

THE IPA NEWSLETTER

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

Summer 2013

A quarterly publication of the Indian Ponds Association

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INVASIVE *HYDRILLA* HAS SPREAD TO MIDDLE POND

In mid July, a 6 ft by 10 ft patch of the invasive aquatic weed *Hydrilla* was found in Middle Pond, just south of the cut from Mystic Lake. The following day a second small patch was found about 200 yards east of the large patch. Rob Gatewood, the Town Conservation Administrator, was notified. He contacted the MA Natural Heritage and Endangered Species Program (NHESP) and obtained their consent to place a benthic

A sample of the *Hydrilla* was pulled up from the center of the large patch prior to installing the benthic barrier and tubers were present, which indicates that this patch started last year. *Hydrilla* tubers are typically produced in the sediment beginning in September, and provide the means by which the plants re-sprout the following season. The two smaller patches undoubtedly started new this season from drifting fragments from the larger patch or from Mystic Lake.

The NHESP has placed conditions limiting the use of benthic barriers due to their concern about the possible impact on endangered mussels. This season they are permitting the use of benthic barriers in all areas of Mystic Lake except around the island where a single live listed mussel was found in the 2011 mussel survey. In all other Town water bodies, including Middle Pond, NHESP permission must be sought for any benthic barrier to be placed. None will be allowed anywhere in Mystic Lake next season. The IPA is attempting to persuade NHESP to reconsider these conditions in light of the need to arrest the spread of *Hydrilla* and the fact that benthic barriers are the most effective tool to rapidly contain and kill newly discovered patches of *Hydrilla*.

It is essential that residents on Middle Pond learn how to identify *Hydrilla* and be on the lookout for it. Information about *Hydrilla* and the color flyer that shows how to identify it relative to the native look alike *Elodea*, is available at www.indianponds.org. It is much easier to limit the spread of *Hydrilla* in a water body if it is caught early.

See *Hydrilla* map for Mystic Lake and Middle Pond, page 5.

--Bob Nichols

IPA ANNUAL MEETING REPORT 2013

The IPA Annual meeting for 2013 was again held at the lovely summer home of Jon and Debbie Halpert and Janis and Michael Maloney on Sunday, July 14. Once again the weather cleared in time for about 75 members to gather under the trees for a brief business meeting, a presentation from guest speaker Dr. Laurel Schaidler of Silent Spring Institute, and then social time with food and wine.

After approving the minutes of the 2012 meeting we heard and accepted the financial report, presented by Betsey Godley as Treasurer Greg Cronin was not able to attend. Thanks to the generosity of our members IPA has sufficient funds to continue producing this newsletter, to battle *Hydrilla*, and to continue our other efforts.

The Nominating Committee presented the slate of directors to be elected this year. Holly Hobart was elected to a two-year term, returning to the Board after a year away. Chip King was also elected to his first two-year term. Our outgoing directors were Bob Dederian and Lew Solomon, who each served the maximum three 2-year terms and Gay Rhue who has chaired the Annual Meeting Committee and the Scholarship committee for several years. Thanks are extended to each of them for their many contributions.

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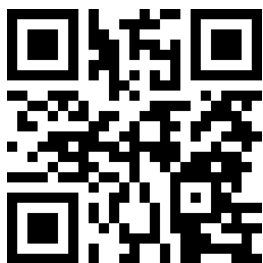
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Scan the above QR code with your smartphone to go to the IPA website.

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 over 650, 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 ELECTS TWO DIRECTORS

At the IPA's Annual Meeting in July, the membership elected the following two Directors to replace Lew Solomon and Bob Derderian, who each completed three terms. Gay Rhue, who has retired from the Board, has not yet been replaced.

CHIP KING – REGENCY

Chip King grew up in Marstons Mills on Mystic Lake. As a child, he enjoyed exploring the neighboring cranberry bogs, the herring run and the ponds. After completing high school, he spent two years at Paul Smith's College in the Adirondacks studying environmental science. From there, he worked on organic farms in New Zealand while learning the local culture and exploring the lands. He took over the family business in 2000, and as a business owner, has taken measures to be environmentally conscientious. He maintains his passion for the environment and has recently purchased his own home on Mystic Lake with his wife and two children. Chip is excited to be a member of group dedicated to aquatic preservation and hopes to assist in protecting and preserving this tremendous resource for generations to come.



HOLLY HOBART – WHISTLEBERRY

Holly Hobart is a graduate of Vassar College with a humanities degree. A deep interest in science and natural history led her to take several additional years of study in math, physics, chemistry, and biology. She went on to a career in software development at two technology companies in northern California. Between 1987 and 1997, Holly and her husband, Ken, sailed full-time in their 52-foot cutter, 'Night Heron', logging more than 50,000 miles at sea in both the eastern and western hemispheres. Between 2006 and 2012, Holly served as IPA Vice President for two years and President for four years.



