

# President's Report by Donna Danis

Last June, I joined Tom Duffy as Co-President of the PLIA and what a year it's been. I've gained new appreciation for some folks I've known for over a decade. I've made wonderful new friends and I am awed by the energy of people who truly think globally and act locally. And, yes, I've learned that this job really is big enough for two people.

### Some of the highlights of the past year, include:

- Pawtuckaway's volunteer water sampling team received an "Excellent" rating on sampling procedures and techniques by the NH Dept. of Environmental Services (DES). We are fortunate to have such a dedicated and thorough team devoted to this task.
- OUR WEBSITE, www.pawtuckawaylake.com, has become a valuable community focal point. Thanks to the hard work of our volunteer webmaster, you can visit the site to stay informed on water quality issues, to experience Pawtuckaway Lake of the past, and to see photos of the boat parade, Campfire night and other community events.
- The **Pawtuckaway Kids Club** was launched and thanks to the musical talents of my cohort, at least 40 kids (and their parents), now have the words "don't pee in the lake" stuck in their head. At this year's annual meeting we're also launching the first Annual Kids Meeting.
- The **PLIA** is joining forces with the Nottingham School and **DES** to provide lake ecology education for fifth grade students. On June 4<sup>th</sup>, 60 fifth graders will visit Pawtuckaway State Park to learn about lake water testing, tributary sampling, and our watershed. We hope to make this an annual event.
- Over 60 lake and town residents completed the **Department of Safety boater certifi**cation class sponsored by the PLIA. Hopefully, we'll all remember what we learned from Officer Mulligan and the lake will be a little bit safer this year.

While all of the volunteers who drive these programs deserve a hearty round of applause, Tom and I would like to acknowledge the accomplishments of one individual. For several years, **Celeste Schmitt** has served as the Coordinator of Pawtuckaway's Lake Host Program. This is a very important program because it is our first line of defense against exotic weed infestation. Celeste has spent numerous hours organizing the volunteers, preparing documentation to ensure that we receive co-funding from the New Hampshire Lakes Association, and even manning the launches herself. **Thank you, Celeste**, for **ALL** of your service. Thank you also to **Andrea Lawson** who has answered the call to be our new Lake Host Coordinator. Andrea is currently organizing the summer schedule and it's not too late to become part of her team.



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# JOIN THE PLIA EMAIL NOTIFICATION LIST

This list is for PLIA use ONLY. We send out notices regarding upcoming monthly meetings, special meetings, upcoming events, Town issues, etc. YOU MUST BE A PAID MEMBER. Send your email address to ddanis@comcast.net and we will add your name to the email; and If you already are on the email notice list and have changed your email address please send the corrected address to ddanis@comcast.net.

Johnson

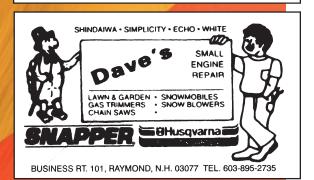


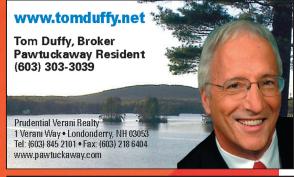
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Hopefully, by the time you read this, spring will have finally arrived and we will be looking forward to our summer of fun. If you enjoy spending time on Pawtuckaway, please become active in the PLIA. To learn more about specific volunteer opportunities, email **volunteer@pawtuckawaylake.com**, or talk to Tom or me at the annual meeting on June 2nd. If you wish you could help, but simply don't have the time, please consider joining the PLIA at one of our new membership levels, which are designed to help fund educational programs, such as the Pawtuckaway Kids, school field trips, and the Lake Host program. See page 7 for a complete description of our new membership levels.

I hope to see you at the Annual Meeting on June 2nd.

# **Annual Meeting**

Date: June 2, 2007 Time: 9am-12 noon

Place: Nottingham School



We will have a chance to learn more about living on the lake and recent PLIA activities.

