

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

**Comité de détermination du statut des
espèces en péril en Ontario**

ANNUAL REPORT

RAPPORT ANNUEL

2023

PREPARED FOR:

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Minister of the Environment, Conservation and Parks

PREPARED BY:

The Committee on the Status of Species at Risk in Ontario

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ACKNOWLEDGEMENTS

The Committee on the Status of Species at Risk in Ontario (COSSARO) wishes to acknowledge and thank the observers who attended and contributed to the 2023 species assessment meetings. Observers represented First Nations, government offices, companies, industry associations, sporting associations and conservation organizations (listed in alphabetical order). The observers' attendance and interest in the work of COSSARO was helpful and is appreciated.

- Alderville Black Oak Savanna – AFN
- Algonquins of Ontario Consultation Office
- Atikameksheng Anishnawbek
- Birds Canada
- Canadian Wildlife Service (CWS)
- Carlton University
- Chiefs of Ontario
- Chippewa of the Thames First Nation
- City of Vaughan
- Environment and Climate Change Canada (ECCC)
- Grand River First Nations
- Henvey Inlet First Nation
- Hydro One Networks Inc
- Mattagami First Nation
- Métis Nation of Ontario
- Ontario Federation of Agriculture (OFA)
- Ontario Land Trust Alliance
- Ontario Ministry of Transportation (MTO)
- Resolute Forest Products
- RJ Burnside and Associates
- Six Nations of the Grand River Elected Council – Lands and Resources
- Species Conservation Action Agency
- University of Manitoba
- Weyerhaeuser Company Ltd.
- Wilderness Committee Ontario
- Wildlife Preservation Canada
- WSP
- WWF Canada

As members on COSSARO, we are grateful to the Hon. Andrea Khanjin as the Minister of the Environment, Conservation, and Parks (MECP) and her team at the MECP that serves as the Secretariat and provides support to COSSARO. We are grateful to the following MECP team members who worked hard to support COSSARO in 2023.

- Jennifer Morton
- Victoria Papuga
- Alison Richmond
- Susan Ecclestone
- Glenn Desy
- Sarah Parna
- Lucy Ellis
- Hailey Huffman
- Christie Curley

We are also grateful to the Ministry of Natural Resources and Forestry (MNR) Natural Heritage Information Centre (NHIC) for providing important Ontario species data to COSSARO that enabled our assessments. In particular, we wish to thank Colin Jones (Provincial Zoologist, Invertebrates with the NHIC) who serves as a Province of Ontario member on the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). In this role he was able to support COSSARO's access to and understanding of COSEWIC considerations related to species assessments that provides historical contexts of past assessments and knowledge that is invaluable to our provincial species assessments.

1. INTRODUCTION

The Committee on the Status of Species at Risk in Ontario (COSSARO) is an independent committee of experts which considers which plants and animals should be classified as at risk in Ontario.

The *Endangered Species Act, 2007* (ESA) gives the committee legal recognition and specific responsibilities:

- Maintaining criteria for assessing and classifying species;
- Keeping a list of species that should be assessed and classified (or reclassified) in the future;
- Assessing, reviewing and classifying species; and
- Submitting reports regarding the classification of species and providing advice to the Minister of the Environment, Conservation and Parks.

COSSARO can consist of up to 12 members with expertise in scientific disciplines, community knowledge or Aboriginal Traditional Knowledge. A quorum of eight members is required for voting purposes.

In 2023, COVID-19 continued affecting COSSARO's activities with the May meeting held virtually, necessitating MECP staff, COSSARO members and Observers to participate on-line. However, the MECP Secretariat team and COSSARO members were able to have an in-person meeting in November in Ottawa with observers attending virtually and/or in person for open sessions. COSSARO held one virtual meeting and one in-person meeting to assess 15 species/populations. Of those 15 species, votes for three species (American White Pelican, Black Tern, and Riverine Clubtail) were deferred until

spring 2024. Voting on the remaining 12 species was completed at the two meetings held on:

- April 20, 2023
- November 22 – 23, 2023

Throughout 2023, several COSSARO members were appointed or reappointed for three-year terms: Derek Parks, Shelley Lohnes, and Gary Epp.

