

Introducing The New KLWA Website Take An Interactive and Educational Journey

by LAURA ROBINSON

A fter a festive celebration of our 50th anniversary last summer, KLWA is now looking ahead to our next fifty years with the launch of a totally new website. Please check it out at **KezarWatershed.org**.

Developing the site has been a fascinating project because like our watershed, all parts are interconnected. Links within our site, as well as outward to carefully selected resources, provide opportunities to delve into the breadth and depth of the watershed we love. For example, one can read about loon nest disturbance and follow a link to our page on boat wakes to discover how wakes can disturb loon and fish nests as well and how KLWA's boating recommendations minimize such damage.

The site will continue to host the ever-popular Upper Bay weather station that delivers live and time-lapse photos of the lake as well as weather data-both current and historic. Trend analyses of wind, temperature and precipitation, as well as real-time cloud coverage photos and local forecasts are also provided.

New features of the site include a plethora of

opportunities to learn about the workings of our watershed and get to know the creatures and plants that also make it their home.

An exploration of the streams begins with headwater or feeder streams, including video of the gripping power during spring thaw, compared to the still waters of summer. Streams empty into our nine ponds, which are documented with depth charts, fishing species, and favorite views.

You can learn about vernal pools, with photographs to identify the four indicator species-wood frog, spotted salamander, blue spotted salamander, and fairy shrimp-each used to deter-



mine whether an ephemeral pool is deemed significant for state protection. Kezar, too, is documented with a fascinating history, and reflection on our attachment to this beautiful lake.

> Resident Wildlife is a new feature of the site, with guides for identifying the watershed's fish, mammals, and native and invasive aquatic plants. A bird guide lists over 200 species that can be found in the watershed, with links to their photos and recordings of their calls. The stories of nine of our favorite watershed species from Lower Bay's eagles to landlocked salmon and brook trout are each described in depth.

> The website is a great way to follow the current KLWA projects in progress, with upto-date descriptions of our work on fisheries, loons, climate change, the lake patrol and our new buoy endeavor.

> The intricacies of half-a-century of our water quality work are explained, offering an opportunity to delve into the science of what makes a lake work: from spring turnover to habitat requirements, as well as threats including phosphorous, acidity, and dissolved oxygen. There is advice as to how you can plant and maintain

your property to safeguard water quality and educate others about the many aspects of caring for the watershed.

What began as a visual update and exploration in cost savings has accomplished not only that, but brought us a tool that delivers a broad spectrum of information and timely interface with which we can communicate with you, our membership.

The site is user friendly, with brightly illustrated buttons that take you to various projects and pages. With over sixty pages, the site is quite large, so if you are feeling lost, just return to the pull *continued on page 2*



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GLLT Representative

Heinrich Wurm, Lower Bay

Kezar Lake Watershed Association

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President's Message

by RICK PILSBURY

hope you and your loved ones are well and finding creative ways to deal with the tiered reopening of our economy. When you read this maybe we'll all be emerging from our dens to confirm that summer will, once again, follow spring.

So much has been written and said about COVID-19, that words are starting to run together like a fog bank. So, enough doom and gloom.

Ice left Kezar on April 10 according to some reports but, others claim it was April 29 and it seems the definition of "ice out" is confusing the observers. The State of Maine defines ice out "as when you can navigate unimpeded from one end of a water body to the other." It doesn't matter if there are a few patches of ice along the shore, as long as you can travel by boat from end to end. One thing we can say with absolute confidence, the ice is now out and we're ready to move forward.

This newsletter leads with the announcement of the new KLWA website, designed and created by board member Laura Robinson, an author and artist. Please explore the new site at **KezarWatershed.org**. It's live end of May when you can go on a journey of beauty and learning that you'll really enjoy. Thank you, Laura.

There will be no annual meeting this year so we can comply with proper social directives. But we will try to report on activities and projects via this newsletter and links to the new website for more details.

