

DRAFT Government Response Statement  
to the  
Recovery Strategy for the Proud Globelet in Ontario

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1 **Proud Globelet**

2 **Ontario Government Response Statement**

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3 **Protecting and Recovering Species at Risk in Ontario**

4 Species at risk recovery is a key part of protecting Ontario's biodiversity. The  
5 *Endangered Species Act, 2007* (ESA) is the Government of Ontario's legislative  
6 commitment to protecting and recovering species at risk and their habitats.

7 Under the ESA, the Government of Ontario must ensure that a recovery strategy is  
8 prepared for each species that is listed as endangered or threatened. A recovery  
9 strategy provides science-based advice to government on what is required to achieve  
10 recovery of a species.

11 Within nine months after a recovery strategy is prepared, the ESA requires the  
12 government to publish a statement summarizing the government's intended actions and  
13 priorities in response to the recovery strategy. The response statement is the  
14 government's policy response to the scientific advice provided in the recovery strategy.  
15 In addition to the strategy, the government response statement considered (where  
16 available) input from Indigenous communities and organizations, stakeholders, other  
17 jurisdictions, and members of the public. It reflects the best available local and scientific  
18 knowledge, including Traditional Ecological Knowledge where it has been shared by  
19 communities and Knowledge Holders, as appropriate and may be adapted if new  
20 information becomes available. In implementing the actions in the response statement,  
21 the ESA allows the government to determine what is feasible, taking into account social,  
22 cultural and economic factors.

23 The [Recovery Strategy for the Proud Globelet \(\*Patera pennsylvanica\*\) in Ontario](#) was  
24 completed on December 7, 2018.

25 Proud Globelet is a terrestrial snail with a yellowish, round shell that ranges from 15 to  
26 20 mm in diameter. It lacks a tooth-like protrusion at the opening of the shell which  
27 distinguishes it from other species in its genus.

28 **Protecting and Recovering Proud Globelet**

29 Proud Globelet is listed as an endangered species under the ESA, which protects both  
30 the snail and its habitat. The ESA prohibits harm or harassment of the species and

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31 damage or destruction of its habitat without authorization. Such authorization would  
32 require that conditions established by the Ontario government be met.

33 Globally, the Proud Globelet occurs in North America, from southwestern Ontario to  
34 Iowa and Missouri in the south and Pennsylvania in the east. The only known Canadian  
35 population of Proud Globelet occurs in the City of Windsor and represents a very small  
36 percentage (0.001%) of the global range. Despite several surveys between 1992 to  
37 2013, no living individuals have ever been documented in the province. Empty, fresh  
38 shells were found in Windsor in the Black Oak Heritage Forest in 1992 and 1996, and  
39 old, weathered shells were found in 2013 at the same location and in a nearby area that  
40 was formerly used as a light industrial site. An unverified historical record also occurs on  
41 Bois Blanc Island, Ontario in the Detroit River, but surveys have not been conducted to  
42 determine whether the species exists there.

43 The recent species assessment by the Committee on the Status of Species at Risk in  
44 Ontario (COSSARO) and provincial recovery strategy suggest that the species was  
45 extant in Ontario, although no live individuals have been documented in the province.  
46 Dead shells found in 2013 were estimated to be 5 to 15 years old, indicating the species  
47 was present at most 15 years ago from the time the survey was conducted. Currently, it  
48 is unclear whether the species is extant in Ontario; however, some areas have not yet  
49 been surveyed and additional efforts at existing and/or new locations with potentially  
50 suitable habitat would be helpful to confirm the presence of any living individuals.