The Women's Club of Nottingham is providing refreshments to benefit their scholarship fund



(great pastries for breakfast-be generous!) There will be information on water testing, fishing, wildlife, the Lake Host Program, our website, and several new projects and grants we have received.

Using last year's popular format, we will have an opportunity to discuss our concerns with the Town Panel including Fire, Police, and Marine Patrol. Another Panel including State environmental people will discuss the larger issues of water quality. The meeting will end with a raffle where many prizes will be won. You might be the winner of a new KAYAK!

# **About the PLIA**

The Pawtuckaway Lake Improvement Association is a private, nonprofit association formed to monitor and act upon environmental and safety issues in the Pawtuckaway Lake watershed area and other issues of concern to its members. The Association routinely conducts water sampling under the New Hampshire Volunteer Lake Assessment program of the State of New Hampshire Department of Environmental Services.

# **PLAC GRANT Progress Report**

## by Tom Duffy

In 2005 a new relationship was forged between the Town of Nottingham and the PLIA, resulting in a new town committee titled the Pawtuckaway Lake Advisory Committee (PLAC).

In 2006, under PLAC, the Town received a \$30,000 grant that will benefit the Pawtuckaway watershed. The grant is a **Watershed Assistance and Restoration Grant**, funded through the NH Dept. of Environmental Services (DES).

In October 2006, Geosyntec Engineering was hired by the DES to perform the study and design work.

We toured the shoreline of Pawtuckaway viewing trouble spots where direct runoff was adding sedimentation and unwanted nutrients. Among the worst offenders were the boat ramps and beach areas of private associations. These often get more traffic and use than private properties, and little maintenance is performed.



Erosion feeds algae and plant life and destroys habitat.

The goal of the work is to **reduce excessive phosphorous loading** through tributaries and **direct runoff**. Phosphorous is a nutrient that feeds algae and plant life. **It is found in soaps, fertilizers, and decaying matter like leaves.** Storm water runoff from tributaries and individual properties wash this nutrient into the lake. Under the grant a watershed based plan will be developed and best management practices (BMP's) will be designed and implemented.

This will include native vegetation buffer plantings, stream bank stabilization, vegetated swales along lake roads, and stormwater detention/infiltration areas within the watershed.

The outcome will be better management of our landscape and the education of watershed residents. Ultimately, **this will reduce algal blooms and help eliminate Cyanobacteria** to meet state water quality standards.

# The money will be used for the following goals:

- 1. Develop a Waterfront and Watershed Property Owner's Guide for residents and developers.
- 2. Up to three properties will be selected to model these landscape techniques and demonstrate Best Management Practices.
- 3. Signage will be placed within the watershed, posting the watershed boundary.
- 4. Before and after digital photos will be taken of all landscape and road projects.
- 5. PLAC will present their findings at the DES Watershed conference upon completion of the projects.

Therese Thompson of the PLIA and Mary Bonser have been the driving force behind these projects. Mary Bonser is the Selectman Representative on PLAC which also currently includes: Tom Duffy, Jack Caldon, Peter Gylfphe (Planning Board member), Dave Fernald, Jeff Boucher (State Park), Judy Doughty, and Bob Mooney. A copy of the final grant document is available at www.pawtuckawaylake.com.

