

From Shore to Shore

For Minnesota citizens promoting the health of our rivers & lakes

April 2005

#66

Calendar of Events

→ Shoreland Erosion Control for Property Owners
April 15, 2005 – 8:30-4:30, Nisswa, MN, Nisswa Community Center
Contact: Eleanor Burkett; 218-828-2326, burke044@umn.edu

→ Shoreland Volunteer Workshops
May 7, 2005 – 8:30-4:30, Perham, MN, Perham Lakeside Golf Course
Contact: Will Yliniemi; 218-732-3391, ylini003@umn.edu

→ Introduction to Shoreland Revegetation
June 10, 2005 – 8:30-4:30, Detroit Lakes, MN
Contact: Will Yliniemi; 218-732-3391, ylini003@umn.edu

→ Shoreland Planting
May 21, 2005 – 8:30-4:00, Prior Lake, MN
Contact: Shanon Lotthammer; 952-447-4166, slotthammer@plslwd.org
June 4, 2005 – 8:30-4:00, Outing, MN
Contact: David Snesrud; 218-792-5824, snesrud@usfamily.net

→ How to Avoid Drowning in Lakeshore Development Workshops for Local Officials and Citizens
April 21, 2005 – Alexandria, MN, Arrowwood Resort
Contact: Minnesota Lakes Association; 800-515-5253, www.mnlakes.org

New for 2005!

Shoreland Erosion Control Workshop

What is the most common pollutant in Minnesota's surface water? Phosphorus, perhaps? Guess again! The answer is *sediment*! This pollutant costs us 16 million dollars annually, not to mention loss of personal shoreland property through erosion, its effects on recreation, and the damage to fisheries and wildlife habitat.

You may love your lake, but what are you doing to protect it against this pollutant? The University of Minnesota Extension is offering a new workshop this season: Shoreland Erosion Control for Property Owners on Friday, April 15, 2005, at the Nisswa Community Center, Nisswa, MN. The workshop will run from 8:30 - 4:30. The cost of \$35 includes refreshments, lunch and materials.

As its name suggests, participants will learn how to prevent or control erosion on their property and assist others in doing the same within their lake/river watershed. Participants will first consider those features of an undisturbed shoreland that minimize erosion. Next they will learn to recognize common erosion features of a developed shoreline and several strategies to correct these erosion problems. Finally, workshop participants will discuss appropriate strategies for specific sites. Strategies may include installing deep-rooted native plants, using simple bioengineering techniques (see erosion control brochure at http://www.shorelandmanagement.org/downloads/erosion_control.pdf), installing rock armor, or a combination of these. Included are detailed instructions for do-it-yourselfers (permitting, material sources, installation methods, and maintenance), as well as information on how to select a contractor, what questions to ask about the project design, and how to oversee an erosion control project so that it is done correctly—the first time!

This summer, do something good for your lake! And enjoy it! More information on this workshop and how to register can be found at: www.extension.umn.edu/water/shore/. ■

Identification of Curly Leaf Pondweed

Potamogeton crispus

Submitted by: Mary Blickenderfer and Eleanor Burkett, University of Minnesota Extension Educators

Curly leaf pondweed is an exotic rooted, submersed aquatic plant, similar in appearance to many native species of pondweed commonly found in Minnesota lakes and streams.

Identification

Curly leaf pondweed can be distinguished from other aquatic plant species using the following two attributes:

- 1) their leaves attach to the stem in an *alternate pattern* (typical of pondweeds), AND
- 2) the summer leaves have finely serrated margins (only found in curly leaf pondweed)

In addition, the leaves are very wavy and may be reddish in color, but these are not unique to curly leaf pondweed.

Habitat

Curly leaf pondweed is considered a deep-water plant, but will also colonize in shallow water. In a lake where it is dominant, it may start in 1 to 2 feet of water and extend out to depths of 10 feet or more. Because it can tolerate low light curly leaf pondweed grows well in disturbed sites and can grow under algae blooms or ice.

