Protection and Recovery of Ontario's Species at Risk

2024 Review of Progress Summary

Ontario

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Introduction to the 2024 Review of Progress towards the Protection and Recovery of Ontario's Species at Risk

Overview

To fulfill a legislative requirement of the *Endangered Species Act, 2007* (ESA), the Government of Ontario publishes a Review of Progress Towards the Protection and Recovery of Ontario's Species at Risk. The Review shows how the Government of Ontario and its partners are helping to protect and recover species at risk in Ontario. In 2024, the Review included the following 12 species at risk:

- Branched Bartonia
- Eastern False Rue-anemone
- Hoptree Borer
- Jefferson Salamander
- Unisexual Ambystoma (Jefferson Salamander dependent population)
- Lake Huron Grasshopper
- Nine-spotted Lady Beetle
- Proud Globelet
- River Darter (Great Lakes – Upper St. Lawrence populations)
- Round-leaved Greenbrier
- Shortnose Cisco
- Western Silvery Aster

This document is a summary of the progress made from 2008 to 2023 for the 12 species listed above. Full-length chapters on each species are found in the *2024 Review of Progress Towards the Protection and Recovery of Ontario's Species at Risk*, available on the Government of Ontario website.

Review of Progress Towards the Protection and Recovery of

Branched Bartonia

Branched Bartonia - Samuel Brinker

Progress towards meeting the recovery goal:

The recovery goal in the *Government Response Statement* (GRS) for Branched Bartonia in Ontario is to "maintain the current distribution and support the viability of existing populations across Ontario".

Progress has been made towards implementing the majority of the government-led actions. Progress has been made towards implementing one of the government-supported recovery objectives and two of the associated actions. Examples of progress include:

- Developing a standardized monitoring protocol for Branched Bartonia.
- Monitoring Branched Bartonia demographics and associated reproductive biology (i.e., pollination and seed production).
- Conducting presence surveys for Branched Bartonia in peatlands where it has not been previously documented.

In alignment with the GRS, further work is required to:

- Collaborate with partners and other jurisdictions to increase understanding of Branched Bartonia's ecological needs, population viability and the factors that affect it.
- Assess the feasibility of potential control measures to manage the threat of Glossy Buckthorn or Invasive Phragmites at locations where they pose a threat to Branched Bartonia, develop guidance on best practices and implement them where possible without excessive damage of Branched Bartonia habitat.
- Maintain or enhance habitat suitability within or adjacent to areas currently occupied by Branched Bartonia in collaboration with landowners or land managers.

33

observations of Branched Bartonia were submitted to the NHIC since 2008

Occurrences and distribution:

Thirteen populations of Branched Bartonia have been documented in and around the Muskoka and Parry Sound regions of Central Ontario. Currently, all of these populations are considered extant. At least five populations of Branched Bartonia have been newly-identified since 2008.

Government-supported stewardship projects:

Through the *Species at Risk Stewardship Program*, the Government of Ontario has enabled its stewardship partners to conduct two projects (by providing $32,131 in funding) that have supported the protection and recovery of Branched Bartonia.

The government's support helped its stewardship partners to involve two individuals who volunteered two hours of their time towards protection and recovery activities for Branched Bartonia. The estimated value of these voluntary contributions, as well as additional funding and in-kind support, is $2,833.

Stewardship partners reported providing outreach on Branched Bartonia to six individuals.

Species at Risk Stewardship Program

By The Numbers

2

projects for Branched Bartonia exclusively

$32,131

for Branched Bartonia exclusively

$2,833

in additional funding and in-kind support

2

volunteers

2

volunteer hours

6

people received outreach

Supporting human activities while ensuring appropriate support for species recovery:

The Government of Ontario has issued no permits for this species and no agreements were entered into.

Four activities have been undertaken in accordance with a conditional exemption that requires registration under the ESA. The activities followed the conditional exemption for ‘threats to health and safety, not imminent’ (section 23.18) under *Ontario Regulation 242/08* of the ESA.

Species-specific documents and guidance published by the government:

Recovery Strategy for Branched Bartonia (2018)

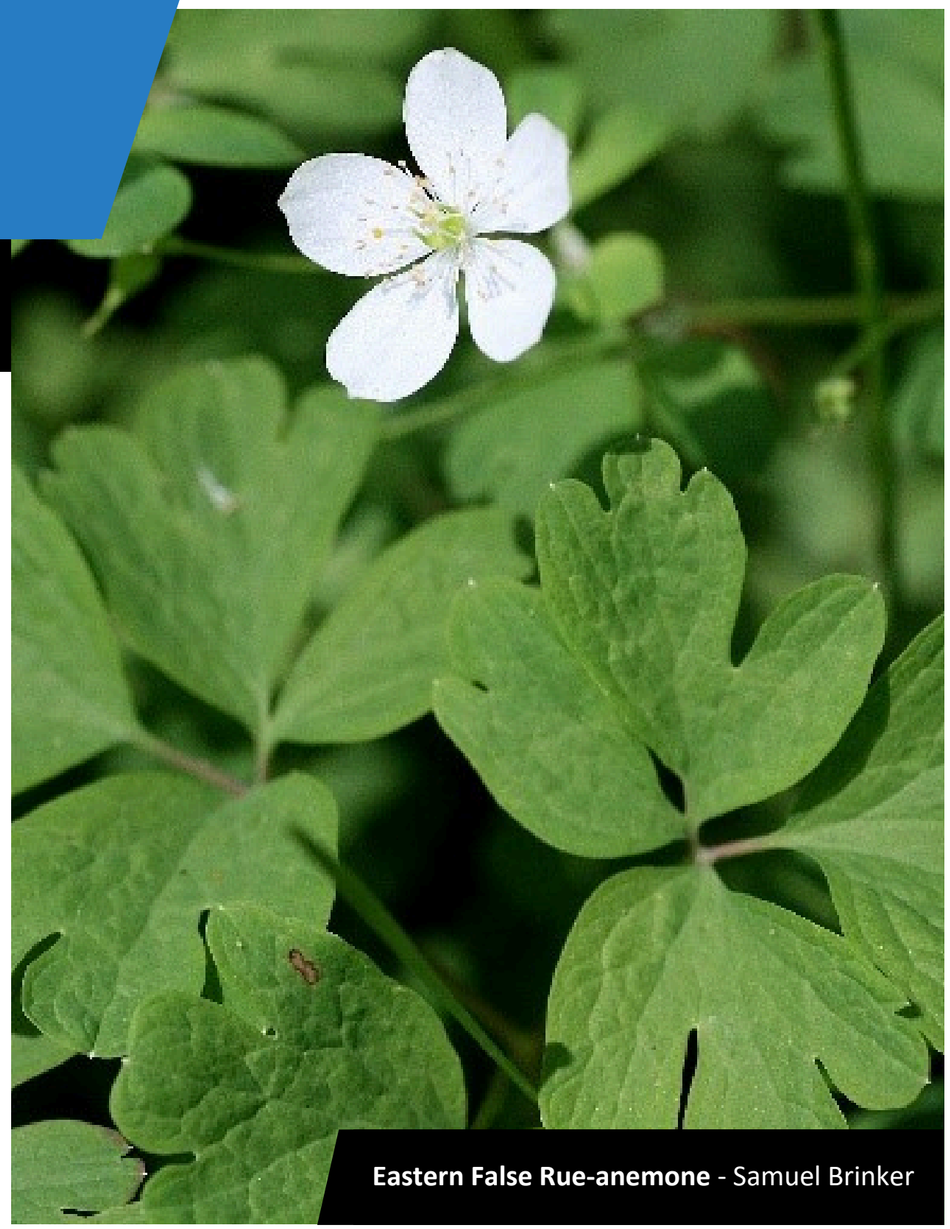
Government Response Statement for Branched Bartonia (2019)

