

**Ontario Species at Risk Evaluation Report for
Eastern Whip-poor-will
Engoulevent bois-pourri
(*Antrostomus vociferus*)**

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

Assessed by COSSARO as Special Concern

April 2023

Executive summary

Eastern Whip-poor-will is a medium-sized crepuscular to nocturnal bird with a large and flattened head, large eyes with eyelashes on lids and a small bill bordered by long, unbranched rictal bristles. The cryptic plumage of both sexes is mostly grey and brown.

Eastern Whip-poor-will nest in dry early-successional open deciduous, mixed and coniferous forests, as well as rock or sand barrens with scattered trees, open conifer plantations, savannahs, abandoned gravel pits, old burns and other disturbed sites in a state of early to mid-forest succession. Eggs are laid directly on the leaf litter and usually located near short herbaceous plants, shrubs, or seedling trees that provide partial shade.

Foraging habitats of Eastern Whip-poor-will include semi-open to open habitats such as shrubby pastures, agricultural fields with perches, wetlands, grasslands and regenerating clearcuts. This species is strictly insectivorous, eating a variety of night-flying species including moths, beetles, flying ants, flies, grasshoppers and mosquitoes.

The breeding range of Eastern Whip-poor-will extends from east-central Saskatchewan east to Nova Scotia and south into Georgia, Alabama, Mississippi, Arkansas and Oklahoma. In Ontario, the main breeding range of this species extends from Sudbury down the Georgian Bay (and Bruce Peninsula) shoreline, along the Canadian Shield edge south of Algonquin Provincial Park east to the Rideau Lakes area. Multiple large concentrations and smaller pockets of Eastern Whip-poor-will have also been documented between Lake Superior and the Manitoba border.

The non-breeding range of this species extends from coastal South Carolina through Florida and along the Gulf Coast of the United States into Mexico and as far south as Costa Rica and western.

Eastern Whip-poor-will is vulnerable to the cumulative effects of various threats. Potential threats to this species are related to natural systems modifications (fire suppression and widespread pesticide use), residential and industrial development, agricultural expansion, transportation corridors and severe weather due to climate change.

Eastern Whip-poor-will is classified as Special Concern in Ontario. Current data suggest that species abundance may now be stable or increasing, however concern remains regarding the reduction in insect prey and threats such as habitat loss.

1. Eligibility for Ontario status assessment

1.1. Eligibility conditions

1.1.1. Taxonomic distinctness

Eastern Whip-poor-will (*Antrostomus vociferus*) is the only species in the genus *Antrostomus* that occurs in Ontario (Cink et al. 2020).

1.1.2. Designatable units

No subspecies for Eastern Whip-poor-will have been recognized, and there is no evidence that any subpopulations show evidence of discreteness or evolutionary significance (COSEWIC 2022). Eastern Whip-poor-will in Ontario are considered to be a single designatable unit.

1.1.3. Native status

Eastern Whip-poor-will is native to Ontario.

1.1.4. Occurrence

The breeding range of Eastern Whip-poor-will extends from east-central Saskatchewan east to Nova Scotia and south into Georgia, Alabama, Mississippi, Arkansas and Oklahoma (COSEWIC 2022). The non-breeding range of this species extends from coastal South Carolina through Florida and along the Gulf Coast of the United States into Mexico and as far south as Costa Rica and western Panama (Cink et al. 2020; COSEWIC 2022). English et al. (2017) reported that tagged individuals from Ontario overwintered from the Gulf Coast of central Mexico to southern Costa Rica.

Approximately 20% (553,000 km²) of the breeding distribution of Eastern Whip-poor-will is found in Canada (COSEWIC 2022), with the highest concentrations appearing to occur in the Frontenac Axis region of eastern Ontario and in south-central and southeastern Manitoba (COSEWIC 2022).

1.2. Eligibility results

Eastern Whip-poor-will (*Antrostomus vociferus*) is eligible for status assessment in Ontario.

2. Background information

2.1. Current designations

- GRANK: G5 (NatureServe 2023)
- IUCN: Near Threatened (June 2019)

- NRANK Canada: N4B,N3M
- COSEWIC: Special Concern (December, 2022)
- SARA: Threatened (Schedule 1)
- ESA 2007: Threatened (September, 2009)
- SRANK: S4B (ranked in 2009)

2.2. Distribution in Ontario

In Ontario, the main breeding range of Eastern Whip-poor-will extends from Sudbury down the Georgian Bay shoreline (and Bruce Peninsula), along the Canadian Shield edge south of Algonquin Provincial Park east to the Rideau Lakes area (Mills 2007; COSEWIC 2022). Multiple large concentrations and smaller pockets of Eastern Whip-poor-will have also been documented between Lake Superior and the Manitoba border over the past decade (COSEWIC 2022).

