

# THE IPA NEWSLETTER

Mystic Lake, Middle Pond, and Hamblin Pond

Fall 2005

A quarterly publication of the Indian Ponds Association, Inc.

Vol. 5 No. 4

## PURPLE LOOSESTRIFE INVASION



Purple loosestrife (*Lythrum salicaria*), an invasive, non-native plant, was discovered this summer in Middle Pond and Hamblin Pond. A survey of the shoreline of all three Indian Ponds in August failed to detect any plants in Mystic Lake. Although found intermittently around almost the entire perimeter of Hamblin Pond and in various locations along the northeast and southeast edges of Middle Pond, the largest amounts seen were in Middle Pond's Turtle Cove and along the south end of Hamblin Pond on and near the Town beach.



*Eric Holzman, Stephen Holzman, and Jake Penn pointing to a purple loosestrife plant on a Hamblin Pond beach.*

This plant, with pink-purple flowers, that can produce 2.7 million seeds annually, was originally introduced from Europe and Asia almost 200 years ago, but only in recent years has it been classified as an undesirable species. Pretty to look at, colorful to see, it can easily take over lake shores, wetlands, or cranberry bogs by crowding out native plants such as cattails, sedges, bulrush, and ferns. This is a big problem for our local birds, mammals, butterflies, and amphibians that depend on native plants for food and shelter.

If left to grow in our ponds, purple loosestrife will potentially take over. There are numerous examples in the U.S. where this invasive plant has completely replaced the native plants within a period of 5-10 years. Here on the Cape, Long Pond in Centerville and Oyster Pond in Woods Hole are currently experiencing major problems with purple loosestrife to the point where eradication efforts are now being undertaken. Purple loosestrife has been and may still be sold by some garden shops and

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## POND WATER QUALITY WORSENS

Pond sampling results for summer 2005 suggest that water quality in all three Indian Ponds is no better than in 2004 and may even be slightly worse. This is based on the fact that Secchi disk measurements of transparency were roughly 1 meter less in 2005 than in 2004, indicating murkier water. This reduced clarity is caused by excessive growth of phytoplankton (algae) due to the high levels of phosphorus in the water.

Surface-to-bottom measurements of dissolved oxygen and temperature in 2005 were comparable to those taken in 2004 and verify the accuracy of last summer's data. Laboratory results from the analysis of water samples are not yet available.

The collection of data (dissolved oxygen, temperature, and transparency) and water samples by IPA volunteers began on June 28 and continued at bi-weekly intervals through September 27 for all three Ponds. One additional sampling on October 25 only on Mystic Lake confirmed, as expected, that the pond had "turned over" and had homogenous temperature and dissolved oxygen from the surface to the bottom. Kudos to the volunteers who faithfully assisted in the collection of samples in 2005: Alex Frazee, David and Nancy Dawson, Susan and Chuck Sawyer, Jim and Donna McGuire, Emory and Geri Anderson, Judy Houghton, John Regan, and Austin Sica.

The draft final report of the Pond Study is nearing completion by the staff of the Cape Cod Commission's Water Resources Office and will be submitted later . . . *Continued on page 3*

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*This Newsletter, with a circulation of 450, is a forum for the exchange of ideas on matters germane to the IPA mission and, as such, the views expressed by authors of articles do not necessarily represent official IPA policy.*

## COLLABORATION WITH OTHER ORGANIZATIONS

The IPA recently entered into a collaborative arrangement with the Wequaquet Lake Protective Association (WLPA) authorizing a member from each organization's Board of Directors to sit in on the meeting of the other organization's Board. The purpose of this new arrangement is to facilitate closer working relations and a better exchange of ideas and information since the two organizations share many water- and environmental-related concerns. Hid Welch, past President of the WLPA, attended the last meeting of the IPA Board of Directors on October 20.

The IPA also maintains close relationships with the Marstons Mills Village Association as well as the seven neighborhood property-owner associations within the IPA area in an attempt to promote its mission and encourage new members. As an example, IPA President Emory Anderson and Newsletter Editor Geri Anderson attended the annual summer block party of the Indian Lakes Association on August 20 to promote a purple loosestrife alert leaflet, and Emory Anderson also spoke at the Whistleberry Residents Association on November 6.

## IPA HIGHLIGHTED ON WQRC'S SUNDAY JOURNAL

The Indian Ponds Association received some welcome recognition and publicity on October 23 on radio station WQRC's (99.9 FM) *Sunday Journal* program. IPA President Emory Anderson was interviewed on the hour-long, award-winning, public affairs program, which airs each Sunday from 8 to 9 am.

