

The THOMPSON LAKE

OBSERVER

Spring 2008

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Olympia, the world's tallest snowwoman, casts her icy eyes from Bethel to Thompson Lake. (Photo Bob Tracy)

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PRESIDENT'S MESSAGE

This issue of the *Observer* goes to every land owner on Thompson Lake. We try hard not to miss anyone. This is our one chance a year to tell you about what should be *your* lake association. Of course, we're trying to entice you to join by mailing in your contribution. Just as important, we'd like your help in some of our projects.

There are several. First, this year we'll be launching our new "hippo" pontoon boat to speed up the removal of variable leaf milfoil around the lake. Put simply, the "hippo" operators will vacuum the weeds onto the boat (see also article on p. 3). Second, our Youth Conservation Corps (YCC) will continue to target areas producing nonpoint source pollution, that is, runoff through your yard or road that goes directly into the lake without being filtered through a buffer area. As in the past years, TLEA will pay for the YCC labor; you pay for the materials. What a great deal! Call us to find out more. Again this summer we will also run the Courtesy Boat Inspection program to educate boaters about removing plant fragments from their boats.

Our biggest educational components consist of Lake Day, the Hey You Cruise, and Scholarships to high school students. We'll be sponsoring Lake Day on May 28 this year at Agassiz Village, where about 150 fourth graders descend for a day long series of conservation activities. Extending that experience is the Hey You Cruise, which takes the students on a learning cruise on the *Songo Queen*. Finally, last year we awarded several \$500 book scholarships to worthy high school seniors and college students interested in environmental education.

It can't be all work. Here our fun component comes into play. At TLEA's annual meeting we always have an interesting presentation. The annual "I-Did-a-Paddle" invites you to paddle any floatable device from one end of the lake to the other, where lunch awaits the weary. And at the Pig Roast we eat and eat. To help you keep track of all this, we publish the *Observer* four times a year.

Yes, this volunteer group does work hard to keep your lake as pristine as it's been in the past. We wish you would join us in this effort. If you can't physically share in some of the above activities, still we hope you'll join our group financially by sending in your membership.

Tom Ray, Co-President

TLEA'S PONTOON BOAT TO TAKE ON MILFOIL

With the arrival of spring, TLEA is in the process of ramping up its milfoil management program. In case you haven't read some of the earlier *Observer* articles about this effort, variable leaf milfoil is an invasive aquatic plant that can quickly overtake native plants with its thick vegetation, thereby changing the use of the shoreline for years to come. Thompson Lake has become the unlucky nursery of this insidious weed that threatens several of Maine's lakes and ponds. To date, TLEA has had success in putting down benthic barriers (light-blocking tarps) in Edwards Cove and Otisfield Cove. However, it's becoming evident that the milfoil infestation is too large to control with benthic barriers alone.

Although the benthic barriers killed about 95% of the treated areas, our pool of volunteers to install these barriers was small, thus straining our resources to continue using them. With the number of infestation sites increasing and the existing sites expanding, we realized we needed to look at some alternatives for milfoil removal. Such programs started on Songo River, Sebago Lake, and Little Sebago Lake a few years before Thompson's. The volunteers there have discovered that the quickest, most effective method to remove milfoil is with a pontoon harvester system. Last season in Edwards Cove, two commercial divers removed by hand several thousand pounds of milfoil. It was this astonishing amount that pointed the need for a pontoon harvester. **Milfoil battlers on some of our neighboring lakes have harvested about one thousand pounds of milfoil a day.**

During the winter, TLEA directors and lakeshore representatives have been working hard on plans for our own pontoon harvester. We are pleased to announce that we forecast a mid-June launch date. At the heart of the harvester system is a vacuum pump, which is mounted on the pontoon boat. A diver in the water will use a four-inch vacuum hose to extract the milfoil and deliver it to a sluice box mounted on the boat. The sluice box separates the plant material from the water and packages it into fifty-pound mesh bags. A crew of three, headed by diver Rob McVety of Otisfield, will operate the harvester. Initially we will concentrate on heavily infested areas that experience moderate to heavy boat traffic. In the following years, we expect to reach smaller, more remote areas of infestation.

We initially projected the cost to be around \$25,000, based on 36 days of operational harvesting. However, the time it will take to achieve significant gains has been increased to 50 days for this season, with an associated increase in work hours per day. In addition, the workers compensation and liability insurance costs were double what we'd expected. Therefore, we've increased our cost projection to \$42,000 for this year. This sum includes the initial cost of modifying and outfitting the boat as well as the year's operational expenses.

