

# THE HERON

Chandler Pond Preservation Society Newsletter ♦ Winter 2005 ♦ Number 16



## ALIEN CLONES ATTACKING CHANDLER POND!

They are not from outer space but these alien clones, aquatic plants from Europe, are growing rampantly across the pond, threatening to cover the entire surface. In this issue, we describe this new and imminent danger and explain what can be done to stop it.

### What You Can Do:

Linda Mishkin, president of the Chandler Pond Preservation Society, asks us to support a plan to eradicate the invaders.

Dear CPPS Members:

Chandler Pond has been seriously invaded by an aquatic plant and needs your help. The only effective way to stop the spread of this foreign invasive is with an herbicide. But we need to raise money to help cover the costs. So please pay your annual membership dues (form on the back).

As you will see in the article by Bill King (right), the Eurasian watermilfoil has been spreading rapidly across Chandler Pond. Although there have been valiant attempts to remove it by hand, the invader is now too widespread for this method to be effective.

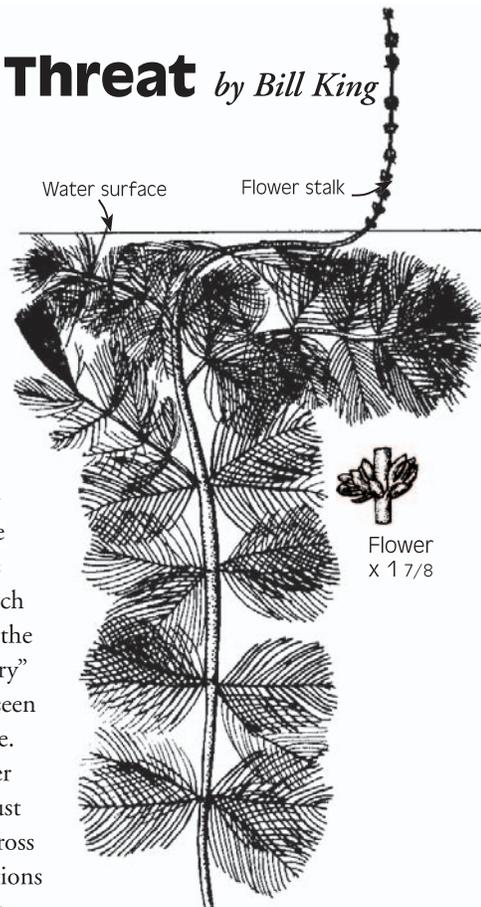
The cost of an herbicide treatment is approximately \$9,000 including \$1,500 for the permitting process. Boston Parks and Recreation Department is funding it all for this year. However, the Chandler Pond Preservation Society is offering to pay part of the \$1,500 to extend the permit upstream to the lowermost part of the golf course in Newton. But this will be not enough; we need to build up a fund for additional treatments in the future. Since the initial application cannot totally eradicate the plant, some follow-up will be needed in three to four years. So, please consider giving an extra donation. Remember, these are tax-deductible contributions!

Left untreated, these invasive plants will totally cover the Pond. Please send what you can to help save Chandler Pond.

Sincerely,  
Linda Mishkin

### The Alien Threat *by Bill King*

You would not have noticed the invasive Eurasian watermilfoil (*Myriophyllum spicatum*), shown on the right, until this past summer. There was no evidence of it when we did a plant survey in 2001. But then, this summer the plant suddenly fanned out across the pond, covering much of its surface. The masses of 3-inch flower stalks poking above the water gave the pond a "hairy" appearance, which can be seen in a photo on the next page. When my daughter Jennifer and I did a survey on August 28th by dragging a rake across the bottom at various locations from a rowboat belonging to Mike Sullo, a Kenrick Street resident, I found that Eurasian watermilfoil represented about 15% of the total aquatic plants.