2. SUMMARY OF STATUS ASSESSMENTS

The table below summarizes the results of the assessments completed on 15 species/populations in 2023. These species are grouped by types of fauna/flora for ease of review. The order is the same used in Attachment 2 to this report.

From the table below, the following observations are offered: three species assessment were deferred to spring of 2024 and seven species/populations retained the same status. No previously assessed species/populations increased in the status level (e.g., moved upwards from Special Concern to Threatened). One species/populations decreased their status from Threatened to Special Concern. One species was deemed data deficient. Three new species that were not previously assessed were assigned a status of Endangered by the COSSARO.

SPECIES English, French, Indigenous*, Latin names	CURRENT CLASSIFICATION (UNDER ESA)	NEW COSSARO EVALUATED STATUS (2023)
BIRDS		
Eastern Whip-poor-will Engoulevent bois-pourri (<i>Antrostomus vociferus</i>)	Threatened	Special Concern
Horned Grebe Grèbe esclavon (<i>Podiceps auritus</i>)	Special Concern	Special Concern
American White Pelican pélican d'Amérique	Threatened	Deferred to Spring 2024

SPECIES English, French, Indigenous*, Latin names	CURRENT CLASSIFICATION (UNDER ESA)	NEW COSSARO EVALUATED STATUS (2023)
<i>(Pelecanus erythrorhynchos)</i>		
Black Tern Guifette noire <i>(Chlidonias niger)</i>	Special Concern	Deferred to Spring 2024
Northern Bobwhite Colin de Virginie <i>(Colinus virginianus)</i>	Endangered	Endangered
INSECTS		
Riverine Clubtail Le gomphe riverain <i>(Stylurus amnicola)</i>	Endangered	Deferred to Spring 2024
Rusty-patched Bumble Bee Bourdon à tache rousse <i>(Bombus affinis)</i>	Endangered	Endangered
American Burying Beetle Nécrophore d'Amérique <i>(Nicrophorus americanus)</i>	Extirpated	Extirpated
MAMMALS		
Eastern Red Bat Chauve-souris rousse de l'Est <i>(Lasiurus borealis)</i>	Not Listed	Endangered
Hoary Bat Chauve-souris cendrée <i>(Lasiurus cinereus)</i>	Not Listed	Endangered
Silver-haired Bat Chauve-souris argentée	Not Listed	Endangered

SPECIES English, French, Indigenous*, Latin names	CURRENT CLASSIFICATION (UNDER ESA)	NEW COSSARO EVALUATED STATUS (2023)
<i>(Lasionycteris noctivagans)</i>		
PLANTS		
Spring Blue-eyed Mary Collinsie printanière <i>(Collinsia verna)</i>	Extirpated	Extirpated
Provancher's Fleabane Vergerette de Provancher <i>(Erigeron philadelphicus var. provancheri)</i>	Not Listed	Data Deficient
REPTILES		
Timber Rattlesnake Crotale des bois <i>(Crotalus horridus)</i>	Extirpated	Extirpated
AMPHIBIANS		
Eastern Tiger Salamander Salamandre tigrée de l'Est <i>(Ambystoma tigrinum)</i>	Extirpated	Extirpated

NOTES:

- Not Listed means the species had not been formerly assigned a status in Ontario.
- All English, French and Indigenous names of species are included in Status Reports, where known. Indigenous names are highlighted with an asterisk and these names are not intended to be inclusive of all cultures and languages. Indigenous names are not based upon western scientific methods.

3. SUMMARY OF 2023 COSSARO MEETINGS & OPERATIONS

3.1 Meetings

COSSARO, modified meeting schedules as a result of the COVID-19 pandemic. In 2023 the first meeting was held virtually to minimize risks to the staff, committee members and public from COVID-19. In the fall of 2023, the COSSARO meeting was held in-person to allow staff, COSSARO members and observers to participate in-person, with the option to participate virtually, should one not be able to attend in-person. Each meeting included opportunities for observers to attend.

The following offers a brief summary of each of the 2023 meetings.

