

Engelmann's Quillwort

Isoetes engelmannii



Status: **Endangered**

Threats:

- ◆ Shoreline development and erosion
- ◆ Nutrient enrichment of waterbodies
- ◆ Invasive species and competition
- ◆ Mechanical damage and deliberate removal
- ◆ Application of aquatic herbicides



Photo: W. Carl Taylor

Description:

- ◆ Submerged aquatic perennial plant
- ◆ Member of a group of plants known as “fern allies”
- ◆ Leaves are long, thin and hollow; approx. 20 cm long; resemble White Pine needles; bright green to yellow-green in colour; rise from two corms
- ◆ Corms may be buried in up to 10 cm of soil
- ◆ Hard to distinguish from other quillworts; identification is based upon characteristics of the spores

Biology:

- ◆ Reproduces through spores, which mature in late summer
- ◆ May hybridize with other quillworts; hybrid is usually bigger and sterile; presence of the hybrid can indicate the presence of Engelmann's Quillwort
- ◆ Spores are usually dispersed by water currents; new plants tend to be close to the parent plants

Habitat:

- ◆ Occurs at just 2 sites in Canada, both in Ontario: one on the lower Severn River and the other on the Gull River
- ◆ In the Severn River they are found in shallow water where there is limited competition from other aquatic plants ; may be found on mud flats during period of low water
- ◆ Corm is anchored in sand and clay soil in shallow water along the shoreline

Species at Risk
STEWARDS' GUIDE SERIES

Engelmann's Quillwort

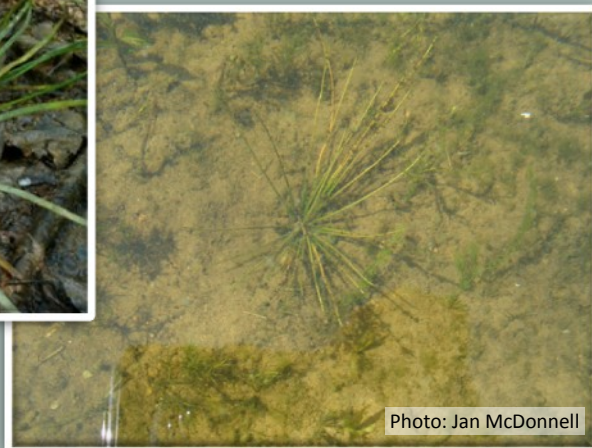
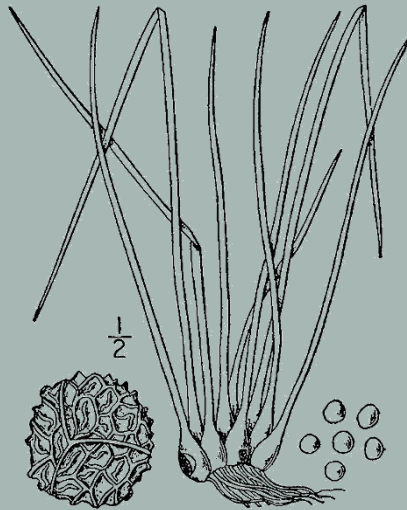
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Engelmann's Quillwort on Your Property? **Here's What You Can Do:**

- ◆ **All aquatic species need good water quality and habitat.** Shoreline activities such as building docks and other structures and removing vegetation can affect the Engelmann's Quillwort and other aquatic plants and animals. If you are planning on working around water, please contact the MNR for information and best practices.
- ◆ **Reduce nutrient inputs to the water.** Nutrient runoff can negatively affect waterways that are home to Engelmann's Quillwort and other aquatic species. Don't use fertilizers on your property and ensure your septic system is functioning properly.
- ◆ **See an Engelmann's Quillwort?** Submit your sighting to the Natural Heritage Information Centre at nhic.mnr.gov.on.ca/MNR/nhic/species/species_report.cfm. Photographs with specific locations or mapping coordinates are always helpful.
- ◆ **Contact the Ministry of Natural Resources.** If you find an Engelmann's Quillwort on your property, you may be eligible for stewardship programs that support the protection and recovery of species at risk and their habitats. Contact the MNR for more information.
- ◆ **Learn More.** Check out the Species at Risk section on the Ontario Ministry of Natural Resources website at www.mnr.gov.on.ca.



Ontario's **Endangered Species Act**

Ontario's *Endangered Species Act, 2007* came into force on June 30, 2008, making Ontario a North American leader in the protection of species at risk and their habitats.

Compared to Ontario's previous Act, written in 1971, the new ESA 2007 provides:

- ◆ Science-based assessment of species' status
- ◆ Automatic protection of a species and its habitat once it's listed as endangered or threatened
- ◆ Broader protection for species at risk and their habitats
- ◆ Greater support for volunteer stewardship efforts of private landowners, resource users, and conservation organizations
- ◆ A commitment to recovery of species through recovery planning
- ◆ Greater accountability, including government reporting requirements

Ontario is home to more than 30,000 species, most of which have stable populations.

However, more than 180 species in Ontario, 34 of which are found in Parry Sound-Muskoka, are currently considered "at risk" because of threats like:

- ◆ Habitat loss
- ◆ Global changes in insect populations
- ◆ Pollution
- ◆ Invasive species
- ◆ Climate change
- ◆ Over-harvesting
- ◆ Road mortality



Learn more about Species at Risk on the Ontario Ministry of Natural Resources website at www.mnr.gov.on.ca.