Eurasian watermilfoil, 83% actual size. Illustration from *A Guide to Invasive Non-native Aquatic Plants in Massachusetts*, by C. Barre Helquist. MDEM, 1997

#### How does it spread?

By cloning. Fragments about 6 inches long break off from the tip, float, develop white roots, and then sink to grow at a new location. But a small fragment, such as a single leaf, cannot reproduce,

(Continued on page 2)

## The Alien Threat *(Continued from page 1)*

nor is it likely that the seeds remain viable through the winter this far north according to Dr. Rick McVoy, Massachusetts Department of Environmental Protection (MDEP).

### What is the danger?

Although milfoil only spreads through cloning, it does this very effectively and could potentially cover the entire pond surface. If nothing is done, our native aquatic plant, *Elodea*, or waterweed, shown on the facing page, would be shaded out and disappear according to Steve Asen of the Massachusetts Department of Conservation and Recreation (DCR), Lakes and Ponds Program. The Eurasian watermilfoil and another invasive, curly-leaved pondweed, shown on the facing page, grow earlier in the year than *Elodea* and form a

cover at the surface, preventing *Elodea* from getting sunlight necessary to grow.

If this is allowed to happen, I understand that fish are likely to die while mosquitoes increase. In addition, milfoil overgrowth will probably be a problem for the outlet. This past summer innumerable fragments of Eurasian watermilfoil clogged the dam, choking the water outflow into the outlet thereby raising the pond water level. The accumulation at the dam was heaviest in the fall, but continued until ice formed. Volunteers raked out these plants

and filled about sixty 30-gallon bags for Parks Department disposal. And this was the first year! Because watermilfoil fragments so readily it is not such a problem in a flowing river, and in fact, it has been growing in the Charles River. But the clog it creates at our outlet is intolerable.

Department of Environmental Protection, either of them could treat Chandler Pond this spring with the herbicide fluridone — the brand name is Sonar. Though most of us would wisely avoid herbicides, this chemical's benefits far outweigh any side effects. It can rid an infested pond of the



Flower spikes of the Eurasian milfoil poke up above the water covering much of the surface of Chandler Pond. A swan glides across an open area in the water. Behind, cormorants perch on a log.

Photo by Richard Wood

### What can be done?

The recommended treatment is to have a selective herbicide applied in the spring followed later by hand picking any surviving or returning plants. There are only two licensed aquatic herbicide applicators in Massachusetts, Lee Lyman of Lycott Environmental and Gerald Smith of Aquatic Control Technologies.

Following a public hearing and approval by the Boston Conservation Commission (part of the Boston Environment Department) and the Massachusetts

Eurasian invader while having little effect on animal life. Swimming and fishing are not restricted after its application and it is toxic only in extremely large doses. A rat or a cat would have to drink over 100,000 liters of treated water to die from it. You can learn more about Sonar on the website listed below on the left.

### What will the treatment cost?

It would be about \$9,000, and the Boston Parks and Recreation Department has already made an initial payment to Gerald Smith. Some Kenrick Street homeowners are interested in paying a bit more money for the herbicide company to spray at the same time the spreading terrestrial pest,

Japanese knotweed, (aka Japanese bamboo) which forms tall, dense thickets.

Also, David Stowe, the superintendent of the Newton Commonwealth Golf Course, upstream from Chandler Pond, is interested in paying for extending the treatment to their brook. In addition to the native *Elodea* and native fish, it has the invasive curly pondweed. The treatment will be more complete and effective if this invasive is targeted at both sites. However, the golf course's tiny body of water requires separate public notification and a hearing before the Newton Conservation Commission.