MEETING DATE	MEETING SUMMARY
<p>April 20, 2023</p>	<p>Mr. Tom Ratz Forestry Manager and Chief Forester for Ontario, Resolute Forest Products provided a presentation on Eastern Whip-poor-will for the committee on observations on this species within the company’s forestry operations.</p> <p>The information presented and review of the scientific research appears to indicate that the Eastern Whip-poor-will designation of Threatened under the Endangered Species Act can be down listed to Special Concern.</p> <p>Approximately 15 observers from various public and private organizations attended the Spring 2023 meeting.</p>
<p>Nov 22 - 23, 2023</p>	<p>COSSARO’s first in-person meeting since the COVID 19 Pandemic.</p> <p>Ms. Shelley Lohnes and Dr. Gary Epp were welcomed to their new roles as members of COSSARO.</p> <p>Dr. Christina Davy, Assistant Professor, Department of Biology, Carleton University offered to present and discuss her work with bats in Ontario as it pertained to three bats species under review for the Fall 2023 meeting.</p> <p>Significant interest in the listing of three new bat species to the Endangered Species Act was the primary focus. With COSEWIC listing these three bat species federally, a review of the COSEWIC report and Dr. Davy’s presentation determined that the</p>

MEETING DATE	MEETING SUMMARY
	<p>three bat species would be listed as Endangered within the province of Ontario</p> <p>The Fall 2023 COSSARO meeting attracted about a dozen observers virtually on-line and about 5 in-person observers made the trip for the Ottawa Meeting days.</p>

3.2 Updates Regarding Other Matters

Engaging with stakeholders in 2023, provided COSSARO direct dialogue with groups and individuals regarding their information for species that were being evaluated and suggested for our new assessments and/or reassessments. The committee found these presentations beneficial to the committee’s assessment and values the proactive dialogue that enables the committee to fulfill its provincial mandate.

The website for COSSARO (<http://cossaroagency.ca>) continued to be helpful in keeping Ontario citizens apprised of COSSARO activities. COSSARO members appreciate the MECP team continuously updating and operating the website on behalf of the committee.

COSSARO continues to work with the province to update the 2017 Terms of Reference for the committee. Those updates are in progress.

The Deputy Chair of COSSARO received requests for media and presentation for the following organization in 2023:

- The Narwhal, April 24, 2023
Interviewer, Ms. Emma McIntosh
- SARPAC, May 17, 2023
Chair, Bette Jean Crews

4. 2024 PLAN

COSSARO expects to conduct its spring and fall meetings in-person in 2024. It is anticipated that with virtual options to attend both meetings will be available for those committee members and observers that are unable to attend in-person.

In addition to assessments of species considered at the previous COSEWIC meeting, COSSARO is beginning to complete reassessments for species that have not been actively and currently considered by COSEWIC in their ongoing assessments. In 2024, these assessments will likely include: American White Pelican and Black Tern. Delays in these two species’ assessments have enabled the committee to secure the latest data to

understand potential threats and latest trends that may be affecting these two species. The assessment of some of these species may depend upon the availability of funds to seek external expertise on status report consulting assignments.

Other species that could be addressed in 2024 are those which have been subject to the provision of additional and/or new data provided in the form of Indigenous and community knowledge. COSSARO is placing an emphasis on ensuring that assessments are based upon “the best available scientific information, including information obtained from community knowledge and aboriginal traditional knowledge.”

Species scheduled for assessment during 2024 are as follows:

	SPECIES SCHEDULED FOR ASSESSMENT	
MEETING DATE	Scientific Name	Common Name
April 3 – April 5, 2024 (Subject to confirmation)	<i>Necturus maculosus</i>	Mudpuppy (Great Lakes / St. Lawrence population)
	<i>Anisota finlaysoni</i>	Finlayson's Oakworm Moth
	<i>Coturnicops noveboracensis</i>	Yellow Rail
	<i>Oenothera clelandii</i>	Cleland's Evening-primrose
	<i>Eurybia divaricata (Aster divaricatus)</i>	White Wood Aster
	<i>Trichostema dichotomum</i>	Forked Bluecurls
	<i>Chlidonias niger</i>	Black Tern
	<i>Pelecanus erythrorhynchos</i>	American White Pelican
	<i>Stylurus amnicola</i>	Riverine Clubtail
September 2024 (Subject to confirmation)	<i>Acris blanchardi</i>	Blanchard's Cricket Frog
	<i>Ixobrychus exilis</i>	Least Bittern
	<i>Setophaga kirtlandii</i>	Kirtland's Warbler
	<i>Limnodromus griseau</i>	Short-billed Dowitcher
	<i>Salmo salar</i>	Atlantic Salmon
	<i>Toxolasma parvum</i>	Lilliput
	<i>Scytinium polucarpum</i>	Pale-bellied Frost Lichen
	<i>Discus patulus</i>	Domed Disc