And, as ever, thanks to the KLWA Board for rolling with the punches and good humor. And a special thanks to all KLWA members who make our mission possible.

Northwest Cove Territorial Battle

text and photo by LAURA ROBINSON

ur loons began returning as soon as the ice was out, and courtship and nest building are now in progress across the watershed. While we are thrilled to see that all of our banded pairs are back - this year, there's a catch.

One of our most productive pairs, the Northwest Cove duo, who have produced chicks in both of the last two years, is currently embroiled in a territorial squabble. Nighttime ruckus and early morning chases bring a surge of tension to the otherwise peaceful cove as two battling males exhaust one another in an attempt to win over the female. Shown above, the banded male rows with his wings for added speed as he is chased by the

continued from page 1

down menus at the top to bring you back to where you started.

Whether you have a concern about phosphorous, a curiosity about how Kezar's waters circulate, or a hankering to listen to a chorus of peepers, please enjoy a virtual journey through our site. We'd love to hear your thoughts.



intruder. On that day, he appeared to be victorious as he later returned to the cove to swim peacefully with the female. But the next morning, it was the intruder who was swimming alongside her.

Elsewhere on the lake, more congenial courtship is

in process, and it is that time of year to be mindful of leaving nesting birds alone. This is important so that they do not feel threatened, possibly leaving their vulnerable eggs unguarded while fending offor decoying-curious humans away from their nests.

QUICK GUIDE TO THE NEW WEBSITE

About the only thing you need to know is the new website address: **KezarWatershed.org**. The website is large and deep, filled with information on research and activities that address the KLWA mission.

There are two ways to explore: by drop down menus on the top of each of the main pages; or links at the bottom of pages to take you to the next chapter of a topic such as "Ponds." If you need to enlarge the font, just "zoom in" (control +) on your browser. If you're having any problems

with the website and there's no young person around to explain how easy it is, feel free to email us at KezarLakeWatershed@ gmail. com.



Water Quality is a Top Priority for KLWA

by HEINRICH WURM

www.ater Quality remains a prominent topic at KLWA Board meetings even though all seems well with the "numbers" in our watershed. We completed the 2019 Annual Report on Water Quality for our watershed in February and it is now on our new website (KezarWatershed.org). I urge you to take a few minutes to explore a new and more detailed review of the water quality efforts we support and check out the tutorial on water quality for those interested in diving a bit deeper.

Last fall we talked about a need to explore future directions in water quality. Accordingly, Steve Lewis and I traveled to Orono to spend some time with Steve Norton, a geo-chemistry professor at UMaine with a special interest in lake science. We also met with Forrest Bell and Laura Diemer, our trusted scientific advisors, and we chose to embark on a blue-green algae monitoring project this summer.

For epidemiological reasons, we decided against projects requiring groups of volunteers. This leaves us with a much-discussed issue: shoreland landscaping and control of harmful runoff that add phosphates to our lake, an important, and one of the few controllable aspects of water quality management.

At least once a month, KLWA receives a phone call of "something going on around the lake that doesn't seem right." We are not enforcers and instead refer such calls to the Town's code enforcement staff. We do hope to come to a point where homeowners, craftsmen, and caretakers working on waterfront property are on the same page. The lake and lake properties are for all of us to enjoy and for some to also make a living. We need to find a way to come together on this. Anyone cutting trees to create a view may be in violation of an ordinance. Further, cutting increases run-off by decreasing filtration of rainwater. Kezar Lake has many unique features contributing to its unique beauty. One of them is the many unspoiled acres of natural shoreline habitat. It is in our hands to preserve it.

KLWA to Help State Monitor Buoys

by TOM GILMORE

s of this writing in early April, Kezar Lake is still fully ice bound but the State of Maine Bureau of Parks and Lands Navigational Aids Unit is already on the water inspecting the buoys on lakes where open water exists. It's a big job. The State currently inspects and maintains buoys on over 40 lakes with more than 2,400 buoys covering 1,000 miles of water, all with only two boats. It takes about a month and a half to get all the lakes inspected and critical repairs completed.

