

THE IPA NEWSLETTER

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

Summer 2015

A quarterly publication of the Indian Ponds Association

Vol. 15 No. 3

IPA ANNUAL MEETING REPORT



The Annual Meeting of the Indian Ponds Association moved this year to the lovely home of Lew and Nancy Solomon. Forty to fifty members attended the event held on Sunday, July 12 and the weather blessed us yet again which allowed us to meet on their lawn.

President Alex Frazee welcomed everyone and expressed thanks to past, present and outgoing directors for all their considerable efforts. Betsey Godley has been the keeper of the database and Tamar Haspel, the Webmaster for many years. Both will cycle off the board due to term limits but we certainly are grateful for all their contributions.

The treasurer's report showed healthy balances in all three of our accounts allowing IPA to publish an updated version of "A Resident's Guide to the Indian Ponds" now available for distribution. Editors Holly Hobart, Maggie Fearn, and Emory Anderson worked very hard to produce this interesting and informative publication. We hope you will all read it and leave it out on a coffee table for guests to examine.

After the membership approved the Minutes of the 2014 meeting the Nominating Committee presented the slate of directors to be elected this year. Nominees for a first term are Maggie Fearn and Kathy Bryan, for a second term Holly Hobart and Chip King, and for a third term Alex Frazee, while Associates are Barry Schwartz, Susan Sawyer and Martin Walsh. The slate was accepted as presented. In keeping with our bylaws, at the conclusion
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STATUS: BAN ON PLASTIC BAGS

The Barnstable Town Council passed an ordinance to ban thin film plastic bags on September 3rd by a narrow 7-6 margin. We are all aware of the unsightliness of these bags clinging to trees and roadside greenery. What makes the bags one of the most pernicious pieces of trash is their tendency to become airborne, and thereby make their way to rivers, streams, ponds and ultimately to the oceans. They are particularly lethal to fish and marine mammals, and there are many examples of entanglements and suffocation due to the bags. They do not biodegrade; they photo degrade into smaller and smaller particles which are consumed by fish. Unfortunately, recycling is not the answer, as the thin film bags are increasingly considered undesirable for recycling, and cause frequent, costly breakdowns of equipment.



Sea turtles often mistake plastic bags for jellyfish, with lethal results.

The ban follows along the line of four other bans on the Cape and many others in the Commonwealth. The ban will begin a year after the approval, so there will be adequate time for stores and consumers to adjust.

If you would like to discuss this important issue, please call Sheila Place at 508-420-4438, and thanks!

-Sheila Place

**IPA OFFICERS AND
DIRECTORS, 2015****President**
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Kathy Bryan**Treasurer**
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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 700, is a forum for the exchange of ideas on matters concerning the IPA mission, and the views expressed by authors of articles do not necessarily represent official IPA policy.

IPA NEEDS A BOAT MANAGER

Do you like messing around in boats? Do you have basic mechanical skills? If so, the IPA needs YOU! The IPA's two outboard skiffs need somebody to take overall responsibility for their care, as distinct from their operation for pond testing and other pond work, which can be done by others.

It's mostly a spring and fall job, and takes only a day or so. In the spring, you would be responsible for getting the boats equipped and the engines up and running. The small engine, a 2 hp. Evinrude, can be simply taken down to a local shop and they can do whatever work may be needed. The big Honda engine on the larger boat is too heavy to remove and carry around, so it must be serviced while still attached to the boat.

This past spring's work involved only changing the Honda's engine oil and oil filter, changing the gear oil, checking the fuel filter, attaching a tank of fresh fuel, and starting it up. For next spring, a change of spark plugs is also on the maintenance list. When both engines have been started and checked out ashore, the bilge pumps and batteries can be re-installed, and the two boats are ready to be launched.