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

The breeding range of Eastern Whip-poor-will extends from east-central Saskatchewan east to Nova Scotia and south into the southeastern United States. The status of this species in adjacent jurisdictions is variable, with Eastern Whip-poor-will designated as Threatened in Manitoba and Special Concern in New York, Ohio and Michigan. This species is designated as S2B in Wisconsin, S3B in Pennsylvania, S4B in Quebec and Indiana and SNR in Minnesota (see Table 1).

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
Manitoba	Yes	S2S3B (Threatened)	NatureServe 2023
Quebec	Yes	S4B	NatureServe 2023
New York	Yes	S3B (Special Concern)	NatureServe 2023
Pennsylvania	Yes	S3B,S3M	NatureServe 2023
Ohio	Yes	S5 (Special Concern)	NatureServe 2023
Michigan	Yes	S3 (Special Concern)	NatureServe 2023
Minnesota	Yes	SNRB	NatureServe 2023
Indiana	Yes	S4B	NatureServe 2023
Wisconsin	Yes	S2B	NatureServe 2023

For the purposes of this assessment, the broader biologically relevant geographic range (BBRGR) for Eastern Whip-poor-will is considered to include all adjacent jurisdictions, as well as Indiana and Wisconsin. These jurisdictions represent a generally contiguous

breeding distribution of Eastern Whip-poor-will and also potential source populations associated with rescue effect.

2.4. Ontario conservation responsibility

Ontario's conservation responsibility is low. It is estimated that approximately 5% of the global population of this species occurs in Ontario.

2.5. Direct threats

Eastern Whip-poor-will is vulnerable to the cumulative effects of various threats. A threats assessment was conducted by COSEWIC (2022), which assigned an overall threat impact as high. Known threats are listed below from highest to lowest.

Natural System Modifications (medium-high threat impact)

Typical Eastern Whip-poor-will breeding habitat includes early successional habitats, which can be residual from relatively recent and sporadic burns (Cink et al. 2020, COSEWIC 2022), however this type of habitat is now scarce due to more than a century of fire suppression across much of the breeding range (COSEWIC 2022). Declines in the abundance of Eastern Whip-poor-will in Algonquin Provincial Park has been largely attributed to fire suppression (Tozer et al. 2014). Recent evidence suggests that clearcuts may provide early successional breeding habitat in the absence of wildfires (Vala et al. 2020), however more study is required.

Increased pesticide use is considered an important factor in the decline of Eastern Whip-poor-will throughout a large portion of its annual range (COSEWIC 2022). Research on insectivorous bird populations in the Netherlands showed a substantial decline across species immediately following the introduction of neonicotinoids to the country in the mid-1990s (Hallmann et al. 2014), and the loss of insect food supplies is thought to play a considerable role in the decline of aerial insectivores worldwide (Spiller and Dettmers 2019).

Residential and Commercial Development (low threat impact)

Eastern Whip-poor-will demonstrates strong site fidelity on breeding and wintering sites (Cink et al. 2020), and as a result, removal of habitat when the species is absent can impact some individuals upon their return (COSEWIC 2022). Although habitat loss may historically have occurred through natural means such as high-intensity forest fires, habitat loss due to anthropogenic development poses a greater risk as it can occur over larger scales and with less reversibility (COSEWIC 2022). Residential and commercial development can result in loss of Eastern Whip-poor-will habitat during all parts of its life cycle.

Agriculture and Aquaculture (low threat impact)

Habitat loss resulting from agricultural intensification has been documented at all stages of the annual cycle including overwintering grounds, breeding grounds and stopover

sites essential for refueling during migration (COSEWIC 2022). The extent of suitable neotropical forest habitat used during overwintering is reported to have declined by approximately 9% between 2000 and 2016 (Tonra et al. 2019). Heavy pesticide use as part of high-intensity agriculture practices also has the potential to reduce insect abundance and affect habitat suitability (COSEWIC 2022).

Transportation and Service Corridors (low threat impact)

Eastern Whip-poor-will have been demonstrated to avoid areas with paved roads, but will forage, sing, and roost over or adjacent to lightly-used roads (COSEWIC 2022). Although roads may facilitate foraging, the benefits may be outweighed by the risk of direct and indirect mortality of both juveniles and adults (COSEWIC 2022). The overall threat related to road mortality is considered low.

