



NEWTON
CONSERVATORS

SPRING ISSUE

NEWSLETTER

Newton's land trust working to preserve open space since 1961

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US Agriculture and the Coming Water Crisis

by Greg Maslowe, Farm Manager, Newton Community Farms



PHOTO: WIKIPEDIA.COM

Pivot Irrigation



PHOTO: RON NICHOLS USDA/NRCS

Lack of water can affect the taste of vegetables

I recently heard a term used that threw the predicament of agriculture, and indeed our entire civilization, into stark light: peak water. Pretty much everyone has heard of peak oil, but peak water? What's that? The book in which I read it used it as something of a throw away phrase, but as I reflected on it, the appropriateness of the term grew.



Farmers and municipalities are in bidding wars over limited water supplies

The arid and semi-arid western United States has already, I would argue, hit peak water. Farmers and municipalities are in bidding wars over limited water supplies:

one to provide water to homes; one to provide food to those same homes. There are battles between up-stream and down-stream communities over access to water, and international disputes occur because rivers like the Colorado no longer reach their historic outflows in the Gulf of Mexico. Living in New England, we can feel sheltered from the water woes of the west, but it takes only a bit of label checking—where *did* that (fill in your fruit or vegetable here) come from?—to realize how much everyone in the

United States can or will be affected by peak water in the west.

Water is what is referred to in agriculture as a “limiting” factor. It's not just that without enough water, a plant dies; that's true, but an extreme. Without enough water (but just enough to live), a plant will grow more slowly, may not grow to full size/weight, or might

shift out of its vegetative stage (during which it is actively growing) into its reproductive stage (when it tries to reproduce) prematurely. The last is a common response to all

kinds of environmental stresses—organisms put all their energy into reproducing when they sense that they might not survive. For farmers, none of these outcomes are good.

Some farms don't really have a choice. They don't have water to irrigate, so they don't irrigate. These are the dry-land farms. Their fields get watered when it rains (or snows), but otherwise the crops are left to glean what moisture they can from the soil. There are dry-land farms in the arid west as well as



right here in New England. These farms can be challenging, and often the season's precipitation can be read out in their yields. The other alternative is to irrigate. Irrigation can speed growth, increase yields, help reduce stress during extremely hot and/or dry weather, and enhance flavor (e.g., crops like carrots can become bitter if allowed to get too dry while growing). Irrigation can make marginal lands economically viable.



PHOTO: DAN BRODY

Newton Community Farm

There are some down sides to irrigation as well. Irrigation tends to increase the salinity of soils, particularly in the alkaline soils of arid climates. To combat this build-up of salts, farmers often resort to a seemingly counter-intuitive solution: over-irrigation. By over-irrigating, that is, applying more water than the soil can hold, so that the excess water flushes the salts (which are highly soluble) from the “root zone” into the subsoil, or more likely, into adjacent waterways. An effective, if not “green,” solution.

Another major down side of irrigation, and I hesitate to acknowledge this as a grower who irrigates, is that it allows us to push land past its “natural” capacity. What do I mean? In dry land farming, you can grow only crops that can survive on the average precipitation of your region. With irrigation, humans take more charge. I wonder how many of the crops currently grown in the central valley of California (both in terms of variety and more importantly, volume) could be grown without irrigation. I suspect that that is a biome pushed well beyond its “natural” capacity.

But without irrigation what would happen to our food supply? Could we eat the way we do today without it? In a word, no. So now we get to the really important questions. First, where does all that water for irrigation come from? Remember that *a lot* of our food is grown in arid or semi-arid regions of the United States (with good reason: many crop destroying diseases are much more prevalent in humid climates). There are two primary sources: aquifers and snowpack. The use of aquifers to supply the water demands of humans—both agricultural and “urban” (i.e., drinking

water, waste water, lawns, manufacturing, etc.)—is where the term “peak water” really finds traction. Just as with oil, we are depleting our aquifers at a rate far faster than they are being recharged. Someday, we will simply run out. At least from this source.