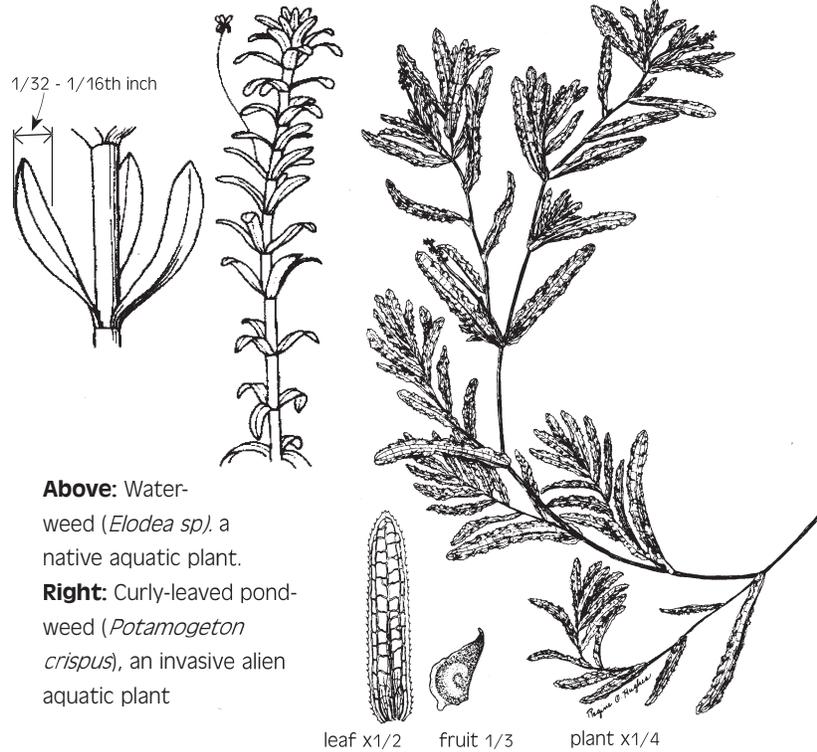
Aquatic Control Technologies is applying to have the public hearings at Boston City Hall on Wednesday, February 16, and at Newton on Thursday, March 24, but these dates are not definite.

**The Future**

Can we win this battle? Gerald Smith of Aquatic Control Technologies says that elsewhere in the state the enemy has not been eradicated, just kept in check. So anticipating that we will not have a complete victory either, we intend to find and pull up any surviving or returning Eurasian watermilfoil and curly pondweed. (See sidebar on hand pulling on the right below.)

Since many places need the herbicide every three or four years, it seems prudent for the CPPS to build up its treasury again in order to be ready if another treatment is necessary.

To paraphrase John Philpot Curran from 1808, the health of an urban pond, like liberty, requires eternal vigilance. 🦢



**Above:** Waterweed (*Elodea sp.*) a native aquatic plant.

**Right:** Curly-leaved pondweed (*Potamogeton crispus*), an invasive alien aquatic plant

Illustration credits:

Pondweed and water chestnut from *A Guide to Invasive Non-native Aquatic Plants in Massachusetts*, by C. Barre Helquist. MDEM, 1997.

*Elodea* from *A Guide to Aquatic Plants in Massachusetts*, by Wanda Kelly, New England Aquarium and Commonwealth of Massachusetts. 1999.

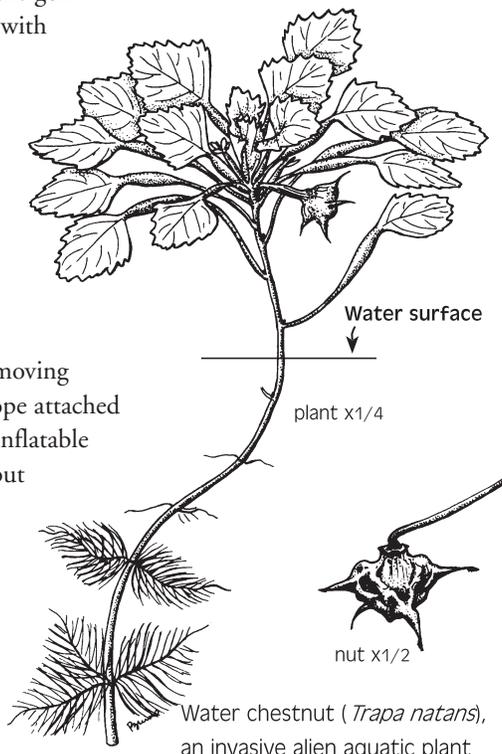
**Another Alien Lurking Upstream**

Upstream from Chandler Pond, at the Commonwealth Golf Course the biggest aquatic problem is the water chestnut, shown below, which has been a menace for us in the past. In just a couple of years, Strong's Ponds in the golf course, has become more than half covered with these invasive Eurasian plants. They could completely cover the surface.