4

Registrations

Review of Progress Towards the Protection and Recovery of

Eastern False Rue-anemone



Eastern False Rue-anemone - Samuel Brinker

Progress towards meeting the recovery goal:

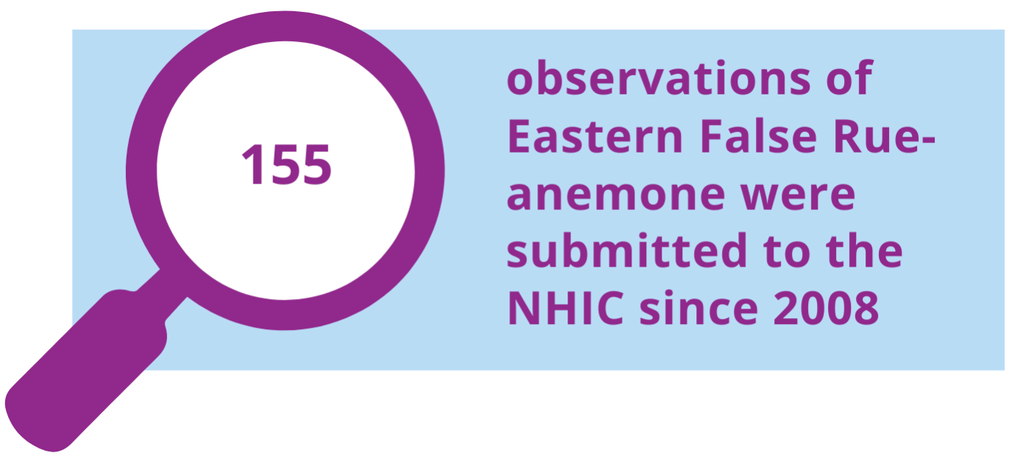
The recovery goal in the *Government Response Statement* (GRS) for Eastern False Rue-anemone in Ontario is to "maintain existing populations within the species' distribution, promote their viability, and where feasible, enable natural increases in abundance".

Progress has been made towards implementing all of the government-led actions. Progress has been made towards implementing all of the government-supported recovery objectives and several of the associated actions. Examples of progress include:

- Conducting presence surveys at locations where predictive modeling indicates Eastern False Rue-anemone is likely to occur.
- Developing, implementing and evaluating site management plans to maintain or improve the quality of Eastern False Rue-anemone habitat and the viability of populations.
- Promoting awareness about Eastern False Rue-anemone among land owners, land managers and land users.

In alignment with the GRS, further work is required to:

- Collaborate with partners and other jurisdictions to increase understanding of Eastern False Rue-anemone population viability and best practices for improving it.
- Implement approaches to avoid or reduce impacts of recreational activities on Eastern False Rue-anemone and its habitat.
- Work with land owners and community partners to support the securement of habitat of Eastern False Rue-anemone through existing land securement and stewardship programs.



Occurrences and distribution:

Nine populations of Eastern False Rue-anemone have been documented in southwestern Ontario. Currently, six of these populations are extant, one is considered historical and two are ranked failed to find. Since 2008, the status of one population changed from extant to historical, three populations have changed from historical to extant based on new observations and two populations changed from historical to failed to find since, despite searches, plants of the species were not re-found.

Through a project funded by the Species at Risk Stewardship Program, Eastern False Rue-anemone was found at three new sites close to a known population of the species.

Government-supported stewardship projects:

Through the *Species at Risk Stewardship Program*, the Government of Ontario has enabled its stewardship partners to conduct five projects (by providing $121,198 in funding) that have supported the protection and recovery of multiple species at risk, including Eastern False Rue-anemone.

The government's support helped its stewardship partners to involve seven individuals who volunteered 5,578 hours of their time towards protection and recovery activities for species at risk, including Eastern False Rue-anemone. The estimated value of these voluntary contributions, as well as additional funding and in-kind support, is $613,848.

Stewardship partners reported providing outreach on multiple species at risk, including Eastern False Rue-anemone, to 601 individuals.

Species at Risk Stewardship Program

By The Numbers

5

projects including Eastern False Rue-anemone

$121,198

for projects that included Eastern False Rue-anemone

$613,848

in additional funding and in-kind support

7

volunteers

5,578

volunteer hours

601

people received outreach

Supporting human activities while ensuring appropriate support for species recovery:

The Government of Ontario has issued no permits for this species.

Eleven activities have been undertaken in accordance with a conditional exemption that requires registration under the ESA. The activities followed either the conditional exemption for ‘species protection, recovery activities’ (section 23.17) or ‘threats to health and safety, not imminent’ (section 23.18) under *Ontario Regulation 242/08* of the ESA.

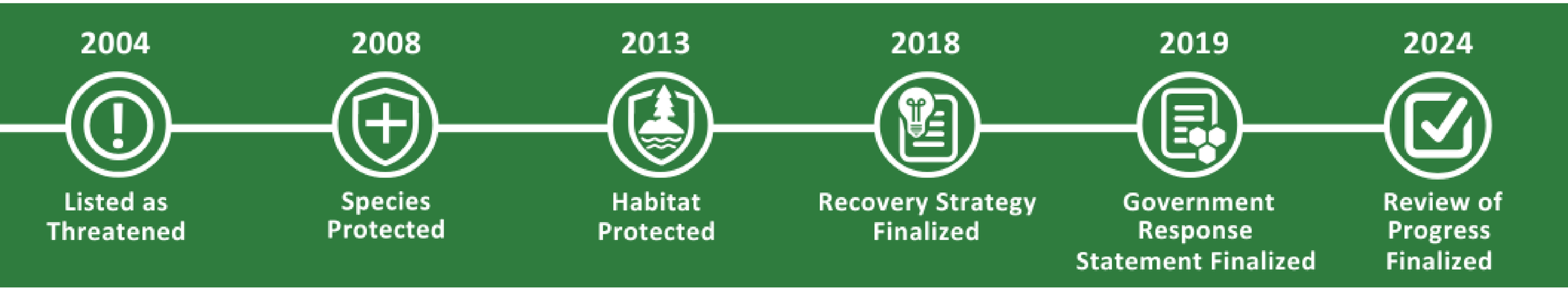
Species-specific documents and guidance published by the government:

Recovery Strategy for Eastern False Rue-anemone (2018)

Government Response Statement for Eastern False Rue-anemone (2019)