	<i>Silphium terebinthinaceum</i>	Prarie-dock
	<i>Symphotrichum praealtum</i>	Willowleaf Aster

ATTACHMENTS

Attachment 1: COSSARO Membership (2023)

Attachment 2: 2023 Species Summaries

ATTACHMENT 1: 2023 COSSARO MEMBERSHIP

<p>1. Ian Barrett, M.Sc. Senior Biologist Senior Manager of Environmental Projects Colville Consulting Inc.</p>	<p>7. Tom Hilditch, B. Sc. President Colucent Environmental Inc.</p>
<p>2. Shannon Catton, M.Sc. Senior Ecologist and Project Director GEI Consultants</p>	<p>8. Shelley Lohnes, H. B.Sc. Vice-President, Branch Lead and Senior Ecologist GEI Consultants</p>
<p>3. Glenn Cunnington, Ph.D. Project Manager, Integrated Watershed Management Initiatives District Municipality of Muskoka</p>	<p>9. Derek Parks, M.Sc. Director, Sr. Aquatic Specialist Parks Environmental Inc.</p>
<p>4. Jillian deMan, B.Sc. (Hons.) Sr. Ecologist Water & Natural Resources, Environment AECOM</p>	<p>10. Darren Sleep, Ph.D. Sr. Director, Conservation Science & Strategies Sustainable Forestry Initiative Inc.</p>
<p>5. Gary Epp, Ph.D. Practice Lead for Ecology AECOM</p>	<p>11. Toby Thorne, M.Sc. Coordinator, Native Bat Conservation Program Toronto Zoo</p>
<p>6. Allison Featherstone, B.Sc. Ecologist Senior Management Team LGL Limited Environmental Research Associated</p>	

ATTACHMENT 2: 2023 SPECIES ASSESSMENT SUMMARIES

<p style="text-align: center;">SPECIES</p> <p>English Name French Name (Latin Name)</p>	<p style="text-align: center;">Summary of Species Assessments</p>
BIRDS	
<p>Eastern Whip-poor-will Engoulevent bois-pourri (<i>Antrostomus vociferus</i>)</p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Eastern Whip-poor-will is vulnerable to the cumulative effects of various threats. Potential threats to this species are related to natural</p>