Chandler Pond Preservation Society volunteers removed a very large quantity of water chestnuts from Chandler Pond in 1997 and continue to find and remove small amounts every year. The spiny nuts float and stick to the feathers of waterfowl, which is how the plant can spread.

The golf course greens keepers were removing much of it by throwing out a rake with a rope attached and pulling it to shore. Then they used an inflatable boat to reach the rest of it. Unfortunately, but predictably, spines on the nuts punctured and ruined the inflatable.

They requested help from us, and help came in the form of an old canoe donated by Dr. Daniel Smith, my boss, and Susan Smith of Natick—avid kayakers and golfers. We wish them luck in controlling the menacing water chestnut. 🦢 *Bill King*



Water chestnut (*Trapa natans*), an invasive alien aquatic plant

**Trials and Tribulations of Aquatic "Weeding"**

Most people know how to pull weeds out of a flower bed, but what do you do if your target pests are floating in the water? This is an important question since we **have** to do some hand-pulling to keep Eurasian watermilfoil in check. With the help of a colleague and snorkling gear I experimented with aquatic "weeding" this past summer.

Dr. Reginaldo Goncalves, a visiting scientist and my co-worker from Piracicaba, Brazil, went with me the first time. An experienced SCUBA diver, he worked with me from a rowboat, using face masks and snorkels, along with nets or burlap bags. The burlap bags were the suggestion of Dr. Rick McVoy of MDEP.

We found that in order to remove the root, it is necessary to rake or grasp the plant close to its base. Furthermore, when the root is pulled up, the plant floats, but the water becomes muddy, and visibility diminishes. All in all, removing Eurasian watermilfoil by hand is a tricky, tedious, but essential maintenance task for the health of Chandler Pond. 🦢 *Bill King*

# William C. Strong—Leading Nonantum Valley Horticulturalist and Entrepreneur

by Bill Marchione

In three previous **HERON** articles, I discussed some of the principal horticulturalists who established nurseries in the valley where Chandler's Pond is situated—John Kenrick of Newton (pioneer horticulturalist of New England), Horace Gray (founder of the Boston Public Garden, 1837) and J. L. L. F. Warren (the “Father of California Agriculture”).

Another name to add to this impressive list is William Chamberlain Strong, the man who had perhaps the greatest long-term impact upon the neighborhood by excavating Chandler's Pond in 1855 and adjacent Strong's Pond in 1865.

## The Graperies

Strong first came to the Nonantum Valley in the 1840s when his employer, Daniel Webster, sent the young law clerk to Horace Gray's nursery on the Brighton/Newton boundary with legal papers to be signed. According to Brighton historian J.C.P. Winship, Strong

was so charmed with the estate and especially the graperies that in the following year, 1848, when the property was sold at auction, he became the purchaser. The size of the estate, over one hundred acres, and the magnitude of the graperies...became at once such an interest and such a burden that he gave up the profession of law and devoted himself to horticultural interests.

It is perhaps safe to assume that the still young Strong inherited the substantial sum he would have needed to make this purchase and the improvements he introduced.

Strong expanded on Gray's operation by laying out additional vines and adding other plants to the nursery's output. He also built an immense greenhouse on Kenrick Street, in which, Marshall P. Wilder, a prominent horticulturalist, noted,

under one continuous roof of glass of 18,000 square feet, is an enclosure where plants are grown in the open ground; where immense quantities of the rose and flowers are daily cut for the market.

