

Six Ponds News

July 2007

(www.sixponds.org)

An Occasional Publication of the Six Ponds Improvement Association, Plymouth Mass.

Plymouth Carver Aquifer

An article in the last newsletter explained how the glacier created Plymouth's ponds 25,000 years ago. That same glacier also deposited the sand and gravel under us that holds 500-billion gallons of clean groundwater, one of the largest aquifers in the state. Everyone in Plymouth gets drinking water from this same aquifer. Plymouth relies almost entirely on the Aquifer for drinking water.

Though it may seem like this amount of water would never run out, growth driven withdrawals can eventually exceed recharge. There is also the danger that the aquifer can become contaminated. A tanker truck of gasoline spilled on Route 3 or a leaky gas station tank can ruin our drinking water source.

The EPA recognizing this has officially designated our aquifer as a "Sole Source Aquifer" under the federal Safe Drinking Water Act. In addition to finding that Plymouth has no other feasible source of drinking water this designation recognizes "if the aquifer were contaminated, it would create a significant hazard to public health". Ours is one of only 70 Sole Source Aquifers in the United States. There are seven towns overlaying the aquifer; Plymouth, Carver, Wareham, Bourne, Plympton, Middleborough, and Kingston. It covers approximately 140 square miles in area. The Aquifer ranges in depth from 20 feet to over 200 feet. *(continued on pg. 2)*



*The Wind-in-the-Pines Girl Scout Center has again offered to host the **Six Ponds Annual Meeting and Potluck Supper** in their dining hall after their summer programs have ended.*

*This year, the meeting and supper will be on **Saturday, September 1st** and will start at **6:00 P.M.** After the potluck supper, there will be a brief annual meeting of the Six Ponds Association. Then, a staff member from the Manomet Conservation Science Center will speak to us about some aspect of the center's research.*

Six Ponders with last names beginning with A thru M should bring a main dish. Those with last names beginning with N thru Z should bring a salad or desert.

Ice water, hot coffee and tea will be provided. Feel free to bring other beverages of your choice.

We look forward to seeing everyone again.

Take Deer Ticks and Lyme Disease Seriously!

Almost everyone knows someone who has had Lyme Disease.

Deer ticks (or black-legged ticks) can carry the bacteria which causes Lyme Disease and they can carry other infectious organisms as well. These infections cause flu-like symptoms, are difficult to diagnose, can become crippling and debilitating if not treated, and can even be fatal.

Deer Ticks prefer moist woodsy environments like we have in the Six Ponds area, and the misty mornings along the coast have allowed Deer Ticks to flourish from Delaware north to Cape Cod.

Most cases of Lyme Disease in people are contracted in the months of June, July and August when Deer Ticks proliferate; however, people can be bitten any month of the year.

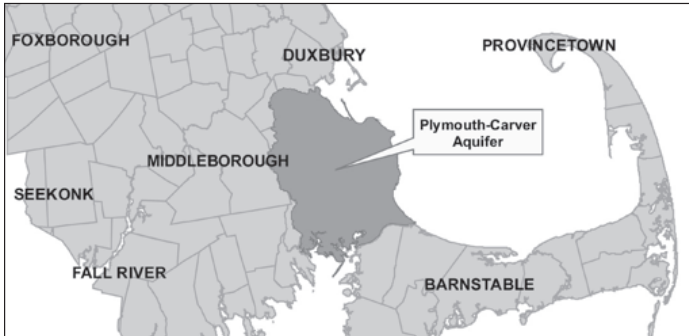
Lyme Disease has been identified as a tick-borne disease, but white-footed mice, chipmunks, shrews and squirrels have been identified as reservoirs for the disease. When larval Deer Ticks feed on small animals, they can pick up the bacteria which causes Lyme *(continued on pg. 4)*

Aquifer...

(continued from pg. 1)

There are several things currently underway that are designed to protect our aquifer.

The U.S. Geological Survey recently launched a \$750,000 two year investigation of the Aquifer to generate a groundwater flow model to help officials understand its quality and dynamics. They will develop models of the area's development patterns, projected water use, and capacity of the aquifer to



meet those needs. No one knows how much unregulated water is taken each year and eventually all of the unregulated/unknown withdrawals from the aquifer could suck it dry. There has never been an attempt to calculate residential well water consumption and the last gross estimate of water use was done 25 years ago when it was 60 million gallons per day. This number has since grown by orders of magnitude. Recharge is estimated at 161 million gallons.