Because the *Sunday Journal* provides a comprehensive look at important issues affecting the Cape and Islands, the IPA Board of Directors had long thought this program would provide an excellent opportunity to receive some media attention for the IPA's important environmental focus and particularly its recent Pond Study. Initially proposed earlier in the year by Nancy Wong, and finally arranged in September by Rick Wheeler, Anderson was contacted by news anchor Will Crocker in early October. The 24-minute interview, recorded a week and a half prior to the broadcast, included discussion on the history and past activities of the Association, its recent (2001) revitalization attributed to problems associated with the Middle Pond herring run, and the current Pond Study. Hopefully some of our readers and members were able to hear this particular broadcast.

The Board is currently investigating other media opportunities to publicize the IPA work.

## DANFORTH PROPERTY SUBCOMMITTEE ACTIVATED

Town Councilors Leah Curtis, Hank Farnham, and Janice Barton convened a first meeting on October 12 of invited representatives from the Indian Ponds Association, Wheeler Road Association, and Marstons Mills Village Association, as well as other individuals concerned with the future plans for the former Danforth property. A sizeable portion of the 217 acres contains the Cape Cod Airfield. Of particular interest to IPA members is the 23-acre segment south of Race Lane bordering the northeast part of Mystic Lake. The group, known as the Danforth Property Subcommittee, will be looking at possible conservation and recreational uses for the land consistent with the limitations set forth in the sales agreement for the property as well as the recently drafted West Barnstable and Marstons Mills Local Comprehensive Plans.

At the meeting, participants were given a copy of a land use feasibility study report, prepared recently by a land use planning consultant hired by the Town, containing an inventory of the existing land uses, environmental and ecological re-

sources, an overview of their constraints and opportunities, and a brief feasibility analysis of the various land uses being considered. After some discussion, it was decided that more information was necessary, including an aerial map of the property indicating walking trails, some of which have become overgrown and impassable, as well as a wildlife habitat study and further definition of the property boundaries, both north and south of Race Lane.

The Subcommittee is scheduled to meet again November 9, and will continue to meet thereafter at 2- or 3-week intervals until its work is completed.

Subcommittee members include Lindsey Counsell, Grace and David Lytle, Wolfgang Fattler, and Will Plikaitis from West Barnstable, and Craig Larson, David Chase, Bob Frazee, and Emory and Geri Anderson of Marstons Mills.

Janice L. Barton  
Town Councilor, Precinct 10  
Marstons Mills

## POND WATER QUALITY WORSENS

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this fall for review by the IPA Board of Directors. After their review and any modifications to the draft, the final report will be available early in 2006. **Pending release of the final report, the Commission staff recently provided the following preliminary summary of their findings.**

**Mystic Lake** is significantly impacted. Phosphorus from the watershed and regenerated from the sediments is causing excessive growth of phytoplankton. This growth is causing diminished clarity (low Secchi disk readings), high total phosphorus and chlorophyll "a" concentrations, and leading to anoxic conditions deep in the pond. Historic readings show that these impairments have occurred over the last 50 years. Steps to reduce the phosphorus in the pond should address phosphorus coming from shoreline properties, as well as phosphorus being regenerated from the sediments.

**Middle Pond** generally has good water quality, but some of the data suggest future concerns. Average phosphorus concen-

trations generally show relatively unimpaired conditions, but chlorophyll "a" and Secchi readings show upward trends as the summer progresses. Conditions appear to have worsened over the last 50 years. Findings suggest that an additional source of phosphorus is being added to the pond to prompt the upward trends, but it is unclear whether the source is internal regeneration from the sediments or flow from Mystic Lake.

**Hamblin Pond** is impacted, but clearly improved from the conditions that existed prior to the 1995 alum treatment. The alum treatment has allowed the creation of a cold, well-oxygenated layer of water that serves as a buffer to limit phosphorus regeneration from the sediments. Deeper waters still turn anoxic, indicating that management discussions of watershed phosphorus should occur, but nearly 6 m (or 335 million gallons of water) of the water column that was formerly anoxic is now full of oxygen and available for a sustained trout fishery. Upper waters in the pond have phosphorus concentrations that are below the Cape Cod pond and lake impacted level of 10 ppb.

