

THE IPA NEWSLETTER

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

Spring 2020

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IN THIS ISSUE

- **IPA's Annual Meeting Cancelled!**
- **IPA to Fund Water Quality Study of Mystic Lake**
- **Pond Sampling Plans**
- **Reduced Price on Septic Tank Pumping**
- **Spring: Time for Jays**
- **Two Schwarm Scholarship's Awarded**
- **Reminder to Pay Dues**
- **AND MUCH MORE....**

IPA ANNUAL MEETING CANCELLED

What would have been the 63rd annual meeting of the Indian Ponds Association has been cancelled by decision of the Board of Directors. Even though the annual meeting is several months away (usually held around mid-July), the Board considered it expedient to announce the cancellation so that readers can be so apprised by the time they receive this newsletter in early June. This decision was based on the fact that many summer events on Cape Cod have already been cancelled at the time of this writing and more yet are likely to be cancelled as a result of the suggestions or mandates of Governor Baker in order to contain the spread of COVID-19. Early announced closures include the entire 2020 season of the Cape Cod Baseball League, the summer season of the College Light Opera Company which performs at Highfield Theater in Falmouth, the Barnstable County Fair, Mashpee Wampanoag Powwow, and Falmouth Road Race.

Although Article V of the IPA By-Laws states that "an annual meeting shall be held on a Sunday in July at which directors shall be elected, and budgets, expenditures, accomplishments, and future plans shall be discussed", the Board views the current situation to be of such an unusual nature that the exercise of common sense should prevail. Therefore, any issues requiring a vote by the assembled membership, e.g. approval of minutes, treasurer's report, election of new directors, can either be deferred until next year's meeting or handled by the Board through its appointment authority (i.e. new directors). In the case of the latter, only a single director (Aaron Fishman) leaves the Board by virtue of having served the maximum three two-year terms. The Board will select and appoint a replacement for the position held by Aaron. With appreciation, the Board thanks Aaron for his service and wishes him well in the future.

Checks and certificates for the recipients of the Schwarm Memorial Scholarship (see article on page 4) will be mailed to them this summer. In lieu of the normal President's report at the annual meeting, such a report will be included in the summer issue of this newsletter.

Given the uncertain nature of the COVID-19 pandemic and the future availability of treatments and vaccines that will be needed before life can return to some semblance of what we have been accustomed to, we still hope to see you at the 2021 annual meeting

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**IPA TO FUND WATER QUALITY
STUDY OF MYSTIC LAKE**

The IPA Board of Directors has voted to fund a study of Mystic Lake this spring and summer that will sample water and sediments to determine the type and amount of phosphorus present, evaluate the sources of phosphorus based on the data collected, and assess options for improved control of phosphorus in the lake relative to its role in supporting the growth of planktonic algae. This study will be conducted by Dr. Ken Wagner of Water Resources Services who has participated in previous studies and treatments of all three Indian Ponds as well as of other ponds in the Town and on the Cape. The IPA's contract with Wagner for this study will cost no more than \$6,600.

The need for such a study was deemed necessary in view of the Board's ongoing concern for the lake's water quality as determined from results of the IPA's ongoing biweekly pond testing of all three ponds and the annual "snapshots" taken by the PALS water samples. These results, coupled with the report last year by the Association to Preserve Cape Cod (APCC) *State of the Waters: Cape Cod 2019* which graded the water quality of Mystic Lake as "unacceptable" (see relevant articles in the fall 2019 IPA newsletter), strongly suggest that the lake is still suffering from unacceptably high levels of phosphorus, the principal nutrient that fuels the growth of algae in the lake. According to Wagner, the 2010 treatment of Mystic with alum (aluminum sulfate) was restricted by permit to a dose lower than what we wanted to apply in some areas. While conditions are much improved over the pre-treatment status, water clarity, as a direct reflection of algae abundance, has not been as high as for neighboring Middle Pond (which has not been treated) and Hamblin Pond (which has been treated twice with alum). The logical question is whether the conditions in Mystic Lake represent a departure simply because the alum dose was too low or if there are other factors that may be impacting Mystic Lake.

Based on his knowledge of the Indian Ponds, Wagner says that it is apparent that phosphorus is accumulating in the deep water of Mystic and appears to support the growth of several species of cyanobacteria, one at mid-depth and another near the sediment. Oxygen data suggest low oxygen in deep water, but existing sediment data do not suggest excessive amounts of iron-bound phosphorus that can be released into that deeper water. It is possible that the previous (2017–2018, the last time Wagner investigated the lake via a contract from the Town) sediment testing was somehow off, a function perhaps of sampling the upper 10 cm (the depth of sediment believed to have been treated) rather than sectioning or just sampling the upper 2–4 cm. It is also possible that the elevated phosphorus comes from entering groundwater, something that is hard to investigate. Phosphorus was not elevated in surface water (in 2018), so the algae must be depending on deeper-water phosphorus to grow to any substantial amount.

