



# Indian River Lakes CONSERVANCY

Protect • Learn • Enjoy • Forever

Newsletter  
Summer 2020



# Nature is Essential



The Huffman Family pictured at St. Regis Canoe Area

Dear Friends and Supporters,

What an “interesting” summer this has been! Even though we have not been able to see and interact with many of you in person, we are steaming ahead, and making good progress across a broad front.

We converted our summer education series presentations to an online (zoom) venue for your enjoyment and established an IRLC YouTube Channel so our presentation series can be viewed at your convenience.

When we realized that we could not host a children’s nature camp in the traditional sense, our education committee and volunteers demonstrated great creativity and dexterity by developing an explorer’s guidebook and adventure kit full of trail-based activities for both our Redwood Hill and Baker Woods preserves. This will allow nature exploration and bonding at the family level. Both of these camps were free of charge and were oversubscribed with more than 120 children registering.

The second year of our high school program, Protectors of Water and Habitat on the Indian River Lakes (Project WHIRL), has 16 students enrolled (up from nine last year) representing seven different school districts to include Indian River, Alexandria Bay, Hammond, Carthage, South Jefferson, Sackets Harbor, and Canton. Most of the students are interested in pursuing degrees in Environmental Science. The students attend weekly zoom video instructions before heading out to explore the unique characteristics of our watershed focusing on watershed management, aquatic resources, and invasive species.

We have been stepping up our outreach, communications, and support to our lake associations as well. Early on in the spring we hosted a meeting with lake association leadership from seven of our lakes to share and discuss ideas on supporting the St. Lawrence River Watershed Project. Many lake leaders we spoke with are concerned with the spread of Eurasian Aquatic Milfoil (EWM) so we started looking into it (see page 2). We are just beginning the conversation and it is an important ongoing topic to discuss and monitor.

Our third annual water quality conference had 45 attendees and addressed the nutrient pollution challenges across our watershed that affect Black Lake. The conference highlighted the importance of citizen science testing of unassessed water bodies in the Indian River Watershed. To that end, we are excited to have hired Jacob Ball (see page 4) as our watershed steward for this summer. One of Jake’s primary responsibilities will be to work with lake associations, IRLC volunteers, and Project WHIRL Students to take steps to improve water quality in our watershed.

As for accomplishing our underlying mission of connecting our community members to nature, things couldn’t be better even through this spring’s unprecedented shutdown which was somewhat of an ordeal for all of us. On IRLC’s trails, we have witnessed our community’s appreciation for the natural world’s ability to serve as an outlet valve for - Corona Cabin Fever. IRLC’s public access trails remained open allowing hundreds of our community members and many visitors the ability to safely exercise, inhale fresh air, and mentally disconnect from the troubles of our human world. Entire families have found time to walk our trails together, creating wonderful memories and perhaps making some new traditions.

We are honored to be an organization that can, and will continue, to provide for our community’s mental and physical wellness during challenging times. It is comforting to know that our properties will be protected and remain public assets – FOREVER. The Indian River Lakes Conservancy is proud to be your local land trust. Thank you for all of your support.

Sincerely,

James Wylie Huffman, Executive Director

## Dreaded Eurasian Watermilfoil and the Mud Lake Case

by Heidi Sourwine

“Our Lakes are dying largely because of aquatic invasives. We need to focus our efforts and create actions toward remedies,” Anne Marie Mcmanus voiced her concerns amongst Indian River Lakes representatives on a call hosted by the IRLC in April.

Mcmanus, who has a cottage on Hickory Lake and is a practiced environmental engineer said, “Our lake is a private-access lake with 50 homeowners so we’ve done it to ourselves, but like any invasive species it only takes one person on a 600-acre lake to bring it in.”

Hickory Lake is host to an infestation of Eurasian Watermilfoil. A study from 2018 completed by weed identification experts Lee H. Harper and Anne Johnson mapped 85% of Hickory Lake as being covered with this weedy invader.

Eurasian Watermilfoil (EWM), *Myriophyllum spicatum*, is a submerged aquatic plant that was introduced in the US in the 1940’s through the aquarium trade. It was documented in Goose Bay as early as 1980, and it is unknown exactly when it was introduced to the Indian River Lakes.