## OUR GREAT INDIAN PONDS: THINGS WE CAN DO TO KEEP THEM CLEAN

When our Editor, Geri Anderson, sent me some pictures of our Indian Ponds that were taken back in the early part of the last century, they prompted a host of memories. My immediate family had started out on Hamblin Pond in the mid-1930s, but a variety of circumstances, including the 1938 hurricane (that's another story!) caused us to move to the north end of Middle Pond. What was in those pictures, such as the one shown on the right, was the way it was; wide open and without any development! Yes, Camp Alpine would appear on Middle Pond in the early 1940s, but that was fun to watch, and by the end of August, the world of Cape Cod was pretty much deserted again, and we had the ponds to ourselves!

A person once remarked to me that, "the only constant in our lives is change!" Our Cape Cod of the mid-20th century certainly changed. I will never forget the first time that I saw two satellite photos of Cape Cod depicting the build-out that had occurred between the early 1950s and the late 1980s. It was dramatic. We were no longer dealing with a summer phenomenon, it was year round, and we, the residents, were the ones primarily responsible for the overall condition of our environment. One way of looking at it was that we had much more help on hand to deal with the threats to our ponds and our water supplies!

It is with that spirit that I invite you to join with us in sharing some of the techniques that you have used in connection with your septic system, conserving and protecting our water supply, and preventing the further eutrophication (doesn't that word raise the level of the debate?) of our ponds.

Let me suggest a few topics for consideration. With regard to your septic system: do you know where it is, when it was installed, how recently it has been checked, the last time that it has been pumped out? Are nutrients being added? As far as what goes down the drain, are we using environmentally friendly detergents? Then, there are the outdoor activities such as fertilization. What steps have you taken to reduce the runoff of adverse chemicals?

Now, the IPA is not alone. Many organizations and individuals are working towards the same objectives. The Barnstable County Wastewater Implementation Committee is launching a series of new programs that we will be tracking, and there are numerous other private groups engaged in related endeavors.

So, you are warmly invited to share your thoughts. Send them to me at [rwheeler@aol.com](mailto:rwheeler@aol.com) or 150 Wheeler Road, Marstons Mills, MA 02648 or to the IPA at [info@indianponds.org](mailto:info@indianponds.org) or P.O. Box 383, Marstons Mills, MA 02648.

*Rick Wheeler*



*North end of Mystic Lake near Race Lane about 100 years ago.  
Photo courtesy of Bob and Colleen Kohl*



## MYSTIC LAKE DAIRY FARM

According to Bill Lister of Marstons Mills, the Hord Dairy, also known as the Mystic Lake Dairy Farm (owned by the Hord family), was in existence from the early 1920s through the early 1960s. It had as many as 200 cows as well as facilities for processing, bottling, and distributing milk. Hord Dairy also bought and processed milk from smaller dairymen in the area. Hord's cows were pastured west of the airfield and would go to drink from Mystic Lake via a tunnel under Race Lane. The tunnel is still in existence, passing under Race Lane just west of the airfield parking area.

The Hord family farmhouse was north of Race Lane and west of the current airfield. Mrs. Hord built herself a smaller house and rented the big farmhouse to Bill Lister's family. The farmhouse was torn down in the late 1980s.

*Holly Hobart*

## WHY THE IPA IS INTERESTED IN MARSTONS MILLS HISTORY

Aside from being civic minded and culturally inquisitive, IPA members have other reasons to be interested in the history of the Village of Marstons Mills. As we have just learned from the results of our Pond Study, 66-79% of the total phosphorus load in Hamblin Pond and Mystic Lake is contained in the bottom sediments (internal load or regenerative phosphorus). Where did all of that phosphorus come from?

Household septic systems, waterfowl feces, lawn and garden fertilizer, and other organic material over time are responsible for the current internal load of phosphorus in the ponds. In addition, years ago, there were considerable agricultural activities in the area around the Indian Ponds. The extent to which such activities might have contributed to the current phosphorus level in the land (e.g., from cow manure, fertilizer) needs to be investigated.

Delving into the history of the Village is, therefore, a valid way to attempt to document the level of agricultural activity and its potential impact on the ponds. We are already all too aware of the adverse impact the Clear Lake Duck Farm (1920-1955) had and is still having on Hamblin Pond (see **"Hamblin Pond - restoration success story"** in Spring 2003 issue of *The IPA Newsletter* at [www.indianponds.org](http://www.indianponds.org)).

## MARSTONS MILLS HISTORICAL SOCIETY

The Marstons Mills Historical Society was formed in the mid-1980s with a charter to "create and foster interest in the history of the Village of Marstons Mills; to promote historical research; to collect historical documents and articles; and to provide for their proper custody."