(continued on page 5)

REDUCED PRICE ON SEPTIC TANK PUMPING

In an effort to help improve the health of our ponds, we have collaborated with Friends of Long Pond Marstons Mills to negotiate a discount on septic tank pumping services with Debarros Septic Services located on Flint St. in Marstons Mills. IPA members are eligible for this discount if they live within the "IPA area", which is the area enclosed by the following bounding roads: Race Lane on the north, Route 149 on the east, Lovell's Lane and River Road on the south, and Bog Road and Old Mill Road on the west, as well as the first lot on the outside of each bounding road. The idea behind this effort is to help reduce the amount of nutrients entering the groundwater and thus impact the nearest pond or lake by more frequently having your septic tank pumped (e.g. every 2–3 years).

The discounted rate is \$210 for a 1,000-gallon septic tank and \$310 for a 1,500-gallon tank. To take advantage of this offer, call Debarros at 508-428-1087 and tell them that you would like the Indian Ponds Association discount. When they come out to pump, Debarros will evaluate how often your tank should be pumped, based on the number of people who live in the house and what percentage of the year it is occupied. They will schedule you to be contacted the next time a pumping is due. If you would like to continue to receive the discounted rate, you will need to schedule your appointment at that time. If the top of your tank is deep (e.g. 2–3 ft), they will charge extra (e.g. \$75) to do that amount of extra digging for access, but upon approval of the homeowner, they will install a "riser" so that, in the future, they do not have to dig for access and charge extra for future cleanings.

VOLUNTEERS NEEDED FOR FUTURE BOARD OF DIRECTOR POSITIONS

The IPA has always depended on volunteers to willingly serve on the Board of Directors. This July, we lose only one member of the Board, Aaron Fishman, who will have served the maximum three terms of two years each. Filling this single vacancy this year should not be difficult. However, in 2021, there will be two vacancies to fill as both Kathy Bryan and Maggie Fearn will have served the maximum terms allowed, and in 2022, there will be three additional vacancies as Barry Schwartz, Emory Anderson, and Peter Atkinson will have served the maximum terms allowed. As you can see, there will be a constant need for new directors in the years ahead.

Although the President is authorized to appoint a nominating committee each year to prepare a slate of candidates to be voted upon by the members at the annual meeting, it is always easier if members step forward and volunteer to be nominated as a candidate. The IPA is blessed by having had dedicated members serve on the Board of Directors over the years, but it is essential that we have a continuous flow of volunteers. Board members have come from various walks of life and careers including medicine, science, law, business, public service, homemaking, and so on. To serve as a Board member does not require extensive knowledge of or experience with the ponds or science, but a willingness to work with fellow directors in managing the affairs of the IPA and to learn in the process. Many previous directors, who have initially claimed no understanding of the ponds or the functioning of the IPA, have expressed amazement at how much they learned during their time on the Board. A good way to begin the learning process is to start as an associate director, which is an appointed position for up to two years.

So please, don't wait to be called upon to serve. Contact any of those currently serving on the Board and indicate your willingness to be considered as a future candidate.

TWO 2020 SCHWARM SCHOLARSHIPS TO BE AWARDED

The Indian Ponds Association Scholarship Committee is pleased to announce that we are awarding two scholarships this year, as we have two very deserving students. Our winners are selected on the basis of their academic achievements, extracurricular activities, and community service. The Schwarm Memorial Scholarship was established in memory of Edward Schwarm, a former IPA Director and Officer. Many thanks to the generous donors who have contributed to the scholarship fund that makes these scholarships possible.

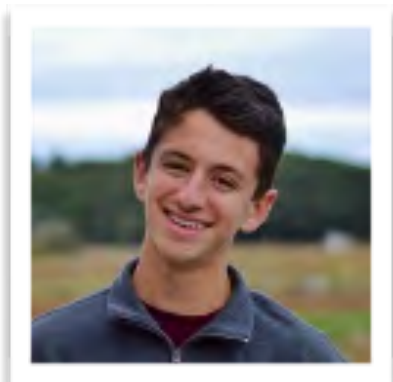


Summer Stagman

Summer Stagman of Regency Drive is graduating from Barnstable High School and will be attending Saint Francis University in Loretto, PA. Summer, the daughter of David and Sheila, has grown up here on our lakes. She has an interest in and commitment to the environment and its effects on all aspects of life. A high school National Honor Society member, she is also a member of the Phi Theta Kappa Society, Cape Cod Community College's honor society for dual enrollment students. She is also a varsity-level athlete in swimming and golf and has raised over \$16,000 for the Dana Farber Cancer Institute in the Pan Mass Challenge. Summer has also been involved in the Glenna Kohl Fund for Hope. She plans on obtaining an advanced degree and becoming a Physician's Assistant.