Thank goodness for snowpack! Except there might be problems there, too. Mountain snowpack is basically a slow-release reservoir system. Snow builds up over the winter and into the spring, then melts over the late spring and summer to feed the human-made reservoirs at lower altitudes. It's an elegant system and allows a massive amount of water to be stored well into summer. One of the things that climate scientists are starting to forecast is that as our planet warms up, the mountains will receive more of their wintertime precipitation as *rain* rather than snow, which means that the snow pack won't build up as much. Instead, moisture that used to be stored in the mountains all winter will flow into reservoirs. But our reservoirs aren't big enough to hold all the moisture that falls in the mountains at one time. We *need* nature to store much of it for us, releasing it over the summer months. To build enough reservoir capacity to replace the holding capacity of the mountain's snowpack would be a monumental undertaking.

So what happens if climate change leads to more rain and less snow in the mountains? It's pretty simple; there will be less water in the parts of our country that grow most of our food when we need it to grow that food.



PHOTO: DAN BRODY

Much of our food is grown in arid or semi-arid regions.

There are other hydrological changes afoot due to climate change that can/will have repercussions for agriculture as well. Precipitation, when it comes, seems to be trending towards coming in more extreme events. Here in Boston last summer, we had a fairly large number of rain storms that brought 2+ inches of rain in single events. For farmers, such concentration of precipitation can cause problems. Heavy rains lead to increased erosion on plowed fields. They batter crops. And when those storms are separated by long periods of dryness, it can stress plants as they cycle from soggy roots to drought.

My home state, Colorado, last year saw what is now being called a 1,000 flood, which not only destroyed roads, railroad lines, homes, and utilities, but also did significant crop damage. More importantly, however, the effects of that storm are still being felt by farmers. Flood waters re-routed rivers and streams so that they no longer feed the extensive network of irrigation ditches feeding thirsty fields throughout eastern Colorado. Farmers are calling on state and federal agencies to re-direct the rivers back to their old beds and are panicked that if this doesn't happen before planting time, they will lose their crops.

The other great agricultural concern with climate change is that weather patterns will shift. If the Great Plains—the bread basket of our country—becomes hotter and more arid, where will our staple crops come from? One hope is that such a change would mean more water and moderate temperatures for the vast plains of Canada. The problem is that the soils there are not the soils of the American Midwest, which at least historically were some of the deepest, richest soils on the planet. Even with more precipitation and fairer weather, Canada would not likely be able to produce enough food to make up for the loss of the American Midwest.

So where does all this bad news lead us? Back to “peak water.” Fresh, clean water is going to become scarcer. Thirsty urban centers are already being more aggressive in their competition for water, which means the price of that water will go up. And as it does, so too will the price of food. Our government spends literally *billions* of dollars each year trying to ensure a steady supply of cheap food. But farm subsidies (or their newest incarnation as insurance programs) won't keep crops watered. We are going to need to re-think the way we use water, in agriculture as well as in all other parts of our society, and make changes. We probably should be prepared for increasing food prices. But most importantly, and most difficultly, we need as a society to once again learn how to have nuanced, difficult, in-depth conversations about politics and policies without letting sound-bite pot shots win the day.

There are no easy answers to the environmental challenges facing us today. Easy answers are almost always Band-Aids, when what we really need are systemic solutions to systemic problems. Anything else is just buying us time. But buying us time for what, if not to figure out long term solutions for how to live in a way that isn't going to drive us, and the rest of our world, to the brink of extinction. ■

Editor's Note

After over twenty inches of snow more than we receive in an average winter, it's exciting to think that spring is almost here. If you want to remind yourself what's coming, check out President Beth Schroeder's article on Spring Blooms and fern expert Don Lubin's witty view of fiddleheads, and peruse the list of walks (and invasive-plant pulls) scheduled for this spring and summer. As always, the photographs taken by our writers are stunning and remind us what we're all working to preserve.

