

# THE IPA NEWSLETTER

Mystic Lake, Middle Pond, and Hamblin Pond

Fall 2003

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*This Newsletter 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*

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## 217 ACRES FOR CONSERVATION



Photo by Geri Anderson

### AIRPORT SAVED, BUT BENEFITS RUN DEEPER

You may note that the sign at the Rt. 149 / Race Lane rotary which said "SAVE THE AIRPORT" now has an addendum, "WE DID". At the September 4 Town Council meeting and hearing, public support for the acquisition of the 217 acres of Danforth land using Land Bank funds was overwhelming. Many spoke in favor, including two officers of the IPA. John Hansen, IPA President, at this and previous Town Council meetings, had stressed that acquisition of the property by the Town was supported by the IPA whose mission is to preserve and protect the Ponds' watershed so critical to the lives of over 500 families living in the vicinity of the Cape Cod Airport.

The Town Council, after careful and searching discussion, voted unanimously to purchase the land, using Land Bank funds. The Town plans to reopen the airfield (84 acres), with the remaining land to be used for light recreational use. Land Bank rules require that those funds can only be used for the purchase of open land, and that no buildings can be built upon it. A purchase and sale agreement was agreed between the Danforth family and the Town of Barnstable. On October 29, the sale was finally consummated and the land now belongs to the Town. Many people in several organizations worked hard to make this happen. We can especially thank Gary Blazis, our Town Council Chair, and John Klimm, Town Manager, for their dedication and hard work in saving this open space for the Town. The local pilots showed their appreciation by staging a spectacular flyover the following Saturday. As a physically grounded commercial pilot who learned to fly from a similar turf airfield, I sure wish I could have participated.

*Edward Schwarm*

## NEW IPA INITIATIVE: POND STUDIES

Tom Camberari, a hydrogeologist and manager of the Cape Cod Commission's Water Resources Program, was guest speaker at the IPA annual meeting. His warmth, expertise, and practical knowledge about lake ecology and more specifically about the Indian Ponds and their watershed prompted a follow-up meeting on August 19 between him and two members of the IPA Board of Directors (BOD), Paul Craig and Jim McGuire. The purpose of this meeting was to discuss how the IPA might assist in assessing and protecting the health of the Indian Ponds, one of several major priority activities that the BOD has identified for action over the next several years that would be consistent with the organization's mission and objectives.



*Tom Camberari*

One way to define a lake's health is to determine its trophic (nutrient) status. Just as a physician can diagnose a person's condition from a blood or body fluid sample, lake scientists (limnologists) can learn much from knowing what chemicals and organic matter are present in a water sample from a lake. Too much (hypereutrophic) or too little (oligo-trophic) organic matter is unhealthy for the lake (see the article by Bruce McHenry in the Spring 2003 issue of the IPA Newsletter about Hamblin Pond and its hyper-

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## CLARIFYING DIFFERENCES BETWEEN TWO LEADING LAND PRESERVATION INITIATIVES IN BARNSTABLE

Many Barnstable residents are confused about the role played in the local land preservation process by two distinctly different, but similarly named, entities: Barnstable Land Bank and the Barnstable Land Trust (BLT). They both focus on preserving land, but they are uniquely different.

**Barnstable Land Bank** is a state-created, tax-funded entity established by the Massachusetts Legislature in 1998 with the Cape Cod Open Space Land Acquisition Program. The "Land Bank Act" was approved by the voters in each of the Cape's 15 towns through a 1998 referendum. It enables towns to impose a 3% surcharge on property owners' real estate tax bills for 20 years, thus establishing a "Land Bank" in each town. The enabling legislation creates a dedicated stream of revenue for the acquisition "of land and interests in land for the protection of public drinking water supplies, open space and conservation land, the creation of walking and bicycling trails and the creation of recreational areas."

Purchase of land for "recreational areas" has been broadly interpreted to include golf courses, soccer and baseball fields, and many other uses. The legislation also specifically requires that "... Any real property interest in open space purchased with land bank funds shall be retained in natural, scenic or open condition and shall be bound by a permanent deed restriction limiting the use of the interest to the purpose for which it was acquired ... " As of this writing, many Cape towns, including Barnstable, have not protected their Land Bank acquisitions with permanent deed restrictions.

By April of this year, Barnstable had purchased about 457 acres in the town, plus 297 acres shared with Mashpee and the State at the Cape Cod Club. In September, it put the "Danforth Airfield Land" under agreement, which will add another 217 acres, for a total of just under 1000 acres ac-

quired using Land Bank funds. This will leave approximately \$4.5 million remaining in the "Bank" at this time.

