Minnesota Department of Natural Resources

Little Falls Fisheries Newsletter

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Curly-leaf Pondweed: Facts About an Invasive Exotic Species

Curly-leaf pondweed is not new to Minnesota lakes. Experts suggest that the plant was first introduced from Eurasia in the mid-nineteenth to early twentieth century. Existing in relative obscurity for decades, curly-leaf has come to the forefront in recent years, apparently due to an increasing presence of nuisance conditions on many lakes in Minnesota. Recent mild falls and winters with little snow cover may be responsible for greater presence of the plant. Currently, DNR data shows over 500 lakes in the state contain curly-leaf pondweed, although most infestations do not produce nuisance levels of the plant.

While curly-leaf pondweed looks similar to native submersed aquatic plants, its life history is quite different and gives it a competitive advantage over native plants. Mature plants form "turions" or "winter buds" in May and June. When mature plants die in July, turions lay dormant on the bottom of the lake. Turions then sprout in late summer and fall, become quiescent or slow growing in winter, and then take off in spring before native plants come out of dormancy. This competitive advantage allows curly-leaf to form nuisance dense mats in shallow water areas that interfere with recreational lake uses. These dense mats of vegetation can also restrict the growth of native plants. Mature plants usually die off in July and cause boating headaches as detached plants drift around the lake. Winds also pile the floating, decaying plants onto lakeshores where property owners must deal with the mess. Algae blooms may also occur as dying plants release nutrients to the lake.

Short term control of nuisance curly-leaf pondweed can be obtained through mechanical or chemical means. Mechanical methods include raking or cutting at the sediment level or harvesting the top few feet of the plants. Contact herbicides such as endothall or diquat can also provide control of the plant. These chemicals typically provide control within approximately two weeks of

A mechanical harvester cuts nuisance mats of curly-leaf pondweed on a lake.

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Northern Pike Harvest Traditions Need to Change

Old traditions die hard, and one of the slowest to die has been the releasing of small northern pike to supposedly, "let them grow up", and the harvesting of medium and large size pike. The fact of the matter is, there is no shortage of small northern pike in central Minnesota lakes. On most lakes, there is a harvestable surplus of small pike. For this reason, DNR Fisheries personnel strongly recommend that anglers and spearers harvest small northerns less than 24 inches. Harvesting a significant proportion of these "hammerhandles" can increase growth rates of remaining pike, reduce predation on other gamefish, restore preyfish abundance, and increase the proportion of large pike in the population. There are many other fish community benefits including better growth and size structure of bluegill.

Probably more important than harvesting small pike, is the fact that medium and large size northerns, those greater

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Important Information and Phone Numbers

- Little Falls Area Office: (320) 616-2450
- DNR Information and Licensing: (320) 646-6367
- DNR Website: www.dnr.state.mn.us
- Turn In Poachers Hotline: (800) 652-9093
- Exotic Species Hotline: (888) 646-6367

Curly-leaf pondweed wrapped around an outboard propeller. Care must be taken to remove plants from boats and trailers to avoid spreading exotics to other water bodies.

Curly-leaf Pondweed: Facts About an Invasive Exotic Species (continued from page 1)

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treatment. Chemical control can have negative impacts on valuable native plants. For this reason, a permit is required for all chemical applications. Properties where chemical permits have never been issued, require an inspection by an Aquatic Plant Specialist. Mechanical control in an area 50 feet along shore (or half the length of property owned, whichever is less) by 50 feet lakeward does not require a permit unless emergent (ie. bulrush) or floating-leaf (ie. water lilies) plants are present.

Long-term control of curly-leaf pondweed using chemicals is being researched. Aquatic ecologists have found that treatments with endothall compounds, as water temperatures near 60 degrees in spring, control plants prior to turion formation. These types of treatments, replicated over three to

"…a permit is required for all chemical applications."

five consecutive years, may reduce curly-leaf pondweed abundance.

On lakes with heavy infestations, it is often advantageous for a lake group to pool its resources to control the plant in nuisance areas. A lake group can write a Lake Vegetation Management Plan (LVMP) which is a joint plan drawn up by DNR and the lake group which addresses aquatic plant management issues. Private consultants may also assist with these plans. LVMP's try to balance the health of the aquatic plant resource with the needs of lake users.

For more information on aquatic plants, aquatic plant permits, aquatic plant restoration or LVMP's contact: APM Specialist Audrey Kuchinski at (320) 616-2450, ext. 235.

