

**COSEWIC**  
**Rapid Review of Classification**

on the

**Eastern Tiger Salamander**  
*Ambystoma tigrinum*

Carolinian population

**in Canada**

**EXTIRPATED**  
**2023**

**COSEWIC**  
Committee on the Status  
of Endangered Wildlife  
in Canada



**COSEPAC**  
Comité sur la situation  
des espèces en péril  
au Canada

The Rapid Review of Classification process is used by COSEWIC for wildlife species that have not changed status since the previous COSEWIC assessment. Readily available information from the previous status report or status appraisal summary, recovery documents, recovery teams, jurisdictions, conservation data centres, and species experts was initially reviewed by the relevant Species Specialist Subcommittees before being reviewed by COSEWIC. The following is a summary of the relevant information.

COSEWIC Rapid Review of Classification are working documents used in assigning the status of wildlife species suspected of being at risk in Canada. This document may be cited as follows:

COSEWIC. 2023. COSEWIC Rapid Review of Classification on the Eastern Tiger Salamander *Ambystoma tigrinum*, Carolinian population, in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix pp. (<https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html>).

Production note:

COSEWIC would like to acknowledge David Fraser, with support from Environment and Climate Change Canada, for preparing the Rapid Review of Classification on Eastern Tiger Salamander (Carolinian population), *Ambystoma tigrinum*. This report was overseen and edited by Tom Herman, Co-chair of the COSEWIC Amphibians and Reptiles Specialist Subcommittee.

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Également disponible en français sous le titre Examen rapide de la classification du COSEPAC pour la salamandre tigrée de l'Est (*Ambystoma tigrinum*), population carolinienne, au Canada



## COSEWIC Assessment Summary

### Assessment Summary – May 2023

**Common name**

Eastern Tiger Salamander - Carolinian population

**Scientific name**

*Ambystoma tigrinum*

**Status**

Extirpated

**Reason for designation**

The only confirmed record of this salamander in Canada was in 1915 at Point Pelee, in southern Ontario, although it occurs in nearby Michigan and Ohio. Despite numerous herpetological surveys by naturalists, it has not been seen since, and very little suitable habitat remains in this and surrounding areas in Canada.

**Occurrence**

Ontario

**Status history**

The Tiger Salamander (*Ambystoma tigrinum*) was originally assessed by COSEWIC in November 2001 as three separate populations: Great Lakes population (Extirpated), Prairie / Boreal population (Not at Risk), and Southern Mountain population (Endangered). In November 2012, Tiger Salamander was split into two separate species, Eastern Tiger Salamander (*Ambystoma tigrinum*) and Western Tiger Salamander (*Ambystoma mavortium*), each with two different populations that received separate designations. The Carolinian population of the Eastern Tiger Salamander was assessed as Extirpated in November 2012. Status re-examined and confirmed in May 2023.



## **COSEWIC Rapid Review of Classification**

### **PREFACE**

Occurrence of this population in Canada is based on a single accepted specimen, housed at the Canadian Museum of Nature (catalogue number CMNAR 623) and reported to have been collected in 1915 at Point Pelee, Ontario (GBIF 2021). Two Pelee Island specimens from 1950 (an adult and a transforming juvenile) are considered unconfirmed (COSSARO 2013), as are other specimens and reports from southern Ontario (Ngo *et al.* 2009). Essex County in Ontario was historically 87% wetland and has lost 90–97% of these wetlands (Carolinian Canada Recovery Team 2009), mostly through drainage for agriculture, so little habitat remains for this species. The federal recovery strategy for this species determined that reintroduction of this species was not feasible due to lack of habitat (Ngo *et al.* 2009). There are numerous records on iNaturalist from the greater Detroit area in nearby Michigan, the closest of which is a research-grade 2022 record ~1 km west of the Detroit River and ~5 km from the Canadian border (iNaturalist 2023a). In addition, the Eastern Tiger Salamander is found on Kelley’s Island, Ohio, in Lake Erie, 11 km south of Pelee Island (Downs 1989; OHPARC n.d.).