With increasing demand each year, clearly something had to give. Enter a pilot program begun four years ago on three smaller lakes and designed to test the feasibility of using local lake associations to assist with buoy inspection. The pilot was eminently successful and is now being rolled out to a few of the larger lakes in Maine. KLWA was contacted last summer to gauge our interest. After careful consideration the Board voted unanimously to assist in buoy inspection. The State assumes all liability and either party can terminate the agreement at any time.

So what's involved and how will it work? As soon as practicable after ice out, KLWA representatives will join Tim Thurston, Navigational Aids Supervisor, for a chilly April boat ride and inspection tour of all Kezar Lake buoys. This annual event is a check to see that all 47 buoys are both functional and in their correct location. Minor repairs will be made on the spot, with more extensive work, if any, scheduled for the near future. KLWA will take over a summer regimen of buoy inspection with a written report generated every three weeks and submitted to the State.



As program participants, should we ever need assistance with buoy or chain repair, we will move to the head of the list and receive immediate attention. Clearly this collaboration extends to all Kezar Lake boaters. If you see anything out of place, email us right away at the "Contact" page of our website: KezarWatershed.org.

The KLWA looks forward to collaborating with the State on this project, which once again places Kezar and KLWA at the front of activities designed to keep our lake as safe as it can be. One glance at our water and its quality is clear. An out-of-towner once stood at the end our dockand asked, "Is that the bottom?"



Apart from the obvious, scientific tools and measures lead our efforts to understand and maintain our water quality. The "Projects" page of our website takes you to "Water Quality," where you'll learn about the science. It's really quite interesting.

- Though there are a few worrisome trends, as described on the website, the
 overall water quality of our lake and ponds is excellent. In order to keep it
 that way, we urge the community to continue to properly maintain culverts
 and camp roads, update septic systems, and provide sufficient shoreline
 buffers along streams and lakeshores.
- Check out "The Lake Dwellers Handbook." On the homepage, go to the "Publications" button then click on "Reports."





Would you like to learn how many chicks fledged last year? See a picture of a trapped chick who flew off while rescue workers were readying for a second day of pummeling the ice with a 2×4 in an attempt to reach it?

Check out the "Projects" page on our website and click on the "Loons" button.

- After our cameras caught a late-night raccoon attacking a parent with feathers flying, we knew we needed to address predation. Because predators tend to attack from the rear, we have put wire backs on five of our rafts, such that any mammal will have to face the beak of the parent loon head on. We have a few ideas for natural nests as well.
- We continue to look for volunteers who would like to become "Loon Rangers," monitoring and recording observations for a specific territory on a weekly basis. If you are interested in learning more about this program, please send me an email at laurarobinson.studio@gmail.com.



KLWA Hol Annual

Deviled eggs and coffee are o plenty of good seats at the 2020 be held on your schedule and at the Lovell VFW Hall and KezarWate

Leaders of our three major proj on last year's activities and whe in-depth information. Question under "About Us" on the home We'll all do our part for social o the meeting an

Our annual meetings usually i the Joan Irish Scholarship Awar of new board members, and sta We've covered most of these else The rest can wai

> Until then, mee And thank you for you



ds Virtual Meeting

n hold for a year but there are KLWA Virtual Annual Meeting to your favorite venue. Just picture steer your computer to rshed.org.

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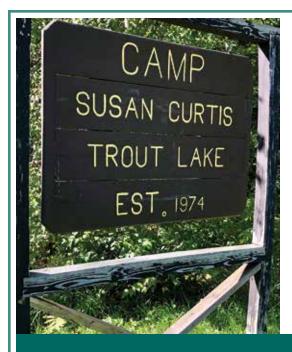


CLIMATE CHANGE The Climate Change Observatory (CCO) tracks our local climate to \mathbf{help} understand how to prepare for and deal with on-going change in our environment.