DO NOT DISTURB!

There are over 30 benthic barriers (see picture) constructed from tarps and PVC pipe that have been placed over *Hydrilla* patches in Mystic Lake to kill the plants. The barriers are distributed all around Mystic Lake, typically in 2 to 5 ft of water, and are held in place by sand bags. **It is important that the barriers not be moved or disturbed.**



HERBICIDE APPLIED TO WORST AREA OF *HYDRILLA* IN MYSTIC LAKE

The herbicide Aquathol K (endothal) was applied by Aquatic Control Technology Inc (ACT) over two days in late July to a 5.5 acre cove area of Mystic Lake in which *Hydrilla* has become the most established and widespread. Aquathol K is a contact herbicide that affects *Hydrilla* more than most of the native plants. It was applied in liquid form via a distribution header towed behind a boat (see photo). The treated area is located along the northwest shoreline of the lake and is shown as a shaded area on the map. The shoreline of the area was posted with signs warning of the treatment and prohibiting swimming in the area for the two days of the treatment.

ACT has since been back twice to inspect the area and assess the effectiveness of the treatment. The herbicide apparently has stopped further growth of the *Hydrilla* in the area, and the plants look unhealthy, but they have yet to drop from the water column even five weeks after treatment. A more dramatic effect was expected and ACT will continue to monitor the effectiveness of the treatment and may decide to perform an additional treatment of the area. The treated area is shown on the map on page 5.

--Bob Nichols



Aquatic Control Technology Inc. applying Aquathol K herbicide

ANNUAL MEETING *(Continued from page 1)*

Vice President Bob Nichols gave a brief report about the condition of the ponds, and then the Scholarship Chair Gay Rhue presented two Schwarm Scholarships of \$1,000 each to Jeff Clark and Sara Pipe-Mazo.

Dr Schader then spoke about "Contaminants of Emerging Concern in Cape Cod Groundwater, Drinking Water, and Ponds" (see article on page 6). After her talk and a time for questions and answers, we adjourned for a social gathering. The newly elected Board of Directors met briefly to elect officers for the coming year. Alex Frazee will remain as President; Bob Nichols as Vice President; Greg Cronin as Treasurer, and Emily Wheeler as Clerk.

--Alex Frazee



President Alex Frazee chairs the meeting



Directors Haspel, King, (Frazee), Godley, Wheeler, Hobart



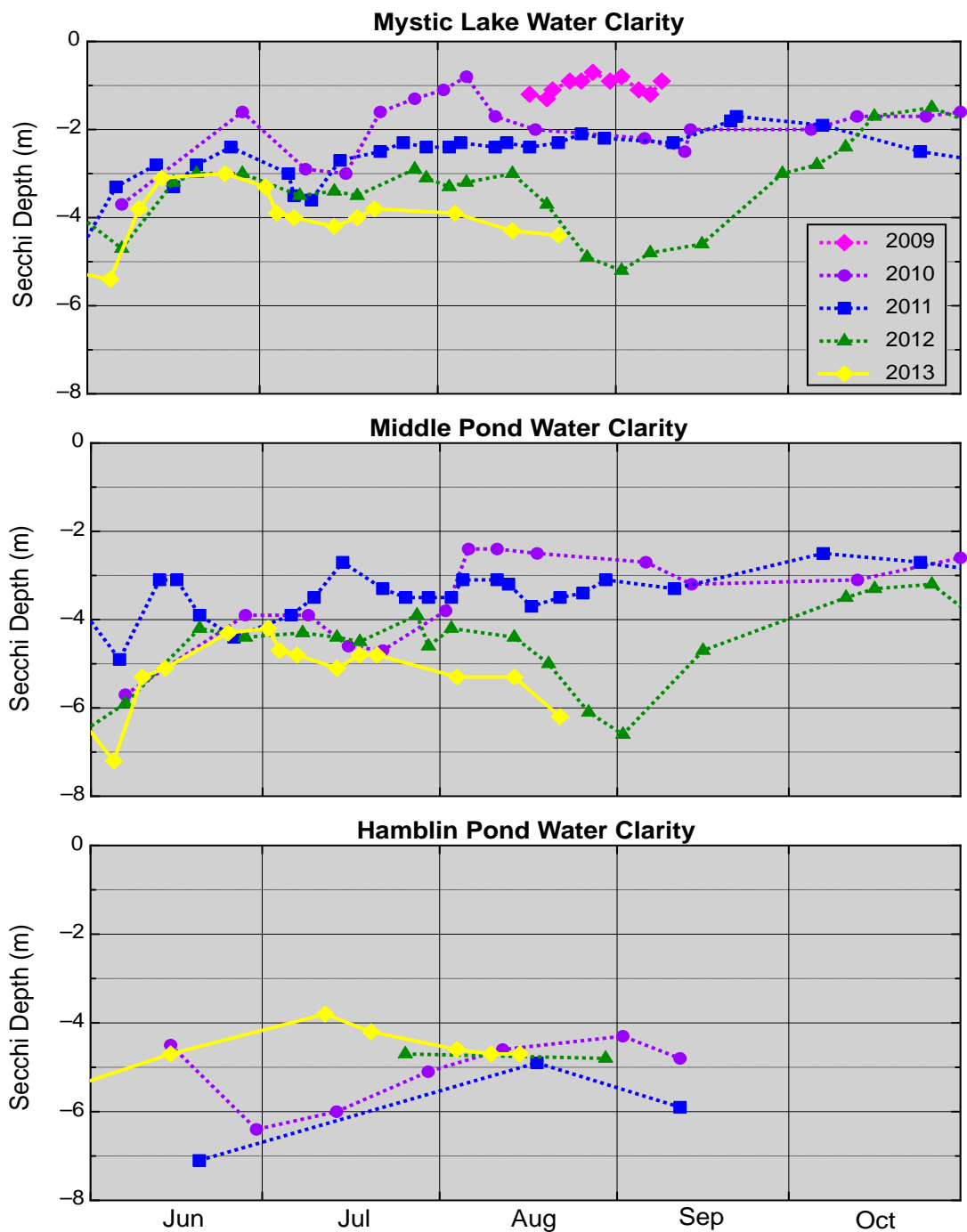
Socializing on a pleasant summer afternoon