No additional records of Eastern Tiger Salamander (Carolinian population) in Canada have come to light since the last assessment (iNaturalist 2023b; NatureServe 2023).

The two previously approved populations of Eastern Tiger Salamander, Prairie and Carolinian (COSEWIC 2013), appear to meet the updated discreteness and significance criteria for designatable units outlined in Appendix F5 of the Operations and Procedures Manual (COSEWIC 2021). Separate post-glacial expansions into Canada and occurrence in separate ecozones (Carolinian, Prairie) have isolated the two populations and exposed them to different selective regimes for a significant period. Further, the loss of the Prairie population would result in an extensive range contraction and loss of the species in Canada. As such, the Carolinian population continues to be assessed separately.

## Status History

The Tiger Salamander (*Ambystoma tigrinum*) was originally assessed by COSEWIC in November 2001 as three separate populations: Great Lakes population (Extirpated), Prairie / Boreal population (Not at Risk), and Southern Mountain population (Endangered). In November 2012, Tiger Salamander was split into two separate species, Eastern Tiger Salamander (*Ambystoma tigrinum*) and Western Tiger Salamander (*Ambystoma mavortium*), each with two different populations that received separate designations. The Carolinian population of the Eastern Tiger Salamander was assessed as Extirpated in November 2012. Status re-examined and confirmed in May 2023.

## Updated map

Required       Not required

## Explanation / updated map provided

Not required. See previous assessment (COSEWIC 2009).

## TECHNICAL SUMMARY

Complete Technical Summary (Boxes 1-33) are not required for Extirpated species assessed by Rapid Review of Classification.

*Ambystoma tigrinum*

Eastern Tiger Salamander, Carolinian population

Salamandre tigrée de l'Est, Population carolinienne

Range of occurrence in Canada (province/territory/ocean): Ontario

### Status and Reasons for Designation:

<b>Status:</b> Extirpated	<b>Alpha-numeric codes:</b> Not applicable
<b>Reasons for designation:</b> The only confirmed record of this salamander in Canada was in 1915 at Point Pelee, in southern Ontario, although it occurs in nearby Michigan and Ohio. Despite numerous herpetological surveys by naturalists, it has not been seen since, and very little suitable habitat remains in this and surrounding areas in Canada.	

### Applicability of Criteria

Criterion A (Decline in Total Number of Mature Individuals): Not applicable
Criterion B (Small Distribution Range and Decline or Fluctuation): Not applicable
Criterion C (Small and Declining Number of Mature Individuals): Not applicable
Criterion D (Very Small or Restricted Population): Not applicable
Criterion E (Quantitative Analysis): Not applicable

## AUTHORITIES CONTACTED

Not applicable.

## INFORMATION SOURCES

- COSEWIC. 2013. COSEWIC assessment and status report on the Eastern tiger salamander *Ambystoma tigrinum* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 53 pp. Website: <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/cosewic-assessments-status-reports/eastern-tiger-salamander-2013.html> [accessed February 2021].
- Committee on the Status of Endangered Wildlife in Canada. 2021. COSEWIC Operations and Procedures Manual - November 2021. Ottawa, Ontario. 409 pp.
- Committee on the Status of Species at Risk in Ontario (COSSARO). 2013. Candidate Species at Risk Evaluation for Eastern Tiger Salamander (*Ambystoma tigrinum*). Website: [http://cossaroagency.ca/wp-content/uploads/2017/06/Final-COSSARO-Evaluation-Eastern-Tiger-Salamander\\_March-15\\_GFM-FINAL-s.pdf](http://cossaroagency.ca/wp-content/uploads/2017/06/Final-COSSARO-Evaluation-Eastern-Tiger-Salamander_March-15_GFM-FINAL-s.pdf) [accessed February 2021].
- Carolinian Canada Recovery Team. 2009. Essex Forests and Wetlands Conservation Action Plan. 64 pp. Website: <https://caroliniancanada.ca> [accessed May 2021].
- Downs, F.L. 1989. *Ambystoma tigrinum* (Green) Tiger Salamander. Pp. 155-166 in R.A. Pflingsten and F.L. Downs (eds.). Salamanders of Ohio. Ohio Biological Survey Bulletin 7(2):xx+315 pp.
- GBIF. 2021. <https://www.gbif.org/occurrence/1804118678> [accessed May 2023].
- iNaturalist. 2023a. <https://www.inaturalist.org/observations/136911926> [accessed May 2023].
- iNaturalist. 2023b. <https://www.inaturalist.org/taxa/26749-Ambystoma-tigrinum> [accessed May 2023].
- NatureServe. 2023. [https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.889738/Ambystoma\\_tigrinum](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.889738/Ambystoma_tigrinum) [accessed May 2023].
- Ngo, A., V.L. McKay, and R.W. Murphy. 2009. Recovery Strategy for Tiger Salamander (*Ambystoma tigrinum*) (Great Lakes Population) in Canada [Proposed]. *Species at Risk Act* Recovery Strategy Series. Parks Canada Agency, Ottawa. v + 28 pp. + 1 Appendix <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/recovery-strategies/tiger-salamander-great-lakes-proposed-2009.html> [accessed February 2021].
- Ohio Partners in Amphibian and Reptile Conservation (OHPARC). n.d. Ohio Herp Atlas. Website: <http://atlas.ohparc.org/> [accessed May 2021].