He called his horticultural enterprise Nonantum Hill Nurseries.

During the period that he was on Nonantum Hill (1848-1875) Strong also wrote important horticultural treatises, enhancing his reputation as a horticulturalist.

## Ice Ponds

A man of great enterprise, Strong also recognized the potential that lay in the emergent ice cutting business. He dug Chandler's and Strong's Ponds and built adjacent ice houses. The first of these ice cutting facilities he leased and later sold to Malcolm Chandler, namesake of Chandler's Pond. Strong was also deeply interested

in transportation and an early promoter of railroads linking Boston to its western suburbs.



William Chamberlain Strong

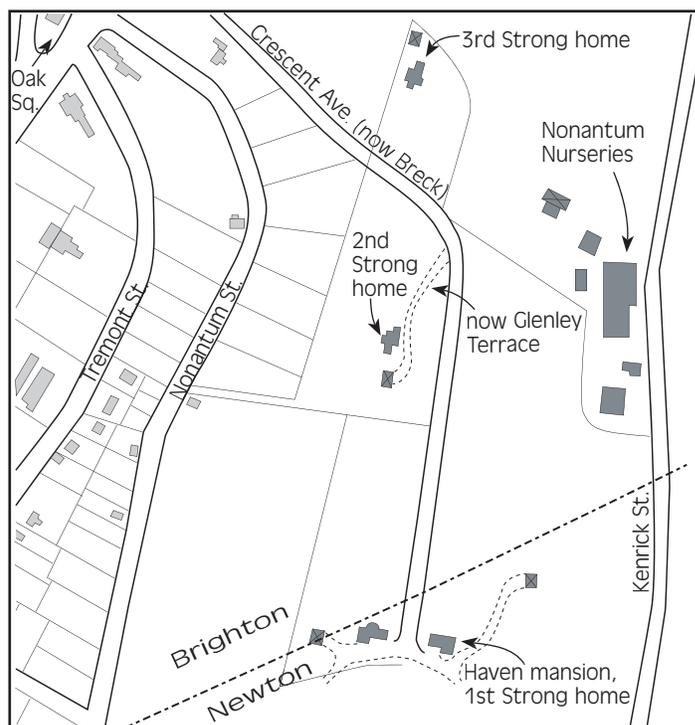
## Homes on the Hill

When Strong first moved to the area he lived in a large house atop Nonantum Hill. It was the southerly one of two adjacent homes, dating from 1807, known as the Wiggan and Haven mansions. The northern home was later converted to a school, which eventually became St. Sebastian's Country Day School.

In 1856 Strong sold his first local home to George Greig and built a new house, which is still standing on what is now Glenley Terrace. He sold the latter in 1871 to wealthy Boston merchant Daniel Shillaber and in 1873 built still another residence on the eastern side of Breck Avenue (then called Crescent Street). In 1875 he left that home and moved to the Waban section of Newton. He is generally regarded as the founder of Newton's Waban neighborhood, which he named after the leader of the local mid-17th century “praying Indian” community of Nonantum.

Highly regarded as a horticulturalist, Strong served as President of the Massachusetts Horticultural Society from 1871 to 1874. 🐾

Redrawn from an 1885 city map, this section of Nonantum Hill shows the three homes where William Strong lived from 1848 to 1875.

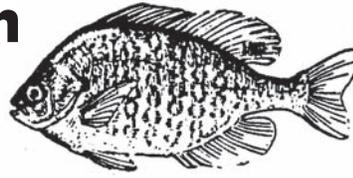


## Chandler Pond Fish Return

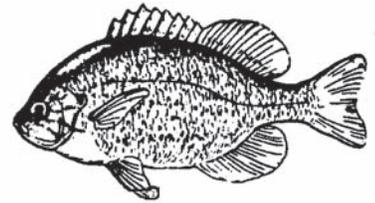
The sunfish that were stocked in Chandler Pond two years ago are doing well according to a survey we conducted this fall. This is despite the four to six industrious, voracious cormorants, seen in the photo on page 2, that fed in the pond all summer.

