

The THOMPSON LAKE

# OBSERVER

Summer 2007

Issue No. 148



*Patriot's Day Storm April 19, washes most of Otisfield's Parkway Road into Thompson Lake. (Photo Jane Fahey)*

**TLEA ANNUAL MEETING**  
**August 4, 9 a.m.**  
**Kamp Kohut**

## PRESIDENT'S MESSAGE

What, you say, another presidential message from Co-president Sue?

As property becomes scarcer along our Thompson Lake shores, a strange thing is happening. People are paying a lot of money for houses and are then tearing them down in order to build much larger ones. This trend does affect our property taxes, something you and I will find out about when the towns do their next re-valuation. Fortunately, most of the new owners seem to have a genuine concern for the lakefront and the environment. And I expect that the new lake dwellers will love Thompson Lake as much as I do, and as much as all the old lake dwellers do. Welcome!

So, how about becoming active in our association? You don't need to be a director. We welcome those who can attend some meetings, bringing new ideas and helping with our activities. How about emailing your good lake photos to the editor of the *Observer*? How about contributing an article to tell us why you chose Thompson Lake? Or maybe letting us know if you have a service you could provide property owners? We know there's lots of talents on our shores, just waiting to be discovered and shared. Perhaps, just perhaps, you might even become TLEA president sometime in the future? Your TLEA directors are not an elite group but an eclectic mix of hardworking men and women, some retired and some not, all of whom share a love of and concern for Thompson Lake.

Do take part in our schedule of fun activities for the summer.

Signed by your **Co-President-for-the-one-year-term-I-agreed-to-going-on-five-or-six.**

**Sue Ellis**

## ICE OUT OCCURRED ON APRIL 23

At 9:24 a.m. on April 23, TLEA President Tom Ray announced that the ice was finally out of Thompson Lake. In his terse email on that date, Tom wrote, "The ice is officially out today. Yesterday the south wind pushed the ice north and blocked the Oxford end. The winner is Kathy Sahrbeck."

Congratulations, Kathy! And condolences to all of us who calculated the effects of global warming and incorrectly predicted an earlier date. But just to keep the record straight, since 1993, the ice has gone out on April 23 or later a total of **five times.**

## GREEN AND MURKY LAKE WATER?

In the middle of June, folks started commenting, louder than usual, that the lake was looking very green and murky. It's pretty obvious that water clarity is one good indicator of water quality. And water quality is important for so many reasons, including recreation, tourism, industry, home use, wildlife, and lakeshore property values. So TLEA takes very seriously its job of monitoring the lake's water. That job, however, is not as simple as it may sound.

Over 320 of our nearly 6,000 lakes and ponds in Maine receive regular water quality checks by more than 350 Volunteer Lake Monitors. These Monitors are trained and provided with the necessary tools. They must be certified, and recertified every three years, by the MVLMP (Maine Volunteer Lake Monitor Program). Funding for their work comes from the EPA, the Maine DEP, certain charitable foundations, and individual donors. Data collected by Monitors are then tabulated and analyzed by VLMP, along with other criteria.

On Thompson Lake, water clarity readings are usually taken at two-week intervals. Typically the Monitor attempts to select a consistent time of day, say mid-afternoon, when wind and sunlight conditions replicate those of previous readings. By using a hand-held GPS unit and a depth-fish finder, the Monitor is able to return to the same point in the lake. On Thompson, the reading is always taken slightly south of Hayes Point in Oxford, in 100 feet of water. After dropping an anchor to stabilize the boat, the Monitor then releases the Secchi disk, tethered to a tape measure, on the shady side of the boat. He then peers at the descending disk through a viewing scope. Just when the disk is no longer visible, the Monitor reads the marking on the tape measure at the water surface. That marking represents the maximum depth of the day's water clarity. The reading is noted on a form, along with other variable data such as time of day, sun conditions, and estimated wind velocity and direction. By season's end some seven or eight readings will have been made, and the form will be sent to MVLMP where professional staff, under the direction of biologist Scott Williams, will compile the data along with several more sophisticated samplings, including Phosphorus, Chlorophyll, color, conductivity, pH, and living organisms. All this data results in a comprehensive picture of the overall condition of the water body. By comparing such studies over a period of years, we can observe changes in conditions and better understand how people and the environment are affecting our lake.