## MARK YOUR CALENDARS!

# **PLIA COMING EVENTS**

### SATURDAY, MAY 19

Lake Host Training, Concord 1:30-4:30 PM

### WEDNESDAY, MAY 23

Lake Host Training, Concord 6-9 PM

### SUNDAY, MAY 27

Lake Host Training, Concord 1-4 PM

# SATURDAY, JUNE 2

**Annual Meeting** 

## MONDAY, JUNE 4

PLIA/Nottingham School 5th grade field trip

### WEDNESDAY, JUNE 6

Lake Host Training, Concord 6-9 PM

## WEDNESDAY, JUNE 13

Lake Host Training, Concord 6-9 PM

### WEDNESDAY, JUNE 20

Lake Host Training, Concord 6-9 PM

### SATURDAY, JUNE 30

Lake Host Training, Concord 9 AM-12 noon

## WEDNESDAY, JULY 4

Annual Boat Parade

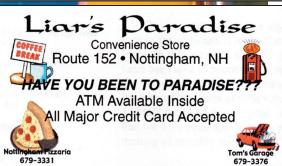
## SATURDAY, AUGUST 25

Sandcastle Day

### TBA:

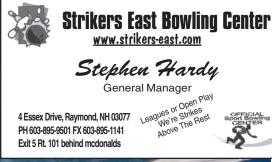
Second Annual Campfire Dinner 1st Annual Paddle Day











# **Pawtuckaway Kids!**



By Lauren Chaurette
Pawtuckaway Kids Coordinator

Get your kids involved in preserving Pawtuckaway Lake!

It's easy to do. Have them become a **Pawtuckaway Kid.** The Pawtuckaway Kids group was formed in 2006 as a way to involve the kids around the lake and

throughout the Nottingham community with activities on and around Pawtuckaway Lake. The focus of the group is fun, however educating the kids about the importance of preservation and care of the lake is the underlying goal. Our activities last year included the **1st Annual Campfire Dinner** where neighbors and friends gathered to share a meal. The kids were taught the famous "Don't Pee in the Lake" song which emphasizes why it is important to protect the water we swim in and that wildlife inhabits.

Our very successful **Sandcastle Day** was held in conjunction with the Town of Nottingham Recreation Department and took place at the town beach. The day included a picnic lunch provided by the PLIA in a keepsake sandbucket for each child. After lunch the kids played vari-

ous games in and around the water and built sandcastles and other interesting structures. PLIA president Donna Danis gave a talk about the importance of the kids helping out with keeping the lake clean. She then led them in a rousing

rendition of "Don't Pee in the Lake" which was heard for miles!!!!

Our activities lined up for the summer of 2007 include the **2nd Annual Campfire Din-**

ner, Sandcastle Day, Paddle Day (kayak and canoe trip around the lake) and others to be announced. At each activity we will have an educational ses-







sion geared toward the kids. We are always looking for ideas and volunteers!!!! Check the PLIA website for scheduled activities. You can also email me directly at tucklake@comcast.net with any suggestions you might have for a fun and educational activity or to volunteer to help out. You can also catch me at the PLIA Annual Meeting scheduled for June 2nd where we will be offering supervised kids activities so that parents can participate in the meeting.

While every effort has been made to ensure the accuracy of the information contained in this publication, we apologize for any errors that do occur.

# **Annual July 4th Boat Parade**

# By George Voltz

It's never too early to start thinking about how you can decorate your boat for this year's Boat Parade. This year's pa-

rade will be on Wednesday, July 4<sup>th</sup> at 10:30 am. We will start gathering down by the twin islands leading into Fundy Cove and the parade will start shortly thereafter. Carol and I



will be leading the parade this year, so please fall in behind our boat. Watch the PLIA website for updates on the parade, plus be sure to attend the PLIA Annual Meeting to receive a copy of the route.

# **UNH Publishes Plankton Study**

# by Tom Duffy

## A quote from the study:

"Pawtuckaway Lake is sensitive to nutrient perturbations, such as an increase in runoff because of its extensive shallow areas, overall small mean depth and summer oxygen deficiencies at the two deep sites (North and South). The increase of nutrients, especially phosphorous and nitrogen, are amplified through their recycling from the lake sediments. During this study a surface bloom of toxic cyanobacteria (blue green algae) appeared at the Fundy site in late May, indicating that problems of cyanobacteria blooms are transient and not limited to the summer and fall.... It is noteworthy that toxic cyanobacteria appeared at all three sites with levels of the liver toxin microcystin exceeding drinking water standards as recommended by the World Health Organization at the North site on July  $21^{st}$ ..."