The "Climate Change" button on the website's home page gives you several areas to explore to learn about climate trends in our watershed.

- Check out The CCO Annual Report under "Publications" and "Reports." It offers a wealth of learning and insights about this important topic.
- The "Weather Station" page is the most visited page on the website. Bookmark it for live camera views of the Upper Bay and a library of images.
- Another interesting page is "Sediment Cores" under "Projects. It describes the sediment core project on Horseshoe Pond in which ground-penetrating radar profile. This profile shows that the 40-foot-deep pond was about 80 feet deep 14,600 years ago when the glacier gorged the area.





CAMP SUSAN CURTIS CAMPERSHIP DONATION

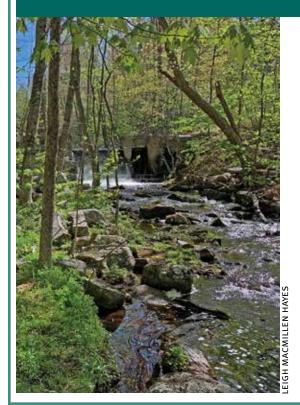
The KLWA is happy to announce that we are providing a campership for a deserving young resident of the watershed to enjoy two weeks at Camp Susan Curtis on Trout Lake.

The mission of the Susan L. Curtis Charitable Foundation and Camp Susan Curtis is to ensure that economically disadvantaged Maine youth develop the individual character, self-confidence, and skills essential to becoming independent, contributing citizens. Unfortunately, Camp Susan Curtis may not open this summer due to COVID-19. The staff is weighing various options such as shortening camp sessions and limiting the number of campers. The good news is that the campership will stay in place until it can be fully used, whether it's this summer or the next. Stay tuned.

AUDRA HAMLIN AWARDED JOAN IRISH SCHOLARSHIP

Audra Hamlin, a Fryeburg Academy senior from Stoneham, has been awarded this year's Joan Irish Scholarship. Audra will attend the College of The Atlantic in Bar Harbor on Mount Desert Island where she will pursue a degree in human ecology.

At Fryeburg Academy, Audra was part of the Outdoor Research Learning Center and completed an environmental study semester her junior year at the Conserve School in Land O'Lakes, Wisconsin. Living in the Kezar Lake Watershed, it's no surprise Audra's studies have taken her to a beautiful island. Congratulations, Audra.



GREETINGS AND GOODBYES

We are pleased to announce the following changes to the KLWA Board of Directors: new additions are Todd Fulshaw and Hal Taylor, each adding pond representation to the board.

Retiring is Tom Hughes of Horseshoe Pond, who first served eight years under two previous presidents and then rejoined the board from 2017 to 2020. Thank you, Tom, for twelve years of devoted service. Your contributions have been many and you will be missed.

Todd Fulshaw, with his wife Sue and their two drop-in daughters, has summered on Cushman Pond for about fifteen years. He is an architect who trained at Cornell and Harvard, as well as an artist who specializes in modern, abstract paintings and sculpture. Improvements and additions to the Fulshaw home and property showcase Todd's interest in design and art. Todd was active in the efforts to eradicate milfoil from Cushman Pond and he also served on the Concord, MA Planning Board, prior to moving to Melbuorne, FL.

If Hal Taylor and his wife Carol Severance Taylor aren't at their home on Farrington Pond, they're likely either traveling or at home in Canton, CT, only a few hours drive from Lovell. Hal has extensive education and work experience in technology. After earning degrees from Worcester Polytechnic Institute and Rensselaer Polytechnic Institute, he spent most of his career at United Technologies in Hartford, CT, where he was deeply involved in the space race and other NASA programs. Hal enjoys golf and if he challenges you to a friendly game of horseshoes, don't say you weren't warned.