*cont. pg 4*

To summarize, the 2007 readings suggest that, indeed, Thompson Lake waters were significantly more “murky” than during comparable time periods in the two preceding years. In his recent MVLMP publication, *The Water Column*, Scott Williams remarked that on several lakes he monitors in Western Maine, May readings for this year have been considerably lower than in the past, a fact he finds unsurprising given the spring’s heavy rains and unusual temperature fluctuations, with consequent shoreland erosion and road washouts.

Such disturbances introduce suspended matter into the lake and provide nutrients for algae and zooplankton. The density of these organisms, in turn, determines or affects the transparency of the water columns tested. Concentrations of algae and other materials fluctuate throughout the year. Typically, in the summer months as the water warms and the rains subside, water clarity improves. In early to mid-June, heavy pine pollen “blooms” cover many water bodies in Maine, creating even more murky lake water, as happened this year. This and a host of other complex natural phenomena affect water clarity, making it difficult to define the lake’s “normal” status. Again, observations need to be ongoing and based on good science.

Currently rated by MVLMP as the thirteenth best lake in Maine for water quality, Thompson is also recognized as an “at risk” lake because of its slow flushing rate (the time span required for all the water in the lake to be replaced, estimated to be about three years) and the extent of its shoreline development. That is why TLEA continues to work hard in the watershed to protect this beloved lake.

Table 1, below, offers a comparison of water clarity observations through the use of the tools and techniques just described, for 2005, 2006, and 2007 to date:

**TABLE 1: SECCHI DISK READINGS ON THOMPSON IN METERS AND (FEET)**

	Late May	Mid-June	Late June
2005	10.6 (34.7)	9.9 (32.5)	10.1 (33.1)
2006	9.5 (31.7)	9.0 (29.5)	11.0 (36.1)
2007	6.3 (20.6)	7.5 (24.6)	6.85 (22.47)

## MILFOIL BATTLE CONTINUES

Efforts to remove variable milfoil that is infesting several coves on Thompson Lake have resumed. Late in the summer of 2006, TLEA workers placed benthic tarps over infested areas in Edwards Cove and Otisfield Cove. By depriving the plants of sunlight, the tarps halt the photosynthesis process necessary for plant life. To do this the tarps must remain in place for six to eight weeks. They are secured to the lake bottom by steel rebar and heavy bags of crushed stone. While this technique appears very effective, it has some limitations. One problem is that milfoil doesn't grow in uniform squares or rectangular patches that conform to the shape of the tarps. Another problem is that the procedure is very work intensive, requiring a lot of time, manpower, and alternative strategies. Even worse, when the silt deposited during heavy spring runoffs, like this spring's Patriot's Day storm, weights down the tarps, the job of shifting or removing the tarps becomes very difficult.

Edwards Cove residents have pledged several thousand dollars to the milfoil eradication cause. That money, combined with a substantial contribution from TLEA, was used the week of June 24-29 to hire two certified divers from Vermont, Joe Carr and Jeff Powers, to hand pull and gather remaining clumps and fragments of milfoil. Joe and Jeff have more than five years' experience dealing with the more pernicious variety of Eurasian milfoil. The divers bagged and hauled off two pickup truckloads of plant material for safe disposal.

TLEA's Environmental Committee, directed by Scott Bernardy, will continue its work in Edwards and Otisfield Coves. Given adequate funding, it anticipates undertaking similar work in other parts of the lake where infestations have been noted. In the meantime, TLEA urges boaters to minimize their travel through those infested areas and to continue to monitor their watercraft, motors, and gear so that this invasive plant does not spread beyond its present scope.



*Professional divers Joe Carr and Jeff Powers retrieving milfoil from Edwards Cove, Otisfield. (Photo Bob Tracy)*

## SUMMER EVENTS AT THE LAKE

The **I-Did-a-Paddle** will happen on **Saturday, July 21, 9:30 a.m. to 12 noon** if the weather cooperates. The Fourth Annual Motorless Regatta will leave from the Thompson Lake Marina in Casco, at the south end of the lake, with registration preceding the 9:30 launch. Rain/wind date will be Saturday, July 28. Information regarding postponement of the event will be available on radio and television and by contacting the TLEA office at 539-4535. TLEA volunteers will provide a cook-out at the regatta's finishing point, Oxford's Pismo Beach. For more information, contact Sharon Rice, 998-2088.