While TLEA is committing extensive financial resources to this program, we need other sources of financial support. As in years past, we are looking to our neighboring towns for funding, and we are pursuing possible grants. Already both individuals and organizations have responded generously to our call for help. However, it's going to take even more commitment to sustain this critical program. If you're interested in contributing, or have fundraising ideas, please contact the TLEA office or Scott Bernardy at 878-5380, or email to drbinme@verizon.me.

We're also looking for volunteers to assist with picking up floating milfoil fragments generated during the harvesting process. If you own a kayak or other non-motorized boat and can spare some time to help, please contact Scott at the above number.

A final note: When you're out boating this summer on our beautiful lake, if you come across the pontoon harvester (yet to be named), we ask that you observe the red and white "diver down" flag and stay 250 feet clear of the harvesting operation. Thanks!



TLEA's milfoil harvester will look much like this when modified and ready to launch in June. The one pictured belongs to Lakes Environmental Association in Bridgton. Notice the kayaker whose job is to remove stray pieces of plants which the harvester has missed. A diver beneath the surface hand pulls and feeds milfoil plants and water into the suction hose that sends the material to the sluce box. On the opposite side of the boat, the sluce box separates the plant material from the water.

NAME THE HIPPO BOAT CONTEST

Here's a new chance to win instant fame and bragging rights! TLEA is announcing a new contest to come up with a snazzy name for its new milfoil harvesting pontoon boat, the same boat that Tom Ray has been calling the "hippo" (see President's Message on page 2).

This contest doesn't cost you a thing – just an email message to Tom at TLEA@fairpoint.net or a slip mailed to TLEA at P.O. Box 25, Oxford, ME 04270.

Closing date for the contest is June 1. Decisions by TLEA's panel of judges, headed by Tom Ray, will be final. We'll announce the winning name in the summer *Observer*.



Blake's Island, Otisfield Cove, early 2008 (Photo, Bob Tracy)

LAKE DAY 2008 GOES A LONG WAYS

Planning is already in high gear for this year's Lake Day, scheduled for May 28 at Agassiz Village, according to Sandy Roderick, coordinator of the event for the last several years. Sponsored by TLEA, Lake Day involves some 150 sixth-graders from schools in Oxford, Paris, Otisfield, and Hebron.

Lake Day is hardly a one-day stand. During the school year, Roderick explains, "our sixth grade curriculum includes units about water, protecting watershed, and marine animals. Our students learn about the water cycle and what a watershed is. Then the teachers proceed to teach them how to protect one."

On May 16, the students are off on staggered visits to the Gulf of Maine Research Institute. The Institute sends out what Roderick terms "real" buses to transport the students to Portland, where they are divided into teams to carry out scientific investigations using high tech research equipment. In this program, which is called "Mystery Fish," the students learn various ways to identify and study fish. Roderick says, "This is a wonderful way to connect our water unit to real life at a real job site." And the day comes free of charge to both the students and the schools.

Then on May 19 all the students involved in Lake Day will attend an entire day at Paris Elementary School. Called Pre-Day, this session mixes the students into their assigned groups which then participate in various environmental activities, including watershed models presented by DEP volunteers. On Lake Day itself, the student groups travel through a series of learning stations set up at Agassiz by volunteers who are expert on everything from soil types to bird identification.

Finally, in June the Lake Day students get to go on the "Hey You" cruise on Long Lake, with Paris Elementary School principal Jane Fahey as mastermind. This cruise involves ten volunteer actors on the river banks committing make-believe shoreland zoning violations.

If, after all this, don't be surprised if these sixth graders end up determined to solve all the environmental problems of the entire world!

THOMPSON LAKE WATER QUALITY REPORT, 2007

Scott Williams, lake biologist at Lake & Watershed Resource Management Associates in Turner, has submitted a preliminary report on Thompson Lake's water in 2007. He cautions that this is a preliminary report. Scott's final report will be sent to TLEA soon and, of course, will be available to anyone interested on request. It contains full details and graphs.

According to Scott, more extreme spring weather may have had an overall negative effect on Thompson Lake's water quality in 2007. **Heavy rain caused lots of watershed runoff, which is the most likely reason that the lake was less clear in the month of May than it has been for fifteen years.** In fact, the May water clarity reading of 5.7 meters (about 18.5 feet) was one of the lowest (poorest) readings for the lake since readings were first taken three decades ago in 1977!

