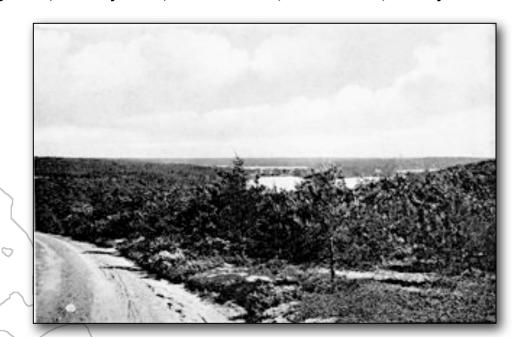
February www.sixponds.org) Six Ponds Improvement Association An occasional Publication of the



Approaching the Six Ponds from the north, around 1900 Long Pond Road (probably near today's Unity Circle), Little Long Pond in center, Gallows Pond to the right; Long Pond in the distance. (an A.S.Burroughs postcard)

DID YOU KNOW

25,000 years ago, during the Pleistocene Era, the Laurentide Ice Sheet (named after the Laurentian region in Canada where the ice sheet first formed) covered most of Canada as well as areas south past Nantucket and Martha's Vineyard. This glacier, which completely covered Plymouth and Cape Cod, was over 5000 feet thick and lasted some 4000 years before slowly retreating northward. As the glacier retreated, the ice melted and released an astonishing volume of water into the Atlantic Ocean. The sea level in the New England area rose over 400 feet. This rise in the sea level covered large land masses including the Stellwagon Bank which is now a National Marine Sanctuary off the coast of Gloucester, as well as Georges Bank some 100 miles offshore. This rise in the sea level also produced the Nantucket and Martha's Vineyard islands by flooding the areas around these higher points of land.

As the glacier melted, it also deposited vast amounts of sand and gravel, called "drift," throughout the Plymouth and Cape Cod area which accounts for the sandy soil prevalent in this area. As the glacier retreated northward, large blocks of ice often were left behind. These enormous icebergs often took up to 2000 years to melt, and they created deep depressions in the soil called Kettle Holes. Where these holes were deeper than the surrounding water table, they filled with water and account for the many ponds that exist throughout Cape Cod and the Plymouth area.

Even today, glacial melting in the ice cap is causing the sea level to rise at the rate of approximately 3 feet per thousand years. At that current rate, Cape Cod may battle the waves for another 5000 years before succumbing to the sea.

For more historical information related to New England's Glacial past, access the following websites:

http://www2.nature.nps.gov/geology/parks/caco/http://www.pubs.usgs.gov/gip/capecod/glacial.html

Fall 2006 Water Quality Testing

My crew and I collected bottle samples in mid-October using a GPS unit to locate sampling sites which have been used for several years now.

Our first stop was Little Long Pond. Lab analysis of the samples from here confirmed a disturbing trend for this pond. Nitrate levels continue to be higher than in any of our other five ponds, and the levels of Sodium and Chloride were the second highest in our ponds. The first is most likely associated with the amount of older development on the high sloping sides of this pond and with the use of fertilizers by homeowners. The second is most likely caused by road and driveway runoff.

We then portaged across the parking lots and dropped into Long Pond. With the surrounding fall foliage, and a tail-wind to row by, gathering the four samples from the pond was a pleasure. The lab results showed some elevation in Sodium and Chloride levels but otherwise the results were excellent.

From here my crew and I headed for Round Pond and its single water station. While portaging to this location was an operation, the effort was worthwhile because lab results for this pond were very good.

The next pond for collecting was Gallows Pond. With just a small amount of development on one side, and the Girl Scouts camping over for the season, one could easily think they were on a pond in upstate Maine or Vermont. This pond has two sampling stations, and the lab results for this pond were the best of all six of our ponds.

Having finished Gallows Pond, we trucked over and put in at Halfway Pond. This pond has always been of an interest to me since I was a small boy. My grandparents used to take me, my brother and sister, and my cousins on walks along the east side of the pond to a place called the "sand pit". Going from Long Pond with its development and traffic to this pond with virtually no development or traffic always seemed very mysterious to me. The lab results from the sampling stations at Halfway Pond were much better than they have been many times in the past.

The last samples were collected from Bloody Pond. Having gone to camp on this lake during my youth, I knew it well. We put in at the Harvey homestead, and made quick work of the three stations needing sampling. The results from the bottle samples were consistent with past findings showing Sodium and Chloride levels to be the highest recorded in all of our six ponds. Road runoff from Route 3 is most likely a major cause of this problem and levels are likely to increase when salt gets applied to the highway in the winter. Aside from this the results were quite good.

Six Ponds Action in 2006

Over the past year the Six Ponds Association has been actively overseeing a number of matters that affect our area.