**Barnstable Land Trust (BLT)** is a member-supported, not-for-profit, tax-exempt organization founded in 1983 to preserve the open spaces and natural resources of the Town of Barnstable. With its own volunteer Board of Directors and paid professional staff, BLT had more than 500 acres under its protection by the end of 2002. Some of the land it owns outright, the balance remaining in private ownership. However, on the latter, development rights have been removed by conservation restrictions. In each case, BLT guarantees that the land will remain forever undeveloped. BLT focuses on land conservation in its natural state and thus can work together with, but also independent of, government, thereby providing landowners with both public (Town) or private (BLT) alternatives for land conservation.



In 2003, BLT is celebrating its 20th anniversary, and is planning for many future decades of land acquisition, preservation, and management. Support for operating revenues comes principally from more than 1500 individuals and local businesses through their memberships, sponsorships, gifts, in-kind donations, and support for special events. Land acquisition projects requiring significant sums rely on special appeals to the community, grant funding, or public-private partnership with the Town or State. BLT lands are *permanently* preserved in their natural state for wildlife, scenic enjoyment, and protection of the natural resources.

To learn more about Barnstable Land Trust, visit BLT online at: [www.bltrg.org](http://www.bltrg.org). To read the text of the Act establishing the Cape Cod Open Space Land Acquisition Program, follow the "Land Bank" link.

*Alexena Frazee, President, Barnstable Land Trust*

## NEW IPA INITIATIVE: POND STUDIES

*Continued from cover*

eutrophic status as a result of a duck farm).

In fact, in the 1960s, Lake Erie was declared "dead" due to its hypereutrophic status. It was resuscitated only when the major point sources of the chemical phosphorus were controlled with water treatment plants.

On the Cape, the major sources of nutrient pollution to our ponds do not come from single-point sources, but from agricultural run-off, storm water run-off, and septic systems. The Indian Ponds are the filter through which the water of the Sagamore lens aquifer must pass before reaching the Three Bays area. Assessing the health of the Indian Ponds will provide a powerful microscope through which to look at the health of our watershed.

In the meeting with Camberari, various meaningful studies that would define the health status of the Ponds and how that

information might be shared or used in a constructive manner were discussed. He noted that the Cape Cod Commission had recently helped the Long Pond Association and the Town of Brewster develop a "Scope of Work" outline which was used as a preliminary overview of that pond. He indicated a willingness to help develop a similar "Scope of Work" to define a first-order diagnostic of the Indian Ponds and their watershed. He also indicated that Dr. Dale Saad, Coastal Health Resource Coordinator for the Town of Barnstable's Public Health Division, could be helpful in this endeavor.

At the September 3 meeting of the IPA BOD, it was decided to request that Camberari and Saad assist in developing a "Scope of Work" for the Indian Ponds.

In an October 1 letter to the BOD, Cambareri submitted a draft "Scope of Work" outlining a first-order assessment of the Indian Ponds consisting of a series of seven tasks. The BOD reviewed this proposal at its October 26 meeting and agreed that further discussions with Cambareri and others were necessary before deciding a course of action.

*Jim McGuire, MD*

## PRESIDENT'S LETTER



John Hansen

Quite a bit of water has flowed over the dam – or the herring run flume – since our last newsletter. At the IPA annual meeting, it was gratifying to hear Mr. Tom Camberari of the Cape Cod Commission acknowledge the service that the IPA provides by making information (and the residents' views) on such issues available to the Town and State agencies.

In addition to our annual meeting in July, your Directors were quite busy during the months of August and September. They spent considerable time on the phone and in meetings with local residents, as well as with Town and State officials on matters relating to the acquisition of the Danforth property in Marstons Mills (which includes the Cape Cod Airport). Some of the people we interacted with were: presidents of the homeowner's associations in the IPA area, Town Council, Barnstable Land Bank, Barnstable Land Trust, Cape Cod Commission, COMPACT, *Cape Cod Times*, Hyannis Airport personnel, Cape Cod Airport pilots, airport manager, and Laurel Kornheiser (Cape Cod Airport).

All of that effort culminated in the IPA and other organizations and individuals making presentations at the Town Council meeting on September 4. The Council then voted 11-0 to acquire the airport property for \$11,200,000 using Land Bank funds. (Some residents did not realize that Land Bank funds are dedicated to preserve open space and cannot be used for pressing local needs, such as schools). The Town is now working (as was stated at the October 2 Council Meeting) "to conclude the acquisition as fast as possible." An impromptu picnic celebration on September 6 had people cheering as some of the pilots flew low over the field. The enthusiastic waving and yelling by those on the ground clearly showed the public support for the Town's decision to purchase the land.