<p style="text-align: center;">SPECIES</p> <p>English Name French Name (<i>Latin Name</i>)</p>	<p style="text-align: center;">Summary of Species Assessments</p>
	<p>systems modifications (fire suppression and widespread pesticide use), residential and industrial development, agricultural expansion, transportation corridors and severe weather due to climate change.</p> <p>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.</p>
<p>Horned Grebe Grèbe esclavon (<i>Podiceps auritus</i>)</p>	<p>The Horned Grebe (<i>Podiceps auritus</i>) is a small, duck-like, sometimes semi-colonial, waterbird. The breeding plumage has distinctive golden fan-shaped 'horns' behind the eyes contrasting with black facial feathers, chestnut neck and flanks, dirty white belly and dark-coloured back (Kirk 2014). It is a medium-distance migrant and returns to Ontario shortly after ice break-up in late March or early April (peaking in mid-April). Approximately 92% of the North American breeding range of the Horned Grebe is in Canada. It breeds in British Columbia, Yukon, the Mackenzie River Valley in the Northwest Territories, the extreme southern part of Nunavut, all of the Prairies, northwestern Ontario and the Magdalen Islands (Quebec), where a small, isolated population has been breeding for at least a century (Cadman et al 2007). The Horned Grebe breeds primarily in temperate zones such as the Prairies and Parkland Canada but can also be found in more boreal and subarctic zones. Estimates of populations in Ontario are complicated by remote locations of breeding areas (Hoar 2007), confusion with similar sympatric species, significant numbers of non-breeders in the population, and the retention of juvenile plumage well into Autumn (Kirk 2014). Long-term trend analyses based on Christmas Bird Counts show a significant decline of 1.5%/year between 1966 and 2005, or a decline of 45% since the mid-1960s (COSEWIC 2009), but recent evidence suggests a Canada-wide increase over the short-term of 78% (ECCC 2014). Threats include aquatic pollution, wetland loss, and climate change. Although recent evidence suggests that the population in Ontario may have stabilized or is increasing, there is a distinct lack of data to confirm this trend in the province. Given the protracted decline in the rest of Canada and the unknown effects of climate change to breeding areas, the Horned Grebe is best classified as Special Concern.</p>
<p>Northern Bobwhite Colin de Virginie</p>	<p>Northern Bobwhite (<i>Colinus virginianus</i>) is a small grouse-like bird, 21-26 cm in length. Males have a black necklace, white throat and a</p>

<p style="text-align: center;">SPECIES</p> <p>English Name</p> <p>French Name</p> <p><i>(Latin Name)</i></p>	<p style="text-align: center;">Summary of Species Assessments</p>
<p><i>(Colinus virginianus)</i></p>	<p>white line above the eye, while females have a buffy throat and eye stripe. Their call is a loud whistle ‘bob-bob-WHITE?’.</p> <p>This is a ground-nesting bird that prefers tallgrass prairie-savannah species, as well as early to mid-successional forest habitats and open areas such as agricultural fields. It prefers areas subject to natural disturbances with an abundance of shade-intolerant herbaceous species and requires large and/or well-connected patches of suitable habitat that provide nesting, feeding and roosting opportunities.</p> <p>It is a non-migratory species, and an individual may spend its entire lifetime in the same geographic proximity, within 2.6 km² of where it hatched. Their clutch size is typically 12-14 eggs. Most (80%) birds live less than one year, with an average life span of five years.</p> <p>Each bird generally requires approximately 2 ha of usable habitat to survive, assuming habitat quality is suitable.</p> <p>In Canada, there is one population of this species, and it is located in southwestern Ontario on Walpole Island First Nation.</p> <p>The main threat that led to the decline of this bird from the mainland of Ontario were extreme, severe and lasting winter conditions that occurred in the second half of the 19th century. These weather events reduced the range of the Northern Bobwhite to the extreme southwestern portion of Ontario.</p> <p>Current threats to this species and its habitat include habitat loss and degradation through agricultural intensification, residential development and the spread of the invasive species European Common Reed grass, as well as predation and indiscriminate burnings.</p> <p>Northern Bobwhite (<i>Colinus virginianus</i>) is classified as Endangered in Ontario based on meeting criteria B1ab, B2ab, C2a(i,ii), and D1. This species consists of a small range with a small subpopulation that is found in one location in Canada – Walpole Island First Nation, Ontario. Its numbers have been declining, and no records have been recorded in the Christmas Bird Count data since 2001, in eBird since 2014 and visually by Walpole Island First Nation members since 2016. This classification is consistent with the COSEWIC report (2023).</p>

