

PRIOR LAKE AMERICAN

Control Curly-Leaf Pondweed in Local Lakes

Dan Miller

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The ice is out and it's time for lake, or aquatic plants to start growing. Even though you may think it's time to get the boat ready some lake plants have been getting ready for summer by growing under the ice. One invasive aquatic plant, curly-leaf pondweed (*Potamogeton crispus*), does just that. It poses significant problems for lake users and wildlife because it contributes to late summer algae blooms. It is one of the first aquatic plants to come up in the spring and then die back in mid-summer. Curly-leaf pondweed is an exotic plant native to Eurasia, Africa and Australia. It generally grows in near-shore areas and can tolerate low water clarity. Curly-leaf pondweed can interfere with recreation because it forms dense mats in late spring and early summer. These oppressive mats also interrupt the opportunity for native aquatic plants to establish.

When Curly-leaf pondweed dies back in midsummer, the vegetation decomposes and contributes to increased phosphorus concentrations in the lakes. The increase in phosphorus provides necessary nutrients for algae to grow causing additional recreation and water-quality problems. Curly-leaf pondweed is so unique that it begins growing in late fall and persists under thick ice and snow cover. This is well in advance of native aquatic plants. Curly-leaf is usually the first plant to appear after ice-out. Then when most native plants are growing, curly-leaf pondweed is dying back.

So how do you control the spread of the invasive aquatic plant? Mechanical control can be used such as raking, cutting or harvesting the vegetation. However, it needs to be performed in the spring - before Memorial Day - to have the maximum benefit. It also needs to be done on an annual basis where the nuisance growth is occurring. Another common approach is to apply an Environmental Protection Agency (EPA)-approved aquatic herbicide according to label directions approved by the EPA. The Minnesota Department of Natural Resources recommends, based on recent research, that aquatic herbicides for the control of curly-leaf pondweed should be applied when water temperatures are about 50 and no higher than 60 degrees Fahrenheit. This means treatment is recommended in spring and should not be performed in early summer because the spring will kill the curly-leaf pondweed which will then allow native aquatic plants to establish more easily.

Native aquatic plants help improve water clarity and are needed for wildlife habitat, soil stabilization in the near-shore area and to consume excess nutrients like phosphorus. Early summer applications of these nonselective herbicides will kill both the young native aquatic plants before they produce seed in addition to the targeted curly-leaf pondweed, which already has set seeds for the next year. These early summer applications of herbicides therefore are harmful in two ways; they don't kill the curly-leaf pondweed before they set seeds and then they kill off the desired native aquatic plants for the season and before they can produce seeds. All herbicide treatments require a permit from the MN DNR. If you hire a contractor to apply an herbicide treatment, please be sure to ask them to treat during the spring when conditions are best. Otherwise, if they apply herbicide in early summer they will kill off all the native aquatic plants which are beneficial for wildlife and keeping the lake clean.

How can boat owners help? Clean boats or watercraft before you leave the public water access. Currently, curly-leaf pondweed has been found in 759 lakes in 70 of the 87 counties in the state of Minnesota. Curly-leaf can spread from just a small plant fragment, so it is imperative to clean off all vegetation from your boat to help prevent the spread of this invasive aquatic plant.

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The hybrid milfoil still will respond to chemical treatment, he said, but the chemical needs to be used at higher concentrations.

To know if a milfoil bloom is the hybrid, Helker said the plant needs genetic testing. "There's no way to visually tell the difference."

"It's interesting. It is certainly something that makes control more costly, because you have to use a higher concentration and so you have to use more herbicides," Helker said. "It makes it more expensive for the lake districts."

Combination raises concerns

The combination of low water levels and higher weed concentrations had some residents worried about winter fish kills.

"I estimated that the water level was down 3.5 feet on Camp Lake," Faber said. "The lake has an average depth of 5 feet, and 60 percent of it is 3 feet or less. That means now some of it is down to nothing."

If there was heavy snow cover on the lakes, Faber worried, it could lead the unusually large weed beds to die off from lack of light, depleting oxygen levels in the water and causing fish kills.

With the winter shaping up to be unusually mild, with little snow, fish kills no longer seem to be likely, said Doug Welch, a fisheries biologist with the DNR. "The low water levels by themselves, I don't think it's going to be a hugely significant factor," he said. "The driving factor will be the snow cover."



Along with mechanical harvesting, many associations use herbicides to treat invasive weeds. In recent years, that too has become more challenging as Eurasian milfoil has adapted, hybridizing with native species and becoming resistant to chemical treatment.

For now, it seems like this winter will continue last year's trend of little snow and little ice. If it is a repeat of last year, Popanda said, "the weeds are going to be even worse."

He said he hopes to be prepared. "Next season we are going to get started a little earlier with our weed harvesting, and we're going to be very aggressive with it."