The second project underway is a \$100,000 state funded study led by the Plymouth-Carver Aquifer Advisory Committee (PCAAC) to develop a plan to protect and manage the Aquifer. The PCAAC's goal is to ensure clean and healthy drinking water. The state study, expected to be completed in fall 2007, will help Plymouth and the other six aquifer towns to coordinate management and protection of the aquifer. PCAAC meetings take place at Carver Town Hall every other month and Six Ponds has a representative at the meetings.

Interesting questions were raised at the last PCAAC meeting. Carver Selectmen asked whether towns have any right to regulate or limit withdraw and sale of aquifer water.

The answer is that anyone can drill a well into the aquifer and pump without regulation and without a permit if they take less than 100,000 gpd or 9 million in any three month period. If however, they are taking it for public consumption (bottling or for 25 or more residents) they have to get a New Source permit under the federal Safe Drinking Water Act. For public consumption local health department requirements also apply. The government has a right to regulate but little right to refuse permits unless significant environmental effects or safe yield issues arise. Obviously town supplied water can be rationed when necessary.

Invasives in our Neighborhood

Invasive species are those alien species whose introduction causes, or is likely to cause, economic or environmental harm or harm to human health. This could be the introduction of live plants or animals, eggs, seeds, and diseases. These aliens may aggressively take over once native habitats; may dominate food chains by starving out native species; or may gradually spread over an area (a neighborhood or a country) until they become viewed as "naturalized". These organisms tend to be highly adaptable, growing under a range of environmental conditions and posing a real threat to biodiversity. Conversely, native species in North America are generally those thought to occur prior to European settlement that can reproduce and grow without the help of humans (i.e. without being transported by humans).

Common invasives we have heard about include those in aquatic as well as terrestrial habitats. Controlling invasive aquatic weeds is costly and time consuming. For this reason, boaters at boat ramps are commonly asked to remove all vegetation from propellers and their boats prior to leaving a pond. In hard to treat areas, we can see the bright fuchsia flowers of purple loosestrife and the tall swaying of the *Phragmites australis* or Common Reed grass both of which are highly invasive.

One invasive now common to Plymouth is known as Black Swallow-Wort (*Cynanchum louiseae*). Native to parts of Europe, this plant can be seen in some fields and along the side of hedges in town with its slightly curled leading bud appearing to vine into thin air. In the Milkweed family, Swallow-Wort is attractive to monarch butterfly larva, yet caterpillars feeding on the plant will die from its toxic nature. The glossy green foliage and tough stems, dense growth, and production of as many as 2,000 seeds per square



meter under optimal full sun conditions can make this plant difficult to eradicate. Perhaps attractive to gardeners at one time, a plant collector in Essex, MA recorded that ten years after its first introduction to North (continued on pg. 3)

Invasives...

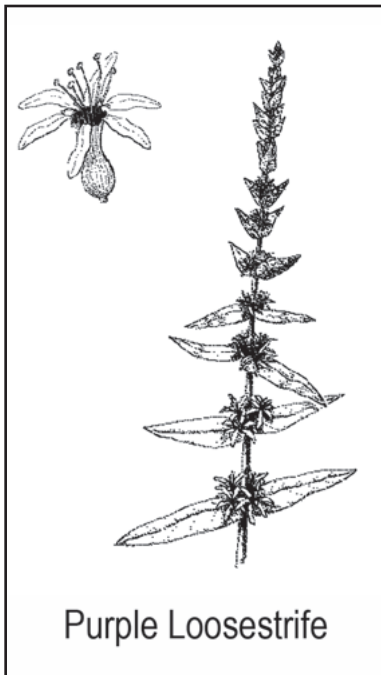
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America in 1854 it was “escaping from the botanic garden and promising to become naturalized”. It is not known when or how it first entered Plymouth.

Invasives are such a problem in some areas that the University of Connecticut has put together a website, Invasive Plant Atlas of New England or IPANE, to disseminate known information on existing or potential problem plants. The web address for this site is: <http://invasives.eeb.uconn.edu/IPANEnew/IPANE-old/sitemap.htm>. Additional information can be gained from the New England Wildflower Society’s website: <http://www.newfs.org/conserve/invasive.htm>

which has links to invasive species by state.

Control of invasive plants can involve a range of actions from removing plant material by hand, through mechanical means, or spraying with appropriate herbicide. Chemical treatments include both broad spraying of vegetation or direct application of herbicide to a cut stem. It is best to check sources for the optimal time to use chemical treatments. Treatments may involve several actions in a season or actions over several years as some species sprout from root



fragments as in the case of oriental bittersweet or from seed stocks as with purple loosestrife.