Climate Change and Severe Weather (low threat impact)

Effects of habitat shifting are likely to be gradual, and more noticeable over a period greater than three generations (11 years) (COSEWIC 2022). Droughts have potential to reduce prey supply, with implications for survival and productivity, but could also trigger greater frequency of forest fires, which may increase the availability of suitable nesting habitat (COSEWIC 2022). Unseasonal cold-snaps may also lead to die-offs of insect prey and negatively affect Eastern Whip-poor-will arriving on the breeding grounds in spring (COSEWIC 2022).

Increased occurrence and intensity of storms associated with warming climate can directly affect demography by causing mass die-offs during migration (COSEWIC 2022). Although many Eastern Whip-poor-wills apparently fly around or take shorter flights over sections of the Gulf of Mexico, some appear to fly directly across the Gulf and may be unable to seek refuge on land should they meet unfavorable weather conditions while in flight (COSEWIC 2022).

2.6. Specialized life history or habitat use characteristics

Eastern Whip-poor-will is a medium-sized crepuscular to nocturnal bird that measures 22 to 26 cm in length and has a mass of 43 to 64 g (COSEWIC 2022). This species has a large and flattened head, large eyes with eyelashes on lids and a small bill (with enormous gape) bordered by long, unbranched rictal bristles (Cink et al. 2020). The cryptic plumage of both sexes is mostly grey and brown (COSEWIC 2022).

Eastern Whip-poor-will first breeds at the age of one year and has an estimated generation length of 3.7 years (COSEWIC 2022). There are few longevity records for the species, however some individuals have been documented to at least 15 years of age (COSEWIC 2022).

Eastern Whip-poor-will nest in dry early-successional deciduous, mixed and coniferous forests (Sandilands 2010; Cink et al. 2020), as well as rock or sand barrens with scattered trees, open conifer plantations, savannahs, abandoned gravel pits, old burns and other disturbed sites in a state of early to mid-forest succession (COSEWIC 2022).

The degree of openness in forest understory appears to be more important than forest composition (Cink et al. 2020). Eastern Whip-poor-will appear to avoid areas of dense uninterrupted forest. No data is available on forest structure and size, however shade, proximity to open areas for foraging, and fairly sparse ground cover are key elements of habitat chosen (Cink et al. 2020).

Eggs are laid directly on the leaf litter and usually located near short herbaceous plants, shrubs, or seedling trees that provide partial shade (Cink et al. 2020). Occasional occurrences of nests on bare ground, sand, or decayed wood have also been reported (Peck and James 1983). The average clutch size in Ontario is reported as 1.97 (\pm 0.16 SD) (Cink et al. 2020) and double-brooding is uncommon to rare in Canada (Mills 1986).

As a ground-nester, Eastern Whip-poor-will is especially vulnerable to predation during the breeding season (Cink et al. 2020). Nest predators can include Raccoon, Striped Skunk, Red Fox, Coyote, Fisher, Gray Ratsnake, White-tailed Deer, Eastern Chipmunk, Long-tailed Weasel and domestic cats (COSEWIC 2022). Blue Jay and Great Crested Flycatcher have also been observed preying on eggs in unattended nests (COSEWIC 2022).

Foraging habitats of Eastern Whip-poor-will include semi-open to open habitats such as shrubby pastures, agricultural fields with perches, wetlands, grasslands and regenerating clearcuts (COSEWIC 2022). Power-line right-of-ways and roadway corridors are also commonly occupied (COSEWIC 2022). In northwestern Ontario, Eastern Whip-poor-will was not found in small patches of open habitat (<3 ha), suggesting that a minimum threshold for patch size of open habitat may exist (Farrell et al. 2016).

Eastern Whip-poor-will is strictly insectivorous, eating a variety of night-flying species including moths, beetles, flying ants, flies (Diptera), grasshoppers (Orthoptera), and mosquitoes (Cink et al. 2020). Foraging occurs at dusk and dawn, and during moonlit periods of night (COSEWIC 2022). Feeding starts about 30 min after sunset and continues as long as light is sufficient (Cink et al. 2020).

Little information is available regarding habitat used during migration, however habitat use during migration is thought to be similar to that used for breeding (Cink et al. 2020). Eastern Whip-poor-will may occur in coastal scrub during migration through Mexico (Cink et al. 2020).

Habitat use in the overwintering range from southern Texas to southern Costa Rica consists predominantly of closed-canopy forest (Tonra et al. 2019). In the southeastern United States, overwintering Eastern Whip-poor-will are primarily found in mixed woods and broadleaf evergreen woods not far from open areas (Cink et al. 2020). This species exhibits high fidelity to wintering sites (Cink et al. 2020).