**The TLEA Annual Membership Meeting** is slated for Saturday, **August 4**, at **Kamp Kohut** in Oxford. Come at 9 a.m. for the annual election of directors and stay for an **Audubon Society** guest speaker who will illuminate us about the ways of the lake's loons.

**The Pig Roast** (our second annual) will be held on Saturday, **August 18**, from 12 noon through 2:30 p.m. at Agassiz Village Camp in West Poland (Johnson Hill Road). Come feast on roast pig, corn on the cob, baked beans, potatoes, rolls, beverages, and dessert. Cost of this event is \$15 per adult. Children eat free! All residents of the Thompson Lake watershed and their guests are welcome to attend. Proceeds from this event, and from the I-Did-a-Paddle, support TLEA's programs. For more information, contact the TLEA office at 539-4535 or Tony Caggiano at 539-4864.

## BOOK SCHOLARSHIPS AWARDED TO FOUR STUDENTS

This year TLEA had an unusual number of worthy candidates for our \$250 book allowance. These scholarships, given in memory of former TLEA president and trustee Fred Peterson, are given each year to area high school seniors with an interest in environmental studies who are going on to college. This year the winners are:

Tyler Wax of Oxford

Skye Landry of Oxford

Josh Grenier of Otisfield

Christopher Wight, summer resident of Thompson Lake



*Steve Trombly from Maine IF&W blows salmon into Thompson Lake during Lake Day. (Photo, Kathy Cain)*

### **LAKE DAY AND CRUISE CELEBRATED BY 150 AREA STUDENTS**

On the perfect spring day of May 30, TLEA continued its successful Lake Day tradition by sponsoring a day-long environmental teach-in for 150 area elementary students, eight teachers, and at least fourteen adult volunteers. Once again the event was held at Agassiz Village in Poland, which has proved a congenial setting for several years past. Schools represented were Otisfield Community School, Oxford Elementary, Paris Elementary, and Hebron Station. Also present were volunteers from Maine Inland Fish and Wildlife, the Casco Fish Hatchery, the Department of Environmental Protection, the Mollyockett Chapter of Trout Unlimited, Androscoggin Soil and Water Conservation District, and, of course, TLEA.

The cover photo shows the day's highpoint, the moment when Steve Trombly from the Casco Fish Hatchery used a hose to shoot approximately five hundred salmon yearlings into the lake. Steve then explained the whys and wherefores of this activity. A similarly dramatic fish release occurred at last year's Lake Day, but only by coincidence. Henceforth it will be scheduled on Lake Day. After the fish release, the children rotated through a series of work stations. Among the more popular were *Droplets and Downpours*, in which students experimented

with a wet tennis ball, representing a rain drop, to see what kind of obstacle most effectively slowed its progress into the lake. At the *First Cast* station, students learned how to fly cast but also played Trivial Pursuits, using questions from the state's fishing rules booklet. At *Muddy Waters*, students listened to a story about polluting the lake. At the *Climate Change* station, students learned how changes in the date of ice-out on Thompson have been pointing towards global warming.

On July 11, the same 150 children got another healthy but fun-filled dose of environmental learning on the **Hey You Cruise**, also sponsored by TLEA. This involved a two-hour cruise on the Songo River Queen up and down Long Lake. Volunteers from the Lakes Environmental Association (LEA) in Bridgton were on hand to supply expertise. As in other years, the kids were challenged to identify environmental violators (actually actors) conducting harmful activities on shore. When they spotted guilty persons spreading fertilizer on the beach, or shampooing their hair, the boat load of kids was primed to yell "Hey You!" The LEA experts also demonstrated how to test lake water for oxygen and phosphorus.