Things to try:

- Check to see if what you are planting is listed on invasive species websites for MA.
- Do not throw aquarium plants (or animals) or garden weeds into ponds, rivers or natural areas – dispose of these with your household trash.
- Consult with your local nursery, or professional, and ask about the invasive nature of any plant you are considering for your garden or landscape.
- Search the internet to research plants you have questions about.
- Work to eliminate invasives through species specific methods.

Famous Poet at Long Pond Camp

During the summers of 1945 and 1946, Long Pond hosted one of the most important female poets of the 20th Century – Sylvia Plath (b. 1932 – d. 1963). Plath, the Pulitzer-prize winning author of *The Bell Jar*, *The Colossus*, *Ariel*, and countless poems, grew up in Winthrop and Wellesley. She also spent two summers as a camper at Camp Helen Storrow, which for many years was located at the south end of Long Pond.

On July 1, 1945, Sylvia – then 12 years old – arrived at Camp Helen Storrow for a two week stay. By the time she came to Six Ponds, Plath was already a published author – having published her first poem in the *Boston Traveller* when she was only 8 years old. Therefore, it’s little surprise that she kept a daily diary and a scrapbook during her time at camp.

While at camp, Sylvia’s diary reports that she enjoyed hiking, picnicking and swimming in Long Pond. But her favorite activity seemed to be eating. At one meal, she bragged of eating six plates of chicken-and-vegetable casserole, five cups of punch and one scoop of ice cream. She wrote to her mother that, when she got home, if the family was running low on ration points (WWII would continue for another month), they could slaughter her and eat her for pork.



Sylvia returned to Camp Storrow in July of 1946 – this time for a full month. During her second summer at Long Pond, she swam, took arts-and-crafts classes, and put on a minstrel show in which she played the role of Frank Sinatra. She was a very frugal camper – spending only \$3 in all four weeks, mostly on crafts, stamps and writing supplies that she purchased from the camp’s “trading post”.

Sylvia very much enjoyed the outdoor pleasures of the Six Ponds. On July 17, 1946, Sylvia and other campers hiked two miles to a blueberry farm where they picked berries all day. The farm’s owner paid Sylvia and the other girls 10¢ per quart, and Sylvia earned a full dollar. She wrote to her mother that this day of hiking and berry-picking was her “best day yet”.

Ticks...

(continued from pg. 1)

Disease. The ticks go through cycles of feeding, molting and growing. When deer are foraging for food, nymphal stage Deer Ticks can attach themselves to the deer, and the deer become reproductive hosts for the ticks.

Although mice and other small rodents have limited ranges, the ticks can be transported long distances while attached to deer and other larger animals. Deer Ticks feed on the blood of host deer for a day or two. Then, after they have finished feeding, the ticks detach and lay their eggs, and the cycle begins again in a new environment with new mice and small rodents.

Nymphal and adult Deer Ticks are able to transmit Lyme Disease while taking a blood meal, but it is the nymphal ticks which most often infect humans. Fortunately, only 15-20% of the tick nymphs are infected with Lyme disease spirochetes. Infection prevalence for other pathogens are typically lower and vary by region.

To avoid becoming infected while walking in woody areas, wear light-colored protective clothing, use insect repellents, treat clothes used for yardwork or hiking with the pesticide Permethrin, and check for ticks after walking or working outdoors. In areas likely to be infested with ticks, avoid sitting directly on the ground or fallen logs, avoid touching bushes and trees, walk in the center of trails, and avoid sitting on stonewalls or woodpiles.

In January of 2004, the Six Ponds Newsletter included an article about efforts to reduce the risk of Lyme Disease to campers at Pinewoods Camp by reducing the number of Deer Ticks on their property. A portion of this article is included below because the method used at Pinewoods Camp is recognized as an effective strategy for localized control.

“Pinewoods Camp has adopted a new program to significantly reduce the number of deer ticks on our property, and hopefully significantly reduce the risk of Lyme disease to our campers. We are targeting mice, common hosts to deer ticks, and the principal culprits in spreading the disease in our area.

If you are one of our many neighbors who enjoy walking through our property, you may have noticed a number of four inch long, one-inch wide, black PVC tubes scattered throughout camp. Each is tied with a bright pink ribbon. Garden columnist Mike McGrath has given us the idea from

a recent article in the Philadelphia Inquirer. Each tube contains cotton balls soaked in Permethrin, a pesticide that's deadly to ticks. The mice take the cotton balls back to their nests to use as bedding, and the permethrin kills all the ticks (not the mice) in the nest.

Permethrin is a synthetic chemical developed to simulate the natural chemical pyrethrum that protects plants from insect attack. While not a natural product, it differs from regular insect repellants in that it will kill insects and deer ticks as well as repel them. It is not harmful to pets or people. And one treatment can last up to two weeks.

