THE IPA NEWSLETTER

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

Summer 2019 A quarterly publication of the Indian Ponds Association, Inc. Vol. 19 No.3

IN THIS ISSUE

TOWN NIXES THEN OKAYS *HYDRILLA* TREATMENT

Hydrilla verticillata is a noxious invasive aquatic weed that was first discovered in Florida in the early 1950s, probably brought into the country as an aquarium plant. It has spread throughout much of the US mainly introduced to new waters as castaway fragments on recreational boats, their motors, and trailers, and in live wells on boats. *Hydrilla* is unusual for Massachusetts, having been identified in only three ponds on the Cape (Long Pond in Centerville and Mystic Lake and Middle Pond) and three other ponds elsewhere in the state. *Hydrilla* is dangerous because it grows rapidly, reproduces rapidly, is highly competitive with native species, and forms dense mats that adversely affect fish populations, recreational boating, swimming, and real estate values. It is extremely hard to eradicate because it reproduces both sexually and by asexual vegetative fragmentation of stems and by the prodigious production of tubers in lake/pond sediments.

In 2010, IPA members discovered patches of *Hydrilla* in Mystic Lake that appeared to have been growing for several years. Over the subsequent four years, IPA volunteers attempted to curtail the spread of this invasive plant by hand pulling and placement of opaque benthic barriers over patches of *Hydrilla*. Beginning in 2011, the Town funded hand pulling by Scuba divers and in 2012 contracted with Aquatic Control Technology (ACT) to conduct diver-assisted suction harvesting (DASH). In 2013, the Town increased its funding of *Hydrilla* control by ACT, including the use of an herbicide Aquathol K, and *Hydrilla* was also discovered in Middle Pond near the cut. This herbicide was again used by ACT in 2014; hand pulling and barriers were also continued by IPA volunteers. Interestingly, large and vigorously growing patches of *Hydrilla* were observed in August 2015 in Long Pond where this invasive had first been discovered in 2002 and had been treated with fluridone for a number of years. Unfortunately, treatment had been suspended in 2012 in the belief that the *Hydrilla* had been eradicated. In 2016–2018, Mystic Lake and portions of Middle Pond were treated with fluridone by SOLitude Lake Management (formerly ACT). Post-treatment surveys in those years had found no *Hydrilla* growing in Mystic Lake, although some were still found in Middle Pond. Nevertheless, concern was raised by SOLitude staff with the presence of tubers that are capable of remaining dormant for 5 years or more before sprouting. In Kings County, Washington, *Hydrilla* appears to have been totally eliminated in two small lakes where fluridone treatments were repeated every year for over ten years.

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MARSTONS MILLS 30TH ANNUAL VILLAGE DAY

“Rediscover Marstons MiIls”

Sunday September 8, Main Street, Marstons Mills: 12–3 pm

Activities for kids, display tables by Village vendors and organizations (including IPA)

LIVE MUSIC ALL DAY Mike Dumas and the Satellite Band

Hamburger or hotdog lunches for sale, Chicken BBQ at 4 pm at Liberty Hall

COME AND JOIN THE FUN!

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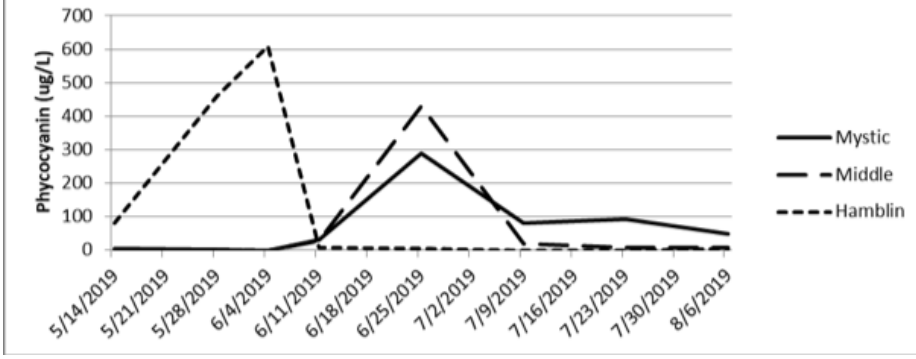
CYANOBACTERIA MONITORING UPDATE – SUMMER 2019