2.7. Existing Conservation and Recovery Actions

A provincial recovery strategy for Ontario (MECP 2019) has been adopted and a government response statement prepared (MECP 2020). The government's short-term goal for the recovery of Eastern Whip-poor-will is to slow the population decline by mitigating threats and promoting suitable habitat conditions over the next 10 years. The long-term goal is to support natural increases in the species' abundance and distribution.

To achieve these goals, the Province has established several Government-led and Government-supported Actions. Some of the Government-led actions intended to help protect and recover Eastern Whip-poor-will include the following.

- Continuing to protect Eastern Whip-poor-will and its habitat through the ESA.
- Undertake communications and outreach to increase public awareness of species at risk in Ontario.
- Encourage the submission of Eastern Whip-poor-will data to Ontario's central repository (Natural Heritage Information Centre).
- Continue to support conservation, agency, municipal and industry partners, and Indigenous communities and organizations to undertake activities to protect and recover Eastern Whip-poor-will.
- Work with partners and stakeholders to support beneficial insects in Ontario through actions such as education and promoting integrated pest management and best management practices.

Government-supported Actions intended to assist with recovery of Eastern Whip-poor-will include the following.

- Research and monitoring to increase the understanding of threats impacting Eastern Whip-poor-will as well as its ecology, habitat characteristics, and population and habitat trends.
- Stewardship and management actions to mitigate threats to Eastern Whip-poor-will and promote availability of suitable habitat for the species and its insect prey.
- Education and awareness initiatives which are intended to increase the level of public awareness of and engagement in protecting and recovering Eastern Whip-poor-will in Ontario.

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

Not applicable. Estimated rate of reduction in number of mature individuals of about 9% over the past three generations (11 years), and projected trend over the next three generations are below the threshold for Threatened.

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

Not applicable. Estimated Extent of Occurrence (834,557 km²) is well over Endangered and Threatened thresholds. Estimated Area of occupancy (9,644 km²) also exceeds Endangered and Threatened thresholds.

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

Not applicable. Estimated number of mature individuals exceeds threshold for Threatened.

3.1.4. Criterion D – Very small or restricted total population

Not applicable. Number of mature individuals is estimated to be 89,000, exceeding the threshold for Threatened. Threatened D2 also not applicable because thresholds for number of locations and IAO exceeded.

3.1.5. Criterion E – Quantitative analysis

Not applicable. A quantitative analysis has not been conducted for this species.

3.2. Application of Special Concern in Ontario

Current trend data suggests that long-term population declines may not have been as severe as thought at the time of the previous assessment. New data suggest that abundance may now be stable or increasing, however concern remains regarding the reduction in insect prey and threats such as habitat loss. Although the number of mature individuals remains relatively large, this species is at risk of becoming Threatened if threats are not adequately mitigated.

3.3. Status category modifiers

3.3.1. Ontario's conservation responsibility

Not applicable. Ontario's conservation responsibility is low given the percentage of the global population within Ontario.

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

The broader biologically relevant geographic range of this species is considered to include Manitoba and Quebec, as well as New York, Pennsylvania, Ohio, Michigan, Minnesota, Indiana and Wisconsin. Eastern Whip-poor-will is listed as Threatened in Manitoba and Special Concern in New York, Ohio and Michigan. This species is also ranked S2 in Wisconsin, S3 in Quebec and Pennsylvania, S4 in Indiana and SNR in Minnesota. Populations of Eastern Whip-poor-will in these adjacent jurisdictions have

also experienced long-term declines due to threats similar to Ontario. No status modifiers based on condition in the BBRGR have been applied.

3.3.3. Rescue Effect

The potential for rescue effect from adjacent jurisdictions is unknown. Although potential immigrants from adjacent jurisdictions are capable of migration into Ontario and would be adapted to survive in the province, it is unknown whether individuals from outside Ontario would immigrate to areas of suitable habitat. No status modifiers based on rescue effect have been applied.

3.4. Other status categories

3.4.1. Data deficient

Not applicable.

3.4.2. Extinct or extirpated

Not applicable.

3.4.3. Not at risk

Not applicable. There are clear threats attributing to an overall decline to this species.

4. Summary of Ontario status

Eastern Whip-poor-will (*Antrostomus vociferus*) is classified as Special Concern in Ontario, as this species does not meet the thresholds for Endangered or Threatened. This species is also considered to be at risk of becoming Threatened if threats are not adequately mitigated.

The status of this species is consistent with the definition of Special Concern under the Endangered Species Act, 2007.

The change in status of this species from the 2009 assessment is considered a genuine change based on current abundance data.