Ethan Weiner, the son of Jeffrey and Lori of Old Mill Road, is also graduating from Barnstable High School. He will be attending Northeastern University in Boston this fall. Ethan is a member of the National Honor Society, a Latin award winning scholar, and was awarded the Rensselaer Medal, selected by the school to honor an outstanding student in math and science. Ethan is a musician and band leader and has his own YouTube channel. As a varsity athlete in cross country and track, he has trained by running on and around the bogs and lakes. Ethan will be majoring in Computer Science and plans to develop software to integrate landscape design with natural solutions to better our ecology and treat water as a valuable resource.

Although we are disappointed that we won't be able to meet our scholarship winners in person at the annual meeting, we hope to see them enjoying the lakes and working in our community this summer. All best wishes to them both for success in college and productive futures in their chosen professions.



Ethan Weiner

Betsey Godley

NEW IPA WEBSITE

The new IPA website is in the works. We're looking for good photos and videos of the ponds and their wildlife (especially pictures of the bald eagles that are frequenting the ponds). Please send any you'd like to share to: IndianPondsWebmaster@gmail.com.

IPA TO FUND WATER QUALITY STUDY OF MYSTIC LAKE

(Continue from page 2)

Wagner's work this year will include water sampling once prior to stratification being established (early May) to determine the background phosphorus, iron, and oxygen conditions going into the stratification season, with sampling at the surface, expected thermocline depth (6 m), and near the bottom at the deepest point of the lake. This would be followed by repeat sampling in early July and early September to track the change in these conditions over time. This will confirm the pattern observed in 2017 and add iron data that has bearing on possible remediation. He will also sample the upper 2–4 cm of sediment and test for the same range of features done in 2018, plus iron, aluminum, and calcium, all important phosphorus binders that were not checked in 2017 and which have bearing on the results of the past treatment and the potential need for a new treatment. Those samples could be collected at the time of the May sampling with the July sampling as a back-up.

If the results from the study reveal that iron–phosphorus is high at the surface of the sediment, more aluminum would be needed to suppress the phosphorus. If there really is not much iron–phosphorus available in the sediment, but the phosphorus is coming from the sediment, it must be from the biogenic fraction (most easily decomposed organic fraction). More alum may help, but this might be a better fit for Phoslock, which uses lanthanum fortified bentonite clay which is more specific to phosphorus, remains available as phosphorus is released until all sites are bound, and may coat the sediment surface with clay in a way that lowers oxygen demand. If there is plenty of iron in the deep water, either by release from the sediment with phosphorus or input with groundwater, adding oxygen may be a better choice (nanobubbles is a new technology). While aluminum remains the least expensive option, there have been improvements in alternative phosphorus inactivation and oxygenation approaches that make them worth considering. The suggested monitoring program will allow us to reach a more complete assessment of options.

The results of Wagner's study this summer will allow us to decide if appropriate action is needed for some type of treatment and, if so, consider relevant options for further control of phosphorus in Mystic Lake, such as another alum treatment, a new treatment with Phoslock, or some type of oxygenation, possibly via the new nanobubble technology.

Emory D. Anderson

REMINDER TO PAY YOUR DUES

If you are a member (or have been a member in previous years) and have forgotten to pay your dues for 2020, please do so. In the 2020 winter issue of this newsletter, we enclosed a remittance envelope to be used for this purpose. If you have misplaced that envelope, simply enclose your payment in any envelope addressed to: IPA, PO Box 383, Marstons Mills, MA 02648.

Annual dues for a family or household membership is \$25. Members are also encouraged to contribute to the Edward Schwarm Memorial Scholarship fund which provides one or two \$1,000 scholarships each year for college-bound graduating high school seniors residing in Marstons Mills. In addition, contributions to our Pond Restoration Program help support the IPA's work and expenses in protecting the quality of the Indian Ponds, including our cyanobacteria monitoring of the three ponds done in collaboration with the Association to Preserve Cape Cod (APCC) and a new study of the water quality of Mystic Lake to be done this summer by Dr. Ken Wagner of Water Resources Services (see story on page 2).