Since mid-May, the Indian Ponds Association (IPA) has been monitoring cyanobacteria in Mystic Lake, Middle Pond, and Hamblin Pond. Done in collaboration with the Association to Preserve Cape Cod (APCC), our effort consists of collecting water and plankton samples at single sites located in the northeast corner of each pond. As an IPA member, I have been collecting and bringing samples to an APCC lab in Brewster where APCC staff and I examine the samples under a microscope and conduct algal pigment analysis using fluorometric techniques.

There have been several local and national press reports about the emerging problem of cyanobacteria. Blooms of these toxic bacteria (also called blue-green algae) have caused recent town beach closures on Barnstable's Long Pond, Schubael Pond, Lovell's Pond, and sections of Lake Wequaquet. Fortunately, this year, cyanobacteria levels have remained low to moderate at IPA's three monitoring sites and at the Town of Barnstable's monitoring sites on the Indian Ponds. However, documenting that levels are low or only moderate is a complex matter that involves identifying the relative mix of various kinds of cyanobacteria (there are many species), their numerical abundance, and their population growth rates.

For readers interested in technical analysis, bear with me; for those less inclined, you might skip to my last paragraph. To begin, in Cape Cod ponds, the two principal bloom-forming types of cyanobacteria are in the genera *Microcystis* and *Dolichospermum*. These two kinds of cyanobacteria produce multiple kinds of toxins, which they can emit in response to various environmental stimuli. **Microcystin** is one of these toxins; it is produced by both *Microcystis* and *Dolichospermum* and is of special concern to those seeking to protect public health. *Microcystis* and *Dolichospermum* differ substantially in the amount of microcystin they can emit. A *Microcystis* bloom can produce roughly 10 times the amount of microcystin than an equivalent bloom of *Dolichospermum*. Quantifying the abundance and risk of complex assortments of cyanobacteria is difficult and costly. Fortunately, however, all cyanobacteria have one thing in common: the pigment **phycocyanin**. Measuring the amount of this pigment gives health officials a general index of the overall amount of total cyanobacteria in a water sample. Armed with this information, University of New Hampshire and APCC researchers have identified a two-prong risk assessment method to evaluate the potential amount of the toxin microcystin which may be present. This method quantifies (i) the concentration of **phycocyanin** (the pigment common to all cyanobacteria) and (ii) the **relative dominance** (*i.e*. ratio) of the two most prevalent types of cyanobacteria (*Microcystis* and *Dolichospermum*). By knowing the total overall amount of cyanobacteria (as indicated by phycocyanin levels) and the proportion of *Microcystis* in the sample (as determined with microscopes), one can assess the risk of Microcystin "poisoning".

Figure 1. Concentration of phycocyanin at Indian Pond monitoring sites May-early August 2019. Note: Only Hamblin tested on 6/4/19.



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IPA ANNUAL MEETING RECAP

The 62nd annual meeting of the Indian Ponds Association was held Sunday July 28 at the home of John and Deirdre Kayajan at 32 Heath Row in Marstons Mills. Nearly 70 members and guests gathered on a warm afternoon under a large tent on the lawn overlooking beautiful Mystic Lake. As last year, the tent was rented jointly by the IPA and the Regency Homeowners Association. President Emory Anderson welcomed the attendees and extended thanks to Cotuit Liquors, Trader Joe's, and Stop & Shop for their donations of food and/or beverages for the meeting, and Rev. Ernest Ryden of Osterville for lending us the PA system. He acknowledged the presence of several Town officials, including Elizabeth Jenkins, Director of Planning and Development for the Town of Barnstable; Griffin Beaudoin, Town Engineer; and Paula Schnepp, Precinct 12 Councilor. Precinct 10 Councilor Matt Levesque sent his apologies, having two prior commitments that afternoon. Lastly, he offered special thanks to John and Deirdre Kayajan for again hosting the event.