The strong rhizomes anchoring the plants into sediment allow curly leaf to grow in areas with strong wave action or streams with moderate velocity.

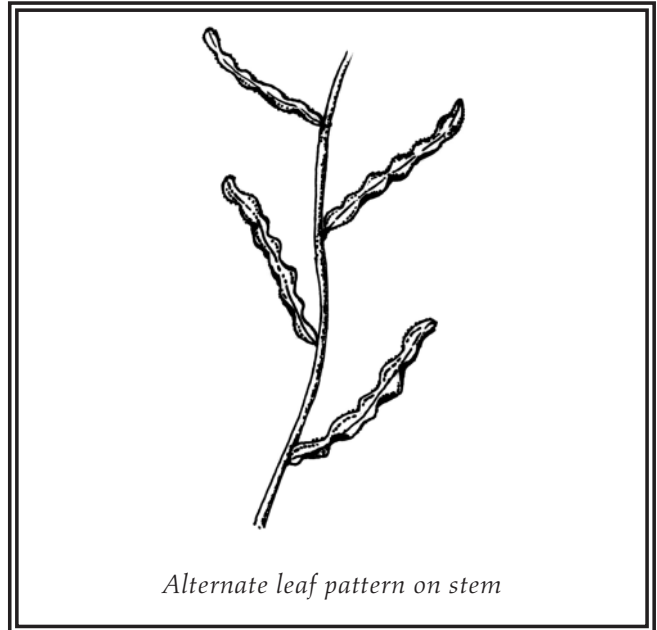
Life cycle

Curly leaf pondweed also has a unique life cycle, which gives it competitive advantages over many other aquatic plants.

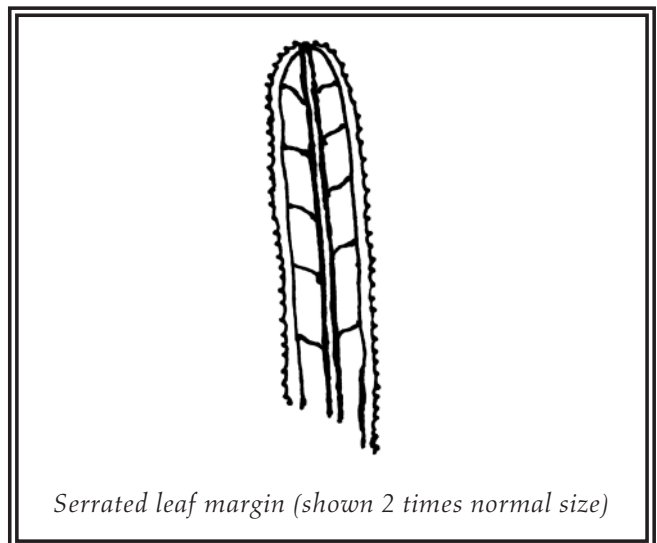
As the water cools in autumn, it sprouts from buds on small dormant stem structures (called "turions") lying on the lake bottom. The small winter plants remain alive under the ice and snow. When the ice melts and water temperature warms in the spring, it begins a period of rapid growth of summer leaves. Mats of these leaves may float at or near the water surface.

Later in the spring, flower spikes are produced that emerge above the water surface. By June, the fruits are mature on the stalks and drop to the sediment. The seeds in these fruits have very low germination rates.

Prior to dying back in mid-summer, curly leaf pondweed produces large numbers of small turions in leaf axes along its stem. When the parent plant dies, these living turions disperse by water movement, sink to the lake bottom, and



Alternate leaf pattern on stem



Serrated leaf margin (shown 2 times normal size)

lie dormant during the summer when other aquatic plants are actively growing. Reproduction of curly leaf pondweed is primarily through these turions. ■