The plant has a slender stem surrounded by wispy, feathery leaves. It roots at the bottom of waterbodies and grows anywhere from 2-10 feet high. EWM has the capacity to overwinter. In spring, it begins growing sooner and grows faster than many of our native plants forming tall, dense stands that choke off the sunlight native plants need to thrive.

Over time and under certain conditions, EWM can create a monoculture by

outcompeting native species. EWM can even secrete chemicals that inhibit the growth and survival of other organisms including cyanobacteria, green algae, and duckweed. In these situations, a reduction in plant diversity can lead to a reduction in overall biodiversity.

Mats of Watermilfoil can interfere with the ability of some fish to spawn and can make predation difficult for larger species of fish, except bass which can thrive in lakes with EWM. In addition to impacting plants and animals, EWM is a nuisance to boaters and swimmers.

One of the characteristics of the plant that makes it particularly invasive is that it reproduces not only by flower and seed, but also by fragmentation and vegetative propagation. Fragmentation occurs as a natural process among full-growth milfoil where the plant will release small pieces of itself that float away and re-root. Other disturbances, such as motorboats, can also tear a plant apart with the result being ten new plants where there was originally only one.

Rick Lopez has been fighting EWM on Mud Lake since he first noticed the plant in 1998. Mud Lake, like Hickory Lake, is especially susceptible to EWM infestation because of its shallow depth and eutrophic nature- meaning it has an abundance of the nutrients needed to feed plants, namely phosphorus and nitrogen. EWM also prefers alkaline environments.

A major concern, Lopez says, is that dead EWM plants can build up at the bottom of a lake leaving less and less room for water, killing more fish, adding nutrients,

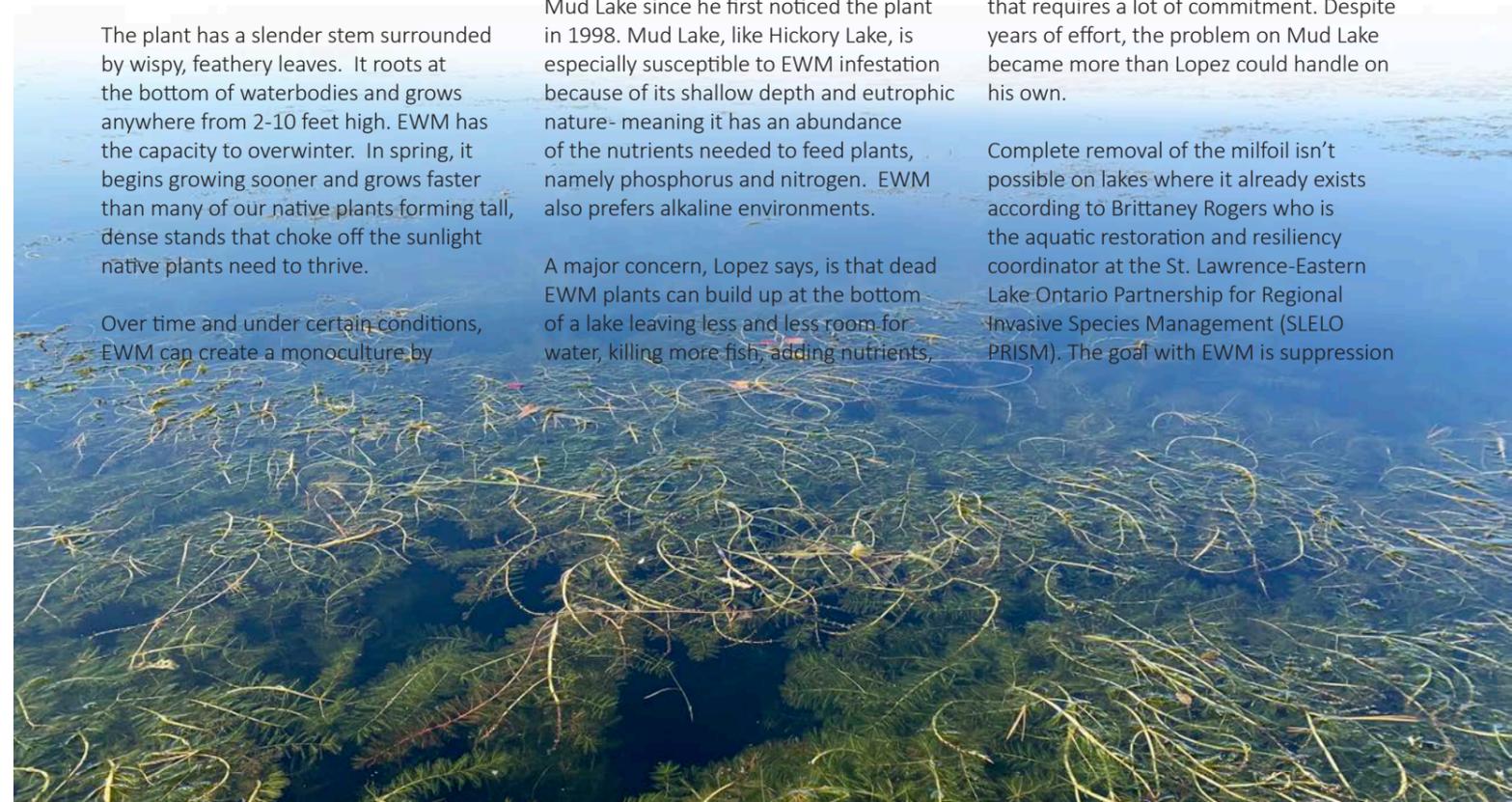
and turning the lake into a “stinking mess.” Plant decomposition can also cause oxygen depletion. Deeper lakes, on the other hand, may only ever see an issue in bays and around docks.

