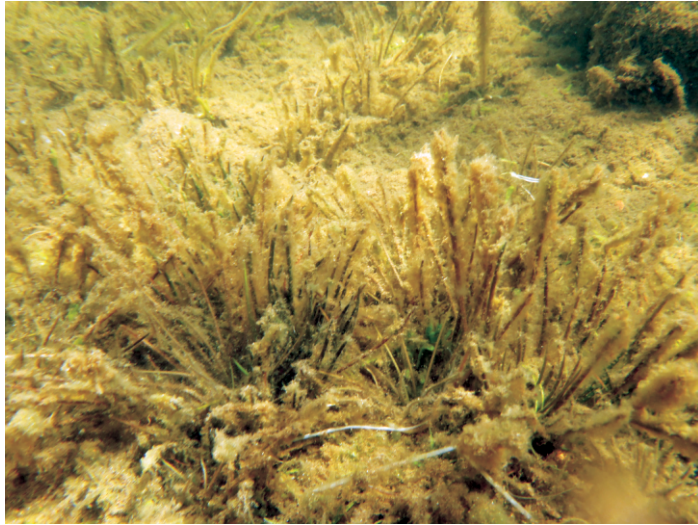


Prototype Quillwort

Isoetes prototypus

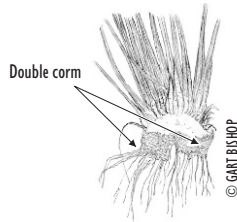
STATUS	Endangered 	Not Listed 
Special Concern 	Vulnerable 	Not Listed 



© JIM GOLTZ

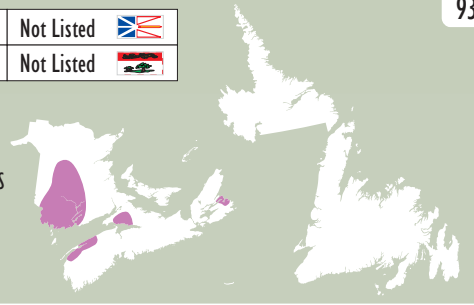
Species Description

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.



© GART BISHOP

Only found in NS, NB and Maine; Currently known to occur on 15 lakes in NB and NS with an estimated population of 350,000 individuals.



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.



© MARIEKA CHAPLIN



© JIM GOLTZ

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

Interesting Points

- Only recognized as a new species in 1991!
- Other than the Nova Scotia and New Brunswick populations, this species is only known elsewhere in the world on five lakes in Maine.
- This species is considered a living fossil with “nothing else like it in the world” (D. Brunton, Quillwort Expert).

Leaves are chestnut-coloured at the base



© GANT BISHOP



© MARIEA CHARLIN



© DND

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, dams, eutrophication, siltation, changes in pH levels and competition from introduced invasive plants.
- Direct damage from activities such as boating, fishing, raking swimming areas, the installation of water intake pipes.



© JIM GOITZ

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.



© JIM GOITZ

Contacts, Information & Sighting Reports

Contact: AC CDC (506) 364-2658, NB DNR (506) 453-3826, NS DNR (902) 679-6091

Info: www.speciesatrisk.gc.ca, www.cosewic.gc.ca

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