

THE IPA NEWSLETTER

Mystic Lake, Middle Pond and Hamblin Pond in Marstons Mills, MA

Spring 2022

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LESLIE JONAS TO BE ANNUAL MEETING GUEST SPEAKER

The 2022 annual meeting of the Indian Ponds Association will be held Sunday July 17 at the home of John and Deirdre Kayajan at 32 Heath Row in Marstons Mills. The meeting will be held outdoors from 4:00 to 6:00 pm, starting with the business meeting and concluding with our traditional social hour. The business meeting will include approval of the minutes of the 2021 meeting and the treasurer's report, election of directors, president's report, presentation of the Schwarm Scholarship, and the address by our guest speaker who, this year, will be Leslie Jonas.



Leslie is a native Cape Codder and Eel Clan member of the Mashpee Wampanoag Tribe. She is an experienced senior planning and grants development strategist with a demonstrated history of working in tribal governments and non-profits in senior-level administration and planning. She is skilled in management, communications, client relations,

and non-profit work, specifically indigenous land conservation management with a focus on climate change, and cultural preservation of lifestyles. As vice-chairwoman, Leslie has spent the past 10 years helping to build the first native-led land conservation trust east of the Mississippi, the Native Land Conservancy. The Native Land Conservancy is involved with numerous land conservation and preservation projects from Cape Cod and the islands, west to the Blackstone River, and up to the Merrimack in MA.

Leslie first became actively engaged in land conservation and the health and wellness of our environment when she worked for the New Alchemy Institute (now called the Green Center, Inc.) in her hometown of Falmouth. This early environmental work became the basis for her life work to help save our precious earth mother.

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IPA OFFICERS AND DIRECTORS 2021-2022

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Emory Anderson

Vice President

Peter Atkinson

Treasurer

Greg Cronin

Clerk

Wendy Bierwirth

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Betsey Godley

Bill Hearn

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The IPA is a 501(c)(3) organization and a registered public charity. All dues and contributions are tax deductible. This newsletter, with a circulation of approximately 800, is a forum for the exchange of ideas on matters concerning the IPA's mission, and the views expressed by authors of articles do not necessarily represent official IPA policy.

FIVE DIRECTORS STEPPING DOWN

At this year's annual meeting in July, five directors will leave the board of directors and will need to be replaced. It is unusual to have so many vacancies in one year. Three of the five (Emory Anderson, Peter Atkinson, and Barry Schwartz) will have served the maximum three consecutive two-year terms and must step down, while the other two (Betsey Godley and James McGuire) are leaving for personal reasons.

For Anderson, who has served as IPA president for the past six years (2016–present), this is his second tour on the board, having been first elected as a director in 2001 and president in 2004, a position he held until stepping down in 2009. Atkinson was elected to the board in 2016 and has served as vice president for all six years. Schwartz initially served as an associate director in 2013 and 2014 before being elected as a director in 2016.

Both Godley and McGuire are in their second tour on the board. Godley was first elected as a director in 2009 and served a maximum six years and during those six years also served as database manager; she was re-elected as director in 2017 and has served as the Schwarm scholarship chair since 2019, but has chosen to step down now for personal reasons. McGuire was first elected to the board in 2004, served as vice president for two years (2004–2006), and then stepped down in 2009 after serving the maximum three consecutive terms; he was re-elected to the board in 2018, but, like Godley, has chosen to step down now for personal reasons.

The IPA is indebted to these five for all of their years of dedicated service on the board of directors. We look forward to welcoming five new directors to fill these vacancies. Over the years, people from all walks of life have agreed to serve on the board, which has enriched each of their lives while they also contributed their personal experience and skills for the benefit of the Indian Ponds Association.

**TO SEE NEWSLETTER PHOTOS IN FULL COLOR
GO TO THE IPA WEBSITE: www.indianponds.org**

ONE SCHWARM SCHOLARSHIP TO BE AWARDED



The Indian Ponds Association is pleased to announce our Edward Schwarm Memorial Scholarship winner for 2022. Nina Barrette is the daughter of Steven and Kathleen Barrette and graduated last year from Cape Cod Regional Technical School's Environmental Technology program with a joint major in general psychology. She was a top honors student and a member of the National Honor Society. In addition, she was a member of SkillsUSA, a nonprofit organization working with students for the nation's future skilled workforce; her team advanced to the national level where they won a gold medal. Nina also played softball, served on the Barnstable Youth Commission, and was a member of the student council. She has interned in the Town of Sandwich Department of Natural Resources, volunteered with AmeriCorps, and worked at Envitech Labs. Nina states that she has a love of the natural environment and has always been drawn towards conservation.

Nina currently attends the University of Massachusetts in Amherst and plans a career in the field of environmental science and conservation. We wish her all the best in her future endeavors.