EXCELLENT WATER CLARITY IN THE INDIAN PONDS THIS SUMMER

The graphs show the Secchi depth for each of the Indian Ponds for the June-October period over the last few years. The Secchi depth is the standard measure of water clarity in ponds and is the maximum depth below the surface at which a black and white 8 inch diameter disk can be seen.

The graphs below show that the water clarity in Mystic Lake and Middle Pond has continued to improve each of the past three years since the alum treatment of Mystic Lake in October, 2010. This year Middle Pond has had the best water clarity of the three Indian Ponds. To view the graphs in color, visit the Newsletter archive at www.indianponds.org.

Hamblin Pond has generally had the best water clarity over the past few years. It experienced a slight reduction in early July this summer, but since then has improved to its typically excellent August values.



Mystic Lake and Middle Pond Hydrilla



The map shows all the known patches and plants of *Hydrilla* in Mystic Lake and Middle Pond. The square symbols indicate larger patches that have been covered by benthic barriers and the circles indicate smaller patches/plants that have been hand pulled. The good news this season is that so far we have not found very many new large patches outside of the herbicide treatment area, unlike last season when about three dozen new large patches were found around the lake. However, many new small patches and individual plants have been found and hand pulled this season and unfortunately, as described in another article, *Hydrilla* has now been found in Middle Pond.

To view this map in color visit the newsletter archive at www.indianponds.org.

IPA GUEST SPEAKER TELLS OF EMERGING CONTAMINANTS IN CAPE COD GROUNDWATER

Annual meeting guest speaker Dr. Laurel Schaidler, of Silent Spring Institute (SSI), described her research into emerging contaminants in Cape Cod's groundwater. She is a research scientist on the staff of the Silent Spring Institute, an organization that investigates links between the environment and women's health, particularly with respect to breast cancer. Her background is in environmental chemistry and environmental engineering, and includes degrees from MIT and Berkeley.

In the last 10-15 years, SSI has become aware of the presence in the environment of small concentrations of complex organic chemicals, such as pharmaceuticals, hormones, and industrial ingredients, that are different than the ones measured by "standard" testing. Most of these come from household products, personal care products, and pharmaceuticals in common use. With new analytical tools and techniques, scientists' ability to measure extremely small concentrations of chemicals has greatly improved. Through their research, SSI has determined that these newly-discovered contaminants can affect the quality of water in lakes, ponds, streams, coastal estuaries, and drinking water, and that they may have ecological and human effects as well. These things get into groundwater from wastewater, particularly septic system effluent. Since all of us on the Cape drink groundwater, it is important to study these new contaminants to see what, if any, risks they pose to environmental and human health.

EXAMPLES OF EMERGING CONTAMINANTS

- Hormones
- BPA
- Perfluorinated compounds - flame retardants
- DDT and other organo-chlorine pesticides
- Alkyl phenols - breakdown products from detergents
- Over-the-counter, veterinary, and prescription drugs
- Triclosan – an antibacterial, antifungal agent found in toothpastes, soaps, detergents

Some of these substances are endocrine-disruptors, meaning that they behave like hormones. One study in which a pond was subjected to very low levels of such a chemical resulted in feminization of male minnows to the extent that the entire population of that species of fish crashed because it was no longer able to reproduce.