During the summer of 2002, 500 sunfish were released into the pond in order to replace the two species that were lost during the dredging in 1999. The Chandler Pond Preservation Society bought the fish from Ben Winikainen of Gardner with a permit from the Massachusetts Division of Fish and Wildlife and approval from the Boston Parks and Recreation Department.

A visiting teenage fisherman, Klaus Brinkman, from Lower Saxony, Germany, carried out the sunfish survey on October 17 and 18. This was his first time in the US, and also his first time measuring anything in inches. Using worms for bait, he caught, measured, and released 84 pumpkinseed sunfish and 9 bluegill sunfish. Only three of these were large: two pumpkinseeds were 9



Bluegill sunfish



Pumpkinseed sunfish

inches and one was 7 inches long. The other pumpkinseeds averaged 4.6 inches and the bluegills averaged 4.0 inches. Since all of the purchased fish were large, and since the only fish upstream in the Newton Commonwealth Golf Course are golden shiners and hornpout (brown bullhead catfish), this proves that the sunfish have been reproducing in Chandler Pond, as we had hoped and expected.

Incidentally, Klaus's worm collecting technique was new to me. He drove a pitchfork at an angle into the grass turf and then shook it vigorously until the worms of all sizes crawled completely out of their holes onto the grassy surface. *Bill King*

## The Way It Was: Chandler Pond 1943

When Sandy Kilbride's father took this photo, looking west from their home on Kenrick Street, Chandler Pond was a bucolic setting. While her grandfather fished, Sandy (the figure squeezing into the photo on the right) watched.

There are no apartment buildings — only trees, meadow, the golf course in the background, and a barn. This is the Keith Stables, used for horse auctions every Sunday. Originally the Downing ice house, the structure burned down in a catastrophic fire on October 5, 1945, which also killed 33 of the 52 horses housed there at the time. The value of the horses and the building was estimated at \$100,000, an enormous sum back then. The *Boston Herald* ran a front page article on the fire with a photo of the stables engulfed in flames.

The pond's shoreline was also very different from today — open with no stands of cattails and no sign of Japanese knotweed or purple loosestrife.



Photo courtesy of Sandy Kilbride

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## Become a Member of THE CHANDLER POND PRESERVATION SOCIETY!

THE CHANDLER POND PRESERVATION SOCIETY is a non-profit organization whose purpose is to restore, maintain, and preserve the character and historic quality of Chandler Pond and its watershed.

ANNUAL MEMBERSHIP:  New  Renewal

MEMBERSHIP TYPE: Please select one

- Individual \$15
- Family \$20
- Friend of the Pond *(receive pond logo mug)* \$25
- Contributor to the Pond *(receive cap with embroidered logo)* \$50
- Patron to the Pond *(receive heavy cotton sweatshirt with embroidered logo)* \$75

Name \_\_\_\_\_ Date \_\_\_\_\_

Street address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Home phone \_\_\_\_\_ E-mail \_\_\_\_\_

Additional family members \_\_\_\_\_

How do you use the pond? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PAYMENT:

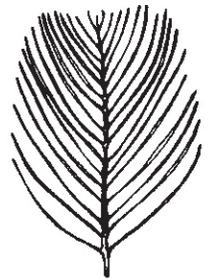
Amount enclosed: \$ \_\_\_\_\_ (tax deductible)

Please mail to:

P.O. Box 35521  
Brighton, MA 02135

Thank you for your support.

Wn 05



A leaf of the Eurasian watermilfoil, a threat to Chandler Pond. See page 1.

**Renew your membership now and help fight the watermilfoil!**

Send in your dues now and you will be renewed until February 2006.

Would you like to help?

- Newsletter
- Public relations
- General support
- Membership drive
- Fund raising
- Education/ecology

We welcome your comments and suggestions. Please write us or e-mail us at our temporary address:  
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