We thank the generous donors who have contributed to the scholarship fund. Recipients in recent years have received a \$1,000 award, but the Board of Directors this year increased the award to \$1,500.

Betsey Godley
Scholarship Committee Chair

CONSIDER MOSS

Moss can be very controversial. While some homeowners are horrified by the sight of moss in their quest for the ultimate carpet of green turf, others are enchanted by the magical quality of moss's soft velvety texture. Still, there are those who are indifferent about the fuzzy green stuff because it provides a ground cover they consider to be better than bare dirt. Regardless of these thoughts, there is so much more to consider about the world's oldest living land plant and why it is scorned by some, yet embraced by others. In fact, surrendering to moss and actually encouraging its proliferation is not only a very eco-friendly practice, but it can also save you money and add more hours to your day.

A moss lawn requires very little care. To begin, moss stays green all year without the assistance of any chemicals such as fertilizers. It is resistant to diseases and insect damage, so herbicide and pesticide application is also unnecessary. In addition, moss never needs dethatching or aerating; and mowing is seldom necessary. Mosses thrive on Cape Cod due to our moist, acidic environment. They grow best when the soil pH is around 5, which eliminates the need for lime too. Because moss is a non-vascular plant, it doesn't even need watering once it is established. Turf lovers, just think about all of that time and money you would have if you replaced your existing high-maintenance grass with a moss lawn.

Now that you have the time, let's discuss the many ways in which moss is eco-friendly. As stated, moss does not need chemicals to enhance its beauty. By growing moss in place of turf, estuaries and groundwater are spared the nitrogen and other harmful ingredients found in lawn products. These substances contribute to the overall decline in the water quality of our lakes, ponds, and coastal waters as well as our vital groundwater. This is why it is important to remember that lawn products contribute to toxic cyanobacteria blooms *before* you break out the fertilizer.

If the chemical harm alone is not enough to make you go all mossy, think about the effects of gas-powered mowing and leaf blowing on the environment. The process of lawn maintenance with gas-powered equipment produces a large amount of CO₂. According to EPA estimates, the pollution produced from an hour of gas mowing is equal to that of 40 new cars running for an hour! What is more, consider how much gas is spilled when filling the lawnmower and leaf blower tanks. The EPA estimates this to be 17 million gallons per year. So, in addition to time, a moss lawn can reduce pollution and greenhouse gas emissions when replacing a grass lawn.

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RED HEADS AND RED BELLIES

People on Cape Cod occasionally tell me that they have seen a red-headed woodpecker. It is always possible that they have, in fact, seen one on the Cape, knowing that the winds blow birds here and there all the time, but it is more likely that they have seen a male red-bellied woodpecker.

I have seen a red-headed woodpecker, and they are quite spectacular. Claire and I saw our red-headed at a roadside stop on the Gettysburg battlefield in Pennsylvania. We both just stood there and watched it search for grubs or whatever on a tree, and it is really quite unmistakable. Its range runs from a line drawn south from the middle of Montana down through Texas and east to a line drawn through the far eastern part of New York straight south to Florida. It comes into New England only as a vagrant. The red-bellied woodpecker covers almost the same territory, but includes all of New England including Cape Cod.



Red-bellied (left) and Red-headed (right) woodpeckers

The red-bellied woodpecker is a colorful species recognizable to the most casual birder. Its preferred habitat is open groves with abundant snags for nesting and roosting. This choice puts it into direct conflict with cavity-nesting birds like European starlings. The main reason for the decline in numbers of red heads is habitat loss caused by development of forest lands.

The red head is a nomadic species with periodic movements based on the yearly abundance of nuts, a favored winter food. The red head is one of four species that commonly store or stash food in caches for later consumption. They can be observed stuffing nuts or other edibles in crevices, tree cavities, or under Red-headed woodpeckers are more omnivorous than many other species of woodpeckers. They feed on a variety of insects, nuts, fruits, berries, and seeds. Pairs may remain together for several years and may often use the same nest cavity as well. In the southern part of their range, red heads may even raise two broods a year. Male

and female red heads look alike. Juveniles, however, have a grayish-brown head which gradually becomes the bright red of the adult bird in their second year.

The red-bellied woodpecker is a relatively large bird about the same size as the hairy woodpecker common on the Cape, which is the larger version of the downy. These birds are common in eastern woodlands and forests from old stands of oak and hickory to young hardwoods and pines. They are a common sight at backyard feeders. I see them most often at my suet feeder. Despite the name, the red on their belly is often not readily visible, but can only be seen when they are in the right position; however, they do have a vibrant red head.

Unlike the red head, male and female are readily distinguishable. The male has a full red crown from the back of his neck by his shoulders right around the top of his head down to his beak. The female has a red area running from her shoulders only up to the back of the crown of her head.