With funding from the PLIA, the Town of Nottingham and the Merrimack River Conservation Initiative, University of New Hampshire completed a study (Summer 2005) to evaluate the lake water quality and plankton communities. The study was undertaken because there may be a link between the introduction of alewives as a bait fish into Pawtuckaway and the increase of blue green (toxic) algae and other algal forms in recent years. Simply stated, alewives and other baby fish eat zooplankton. Zooplankton consume algae. Increased baitfish may decrease plankton, thus increasing algae.

The study can be reviewed at **www.pawtuckawaylake.com**. It is also available at the library. We are planning to have Dr. Haney and Jessica Trout Haney speak at a separate event later this year to discuss their research. Such studies attract the attention of the scientific community and can enable us to receive funding for further studies.

# **2007** Lake Host Program

The PLIA will be participating in the Lake Host Program again this year and we want to **welcome Andrea Lawson** as our new Lake Host Program coordinator.

Wouldn't you like to be able to say "I saved Pawtuck-away Lake"? Well, now you have your chance. The spread of exotic species of lake weeds is ruining lakes all over New Hampshire. Over 50 Lakes in New Hampshire have already been infested. In shallow, nutrient rich lakes like Pawtuck-away Lake these weeds can spread in as little as one year. These weeds can grow up to 20 feet in length and multiply until they fill the lake.

What is the PLIA doing about it? The State of NH Dept. of Environmental Services, the NH Lakes Association, and the PLIA have teamed up to combat exotic weeds through the Lake Host Program. This program provides funding, training, and laboratory services for exotic weed detection and prevention. The PLIA must find a combination of paid and volunteer help to do boat inspections at Pawtuckaway's two public boat ramps. These trained personnel examine boats and trailers before they launch to check if they are carrying one of the 14 dangerous species of exotic weeds. If a weed is found, it is removed, bottled, and sent to the DES lab for analysis. Last year, there were 54 samples positively identified as exotic species on 12 different lakes in NH. If



TIM Schmitt inspecting a boat, Summer 2006

those boats had launched, by this summer the infestation would have begun.

So, what can you do to help? The PLIA is actively looking for volunteers to help join the Lake Host Program. For the last 5 years a small group of volunteers have put in ALOT of hours of service monitoring our boat ramps.

This year we are looking for ALOT of volunteers to put in a small amount of hours of service. The PLIA is eligible for \$6,000 of grant money to fund the program but, only if we provide matching dollars or volunteer hours. **Every hour a volunteer puts in equals almost two hours of grant money.** 

Even if you only have a few hours available, whether morning or afternoon, weekdays, or weekends, you can make a big difference in our lake's future. Bring your kids, bring your grandchildren, bring a picnic. Enjoy meeting some of the wonderful people who visit our lake and help educate them on the dangers these exotic species pose to everyone's enjoyment of our lake.

**ACT NOW!** Free Training is available in May and June, no commitment is necessary. If you are interested please contact Andrea at alawson14@comcast.net or call 488-2414. **Help your friends and neighbors Save Pawtuckaway Lake!** 



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# **Pawtuckaway History Project**

# by Jeff Gurrier

The mission of the Pawtuckaway History Project is to interview longterm residents of the lake and capture their memories of how the lake and its community have developed and changed over time. The following quotes are excerpts from many of the wonderful people I have interviewed over the last year. Their full interviews can be found on the PLIA website at www.pawtuckawaylake.com.

"I first came up in the 1930's; I grew up in East Boston. So, being a city boy, this was really God's country. To me, this place was another world. It was hidden away, nobody knew about it. There were no buildings at all—it was wilderness. The deer used to come down to the water here and bears too. Every night you'd hear the coyotes.