Lopez’s method of removal evolved from hand-pulling to a using a small hand-built, rake-like tool that he fashioned to get the job done faster. He recalls untold hours spent diving in the Lake, uprooting the plants by tugging on them, carefully wrapping the swath around his arm as to avoid breaking it up, and throwing it in his boat to remove it.

“The more time I spent under the water, the more of an appreciation I got for the diversity of life under the lake’s surface. They need this habitat in order to survive,” Rick said.

On one pulling expedition Lopez remembers a face-to-face encounter with a snapping turtle who was hiding amongst an armful of milfoil. “I started carrying a diving knife after that just in case. It’s actually dangerous work. Divers have known to get caught up in the weeds. You could drown.” It’s also the kind of work that requires a lot of commitment. Despite years of effort, the problem on Mud Lake became more than Lopez could handle on his own.

Complete removal of the milfoil isn’t possible on lakes where it already exists according to Brittaney Rogers who is the aquatic restoration and resiliency coordinator at the St. Lawrence-Eastern Lake Ontario Partnership for Regional Invasive Species Management (SLELO PRISM). The goal with EWM is suppression



and control.

As Eurasian Watermilfoil started to become more and more of a nuisance, Mud Lake residents began to question whether the valuation on their homes was accurate and the Town of Alexandria took an interest in the problem.

In 2014, meetings between the Mud Lake Association and the Goose Bay Reclamation Corporation began. Both organizations had been working on the problem and they saw value in learning from each other's experiences.

Then in 2015, the planning process associated with the Town of Alexandria's Local Waterfront Redevelopment Program (LWRP)- a program through the Department of State- called attention to the issue of EWM. The Town of Alexandria along with the Mud Lake Association and the Goose Bay Reclamation Corporation applied for a grant through the Great Lakes Restoration Initiative (GLRI), and they received federal funding in 2016. The goal for the grant is to equip the town with both the knowledge and tools to address EWM at a municipal level.

The grant includes funds for two years of herbicide application, and the purchase of a mechanical harvester. The first application was in 2018 and the chemical used was Renovate OTC. The active ingredient is Triclopyr. This year the chemical used will be a new herbicide called ProcellaCOR. The active ingredient is Florpyrauxifen-benzyl.

Both herbicides are systemic auxin mimics herbicides. It is best to apply them on calm, sunny days so that the EWM can best absorb the herbicide through its leaves where it works by mimicking a hormone. It binds to a receptor found in susceptible plants and the plants experience accelerated cell division and elongation resulting in death over 3-6 weeks.