Since the IPA is a 501(c)(3) organization, your membership dues and other donations are tax-deductible. Thank you for your past support of the work of this important organization, and we look forward to your continued support.

Emory D. Anderson, President

IT MUST BE SPRING

It must be spring, the blue jays have returned. You can safely say that because you are living in the northeast corner of the United States. For the most part, blue jays are around all year long.

And, although there is some slippage, blue jays are only found on this side of the Mississippi. On the other side, however, there are eight other types. I hope to acquaint you with all of the American jays and one from Peru.



Blue Jay

Blue jays are most often detected by their noisy calls. Near shorelines, they migrate in loose flocks. You can recognize them by their steady flight, rounded wings, long tail, and white underside. While resident birds may associate in flocks, they usually fly across open areas one at a time, usually silently. If you have feeders out, you may find them at the feeders all day long.

The Steller's jay might be confused for the blue jay at a quick glance. They are a large songbird with large heads, chunky bodies, rounded wings, and a long tail. They have a large triangular crest that often stands straight up from their head. At a distance, Steller's are very dark jays. They do not have the white underparts of most other species. The head is black, and the body is all blue. Like other jays, Steller's are inquisitive, intelligent, and noisy. They come down to the ground to investigate visitors and to look for food. If you throw food for them, they will stay with you until you no longer feed them.



Steller's Jay

Scientists have described 16 subspecies of the Steller's in North and Central America, showing varying combinations of black and blue on the crest, head, and body. The largest and darkest are found on the Queen Charlotte Islands off British Columbia.



Green Jay

It has a purple and black head and bright yellow outer tail feathers. This bird travels in family flocks through brush lands and forests seeking insects, small vertebrates, and fruit to eat.

Green jays are among the few known North American birds to use tools. They are known to pick up sticks to pry up loose bark seeking insect prey.

(continued on page 7)

IT MUST BE SPRING

(continued from page 6)



Western Scrub Jay

Western scrub jays have long tails and small bills. Unlike Steller's and blue jays, they do not have a crest. They do not migrate and are found from Washington State south to Mexico and east to Texas. We found ours in the Rocky Mountains National Park in Colorado. The Pacific coastal group have the shorter bills for eating acorns, while interior scrub jays have longer bills to allow them to get at pine nuts from deep within pine cones. The Pacific group are loud and raucous, while those of the interior tend to be quieter and lower pitched.

The Mexican jay is locally common in mountain canyons and oak woods near the Mexican border in Arizona and New Mexico, a very small area of west Texas, and a greater area in Mexico. It was formerly known as the grey breasted jay. It lives in social groups that may include multiple breeding pairs. Group members may feed young at multiple nests within the group territory. In winter, Mexican jays are often followed by northern flickers. The flickers pay attention to Mexican jay alarm calls and are protected by the vigilance of the jays.



Mexican Jay



Gray Jay

Gray jays are the national bird of Canada. Gray jays are medium-sized birds with lighter bellies. They are stocky, fairly large songbirds with short, stout bills. They are dark gray above, light gray below, and have no crest. They have black on the back of the head like a partial hood. Gray jays are typically found in small groups. They stay with their mates as long as both birds are alive and rarely leave each other's sides. The pairs breed in frigid conditions during February and March.

Gray jays eat a variety of foods including berries, arthropods, carrion, nestling birds, and fungi. They will snap up flying insects, wade in shallow water to capture invertebrates and amphibians, kill small mammals, raid the nests of other birds, and sometime attack small birds such as chickadees and warblers



Violaceous Jay

And finally, the violaceous jay. The violaceous is found in South America and found its way onto our list in Peru. This medium-large bird has violet-blue plumage and a black face and throat. The violaceous is omnivorous, mainly consuming fruits, insects, and bird and reptile eggs. Like other jays, flocks are often noisy, but also, like other jays, they can be quiet and inconspicuous at times. They have been known to mob potential predators.

In addition to the jays I have discussed, in the United States we also have the brown jay, the Florida scrub jay, the Island scrub jay and the pinyon jay. Unfortunately, I haven't seen any of those yet. Maybe we'll travel some more sooner or later.