11

Registrations



Review of Progress Towards the Protection and Recovery of

Hoptree Borer

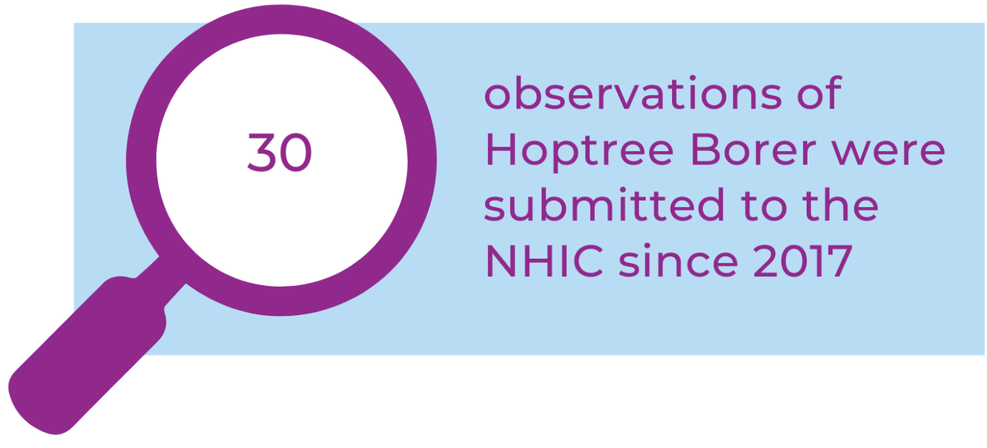
Hoptree Borer - Karen Yukich

Progress towards meeting the recovery goal:

The recovery goal in the *Government Response Statement* (GRS) for Hoptree Borer in Ontario is to “maintain the distribution of the species at existing locations in Ontario by filling knowledge gaps and managing threats to the species and to its host”.

Progress has been made towards implementing several of the government-led actions. Initial progress has been made towards implementing one of the government-supported recovery objectives and one associated action. Examples of progress include:

- Monitoring and managing provincially protected areas in a manner consistent with park management plans.
- Taking appropriate management actions in accordance with provincial policy direction on cormorants to support protection and recovery of Hoptree Borer.
- Continue to address invasive species such as Garlic Mustard that threaten Hoptree Borer Habitat.
- Conducting surveys in suitable habitat to identify populations of Hoptree Borer in priority areas.



In alignment with the GRS, further work is required to:

- Develop and implement a standardized monitoring program at locations where Hoptree Borer and its host species are known to occur.
- Conduct surveys in suitable habitat to identify new populations in priority areas.
- Investigate the biology of Hoptree Borer.
- Work collaboratively with municipalities, conservation partners, land owners and land managers to mitigate threats and develop, implement and evaluate management plans to maintain or improve the quality of Hoptree Borer habitat and that of its host species.

Occurrences and distribution:

Three populations of Hoptree Borer have been documented along the shoreline of Lake Erie. Currently, all three of these populations are extant. One of these populations has been newly discovered since the species was listed in 2017.

Government-supported stewardship projects:

Supporting our partners through the *Species at Risk Stewardship Program* is an important government-led action identified in the GRS for the species. To date, no stewardship projects have been performed for Hoptree Borer. The species is very rare and localized to an extremely restricted area of the province within protected areas.

Supporting human activities while ensuring appropriate support for species recovery:

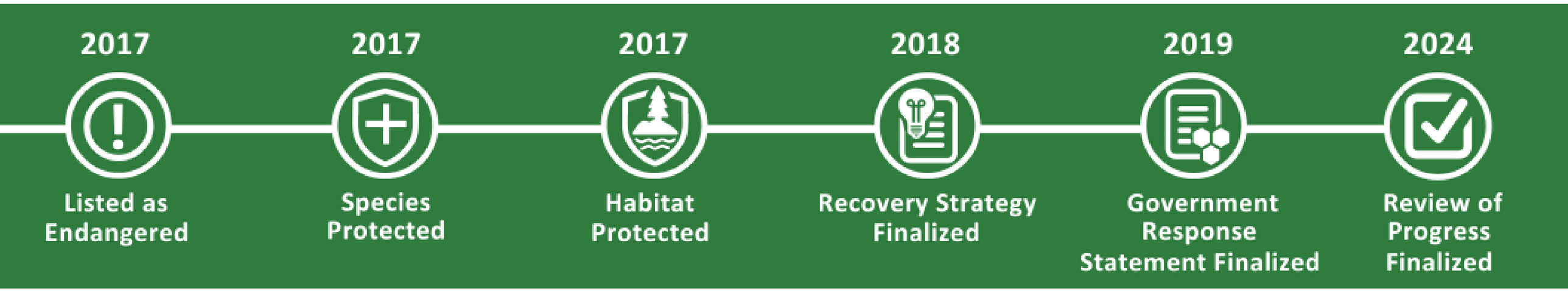
The Government of Ontario has issued no permits for this species.

No activities have been undertaken in accordance with a conditional exemption that requires registration under the ESA.

Species-specific documents and guidance published by the government:

Recovery Strategy for Hoptree Borer (2018)

Government Response Statement for Hoptree Borer (2019)



Review of Progress Towards the Protection and Recovery of

Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population)

Jefferson Salamander - Joe Crowley

Progress towards meeting the recovery goal:

The recovery goal in the *Government Response Statement* (GRS) for Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population) in Ontario is to "ensure long-term viability and persistence of the extant distribution, and to support the expansion of the species' range to include historically-occupied areas in Ontario".

Progress has been made towards implementing the majority of the government-led actions. Progress has been made towards implementing all of the government-supported recovery objectives and all of the associated actions. Examples of progress include:

- Multiple research studies that have provided important new information on species movements and habitat use to help inform ongoing habitat identification and threat mitigation work.
- Survey and monitoring work carried out by multiple stewardship partners to assess species presence at historic sites and locate new populations.
- Several organizations across southern Ontario have been enhancing and restoring habitat for Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population).
- Several organizations, including conservation authorities, researchers, and municipalities, have worked collaboratively to mitigate the effects of roads on Jefferson Salamander and Jefferson dependent unisexuals at several sites, as well as study the effectiveness of mitigation approaches to inform ongoing conservation work.

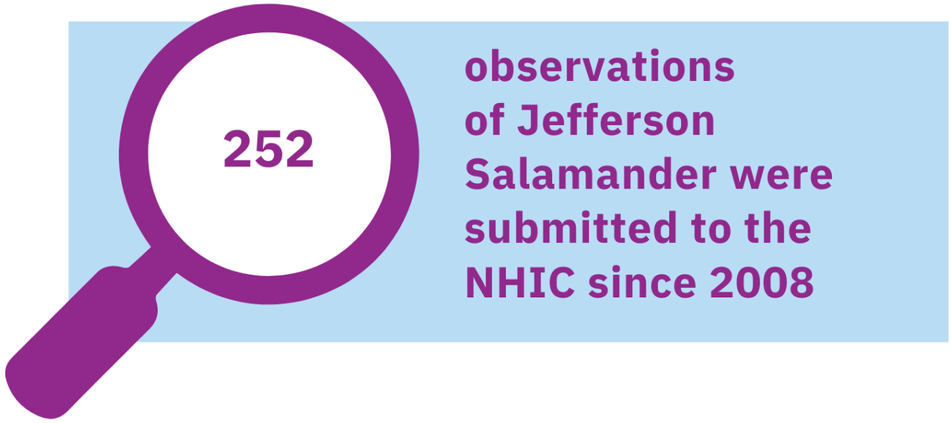
In alignment with the GRS, further work is required to:

- Integrate existing survey and monitoring efforts into a standardized province-wide monitoring program and to expand this work to include representative sites across the species' ranges by engaging additional stewardship partners.
- Develop, implement, and evaluate best management practices to reduce the impacts of threats to the species.
- Prioritize the protection of existing populations and habitats through the development of tools and approaches for municipalities, planning authorities, industries, property managers and other stakeholders that will ensure habitat mapping and protection requirements under the ESA to inform land use planning decisions.