The minutes of the 2018 annual meeting and the treasurer's annual report were both presented and approved without comment or correction.

The report of the Nominating Committee indicated four candidates for election to the board of directors: Sandy Leo-Clark for her first two-year term, Betsey Godley for her second two-year term, and Kathy Bryan and Maggie Fearn for their third two-year terms. This slate of candidates was elected unanimously.

Director Betsey Godley presents checks to Julia Wiseman and Christopher Breshahan

Betsey Godley, chair of the Schwarm Memorial Scholarship Committee, presented $1,000 checks to two very deserving applicants: Julia Wiseman and Christopher Bresnahan. They were elected on the basis of their respective academic achievements, extracurricular activities, and community service, more details of which were reported in the spring issue of this newsletter. The Schwarm Memorial Scholarship honors the memory and contribution of former IPA director Edward Schwarm, who passed away in 2005.

President Anderson reviewed the history of the Order of the Turtle award which had been established in 2007 by the IPA board to recognize individuals, mainly outside the IPA membership, who had made significant contributions to the mission of the IPA. He noted the six previous recipients of the award who had come from a variety of walks of life and occupations (including government, consultancy, and private citizens). He then presented the Order of the Turtle award to David Reid, an avid birder, talented writer, and friend who has faithfully penned an article on our local birdlife for every issue of the IPA newsletter since fall 2007, nearly 13 years.

President Anderson presents the Order of the Turtle to David Reid

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HERRING COUNT RESULTS FOR 2019

The final results of this year's counting for the Marstons Mills River herring run have been made available to us by Heather Rockwell of the Barnstable Clean Water Coalition and Amy Croteau of the Town's Natural Resources Program, who coordinate the actual counting program. Data provided by the Mass. Division of Marine Fisheries in the following tables are based on the data collected by volunteers. For the Mill Pond ladder, 55 volunteers counted 4,521 herring over 61 days resulting in a run-size estimate of 35,092. For the Middle Pond ladder, a total of 2,540 herring were counted over 54 days resulting in an estimated 25,867 fish that made it into Middle Pond and Mystic Lake to spawn. The difference between the two run-size estimates is due to predation occurring between the two ladders and possibly other unknown factors.

Mill Pond fish ladder	
Start date	4/1/2019
End date	5/31/2019
Total days	61
Total counts	472
Mean counts/day	7.9
Pe (2W-3P)	35,092 ± 2,456

Middle Pond fish ladder	
Start date	3/31/2019
End date	5/23/2019
Total days	54
Total counts	361
Mean counts/day	6.7
Pe (2W-2P)	25,867 ± 1,944

Year	Visual count	Run size
2006	719	6,302
2007	1,741	13,862
2008	5,232	42,404
2009	1,332	10,668
2010	478	3,944
2011[1]	53	428
2012	10,327	87,308
2013	8,117	56,987
2014	6,396	47,006
2015	3,667	23,840
2016	483	13,954
2017	5,251	36,148
2018	1,567	10,306
2019	4,521	35,092

[1] Data likely underestimated due to count not covering entire spawning migration.

The time-series of counts and run-size estimates for the Mill Pond ladder from 2006 to the present indicates that even though the 2019 estimate was about 3 times larger than in 2018, it was still considerably smaller than the runs in 2012–2014. In spite of that, it is always encouraging when the current year's results are an improvement over the previous year.

The herring counting program for the Marstons Mills River is a valuable community service activity that provide important data for fishery managers. Thanks go to all who volunteered as counters this year, and we look forward to having your services again in 2020.