Fortunately, conditions improved over the five month sampling period in 2007, but overall, the water was substantially less clear last summer. The average for the May-September season was 8.2 meters (about 27 feet), compared to 9.2 meters in 2006, and the historical average of 9.0 meters. In August, the lake was the most clear, at almost 10 meters (33 feet).

Phosphorus levels in Thompson Lake were actually lower than average in 2007, ranging from 5 parts per billion (ppb) in May, to a very low (good) reading of 3 ppb in September. The average of 4 ppb was only slightly lower than the historical average of 5 ppb. Asked to explain the relatively low phosphorus levels even with the heavy spring rains, Williams said that while he was not sure, he thought perhaps the phosphorus might be still clinging to the soil particles that had run off into the lake.

Many other measurements were made. Chlorophyll-a (CHL) levels were slightly higher than average, indicating that there was more algae in the water last summer. Highest CHL readings occurred in May and June and slowly declined during the summer. The concentration of dissolved oxygen (DO) is another important indicator of overall health lake. The oxygen loss in Thompson, even at the deepest depths near Hayes Point in Oxford, remained relatively high (good), even into late September. Additional water quality indicators, including pH, water color, and total alkalinity were monitored throughout the season. All were within the normal range of historical values for the lake. Williams has also monitored for *Gleotrichia*, a blue-green algae which has been increasing in some Maine lakes. At this time, he concludes, *Gleotrichia* concentrations in Thompson are very low.

SUMMIT CONSIDERS MILFOIL, BOAT STICKERS, AND MORE

The ninth annual milfoil summit was held on March 7 at the University of Maine in Augusta. Coordinated as usual by Peter Lowell, Executive Director of the Lakes Environmental Association (LEA), this year's well-attended event addressed several issues dear to the heart of lake organizations like TLEA: boat inspections, boat stickers, invasive plant identification, and milfoil mitigation. The delegates also learned of a possible federal grant for battling invasive aquatic plants.

Karen Hahnel of Maine's Department of Environmental Protection reported that cost sharing by the DEP has increased slightly for the Courtesy Boat Inspectors and plant removal programs. She noted that the list of Maine water bodies affected by invasive plant infestations has been reduced by one lake.

Adam Gormely of the Maine Warden Service said that in 2007 fifty-nine boaters were penalized by the courts for lack of the required boat stickers. This year the milfoil sticker fee remains the same, but the sticker will be part of the boat registration sticker, except for boats registered out of state. According to Gormely, on a given day there are between 36 and 41 wardens on duty throughout the state.

Roberta Hill, Director of the Maine Center for Invasive Aquatic Plants (MCIAP), stated that the Center, now in its fifth year, has trained 1,650 people in plant identification, and that 258 of them are certified as Plant Patrollers. Several workshops are planned for this season. Enthusiastic applause erupted at mention MCIAP's new *Field Guide to Invasive Aquatic Plants*.

Amy Smagula, Exotic Species Program Coordinator for the New Hampshire Department of Environmental Services, described a sophisticated survey undertaken in Lake Winnepesaukee to help identify water body characteristics susceptible to milfoil. The study seems to suggest that sediment content is more significant than the nature of the water column regarding the propensity for milfoil growth. She mentioned experiments using certain biocontrols, such as nematodes, and also work involving suction harvesting followed by replanting with native varieties of plants. For more information, visit <http://www.des.state.nh.us/wmb/ExoticSpecies/index.html>.

Scott Lowell, representing Little Sebago Lake Association, discussed a bill pending at the federal level to place an "earmark" on an appropriations bill for a very large amount of money to be used for combating invasive species. The proposal is too complex to outline here and will have to be addressed in another article at a later time.



A tough winter for deer: This mother plods through the deep snow to Sue Ellis' back yard in late winter. (Photo, Sue Ellis)

TLEA SUMMER EVENTS – Save the Dates!

July 19 I-Did-a-Paddle

August 2 Annual Meeting

August 16 Pig Roast

HELP CONTROL INVASIVE PLANTS!

There are many rewards from living alongside Thompson Lake. If you ask your fellow lake dwellers what makes Thompson Lake special, they most often mention its size, clarity, diversity of shoreline. It's hard to think this lake's at risk or threatened by much of anything. That's probably how those living near Pickerel Pond in Limerick, Maine, also felt at one time. Then their lake became inundated with hydrilla, a very aggressive plant species that in a short time had the pond looking more like a swamp choked with vegetation than a pristine body of water.