Red-bellied woodpeckers sometimes wedge into bark crevices and then break them into more manageable pieces using their beaks. They also use cracks in trees and fence posts to store their food for use later in the year. They have been known to take over the nests of other birds. On the other hand, they are most often the victims of the larger, more aggressive European starlings. In some areas, more than half of the nests of the red-bellied are invaded by starlings.

The red-bellied are omnivorous. Their diet may be more than 50% plant material. They feed by searching for insects on the trunks and major limbs of trees in their home area. They climb and perch among branches to pick berries and nuts and sometimes catch insects flying by their perch. Occasional items in their diet may include tree frogs, eggs of small birds, and even small fish.

These have been some comparisons between the red-headed and the red-bellied woodpeckers. The better way is for you to look for them at your feeders or at rest areas along the roadway. You may have to travel out to western New York or down to Pennsylvania to see the red-headed, but if you happen to be in that area anyway, be sure to watch for them. The red-bellied you can probably coax to a suet feeder right here on Cape Cod.

Dave Reid

CONSIDER MOSS

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Moss is amazing! Because it is super absorbent, moss can slow the deluge of stormwater run-off. It also stabilizes the soil to decrease landscaping damage and erosion. In this way, moss acts like a sponge, preventing harmful road and storm run-off from making its way into our precious groundwater. Just think about what happens to all of those turf-building products after a big rainstorm.

What is even more fascinating about moss is its role in the carbon cycle. Moss, like all photosynthesizing plants, has the ability to store carbon and fix nitrogen. Fixing nitrogen is the chemical process that occurs when the nitrogen in the environment is converted from gas to a soluble substance. The nitrogen that is processed by moss can then be released to surrounding plants, helping them to take in more CO₂. Moss is also a terrific storage place for carbon. Globally, mosses accumulate as much carbon annually as the combination of forest and biomass burning. This means mosses store more carbon than any other plant on earth!

In addition to pondering the beneficial prospects of being green, there are a few more conditions to consider when converting from turf to moss. Although some types of moss can tolerate a good amount of sunshine, most thrive better in shady, moist environments. However, despite being moisture-loving, moss is also immune to drought. It can withstand frequent drying out and then return to its lush green appearance immediately after moisture is reintroduced to its tiny, almost microscopic leaf system. This characteristic, known as poikilohydry, means that mosses rely only on their environment for water, eliminating the need for expensive sprinkler systems.

Encouraging the growth of moss is easy. For the most part, just leave it alone. Otherwise, gently rake any leaves and sticks off it. Moss does not like leaves or rotting debris on its surface. But do not fret. Because of its low-lying compactness, leaves do not tend to collect on moss as much as they do between blades of grass. To grow moss or expand your current mossy terrain, most landscaping companies sell moss. They can give advice on the different types of bryophytes (mosses) that will complement your specific landscaping needs. You will need to provide the shade and the moisture until the moss is established. What is more, you can grow moss very simply by transplanting it or by making a moss slurry to sprinkle on the desired shady area. The slurry is made by blending shredded moss with water and buttermilk or beer. Another option for acquiring moss is to

ask a friend or neighbor. They may be happy to rid themselves of moss because they, unlike you, are unaware of the benefits of this remarkable plant.

The perception of moss as a nuisance plant is changing. Increased ecological awareness is fueling the shift from turf to moss. The request for moss has many landscapers and garden centers contributing to the design and creation of moss features in place of grass in yards. Moss lawns, gardens, and even roof tops are being embraced by people who respect the beauty and sustainability factors associated with this humble plant. Certainly, moss provides the simplest solution to lawn problems. All that fertilizing, raking, mowing, weeding, aerating, seeding, even downright begging, to get a lawn to grow can and should be a thing of the past. In essence, by encouraging the growth of moss, you are not only saving time and money, you are nurturing mindful yard care practices for the future of our ecosystems.

Sandy Leo-Clark

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TOWN SAYS NO TO MYSTIC LAKE ALUM TREATMENT THIS YEAR

At its April 28 meeting, the Barnstable Town Council opted to not support a request from the IPA to fund a Mystic Lake alum treatment in the amount of \$175,000. This was a project high on the list of projects submitted last fall by the Department of Public Works for possible funding in the overall FY2023 Capital Budget and FY2023–2027 Capital Improvement Plan. It failed to survive a review process by senior-level Town department managers and, hence, was not included in the final list of projects recommended to the Town Council by the Town Manager. In an attempt to appeal directly to the Town Council, the IPA president wrote a lengthy letter to Council members explaining why the project was important and providing considerable background information in support of our argument. On the night of the Council meeting in question, the IPA president spoke during the public comment period in support of the project emphasizing the urgency of the treatment and that delaying the treatment would risk another catastrophic cyanobacteria bloom such as what happened in 2009 and 2010 which killed an estimated 24 million freshwater mussels.