While the membership has been quite small over the years, past President Barbara Hill and others in the organization have been able to preserve the Society's collection as well as increase its holdings. Recently, Barbara has "passed the baton,"



*Advertisement for the Mystic Lake Dairy Farm.  
Photo courtesy of David and Nancy Dawson*

### CAN YOU GUESS THE YEAR THE ABOVE AD WAS MADE?

Send your answer and reasons to the IPA at  
[info@indianponds.org](mailto:info@indianponds.org) or  
P.O. Box 383, Marstons Mills, MA 02648

and while she'll continue to be a member, she's happy to see that the group has renewed energy and is attracting members.

While Marstons Mills doesn't have a history of great interest to many people off Cape Cod, there is a lot about our past that would intrigue those who do live in the community. From the history of the mills themselves, to agriculture, the airfield, etc., much has happened here since 1648, but little has been recorded.

The goal of the Society now is to get organized and get to work on these projects. We're just getting started, and we are a looking for new members to help in the process.

We'll be meeting frequently over the winter, and these meetings are open to all. For more information, see the Marstons Mills Historical Society's page at [www.marstonsmills.org](http://www.marstonsmills.org), or call 508-420-0075.

*Kevin Galvin, President  
Marstons Mills Historical Society*

## PURPLE LOOSESTRIFE INVASION

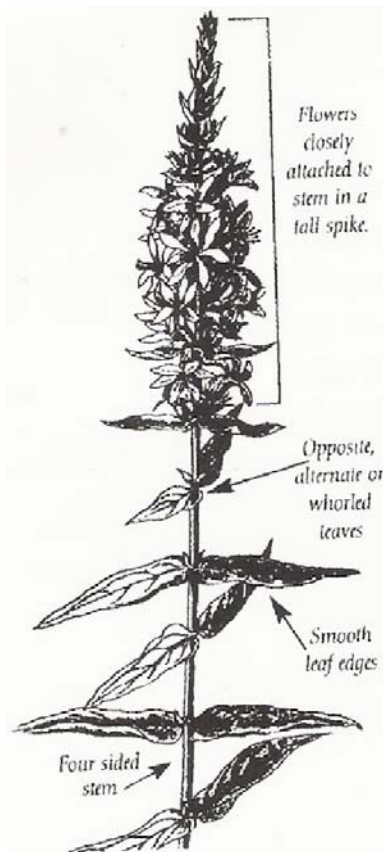
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nurseries, even some on Cape Cod, as an ornamental plant for gardens

Following discovery of the purple loosestrife and recognizing the need to remove this unwanted invasive plant, the IPA contacted Rob Gatewood, Town Conservation Division, to ascertain an appropriate course of action. In view of the extensive numbers of plants observed, Gatewood advised that a special permit to remove plants would have to be sought from the Town Conservation Commission. Waterfront property owners on the three Indian Ponds received letters announcing a hearing for this permit that was held on September 15.

The Commission granted a permit to authorize pulling purple loosestrife plants during a three-year period (2006-2008) in an area to include the three Indian Ponds as well as Mill Pond and the Marstons Mills River. No plant pulling activities were authorized for 2005. Instead, coordinated removal efforts will be scheduled for the summer of 2006 by the Marstons Mills River Committee, which will meet in April 2006 under the chairmanship of Al Baker to make final arrangements. All volunteers are welcome.

In the meantime, Gatewood will consult specialists and Town officials concerning the optimal time to pull the plants while they are in flower and before they begin dropping their seeds, and proper disposal procedures.



### How to identify purple loosestrife

1. **Individual flowers have five or six pink-purple petals surrounding small, yellow centers.** Each flower spike is made up of many individual flowers.
2. **As flowers begin to drop off, capsules containing many tiny seeds appear in their place.** Plants may go to seed as early as late July.
3. **Each mature plant can produce up to 2.7 million seeds annually.** As tiny as grains of sand, seeds are easily spread by water, wind, wildlife and humans. Germination can occur the following season, but seeds may lay dormant for several years before sprouting.
4. **Leaves are downy, with smooth edges.** They are usually arranged opposite each other in pairs which alternate down the stalk at 90 degree angles, however, they may appear in groups of three.
5. **Stalks are square** (but can be five- or six-sided), woody, as tall as 8 ft, with several stalks on mature plants. Rootstocks on mature plants are extensive and can send out up to 30 to 50 shoots, creating a dense web which chokes out other plant life.