Fall maintenance starts when the boats are hauled out. To get all the gas out of the engine, the Honda is run with its fuel line detached until it stops by itself. Bilge pumps and batteries are removed and the batteries recharged and stored in a warm, dry place for the winter. The boats are cleaned inside and out with a pressure-washer. The small boat, which weighs only 150 lb., is nested inside of the larger skiff on its trailer, and the two are ready for winter storage, preferably indoors. Dock and anchor lines are soaked in a solution of laundry detergent, fabric softener and water, then rinsed and hung up to dry. Any remaining fuel can be donated to your car and the fuel jugs left empty until spring.

All the equipment to do these tasks is supplied, including a battery charger and a large plastic bucket for running the Honda ashore. The Honda's User Manual is also included.

If you're interested in taking on this vital responsibility for the IPA, please get in touch with Alex Frazee at 428-2485.

**CAN YOU PROVIDE INSIDE WINTER STORAGE (OR SAFE
OUTDOOR STORAGE) FOR THE TWO IPA BOATS?**

**REQUIRES THE EQUIVALENT OF ONLY ONE PARKING
SPACE (THEY STACK).**

**NO MAINTENANCE OR OTHER ATTENTION
REQUIRED.**

PLEASE CONTACT ALEX AT 428-2485.

Photo Credits: Cover, "Mystic Lake", Russ Price, Page 6, Russ Price.

Hydrilla Q & A

The IPA newsletter has covered *Hydrilla* extensively since it was first identified in Mystic Lake in 2010. But I still get some surprising questions, leading me to believe that everybody hasn't read all the fine print. With that in mind, this article will cover some of the questions I've been asked recently.

Q. Is *Hydrilla* toxic?

A. Not toxic as in poisonous. In fact, you can buy a 120 capsule bottle of Swanson GreenFoods Wild-Crafted *Hydrilla Verticillata* for \$11.79. Touted "as a green food loaded with antioxidants and phytonutrients...as a dietary supplement, take one veggie capsule per day with food and water." Seriously! Personally, I prefer to compost the plants that I collect. But toxic for a pond's ecosystem, yes. *Hydrilla verticillata* is an aggressive invasive super weed. It is considered the most invasive aquatic plant in the country (and there are some nasty ones out there!) It will outcompete native plants. If not controlled now, in the early stages of the infestation, will grow at an increasing rate, likely spreading throughout Middle Pond, to Mill Pond and the adjacent cranberry bogs which draw water from Mystic.

Q. Where is it growing in Mystic Lake?

A. There are some plants in at least a dozen areas of Mystic. It grows on all kinds of substrates, from mud to sand to gravel. Most growth in Mystic and Middle is not very dense yet, but it will eventually form large mats and grow vertically.

Q. What about Middle Pond?

A. We know about some isolated plants in Middle Pond near the "cut" where it joins with Mystic. If, and it's a big if, that's the only area where it is growing in Middle Pond, then for now it is well-controlled there. But stem fragments will inevitably drift over to other areas of Middle Pond. (See below—this is one area where volunteers who can identify *Hydrilla* would really help. Early identification is the key to control.)

Q. How does it spread all over the place?

A. When stem fragments break off they float to new areas of the pond and take root. Stem fragments will break off naturally when the plants get tall enough. Waterfowl, like geese, swans and ducks, love to feed on it and spread fragments in the process (they must crave those phytonutrients!). *Hydrilla* also flowers and forms seeds, but this is not considered a primary means of reproduction.

Q. In what depth of water does it grow?

A. I have seen it as far down as 12' but it grows best in shallow water, less than 6' deep. While it is well adapted to low light conditions, at least so far there does not seem to be much at depths below 6'-8'.

Q. When does it grow?

A. It begins to grow in June and grows throughout the summer and well into October. It dies back in the winter and sprouts the following year from tubers and over-wintering rhizomes.

Q. What if I go out and rake up all the vegetation in the water off of my beach. Won't that help?

A. That is a Very Bad Idea. Besides being illegal and exposing yourself to a healthy fine, if there are *Hydrilla* plants in the mix, raking will spread viable stem fragments throughout the lake. And by removing native plants you'd be removing the best natural control, which is our native vegetation. *Hydrilla* is opportunistic and roots most readily in areas where there are no other plants.