Emory D. Anderson

TO SEE NEWSLETTER PHOTOS IN FULL COLOR
GO TO THE IPA WEBSITE: www.indian-ponds.org

TOWN NIXES THEN OKAYS *HYDRILLA* TREATMENT

(Continued from page 1)

In early June of this year, the IPA was informed by Darcy Karle, the Town's Conservation Administrator, that alternatives (i.e. mechanical controls consisting of DASH and placement of benthic barriers) to the usual fluridone treatment were being considered because of the Town's new policy of no use of synthetic chemicals on Town property including lakes and ponds. It was explained that this policy was put in place because of the Town's highest priority being the protection of drinking water. On July 24, we met with the Town Manager to express concerns with the supposed ban on the use of fluridone, present documentation on the seriousness of the *Hydrilla* problem, the effectiveness of fluridone in combating *Hydrilla*, and to emphasize that fluridone had not been shown to be harmful to drinking water. The Town Manager explained that the shift to non-chemical alternatives was a "pause" in routine applications of chemical treatments until staff undertook review of impacts and necessity for various chemical treatments. We agreed on the importance of protecting the Town's drinking water supply as well as the protection of other important resources such as our lakes and ponds. We provided the Town Manager with several highly technical documents pertaining to the safety of fluridone and its preferred use by pond and lake managers nationwide in combating *Hydrilla*. That meeting was followed by a letter from the IPA President to the Town Manager dated July 27 that summarized our concerns about the importance of continuing control of this highly noxious and invasive aquatic weed through the use of fluridone and urged him to resume the treatment of Mystic Lake, Middle Pond, and Long Pond.

At the July 28 IPA annual meeting, this matter was reviewed by the President in his report and supplemented by comments from Elizabeth Jenkins, Director of Planning and Development for the Town, who concluded by saying there would be no fluridone treatment of *Hydrilla* this year. This announcement by Jenkins came as a surprise because, based on our July 24 meeting with the Town Manager, we had reason to be optimistic that the ban on the use of the fluridone might be relaxed as a result of our reasoned arguments and presentation of compelling documentation and evidence. Furthermore, we were perplexed at Jenkins' statement that Town staff had been working daily on this issue since May. Consequently, a second letter dated August 4 was sent to the Town Manager (copied to other Town officials) reiterating our earlier concerns and asking why a fluridone treatment could not have been implemented this summer and requesting that the IPA be allowed to work with the Conservation Administrator and SOLitude staff on this matter.

Although Town officials have not responded to our questions, we learned just before this issue went to press that approval has been given for a fluridone treatment sometime this autumn.

Emory D. Anderson, PhD
Peter Atkinson
Bill Hearn, PhD

CYANOBACTERIA MONITORING UPDATE

(Continued from page 2)

Figure 1 shows the total phycocyanin concentrations at our three monitoring stations through August 6. As you can see, Hamblin Pond had an early growth of cyanobacteria from mid-May to early June, but that population soon collapsed. In Middle Pond and Mystic Lake, cyanobacteria levels peaked in late June. Microscopy revealed that Hamblin Pond samples are consistently dominated by *Dolichospermum*, with almost no *Microcystis;* whereas these two cyanobacteria alternately dominate in Mystic and Middle Ponds from week to week. If phycocyanin concentrations exceed 100 ug/L and the water is dominated by *Microcystis*, APCC conducts a separate test for toxin concentrations, which have suggested federal standards. For waters largely dominated by *Dolichospermum*, a microcystin toxin test is done if phycocyanin concentrations exceed 1000 ug/L. To date, we have only conducted one such toxin test, and that was on June 25 when phycocyanin levels reached 400 ug/L in Middle Pond and *Microcystis* represented about half the cyanobacteria. Fortunately, the test showed cyanobacteria had produced negligible amounts of toxin in the pond sample.

