

Prototype Quillwort

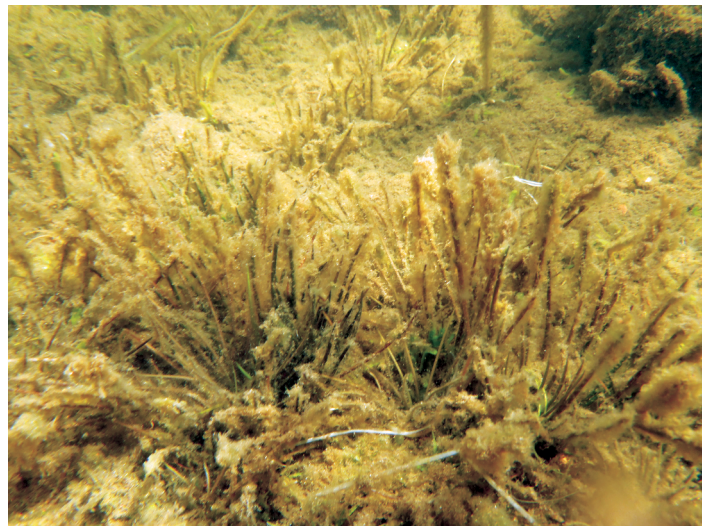
Isoetes prototypus

STATUS

Special Concern 

Vulnerable 

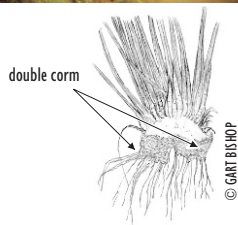
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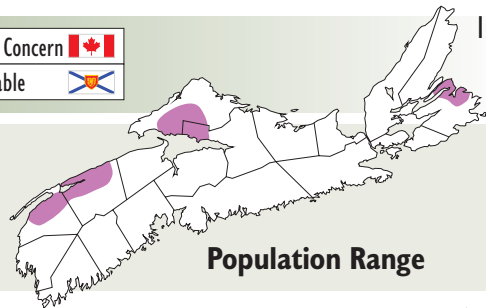
Species Description

Prototype Quillwort is a perennial aquatic plant. Its straight, brittle leaves are swollen at the base and arise from a short, solid, two-lobed corm (globular rootstock). Its 4-12 cm long leaves are dark green with a chestnut-coloured base.



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Currently known to occur on nine lakes in Nova Scotia. Estimated Canadian population of 350,000 individuals.



Population Range

Habitat

Occurs in nutrient poor, spring-fed lakes 1.5-2.5 m below the lake surface. Found on lakes with gently sloping, well defined shorelines that are not marshy. It grows in oozy sediment overlying sand or gravel substrates and typically forms dense mats. Occasionally found floating on the lake surface in uprooted mats.



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Prototype Quillwort is found on lake bottoms. It occurs with other aquatic species such as *Eriocaulon aquaticum* and *Isoetes lacustris*.

Interesting Points

- Discovered as a new species in 1988!
- Other than the Nova Scotia population, this species is only known elsewhere in the world on six lakes in New Brunswick and five lakes in Maine.
- This species is considered a living fossil with “nothing else like it in the world” (D. Brunton).



Uprooted Quillwort plants can occur singly or in small mats and often wash up along the shore among other dislodged aquatic plants.

Similar Species

Other aquatic Isoetes species may be confused with this one, and a microscope or possibly an electron microscope and laboratory testing for chromosome numbers may be required to confirm the identity. Prototype Quillwort differs from other Isoetes species by its very brittle leaves that often break when gentle downward pressure is applied to the tips of the leaves using the palm of the hand. The base of the leaves are chestnut-coloured and not white.

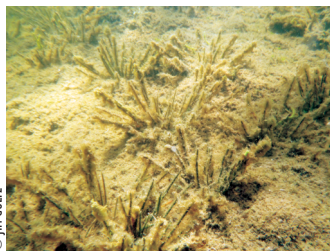
Threats to Survival

- Habitat modifications such as road, causeway, and cottage development, shoreline alterations, water dams, eutrophication, siltation, changes in pH levels and competition from introduced invasive plants.
- Direct damage from activities such as boating, fishing, raking swimming areas, snorkelling, the installation of water intake pipes and wildlife activities.



How You Can Help

Leave your shoreline natural, install and maintain septic systems, and avoid using pesticides and fertilizers. If you think you have found a quillwort plant washed ashore, carefully collect and press the specimen and send to a herbarium for identification. This will assist in determining the distribution of this species.



Contacts, Information & Sighting Reports

Contact: NS DNR (902) 679-6091

Info: www.sararegistry.gc.ca

Sighting Reports: 1-866-727-3447 or www.speciesatrisk.ca/sightings