Northern Pike Harvest Traditions Need to Change (continued from page 1)

"Probably more important than harvesting small pike, is the fact that medium and large size northerns, those greater than 24 inches, need to be released".

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than 24 inches, need to be released. These larger fish have the ability to control the abundance of small northern pike and act as a top predator, adding stability to the entire fish community. In almost all cases where big pike are present and the overall northern population is low, prey fish populations (mainly perch) are healthy and abundance of other gamefish species are good.

Several lakes in central Minnesota have regulations protecting medium and large size pike. On these lakes, DNR Fisheries personnel still strongly encourage the harvest of small northern pike, but stress the importance of the careful release of medium and large northerns. These are the fish that anglers and spearers enjoy seeing attached to their line or through their spear hole. These are the fish that make memories. Take a good photo and carefully release these larger northern pike. Consider a graphite reproduction instead of a fish mount. If anglers and spearers do their part, hopefully it won't take as long in the future to have an encounter with a truly memorable fish.

Bluegill Management: Are New Limits Low Enough?

Big bluegills like this one are rare and being over-harvested. Anglers can help by keeping enough for a meal instead of an allowable limit.

The bluegill is one of the most popular angling targets in Minnesota. Prized for its fine table fare, scrappy nature and high availability to both boat and ice anglers, bluegills can receive intense angling pressure on many bodies of water. This can lead to over-harvest of "keeper" size bluegill (generally those over 6.5 inches in length) on popular panfish lakes. DNR Fisheries recently reduced the possession limit on bluegill from 30 to 20 statewide. Although this is a step in the right direction, it probably offers little help on lakes that receive high fishing pressure for this species. Anglers are usually the first to notice the effects of over-harvest as it gets harder to find keepers and more sorting is required to bring home a limit.

The fact is, a 20 fish limit is not adequate to protect bluegill populations on high pressure lakes. DNR Fisheries recommends that anglers "voluntarily" reduce the number of fish they harvest. Keep only enough for a meal, then practice catch and release. Consider not "gifting" fish to friends or neighbors. Also, remember that daily and possession limits are the same. By law, you must consume some or all of your possession limit before keeping more.

Shallow Lake and Wetland Management Becoming a High Priority

Shallow lakes, those typically not deep enough to support gamefish populations, have been overlooked by fisheries managers for decades. These lakes are extremely important to migrating and nesting waterfowl and other wildlife. DNR Fisheries and private aquaculture businesses also use these basins to raise fish for stocking or bait.

Several factors over the last dozen or so years have led to the deterioration of habitat and water quality in these basins. Wetland drainage, installation of drain tile, and ditching; coupled with an unprecedented wet period since the early 90's, have raised water levels in these shallow lakes. In addition, above normal precipitation has allowed undesirable fish species such as fathead minnows, bullheads, carp and hybrid sunfish to enter these basins. Recent mild winters have reduced fish winterkill frequency allowing these species to flourish. The end result has been lakes with turbid water and reduced aquatic plant and macroinvertebrate abundance. Wetlands in this condition are unattractive to ducks and are poor candidates for walleye rearing.

Little Falls Area Fisheries plans to work closely with Area Wildlife personnel in developing management plans for local shallow water basins that are also used for fish rearing. Effects of fish production on habitat, water quality and macroinvertebrate abundance will be closely monitored. Construction of draw-down structures and fish barriers, and the use of rotenone treatments to exclude or remove undesirable fish species, will be considered on many shallow basins. Hopefully, a renewed management emphasis on shallow lakes will improve the quality and attractiveness of these basins to waterfowl and other wetland wildlife, and increase our fish rearing capacity.

Waterfowl biologists have related a long term decline in lesser and greater scaup with the poor condition of shallow basins in Minnesota.

Photo courtesy of Ducks Unlimited

Proposed Redesign of Trace Lake Fish Barrier

Trace Lake, near Grey Eagle, has historically been an annual stop-over for thousands of waterfowl, especially diving ducks such as bluebills, canvasbacks and ringneck ducks. It also happens to be one of the most productive walleye rearing lakes in Minnesota with tens of thousands of pounds of walleyes produced there over the years. These walleyes typically end up in central Minnesota lakes and provide angling opportunities that wouldn't otherwise be available.

"This new structure will enable us to better manage the lake for both fish and wildlife".

Recently, however, the lake has become dominated by undesirable fish species, mainly bullheads and hybrid sunfish. This has led to a significant decline in macroinvertebrate abundance and waterfowl use. It has also reduced its value as a walleye rearing lake.