Press reports and scientific literature both make clear that cyanobacteria are becoming more of a problem in many of our nation's ponds and lakes. The cause seems to be a combination of increased nutrient loading and increasing summer temperatures. Climate data indicate that climate change is accelerated along coastal southern New England and New Jersey, perhaps because of its proximity to the warming Atlantic. This warming trend may not be something that we can stop as individuals; however, we can play a significant role in helping to limit nutrient loading to our Indian Ponds. Waterfront development has increased dramatically in the last 50 years, and cyanobacteria blooms were implicated in previous mass mortalities of mussels in the Indian Ponds. If you own a property here, please consider ways to reduce nutrient runoff: maintain your septic system, reduce the size of your lawn, or at least seriously minimize the use of lawn and garden fertilizers, and restore and maintain natural vegetated buffers at road edges and pond shores. Our collective efforts in being good stewards of our natural environment will help to maintain the ecological health, beauty, and associated value of this special place for generations to come. Thanks for reading.

Bill Hearn, PhD

TUFTED TITMOUSE

Before I get into my chosen subject for the month, I would like to thank the members of the IPA board and the membership of the Indian Ponds Association for the Order of the Turtle award that I was presented at the recent annual meeting. It was a very thoughtful way to recognize my efforts through the years when I certainly did not expect any other recognition than the occasional comment that someone had enjoyed some of my articles. Also, to the gentleman with the picture of the hawk that I could not identify, I now believe that to have been a common black hawk. I could not see the beak or the tail, but, assuming the beak to have been hooked and yellow, and assuming the tail to have had a white band, it was probably the common black hawk. I looked it up as soon as I got home while the memory was still fresh.

Now, on to my subject of the month. Emory couldn't provide any suggestions from anyone as to a particular bird to write about, so I was pondering the subject while we were breakfasting out on the deck. Our feeders were inundated with titmice, and my wife suggested that since I had not discussed them previously, they might be interesting.

Titmouse

The tufted titmouse is common in eastern deciduous forests and is a frequent visitor to backyard feeders. They are native to the whole eastern side of the United States, with a western boundary just west of the Mississippi River and a southern boundary at the Gulf of Mexico.

They are small gray birds with short, rounded bills whose food of choice is insects of various kinds, which make up about two-thirds of their diet, but they will definitely accept various kinds of seeds from feeders set up in their patrol area. They will usually grab a seed from your feeder and fly off to some perch to crack open the seed pod with their stout bills rather than sitting on the feeder to open the seed pod like a cardinal would do.

Titmice build their nests in cavities, so one way to attract them to your yard is to put up nest boxes. They cannot dig their own holes in trees to provide nesting cavities, so they make use of natural holes and cavities left by woodpeckers. They line their nest with hair plucked from dead or even living animals such as raccoons, mice, woodchucks, squirrels, and rabbits. Once, a brave little gal tried to pull some fluff from our sleeping chow-chow.

Although you may see many tufted titmice around your feeder, they are not a flocking bird. Once they mate, they can be found in pairs, and although there may be several pairs around your feeder, they are all individuals or mated pairs. The female can lay 3–9 eggs in the nest. The eggs are white and finely dotted brown, reddish, or purple and are incubated by the female only for 12–14 days. After hatching, the female stays with the young while the male brings in food. After a while, the young are fed by both parents, sometimes with the aid of an additional helper, usually a member of a previous brood.

Titmouse

The tufted titmouse has several cousins which occur west of the Mississippi. They all appear very similar to the tufted, and you would see them and say, "What is wrong with that tufted". They are the black-crested titmouse, the oak titmouse, the juniper titmouse, and the bridled titmouse, the latter looking like a cross between a tufted and a chickadee. Their calls are all different, and you could easily identify which bird you were seeing by listening to their calls.

Dave Reid

IPA ANNUAL MEETING RECAP

(Continued from page 3)

Director Bill Hearn talks about the new IPA cyanobacteria project

Director Bill Hearn, who has been working with the Association to Preserve Cape Cod (APCC) since early May to monitor levels of cyanobacteria (also known as blue-green algae) in our three ponds, summarized the results to date (Note: more details are contained in a separate article on page 2). APCC will provide a formal report on the levels observed in the Indian Ponds at the end of the year, and we will continue to update members through the IPA newsletter. The Town of Barnstable posts regular updates on the dangers of cyanobacteria and the latest information on water quality for Town beaches (https://tobweb.town.barnstable.ma.us/Departments/healthdivision/). People are also encouraged to call the Town and the APCC to report anything unusual they may see. To get involved in the monitoring program, contact Bill at billhearn@yahoo.com.