<p style="text-align: center;">SPECIES</p> <p>English Name French Name (Latin Name)</p>	<p style="text-align: center;">Summary of Species Assessments</p>
<p>INSECTS</p>	
<p>Rusty-patched Bumble Bee Bourdon à tache rousse (<i>Bombus affinis</i>)</p>	<p>Rusty-patched Bumble Bee (<i>Bombus affinis</i>) is a large bee with dense, even hairs where workers and males have a characteristic rusty brown patch on the second tergite or abdominal stripe. It is a short-tongued, generalist forager where it has been documented to use more than 50 genera of flowers in Ontario (COSEWIC IN PRESS, 2023).</p> <p>Rusty-patched Bumble Bee is a generalist found in a variety of landscapes including wooded areas, upland forests, oak-savannah, remnant and restored tallgrass prairie, wetlands, open fields, agricultural, and urban areas. It requires floral, nesting, and overwintering resources (COSEWIC IN PRESS, 2023).</p> <p>A threats calculator was not prepared considering that mature individuals have not been observed since 2009. Threats with high impact include invasive non-native/alien species/diseases, agricultural and forestry effluents, climate change and severe weather, housing, urban, commercial and industrial development (COSEWIC IN PRESS, 2023).</p> <p>Rusty-patched Bumble Bee is classified as Endangered in Ontario based on meeting criteria B2(a)(b)(ii)(iii)(v)+D1.</p>
<p>American Burying Beetle Nécrophore d'Amérique (<i>Nicrophorus americanus</i>)</p>	<p>American Burying Beetle (<i>Nicrophorus americanus</i>) is a large (25 to 35 mm), black beetle with distinctive orange markings. This genus is unusual among insects in that both parents care for the young by burying carrion and building and defending a brood chamber. American Burying Beetle was formerly distributed across most of the eastern US and adjacent Ontario but has declined precipitously and is now restricted to less than 10% of its former range.</p> <p>It is a habitat generalist, but the habitat requirements of this species in Ontario are unknown. In the United States, it has been found in a variety of forested and open habitats, including deciduous and coniferous forest, tallgrass prairie, shrub thicket, mown fields, and grazed pasture. There are likely several habitat requirements for the American Burying Beetle, including soil type, a sufficient supply of suitably sized carrion, limited abundance of predators, and minimal competition for carcasses.</p> <p>The cause of the extirpation of the American Burying Beetle in Ontario, and throughout much of its range, are unknown. Potential</p>

<p style="text-align: center;">SPECIES</p> <p>English Name French Name (Latin Name)</p>	<p style="text-align: center;">Summary of Species Assessments</p>
	<p>threats that reduced its population and range include habitat loss and fragmentation, increased use of artificial lighting (which may alter its behaviour) roadkill of wandering adults, mortality due to the use of insecticides, predation by dogs and cats, and reduction of appropriate sized cadavers. Other causes for its decline could be linked to diseases, pathogens, and parasites, and the local extirpation of top mammalian predators (allowing other scavengers to flourish which reduced its food availability).</p> <p>American Burying Beetle is classified as Extirpated in Ontario. It has not been recorded since 1972 despite extensive survey effort throughout its former Ontario range.</p>
<p>MAMMALS</p>	
<p>Eastern Red Bat Chauve-souris rousse de l'Est (<i>Lasiurus borealis</i>)</p>	<p>The Eastern Red Bat (<i>Lasiurus borealis</i>) is distinguished by fur that is usually orange but varies from yellowish-red to yellowish-grey. White hairs or white-tipped hairs give a frosted appearance. The skin is light-coloured on the face and along the margins of the arms and fingers but contrasts strongly with black wing membranes. Males are typically redder than females. Females are slightly larger than males. Moths are an important component of the diet for Eastern Red Bat. They occur primarily east of the Western Cordillera and are widespread from the boreal forest to the Gulf of Mexico. The northern extent of its range is uncertain due to low survey effort (COSEWIC IN PRESS, 2023).</p> <p>Eastern Red Bat are long-distanced migrants, with some individuals moving hundreds or thousands of kilometres between summer and winter months. Eastern Red Bat overwinter in the southern United States; however migration routes are unknown. They hibernate beneath leaf litter during cold periods with periods of torpor possibly lasting several days (COSEWIC IN PRESS, 2023).</p> <p>Major threats contribute cumulatively to suspected declines and include wind energy development, decline in prey availability, pollution, loss of roosting habitat and climate change. Wind energy development is identified as the greatest threat to migratory bat species (Fleming et al., 2003; COSEWIC IN PRESS, 2023). Bat mortality at turbines is comprised of 75 to 80% migratory bats and are the most common groups of bats killed at wind turbines in North America. Eastern Red Bats are the second most often killed bat species at wind energy facilities across North America, representing 22% of fatalities. In Canada, they represent 15% of fatalities (Zimmerling and Francis, 2016; Arnett and Baerwald, 2013). Wind</p>