Invasive plants are probably the greatest threat we face today on our lake. If you enjoy living here and want to help ensure the health and quality of the lake for years to come, then *now* is the time to make a difference. If you're a swimmer with mask and snorkel, a kayaker or a canoeist, or a scuba diver, or none of the above but you want to help, then yes, TLEA can use you.

We are in our fourth year of patrolling the shoreline of Thompson Lake with a group of volunteers who help manage and protect our lake from invasive aquatic plants. We are still short-handed by at least five volunteers. Some of the important tasks we'll be undertaking in the new summer season are mapping existing locations of variable milfoil and monitoring for any infestation from new plant species.

If you have an interest in protecting the lake and can offer some of your free time (approximately two or three half days) this summer, please contact TLEA Environmental Committee Director, Scott Bernardy, at 207-878-5380, or drbinme@verizon.net. We look forward to working with you!

MILFOIL FACTS

The following data comes from the "Milfoil Summit Fact Sheet '8" published by the Lakes Environmental Association of Bridgton.

Number of Lakes Infested with invasive plants: 29 in 2006, 28 in 2007. (Great East Lake was removed this year from the DEP's list.)

Lakes and other waterbodies with milfoil inspectors: 75 in 2006, 76 in 2007. Thompson Lake is one of them.

Total number of invasive plants found: 1114 plants in 2006, only 1069 in 2007.

Number of Eurasian milfoil plants "caught" entering Maine lakes in 2007: one, at the public boat launch at Damariscotta Lake.

VOLUNTEERS SET TO SURVEY LAKE

Planning for TLEA's survey of part of the western side of the Thompson Lake watershed, set for April 26-27, began months ago. But recently several TLEA directors have been looking with some apprehension, first at the calendar, and then at the ice and snow surrounding the lake. As the April 26 date comes closer, the problem of getting volunteers' boots on the ground begins to be daunting. Roads may not be driveable; the lake may still have ice. But the chief organizer of the event, Kristin Feindel of Maine's Department of Environmental Protection, has suggested a little breathing room may be possible. "If we can't get the surveyors onto the sites on April 26," she said, "at least we can have the two-hour training session, which is going to be held inside." Let's hope Mother Nature yields a little space.

The purpose of the watershed survey is to search the entire area covered by the watershed, roughly from Otisfield Cove to the Casco town line, looking for problem areas that may be contributing nonpoint source pollution – soil erosion – to the lake. TLEA conducted similar watershed surveys in 1994-95 and 1999. The data from these surveys is now considered too old and out of date to be useful for groups like the Youth Conservation Corps to use.

Scientists have repeatedly argued that worldwide, soil erosion is the biggest pollutant threatening our waters. Erosion carries sediment and nutrients from the soil to the lakes and streams where it settles out, clogging habitat for fish and other aquatic life. Phosphorus, which is one of these nutrients, is the chief cause of algal blooms which destroy water quality. The TLEA survey, then, is intended to record such soil erosion sites.

On the day of the survey, six team leaders, all experts in this field, will lead our volunteers (numbering 14-20) into 6 different sectors in the watershed for further outside training in how to identify and record the problems. The data will be tabulated and later printed in a report, again with the assistance of DEP personnel.

TLEA has sent letters to property owners in the designated survey area asking them to let us know if they do not want surveyors to cross their property. The survey is not intended in any way to address shoreland zoning violations. If you are reading this before April 26 and can be a volunteer surveyor on April 26-27, please call Jim Bishop at 539-4445 or Jean Hankins at 539-2521. And let's hope that by then the snow and ice are only melting memories.

Visit our website at:
home.gwi.net/~tlea

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**The Thompson Lake
Environmental
Association**

needs you more than ever!

**Please mail in the enclosed
membership envelope to
begin a career of
responsible care of one
important Maine lake.**

TLEA is not dedicated to having fun on the lake. Our goal is to keep Thompson's water clear and clean. To do this we are engaged in:

- testing and measuring the lake's water quality
- surveying the watershed to identify nonpoint source pollution (erosion) problems
- fixing those erosion problems with the help of landowners and our own Youth Conservation Corps
- eradicating variable milfoil wherever it appears on the lake
- keeping watchful eyes out for any future invasive animal or plant species

All these activities are outlined in this Observer.

To keep it coming, and to help make a difference, join TLEA!