In his report, President Anderson summarized some of the IPA's recent activities.

•**Pond testing.** One of reasons the IPA has been concerned about cyanobacteria stems from the massive mussel die-off in 2009/2010, which evidence suggests was caused by cyanobacterial toxins (conditions were ripe for a bloom at that time). While we don't know whether those conditions will recur, given what happened nine years ago, the board felt it important to invest in the APCC's cross-Cape monitoring program. In addition to cyanobacteria monitoring, we also conduct bi-weekly pond testing throughout the warmer season, taking readings on water clarity, dissolved oxygen, and temperature. All three ponds appear to be in pretty good condition As is usual at this time of year, a thermocline layer develops at depths of 20–25 feet in the deeper parts of the ponds. At that point, water becomes very cold and oxygen levels below that decrease sharply. Fish accordingly don't swim there at this time of year. Measurements in Mystic Lake in late July showed clarity to a depth of nearly15 ft, which is exceptional. Hamblin traditionally has the clearest waters of the three ponds, thanks to the Town's alum treatment in 2015.

•**Membership.** The IPA is a strong organization in good financial shape with a stable membership of about 170–180 households. To keep both members and our wider constituency informed, key board activities and goings-on in our ponds are reported in our quarterly newsletters and posted to our website (www.indianponds.org). We also contact members who have provided their email addresses with timely news as the need arises.

•***Hydrilla* in Mystic Lake.** In July–August since 2013, SOLitude Lake Management (and its predecessor Aquatic Control Technology) has been contracted by the Town to treat Mystic Lake and Middle Pond with a herbicide to combat the highly invasive and environmentally damaging *Hydrilla* plant. Our two ponds and Long Pond in Centerville are three of only six ponds in Massachusetts in which *Hydrilla* has been found. Beginning in 2016, SOLitude started using fluridone, which is the herbicide of choice for many state and municipal water authorities and is approved for use in Massachusetts. It has no known negative impacts on drinking water or the health of people and pets swimming in the waters when applied in prescribed doses. *Hydrilla* is difficult to eradicate, and consecutive multiyear fluridone applications are necessary to kill *Hydrilla* tubers, which can lie dormant for 5 years or more before propagating. Mechanical remedies, such as dredging and hand pulling, are generally ineffective: they don't remove tubers from the substrate, and can make the problem worse by fragmenting plants, which then spread to other parts of the lake to root and grow. In early June, we were informed by Darcy Karle, the Town's Conservation Administrator, that alternatives to the usual fluridone treatment were being considered, given the Town's policy of no use of synthetic chemicals on Town property including lakes and ponds because of the Town's highest priority at this time being the protection of drinking water. On July 24, several IPA directors met with the Town Manager to present documentation on the seriousness of the *Hydrilla* problem, the effectiveness of fluridone in combating *Hydrilla*, and that fluridone has not been shown to be harmful to drinking water. That meeting ended on what was thought to be a note of optimism, with the hope that the fluridone treatment would yet be possible this year.

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IPA ANNUAL MEETING RECAP

(Continued from page 7)

Emory invited Elizabeth Jenkins, Director of Planning and Development for the Town of Barnstable, and to whom the Conservation Administrator reports, to address our annual meeting. She spoke about the connections between land use, natural resources, infrastructure, growth and development, noting that the Town is committed to its Lakes and Pond Management Program. *Hydrilla* is one of two invasives they manage (the other being fanwort). It's a difficult dilemma to be sustainable stewards of environment while doing all they can for groundwater protection. A town-wide audit had indicated some additional research into Sonar (the brand name of fluridone) was needed. She further indicated a preference for mechanical rather than chemical treatment, and that the window for fluridone treatment this year had likely closed.