Occurrences and distribution:

Thirty-six populations of Jefferson Salamander have been documented in southern Ontario. Twenty-eight of these populations have been newly identified since 2008. Currently, 24 of the 36 populations are extant, whereas the remaining twelve are considered historical. Since 2008, the status of nine populations changed from extant to historical based on the date that it was last observed, while four populations changed from historical to extant as their existence was confirmed through monitoring efforts.

Sixty-one populations of Jefferson dependent unisexuals have been documented in southern Ontario. Fifty-one of these have been newly identified since 2017. Currently, 35 of the 61 populations are extant, whereas the remaining 26 are considered historical. Since 2017, the status of two populations changed from extant to historical based on the date the species was last observed, while six populations changed from historical to extant as their existence was confirmed through monitoring efforts.



Government-supported stewardship projects:

Through the *Species at Risk Stewardship Program*, the Government of Ontario has enabled its stewardship partners to conduct 46 projects (by providing $2,649,461 in funding) that have supported the protection and recovery of multiple species at risk, including Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population). Thirty-eight projects ($2,359,124) were designed to provide benefits to multiple species at risk, while eight projects ($290,337) focused exclusively on Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population).

The government's support helped its stewardship partners to involve 33,698 individuals who volunteered 51,269 hours of their time towards protection and recovery activities for multiple species at risk, including Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population). The estimated value of these voluntary contributions, as well as additional funding and in-kind support, is $4,296,313.

Stewardship partners reported that through their actions 8.4 hectares of habitat were enhanced for Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population) and other species at risk.

Stewardship partners reported providing outreach on multiple species at risk, including Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population), to 336,034 individuals.

Species at Risk Stewardship Program

By The Numbers

38

projects including Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population)

8

projects for Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population) exclusively

$2,359,124

for multi-species projects that included Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population)

$290,337

for projects that included Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population) exclusively

$3,978,439

in additional funding and in-kind support for multi-species projects

$317,874

in additional funding and in-kind support for species exclusive projects

33,564

volunteers for multi-species project

134

volunteers for species exclusive projects

50,472

volunteer hours for multi-species projects

797

volunteer hours for species exclusive projects

336,034

people received outreach for multiple species including Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population)

26,182

people received outreach for projects that included Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population) exclusively

8.4

hectares of habitat enhanced

Supporting human activities while ensuring appropriate support for species recovery:

The Government of Ontario has issued 121 permits for Jefferson Salamander: 112 ‘protection or recovery’ permits were issued under clause 17(2)(b), and nine ‘overall benefit’ permits were issued under clause 17(2)(c) of the ESA. Additionally, 15 permits have been issued for Unisexual Ambystoma (Jefferson Salamander dependent population): 12 ‘protection or recovery’ 17(2)(b) permits, and three ‘overall benefit’ 17(2)(c) permits.

Three agreements were entered into for Jefferson Salamander. These agreements were enabled through *Ontario Regulation 242/08* (prior to the July 1, 2013 amendment).

One hundred fifty-five activities have been undertaken for Jefferson Salamander and 42 activities have been undertaken for Unisexual Ambystoma (Jefferson Salamander dependent population) in accordance with a conditional exemption that requires registration under the ESA. The activities fell under conditional exemptions for ‘aquatic species’ (section 23.1),‘drainage works’ (section 23.9), ‘ecosystem protection’ (section 23.11), ‘pits and quarries’ (section 23.14), ‘species protection, recovery activities’ (section 23.17), ‘threats to human health and safety, not imminent’ (section 23.18) or ‘trapping – incidental catch’ (section 23.19) under Ontario Regulation 242/08 of the ESA.

Species-specific documents and guidance published by the government:

Recovery Strategy for Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population) (2018)

Government Response Statement for Jefferson Salamander and Unisexual Ambystoma (Jefferson Salamander dependent population) (2019)

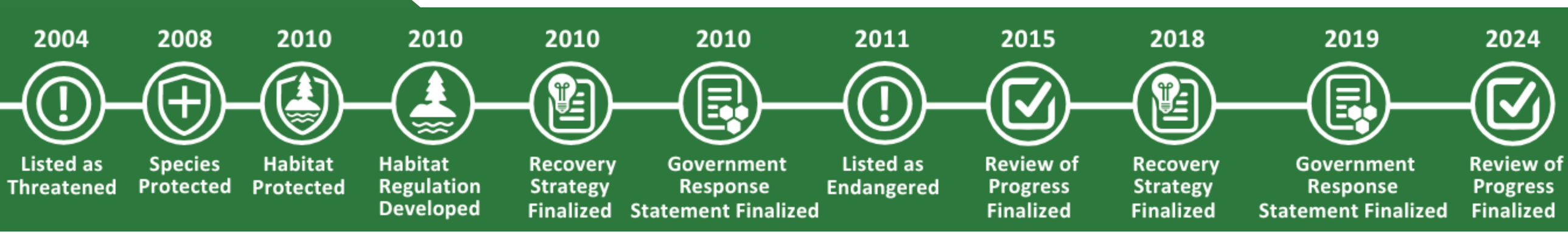
Jefferson Salamander

- 155 Registrations
- 3 Agreements
- 112 Protection or Recovery Permits
- 9 Overall Benefit Permits

Unisexual Ambystoma (Jefferson Salamander dependent population)

- 42 Registrations
- 12 Protection or Recovery Permits
- 3 Overall Benefit Permits

Jefferson Salamander



Unisexual Ambystoma (Jefferson Salamander dependent population)

Review of Progress Towards the Protection and Recovery of

Lake Huron Grasshopper

Lake Huron Grasshopper - Colin D Jones

Progress towards meeting the recovery goal:

The recovery goal in the *Government Response Statement* (GRS) for Lake Huron Grasshopper in Ontario is to "maintain existing populations within the species' distribution in Ontario, and where feasible, enable natural increases in abundance by improving habitat and reducing threats".

Progress has been made towards implementing the majority of the government-led actions. Progress has been made towards implementing two of the government-supported recovery objectives and several of the associated actions. Examples of progress include:

- Removing or controlling invasive species in Lake Huron Grasshopper habitat by supporting landowners and municipalities with on-the-ground invasive species control actions, including almost completely eliminating European Common Reed, also known as invasive Phragmites (*Phragmites australis subsp. Australis*) from nine of the Lake Huron Grasshopper populations on Manitoulin Island.
- Collaborating with local groups and land managers to identify candidate areas for habitat enhancement and/or restoration, prioritizing currently occupied habitat.
- Promoting local stewardship and awareness of Lake Huron Grasshopper and its habitat.