This winter, our whole country is experiencing significant water problems—both too little and too much. Excessive use of the Ogallala Aquifer, which lies beneath eight of the Great Plains states, for irrigation and drinking water has depleted 10% of that critical resource, which provides almost 30% of ground water used for irrigation in the United States. That aquifer was created millions of years ago, and scientists estimate that it would take over 100,000 years to be “recharged,” replenished by rainfall. For more about how our food supply could be affected by the water shortage, please read our cover story by Greg Maslowe, Farm Manager at the Newton Community Farm. His concerns are reinforced by the snow-cover research of Professor Pamela Templer, which is presented in the following article.



The Conservators' Annual Meeting and Dinner will take place on Thursday, May 7. This newsletter contains information about the event and our speaker, Julie McIntosh Shapiro. We hope to see you there.

The annual meeting will mark the end of this term of President Beth Schroeder. This has been her second round as president, and our organization has continued to thrive under her able leadership, thoughtful approach, and kind manner. Fortunately, she will remain on the board and will continue to write her informative and beautifully written garden column for the newsletter.

As the members of the Board of Directors make plans for the next year, we remember our mission. The mission statement of the Conservators begins, “Newton Conservators Inc. promotes the protection and preservation of natural areas, including parks, park lands, playgrounds, forests and streams, which are open or may be converted to open spaces for the enjoyment and benefit of the people of Newton for scientific study, education, and recreation.” What do you think are the most important conservation/open space issues now facing Newton? What would you like our organization to work on in the coming year? We would love to hear from you. **Happy Spring!** ■

Review of Dr. Templer Talk at Library



Shortly after becoming a professor at BU, Dr. Pamela Templer came across research showing that in years with low snow cover, there was a spike in the amount of nitrogen moving from forest soils to nearby streams. Curious why that should be true, she started a research project of her own into the cause of that nitrogen increase and also into how changes in winter climate might affect the health of trees and other organisms in forests. On Thursday, January 30, Dr. Templer was the guest speaker for the Newton Tree Conservancy's annual Tree Lecture at the Newton Free Library, and she presented her research to a rapt audience of tree lovers and scientists from the city.

Professor Templer, who is on sabbatical at Harvard as a Charles Bullard & Sustainability Science fellow, explained that her research is important because having more nitrogen move out of forest soils could lead to increased amounts of the greenhouse gas nitrous oxide moving from soils to the air, increased acidity in the soil, and the decreased quality of our water supply.

The sites for her team's research are Hubbard Brook Experimental Forest in New Hampshire and Harvard Forest in Massachusetts. Hubbard Brook is an especially valuable site because it has detailed records of temperatures and snow cover going back over fifty years.

The records for Hubbard Brook show that the depth of the snow cover on the ground has fallen by nearly 25% in the past fifty years. Furthermore, those records confirm that our sometimes-faulty memories are accurate: in the past snow that came down early in the season would remain on the ground until the spring melt, but now it falls, melts completely, falls again, and melts again, repeating that cycle over and over during the winter.

Assuming that the decline in continuous snow cover will continue (given that climate models project a rise in temperature of up to 5 degrees Celsius in southern New England by the year 2100), Dr. Templer felt an even greater need to learn more about the effects of low snow cover. She believes that her work will have wide applicability because

55% of the landmass in the northern hemisphere currently is affected by seasonally frozen soils.

(As an interesting aside, Dr. Templer also explained that researchers at Cornell University have predicted that this anticipated rise in temperatures will cause the sap in sugar maples to flow a full month earlier. Furthermore, it is likely that the sap-flow date will continue to advance until maple sugaring will be possible only in Canada.)



PHOTO: PHENOCAM NETWORK, ANDREW RICHARDSON, HARVARD UNIVERSITY

Harvard Forest

To do their research, her team of graduate students aided by some able undergraduates created 4 reference plots and 4 treatment plots (each side being 13 meters long) at Hubbard Brook and at Harvard Forest. The species of trees on those plots are sugar maples, American beech, red maple, and red oak. After each snow, the students shoveled the snow from the treatment plots for the first four weeks of winter.