- **Dues.** IPA dues have been set at $20 per household for many years. As such, the amount of income from dues has not kept up with rising operational costs, particularly for postage and printing of our quarterly newsletter. Recently, we have had to dip into the Pond Restoration Fund to support our operating expenses. While we are entitled to do that, the board believes that raising dues to $25 starting in 2020 is appropriate, as such an increase will cover our operating expenses. Many members have been contributing to the Restoration Fund over many years. While in the recent past, we haven't needed to access those funds in any significant way, we have allocated about $4,000 for cyanobacteria monitoring this year. If we continue to do this in subsequent years, we will continue to need resources in the Restoration Fund.
- **Special thanks to Peter Atkinson**. President Anderson offered special thanks to Vice President Peter Atkinson for serving as acting President since February while he was away, and for coordinating today's meeting.

The guest speaker was Andrew Gottlieb, Executive Director, Association to Preserve Cape Cod (APCC) and Chairman of the Board of Mashpee Selectman, who talked about the work of the APCC and some of the major environmental issues facing Cape Cod.

- The APCC is a 501(c)(3) non-profit environmental, education, and advocacy organization which works collaboratively with government, businesses, local groups, and individual citizens to address major environmental issues confronting Cape Cod. Increasingly, APCC's work concentrates on water quality, though protecting native flora and fauna is also a focus. We have recently taken on resource restoration projects in communities across the Cape, encompassing stormwater remediation and providing technical resources to mitigate the impact of storms, and restore wetlands and marsh systems.
- Transportation management proposals are a major focus of our work. For example, options to rehabilitate or replace the canal crossings raise significant questions: it's not just about smoothing traffic bottlenecks, but the results of making it easier for people to cross the canal, which will encourage further visitation and development, and push the impact of more people coming to the Cape eastwards.

Guest speaker Andrew Gottlieb

- The APCC believes that the science behind climate change and warming temperatures is clear and that the consequences are manifesting now. Examples include cyanobacterial blooms, as warmer waters encourage dominance of different, sometimes non-native species. We've added a lot of nutrients to our water systems – mainly through septic systems – and created the warmer conditions those species like. Cape Cod is different now than it was 30 years ago, and it's going to get "more different" and more difficult to live and use Cape Cod in the way we have traditionally. We've accelerated the rate of change in a way that makes it hard for people to comprehend and adapt and very difficult for the natural world and species that inhabit it to adapt to. We don't know the answers, and APCC spends a lot of time on climate change issues. We often reference the observation of Dr John Holdren, White House climate advisor under President Obama, that there is (i) Adaptation: how do we adjust our living to the changing habitat; (ii) Mitigation: how do we soften its impact; and (iii) Suffering: how much of the last one you do is a function of how much of the first two you engage in. In other words, the more we on Cape Cod can adapt and mitigate, the less we need to suffer.
- The IPA provides enormous expertise and cares deeply about the area they serve. APCC works with organizations like the IPA all over the Cape that are geographically based and focused on local issues. Some of these issues are broadly felt and beyond the ability of a neighborhood, and sometimes even towns or states,

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IPA ANNUAL MEETING RECAP

(Continued from page 8)

to deal with. APCC fills the gap in these broader issues, and with a cross-Cape remit can find commonality in what various towns and communities are grappling with. As a regional organization, we are able to step back and say: "if 50% of the ponds we're dealing with have the same issue, this is in fact an issue."