We are making progress on a number of other fronts. It is gratifying to see the new Directors who were elected at the annual meeting (Paul Craig, Jim McGuire, Karen Steele, and Rick Wheeler) enthusiastically getting involved in the business of the organization.

We also have Curt Clayman – now starting his second two-year term, for which we are very grateful – contributing as he has in the past. Hopefully, the Danforth land purchase will go through smoothly, and then we can turn our efforts to a number of other challenges that will help improve the environment of the Indian Ponds.

John Hansen

## MARSTONS MILLS HERRING RUN

The rebuilding of the herring run which exits from the southwest corner of Middle Pond and flows into the Marstons Mills River is on schedule and initially funded. A grant of \$15,000 from the U.S. Dept. of Agriculture has been obtained to lower the fish ladder so that mature and young-of-the-year fish can return to the sea during low-water situations, with work scheduled to be done this winter. Acceptable bids have been received. An additional grant of \$20,000 from the Gulf of Maine Council has been received to repair and regrade about 300 feet of the wood-lined sluiceway from the newly lowered herring ladder downstream. Work will be concurrent with the lowering of the ladder.



Wooden control gate into cranberry bog to be replace.

Photo by Paul Craig

A major source of water loss from Middle Pond is due to leakage from the deteriorated wooden control gate feeding water to John Hamblin's cranberry bog. The gate is located just upstream from the herring ladder. The IPA membership voted to provide \$500 seed money to replace this gate, and the project has just been awarded another \$15,000 by the U.S. Dept. of Agriculture. John Hamlin will oversee this work. We are thankful for Donna Lawson's efforts in working with Don Liptack of the U.S. Dept. of Agriculture to secure this grant, and to Don for his consideration.

The new management plan for the herring run is working well. The flow of the run is being controlled so as to optimize water conservation and herring preservation under the able direction of Doug Kalweit, Town Director of Natural Resources. He is also directing the herring run rehabilitation in coordination with the Marstons Mills River Committee. A smaller construction management group has been organized to work with Doug to provide the day-to-day planning, incidental supervision, and, ultimately, the work force.

Edward Schwarm

## CAROLYN GARBUTT HONORED AT ANNUAL MEETING



Photo by Paul Craig

This year marks the 45th year of the IPA's existence. In recognition of being one of the founding members of the organization and for her many years of service, Carolyn Garbutt was given a letter of recognition by President John Hansen at the July annual meeting and presented with a lifetime membership in the IPA. In addition to her long-time service as secretary/treasurer, she played a leading role in matters affecting local zoning and conservation and in support of measures to protect the environment and maintain the water quality of the Indian Ponds. Congratulations, Carolyn, we all owe you a debt of gratitude.

## PRESSURE-TREATED WOOD – OLD AND NEW VARIETIES ARE HARMFUL

Most of us have used pressure-treated wood for one or another purpose around our residences such as decks, playground structures, outdoor furniture, foundations, retaining walls, fencing, and docks, to name just a few. A mixture of chromium, copper, and arsenic (chromated copper arsenate or CCA) is commonly used to treat wood to preserve and protect it from dry rot, fungi, molds, termites, and other pests. Lumber treated in this way has been in use since the 1940s.

Studies have shown that the chemicals in pressure-treated wood leach out and are harmful to aquatic organisms in the aquatic environment and to human and animal health in the terrestrial environment. For humans and pets, arsenic is the most toxic. Concern over the safety of CCA-treated lumber led to the U.S. Consumer Product Safety Commission being petitioned by several public-interest groups in May 2001 to ban the use of CCA-treated lumber for playground equipment. In February 2002, the U.S. Environmental Protection Agency announced a voluntary decision by the three manufacturers of CCA to phase out, effective December 31, 2003, the use of arsenic in treated wood products for residential use. The production of CCA products for residential use will be prohibited after this date.

A number of alternative non-arsenic wood treatment preservatives have been developed and are in use. The major problem with these alternative formulations is that they contain more copper, and also leach more copper. The non-arsenic treated products pose far less of a risk to human health than CCA-treated wood in the terrestrial environment. However, recent research in Florida has demonstrated that, in the aquatic environment, they are more toxic to aquatic organisms, especially in situations characterized by limited flushing, such as lakes.

