THE LAKESIDER

Newsletter of the Greater Pushaw Lake Association, serving Pushaw Lake and Little Pushaw Pond

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INVASIVE PLANTS: WHAT CAN WE DO? by Rich Dressler

Right: Eurasian water-milfoil infestation in Scarborough, Maine. Photo credit: Don Cameron/Lake Stewards of Maine website.

GPLA is working closely with Lake Stewards of Maine (formerly known as VLMP) to address the potential for invasive plants in our lakes. The **Invasive Plant Patrol (IPP)** program promotes prevention, early detection and rapid response at the local level, by providing training, educational materials, resources and technical support to groups and individuals throughout Maine. To date, thousands of individuals (volunteers, state agency personnel, water quality professionals, teachers, students and others) have participated in IPP workshops. The IPP 101 workshop teaches participants how to recognize the invasive aquatic plants on Maine's "Eleven Most Unwanted" list, and how to distinguish these invaders from their native Maine look-alikes. More advanced training opportunities include native water plant identification, manual control methods to eliminate small infestations, and other helpful and informative workshops. **GPLA is currently working to get more volunteers on Pushaw Lake and Little Pushaw Pond trained to identify invasive plants.**

Another major component in keeping invasive plants out of our lakes is Maine's **Courtesy Boat Inspection Program** run by the Department of Environmental Protection, and funded by your annual boat license. The purpose of these voluntary inspections is to reduce the spread of invasive aquatic plants by boats, trailers, and associated equipment into Maine waters **(see "Did You Know" article at right, on new requirements for Maine bass club tournament inspections).** Trained Courtesy Boat Inspectors discuss with boaters the risk posed by invasive aquatic plants, show boaters how to inspect and remove vegetation from their boats and fishing equipment, and urge boaters to inspect before and after every launch. Currently, boat inspections are only occurring at Lakeside Landing in Glenburn, with financial support from the DEP. **Our hope is to expand the boat inspections to other landings, in collaboration with local municipal governments and GPLA volunteers.**

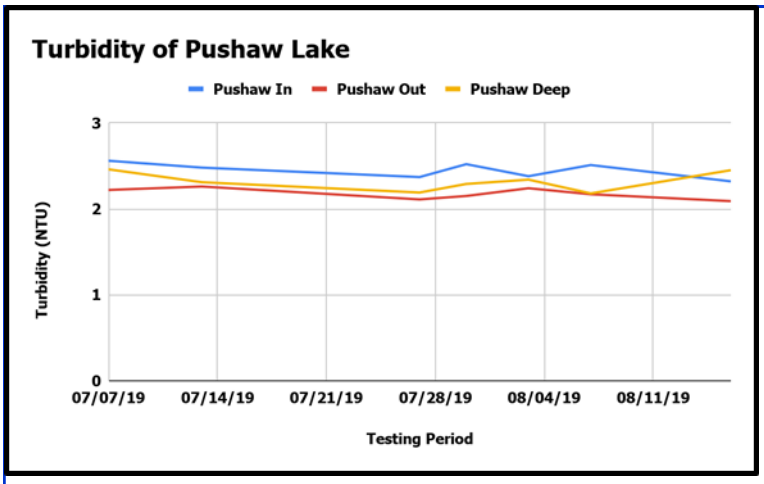
There are no known invasive plants in the Pushaw Lake watershed...yet. Early detection of a new invasive plant infestation provides the best hope of eradication. In cases where eradication is not possible, the earlier an infestation is detected, the greater the chance that the invasive plants can be managed effectively using low-impact methods. ***Trained volunteers play an extremely important role in Maine's early detection effort.*** If you are interested in joining the GPLA Invasive Plant Patrol and receiving free training to identify invasive aquatic plants, please contact us on Facebook or at *greaterpushawlakeassociation@gmail.com*. Thank you!

Inside this issue:

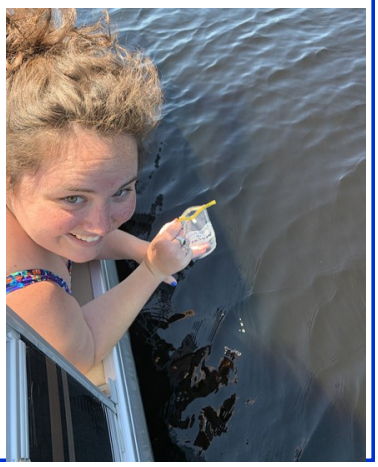
DID YOU KNOW?

- **Maine has a Thanksgiving Pond! It's in Blanchard, Piscataquis County, and covers 18 acres with an average depth of 6 feet and a maximum depth of 22 feet.**
- **Beginning in 2020, all Maine bass clubs will participate in state-approved training for aquatic plant ID and live-well inspection. All tournament related inspections must be performed by individuals that have received this training.**

PUSHAW LAKE WATER QUALITY STUDY by Jordyn Miller



I first realized the importance of water quality while growing up on Pushaw Lake. Observing the lake ecosystem was intriguing, making me want to know more about how to ensure my home lake was healthy and protected. Now, as a senior in high school, I chose to conduct research on Pushaw Lake over the 2019 summer as part of my senior STEM Capstone project. During the months of July and August, I tested the water of Pushaw Lake eight different times. The purpose of this project was to figure out how the inlet and outlet placement of the lake affects its water quality. The testing took place at the inlet, outlet and deep hole of the lake. Conductivity, pH, dissolved oxygen, temperature and turbidity measurements were taken at each testing site. Preliminary results indicate the turbidity of Pushaw Lake tended to be higher than the turbidity of other local lakes. This was potentially a result of the lack of water circulation throughout the lake, due to the inlet and outlet placement. This may indicate that inlet and outlet act as a natural filtration system from the lake, stirring the water and clearing suspended particles. As a senior, looking forward to my future plans at the University of Maine and eventually Veterinary School, I am also looking to find a way to continue the research on Pushaw Lake. I am working with other students who are passionate about the environment and would want to study local lakes. The final goal of my research and the research in the future is to make sure the public knows about the health of their lake and what future generations can do to preserve it.