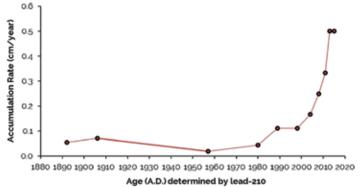
Horseshoe Pond Project to Solve Sediment Rate Mystery in Kezar Lake

by DON GRIGGS

o better understand observed watershed trends by determining environmental conditions in the watershed over the past 200 to 1,000 years, the CCO has taken sediment cores from Kezar Lake in 2015 and in Horseshoe Pond this past year. The technical leader for the coring was Dr. Lisa Doner from Plymouth State University, and the GPR work was led by Dr. Steve Arcone, a Dartmouth University Geophysicist. KLWA volunteers included Heinrich Wurm and Tom Hughes.

A key observation of the Kezar cores was the exponential rise in sediment accumulation rate since 1980. See chart below.

Kezar Deep (2015 Core 3) Sediment Accumulation Rate





Greater Lovell Land Trust (GLLT) Continues Essential Work

by ERIKA ROWLAND, EXECUTIVE DIRECTOR

he last year has carried many changes on its winds, bringing in new faces and blowing others onto new courses. I began my tenure as Greater Lovell Land Trust's executive director in August 2019 and, after a smooth transition, Aidan Black and Dakota Ward, the trust's core staff for a year and a half, moved on to new adventures. The cause of this dramatic rise in the sediment is a mystery. Our team of researchers and volunteers, however, hypothesized that the rise in the rate might be due to increased boat wakes. Since Horseshoe Pond has virtually no boat wakes, we expect comparing its rate to Kezar's could help in determining why we're seeing the dramatic rate of sediment accumulation in the latter.

To further support the coring project in Horseshoe Pond, we studied the nature of its bottom sediment using a ground-penetrating radar (GPR) pulled over the ice. The GPR reached up to about 20 feet deep into the ground. It is estimated that the 40-foot-deep pond was about 63 feet deep



Taking a core sediment sample at Horseshoe Pond.

14,600 years ago when the glacier retreated. More information on the GPR project, including radar images, is available on the KLWA website. The radar data will be applied to the core analysis and interpretation later this year.

A full report on the results of the Kezar Lake coring can be found in the 2016 CCO Annual Report (available on the KLWA website). The Horseshoe Pond coring is still being dated and analyzed and should be available in late 2020. \blacklozenge

The first eight months on the job have been a whirlwind of conversations and collaboration with board, staff, and neighboring land trusts, identifying partners, shaping projects and looking forward to the future of GLLT's conservation efforts.

Plans are well underway for the ambitious and diverse schedule of educational program offerings for 2020, and we hope to add new interns and staff faces, but uncertainty may be the theme for the upcoming months. One advantage of being a small organization is that we can be nimble when necessary, and GLLT's education and outreach efforts are adapting to the unsettled times. We've added an entirely new page to our website for remotelyaccessible and small-group events and activities that we're developing daily, including virtual hikes, nature journals, videos and more. Stay tuned, though, as we will resume our regularly scheduled programming when we are able. For the latest news, join our weekly announcement list by sharing your email at gllt.org.

The important work of stewarding our properties and conservation easements goes on, pandemic or not. We're thankful that land trust activities have been recognized as "essential" at the State level, and our friends and neighbors have been out on the trails through the spring in numbers akin to those of mid-July, requiring earlier attention to annual trail management, signage, and trail markings. In addition to monitoring conservation easement properties in the era of social distancing, GLLT's big push this year will be updates to the management plans for the over 2,500 acres owned by the land trust. We are also making headway on fundraising to purchase additional conservation land with significant ecological value, both aquatic and terrestrial.

Thank you for your ongoing support of the critical work of conservation of the landscape which, along with the KLWA's care of the region's waters, assures the many ecosystem services, like water quality, we all rely on.

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The KLWA has enjoyed a long tradition of partnership with local business. Each of these Corporate Sponsors has made a much-valued contribution to the financial stability of our organization and to the programs that we support. We are most grateful for their continued commitment and for their recognition of the many benefits that a vibrant and sustainable watershed brings to our community.