5. Information sources

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Appendix 1: Technical summary for Ontario

Species: Eastern Whip-poor-will (*Antrostomus vociferus*)

Demographic information

Demographic attribute	Value
<p>Generation time. Based on average age of breeding adult: age at first breeding = X year; average life span = Y years.</p>	3.7 years.
<p>Is there an observed, inferred, or projected continuing decline in number of mature individuals?</p>	<p>Unknown. Recent BBS information suggests historic declines may have ceased.</p>
<p>Estimated percent of continuing decline in total number of mature individuals within 5 years or 2 generations.</p>	<p>Estimated decline of 6% over 2 generations (seven years) in Canada. It is expected that rates of decline are similar in Ontario.</p>
<p>Observed, estimated, inferred, or suspected percent reduction or increase in total number of mature individuals over the last 10 years or 3 generations.</p>	<p>Estimated decline of 9.3% over 3 generations (eleven years) in Canada. It is expected that rates of decline are similar in Ontario.</p>
<p>Projected or suspected percent reduction or increase in total number of mature individuals over the next 10 years or 3 generations.</p>	<p>Unknown. Likely <30% reduction in Canada, based on applied long-term trends and anticipated threats. Ontario trend likely similar.</p>
<p>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.</p>	<p>Unknown. Likely <30% reduction in Canada, based on applied long-term trends and anticipated threats. Ontario trend likely similar.</p>
<p>Are the causes of the decline (a) clearly reversible, and (b) understood, and (c) ceased?</p>	<p>a. No. Habitat conservation potentially reversible, but other reversing other potential threats is more difficult. b. No. Long-term decline in aerial insectivores is</p>

Demographic attribute	Value
	<p>somewhat understood, but several knowledge gaps remain.</p> <p>c. Unknown. Natural system modifications (prey availability) and habitat loss and agricultural intensification (pesticide use) are ongoing. More research is needed on other threats.</p>
Are there extreme fluctuations in number of mature individuals?	No.

Extent and occupancy information in Ontario

Extent and occupancy attributes	Value
<p>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></p>	Estimate 834,557 km ²
<p>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></p>	Estimate 9,644 km ²
<p>Is the total population severely fragmented? i.e., is >50% of its total area of occupancy 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?</p>	<p>a. No b. No</p>
<p>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></p>	Unknown.
<p>Number of NHIC Element Occurrences <i>Request data from MNRF.</i></p>	11,319
<p>Is there an observed, inferred, or projected continuing decline in extent of occurrence?</p>	No.
<p>Is there an observed, inferred, or projected continuing decline in index of area of occupancy?</p>	Yes. Continuing loss of known territories.
<p>Is there an observed, inferred, or projected continuing decline in number of sub-populations or EOs?</p>	Not applicable.

Extent and occupancy attributes	Value
Is there an observed, inferred, or projected continuing decline in number of locations?	Unknown. Incomplete understanding of threats limits consideration of trends in number of locations.
Is there an observed, inferred, or projected continuing decline in [area, extent and/or quality] of habitat?	Likely. Long-term population decline may partially reflect continuing decline in extent and/or quality of habitat in breeding and wintering areas.
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
Estimated Total 89,000	95% CI = 25,000 to 190,000

Quantitative analysis (population viability analysis conducted)

Probability of extinction in the wild is unknown.

Threats

A threats calculation for this species was conducted by COSEWIC (2022) and assigned the overall threat impact as High.

Natural systems modifications (High-Medium impact)

Residential & commercial development (Low impact)

Agriculture & aquaculture (Low impact)

Transportation and Service Corridors (Low impact)

Climate change & severe weather (Low impact)

Energy Production and Mining (Unknown impact)

Biological resource use (Unknown impact)

Human intrusions & disturbance (Unknown impact)

Problematic species and genes (Unknown impact)

Pollution (Unknown impact) *threats calculator*.

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	Threatened in Manitoba Special Concern in New York, Ohio and Michigan S2 in Wisconsin S3 in Quebec and Pennsylvania S4 in Indiana SNR in Minnesota
Is immigration of individuals and/or propagules between Ontario and outside populations known or possible?	Yes
Would immigrants be adapted to survive in Ontario?	Yes.
Is there sufficient suitable habitat for immigrants in Ontario?	Unknown.
Are conditions deteriorating in Ontario?	Unknown.
Is the species of conservation concern in bordering jurisdictions?	Yes. Threatened in Manitoba. Special Concern in New York, Ohio and Michigan.
Is the Ontario population considered to be a sink?	No.
Is rescue from outside populations likely?	Unknown.

Sensitive species

Not 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