They left a small layer of snow to avoid disturbing the soils beneath, and they used sensors to measure the temperature of the soil and the depth of soil frost.

Dr. Templer's first discovery about the effects of reduced snow cover confirmed what common sense would tell one: with less snow cover, there is significantly increased soil frost because of the lack of insulation from the snow.

Her team hypothesized that the increased frost would kill some roots of trees, which could cause decreased nitrogen uptake by the trees and, therefore, the increase in nitrogen movement into nearby waterways. The scientists discovered that there was a 37% increase in damage to the roots in the trees in the cleared plots. As a result, the amount of nitrogen taken up by the roots was reduced significantly.

The scientists determined the amount of nitrogen uptake by putting live, still-attached, shallow roots into tubes of nitrogen for 90 minutes and then by measuring how much nitrogen had been sucked up by the trees. They found that the ability of the roots to remove nitrogen from the soil was decreased by 36%.

This significant decrease in nitrogen uptake, however, was present only at the beginning of the winter season. By the



Harvard Forest

end of the season, the trees seemed to have recovered their ability to remove the nutrient from the soil. In spite of that resilience, the increase in nitrogen moving out of the soil into nearby waterways was much larger than their original hypothesis had predicted and could be explained by the reduced nitrogen uptake by trees.

Sugar maples have especially shallow roots, and, consequently, they suffered more damage than the more deeply rooted red oaks. This difference may have an impact on what species survive in our region and may lead to changes in forest composition.

The next step in examining the effects of the reduced snow cover was to determine whether the damage to the roots also caused decreased sap flow in trees, thus, compromising their ability to take up water from the soil and to remove carbon from the atmosphere during photosynthesis.

Dr. Templer's team measured uptake of water by the trees by inserting a probe into the cambium and leaving it there for the growing season. The uptake of water was used as a proxy for the uptake of carbon, given that both water uptake and carbon uptake are regulated by the opening of stomata in the leaves. Once again, the red oaks fared better than the sugar maples. In the shoveled plots (in which the amount of nitrogen in run-off rose), there was no difference in the amount of water that was taken in for red oaks, but the poor sugar maples had a reduction of 23%.

At that same time, Dr. Templer had an undergraduate student, Andrew Schiller, who was interested in measuring whether the arthropods also suffered from the effects of a decreased snowpack and increased soil frost. Dr. Templer was unsure whether to mentor a student for a project focused on insects because she is a biogeochemist; nonetheless, Mr. Schiller was determined, and with the co-mentorship of

Dr. Tom Kunz, he sampled the leaf litter on all of the plots and then pulled out all of the insects. The reference plots had a greater number and diversity of all species, but the treatment plots were especially deficient in spiders, pseudoscorpions, and ants. They did not discover whether the missing critters in the treatment plots died or whether they migrated into better territory.

Dr. Templer and her students started this process in the winter of 2008-2009. In the following years, the scientists noted that the fifty-year trend continued, with increasingly less snow cover (although there were some years with more snow).

In 2013, for the first time, there was so little snow that even the control, or reference, plots froze. They also determined that lack of snow cover is particularly significant early in the season and that even if there is plentiful snow later in the season because once frozen, the ground stays frozen.

Dr. Templer recently received a CAREER grant from the National Science Foundation for a 5-year study with which she is investigating how winter and summer climate change interact. For example, it is possible that the warming air temperatures and lack of snow damage tree roots and cause



Woodland Forest

increased nitrogen movement out of forest soils during the winter but that the longer growing season caused by the warmer temperatures may offset any damage. She seemed doubtful about that but indicated that we will have to wait for their results to be certain.

