



DAKOTAFLORA

Curly Pondweed

BY DAVE ODE, GFP BOTANIST

Curly pondweed can be a pest. It has not been on the continent for very long, but it has spread far and wide. The first correctly identified, North American record of curly pondweed (*Potamogeton crispus*) appears to be a specimen collected by “Gavin Watson & Kilvington” from “Philadelphia, 1841-2;” or so reads the label of a dried plant specimen lying in a small English herbarium.

By the 1880s, specimens were being collected from elsewhere in Pennsylvania, and in Delaware, Massachusetts and New York. By the 1930s, the plant had spread north to Ontario and west to Minnesota. Nowadays, it appears in virtually every state; the “carp” of the plant world.

Sometimes called curly-leaf pondweed, this submerged aquatic perennial takes its name from the crisped or wavy margins on its summer leaves.

Pondweeds in general provide a variety of benefits to wildlife. Leafy cover hides bait fish from predators, while also providing hideouts for predators like northern pike to ambush their prey. Aquatic insects and other invertebrates often cling to the submerged leaves and stems. Ducks and geese may graze pondweed leaves and fruits. However, in the case of curly pondweed, it is a matter of too much of a good thing.



THE “CRISPED” LEAVES OF CURLY PONDWEED HAVE FINELY SERRATED MARGINS, WHICH IS ONE WAY TO DISTINGUISH IT FROM OUR NATIVE RICHARDSON’S PONDWEED, WHICH HAS SMOOTH LEAF MARGINS.

Photo © Frank J. Koshere, Wisconsin DNR

Like many exotic species, curly pondweed exhibits explosive population growth often to the exclusion of more desirable aquatic plants. This is due in part to the absence of Eurasian diseases, predators and parasites. Much of the plant’s success is because of its unique life cycle; which enables it to disperse and reproduce vegetatively.

The key to this reproduction is the formation of dormant apical buds. As daylength increases and water temperatures rise with the approach of summer, each growing point on a curly pondweed plant begins to transform into a hardened structure consisting of a small length of stem and adjacent leaf bases. This hardening of each growing point brings further plant growth to an end, so the curly pondweeds begin to fragment and decompose. The hardened, dormant apices persist, disperse by waves and currents and sink to the bottom of the water body. As summer turns to autumn with shorter daylengths and cooler water, the dormant apices sprout roots and begin to grow winter leaves, which generally have smooth, straight margins. This plant overwinters beneath ice and snow. With the onset of spring, curly pondweed begins to exhibit finely serrated, wavy-margined leaves, normally associated with spring. This jump-start on the growing season enables the plant to grow profusely in April and May, reaching the water surface by June; well before the majority of other aquatic plants. While curly pondweed does produce some flowers and fruits, the numbers are small when compared to the prodigious number of dormant apices.

Curly pondweed’s invasive tendencies and aggressive growth have gained it the reputation as an aquatic nuisance. The formation of large aquatic beds which break loose in late June and July and blow into shore, often frustrate boaters and swimmers. The large masses of vegetation can block boat ramps, foul propellers, snag fishing lines and confound swimmers.

Unfortunately, the dormant apices of curly pondweed are easily transported in boat bilges and in any moist cavity of boats or trailers, thus the rapid spread of the plant to new lakes and streams. Since the first collections of curly pondweed specimens were gathered by Vernon Harms and Ted Van Bruggen from southeastern South Dakota in the 1960s and 1970s, it has spread to at least three of our four Missouri River reservoirs; Angostura Reservoir, Sheridan Lake, Canyon Lake, Stockade Lake, Herrick Lake, McCook Lake, Lake Mitchell, Lake Alice, Big Stone Lake and Roy Lake. If you are a boater, this is a hitchhiker you do not want to pick up. Please help slow the spread of this invasive weed by cleaning any plants off your boat before you enter other water bodies.



CURLY PONDWEED PRODUCES HARD, VEGETATIVE BUDS THAT LIE DORMANT UNTIL AUTUMN WHEN THEY GERMINATE, GROW AND OVERWINTER AS PARTLY GROWN PLANTS.

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LARGE MATS OF CURLY PONDWEED CAN BLOCK BOAT RAMPS AND FRUSTRATE BOATERS AND SWIMMERS.

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