## SCHWARM MEMORIAL SCHOLARSHIP

The IPA Board of Directors continues to develop the details of the Schwarm Memorial Scholarship established in memory of Edward Schwarm, former IPA Board member who died in May. A subcommittee comprised of Steven Paglierani, Jane Smith, and Rick Wheeler has researched other comparable scholarship programs and has also been in touch with officials at Barnstable High School. Although final details such as application form and selection criteria remain to be worked out, it has been agreed that one scholarship in the amount of \$500 will be awarded annually to a worthy college-bound graduating senior from Barnstable High School who is also a resident of Marstons Mills. Among other things, applicants will be required to submit either an essay or demonstrate community work/accomplishments consistent with the mission of the IPA as well as provide three letters of recommendation.

IPA members are encouraged to contribute to the scholarship fund. More details will be included in the next issue of *The IPA Newsletter* and in the annual dues letters that will be sent to members in January 2006.

SMEDLEY

by Gordon Nelson





## MIDDLE POND HERRING RUN

In the summer 2005 issue of *The IPA Newsletter*, we reported that work began in late July to rebuild the Middle Pond herring run below the new concrete ladder constructed in 2003. Sections of plastic ditch lining (FastDitch) were installed in the first 140 ft of the approximately 1000-ft run below the ladder which empties into the Marstons Mills River. Work on this first section was completed in late summer in time to permit the downstream migration of young-of-the year and remaining adult alewives (river herring).

In keeping with the protocol outlined in the management plan for the run agreed in 2002 by the Massachusetts Division of Marine Fisheries, the Town's Natural Resources Division, and the IPA, the run is open from October 1 to no later than December 1 to allow the out migration of herring. On October 31, the water level at the gauge immediately upstream from the ladder measured about 45 ft above sea level. With an approximately 6-in deep flow through the v-notched weir at the head of the ladder, the run is functioning properly as recommended.



View downstream from Middle Pond herring run ladder showing 140 ft of newly installed FastDitch lining.

## IPA CLEANS BEACHES

Coastsweep, the Massachusetts Annual Statewide Beach Cleanup sponsored by the Massachusetts Office of Coastal Zone Management and the Urban Harbors Institute at the University of Massachusetts Boston, was held this year for the 18<sup>th</sup> time. Coastsweep 2005 took place on Saturday September 17. More than 100 volunteers helped in Barnstable to clean up beaches, Town landings, and ways-to-water.

This year, IPA Vice President Jim McGuire and Donna McGuire together removed litter from the four public beaches and Town landings on Mystic Lake (one), Middle Pond (one), and Hamblin Pond (two). Thanks to the McGuire's for this service to our community. Next year, we hope that more of the residents in the IPA area will volunteer in this important activity.

Residents may have noticed various derelict boats, floats, and miscellaneous parts from docks and rafts that have accumulated around the shores of the Indian Ponds over the past several years. The IPA Board of Directors has discussed this problem several times and has agreed to organize a group of volunteers next spring to gather these unclaimed objects and dispose of them. This will be done in cooperation with the Town's Conservation and Natural Resources Divisions.

## CLEAN UP AFTER YOUR PETS

The results of a study conducted in Buttermilk Bay (part of Buzzards Bay) and published in 1996 concerning the impact of fecal waste from household dogs are very relevant and applicable to our Indian Ponds, maybe even more so because tidal flushing doesn't wash away pollutants in freshwater as it does in a marine setting.

The study in question found that the major source of fecal coliforms to storm waters was the feces of domestic animals and wildlife. Dog feces exposed to ambient environmental conditions in the study area showed no detectable declines in fecal coliform density after 7, 14, and 30 days. Fecal material accumulates during dry periods, and the surviving bacteria gets washed off during storm events and ends up in the waterways. That means the feces left behind when people don't pick up after their dog can contribute bacteria to the watershed for up to a month.

For Buttermilk Bay, the survey conducted found that, based on the existing population of dogs and excluding wildlife, only 2-3 days worth of dry weather and the standard rate of dog feces production would be enough to account for the bacteria levels observed in the Bay.

The bottom line is: "Pick up your dog's waste." It can make a big difference.

Information provided by Kirsten N. Ryan  
SEA Consultants, Inc., Cambridge

**For a color edition of *this issue* of  
*The IPA Newsletter*,  
go to our website at:  
[www.indianponds.org](http://www.indianponds.org)**