In conclusion, Professor Templer said that the trees in our forests currently are net carbon sinks: they take in more carbon than they give back into the atmosphere. There is concern, however, that if the changes observed by her team continue, that positive situation may no longer be true. Dr. Templer said that people always talk about what will be the effects of climate change in the future. With the new observations of her team, she said "The future is here." ■

✍️ *Beth Wilkinson*

∞ In Memoriam ∞

"Bud" Elliot

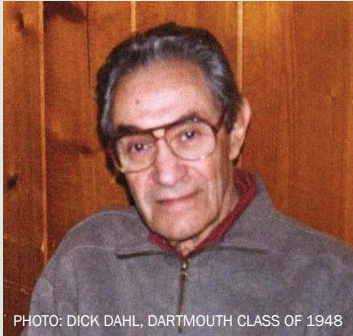


PHOTO: DICK DAHL, DARTMOUTH CLASS OF 1948

Former Newton Conservators president Burton "Bud" Elliot was a life-long learner. It was particularly fitting, then, that just weeks before Bud passed away on December 12, 2013, at the age of 87, the *Bolli Banner*, the newsletter of the Osher Lifelong

Learning Institute at Brandeis, published an article detailing how Bud had transformed one of the Institute's drab barren classrooms into a "visually delightful" small gallery with a display of his photography. As a photographer, Bud documented process (he chronicled the building of the Newton Free Library), repurposing (when the Weston Library moved to a new location, he recorded the disassembly of a tile floor and its installation on a wall in the new facility) and encouraged viewers to become involved and to see new possibilities (under Bud's guidance, landscape images were transformed into finely detailed textured patterns). And that's pretty much the way Bud approached his work as president of the Conservators from 1996-97.

Bud is probably best remembered by Conservators for organizing a landmark Open Space Symposium in the fall of 1996. As Bud envisioned it, the forum would have four objectives: to provide a public understanding of the decision making process, to give a chance to raise questions and an opportunity to raise and to hear issues, and to create an on-going dialogue to help resolve issues. Bud recruited co-sponsors the League of Women Voters, the Green Decade Coalition and the Newton Neighborhoods Network, and on Thursday, November 14, 1996, a standing-room only crowd packed Newton Free Library's Druker Auditorium to begin a dialogue with six representatives from City government, City commissions and the MDC. For two hours Bud presided over a wide-ranging discussion that included the need for a City forestry department, the extension of the Newton section of the Charles River walkway, the capping of the Rumford Avenue Dump, the deterioration of the City's historic cemeteries, the use of pesticides on public lands, the wish of some citizens for skateboard parks, and the significant reduction in City-owned public open spaces. Bud would continue his vision into the next decade, "ably representing," as Conservator's president Doug Dickson noted in 2000, the Conservators on the Mayor's Framework Planning Committee leading to a new Comprehensive Master

Plan for Newton. Dickson recognized Bud and fellow Conservator Norm Richardson for "representing the Conservators in this process and prevailing in the end over a roomful of development interests."

"Those of us who served with Bud will remember him not only for his devotion to open space but for his warm smile and quiet ways," remembered current Board member Margaret Albright. "He enthusiastically supported our grants program and always spent a great deal of time at our annual meetings discussing projects with the students and teachers there." Under Bud's leadership, the Conservators made supporting educational programs a priority, providing funds to the High School Environmental Program for scholarships, to Day Middle School for student canoe trips testing water quality on the Charles River from Cheesecake Brook to Boston Harbor, to Underwood School in support of its ongoing garden education project, to the Environmental Camp Program and to the Library for the purchase of more environmental books and periodicals.

As part of his report at the Conservators' annual dinner and meeting in May 1997, Bud presented a half-tongue-in-cheek review of the Conservators' original 1961 mission statement. "Article II of the original by-laws is entitled 'purpose'," Bud told those assembled. "It reads: 'The purpose of the Corporation shall be to foster for the public interest in the City of Newton the protection, preservation and conservation of natural objects and areas.' It later mentions fostering acquisition of land, dissemination of information, and incidentally, not to participate or intervene on behalf of any political candidate, to promote good citizenship, and even to combat juvenile delinquency! I cannot imagine what was going on then for that to be included!"