51 Proud Globelet is a member of the Polygridae family, which consists of air-breathing  
52 land snails. Very little is known about the biology and habitat requirements of the  
53 species throughout its range. In the United States the species has been found in  
54 exposed wooded (ravines, hillsides) or forest edge habitat. These types of habitat are  
55 believed to play an important role in providing shelter, egg laying and foraging habitat  
56 for Proud Globelet. In general, terrestrial snails rely heavily on moist microhabitats, such  
57 as soil, leaf litter and logs to provide refuge areas to prevent dehydration or freezing  
58 during extended periods of heat, drought or extreme cold. Proximity to exposed hillside  
59 or edge habitat also provides snails with exposure to warm and sunny conditions during  
60 periods of activity. In temperate regions, snow cover provides important insulation when  
61 snails hibernate during the winter months in the soil or under leaf litter. The dispersal  
62 ability of Proud Globelet is unknown but is thought to be limited based on the maximum  
63 dispersal distance (32 m) measured in other snails in the Polygyridae family.

64 There are extensive knowledge gaps regarding the diet and reproductive behaviour of  
65 Proud Globelet; until species-specific information is available, this information has been  
66 inferred from other species in the Polygyridae family of snails. Generally, mating in

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67 Polygyridae occurs in the fall or early spring, and individuals lay their eggs in the spring  
68 to late summer in humus-rich soil. The eggs hatch about 20 to 60 days later depending  
69 on temperature and moisture. The lifespan of Polygyridae is estimated to range  
70 between three and five years. The diet of Proud Globelet is unknown but may consist of  
71 dead or fresh plant material and fungi based on the diet of other Polygyridae. A greater  
72 understanding of the life history traits and habitat requirements specific to the Proud  
73 Globelet and populations in Ontario would help support the recovery of the species.

74 Because no live individuals have ever been collected in Ontario and very little is known  
75 about the species, it is difficult to identify the specific causes of decline. Potential threats  
76 to the species and its habitat include habitat loss, pollution, garbage accumulation,  
77 changes in soil composition, and trampling from intensive recreational trail use. Invasive  
78 plant species such as Garlic Mustard (*Alliaria petiolata*), non-native earthworm (e.g.,  
79 genus *Amyntas*) and other introduced gastropod species (e.g., slugs) such as Dusky  
80 Arion (*Arion subfuscus*), Grovesnail (*Cepaea nemoralis*) and White Heath Snail  
81 (*Xerolenta obvia*) may also negatively affect native snail populations by altering the soil  
82 composition, reducing the leaf litter layer and competing for habitat and food resources.  
83 Further research on the inter-specific interactions with exotic snails or slugs are needed  
84 to determine the impact and severity of this potential threat on the Proud Globelet.  
85 Climate change may also pose a threat to Proud Globelet through the increase in  
86 temperature and extreme weather events such as droughts or heat waves. Filling  
87 knowledge gaps related to the species' physiological tolerances and ability to adapt to  
88 changing climate and soil conditions would help to further inform recovery efforts.

89 The knowledge gaps associated with the Proud Globelet are substantial. As a result, the  
90 government supports focussing efforts on determining whether the species is still extant  
91 in Ontario and undertaking research fill knowledge gaps related to the species'  
92 distribution, biology, habitat requirements and threats. If Proud Globelet is found to be  
93 extant, consideration should be given towards minimizing threats and managing the  
94 habitat as appropriate. Once further information is available about the species, this  
95 information may be used to review and adapt protection and recovery activities and the  
96 goal may be re-evaluated.

97 **Government's Recovery Goal**

98 The government's goal for the recovery of Proud Globelet is to support the persistence  
99 of the species in Ontario and fill knowledge gaps related to the current state of the  
100 species, its habitat and threats in Ontario.

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102 **Actions**

103 Protecting and recovering species at risk is a shared responsibility. No single agency or  
104 organization has the knowledge, authority or financial resources to protect and recover  
105 all of Ontario's species at risk. Successful recovery requires inter-governmental  
106 cooperation and the involvement of many individuals, organizations and communities. In  
107 developing the government response statement, the government considered what  
108 actions are feasible for the government to lead directly and what actions are feasible for  
109 the government to support its conservation partners to undertake.