Herbicides are approved for usage in the United States by the Environmental Protection Agency (EPA). A permit is also required by the NYS Department of Environmental Conservation. After Mud Lake's ProcellaCOR treatment, there will be no water restrictions on swimming, potable water use, domestic water use,

fishing, or animal consumption. Livestock watering and irrigation is restricted until the herbicide concentration falls below one part per billion. Notice signs will be posted until the restrictions expire.

"Not all lakes are willing to use herbicides," according to Catherine McGlynn, DEC. "It really just depends on what stakeholders are comfortable with." McGlynn has seen situations where stakeholders fear impacts to human health and health of the ecosystem or they are concerned about non-target impacts to wildlife habitat or endangered or threatened plants.

Mud Lake's plan has been to 'gain control' with the herbicides, Lopez says, then keep control with a manual harvester.

The harvesting machine pulls the plant up from the root instead of cutting it in an attempt to minimize fragmentation and spread. It is set to be used on Mud Lake this year for the first time. Currently the harvester is operated by a private contractor. Insurance details are being worked through to see if local volunteers would be able to operate the Town-owned equipment.

Preliminary cost estimates determined by the team working on the Town's grant show the cost for herbicide treatments for this project to be approximately \$1,500 per acre. One hundred and thirteen acres are being treated between Mud Lake and Goose Bay this summer. The cost to use the harvester is estimated to be approximately \$375 per acre. The team thinks they will be able to harvest one acre per day. This cost estimate does not include the purchase of the machine (\$110,000), machine repairs, or disposal of plant material. Coordination time is not included in either cost estimate.

Mud Lake and Goose Bay's project has been described by the grant team as a "pilot project" whereby costs and benefits can be properly assessed at its completion.

Other methods of control that were considered include Diver-assisted Suction Harvesting (DASH), benthic mats, and biocontrol using weevils or herbivorous fish.

DASH is a process where trained divers hand-pull invasive plants and send them up to the surface through a tube with suction.

It is very labor-intensive but has been used successfully on some NY Lakes.

Benthic mats are large barriers that are placed at the bottom of a waterbody to block light out and prevent growth of plants. They are usually used in localized areas.

Watermilfoil weevils are an aquatic beetle native to North America. The weevil's host plant is a native milfoil, but once exposed to EWM, it prefers it over other milfoils. Diane White and Michael Twiss, Clarkson Professors, are currently studying the density of weevils necessary to manage a lake, especially when combined with the use of benthic mats. Predation of the weevil is a concern with this method of control, but it remains to be seen if this biocontrol can be used successfully in NY Lakes.

Lakes that are looking for funding for control and management, research, or lake management planning may at times find assistance by visiting [dec.ny.gov](http://dec.ny.gov) and searching for the Invasive Species Grant Program. There exists, however, great unmet need when it comes to invasive species management among NY waterbodies and waterways.

"Prevention is the most cost effective solution by far, but here we are and so we are making decisions based on the reality that we have facing us," commented Erica Tauzer, Project Manager at Environmental



USGS Data 1980 Eurasian Watermilfoil



USGS Data 2005 Eurasian Watermilfoil

## Watershed Steward Joins the IRLC Team

The IRLC has added a third staff member to its crew. Jacob Ball will join the team in the position of Watershed Steward for the summer season.

Ball lives with his wife Carrie in Oxbow. He is a graduate of SUNY College of Environmental Science and Forestry's Fisheries and Aquatic Sciences program.

His previous experience includes work as a technician at the Thousand Islands Biological Station in Clayton, NY where he conducted various fishery, invertebrate and macrophyte surveys, reared northern pike and muskellunge, completed muskrat house surveys, and performed diet analysis of round goby and northern pike.

Ball also worked in Doylestown, Pennsylvania as an Aquatic Biologist for Aqua Link managing lake improvement projects and coordinating stakeholder groups in order to solve aquatic ecological problems on lakes in the Poconos region.

At the IRLC, Ball will be conducting research and water quality sampling while developing curriculum and mentoring high-school students as part of Project WHIRL

## Why we Give by Kay Bolivar

Our favorite part of spending summer and fall on the lake is connecting with the dear friends we have made. Each spring, we find ourselves getting excited about seeing everyone at the lake and catching up on their lives during the winter and spring months.