Q. What are all those "nets" I see on the floor of Mystic Lake with sandbags on them?

A. Those are opaque benthic barriers placed over dense patches of *Hydrilla*. Most of them are made of Ocean State Job Lot tarps attached to a PVC pipe frame. A dense patch of *Hydrilla* will die in a few weeks without any sunlight and the barriers do the job very efficiently. But constructing, moving, and installing the barriers is labor intensive.

Q. Did *Hydrilla* have anything to do with the mussels dying?

A. No. But *Hydrilla* may be bad news for mussels—there don't seem to be any mussels growing in dense mats of *Hydrilla*, so more *Hydrilla* means less habitat for mussels. Anecdotally, *Hydrilla* plants have been observed flourishing in the mud-filled empty mussel shells left over from the great mussel die-off of 2009.

Q. Does *Hydrilla* have anything to do with algae blooms?

A. No. *Hydrilla* grows best in clear water (more sunlight) so anything that makes the water cloudy will somewhat impede its growth. But of course we all want clear water, and *Hydrilla* is well-adapted to growing in low light.

Q. Is *Hydrilla* the plant that grows to the surface and gets tangled in my legs when I'm swimming? (or in my paddle when I am stand-up paddling)?

A. No. That is most likely clasping leaf pondweed, one of our common native aquatic plants. While these plants may be a little annoying, they won't take over the ponds, and their vigorous growth is a sign of pond health (clear water). *Hydrilla* has the potential to grow to the surface like that, but as far as I know there is none growing to the surface in Mystic now.

Q. I heard that *Hydrilla* was in Long Pond in Centerville and was eradicated there. How did they do it?

A. Long Pond had an awful *Hydrilla* infestation which was identified in 2002. The Town funded years of treatment with the systemic herbicide fluridone. The treatment was extremely effective and no *Hydrilla* was observed in 2013 and 2014, but several dense

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INVASIVE ASIAN CLAMS PROLIFERATING IN HAMBLIN POND

The Asian clam, *Corbicula fluminea*, is a tiny freshwater bivalve, about as big as a fingernail, that is native to eastern and southern Asia. It arrived in the United States around 1930, possibly as a food source for Asian laborers on the west coast. They were spotted in the Columbia River in 1938, and have subsequently spread to nearly every state. They live in both lakes and streams, where they may be easily discovered living on the surface of a sandy or gravelly substrate.



Adult and juvenile asian clams found in Hamblin Pond this summer. You'd need hundreds to make a decent chowder.

I first discovered them in Hamblin Pond in the summer of 2014, while snorkeling in shallow water off the Town Beach. I collected the paired shells of several individuals, and one live clam. Identification was subsequently confirmed by lake management consultant Dr. Ken Wagner. This summer, I asked my visiting grandson, Christopher Quillin, and his local friend

Aidan Hamblin, to snorkel for them at the Town Beach. They brought back a plastic bag containing a number of shells and live individuals, and reported seeing a group of at least 50 that they left alone.

It is hard to say what kind of impact Asian clams might have on the Indian Ponds. They have been living in Lake Weququet for a number of years and have caused no apparent trouble. But they are thought to outcompete native bivalves (of

which there are none known to be living in Hamblin Pond) by growing fast, reproducing rapidly and gobbling up habitat and food. In the Midwest, clusters of them have been known to occlude cooling-water pipes, which is not a problem in Hamblin Pond.

On the benefit side, they are filter feeders, and a large population of Asian clams would help keep the water clear.

It has been reported that Asian clams out-compete native freshwater mussels, which is a concern, because their minuscule larval stages can spread easily and invisibly from pond to pond in outboard cooling water, live bait wells, shoes, and attached to floating objects or birds. However, thus far the reports of harm to mussels are anecdotal and there are already so many other stresses on native mussel populations that it would be premature to conclude that Asian clams are a culprit.