Owners of waterfront property who may be considering using wood products treated with some of the alternative, non-arsenic formulations to build docks, floats, rafts, or other structures that would be placed in or on our lakes need to be aware that such products may, in fact, be more harmful to the lake environment than the old CCA-treated products. People contemplating using such products around the water should seek more information from the Barnstable County Cooperative Extension office and/or from the internet at websites such as the following:

<http://www.cpsc.gov/phth/cca.html>

<http://www.ccaresearch.org/publications.htm>

[http://www.epa.gov/pesticides/factsheets/chemicals/residential\\_use\\_cancellation.htm](http://www.epa.gov/pesticides/factsheets/chemicals/residential_use_cancellation.htm)

Emory Anderson, PhD

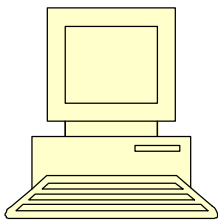


### *A Resident's Guide to Living on the Indian Ponds*

We hope you have enjoyed reading this information-filled booklet that was recently published by the IPA and distributed to 500 residents and organizations in the community. Please make use of the advice provided to protect and keep our valuable Indian Ponds clean and healthy.

Congratulations to Sheila Place for her leadership in publishing the *Resident's Guide*. Special thanks to Holly Hobart Creighton for handling the production, to Rene Saulnier, Michelle Robinson, Nancy Dawson, the Cape Cod Cooperative Extension, and the Westport River Watershed Association for their contributions, and to various members of the IPA Board of Directors for their editorial assistance.

### NO COMPUTER AT HOME?



The Marstons Mills Library and most public libraries have computers available for public use. Librarians are able to familiarize you with using the Internet.

### SPEND A RELAXING HOUR BROWSING THE INTERNET

- ! Check out the websites mentioned in articles in this issue
- ! Check out the IPA website at [www.indianponds.org](http://www.indianponds.org)
- " Read previous issues of the IPA Newsletter
- " See the IPA's booklet *A Resident's Guide to Living on the Indian Ponds*
- " Learn about the history of the IPA
- " Find out how to become an IPA member



## MERCURY POISONING IN HUMANS

Mercury poisoning is becoming more of a concern in our modern industrialized society. This article reviews the history of this fact from social, medical, nutritional, and preventative viewpoints.

Mercury poisoning is a significant concern in today's society. Life has many seeming contradictions, and there are more than a few in medicine and nutrition. One of them is that fish, as a food, is very beneficial to human health. The trade-off is that some fish have been implicated in the retention and concentration of mercury in their bodies, subsequently making them hazardous to ingest in certain quantities and frequency (see the article by Dr. Emory Anderson in the Summer 2003 issue of the IPA Newsletter). Suffice it to say, large long-lived predator fish such as swordfish, sharks, king mackerel, and tilefish, as well as freshwater fish mentioned in Anderson's article, are hazardous when consumed in quantities greater than 12 oz per week, especially during pregnancy and childhood. An average serving is 6 oz. Ingestion of as little as 100 mg of mercuric chloride by an adult may cause poisoning. Doses in excess of 1000 mg may cause fatalities. When mercuric chloride is ingested, it may be absorbed by any of the mucous membranes from the mouth to the stomach. Incidentally, contrary to popular belief, ingestion of metallic or liquid mercury, as is found in thermometers, is unlikely to be followed by ill effects, as it is poorly absorbed by the human body. Conversely, mercuric chloride salts that are absorbed distribute themselves to all

tissues of the body including the brain, but they are principally concentrated in the liver and kidney.

Clinical symptoms of acute poisoning, which occur a few minutes after ingestion, include excessive salivation, metallic taste, abdominal pain, nausea, and vomiting. Also possibly occurring may be mouth soreness, kidney failure, circulatory collapse, fluid accumulation, and cessation of urine production. Acute mercury poisoning, as described above, originally was deadly, but with prompt institution of British anti lewisite (BAL), mortality rates have decreased considerably.

Chronic mercury poisoning, which results from a slow buildup of toxic mercuric salts, is more insidious. This is the disease manifested by "mad hatters" in the felt industry. The hatters would use mercuric nitrate to "carrot" felt. Hatters are no longer going mad because a non-toxic substance is now used. Chronic poisoning involves mouth soreness, abnormal behavior; tremors of the eyelids, lips, tongue, fingers, and limbs, failing vision, and kidney failure.

As with all toxic exposures, the best treatment is prevention. Aside from industrial, chemical, and environmental exposure, the cautions mentioned with regard to fish exposure in the diet should be followed, especially if one is a child or if one is pregnant.

Web sites to learn more: [www.epa.gov/mercury/fish.htm](http://www.epa.gov/mercury/fish.htm), [www.gov/waterscience/fish](http://www.gov/waterscience/fish), [Bigler.jeff@epa.gov](mailto:Bigler.jeff@epa.gov).