DNR Fisheries, DNR Wildlife, and Ducks Unlimited are currently working on plans for a new outlet structure on Trace Lake. This new structure would be designed as a high velocity fish barrier with drawdown capability. This will allow fisheries and wildlife managers to exclude fish from entering the lake and allow for periodic drawdowns to induce fish kills and rejuvenate aquatic plants. This new structure will enable us to better manage the lake for both fish and wildlife. Be alert for announcements for upcoming public meetings. Call Jim Lilienthal (ext. 225), or Beau Liddell (ext. 222) at the DNR office: (320)616-2450, for information.

Fish Trap Lake Walleye and Northern Pike to be Studied in 2005

Little Falls Area Fisheries personnel will be conducting a spring walleye and northern pike assessment in 2005. As soon as the ice disappears, trapnets will be set throughout the lake at presumed spawning sites for these two species. Northern pike typically spawn in shallow, weedy bays or run up incoming creeks, while walleye seek areas with hard-bottom sand, gravel and rock substrates. All netted northern pike will be measured, sexed, and scale sampled (for age determination) prior to release. This information will help us to monitor whether the 24 to 36 inch slot limit is improving size and age structure of the population.

The same information will be taken on all captured walleye prior to release. In addition, a caudal fin spine will be taken which is a more accurate way to determine age of older walleye. This will give us a good indication of walleye population size and age structure in Fish Trap Lake. It will also help us to determine the success of recent large fingerling stockings that have taken place on the lake. Length information will also be taken on all other gamefish and panfish caught. Preliminary results of this netting should be available in early summer.

An ice-out crew measures a large northern pike. Spawning pike and walleye are vulnerable to shallow trapnets at ice-out.

Minnesota Department of Natural Resources

Lake Management Plan Drafts Available for Comment

Management Plans for the following lakes have been revised and are available for comment:

Maple Lake
Fairy Lake
Big Swan Lake
Moose Lake
Long Lake (near Burtrum)
Mons Lake
Big Sauk Lake.

To request a copy of the draft revised management plan call the Little Falls Area Office at:

(320) 616-2450 ext. 225

Little Falls Area 2004 Stocking Detail

Lake/Stream	Species	Size	Number
L. Rock Cr.	Brook Trout	Yearlings	404
	Brown Trout	Yearlings	300
	Brown Trout	Adults	552
Platte Lake	Walleye	Fry	500,000
Lake Alexander	Muskellunge	Adults	294
Lake Alott	Walleye	Yearlings	272
	Walleye	Adults	36
Fish Trap Lake	Walleye	Fry	1.2 million
	Walleye	Fingerlings	30,551
	Walleye	Yearlings	16
	Walleye	Adults	52
Shamineau	Muskellunge	Adults	249
	Walleye	Fry	2.25 million
	Walleye	Fingerlings	28,055
Long (Burtrum)	Walleye	Fry	375,000
	Walleye	Adults	649
Mary	Walleye	Fingerlings	3,427
	Walleye	Adults	23
Pine Island	Walleye	Adults	513
Thunder	Walleye	Fry	300,000
Turtle	Walleye	Fingerlings	930
	Walleye	Yearlings	21
	Walleye	Adults	12

Little Falls Area 2005 Survey and Assessment Schedule

Lake Surveys and Assessments

Lake surveys are in-depth assessments of the fish community and habitat. Lakes scheduled for full lake surveys are:

Coal Lake	June 27-July 1
Pine Island Lake	July 4-8
Sullivan Lake	July 11-15
Big Lake	July 18-22
Dower Lake	July 25-29
Sylvia Lake	August 1-5
Mound Lake	August 8-12
Pine Lake	August 22-26
Lady Lake	August 29-Sept. 2

Ice-Out Netting

Ice-out netting targets northern pike, walleye, and black crappie. Lakes scheduled for ice-out netting include:

Big Swan Lake
Big Birch Lake
Mound Lake
Fish Trap Lake

Panfish Assessments

Target bluegill and crappie. Lakes scheduled for sampling include:

Pine Island Lake	Lady lake
Star Lake	Sullivan Lake
Pine Lake	L. Sauk Lake

Springtime Night Electrofishing

Directed at largemouth bass and walleye.

Star Lake
Pierz Fish Lake
Fish Trap Lake

Fall Night Electrofishing

Targets naturally reproduced walleye or spring stocked walleye fry.

Lake Alexander	Fish Trap Lake
Big Birch Lake	Little Birch Lake
Big Swan Lake	Little Rock Lake
Cedar Lake	Placid Reservoir
Sylvan Reservoir	