (c) ceased?	a. No b. Yes c. No
Are there extreme fluctuations in number of mature individuals?	No

Extent and occupancy information in Ontario

Extent and occupancy attributes	Value
Estimated extent of occurrence (EOO). <i>If value in COSEWIC status report is not applicable, then use geocat.kew.org. State source of estimate.</i>	393,409 km ²

Extent and occupancy attributes	Value
Index of area of occupancy (IAO). <i>If value in COSEWIC status report is not applicable, then use geocat.kew.org. State source of estimate.</i>	520 km ²
Is the total population severely fragmented? i.e., is >50% of its total area of occupancy is in habitat patches that are: (a) smaller than would be required to support a viable population, and (b) separated from other habitat patches by a distance larger than the species can be expected to disperse?	a. No b. No
Number of locations. <i>See Definitions and Abbreviations on COSEWIC and IUCN websites for more information on the term "location". Use plausible range to reflect uncertainty if appropriate.</i>	Unknown
Number of NHIC Element Occurrences <i>Request data from MNRF.</i>	195 Candidate EOs
Is there an observed, inferred, or projected continuing decline in extent of occurrence?	No
Is there an observed, inferred, or projected continuing decline in index of area of occupancy?	Yes, inferred continuing decline, based on long-term population decline
Is there an observed, inferred, or projected continuing decline in number of sub-populations or EOs?	Not applicable, as only one subpopulation is recognized in Canada
Is there an observed, inferred, or projected continuing decline in number of locations?	Unknown
Is there an observed, inferred, or projected continuing decline in [area, extent and/or quality] of habitat?	Yes, inferred and projected based on threats calculator
Are there extreme fluctuations in number of populations?	No
Are there extreme fluctuations in number of locations?	No
Are there extreme fluctuations in extent of occurrence?	No
Are there extreme fluctuations in index of area of occupancy?	No

Number of mature individuals in each sub-population or total population (if known)

Sub-population (or total population)	Number of mature individuals
<i>Ontario population</i>	<i>Estimated at ~30,000 (based on Ontario containing 4.5% of the global range and global population estimate of 660,000 mature individuals)</i>

Quantitative analysis (population viability analysis conducted)

Probability of extinction in the wild is unknown.

Threats

A threats calculator was prepared for Lesser Yellowlegs by COSEWIC (2020) as follows:

- i. IUCN 5.1 (Hunting and collecting terrestrial animals) - low to medium impact threat
- ii. IUCN 2.1 (Annual and perennial non-timber crops) - low impact threat
- iii. IUCN 3 (Energy production and mining) – low impact threat
- iv. IUCN 7.3 (Other ecosystem modifications) - low impact threat
- v. IUCN 8.2 (Problematic native species/diseases) – low impact threat
- vi. IUCN 9 (Pollution) – low impact threat
- vii. IUCN 11 (Climate change) – low impact threat

Rescue effect

Rescue effect attribute	Value
Does the broader biologically relevant geographic range for this species extend beyond Ontario?	Yes
Status of outside population(s) most likely to provide immigrants to Ontario	Declining
Is immigration of individuals and/or propagules between Ontario and outside populations known or possible?	Possible
Would immigrants be adapted to survive in Ontario?	Yes
Is there sufficient suitable habitat for immigrants in Ontario?	Yes
Are conditions deteriorating in Ontario?	Possibly, but likely not significantly
Is the species of conservation concern in bordering jurisdictions?	Probably
Is the Ontario population considered to be a sink?	No
Is rescue from outside populations likely?	Possibly

Template last updated: Oct. 14, 2021.
Previous version: Oct 14, 2020.

Rescue effect attribute	Value
Does the broader biologically relevant geographic range for this species extend beyond Ontario?	Yes

Sensitive species

Lesser Yellowlegs is NOT considered a data sensitive species.

Acronyms

COSEWIC: Committee on the Status of Endangered Wildlife in Canada
COSSARO: Committee on the Status of Species at Risk in Ontario
ESA: Endangered Species Act
EO: Element occurrence (as defined by NHIC)
EOO: extent of occurrence
GRANK: global conservation status assessments
IAO: index of area of occupancy
IUCN: International Union for Conservation of Nature and Natural Resources
MNRF: Ministry of Natural Resources and Forestry
NHIC: Natural Heritage Information Centre
NNR: Unranked
NRANK: National conservation status assessment
SARA: Species at Risk Act
SNR: unranked
SRANK: subnational conservation status assessment
S1: Critically Imperiled
S2: Imperiled
S3: Vulnerable
S4: Apparently Secure
S5: Secure
IUCN: International Union for Conservation of Nature and Natural Resources
CDSEPO: Le Comité de détermination du statut des espèces en péril en Ontario