Dave Reid

TRIBUTE TO RICK WHEELER



IPA Director and summer resident of Wheeler Road, Rick Wheeler died on April 20 at the age of 91 at his family home in Concord. Anyone unfamiliar with Rick's lifetime experiences would be amazed to learn of his many significant endeavors and achievements by reading the obituaries published in *The Concord Journal*, *Boston Globe*, and *Cape Cod Times*. He was an outstanding individual and gentleman in the true sense, as aptly described by *The Concord Journal*: "both his long, accomplished career and his personal life were hall-marked by his characteristic passionate spirit, irrepressible curiosity, and an inclusive, thoughtful and caring manner." In addition to having been an international banker and civic and religious leader, Rick was also a down-to-earth and practical individual who was a joy to be with.

The IPA was privileged to have Rick serve on the Board of Directors from 2003 to 2009, and as clerk from 2006 to 2008.

Rick's daughter Emily followed him onto the Board, serving from 2010 to 2015 and also taking on the job of clerk during that time. While on the Board, he was a key proponent of various important projects, most important being the invasive gray willow removal project in 2008–2009. Rick, whose family had close connections with Bartlett Tree Experts, played a major role in securing their involvement in that project. He was also a strong advocate for greater participation on the Board by representatives from the various homeowner associations located within the IPA area and also for the establishment of the Associate Director position on the Board. Most of all, he was a vocal and jovial attendee at all Board meetings, generally driving down to the Cape from Concord for the Thursday evening meetings.

Having served as IPA president for much of Rick's tenure on the Board, I had the privilege of working closely with him on many occasions. I was impressed with his endless ideas for improvements to anything in which we were engaged. Outside of IPA business, my wife and I had a memorable evening dinner with him and his wife Betty Ann at Windrift, the family's get-away home on Wheeler Road. I recall sharing stories about our common experiences of living abroad, he and his family in Asia and Geri and I in Denmark. My regret is that we didn't do that more often. The last time we were blessed to see both of them was in January 2019 at the annual IPA Directors' holiday party. I believe I speak for many others in saying that the world has lost a truly remarkable man, and we will all miss seeing his smiling face and hearing his cheerful voice. *Bon voyage* my friend.

Emory D. Anderson

WHAT'S HAPPENING ON THE WATER

This spring has been rather strange in many ways with the COVID-19 pandemic fully upon us. Many are still at work such as medical personnel, first responders (fire, police), and those at businesses still allowed to remain open. Others are finding ways to manage from home given the closure of schools and churches and stay-at-home and wear-a-mask requirements. Many of the activities we normally associate with this time of year have been cancelled.

One of the first to be cancelled, that many in the IPA area participate in, was the annual volunteer counting of river herring coming up the Marstons Mills River to spawn in Middle Pond and Mystic Lake. Amy Croteau, Senior Natural Resource Officer for the Town reports that we had seen herring in March and April across all our runs in Town, the weather had kept it kind of slow going. With the recent shift in weather, we have seen increasing numbers in the Santuit River, Marstons Mills River, and Centerville River runs. As we are not conducting counts, there is little to report on numbers, but the fish are still steadily making their way to spawning grounds.

The IPA Board of Directors has not met in person since February 5, but has continued to conduct its business via email correspondence.

However, some activities will still take place. The IPA's annual biweekly pond testing began again in May and will continue through the summer until about the end of October. As usual, this testing will include surface-to-bottom water temperature and dissolved oxygen as well as Secchi disk reading to gauge water clarity. This will be led by Emory Anderson for Mystic Lake and Middle Pond, and by Bob Dederian for Hamblin Pond.

The Town-funded treatment of Mystic Lake and parts of Middle Pond for the control of the invasive *Hydrilla* is again expected to be authorized by the Town Council. This treatment, using the herbicide Sonar, will be done in early summer by SOLitude Lake Management and poses no risks to humans or pets.

The IPA plans to continue its seasonal monitoring of cyanobacteria at one location in each of the three Indian Ponds. This project, done in collaboration with the Association to Preserve Cape Cod (APCC), involves sampling fixed stations once every two weeks during the months of June through October. Water samples will be analyzed for the relative abundance of different types of cyanobacteria, some of which can be quite toxic. Similar to last year, this monitoring program complements the cyanobacteria monitoring done by the Town of Barnstable at each of the pond's Town beaches. APCC will provide IPA with biweekly results as they become known, and if cyanobacteria levels reach thresholds of concern, the Town of Barnstable Health Department will be notified for possible postings. Given current concerns about the spread of COVID-19, APCC plans, at least initially, to conduct all field sampling and laboratory work. As the season progresses, we may be able to reduce our costs by using local IPA volunteers to collect the biweekly water samples, as we did last year. APCC proposes to provide an end-of year-summary after all sampling is completed.

Emory D. Anderson and Bill Hearn

"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