I found one published article on the use of benthic barriers to control Asian clams. They work by reducing the dissolved oxygen available to the clams, and, in effect, smothering them, and were reported to be 100% effective. ["The control of an invasive bivalve, *Corbicula fluminea*, using gas impermeable benthic barriers in a large natural lake". M. E. Wittman et.al. Environmental Management. 2012 June: 49(6):1163-73.]

Asian clams are edible, so one solution might be to develop them as a food item. They are considered quite tasty in Asia. They are so small, however, that it would take a great many clams and a lot of work to produce much of a meal.

-Holly Hobart

ANNUAL MEETING REPORT

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of the meeting officers were elected with Chip King becoming President, Kathy Bryan Vice-president, Emily Wheeler Secretary, and Greg Cronin Treasurer.

Roberta Gough informed the membership that the Schwarm Memorial Scholarship award of \$1,000 this year went to Ethan MacPherson to help with college expenses as he attends college at U. Mass. Amherst this fall.

Most years IPA has a speaker at the Annual Meeting, but this year we tried something new. Those of us presently or recently on the Board spoke in turn about the positive personal growth that resulted from our individual and collective efforts to protect the ponds we value. We all encouraged members to become more actively involved. There are a wide variety of needs, and the old adage "Many hands make light work" certainly applies. Holly Hobart shared the personal news that she and her husband Ken will move to Seattle Washington sometime this fall. Like the departure of Bob Nichols, this will leave many additional opportunities for the rest of us to step into new and more active roles for the betterment of everyone, and especially the ponds. No special skills are necessary. On the job training will be provided. IPA is an equal opportunity situation with all of us protecting property values as well as the ponds. There is always room for more involvement so please contact a board member to see where you might lend a hand.

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KIDS AND FRESHWATER CRAYFISH IN THE INDIAN PONDS

Paddle boarders, kayakers and canoers are very familiar with the natural beauty of what lies above the water on the Indian Ponds, and anglers are drawn to them due to the bountiful populations of species such as bass, perch, and pickerel. What many may not be aware of, however, is that these fish,



Freshwater crayfish

at least in part, are fed by the numerous species of invertebrates that lie many feet below the surface on the murky bottom. One species in particular that is responsible for supplying the bass with food, is the freshwater crayfish. While there are over 300 species of freshwater crayfish, the

ones typically found in freshwater lakes typically range from between 10 and 150mm. Besides the bass, the population best acquainted with these creatures of the depths are probably kids equipped with masks, snorkels and buckets.

While the dispersion of the populations of these crayfish throughout the Indian Ponds is unclear, there seem to be densely populated areas where groups of rocks or fallen debris from trees offer them exactly the type of habitat they seek. In clear ponds such as these, crayfish populations can grow to a density of 15 per square meter, which is good news for hungry bass and curious kids alike. Many kids this summer in Middle Pond have been known to "harvest" more than 10 in just an hour or so of exploring. Because these crayfish breathe through gills, and require their gills to be wet in order

to function, a bucket of cool lake water is always essential if one is holding these creatures captive for the duration of the swim. Kids can also get a great chance to compare and contrast the two primary



Sammy with his wriggling catch.

means of locomotion at the crayfish's disposal. It doesn't take long to see that a crayfish is far more adept at using its tail as a flipper to quickly propel itself back to the bottom, and to the safety of rocks and debris, than it is at slowly making its way across the bottom via the use of its feelers

and claws. This hands-on exploration not only teaches kids about the rocky and murky habitat of these creatures, but it is a chance for them to learn about their place in the overall ecology of the ponds. Kids learn that while the crayfish offer them entertainment for a few hours, they also play an important role in helping keep the lakes clean of decaying plant and animal matter. It is also interesting to note that recent excursions have yielded far fewer sightings and captures than ones only a couple of weeks ago. Crayfish are typically found in water of only 1-2 meters, but migrate to deeper waters during the fall and winter months. Could it be that kids starting school aren't the only ones who are aware of summer's impending departure?