In 2002 United States Geological Survey tested 140 streams throughout the United States for 100 leading contaminants and discovered that 80% of the streams tested had at least one of them, and two-thirds of the contaminants tested for were found in at least one of the streams.



Annual Meeting guest speaker Laurel Schaidler of Silent Spring Institute

Dr. Schaidler started searching for evidence of such emerging contaminants on Cape Cod in the 1990s. She has found some of them in ponds. In 2009, she tested twenty drinking-water wells, both private and public, for 100 of them and found more than 30 in one or more wells. The chemical that was most frequently found was an antibiotic. They also found an epilepsy drug and chemicals associated with non-stick and stain-resistant products. An artificial sweetener was found in 85% of the wells tested. The wells in more thickly-settled areas had more contaminants, as might be expected.

As the Cape plans for changes to its wastewater disposal systems, Dr. Schaidler recommended that we take such new contaminants into consideration. If a neighborhood or town switches from septic systems to municipal sewers, the effluent all goes into one place rather than being widespread, as it is now. Also, considering that new chemicals are being invented daily, perhaps it would make sense to keep wastewater out of drinking water altogether.

People assume that the products they buy have been tested for safety, but there is actually very little of such testing done, so we don't have a lot of information about the potential effects of those chemicals on human health, particularly over long periods of exposure. But Dr. Schaidler mentioned several ways in which we can reduce our own exposure to chemicals of all kinds in drinking water, such as by using carbon filters and pumping out the septic tank on a regular basis. Other tips and useful information can be found on the Silent Spring website, <http://www.silentspring.org>.

--Holly Hobart

STRANGE BIRDS

You are all very lucky, indeed, that I am here to write this article and not off in Socorro, New Mexico. There has never been a recorded sighting of a **Rufous-Necked Wood Rail** in the United States and even as I sit here trying to type, there is one running around at the Bosque del Apache National Wildlife Reserve in Socorro. Not only that, but what is normally a very secretive species of bird is out in the open being photographed and, in general, making a real spectacle of itself. This bird is a native of the coasts of Central and South America and is a very long way from home. It is causing a frenzy in the birding world with everyone flying to Albuquerque and driving down to Socorro to get a look at the visitor.



Lazuli Bunting

The Wood Rail aside, Bosque del Apache Wildlife Reserve is a very good place to be in November if you happen to be in my favorite state in the U.S. In November they hold the Festival of the Cranes and you can see 100,000 **Sandhill Cranes** and almost as many Snow Geese flying out in the morning to feed and back in in the evening to roost. What a racket of wings, feathers, and honking.

Occasional interlopers of this sort are fairly common after large storms or high winds. You often find birds thousands of miles from their

normal area of residence. You may remember, several years ago, a strange hawk flew into Martha's Vineyard or Nantucket and the birding world descended on Cape Cod. It happened again in February last year when a **Lazuli Bunting** showed up at the Wellfleet Wildlife Center. That one Claire and I did get to see, along with several hundred other people. That bird normally stays west of the Mississippi and winters along the West coast of Central America so it was a long, long way from its normal winter habitat.

When these strangers arrive, they usually stay for a good part of the rest of the season, circulating around to good feeding spots. When it is time for them to migrate, they return to their usual winter haunts and the next time they return north they go to their normal home range.



Ruby-Throated Hummingbird

That is not always the case, however. South Texas, like Cape Cod, used to have only the **Ruby-Throated Hummingbird** in residence. Lately, two or three other species of Hummingbirds have started moving in. First, bird-watchers saw one or two of some other species and then the next year there were more and so on. It appears that a part of the population of two or three species have decided to relocate their home range to South Texas. So there may be hope for us here with our lone type of Hummer.

Good Birding,
Dave



Rufous-Necked Wood Rail



Sandhill Crane

--Dave Reid

PHOTO CREDITS: Page 2, Chip King, Holly Hobart; page 3, Herbicide article, Bob Nichols; Annual Meeting article, Michael Maloney; pages 4 and 5, charts, Bob Nichols; page 6, Michael Maloney; cover, Betsey Godley.

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2013 Marstons Mills River Herring Count Projection

Run Started - 4/1/2013

Run Ended - 5/16/2013

46 Days of counting

MA Dept of Marine Fisheries Validated
Projection of Run (uses 2-way, 3 period
statistical design to estimate the run size)

- Projected Run Size - **56,987** +/- 4859
fish
- 32 Counters Participated
- 10.5 Mean counts/day

(Fish shown in photo not counted....photo courtesy B. Godley)



- A. Nichols