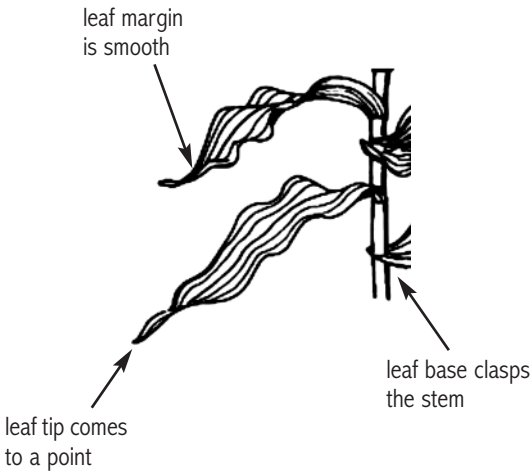
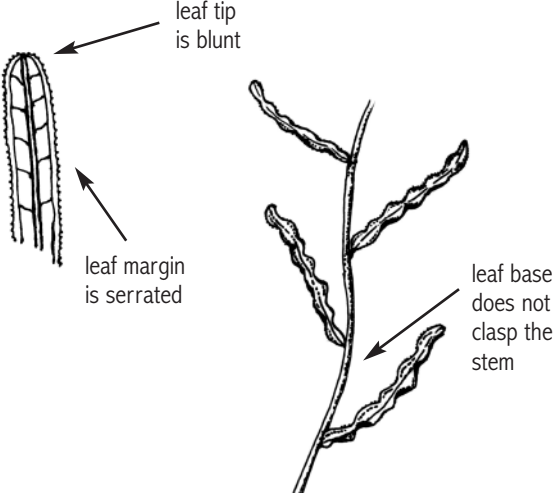
References:

Boorman, S., Korth, R. & Temte, J. (1997). Through the Looking Glass: A Field Guide to Aquatic Plant Management. Wisconsin Lakes Partnership.

Crowell, W. Curlyleaf Pondweed: New Management Ideas for an Old Problem. Minnesota Lakes Association Reporter 7:1.

Curly Leaf Pondweed Look-alike: *Potamogeton richardsonii* (Richardson's pondweed)

Compare Richardson's pondweed and curly leaf pondweed using these descriptions and illustrations below. Use this information to distinguish between these plants.

Richardson's pondweed <i>Potamogeton richardsonii</i>	Curly leaf pondweed <i>Potamogeton crispis</i>
<ul style="list-style-type: none">● leaf margin is entire (smooth)● leaf base clasps the stem● leaf tip comes to a point	<ul style="list-style-type: none">● leaf margin is serrated (toothed)● leaf base does not clasp the stem● leaf tip is blunt/rounded
 <p>leaf margin is smooth</p> <p>leaf tip comes to a point</p> <p>leaf base clasps the stem</p>	 <p>leaf tip is blunt</p> <p>leaf margin is serrated</p> <p>leaf base does not clasp the stem</p>

Weeds Are Winter-Worthy Study

Submitted by: Emily Wolf, Regional Extension Educator, U of MN Extension Service, (218) 998-5790, wolfx222@umn.edu

One hundred people got more out of this winter than snow shoveling. They attended Curly Leaf Pondweed Management workshops focused on aquatic plant ecology, curly leaf identification, management techniques, and local field experiences.

Lake association members, individual lakeshore owners, and others who attended possessed various levels of knowledge and experience with curly leaf pondweed. All attendees found a review of aquatic plant ecology and identification of this plant beneficial. Of particular use were the presentations of both mechanical and chemical plant management techniques. Advantages, disadvantages, and costs were described, which allowed each lake association or individual to choose the solution that best fits their situation. The workshops also gave participants a great opportunity to network with others tackling the curly leaf problem, allowing additional contacts to be made and

information exchanged. Overall, people gained a greater understanding of the complexity of curly leaf pondweed and that there is no "magic bullet" that will eliminate the need for control.

The workshop was a successful collaborative of multiple groups including the University of Minnesota Extension Service and Water Resources Center, MN Sea Grant, Initiative Foundation, MN Department of Natural Resources, and the MN Lakes Association. Several other organizations also played important roles such as the Sauk River Watershed District, Morrison County Planning and Zoning, aquatic plant management professionals and area lake associations.