**Writer of RRoC:**

- David F. Fraser, 2021.

**RAMAS results graphic output:**

**RAMAS text output:**

- RAMAS not required for extirpated species.





## COSEWIC HISTORY

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) was created in 1977 as a result of a recommendation at the Federal-Provincial Wildlife Conference held in 1976. It arose from the need for a single, official, scientifically sound, national listing of wildlife species at risk. In 1978, COSEWIC designated its first species and produced its first list of Canadian species at risk. Species designated at meetings of the full committee are added to the list. On June 5, 2003, the *Species at Risk Act* (SARA) was proclaimed. SARA establishes COSEWIC as an advisory body ensuring that species will continue to be assessed under a rigorous and independent scientific process.

## COSEWIC MANDATE

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses the national status of wild species, subspecies, varieties, or other designatable units that are considered to be at risk in Canada. Designations are made on native species for the following taxonomic groups: mammals, birds, reptiles, amphibians, fishes, arthropods, molluscs, vascular plants, mosses, and lichens.

## COSEWIC MEMBERSHIP

COSEWIC comprises members from each provincial and territorial government wildlife agency, four federal entities (Canadian Wildlife Service, Parks Canada Agency, Department of Fisheries and Oceans, and the Federal Biodiversity Information Partnership, chaired by the Canadian Museum of Nature), three non-government science members and the co-chairs of the species specialist subcommittees and the Aboriginal Traditional Knowledge subcommittee. The Committee meets to consider status reports on candidate species.

## DEFINITIONS (2023)

Wildlife Species	A species, subspecies, variety, or geographically or genetically distinct population of animal, plant or other organism, other than a bacterium or virus, that is wild by nature and is either native to Canada or has extended its range into Canada without human intervention and has been present in Canada for at least 50 years.
Extinct (X)	A wildlife species that no longer exists.
Extirpated (XT)	A wildlife species no longer existing in the wild in Canada, but occurring elsewhere.
Endangered (E)	A wildlife species facing imminent extirpation or extinction.
Threatened (T)	A wildlife species likely to become endangered if limiting factors are not reversed.
Special Concern (SC)*	A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.
Not at Risk (NAR)**	A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.
Data Deficient (DD)***	A category that applies when the available information is insufficient (a) to resolve a species' eligibility for assessment or (b) to permit an assessment of the species' risk of extinction.

\* Formerly described as "Vulnerable" from 1990 to 1999, or "Rare" prior to 1990.

\*\* Formerly described as "Not In Any Category", or "No Designation Required."

\*\*\* Formerly described as "Indeterminate" from 1994 to 1999 or "ISIBD" (insufficient scientific information on which to base a designation) prior to 1994. Definition of the (DD) category revised in 2006.



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The Canadian Wildlife Service, Environment and Climate Change Canada, provides full administrative and financial support to the COSEWIC Secretariat.