Jordyn Miller is currently a student at the Bangor High School STEM Academy advised by Barbara Stewart.

GPLA Seeks Your Feedback!

GPLA is conducting a survey to learn more about the interests of our members, and gauge public awareness of our programs and activities. We would appreciate you taking five minutes from your busy day to answer a few quick questions, so we can be more aware of our members' interests and opinions. Simply visit: **tinyurl.com/GPLAsurvey**

Or jump to the survey via your smart phone, using our QR code:

34TH ANNUAL MAINE AUDUBON LOON COUNT RESULTS by Rich Dressler

Based on the loon count in July 2019, a total of 28 adults and four chicks were counted on Pushaw Lake. Laura Hurst reported that the count coordinated by Pam Griffith on Little Pushaw found 13 adults and five chicks. Thanks to all the volunteers who helped with the count this year. Over recent years the adult count on Pushaw Lake has been primarily in the upper 20s to low 30s; chick numbers improved this year over 2018. Results on Little Pushaw this year were very surprising, with a high count of adults and especially chicks.

MAINE Loon Project

REMINDER: PLEASE OBEY THE 200 FOOT NO-WAKE ZONE ALONG SHORELINES ~ *AND GIVE LOONS AND THEIR CHICKS PLENTY OF SPACE ON THE LAKE!!*

2019 WATER QUALITY RESULTS by Rich Dressler and Jeff Hayward

THANKS TO OUR VOLUNTEER WATER QUALITY DATA COLLECTORS: DORLI AND LOU CLOUTIER ON PUSHAW LAKE, AND LAURA AND QUINTON HURST ON LITTLE PUSHAW POND!
Water quality data is collected twice a month in late spring and summer at two locations on Pushaw Lake, and at one location on Little Pushaw Pond. Water clarity continues to be a key measure of lake health, but phosphorus levels, a major contributor to algae blooms, are rising.

Clarity: the higher number the better - Clarity is the measure of distance that an object can be viewed underwater from the surface of the lake (in meters). Factors affecting clarity include recent rainfall, runoff, algae, silt, and natural water color.
Pushaw Lake 2019 results averaged only 2.5 meters. This is a decline from the 3.5 meter average in 2018. However, most of this decrease can be attributed to poor June readings, with all the rainfall we received. Overall, the clarity numbers appear OK, ranging around 3.5 meters which is reasonable given the dark color of the water due to dissolved organic matter.
Little Pushaw also had favorable clarity, with a seasonal average over 3 meters.

Dissolved Oxygen (DO): the higher number the better - DO measures the amount of oxygen that dissolves in water at 1 meter increments, from top to bottom. It is measured in parts per million, and it also can be expressed as milligrams per liter (**mg/L**). Factors affecting DO include temperature, lake mixing (seasonal turnovers), algae growth, and stratification.
Pushaw Lake 2019 results to date continue to show healthy levels of oxygen in the water, indicating good mixing in the water column. There was one week of stratification in August, when the bottom DO dropped to about 2 mg/l, but this returned to normal (around 8 mg/l) by the next testing period.
Little Pushaw DO was healthy for Little Pushaw, with just one June reading showing a small amount of stratification. Otherwise, results show good mixing taking place.

Phosphorus: the lower number the better - Phosphorus content in water is measured in parts per billion (ppb). Factors affecting phosphorus levels include rainfall and surface runoff, faulty septic systems, lakeside hygiene, shoreline buffer removal, bank erosion, etc.
Phosphorus numbers in the low teens (ppb) are enough to trigger an algae bloom!
Pushaw Lake 2019 numbers to date have averaged 20.0 ppb, which continues an upward trend. Overall, the 5-year running average for Pushaw has increased 1.0 ppb per year for the last 4 years, which is a message to us all that **we all need to work harder to protect this resource**.
Little Pushaw has averaged 17.3 ppb in 2019. Phosphorus in Little Pushaw also increased over 2018 levels, probably due to the higher amount of rainfall. These numbers are also in the range that can support an algae bloom, even though the phosphorus concentrations are lower here than on Pushaw Lake.

Greater Pushaw Lake Association

Send address changes to:

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Stillwater, ME 04489

Website: www.greaterpushaw.org

"Never doubt that a small committed group of citizens can change the world. Indeed it is the only thing that ever has."

Margaret Mead

GPLA MEMBERSHIP DUES AND DONATIONS ARE TAX-DEDUCTIBLE!

Name(s): _____

Address: (please provide both summer and winter addresses, if applicable):

_____

_____

Phone: _____ E-mail: _____

Please mail along with $15 annual dues (more if you wish, and if you can) to: GPLA, PO Box 302, Stillwater, ME 04489. If you prefer, you can **donate online** at www.greaterpushaw.org/membership.html. **Thanks!**