Bud then turned to his audience and asked, "except possibly in regard to that last item, is the Newton Conservators of today living up to the original purpose.... Is Newton a better place because the Newton Conservators exists?" And then answering his own questions, Bud continued, "I certainly believe so. And nothing we do could be done without the support of all of our members. Thank you."

Bud is survived by his life partner, Michele Waldman of Newton; children Richard, John and Lisa; two step-children Mara Van Vorst and Andrew Waldman; five step-grand children, and his many thankful Conservator friends. ■

✿ Margaret Doris

FIDDLEHEADS



PHOTO: DON LUBIN

Cinnamon Fiddleheads

ferns emerge in that pattern, though some other plants have tendrils that uncoil.

The term “fiddlehead” has a very specific meaning in the grocery trade. It refers to the emerging shoots of Ostrich fern (*Matteuccia struthiopteris*), the only fern species deemed safe to eat in North America. At least some other ferns have too many chemical defenses. But in discussing ferns in general, “fiddlehead” is just the stage of growth as the stalk is still uncoiling.

The shape is actually a logarithmic spiral, and the relative dimensions stay the same as it grows larger. The shape is defensive, to protect against insects eating the tender growth tip at the center. Ferns don’t have a mechanism for secondary growth, like a tomato with new growth sprouting from the “shoulders,” where the branches come off the main stem. Part of what makes ferns pretty is that they retain the symmetry of their design. If they do lose their growth tip, they have to just grow another frond instead.

Besides hiding the growth tip at the center of the spiral, ferns often protect the outer tissue with armor of hairs or scales. These often persist through the growing season and are a clue to help identify the species, if you look at the lower part of the stem.

Most fiddleheads are green, but Royal ferns are purple, and Cinnamon ferns can be blue or even reddish. In evergreen ferns like Christmas or Polypody or Marginal Wood ferns, they will emerge from a bed of last year’s fronds. Look for them protruding, clad in white hairs, from the supine dark green fronds of a Christmas fern. Sensitive or Ostrich or Netted Chain fiddleheads will emerge among the standing fertile fronds from last year.

Ferns are perennial (a useful trait in the garden), and most emerge quickly in early spring. Some have an indefinite lifetime: individual plants can be more than 100 years old. They don’t have bulbs but store energy in their rhizome, the



PHOTO: DON LUBIN

Marginal Fiddleheads

underground portion of the plant. In my yard, most species emerge in April, and it is a joy to walk around the house to see what else has appeared overnight. Since I mark their locations, I can find them as soon as they emerge. In the woods I might miss

the smallest new shoots, but by late April there should be enough larger plants to reward a fiddlehead hunt. Don’t eat them though: Ostrich ferns are rather uncommon around here. ■

— Don Lubin

Don’t miss the Annual Meeting on Wednesday, May 7 Seeds: Up Close and Amazing



Our guest speaker this year will be Julie McIntosh Shapiro, who will give us a fascinating glimpse of the very beginning of plants’ lives—their seeds. Ms. McIntosh Shapiro lists her job title as “Digital Carpologist – Photographer,” and her presentation will include some of her photographs of the seeds she studies.

Since 2009, Julie has been a Group Leader in the Global Plants Initiative of the Harvard University Herbaria, where the seeds and fruit of plants are digitally imaged and then put into databases that are available to members of the worldwide scientific community for their research.



The annual meeting and dinner will be held on May 7 at the American Legion Post 440 at 295 California Street in Nonantum. A social hour will begin at 6:00 pm; dinner will begin at 7:00, to be followed by a brief annual meeting, an awards ceremony and then Ms. McIntosh Shapiro’s presentation titled “Seeds: Up Close and Amazing.”

You can register for the meeting using the form in this issue online at www.newtonconservators.org.