The Association is concerned with A. D. Makepeace (ADM) plans for a large development just south of the Six Ponds area which, when completed, could generate over 7,000 car trips a day. Currently, it appears that most of this traffic will be coming up Long Pond Road to the Clark Road interchange of Route 3, and association members have been getting involved in exploring infra-stucture alternatives. The Association also continues to work on preserving undeveloped ADM land at Halfway Pond by encouraging early and effective use of the town's new Transfer of Development Rights (TDR) bylaws.

The status of gravel roads has been of concern to both the Town and Six Ponds. We have worked closely with the DPW and the newly established Gravel Roads Committee to assure that the character of our more rural roads is maintained. Presently, we are working with the town to get warning signage for roads vulnerable to damage from large trucks. We are also concerned with calls for upgrades to Ship Pond Road which would cause a new north south corridor to develop, shunting additional traffic from the southeast of us through our area.

Our water quality assessment program continues to test the ponds. In the process we have uncovered additional problems that warrant oversight. One is the recurrent presence of high coliform levels in storm water that enters Long Pond near the boat ramp. The other issue is the salt levels found in the North section of Bloody Pond caused by the storm water from catch basins on Route 3.

Periodic roadside cleanup days have seen dozens of Six Ponders out on Clark and Long Pond Roads, carting away pickup truck loads of trash to the town dump.

Association members sit on committees working to protect the Plymouth-Carver sole source aquifer. It is one of the largest aquifers in the state, and we want to assure that it remains a clean source for all of our homeowners' wells.

Please be reminded that members wishing to become more involved with the Association or who would like to attend some of our monthly Executive Committee meetings should call Leighton Price at 508-224-3441 or e-mail him at leightonaprice@yahoo.com

Please join/renew/update your member information!

Dues for the Six Ponds Association are \$10 per family per year. Payment of your dues, and any additional donation you may wish to make, will go to the support of the Association in protecting our ponds and our common interests as residents.

Please make out your check to the "Six Ponds Association" and mail it to P.O. Box 1580, Plymouth, MA 02362 Thank you

Exotic Birds in Plymouth?

Last year, two Six Ponds families took separate trips to South America and explored portions of the Amazon River in Peru and Brazil. They both returned with interesting observations about the wildlife found there and were particularly surprised at the number of birds that are seen both in South America and in Plymouth.

About Brazil: "While Plymouth doesn't have the variety of wildlife found in the Amazon, we were continually reminded of birds at home. Plymouth birds may not have the brilliant colors of some or noisy squawks of their parrots but the majestic ospreys that we saw soaring over us last summer could be the same migrating birds we saw in Brazil. Watching the swallows swoop through narrow Amazonian side waters reminded us of the swallows darting around Long Pond's South Cove each summer. Though our hawks may be a different variety we found that it is actually easier to get to see them here in Plymouth. We may not have the large Harpy Eagle found in Brazil but we are visited at Halfway Pond by the only slightly smaller Bald Eagle. Cormorants seem to be everywhere and while not the same variety as in Brazil we have more than our share in the summer.

Unless it is our turkeys, we have no



to the prehistoric looking Hoatzin that flap noisily from branch to branch making wheezing snore, but from what said i s about its odor perhaps we are

counterpart

lucky (we didn't get that close). We saw many herons in Brazil and, each time, we were reminded of our own majestic Great Blue Herons walking the shallows of our local waters."

The other Six Ponds family took a bird watching trip with Massachusetts Audubon to the Amazon, Ucayali and Maranon rivers in Peru: "We were delighted to see many varieties of birds, some of which are also found in the Six



barn swallows darted around the river just as they do around our ponds. The E astern Kingbird called from the edge of the trees as it does here.

Did it make

Ponds area.

and

Bank

the long migration to Peru? Osprey were seen circling over the river, and Turkey Vultures rode the air currents looking for food. Various species of hawks were found all along the river and its tributaries. The Great Blue Herons were fishing along the shore just as they do here. Other shore birds such as egrets and sandpipers could be seen. Terns flew overhead, just like at the Plymouth beaches."

We are fortunate to have a wonderful ornithological resource right here in Plymouth at the Manomet Center for C on servation Sciences (http://www.manomet.org). It's a little known treasure for those interested in the science behind conservation. There doesn't appear to be a question about birds that can't be answered there. If you want to learn more, contact them at 81 Stage Road, P.O. Box 1770, Manomet, MA 02345 (508-224-2007).

They advise that there are 74 species of birds that are found both here and in South



America. Some of those birds migrate over 4,300 miles to Brazil. You can see some of these commuters (sandpipers, terns, plovers and others) on Plymouth Beach. Other migrants include some

falcons, vireos, Broad Winged Hawks and American Ospreys. While some breed here, some breed even further north and pass through Massachusetts on their way.