110 **Government-led Actions**

111 To help protect and recover Proud Globelet, the government will directly undertake the  
112 following actions:

- 113 • Continue to implement the [Ontario Invasive Species Strategic Plan \(2012\)](#) to  
114 address the invasive species that may directly threaten the Proud Globelet.
- 115 • Educate other agencies and authorities involved in planning and environmental  
116 assessment processes on the protection requirements under the ESA.
- 117 • Encourage the submission of Proud Globelet data to the Ontario's central  
118 repository through the citizen science project that they receive data from (i.e.,  
119 [iNaturalist.ca](#)) and directly through the [Natural Heritage Information Centre](#).
- 120 • Undertake communications and outreach to increase public awareness of  
121 species at risk in Ontario.
- 122 • Continue to protect Proud Globelet and its habitat through the ESA.
- 123 • Support conservation, agency, municipal and industry partners, and Indigenous  
124 communities and organizations to undertake activities to protect and recover  
125 Proud Globelet. Support will be provided where appropriate through funding,  
126 agreements, permits (including conditions) and/or advisory services.
- 127 • Encourage collaboration, and establish and communicate annual priority actions  
128 for government support in order to reduce duplication of efforts.

129 **Government-supported Actions**

130 The government endorses the following actions as being necessary for the protection  
131 and recovery of Proud Globelet. Actions identified as "high" may be given priority

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132 consideration for funding under the Species at Risk Stewardship Program. Where  
133 reasonable, the government will also consider the priority assigned to these actions  
134 when reviewing and issuing authorizations under the ESA. Other organizations are  
135 encouraged to consider these priorities when developing projects or mitigation plans  
136 related to species at risk.

137

138 <b>Focus Area:</b>	<b>Inventory and Monitoring</b>
139 Objective:	Increase knowledge of Proud Globelet presence in Ontario and if 140 located, improve knowledge of existing populations, their habitat 141 and site-specific threats.

142 The first step in supporting recovery of Proud Globelet is to determine whether the  
143 species is still extant in Ontario. Standardized surveys are required to confirm the  
144 presence of the species in areas where shells have been found and to survey in  
145 additional areas with suitable habitat. Involvement of volunteers including species  
146 experts, naturalists and land stewards should also be encouraged to maximize efforts. If  
147 any live individuals are found, monitoring of their status, habitat conditions and site-  
148 specific threats will be important to inform future recovery efforts.

149 **Actions:**

- 150 1. **(High)** Identify areas with potentially suitable habitat for Proud  
151 Globelet using modeling techniques and local knowledge to  
152 inform survey efforts.
- 153 2. **(High)** Develop, implement and promote a standardized survey  
154 protocol to survey for the presence/absence of Proud Globelet  
155 in Ontario and determine whether the species is currently  
156 extant. Surveys should:
  - 157 ○ be supplemented with identification material to accurately  
158 distinguish this species from other terrestrial snails; and,
  - 159 ○ prioritize survey efforts in and around areas where shells  
160 have previously been found or reported (e.g., Bois Blanc  
161 Island) and in additional areas with suitable habitat.
- 162 3. At locations where the species is found to be present, develop  
163 and implement a monitoring protocol that includes inventory and  
164 monitoring of populations, habitat conditions and site-specific  
165 threats.

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- 166 4. Engage volunteers to participate in surveys for this species to  
167 determine its presence or absence including citizen science  
168 programs (e.g., iNaturalist).  
169

**Focus Area: Research**

170 **Objective:** Improve knowledge of the Proud Globelet biology, habitat  
171 requirements and threats.  
172

173 Very little is known about the biology, habitat requirements and threats to the Proud  
174 Globelet throughout its global range. Further understanding of the life history traits of  
175 Proud Globelet such as diet, reproduction, dispersal, interspecific interactions with  
176 introduced species and physiological tolerances to changes in climate and soil  
177 conditions will be necessary to help inform recovery efforts. Research should be done in  
178 collaboration with the United States on extant populations to help identify causes of  
179 declines and requirements needed for persistence. Additional research is also needed  
180 to identify the extent and severity of potential threats to the species and its habitat,  
181 including recreational trail use, pollution, introduced species and climate change, to help  
182 inform appropriate management actions.