105

observations of Lake Huron Grasshopper were submitted to the NHIC since 2017

In alignment with the GRS, further work is required to:

- Develop and implement a standardized survey protocol, prioritizing surveys at historical sites and under or un-surveyed areas with suitable habitat.
- Develop a standardized long-term monitoring protocol and monitoring schedule to be implemented at subpopulations through the species' range.
- Collaborate with local organizations and initiatives to minimize threats to the species and its habitat, including trampling and dune vegetation removal.

Occurrences and distribution:

Fifteen populations of Lake Huron Grasshopper have been documented in the southern area of Ontario along the shores of Lake Huron, Lake Michigan and Lake Superior. Currently, 13 of these populations are extant, whereas the remaining 2 are considered historical.

All 15 populations of Lake Huron Grasshopper have been newly-identified since 2008. The most recent previously-undocumented population of Lake Huron Grasshopper was identified in Lake Superior Provincial Park in 2023.

Government-supported stewardship projects:

Through the *Species at Risk Stewardship Program*, the Government of Ontario has enabled its stewardship partners to conduct one project that has supported the protection and recovery of multiple species at risk, including Lake Huron Grasshopper, through landscape-level habitat restoration in shoreline and wetland habitats where Lake Huron Grasshopper and other species at risk occur. Through this project, invasive Phragmites has been almost eliminated from the habitat of nine of the Lake Huron Grasshopper populations on Manitoulin Island.

Species at Risk Stewardship Program

By The Numbers

1

project including Lake Huron Grasshopper

Supporting human activities while ensuring appropriate support for species recovery:

To date, no permits have been issued for this species.

No activities have been undertaken in accordance with a conditional exemption that requires registration under the ESA.

Species-specific documents and guidance published by the government:

Recovery Strategy for Lake Huron Grasshopper (2018)

Government Response Statement for Lake Huron Grasshopper (2019)

Review of Progress Towards the Protection and Recovery of

Nine-spotted Lady Beetle

Nine-spotted Lady Beetle - Thomas Schultz

Progress towards meeting the recovery goal:

The recovery goal in the *Government Response Statement* (GRS) for Nine-spotted Lady Beetle in Ontario is to "support the persistence of the species in Ontario by filling knowledge gaps related to the species' current status and distribution, habitat use, and threats in order to better inform protection and recovery actions" and to "support investigating the necessity and feasibility of reintroduction and of augmenting existing populations".

Progress has been made towards implementing several of the government-led actions. Progress has been made towards implementing several of the government-supported recovery objectives and several of the associated actions. Examples of progress include:

- Developing and testing techniques for a standardized survey protocol to help confirm whether Nine-spotted Lady Beetle is present in Ontario.
- Developing and carrying out public outreach programs in Ontario which have resulted in public engagement and widespread data collection across the province.
- Conducting comprehensive insect surveys and anecdotal observations at several locations throughout Ontario and submitting the data to Ontario's central repository.

332 **observations of Nine-spotted Lady Beetle were submitted to the NHIC**

In alignment with the GRS, further work is required to:

- Undertake collaborative research, including work with other jurisdictions, to better understand potential causes of decline and current threats, such as the effects of introduced non-native lady beetles, pathogens and parasites, and pesticides (e.g., neonicotinoids) on both the Nine-spotted Lady Beetle and its prey.
- Investigate the necessity and feasibility of augmenting or reintroducing the species in areas with suitable habitat.
- Collaborate with organizations, landowners, land managers, and Indigenous communities and organizations to promote awareness among people engaged in agricultural, gardening and stewardship activities in Ontario.

Occurrences and distribution:

Ninety-nine populations of Nine-spotted Lady Beetle have been documented throughout Ontario. Currently, all populations are considered historical. The species has not been documented in Ontario since 1987.

Government-supported stewardship projects:

Through the *Species at Risk Stewardship Program*, the Government of Ontario has enabled its stewardship partners to conduct one project that has supported the protection and recovery of multiple species at risk, including Nine-spotted Lady Beetle, through a multi-species survey, while a second project focused exclusively on Nine-spotted Lady Beetle.

The government's support helped its stewardship partners to involve 39 individuals who volunteered 608 hours of their time towards protection and recovery activities for species at risk, including Nine-spotted Lady Beetle. The estimated value of these voluntary contributions, as well as additional funding and in-kind support, is $77,520.

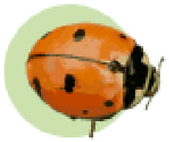
Stewardship partners reported providing outreach on multiple species at risk, including Nine-spotted Lady Beetle, to 12,651 individuals.

Species at Risk Stewardship Program

By The Numbers

1

project including Nine-spotted Lady Beetle



1

project for Nine-spotted Lady Beetle exclusively

$44,138

for projects that included Nine-spotted Lady Beetle

$77,520

in additional funding and in-kind support

39

volunteers

608

volunteer hours

12,651

people received outreach

Supporting human activities while ensuring appropriate support for species recovery:

The Government of Ontario has issued no permits for this species and no agreements were entered into.

Three activities have been undertaken in accordance with a conditional exemption that requires registration under the ESA. The activities followed the conditional exemption for ‘drainage works’ (section 23.9) under *Ontario Regulation 242/08* of the ESA.

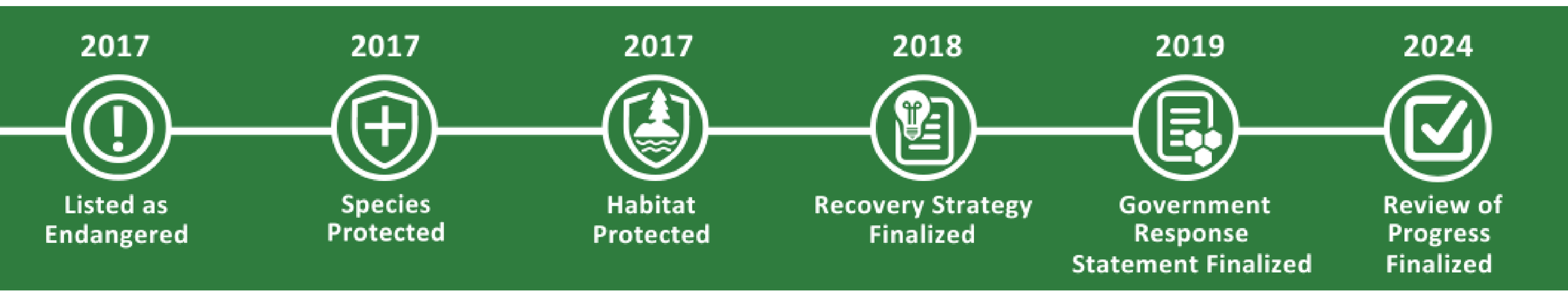
Species-specific documents and guidance published by the government:

Recovery Strategy for Nine-spotted Lady Beetle (2018)

Government Response Statement for Nine-spotted Lady Beetle (2019)

3

Registrations



Review of Progress Towards the Protection and Recovery of Proud Globelet

Proud Globelet- David Lang

Progress towards meeting the recovery goal:

The recovery goal in the *Government Response Statement* (GRS) for Proud Globelet in Ontario is to "support the persistence of the species in Ontario and fill knowledge gaps related to the current state of the species, its habitat, and threats in Ontario".