Please visit the following Website, www.extension.umn.edu/water/shore or contact a Regional Extension Center for more information. ■

Lake Phalen Shoreland Restoration Walking Tour and Plant Guide

Submitted by: Bill Bartodziej, Ramsey Washington Metro Watershed District, bill@rwmwd.org, 651-704-2089

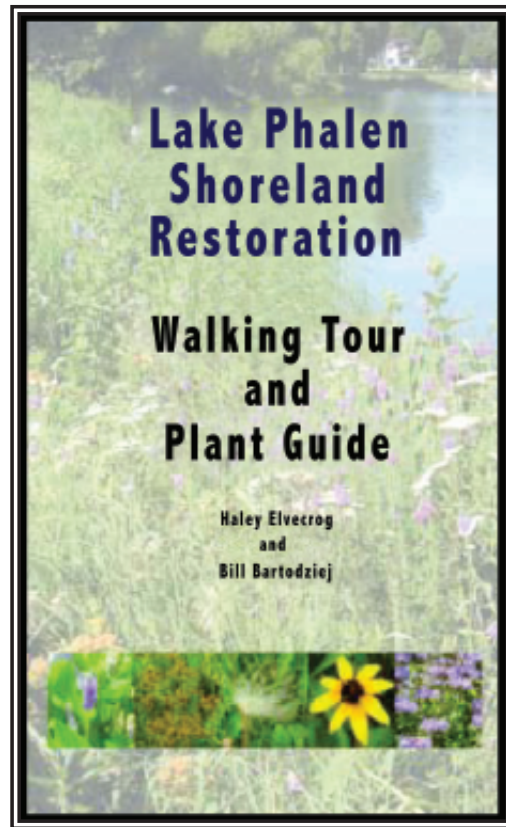
The Ramsey-Washington Metro Watershed District (RWMWD) is pleased to announce the release of our newest publication, the Lake Phalen Shoreland Restoration Walking Tour and Plant Guide. Co-authored by Haley Elvecrog, a University of Minnesota graduate student and Bill Bartodziej, watershed district natural resources specialist, this field guide details the shoreland restoration and common plant species found around Lake Phalen.

The ecological restoration of the Lake Phalen shore began in 2001. The goals of the project are to help reduce shoreline erosion, improve shoreline aesthetics, increase native plant diversity, expand fish and wildlife habitat, and to improve recreational opportunities. The project has also been a valuable educational resource for the local community – fourteen schools and over 1,500 students have participated. Park patrons now enjoy a multitude of beautiful views around the lake.

The guide contains two parts. The first section summarizes and illustrates each restoration segment in a walking tour format. The plant section contains over 250 high-quality photos of both beneficial native plants and noxious weeds. Close-up photos of plants at various life stages make this book useful to the wildflower enthusiast throughout the growing season. It also has a water resistant cover and coated pages to make it field-ready.

According to Jason Husveth, President of the Minnesota Native Plant Society, "Not only is this guide invaluable for learning more about the shoreland restoration of Lake Phalen, but it will be an extremely helpful resource for those interested in lakeshore ecology, restoration and management.

The Lake Phalen Shoreland Restoration Walking Tour and Plant Guide is available for \$10, including shipping, handling, and tax at the District office (2346 Helen Street, North St. Paul, MN 55109) or by mailing an order form with payment. Order forms can be printed from our Website, www.rwmwd.org. If you have questions please call 651-704-2089 or email: office@rwmwd.org. ■



The RWMWD is a grouping of five smaller urban watersheds (Phalen Chain of Lakes, Beaver Lake, Battle Creek, Fish Creek, and East St. Paul) that drain to the Mississippi River just downstream of downtown St. Paul. We are a special purpose local unit of government with a mission to protect and improve water resources and water related environments within its jurisdiction. For more information, you can visit our Website at www.rwmwd.org, or call our offices at 651-704-2089.

**Be sure to stop by our display booth at
the Lake Home and Cabin Show
Minneapolis Convention Center**

**April 29 –
May 1, 2005**

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www.shorelandmanagement.org



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