



Curly Leaf Pondweed

Potamogeton crispus

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Agenda

Regulatory Status

Identification & Native Relatives

Growth, Ecology, & Impacts

Prevention & Control

Conclusions & Questions



Regulatory Status

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- Prohibited under the Fisheries (Alberta) Act.
- Sampled and verified in the South Saskatchewan River at Police Point Park, Medicine Hat, in August 2024.
- Retrospectively discovered two unreported sightings on iNaturalist (Sept 2023, Aug 2024, both in the Bow River).
- Historical record in Elbow River (Calgary), from 1944.
- Marks the 6th prohibited aquatic invasive plant species with significant presence in Alberta.
- Heavily infested in the Bow & South Saskatchewan Rivers.

Identification

Identification

- Simple, alternate leaves, up to 3 inches long with a serrated margin.
- Wavy leaf margins, resembling crinkle cut French fries or lasagna noodles.
- Leaves with pronounced midvein, rounded tips.



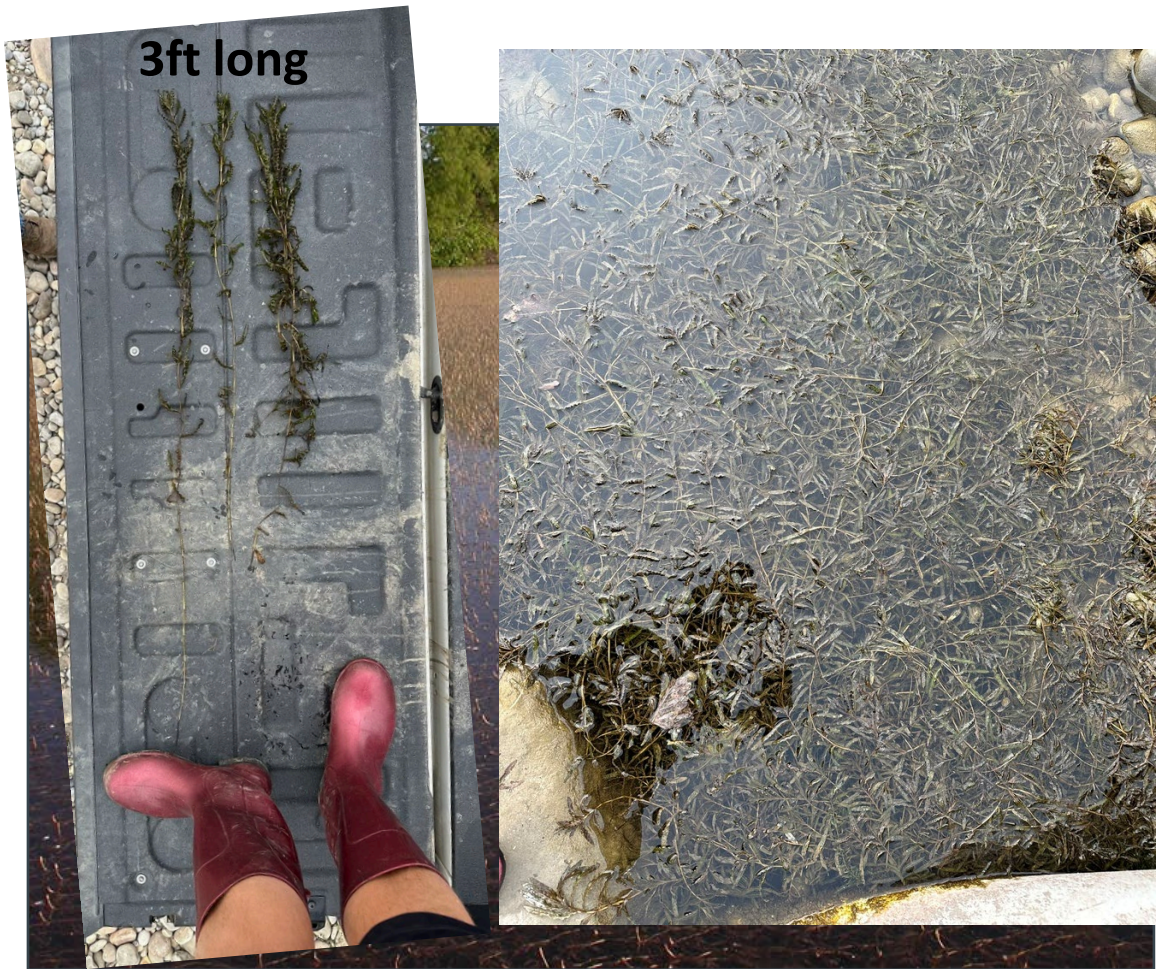
Identification

- Flowers borne on short spikes about 1 inch tall, above the water.
- Flowers may appear reddish-brown to green.
- Produces winter buds (called turions) with densely packed leaves that may resemble small pine cones.



Identification

- Vegetative reproduction via thick white, yellow, or red rhizomes.
- Can grow in waters up to 15 feet deep, prefers still and slow waters but can still grow in swift, cold water.
- Can form dense mats of vegetation.



Differentiation from Native Relatives

Richardson's Pondweed

- Alberta has nearly 20 native *Potamogeton* species.
- *Potamogeton richardsonii* – NATIVE to Alberta, common in many lakes and rivers in Alberta.
- Leaves larger, wider, less wavy, does not form dense monocultures.



Growth, Ecology, & Impacts

Growth & Ecology

- Evergreen – vegetation does not fully die back to the roots in the fall, remains green through the winter.
- This enables rapid early season growth, even at very low temperatures → outcompetes native aquatic species.



Impact on Irrigation Canals

- Unmitigated growth in irrigation canals:
 - Blockages that lead to flooding
 - Blockages that slow or stop flow to farmers' fields
 - Dry up small, shallow canals.



Competition with Native Aquatic Plants

- Canada Waterweed / *Elodea canadensis*
 - Native aquatic plant, listed as S2 (endangered) in Alberta.
 - Grows in still backwaters and eddies, struggles to compete with Curly Leaf Pondweed.
- Fennel Leaved Pondweed / *Stuckenia pectinata*
 - Native aquatic plant, very common in lakes and rivers.
 - In the Bow River, appears to mostly outcompete Curly Leaf Pondweed.



Prevention & Control

Control

- Extremely limited options.
- Manual removal for small, isolated populations → not feasible for eradication from major lakes & rivers.
- Reward → registered herbicide for use on aquatic plants in still or slow-moving waterbodies.
- South Saskatchewan River irrigation use – significantly limits herbicide options.
- No biological control agents available.

Monitoring & Help with Identification

- Curly Leaf Pondweed → present in Alberta for over 80 years? Serious lack of aquatic vegetation monitoring, awareness, and reporting.
- Few are skilled at plant identification, even fewer are skilled at submerged aquatic and invasive plant identification.
- Does your lake or river have Curly Leaf Pondweed? We eagerly welcome pictures of plants, fish, mussels, etc. to help determine whether a species is invasive: epa.ais@gov.ab.ca and post to iNaturalist.

Clean, Drain, Dry & Don't Let It Loose

- Remove vegetation from your watercraft and trailer to avoid spreading **turions**.
- Never dump aquarium contents into water bodies.
- Report all sightings to the AIS Hotline (1-855-336-2628) or epa.ais@gov.ab.ca
- We are happy to help with identification of any aquatic species – please email us pictures!

Questions?