Progress has been made towards implementing all of the government-led actions. Limited progress has been made towards implementing the government-supported recovery objectives. An example of the progress includes conducting surveys for the presence/absence of Proud Globelet in locations where the species has been found.

In alignment with the GRS, the overall direction provided in the GRS for Proud Globelet should continue to guide protection and recovery actions for the species, particularly actions identified in the GRS as high priority. Further work is required to:

- Identify areas with potentially suitable habitat for Proud Globelet using modelling techniques and local knowledge to inform survey efforts.
- Fill knowledge gaps related to the species' distribution, biology, habitat requirements and threats to inform recovery efforts.
- Maintain or improve habitat where the species is found to be present by undertaking activities to minimize threats to the species and manage the habitat as appropriate.

Occurrences and distribution:

One population of Proud Globelet has been documented in the Windsor area. Currently, this population is considered extant.

Very little is known about the species, as live individuals have not been collected in Ontario.

Since 2009, the government's central conservation data repository at the Natural Heritage Information Centre (NHIC) has received five records of the species. These records are based on observations between 1992 and 2013.

Government-supported stewardship projects:

Supporting our partners through the *Species at Risk Stewardship Program* is an important government-led action identified in the GRS for the species. To date, no stewardship projects have been performed for Proud Globelet.

Supporting human activities while ensuring appropriate support for species recovery:

The Government of Ontario has issued no permits for this species and no agreements were entered into.

Nine activities have been undertaken in accordance with a conditional exemption that requires registration under the ESA. The activities followed the conditional exemption for 'threats to health and safety, not imminent' (section 23.18) under *Ontario Regulation 242/08* of the ESA.

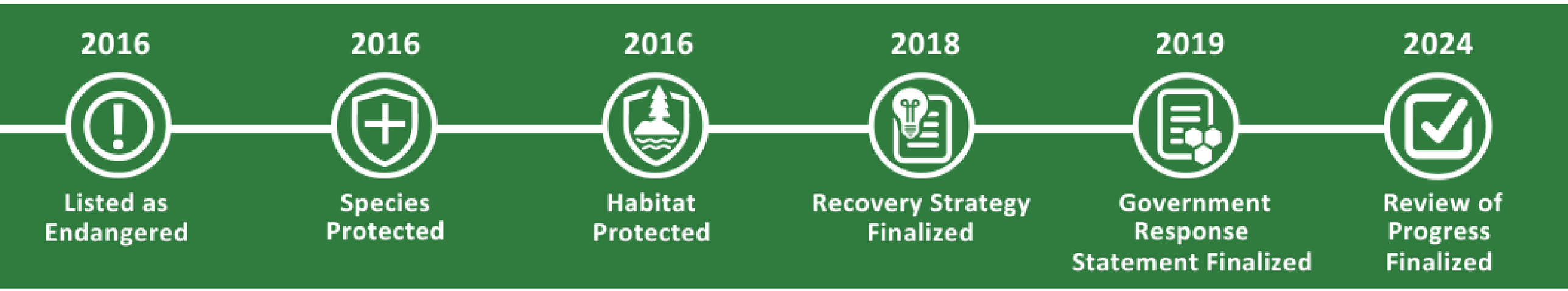
Species-specific documents and guidance published by the government:

Recovery Strategy for Proud Globelet (2018)

Government Response Statement for Proud Globelet (2019)

9

Registrations



Review of Progress Towards the Protection and Recovery of

River Darter (Great Lakes – Upper St. Lawrence populations)

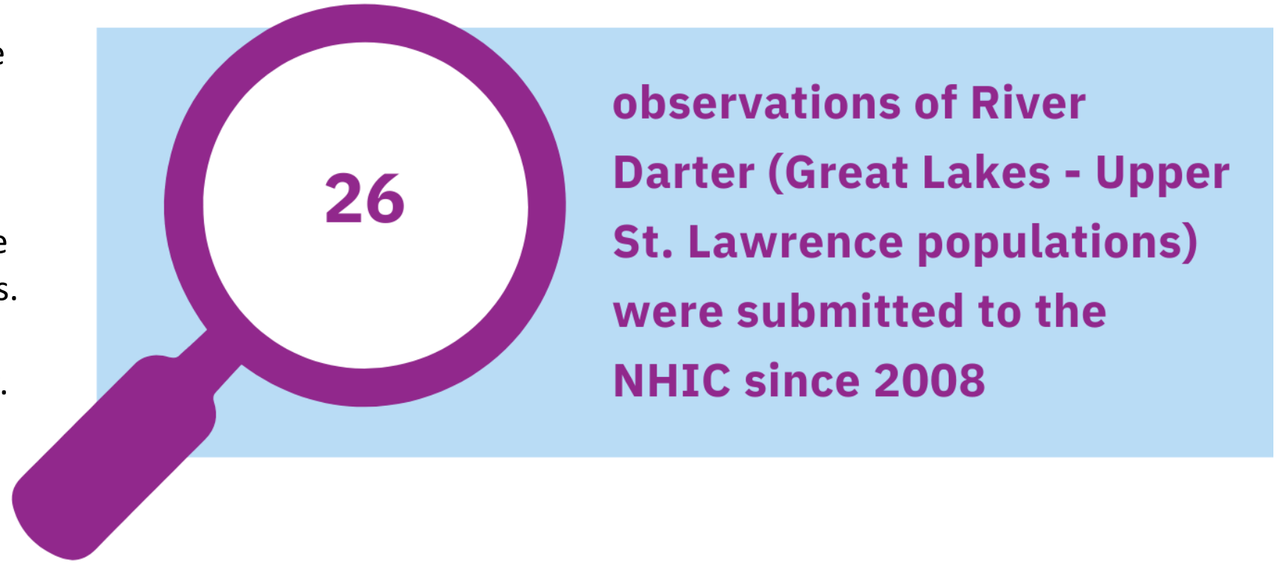
River Darter - Savannah Wise

Progress towards meeting the recovery goal:

The recovery goal in the *Government Response Statement* (GRS) for River Darter (Great Lakes – Upper St. Lawrence populations) in Ontario is to "support the persistence of self-sustaining populations across the species' distribution. The government supports investigating the feasibility of augmenting existing populations".

Progress has been made towards implementing all of the government-led actions. Progress has been made towards implementing three of the government-supported recovery objectives and the majority of their associated actions. Examples of progress include:

- Targeted surveys for River Darter (Great Lakes – Upper St. Lawrence populations), to improve understanding of where the species occurs.
- Increasing awareness of the species through work from partners developing guidance on maintaining municipal drains in fish habitat.
- Removing River Darter (Great Lakes – Upper St. Lawrence populations) from the list of permitted baitfish species.
- Federal research and a recovery potential assessment for River Darter (Great Lakes – Upper St. Lawrence populations).



In alignment with the GRS, further work is required to implement all GRS actions, including to minimize threats in and around the species' habitat and completing effectiveness monitoring for these activities.