**Actions:**

- 183  
184 5. If found to be extant, undertake collaborative research to fill  
185 knowledge gaps related to the species' distribution, biology,  
186 habitat requirements and threats to inform recovery efforts.  
187

**Focus Area: Habitat Management and Awareness**

188 **Objective:** Maintain and improve the habitat for Proud Globelet and increase  
189 the level public awareness and engagement in protecting and  
190 recovering the species.  
191

192 If an extant population of Proud Globelet is confirmed in Ontario, efforts should be  
193 focused on maintaining and/or improving habitat and minimizing threats. The Proud  
194 Globelet may be impacted by several threats including pollution, intensive recreational  
195 trail use and introduced species which can damage or destroy existing habitat. As  
196 specific habitat and life history requirements for this species are investigated,  
197 implementing actions to effectively mitigate and manage habitat will support the  
198 protection and recovery of this species. Increasing public awareness of this species and  
199 encouraging participation in management will also contribute towards recovery efforts.

**Actions:**

- 200  
201 6. At locations where the species is found to be present, maintain  
202 and/or improve habitat by undertaking activities to minimize

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203 threats to the species and manage the habitat, as appropriate.  
204 Emphasis should be placed on:

- 205 ○ identifying and mitigating threats affecting the species,  
206 such as minimizing impacts from human-caused  
207 disturbances (e.g., recreational trail use) and threats  
208 posed by introduced species;
- 209 ○ identifying opportunities for habitat creation, restoration  
210 and/or enhancement including creating refuge areas to  
211 improve available habitat; and,
- 212 ○ working with partners where the species is found to  
213 effectively manage the habitat, where appropriate (e.g.,  
214 Black Oak Heritage Forest).

215 7. Develop education and outreach material to promote the  
216 awareness of the species at existing locations. Information  
217 should include:

- 218 ○ how to identify the species;
- 219 ○ protection afforded to the species and its habitat under  
220 the ESA; and,
- 221 ○ actions that can be taken to avoid or minimize impacts to  
222 the species and its habitat including preventing garbage  
223 dumping and trampling.

## 224 **Implementing Actions**

225 Financial support for the implementation of actions may be available through the  
226 Species at Risk Stewardship Program. Conservation partners are encouraged to  
227 discuss project proposals related to the actions in this response statement with the  
228 program staff. The Ontario government can also advise if any authorizations under the  
229 ESA or other legislation may be required to undertake the project.

230 Implementation of the actions may be subject to changing priorities across the multitude  
231 of species at risk, available resources and the capacity of partners to undertake  
232 recovery activities. Where appropriate, the implementation of actions for multiple  
233 species will be coordinated across government response statements.

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235 **Reviewing Progress**

236 The ESA requires the Ontario government to conduct a review of progress towards  
237 protecting and recovering a species not later than five years from the publication of this  
238 response statement. The review will help identify if adjustments are needed to achieve  
239 the protection and recovery of Proud Globelet.

240 **Acknowledgement**

241 We would like to thank all those who participated in the development of the Recovery  
242 Strategy for the Proud Globelet (*Patera pennsylvanica*) in Ontario for their dedication to  
243 protecting and recovering species at risk.

244 **For Additional Information:**

245 Visit the species at risk website at [ontario.ca/speciesatrisk](http://ontario.ca/speciesatrisk)  
246 Contact the Natural Resources Information and Support Centre  
247 1-800-667-1940  
248 TTY 1-866-686-6072  
249 [nrisc@ontario.ca](mailto:nrisc@ontario.ca)