Sandy Roderick, the Oxford teacher who bears overall responsibility – and credit – for Lake Day, noted that, as usual, this year's students were well behaved and had an enjoyable day. She also commented that Lake Day mixes students up with those from other schools and thus helps provide transition to relieve students' nervousness about moving up to seventh grade. Already planning next year's events, Sandy particularly thanks Lisa Gillis of Agassiz Village, where organizers hope to schedule the 2008 Lake Day.



*Unidentified transgressor fertilizes the lakefront and receives a "Hey You" shout from 150 students on the SongoQueen. (Photo, Jane Fahey)*

## INTRODUCING OUR BOAT INSPECTORS . . .

Risa Card, Zachary Downing, Gary Garcelon, Cecille Simmons, Ian Stauder, and Kara Woods are TLEA's Courtesy Boat Inspectors for this summer. Risa hails from Casco; Zachary, Cecille, and Kara from Otisfield; Gary from Oxford; and Ian from Paris. Two of them are veterans from last year. You may see any of these manning (or womaning) their posts at Casco's Thompson Lake Marina, the Landing in Oxford, and Pismo Beach in Oxford. Supervised by TLEA's Jim Bishop, each puts in about eight hours every weekend, checking boats entering and leaving the lake for hitch-hiking plants. They also check for boaters' compliance with the Maine sticker program and provide educational material to the boat owners.



*Risa Card, Courtesy Boat Inspector.  
(Photo Jim Bishop)*

## . . . AND YOUR YOUTH CONSERVATION CORPS

With TLEA's Joe Kiley again coordinating the YCC and Minty Gilman again serving as crew chief, we are pleased and fortunate to have veteran YCC members Tyler Wax and Chris Wight back again. Newcomers in this summer's workforce are Drew McClaren of Harrison and Cody Smith of Oxford. *See photo page 10.*

As most folks know by now, the YCC is willing to undertake erosion control projects anywhere in Thompson Lake's large watershed, subject of course to current demands for their services. While their labor is provided gratis, the landowner pays for all materials used. For free advice about solving your particular problem, give Joe Kiley a call at the TLEA office, 539-4535.



*YCC Crew 2007, L to R are Cody Smith, Chris Wight, Tyler Wax, Drew McLaren and Minty Gilman. (Photo Joe Kiley)*

## **ZOOPLANKTON AND THOMPSON LAKE**

**By Scott Williams, Aquatic Biologist**

Thanks to TLEA's efforts, much is known about the water quality of Thompson Lake, particularly historical data about its clarity and its levels of phosphorus, oxygen and algae. But there is one gaping hole in this historical data: Very little is known about a very influential group of little lake dwellers known as **zooplankton**. These have a direct bearing on water clarity and the lake fishery. Three years ago, TLEA agreed to participate in a preliminary study of zooplankton being conducted by Dr. Katherine Webster of the University of Maine in twenty-two Maine lakes. My own role has been to collect the zooplankton specimens for the study.

Zooplankton are tiny, abundantly-occurring animals that inhabit our lakes and ponds. Some of the larger "zoops" are visible to the naked eye, but most of the many different species are not. One of the largest groups is the **cladocerans**. If you look closely at a cup of lake water in a clear container, sometimes you can see one or

two of these tiny critters jumping around. The cladocerans are important in lake food webs or chains because they eat algae, and, in turn, some fish eat them. Because of their constant appetite for algae, they are sometimes called “lake cows.” The bigger the cladocerans, the more effective they are. In short, size matters.

Because the historical data for zooplankton are limited, several years of collection and analysis may be required. But based on *limited* analysis to date, about all that can be concluded at this time is that the size of the cladocerans in Thompson may have a bearing on the lake’s exceptional clarity. Interestingly, the average size of the cladocerans in Thompson matches those of nearby Kezar Lake and Lake Auburn, both of which also have very good water clarity.

By adding zooplankton sampling to TLEA’s comprehensive annual monitoring, we hope to improve our understanding of the complex interaction of forces that results in the exceptional water quality of the lake. Ultimately, that information will be used to support ongoing efforts to protect this exceptional water resource.



*Patriot's Day flooding of Frog Brook on King Street, Oxford.  
(Photo, Tyler Wax)*

Visit our website at:  
[home.gwi.net/~tlea](http://home.gwi.net/~tlea)

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