We love going out on the boat with our friends, taking a daily spin around the lake in search of the lake's wildlife. The nearby beaver and the loons are two of our favorites.

We feel it is essential to teach children the importance of being good stewards of the lakes, something that we were not taught at a young age and had to learn as adults. When we teach children how important it is to protect our lakes and protect the wildlife, they will carry that knowledge throughout their lives and hopefully teach others by their actions.

Steve grew up on Butterfield Lake. After we married



(Protectors of Water and Habitat on the Indian River Lakes), IRLC's environmental education program for teens. Ball's extensive knowledge of lake management and research will help to inform the future direction of the IRLC's water quality improvement and protection programs.

"It is a major goal of the IRLC to be able to provide outreach and assistance to the 18 Lakes in our watershed. Bringing Jacob on board really ups our game in this capacity," states Wylie Huffman, IRLC Executive Director.

in 1978, we began bringing our sons to Butterfield for yearly vacations. In 2012, upon Steve's retirement, we started spending every summer and fall at the lake.

Our family's love of this special area has made us want to do everything possible to preserve the area for future generations.

When the IRLC was formed, and we became more aware of its mission to improve the water quality of all the Indian River Lakes and to protect the wetlands, we knew this was something that we wanted to support.

We are particularly pleased that our donations help support the educational programs and IRLC Kids' Nature Camps.

Steve & Kay Bolivar have been loyal supporters of the Indian River Lakes Conservancy since 2005.

## Milfoil continued...

Design & Research, Landscape Architecture, Engineering & Environmental Services, DPC, and coordinator for the Town of Alexandria's grant.

In other deeper Indian River Lakes, EWM seems to exist without creating monocultures. Butterfield Lake was surveyed for EWM last year by Dave Andrews, Research Scientist at Upstate Freshwater Institute, as part of his Butterfield Lake Management Plan- completed through a partnership between SUNY Oneonta, CSLAP, and the Indian River Lakes Conservancy. Andrews found that the natives were thriving despite EWM being present and recommended management by benthic mats only where cottage owners found EWM to be a nuisance.

Andrews notes that, "Evidence from published studies seems to suggest that removal only for areas that are densely colonized, is better than doing nothing. Basically, when an area is nearly 100% EWM and is completely cleaned of all plant life, when plants grow back there is generally a better mix (40-60%) of native plants, but EWM still comes back to that area. Butterfield Lake would be a good candidate for this type of small area management because there is a diverse seed bank from the native plants which should also take the opportunity to re-colonize open substrate. However, if you remove an area comprised of nearly 100% native plants, you can expect EWM to sneak in and colonize there and become 40-60% prevalent where it might have been 0% before."

Boaters are urged to make sure to clean, drain, and dry their boats especially when moving from an known infested waterbody to a non-infested waterbody, but it also matters how often and to what degree the plant is spread within and between lakes. Moreover, this is not the first invasive species introduction, and it will not be the last. Another invasive, Hydrilla Verticillata, is on the watch list for our area.

This year, if you launch a boat on Millsite or Butterfield lakes, you might encounter a watercraft inspection boat steward sharing information about preventing invasive species. The Watercraft Inspection Boat Steward program is managed by our local Partnership for Regional Invasive Species Management (PRISM). "Stop the Spread" has always been their motto, long before the Covid pandemic.

Invasive Aquatic Plants, and EWM in particular, are a serious problem. Protecting water quality and the ecology of our waterbodies is ongoing. It is a complicated problem, and there exists no silver bullet. Stakeholders committed to protecting our water quality, like our Lake associations, our Town, and nonprofits like SLELO PRISM and the Indian River Lakes Conservancy, need outlets to communicate and to share resources. The IRLC plans to continue to host calls with Lake representative to discuss ways to improve and protect water quality in the Indian River Lakes Region with the goal of bringing together dedicated people to collaborate on complex environmental issues.

## Kids Need Nature

by Andrea Inserra

Now, more than ever, kids need nature. In the middle of March, life as kids knew it came to a screeching halt. They were suddenly separated physically from their classmates; their sports mates; their teachers. Kids were thrown into an adult world where they were expected to check their email, prioritize responsibilities, and use self discipline to complete academic tasks. Just like adults, kids felt chained to their computer screens for hours on end. Held up in their bedrooms, slouched with terrible posture, many even suffered the physical and emotional side effects of isolation.