*Curtis Clayman, MD*

## HOW DOES THE MERCURY GET INTO THE FISH?

Mercury is a natural element in the environment and is found at low levels nearly everywhere. However, human activities such as coal burning, industrial discharges, and garbage disposal have significantly increased such levels. Since many consumer products contain mercury, citizens are strongly encouraged to recycle such items (e.g., "button" batteries used in cameras, watches, and hearing aids; home thermometers and thermostats that contain mercury). Once released into the air, water, or soil, mercury can be transferred to lakes and ponds by rain, surface water runoff, or landfill leaching. Airborne mercury can travel great distances, even across continents. Once in the environment, it persists for many years and does not degrade into harmless components.

**SMEDLEY**

**by Gordon Nelson**



When mercury is deposited into water, microorganisms help convert it to highly toxic organic methylmercury. Small plants and animals (i.e., algae and zooplankton) absorb the mercury as they feed. As animals higher up the food chain (i.e., larger invertebrates and small fish) eat the smaller plants and animals, they also take in methylmercury. The process continues on up the food chain, with the levels of mercury increasing by the process of bioaccumulation. Consequently, larger fish have much higher mercury concentrations than smaller fish. Methylmercury concentrates in the flesh of fish and cannot be removed by cutting, cleaning, or cooking.

*Reprint of part of the article "IS IT SAFE TO EAT THE FISH IN THE PONDS?" from the Summer 2003 issue of the IPA Newsletter*

## THE GREAT PONDS ACT

We all share such a particular privilege in our proximity to the Indian Ponds. How much they add to our lives throughout the year!! It is not simply the recreation that they give us; there is their quiet beauty and sense of space. What a progression of images unfolds during our year! The memories of the spring and summer transformations are not that distant. Now, as the sun steadily proceeds towards its winter solstice, the waters dazzlingly reflect the slanting rays. Even as the autumn foliage gradually disappears, new vistas appear. Soon we will be seeing the ice gradually cover our Ponds while we wonder when it will be safe to skate! We are indeed fortunate. Yes, but we are also at the same time inheritors of a very precious environmental asset that requires our constant care and concern.

Ponds? "Just a minute," our guests have so often said, "aren't these lakes? They seem to be quite large, you know, over a hundred acres. Aren't you being a bit provincial in calling them ponds?" "No, they are Ponds," we reply. "Actually they are Great Ponds." Here's some history.

Following the adoption of the Massachusetts Charter in 1629 that brought the several "plantations" under a unified governance, a popular effort began to spell out more clearly just what were the specific rights of the individual citizens. In 1635, Governor Winthrop declared that the four men appointed to draft the document detailing these rights would use the Magna Charta as a guide! The result of their endeavors was achieved with the publication, in 1641, of one hundred laws covering a wide range of activities entitled, "Body of Liberties." Its purpose was to provide guidance to the General Court. To this day, "Body of Liberties" is considered by most historians to be the foundation of the Massachusetts Constitution and our General Laws.

About half way through the document, nestled between "Levies" and "Lying," is a section devoted to "Liberties Com-

mon." Following a paragraph that articulates our basic rights of self governance, come the passages that lie behind the designation of our Ponds as "Great Ponds." First, it was established that "Every inhabitant who is a householder shall have free fishing and fowling in any Great Ponds." Great Ponds were then defined as those in excess of ten acres. Further, the owner of land abutting a Great Pond would have property rights to the low water mark. In conclusion, it was reiterated that for Great Ponds lying in common it would be, "free for any man to fish and fowl there, and may pass and repass on foot through any man's property!"

So what do we learn? We note that from the beginning it was more about food than property rights. Access to fish and fowl were so very important for the continuing livelihood of the early communities. Other permitted activities would follow: boating, bathing, skating, ice cutting, and agricultural irrigation for adjoining farms are examples. We also learn that size did count – ten acres or more, and it was a Great Pond subject to the evolving laws of the State. Our ownership of the lake frontage only goes to the natural low water mark? Hmm, that could be cause for some discussion, what with our recent experience! That right of free passage through any abutter's property would eventually be effectively annulled in 1898 by the Courts in the case of Slater vs. Gunn. In response, the State introduced the concept of creating "public ways" such as our present 'Town Landings.' Prior to "public ways," there must have been many confrontations!

A great body of law and local regulation has developed on this subject over the years, which could be the subject of another article. For now, you know why our Ponds are Great!!

*Rick Wheeler*



*Looking onto Middle Pond from channel to herring run. Photo by Paul Craig.*

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**Where else can you get a tax deduction  
and  
enhance your property value?**

**2004 Membership Drive begins in January**