-Matt and Amy Hodge

DEAD MUSSELS AND SNAILS FOUND IN MYSTIC LAKE

Since mid-July, dead mussels were observed floating and washing up on the downwind beaches of Mystic Lake. Reported numbers run from dozens to hundreds, not close to the wipe-out of millions of mussels we saw in 2009. One consistent observer, Nancy Dawson, recently reported finding unusual numbers of dead freshwater snails as well.

The IPA has inquired of various state agencies what could have caused this mortality, but no agency had people available to visit the pond. Peter Hazleton of the MA Natural Heritage and Endangered Species Program wrote that there were four possible causes:

1. A localized cyanobacterial bloom might have produced toxins lethal to mollusks. However, he said, if it is enough of a bloom to kill mussels, it would be above Town Health Department thresholds. No such bloom has been reported in Mystic this summer.
2. Localized drops in dissolved oxygen, caused by dead and decaying aquatic plants, or by an increase in water temperature. No such mortality among aquatic plants has been observed.
3. Introduction of a toxic foreign substance, such as a herbicide. But there were no herbicides known to have been used in Mystic this summer.
4. Natural mortality, which seems unlikely because the number of dead mussels was suddenly so much greater than usual.

Was more than one species of mussel dying? Certainly the species most commonly found dead was the Eastern Floater, *Pyganodon cataracta*, which also happens to be the most common species of mussel found in Mystic Lake since 2009. Whether other species

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patches were discovered there this summer. This speaks to the resilience of the plant and how elusive a goal eradication can be.

Q. But if it was “eradicated” for two years, how did it re-grow?

A. *Hydrilla* plants form small tubers in the sediment at the end of each growing season. Think lots of tiny potatoes ¼ inch diameter weighing 50 mg. These tubers remain viable for at least six years. The bank of tubers creates a ticking time bomb, that can go off years after the plants appear to have been eradicated. Also, no plants were **observed** in Long Pond over the last two years. The contractor hired by the Town was responsible for surveying the pond, and it is easy to miss some plants when surveying a 50 acre pond in one or two days (see next question).

Q. What can I do to help?

A. If you are comfortable snorkeling or swimming with goggles, the best thing is to learn to identify *Hydrilla*. An IPA volunteer will be delighted to help. There are a couple of native aquatic plants that are similar—one in color and one in leaf-structure—but *Hydrilla* in clear water is distinctive. Volunteers who can recognize where *Hydrilla* is growing can pinpoint where treatment is needed, prevent it from getting established in new areas and help avoid unwelcome surprises like they had in Long Pond this year. Volunteers of any age are most welcome! Beyond that, careful hand pulling of small clusters of plants is a useful control method for areas with limited growth. A special mesh bag available from the IPA must be used to

avoid spreading fragments. Any plant removed by hand in the early stages of growth will never form a dense mat and will never produce any tubers.

Q. What about the herbicide that was used in Mystic Lake last year and they were going to use this year?

A. In 2013 and 2014 the contact herbicide endothall was used in the 5 acre cove known as “ground zero”, where there was an unusually high concentration of *Hydrilla*. This was the cove where the noxious weed was first identified in 2010. The treatment was successful, killing nearly all the *Hydrilla* in the cove while not harming common waterweed, an important native competitor. But this kind of spot treatment offers no promise of long-term eradication, so the Town’s contractor recommended using fluridone, the same herbicide that has been so effective treating Centerville’s Long Pond. Fluridone is a systemic herbicide and there was concern that it could affect the cranberry bogs which rely on Mystic Lake water for irrigation and harvesting. The treatment was delayed because of these concerns and it looks like the “treatment window” has been missed for this year. In the concentrations used to treat *Hydrilla* both herbicides are generally considered safe for humans and aquatic animal life, but they have some adverse impact on the native aquatic vegetation, although possibly only a temporary impact.