Occurrences and distribution:

Six populations of River Darter (Great Lakes – Upper St. Lawrence populations) have been documented in Lake St. Clair, Sydenham River, and Thames River. Currently, three of these populations are extant, whereas the remaining three are considered historical.

Government-supported stewardship projects:

Supporting our partners through the *Species at Risk Stewardship Program* is an important government-led action identified in the GRS for the species. To date, no stewardship projects have been performed for River Darter (Great Lakes – Upper St. Lawrence populations).

Supporting human activities while ensuring appropriate support for species recovery:

The Government of Ontario has issued one permit for this species: one 'protection or recovery' (17(2)(b)) permit has been issued for River Darter (Great Lakes – Upper St. Lawrence populations) since the species has been protected under the ESA.

Six activities have been undertaken in accordance with a conditional exemption that requires registration under the ESA. The activities followed the conditional exemption for 'species protection – recovery activities' (section 23.17), and 'threats to health and safety, not imminent' (section 23.18) under *Ontario Regulation 242/08* of the ESA.

Species-specific documents and guidance published by the government:

Recovery Strategy for River Darter (Great Lakes – Upper St. Lawrence populations) (2018)

Government Response Statement for River Darter (Great Lakes – Upper St. Lawrence populations) (2019)

Review of Progress Towards the Protection and Recovery of

Round-leaved Greenbrier

Round-leaved Greenbrier - Michael John Oldham

Progress towards meeting the recovery goal:

The recovery goal in the *Government Response Statement* (GRS) for Round-leaved Greenbrier in Ontario is to "maintain the species' distribution in Ontario, and to support the viability of natural populations by addressing threats and limitations. The government supports augmenting single-sex populations where feasible and investigating the necessity and feasibility of augmenting mixed-sex populations".

Progress has been made towards implementing the majority of government-led actions. Progress has been made towards implementing one of the government-supported recovery objectives and one of the associated actions. Examples of progress include:

- Developing and implementing a monitoring program for Round-leaved Greenbrier that will evaluate detectability and survey locations where the population is considered to be historical.
- Investigating population dynamics such as genetics, reproductive biology, and factors inhibiting growth.

In alignment with the GRS, further work is required to:

- Conduct research to determine optimal methods for managing Round-leaved Greenbrier populations.
- Collaborating with landowners and local agencies to implement, monitor and adapt actions to promote sexual reproduction in the species.
- Develop, implement and evaluate management plans and best management practices for Round-leaved Greenbrier habitat and viability.
- Promote awareness and implement approaches to avoid or reduce impacts of recreational activities on Round-leaved Greenbrier and its habitat.

Occurrences and distribution:

Sixteen populations of Round-leaved Greenbrier have been documented in southern Ontario. Currently 14 of these populations are extant and the remaining 2 are considered historical. Since 2008, the status of 2 populations changed from extant to historical based on the date that it was last observed, while 5 populations of Round-leaved Greenbrier have been newly-identified since 2008.

Government-supported stewardship projects:

Through the *Species at Risk Stewardship Program*, the Government of Ontario has enabled its stewardship partners to conduct three projects (by providing $77,235 in funding) that have supported the protection and recovery of multiple species at risk, including Round-leaved Greenbrier. Two projects ($62,235) were designed to provide benefits to multiple species at risk (e.g., landscape-level habitat restoration, or outreach and education focusing on a certain group of species such as those present in a local region), while one project ($15,000) focused exclusively on Round-leaved Greenbrier.

The government's support helped its stewardship partners to involve many individuals who volunteered 7,174 hours of their time towards protection and recovery activities for species at risk, including Round-leaved Greenbrier. The estimated value of these voluntary contributions, as well as additional funding and in-kind support, is $167,082.

Species at Risk Stewardship Program

By The Numbers

2

projects including Round-leaved Greenbrier

1

project for Round-leaved Greenbrier exclusively

$77,235

for projects that included Round-leaved Greenbrier

$167,082

in additional funding and in-kind support

3

volunteers

40

volunteer hours

Supporting human activities while ensuring appropriate support for species recovery:

The Government of Ontario has issued no permits for this species and no agreements were entered into.

Thirty-six activities have been undertaken in accordance with a conditional exemption that requires registration under the ESA. The activities followed either the conditional exemption for ‘drainage works’ (section 23.9) or ‘threats to health and safety, not imminent’ (section 23.18) under *Ontario Regulation 242/08* of the ESA.

Species-specific documents and guidance published by the government:

Recovery Strategy for Round-leaved Greenbrier (2018)

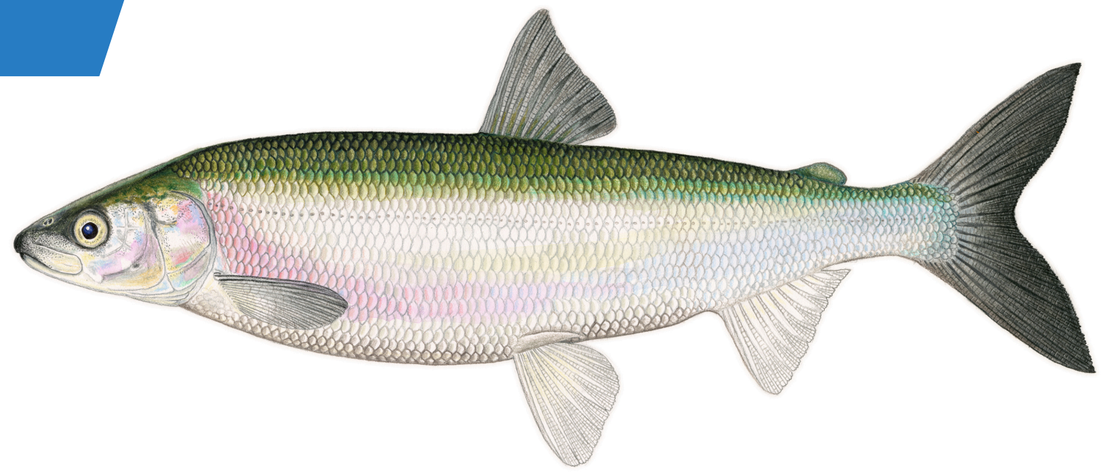
Government Response Statement for Round-leaved Greenbrier (2019)

36

Registrations

Review of Progress Towards the Protection and Recovery of

Shortnose Cisco



Shortnose Cisco - Paul Vecsei

Progress towards meeting the recovery goal:

The recovery goal in the *Government Response Statement* (GRS) for Shortnose Cisco in Ontario is to "increase knowledge of the species, the cisco complexes and their habitat and if populations are found to exist, mitigate threats to the Shortnose Cisco".

Progress has been made towards implementing all of the government-led actions. Progress has been made towards implementing all of the government-supported recovery objectives and the majority of the associated actions. Examples of progress include:

- Protecting and restoring the Great Lakes including work underway to implement the Ontario Great Lakes Strategy that maintains the quality of deepwater habitat previously utilized by Shortnose Cisco.
- Investigation of the taxonomic uncertainty surrounding the cisco complex species.
- Collaborating with federal and jurisdictional partners to implement fisheries monitoring programs and research.