These observations on nature in other parts of the world help us all to better appreciate the wildlife that we have here in Plymouth."

The joy of seeing red-bellied turtles

One of the joys associated with summer in the Six Ponds area is getting to see turtles sunning themselves on logs and branches at the edges of our ponds or getting to see turtles swimming silently along as we swim or paddle a boat.

With slowly increasing frequency, the turtles we see are Plymouth red-bellied turtles, and these turtles are found only in Plymouth County. In recent years, as a result of on-going research, the name of the red-bellies has been changed to Northern red-bellied cooter (*Pseudemys* rubriventris). The Plymouth red-bellies appear to be an ecologically isolated group which is now separated from their nearest relatives in coastal southern New Jersey by over 250 miles. Once thought to be a subspecies of these southern relatives, biologists have determined through genetic testing they are in fact the same species.

Under normal conditions, eggs buried in the ground by female turtles often become food for predators such as skunks and raccoons, and hatchling turtles not much larger than a fifty-cent piece become food for these and other predators such as bullfrogs and herons as they make their way into the ponds. Few of the hatchlings that do make it to the ponds to hibernate at the bottom during their first winter even survive. Moreover, when they emerge from hibernation the following spring much the same size as when they hatched, they are still prone to predation.

Female red-bellies are not able to mate and lay eggs until they are about 15-20 years of age. They can sometimes be seen in the late spring/early summer crossing roads to find or return from their chosen nesting spot where they will lay 5-17 eggs.

As pond dwellers, they need to bask in the sun. This important part of their species is undergoing a five year status review. Further, a petition was filed by the "National Wilderness Institute" (NWI) to reconsider the turtle's status. The NWI appears to be comprised of Existing state and local wetlands rules and regulations require property owners to obtain permission from the Plymouth Conservation Commission BEFORE any alteration of existing conditions or any construction may begin.

For example, suppose you would like to prune or cut trees between your house and the water, perhaps you want to cut down bushes that are near the water, suppose you want to enlarge a structure, maybe there are some wetlands on your property that you would like to fill in, suppose you think it would be nice to have a lawn which goes closer to the water's edge, maybe you want to construct a patio, perhaps you want to make a small beach, etc.

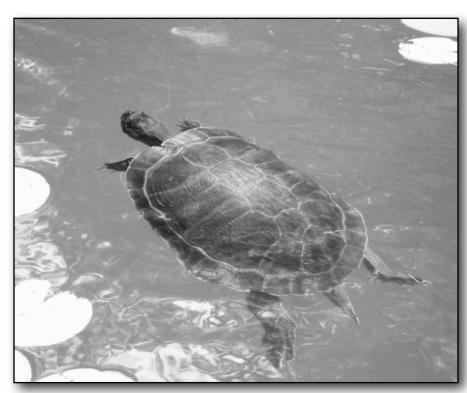
If you are considering any of these or

If you are considering any of these or any of many similar activities, you need to make sure that the work you want to do within the 100-foot buffer zone not only makes sense environmentally but is also considered to be legal by the Town of Plymouth. You should know that some residents of the Six Ponds have learned the hard way.

The process of seeking approval can range from submitting a simple letter describing a project to submitting detailed engineering plans and other documentation. If the Conservation Commission thinks the work can proceed without formal review, you will receive a letter authorizing the work. If the Commission thinks a formal review is necessary, the review process may involve public hearings and other reviews.

The bottom line is that you are the one responsible for finding out whether the work you want to do requires approval from the Conservation Commission. Moreover, if you should decide to do work without obtaining approval, it can result in work being stopped midproject, in fines being imposed, and even in you having to bear the expense of restoring the site.

The Conservation Office is prepared to check into whether a project requires approval or whether an approved project is being done as approved, but the town needs the cooperation and assistance of its residents. If you think that a property owner may not be following



routine helps them to warm their coldblooded bodies with solar energy. Human disturbances via boat, shoreline development, fire suppression, or other activities disturb the turtles and their habitat and can even threaten their lives and species viability given their low reproductive rate.

About 20 years ago, the Massachusetts Natural Heritage and Endangered Species Program (NHESP) instituted a "head start" program in which hatchling red-bellies are collected and reared in captivity for one winter and released as sizeable yearlings the next summer in order to increase population numbers. Around 2,000 head started, marked, turtles have been released into the wild over nearly 20 years. The Wildlands Trust, for example, is in its third year as foster parents to fall hatchlings which are released in June.

Although currently protected under the Federal Endangered Species Act, the

politicians seeking to challenge environmental laws. For the turtle's sake it is hoped that their geographic isolation will allow them to remain under the endangered designation. Let us continue to enjoy our herbivorous friends, protect them, and share our ponds with them.