-Greg Cronin

*If you are interested in volunteering to help, learning how to identify *Hydrilla*, or have other questions, call Greg at 428-4205 (please don’t ask about phytonutrients!).*

ANNUAL MEETING REPORT

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For those who may not have already heard, Alex mentioned that long time Barnstable Conservation Administrator Rob Gatewood retired this spring and that his former deputy Darcy Karle has assumed his former position.



Members and guests enjoy the view while catching up on IPA business.

Brief mention was made of **Marstons Mills Village Day to be held on Sunday September 13** this year. Please come visit the IPA table, have a burger, visit with neighbors and join the fun.

Following adjournment, participants enjoyed a social hour sponsored by the board of directors. Thanks go to Stop & Shop and Trader Joe’s for donations of food and to Cotuit Liquors for supplying wine.

-Alex Frazee

To see all Newsletter photos in full color, go to www.indianponds.org

KINGFISHERS IN OUR LIVES



Belted Kingfisher

It is my understanding that there has been a Kingfisher hanging around Middle Pond this summer and I have been asked to write something about the bird. First, what you are seeing is the Belted Kingfisher. Since there are around 90 species of Kingfishers in the world, we must be precise.

There are actually three species that come into the United States. The Belted, which you have seen, is found in almost every state and is the most common Kingfisher in the United States. The other two are found in a very narrow band down in Texas along the Rio Grande. They are the Green and the Ringed Kingfishers.

There are six species to be found in the Americas, both North and South, so that leaves about 85 distributed over the rest of the world. Some of those are not commonly known as Kingfishers but they are members of the clan. The Australian Kookaburra is one of these.

Kingfishers live away from water, some in the middle of forests, and eat invertebrates, mollusks, frogs, reptiles, small mammals, and even the nestlings of other species of birds. The method of feeding, however, is pretty much universal, that is, sitting on branches and swooping down on some passing prey.

Most Kingfishers nest at the end of tunnels dug into the ground. The length of the tunnel depends on the softness of the ground. Some have been found to be 28 feet into the ground. Some nest by burrowing into large, abandoned termite nests.

Because we see the Belted Kingfisher perched along the shore of rivers and ponds and occasionally diving in to snag a minnow, we might be surprised to find that most



Green Kingfisher



Ringed Kingfisher

Before I hang it up this time, a couple of other facts that I didn't know before this article:

Because of the arrangement of their eyes in their head, the Kingfisher, like humans, have binocular vision, that is, they see with both eyes at the same time whereas most birds see out of one eye at a time. They also have nictitating membranes in their eyes which slide into place when they dive into the water. These protect their eyes while allowing full vision.

This has been an interesting article to research. I learned a lot that I didn't know before starting it. The article was the result of a request from one of you. This is the way I would prefer to work. You suggest, I write and answer questions.

-Dave Reid

DEAD MUSSELS AND SNAILS FOUND IN MYSTIC LAKE

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were involved is a hard question to answer. The floating mussels and recently dead mussels found on the shore appear to be all the same species, but unless every single dead mussel is found and examined, it's impossible to tell.

Systematic measurements of water quality, including temperature, dissolved oxygen, and transparency were taken in all three ponds during May, July, and August, and all appeared to be within normal limits for the time of year. However, these measurements are taken only at the deepest part of the pond, which would not show what might be happening in any one particular cove or shoreline. Floating mussels were observed, however, across the full north-south extent of Mystic Lake.

The IPA has asked lake management expert Dr. Ken Wagner to consult on possible causes of the mussel mortality.

Finding unusual numbers of dead creatures in the ponds is always disturbing and should prompt us to ask the right questions (what is the date, where did the observation take place, number and species of animals observed), perform regular and frequent observations, and endeavor to determine the cause.

-Holly Hobart

“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.”

INDIAN PONDS ASSOCIATION
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FORWARDING SERVICE REQUESTED