<p style="text-align: center;">SPECIES</p> <p>English Name French Name (Latin Name)</p>	<p style="text-align: center;">Summary of Species Assessments</p>
	<p>energy development is currently widespread in Southern Ontario and is projected to increase across North America.</p> <p>Eastern Red Bat (<i>Lasiurus borealis</i>) has been assessed as Endangered in Ontario based on meeting criteria A2be+A3be+A4be.</p>
<p>Hoary Bat Chauve-souris cendrée (<i>Lasiurus cinereus</i>)</p>	<p>The Hoary Bat (<i>Lasiurus cinereus</i>) is a large-bodied bat and is the largest bodied bat in Canada. It is identified by light fur around its face and neck and white-tipped hairs over most of its body. It is very widely distributed across Canada and Ontario. Along with Eastern Red Bat (<i>L. borealis</i>) and Silver-haired Bat (<i>Lasionycteris noctivagans</i>), Hoary Bat is a migratory bat species that migrates long distances between summer breeding habitat and winter range. They are considered long-lived and give birth to more than one pup per year. Its habitat requirements include foraging, drinking and tree roosting habitats.</p> <p>As a migratory species, Hoary Bat is exposed to considerable risk during long-distance movements. Threats to this species are considered significant and ongoing and identified as mortality from wind turbines, ongoing declines in insect prey abundance, loss of forest roosting habitat and pollution. Wind energy development is the most immediate and concerning threat to Hoary Bat. Population viability modeling (COSEWIC 2023, IN PRESS) estimates the probability of extinction is at least 20% by 2050 or 3 generations and population reductions are estimated at greater than 50%, with some assumptions. Given this information, Hoary Bat was assessed by COSSARO as Endangered in November 2023. The species was designated by COSEWIC as Endangered in May 2023.</p>
<p>Silver-haired Bat Chauve-souris argentée (<i>Lasionycteris noctivagans</i>)</p>	<p>The Silver-haired bat is a dark colored bat, with black skin membranes and black to dark brown fur (van Zyll de Jong 1985). The fur often has grey or silver-frosted tips, giving it the silvery appearance for which it is named. This large-bodied bat is found across Canada in the summer months and during fall migration. Some individuals overwinter in British Columbia and southern Ontario, but most migrate out of Canada annually. This seasonal migration exposes individuals to a variety of threats including risk of mortality at wind energy facilities. There is considerable uncertainty regarding the rates of decline for these bats across Canada, and population estimates are non-existent. Declines in carcass counts at wind energy facilities suggest declines may be significant for this species, but evidence to assess risk is low, and more research is needed. Other threats to this species are unknown. Silver-haired Bat</p>

<p style="text-align: center;">SPECIES</p> <p>English Name French Name (<i>Latin Name</i>)</p>	<p style="text-align: center;">Summary of Species Assessments</p>
	<p>is assessed as Endangered under criterion A4b; evidence suggests a significant decline is occurring, likely much higher than 50% needed to meet the criterion.</p>
<p>PLANTS</p>	
<p>Spring Blue-eyed Mary Collinsie printanière (<i>Collinsia verna</i>)</p>	<p>Spring Blue-eyed Mary (<i>Collinsia verna</i>) belongs to the snapdragon family. It reaches 20-40 cm in height with opposite, simple leaves and a blossom that typically consists of whorls of four to six flowers. The flowers have five lobes with the upper lobes white to pale blue and the lower lobes bright blue. It is a winter annual that flowers by late May. This flowering plant is usually found in open woodland within floodplains and prefers moist rich soils. It is often associated with Sugar Maple and White Oak trees. This species is easy to identify in the wild.</p> <p>In Canada, there are currently no known extant population of this species. Spring Blue-eyed Mary was historically recorded in three locations in southwestern Ontario. The first record was in Middlesex County in 1894; the second record was in Oxford County in 1896; and the third and last observation was in Elgin County in 1954.</p> <p>This species is affected by several limiting factors including a short duration of seed viability, a short growing season (it is a winter annual that flowers by late May), being outcompeted by other vegetation and experiencing dramatic annual fecundity and population growth fluctuations.</p> <p>The main threats that led to the extirpation of this plant from Ontario were habitat loss and degradation through forest clearing and agricultural development.</p> <p>Spring Blue-eyed Mary is classified as Extirpated in Ontario as there have been no verified Canadian records since 1954, despite survey efforts in the region of former occurrence.</p>
<p>Provancher's Fleabane Vergerette de Provancher (<i>Erigeron philadelphicus</i> var. <i>provancheri</i>)</p>	<p>Provancher's Fleabane is a small perennial herbaceous plant belonging to the Aster family. This taxon is characterized by 3 to 20 hairless or nearly hairless leaves, which form a basal rosette. The inflorescence consists of 1 to 20 flower heads with white or pale pink petals. The often-hairless stem may be up to 20 cm long and arises</p>