Work Within 100 Feet of Ponds

If you are considering making any changes to the natural vegetation or topography within 100 feet of a pond, you should be aware that specific restrictions may apply. Likewise, if you are considering construction of any kind within 100 feet of a pond, these restrictions as well as additional ones may apply. Moreover, where rivers, streams, marshes, vernal pools and other wetlands are close by, there can be situations where restrictions may apply beyond the 100-foot buffer zone.

Long Pond, Little Long Pond, Halfway Pond, Gallows Pond, Round Pond, Bloody Pond

the spirit or the letter of the wetlands regulations, or that a property owner may be exceeding the limits of work that had been approved for a project, you should: a) ask the Conservation Office whether the work has received approval and b) ask the Conservation Planner or a Conservation Commission member to visit the site.

It is important to address developing problems as early as possible because it can be time-consuming and difficult to halt projects which have not been approved or which have gone beyond what was approved. In other words, the Conservation Office needs residents to bring concerns to their attention and to do so as early as possible.

Residents can call the Conservation Office themselves. Alternatively, residents can bring concerns to the attention of a Six Ponds Board member. The Six Ponds Board will facilitate bringing concerns to the attention of the Conservation Office where this seems warranted.

If you have questions about the wetlands rules and regulations, call the Plymouth Conservation Commission at 508-747-1620 or see the Plymouth Conservation Commission webpage for detailed information. The webpage (www.plymouth-ma.gov/Public_Documents/PlymouthMA_Planning/Conservation) has links to both state and local laws.

The Future of Private & Gravel Roads in the Six Ponds Area

About half of the 400 miles of roads in Plymouth are not owned by the town, despite many receiving some town services like snow plowing. In the Six Ponds area, some of the paved roads, and virtually all the gravel roads, are private.

In May of 2006, Town Meeting passed a Gravel & Private Roads bylaw whose purpose is to:

 Provide an upgrade path for private and gravel roads experiencing a rapid increase in use, and Provide protections for environmentally sensitive or visually significant private and gravel roads that might otherwise see undesired increase in use and destruction of character;

The bylaw does this by creating two new categories of roads, *Minor Collectors of Special Character* and *Rural Conservation Roads*. Once the system is fully in place, private roads in both these categories will be subject to a special review process before certain modifications can be made.

Committee, the later now being formed by the Board of Selectmen. This committee will work with abutters and others to see that proposed changes to roads in both new categories are not harmful to the special qualities of those roads and their surroundings.

In total, seven roads in town were chosen for initial inclusion in the Minor Collector of Special Character category, and three for the Rural Conservation Road status. In creating the bylaw, a process was put in place for both adding roads to, and removing roads from these



Morgan Road about 1900 (an A.S.Burroughs postcard)

In the Six Ponds area, the portion of Ship Pond Road west of Route 3 and the section of Wareham Road from Mast Road south to the town line are categorized as Minor Collectors of Special Character, and Mast Road and West Long Pond Road have been designated Rural Conservation Roads. The last two were included in that category because of their scenic character, proximity to surface water bodies, and, most importantly, because they were likely to see undesired and unsustainable traffic growth in the future.

The bylaw discourages most upgrades to roads in either category without a formal review process. This process will involve application to the Town and review by the Selectmen, Planning Board, DPW and a Roads Advisory categories. The intention was to create a process that will allow the community and its road system to grow in ways that respect the character and environmental qualities of these roads.

The Private & Gravel Roads Committee, which created this legislation at the request of the Board of Selectmen, consisted of seven members. Larry Rosenblum, a planning board member and Six Ponds resident served as its chairman and Anthony Schena, a current selectman, was co-chair. Dr. Sanford Leslie, another Six Ponds resident, also served on the committee.

The text of the bylaw and regulation, as well as the report of the Committee can be downloaded from the Six Ponds website at http://www.sixponds.org.

CRACKED CORNA great solution for icy conditions

Last year we tried using cracked corn to create better traction on ice. We have a steep dirt driveway leading up to our house. We also have a steep set of dirt and wood stairs leading from the garage down to the house. We have tried various methods (including a beer waste product) to make ice less of a problem but finally hit upon the cracked corn solution.

We have found that cracked corn creates a very good walking or driving surface while causing no pollution concern. We sprinkle it liberally on both the driveway and the stairs, wherever we have ice.

Birds eat up the cracked corn as the ice melts. This is particularly beneficial to

birds in the early spring when wild seeds are scarce and birds are hungry.

The cracked corn is readily available at Morrison's. (Wild bird seed will also work.)

I even carry a bag of cracked corn in the trunk of my car all winter to use if I should get stuck in the snow. A little bit under the wheels gives great traction.

Contributers to this issue of the SixPonds News Include:

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Six Ponds Executive Committee 2006-2007

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Roger Monks (Vice President)
Douglas Post (Secretary)
Walter Morrison (Treasurer)

Steve Abbott

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Pat Grace

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