We will be gathering up all our tick tubes before the summer starts, and once again scatter them throughout camp in the fall. With repeated dosages, our hope is that the population of deer ticks will be reduced, as fewer and fewer survive to reproduce. Tests on Long Island, NY have shown that similar commercially made tick tubes will reduce the number of infected deer ticks by more than 90% year after year.”

As mentioned earlier, you can protect yourself by treating outdoor clothing with the pesticide Permethrin which is available for do-it-yourself clothing treatment. Once the clothing is dried, there is no absorption through the skin. Hiking and gardening clothes can be treated monthly, as the

chemical remains through two cold-water washings.

For pets, two types of control are available. One, Advantix, containing permethrin is very effective for ticks but cannot be used on cats. The other is Frontline, which can be used for dogs and cats, and targets both fleas and ticks that have attached.

Thomas Mather, a University of Rhode Island Entomologist specializing in tick population suppression and the transmission dynamics of tick-borne diseases, has developed a tick bite prevention website - www.tickcounter.org. The site provides users with detailed information about tick biology, tick identification, additional strategies for controlling ticks, health tips, and other information useful to anyone going outside in areas where ticks are abundant.

For more information, see:

The Centers For Disease Control Lyme website:

<http://www.cdc.gov/ncidod/dvbid/lyme/index.htm>

The Lyme Disease Organization website at:

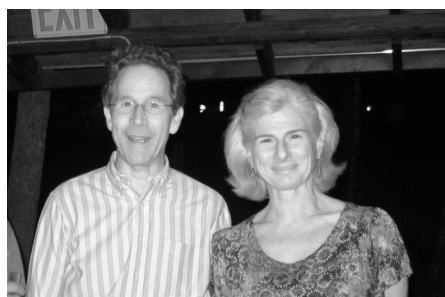
<http://www.lymediseaseassociation.org>



Country Dance and Social

On Saturday evening, June 9th, the Pinewoods Camp sponsored a dance and social for the Six Ponds Community. Hank Chapin called the dances. Some of the Pinewoods crew played in the band and other crew members helped people learn the dances.

About 60 people were at the event held in one of the camp's pavilions and enjoyed dancing for several hours in the cool breezes of a perfect June evening. Several pictures taken that evening are shown here.



Judy Savage, Executive Director of the Pinewoods Camp, has invited pond neighbors to visit the camp for dances on several Sunday evenings this summer. If you

are interested, please call Judy Savage at 508-224-4828 to find out which Sundays there will be dances and whether it might be possible for you to attend.

On the Sundays when dances are held, they will be in the C# pavillion and will usually begin at 8:00 PM. A caller will lead all dances and no experience is required. You will need to bring a pair of soft-soled shoes (sneakers are fine) to dance in. Parking is available in the visitor parking area. But, remember, you must call ahead to find out which weeks there will be dances and whether there will be room for you.

For Six Ponds residents who are not familiar with Pinewoods Camp, it should be mentioned that it is a traditional dance and music camp. Located on twenty-five acres in a beautiful pine forest



between Long Pond and Round Pond in Plymouth, Massachusetts, it has four custom-built dance pavilions, a number of rustic cabins, swimming in two clear water lakes, an open-air dining hall that looks out over the pond, and a cozy camphouse for gatherings.

Dance and music sessions are held there from June through Labor Day. They include both weekend and week-long sessions, and they are for dancers and/or musicians with any level of experience. Most sessions are for adults, and some include families as well. Programming during these weeks



is provided by one of four "user groups": Country Dance and Song Society; Country Dance Society – Boston Centre; Folk Arts Center of New England; and Royal Scottish Country Dance Society, Boston Branch.



The facilities of Pinewoods Camp are operated by Pinewoods Camp, Inc. (PCI), a non-profit organization. PCI is dedicated to supporting country dance, folk dance, folk

music, and early music programs by providing an accessible and beautiful setting which enhances the programs offered by the user groups.

For further information about Pinewoods or how to support it, please see the camp's website at www.pinewoods.org or contact Judy Savage, Executive Director, at manager@pinewoods.org (or at 508-224-4858).



Six Ponds Executive Committee 2006-2007

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100 years of Fun and Games at the Six Ponds



~1907



2007

An Invitation to Join or Renew your Membership in the Six Ponds Association *2007*

Name _____

Address _____

City _____ State _____ ZIP _____

Telephone
(summer/winter) _____ / _____

email _____

Dues: \$10/household per year

Mail to: Six Ponds Improvement Association
P. O. Box 1580
Plymouth, MA. 02362

I/we wish to add
an additional
contribution of:
\$ _____