"One evening we were sitting around and our dog Penny came home with a fully cooked chicken in her mouth. We never figured out whose dinner that was. We didn't advertise it but we would have fessed up if someone had mentioned it." - Joe Boudreau

"In the old days having a camp on a lake in New Hampshire was a workingman's vacation. It was a lot of work but it was a different kind of work than you did all week. If you were up here doing it then it was because you didn't mind working. It was the same thing for everybody." - Henry Musial

"People don't realize how small the lake was before the manufacturing company started to raise the water level in the mid 1930's. The

company was so desperate for water one year that they blasted in the South Channel, over by the camp 'Calitaday', to bring more water into the Doloff side. After they raised the water level, in the springtime the water came right up to the house.



Boating on Pawtuckaway Lake, 1937

The water was so high, all I had to do was open the front door and I could cast a line out and fish from there. By the end of the summer the water would be a good 60-70 feet out from the shoreline. During the summer they would slowly drain the water down to power the mills in Newmarket." - Charlie Soroko

"I think our biggest challenge is education. How do you enjoy the lake without ruining it? Like any ecology, if it is overused it is going to develop problems. You have to learn to deal with the growth. People can't afford to just have a good time on the lake without being responsible for what goes on. I don't think that as a whole people are any different than they used to be, it's just that there are so many more of them. Every little thing people do that effects the lake is being done by a lot of other people, it all adds up, nothing is insignificant." - Joan Lukens

# MEMBERSHIP

The PLIA has been ramping up its events and services over the years and has managed to stay within its limited budget. Recently, a number of important environmental and educational initiatives are straining our resources. For close to 20 years the PLIA membership dues have been \$10 a year. While the \$10 membership level is still an option, this year we are introducing a new structure for dues to help cover the cost of some significant additional initiatives.

Increasingly, government support for environmental, conservation, and educational programs is taking the form of matching grants. **The PLIA must provide large amounts** 

of volunteer hours and/or matching dollars to be eligible for government funding of these initiatives. Our members have very busy personal and professional lives and we are finding it increasingly difficult to accumulate enough volunteer hours to cover the PLIA's share of these match-



ing grants. Therefore, we need to make up the difference with dollars brought in by membership dues.

Members now have the option to **join at one of three dif-ferent levels**. Each level helps support additional conservation and community services. If you care deeply about these programs or you don't have the time to volunteer, joining at a higher level is a way for you to show your support. You can still join at the traditional \$10 per year or you can help fund these important expanded services.

**\$10 - Basic Membership Level.** This membership level covers the cost of the basic services the PLIA has provided for the past 15 years.

- Water Quality Testing Program
- PLIA Annual Meeting
- PawPrints Newsletter
- PLIA mailings
- Road & Island Cleanup Supplies
- PLIA contribution to NH Lakes Association, and other conservation affiliations

**\$25 – Community Membership Level**. This membership level, in addition, supports kids, educational and community programs.

- Pawtuckaway Kids Programs
- Community Events (ie. Campfire Night)
- Pawtuckawaylake.com Web Site
- Boating Safety Programs

**\$50** – *Conservation Membership Level*. This membership level, in addition, helps fund the environmental and conservation initiatives that are protecting our lake for future generations.

- ◆ Lake Host Exotic Species Prevention Programs
- Weed Watchers Program
- Conservation Programs (ie. non-point source pollution/run off grant)
- Environmental Studies (ie. UNH Alewife Study)
   National/State/Local matching grants

# Please invest in the future of Pawtuckaway Lake by becoming a member today! Mail your check to: PLIA, PO Box 30, Raymond, NH 03077

Membership	<b>Application</b>
Name	I have enclosed a check for:
Mailing Address:	□ \$10 Basic Membership Level
	□ \$25 Community Membership Level
City State Zip	— □ \$50 Conservation Membership Level
Lake Address:	<ul> <li>Please check your preference for receiving Pawprints:</li> </ul>
Telephone	_
Email	■ Emailed PDF file (Choosing the emailed PDF copy saves the PLIA significant printing and postage costs)
Thank you for your support!	☐ <b>Printed</b> copy - US Mail