What kids need now is nature. The sound of nature; the smell of nature; the warmth and breeze of nature. Nature is full of new life, new hope, and new beginnings. Nature provides a sense of calm and normalcy. Kids need that feeling of normal now, more than ever.

Lots of times students who struggle to learn in a traditional classroom exel when invited to immerse themselves in an outdoor experience. Kids who feel last in class are suddenly the experts, confident to lead discussions on what they've learned. Placed-based education lends authenticity to science concepts we try to teach in the classroom. Students can discover human disruption of biodiversity when they are in a location where it has happened. Students can witness the developmental stages of aquatic insects when they are led to where they develop. They can see the invasion of purple loosestrife in a wetland of cattails when they are standing in the wetland.

What students need now is nature. They need it for their mental health. They need it to develop a passion to protect it. They need it so nature will still be there for the future.

## In Loving Memory of Elizabeth May Duvall

It was in early January 2018 when Elizabeth or "Liz" as we came to know her, first walked into the IRLC office for our first-ever education committee meeting. I was ecstatic having a local educator from La Fargeville schools on our committee who was renowned for springing her second-grade class out of the classroom for outdoor adventures at IRLC's Redwood Hill Preserve trails.

Pam Nelson from Indian River School, Denise Haddock from Hearts for Youth in Alexandria Bay, and Kim Sell from Jefferson Community College were also in that first meeting and were also well known for bringing their students to IRLC preserves.

At that first meeting, the four educators and I discussed initiating several children and family programs to include the possibility of hosting a first-ever Children's Nature Camp at our Redwood Hill Preserve. At the time, we were a bit apprehensive about hosting our first camp as it seemed like a daunting challenge for many different reasons- mainly because we had never hosted a camp before.

From that first meeting, I'll never forget Liz's excitement and enthusiasm for initiating our children's nature camp program. In short, she helped energize our group into accepting that challenge and thereby changing IRLC's youth education programs forever.

In the next two summers, the camp grew significantly, providing free programming to over 100 children.

Each year, when the camp went into the execution phase, Liz recruited her incredible network of friends and relatives to volunteer to help run the camp. Her mother, Patricia Estford was our first camp nurse, her sister Rachel Zysk was a group leader, and her daughter, Chloe Magdalene May Duvall, was a group escort as well.

After our first camp's success, Liz was instrumental in garnering substantial sponsorship from area organizations and businesses so that we could ensure our camp remained free for all children in our community.

My favorite memory of Liz was when she and her mother would lead several other volunteers in singing the "Herman the Worm" song as an ice breaker with our campers to get them fired up about the day's activities. The kids (including myself) would squeal in delight to watch Liz's goofy singing and dancing around on the deck beside the Trailside Learning Center.

It's comforting to realize that Liz's spirit, as a founding member of IRLC's children's programs, will be with our youth education programming forever. We should all aspire to live as Liz did - full of energy, passion, gusto, and enthusiasm for everything that she chose to be involved with.

She made our wonderful community an even better place to live and we will never forget her contributions.

Thank you, Liz. We miss you but we will never forget you.  
- Wylie Huffman & the IRLC Crew





# Indian River Lakes CONSERVANCY

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Front Cover: © Andrea Inserra  
Jacob Ball and Andrea Inserra study the  
Indian River in Natural Bridge, NY.  
Back Cover © Penny Kring

**IRLC Newsletter : Summer 2020**

## Join us for an upcoming event...

**Project WHIRL**

*Teen Environmental Education*

July 7<sup>th</sup> - August 18<sup>th</sup>

**Baker Woods Kids' Nature Camp**

August 11<sup>th</sup> - 13<sup>th</sup>

**Kate Cleary Talk**

*"Genetics and the Movement of Wildlife"*

August 13<sup>th</sup>

**Nina Schoch Talk**

*"Adirondack Loons and their Habitats"*

August 27<sup>th</sup>

*For a full listing of events & event details, visit [indianriverlakes.org](http://indianriverlakes.org).*