<p style="text-align: center;">SPECIES</p> <p>English Name French Name (<i>Latin Name</i>)</p>	<p style="text-align: center;">Summary of Species Assessments</p>
	<p>from the center of the rosette. The fruits are achenes, crowned with silky whitish hairs.</p> <p>Provancher's Fleabane is endemic to northeastern North America. This taxon has been recorded from five subpopulations in Ontario, composed of 28 known sites on the Bruce Peninsula and adjacent Lake Huron islands. It may also occur in the Waterloo area and near Lake Erie.</p> <p>Provancher's Fleabane typically grows in crevices in calcareous rocks or pavement along rivers and Great Lakes. This taxon appears to be closely associated with underlying calcareous sedimentary bedrock and surface materials with an alkaline to circumneutral pH. In Ontario, this taxon often occupies the upper, well-drained portions of shorelines, however Provancher's Fleabane also appears to be adaptable to a variety of natural and anthropogenic habitats.</p> <p>A threats assessment assigned an overall threat impact for this taxon as low. Invasive non-native plants and introduced genetic material from the Philadelphia Fleabane are considered to be the main threats to this taxon, with trampling and recreational activities also reported as threats to some subpopulations.</p> <p>There has been controversy regarding the taxonomy of this taxon since it was first described in 1940. Detailed genetic and ecophysiological studies are required to determine if the Ontario occurrences of this taxon represent <i>Erigeron philadelphicus</i> var. <i>provancheri</i>. Because of this uncertainty, Provancher's Fleabane is classified as Data Deficient in Ontario.</p>
<p>REPTILES</p>	
<p>Timber Rattlesnake Crotale des bois (<i>Crotalus horridus</i>)</p>	<p>Timber Rattlesnakes (<i>Crotalus horridus</i>) is a large pit viper that can grow to 1-2m in length. These snakes are typically yellow or brown in colour with dark brown or black v-shaped markings across their back. As is typical with pit vipers, the Timber Rattlesnake head is triangular. Timber Rattlesnakes were formerly found across the Niagara Peninsula in southern Ontario. Available records indicate that this species was found in Essex, Kent, Elgin, Halton, Manitoulin, and Peel counties in Ontario (COSSARO 2019). Timber Rattlesnake is assessed as Extirpated as the last recorded observation of Timber Rattlesnakes was in the Niagara Gorge in 1941 and despite considerable efforts in the past 15-20 years, no observations of this species have been made in Ontario.</p>

<p style="text-align: center;">SPECIES</p> <p>English Name French Name (Latin Name)</p>	<p style="text-align: center;">Summary of Species Assessments</p>
<p>AMPHIBIANS</p>	
<p>Eastern Tiger Salamander Salamandre tigrée de l'Est (<i>Ambystoma tigrinum</i>)</p>	<p>The Eastern Tiger Salamander (<i>Ambystoma tigrinum</i>) is a large burrowing salamander that is primarily found across the eastern United States. Historically, records for this species included a single individual that was collected in 1915 at Point Pelee. Although considerable survey efforts have been expended at both the historic observation on Point Pelee and other areas in southwestern Ontario that contain suitable habitat for this species, there have been no further observations of Eastern Tiger Salamanders in the province. As such, Eastern Tiger Salamander has been assessed as Extirpated.</p>