- APCC is currently compiling a Cape-wide state-of-the-waters report on water quality in estuarine embayments (near-shore), ponds, and drinking water systems. We will release our report in September/October this year, and bluntly: every south-facing embayment is going to get a lousy grade. We have deployed extensive science and evaluative work, reinforced by visual observation. Northside, particularly Barnstable Harbour, has the highest estuarine quality on Cape Cod. Ponds are a mixed bag, though almost every pond we look at is under some kind of stress. Drinking water quality is pretty good because people care about it, and there's a strong regulatory framework at the local, state, and federal levels accordingly. The same concern doesn't exist with wastewater management. It's the now-familiar story of too much nutrient enrichment finding its way into lakes and embayments: fertilizers used too close to water, put down at the wrong time, in too high quantities, exacerbated by frequent heavy rainstorms we're now having, which lead to significant algal blooms. The main driver, however, is septic systems. They were not designed to remove nutrients and in fact with our sandy soils, they very efficiently inject those nutrients into groundwater, effectively fertilizing invasive forms of aquatic life and squeezing out indigenous pond life. Whereas our ponds used to have sandy bottoms, now we have mucky and soft lake beds, composed of partially degraded algae that smothers what it lands on. That provides a different habitat to the oxygen-producing plants that used to live in the sandy bottom.
- We all focus on curtailing new development, but the vast majority of water quality degradation follows ineffective management of what is already here. Even with zero net population growth, the problem will get worse without municipal wastewater treatment. Only 3% of the parcels on Cape Cod are serviced by public sewerage. The solution is a combination of municipal wastewater treatment, some denitrification, and alternative septic systems in every town. This is a big-ticket item that competes with more 'sexy' high-expense proposals and carries a long-term political payback (40–50 years). So, there is little political appetite: politicians aren't known to take tough positions now for benefits down the road.
- The crux of the matter: we want Cape Cod to remain a place that people want to come to and enjoy safely with their kids, families, and pets. The cost of doing nothing is enormously high; without quality waters, the Cape's appeal vanishes, taking with it businesses and property values. It's hard to calibrate that impact in people's minds; they know what they're spending on their tax bill, but they don't know what they're courting in terms of harm to their property. Higher tax bills won't be reflecting improvements to water quality in the short- or even medium-term. That's why APCC's report will have scientifically validated information conveyed in a more blunt manner than in the past. It won't be well received in town halls, but APCC is trying to convey in every fashion that things are not the way they used to be.
- To questions about inspections and regular pumping of septic systems, Gottlieb noted that doing so will extend the life of Title 5 systems, but won't help nutrient levels. Many different alternative septic systems are available, though none lower nutrient levels sufficiently to solve water quality issues – particular for salt water. Over the past 10 years, the APCC's highest priority had been to get legislation passed to help divert revenue from the state back to the Cape. Late last year, Governor Baker signed legislation that distributed state-collected monies back to Cape Cod communities to help manage wastewater. It has been funded by the 2.75% surcharge on all rental stays of 31 days or less in Barnstable County, with the money to go to the Cape Cod & Islands Water Protection Fund. Their economic model over the life of planning cycle – 50 years – indicates a minimum of 1 billion dollars in state assistance diverted to the Cape.

IPA board of directors (l-r): Emory Anderson, Barry Schwarz, Peter Atkinson, Sandy Leo-Clark, Kathy Bryan, Bill Hearn, Maggie Fearn, Butch Roberts, and Betsey Godley. Not pictured: Aaron Fishman and James McGuire.

- To a question about what individual residents can do, he said ask your town councilors and town manager to set aside short-term rental tax money to fund wastewater management, work with the military base towards regionalizing wastewater management, and encourage towns to adopt comprehensive wastewater management programs. Also, give your officials positive feedback. When they take difficult stands, let them know it's appreciated and influences how you vote. Make this an issue in your town elections and vote accordingly. And – crucially – spread the word about this critical issue and bring it to the forefront of people in your circle's minds. As a Mashpee selectman, lots of constituents stop me in the supermarket and complain about parking at the beach, or trash pick-up. No one has ever asked me about wastewater management. That has to change.
- Thank you IPA for the opportunity to discuss the APCC's work and for supporting APCC in our shared goals.

A social hour followed the meeting. The new board of directors also met briefly to elect officers. All incumbents were re-elected.

Emory D. Anderson and Maggie Fearn
Photos by Geri Anderson

"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

INDIAN PONDS ASSOCIATION, INC.
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FORWARDING SERVICE REQUESTED