163 observations of Shortnose Cisco were submitted to the NHIC

Based on progress to date, the overall direction provided in the GRS should continue to guide recovery efforts for Shortnose Cisco. For example, further work is required to:

- Investigate the historic cisco species samples to determine whether the Shortnose Cisco occurred in other parts of the Great Lakes.
- Develop educational tools to help with the identification and reporting of any new potential records of the species.

Occurrences and distribution:

Two populations of Shortnose Cisco have been documented in Ontario, one in Lake Ontario and one in Lake Huron. Currently, both of these populations are extirpated (i.e., species no longer exists in Ontario).

Government-supported stewardship projects:

Supporting our partners through the *Species at Risk Stewardship Program* is an important government-led action identified in the GRS for the species. To date, no stewardship projects have been performed for this species.

Supporting human activities while ensuring appropriate support for species recovery:

The Government of Ontario has issued one ‘protection and recovery’ permit for this species under clause 17(2)(b) of the ESA.

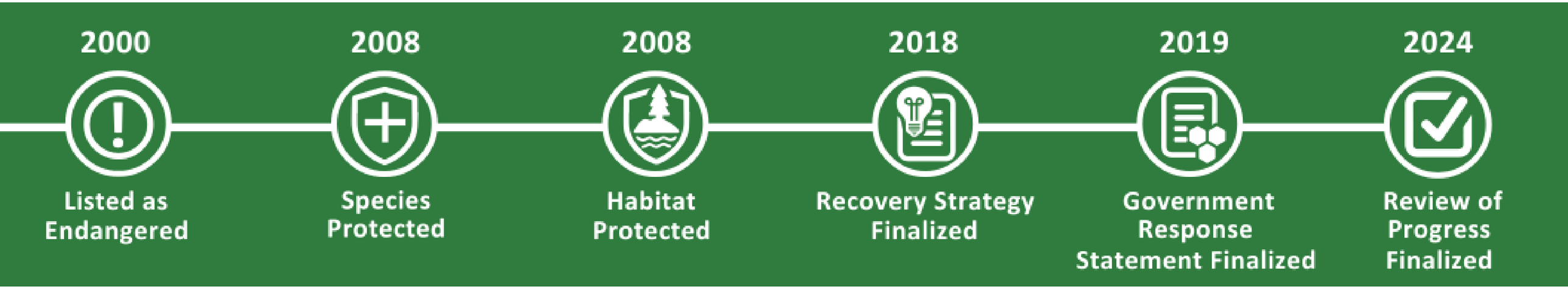
No agreements were entered into and no activities have been undertaken in accordance with a conditional exemption that requires registration under the ESA.

Species-specific documents and guidance published by the government:

Recovery Strategy for Shortnose Cisco (2018)

Government Response Statement for Shortnose Cisco (2019)

Protection or Recovery Permit



Review of Progress Towards the Protection and Recovery of

Western Silvery Aster

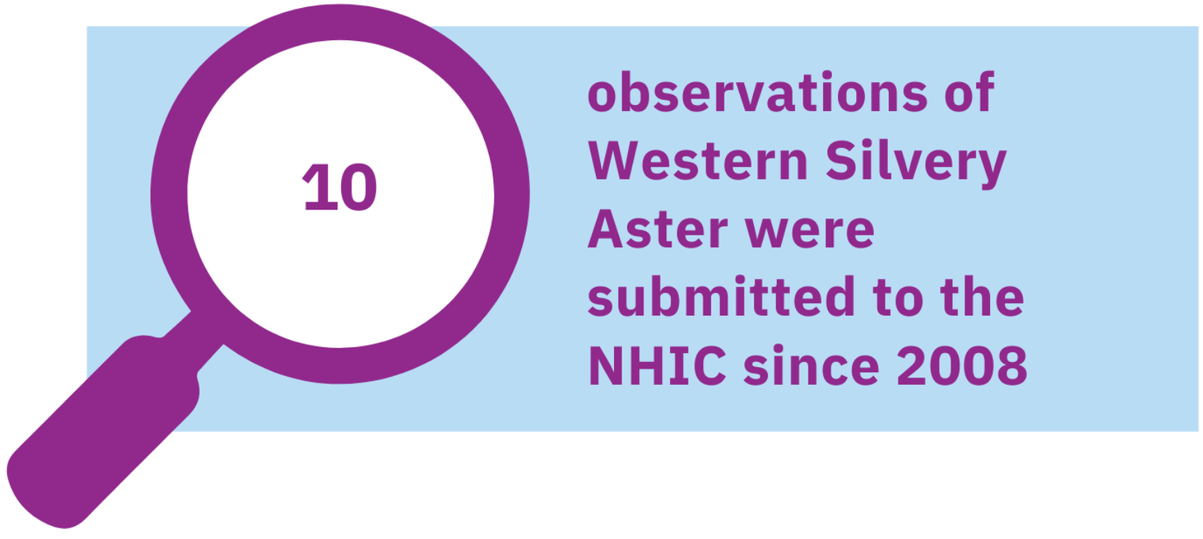
Western Silvery Aster - Wasyl Bakowsky

Progress towards meeting the recovery goal:

The recovery goal in the *Government Response Statement* (GRS) for Western Silvery Aster in Ontario is “to promote the viability of existing populations across the species’ distribution in Ontario and where feasible, to facilitate natural expansion to adjacent habitat”.

Progress has been made towards implementing the majority of the government-led actions. Progress has been made towards implementing one of the government-supported recovery objectives and part of an associated action. Examples of progress include:

- Encouraging the submission of Western Silvery Aster data to Ontario’s central repository.
- Monitoring habitat in Lake of the Woods Provincial Park.
- Conducting presence surveys in areas where Western Silvery Aster is predicted to occur.



In alignment with the GRS, further work is required to:

- Develop and implement a standardized survey and monitoring program.
- Conduct research to increase the understanding of the impacts of threats and existing habitat management practices.
- Work collaboratively with land owners, land managers and researchers to develop, implement and evaluate strategies to maintain or enhance habitat within and adjacent to areas currently occupied by Western Silvery Aster.

Occurrences and distribution:

Five populations of Western Silvery Aster have been documented in the northwestern area of Ontario. Currently, three of these populations are extant, whereas the remaining two are considered extirpated. One population of Western Silvery Aster has been newly identified since 2008.

Government-supported stewardship projects:

Through the *Species at Risk Stewardship Program*, the Government of Ontario has enabled its stewardship partners to conduct a project that has supported the protection and recovery of multiple species at risk, including Western Silvery Aster. The objective of the project was to determine the distributional status of three northwestern Ontario protected plant species, including Western Silvery Aster, within the West English River system. A total of 102 locations were surveyed, and records of 221 occurrences of plant species were produced, including records of the occurrences of five provincially tracked species. However, no previously undocumented occurrences of Western Silvery Aster were detected.

Species at Risk Stewardship Program

By The Numbers

1

project including
Western Silvery Aster

Supporting human activities while ensuring appropriate support for species recovery:

The Government of Ontario has issued no permits for this species and no agreements were entered into.

No activities have been undertaken in accordance with a conditional exemption that requires registration under the ESA.

Species-specific documents and guidance published by the government:

Recovery Strategy for Western Silvery Aster (2018)

Government Response Statement for Western Silvery Aster (2019)