While opting to not fund the relatively modest request of \$175,000 for the alum treatment, the Council nevertheless voted to spend millions of dollars for improvements to the Town's physical infrastructure, such as the expanded sewer system, public roads and sidewalks, and Town buildings (Town Hall, school administration building, recreation facilities). **We would argue that the Town's infrastructure also includes its freshwater lakes and ponds, and that they too merit periodic remediation in order to maintain their water quality for safe public use.**

The IPA has had major concerns with the water quality of Mystic Lake in recent years based on sampling results from our bi-weekly monitoring which have revealed decreasing water clarity and increasing incidence of cyanobacteria all caused by excessive amounts of phosphorus in the lake's sediments. The lake has been graded as "Unacceptable: requires immediate restoration" by the Association to Preserve Cape Cod in its 2019 and 2021 reports on "State of the Waters: Cape Cod". Contrary to many other ponds on the Cape, the principal source of Mystic's phosphorus appears to have originated largely from manure and fertilization from the former Hord Dairy Farm in operation for 40 years on the north side of the lake. In early 2020, the IPA Board of Directors voted to fund a study of the lake by Dr Ken Wagner of Water Resources Services. His report concluded that the release of phosphorus from the sediments to the overlying water was still the dominant source of phosphorus in the lake and that the management of this release of phosphorus would best be handled by means of a modest alum (aluminum sulfate) treatment. Wagner's report was also critical of the 2010 alum treatment which had a lower-than-recommended dosage, due to regulatory constraints imposed by the Natural Heritage & Endangered Species Program, and a lower efficiency of treatment in late summer after so much phosphorus had already been released from the sediments and was still present in the water column.

In early 2021, the IPA presented Wagner's report to the Town and began to make a case for a moderate alum treatment of about \$100,000 (as proposed by Wagner). Several meetings with Town officials during 2021 produced no results, and the Town Manager himself, as guest speaker at the IPA annual meeting that year, appeared supportive, but cautioned that other Town ponds also were experiencing severe water quality problems due to the presence of excess phosphorus and, thus, commanded higher priority for Town action and funding.

Faced with no Town funding this year to deal with a potentially looming problem with Mystic Lake, the IPA will continue its monitoring of all three Indian Ponds, remain watchful for problematic signs of diminishing water quality, and persist in reminding Town officials of the importance of Mystic Lake as a valuable natural resource and that it requires periodic attention in the same way that the Town's man-made physical facilities require periodic attention.

Emory D. Anderson, PhD

LESLIE JONAS TO BE ANNUAL MEETING GUEST SPEAKER

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During the past few years, she has been researching and focusing on climate change from the Indigenous perspective. Currently, this work for the Native Land Conservancy has led to her co-teaching and co-advising environmental courses in social/environmental justice at UMass Boston and MIT, speaking publicly on climate change, and producing educational video tools for audiences across many disciplines. During summer 2021, she was invited to sit on the Conservation Law Foundation (CLF) Advisory Board for the state of MA. where she helps to advocate for human rights to land and clean water in MA with teams of CLF environmental experts.

Leslie currently works at the Woods Hole Oceanographic Institution as fiscal officer for Woods Hole Sea Grant which provides grants funded by the National Oceanic and Atmospheric Administration to support our coastal communities through research, extension, and education. She is also DEI-certified (diversity, equity, and inclusion) from Cornell University, holds a BA in mass communications and television production from Emerson College, and a Masters degree in community economic development.

Emory D. Anderson, PhD

MEMBERSHIP DUES REMINDER

Previous members who have not yet renewed their membership for 2022 or others who wish to become members are asked to either (i) use the remittance envelope which was included in the winter issue of this newsletter that you received in early March or (ii) log onto the IPA website (<https://www.indianponds.org/>) and click "MEMBERSHIP" at the top of the home page and then click on "How to join", "New & Renewal Memberships", and/or "Payment Information" for appropriate instructions on how to join, rejoin, and pay your membership dues and additional contributions using either your credit card or PayPal. Dues are still only \$25 per household; additional contributions are greatly appreciated for either the Pond Restoration Fund or the Schwarm Scholarship Fund. Both membership dues and donations are tax-deductible as the IPA is a 501(c)(3) organization.

“To preserve and protect the natural environment and ecological systems of the Indian Ponds and surrounding parcels of land and watershed and to participate in studies and work with other agencies, individuals, and groups to educate the public, serve the community, and promote and preserve the Indian Ponds and surrounding areas.” IPA Mission Statement

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FORWARDING SERVICE REQUESTED