### PAWTUCKAWAY WILDLIFE

# **Pileated Woodpeckers**

## by Jeff Gurrier

There is something prehistoric about Pileated Woodpeckers. They have an exotic appearance that reminds me of Pterodactyls. Sightings are so infrequent that I'm always surprised and fascinated when I have a chance to see one. As the sun comes up on the lake you can hear them declaring their ter-

ritory by drumming on dead trees. The hammering drumbeats and eerie, laughing call carry over the water adding an air of mystery to the morning.

Pileated Woodpeckers eat mostly insects such as carpenter ants and beetle larvae that live under the bark or in the trunks of old, dead, or dying trees. Due to the young age of the trees in secondary forests like Pawtuckaway State Park, Pileated Woodpeckers need between 1,000 to 4,000 acres of territory to survive. Since



photo by Jeff Gurrier

Pileated Woodpeckers mate for life and stay together all year round, the forests surrounding the lake only support 2 or 3 breeding pairs. This small population accounts for the rare sightings. Because they don't migrate, you are more likely to spot one in the winter due to the diminished human activity in the State Park.

To reach their food, Pileated woodpeckers chip away the bark and dig large, roughly rectangular, holes in trees. The

holes can reach 4-5" wide by 1 foot long, severely weakening small or dead trees. Pileated woodpeckers hammer at a force up to 1,200 G's, which is equivalent to hitting a wall at 16 mph. They strike up to 20 times per second and do this up to 12,000 times per day. They have an amazing physiology to support this daily beating.

A Pileated Woodpecker's skull is reinforced with spongy bone to help absorb the shock. They have a thick muscle at the base of the beak that tightens just before striking which cushions the blow and redirects the force of the impact to the back and base of their head. Milliseconds before striking, a thickened membrane covers their eyes, protecting them from flying wood chips and, quite literally, keeping their eyes from being knocked right out of their head. Their tail feathers spread wide and press hard against the tree to provide a damping for the recoil of striking the tree.

Even more fascinating, a Pileated Woodpecker's tongue is so long that it wraps around their skull. It is anchored at the base of it's bill, runs up the back of the skull, over the top of the head (under the skin), and down into the nasal cavity. It is believed that the soft, spongy tongue actually protects the skull during hammering by absorbing some of the impact.

This extraordinary tongue is also really useful for getting dinner. It is so long that it can extend up to 4" past the end of the Pileated's beak. The tongue is sticky, splits in two, has barbs on the ends, and is very sensitive. This allows the tongue to be inserted deep into holes in trees feeling for insects. The insect will either stick to the tongue or will be hooked by the barbs on the tongue before being pulled out of the hole.

If you have the good fortune to spot a Pileated Woodpecker, take a moment to watch them carefully. Every aspect of their physiology is designed to support them at work. They are a wonder to behold.

15TH ANNUAL

# Pawtuckaway Open Charity Ice Golf And Chili Competition

FUN, FUN, FUN... but oh so Chili! Ninety golfers tee'd off and 20 chefs competed for the coveted chili pot. In all, an estimated 200 people turned out for the event to golf or just socialize by the fire and enjoy over 20 varieties of chili. Participants came from as far away as New Jersey and North Carolina to attend this annual event. This year over \$4,200 was raised for New Hampshire-based Families in Transition bringing the seven-year total to \$20,828. Kudos to Donna and Eric Danis and all the volunteers that keep this event better than ever!

Congratulations to this year's winners: Colleen Gagnon, Women's Golf Trophy Jim Zellers, Men's Golf Trophy Donna King, Chili Champ

### MARK YOUR CALENDAR

15th Annual

Pawtuckaway Open Charity Ice Golf & Chili Competition FEBRUARY 2, 2008

**An All New Course!!** 