Watch for Spring Blooms

Here comes another spring. We've had enough snow and ice. As spring approaches, we have a special reason to go out for hikes outdoors. It's time to explore with our children, spouses, friends and canine companions. Here is a list of blooming plants you can find in Newton's parks and conservation areas. All but two are native to Middlesex County. See how many you can find this spring, and note when you saw them blooming. Mother Nature plays tricks on us with blooming times. Will plants bloom early or late this year after their deep blanket of snow?



Pussy Willow, *Salix discolors*

March 4 – April 28: (potential bloom dates) The fuzzy catkin buds of **Pussy willow**, *Salix discolors*, will be found along Bullough's Pond and in Nahanton Park. I'm surprised pussy willow is so uncommon here. Perhaps you will find more examples. Each catkin contains hundreds of tiny yellow flowers. Pussy willows provide one of the first sites for bees looking for nectar and pollen.

April 8 – May 5: The green shoots of **skunk cabbage**, *Symplocarpus foetidus*, emerge from swampy low-lying areas. It looks wonderfully green like a giant head of lettuce. It attracts flies, gnats and bees. We can see skunk cabbage in Baldpate Meadow Conservation Park, Cold Spring Park, Edmands Park, Goddard Christina Conservation Area (CA), Kennard Park, Kessler Woods, Staniford Flowed Meadow CA and Saw Mill Brook CA.

April 8 – May 19: Shadbush, *Amelanchier Canadensis*, blooms along the Charles River Path near California Street and in Cold Spring Park, Dolan Pond and Webster CA. Shadbush's white flowers provide nectar for butterflies. Our earliest spring butterfly is the mourning cloak butterfly. This butterfly is found in wooded areas and near the banks of rivers and streams. I wonder if it visits the shadbush.

April 15 – May 12: Spicebush, *Lindera benzoin*, can be found in many damp, swampy spots including Cold Spring Park, Goddard Cristina CA, Kennard Park CA, Kessler Woods, Saw Mill Brook CA and Webster CA. In the past, I've noticed an especially nice patch of spicebush in Webster CA. Spicebush creates a cloud of soft yellow flowers.

April 15 – May 12: Bloodroot, *Sanguinaria Canadensis*, blooms in Cold Spring Park and Nahanton Park. It's called bloodroot because of its bright orange sap. The flower petals stay on for only a few days, so you need to be quick to get a peek or a picture of bloodroot blooming.

April 29– May 26: Marsh Marigold, *Caltha palustris*, blooms in Webster CA. As you can see in the photograph, you will find marsh marigold in wet areas. The bright color and flower nectar attract bees and flies.

April 15 – May 26: Carolina silverbell, *Halesia Carolina*, will be found blooming in Newton Cemetery and in Oakdale Woods CA. Oakdale Woods is an interesting smaller conservation area to check out in Newton. Carolina silverbells are native to the Eastern United States. They are also a wonderfully decorative understory tree for home gardens.

April 15 – June 2: Flowering dogwood, *Cornus florida*, blooms in Avery Woods, along Crystal Lake, and in Edmands Park, Kennard Park, Kessler Woods, Nurumbega Park, Varick Hill CA and Webster CA. Did you know their distinctive large white blooms are actually bracts? The true flowers are the tiny yellow flowers in the center of each bloom.

April 22 – May 12: Yellow Trout Lily, *Erythronium americanum*, can be found Cold Spring Park, Edmands Park and Kennard Park CA. Trout lilies grow into large colonies. I once found a huge patch of trout lilies in a friend's backyard. Up until that point, no one had noticed they were there.

April 22 – May 26: Redbud tree, *Cercis Canadensis*, can be seen along the Charles River Path near California Street. Redbud is native in the southeastern United States and was introduced to Middlesex County. The blooming pattern is very unusual because the flowers pop out in clusters along the bare stems, creating a cloud of magenta pink.



Bloodroot, *Sanguinaria Canadensis*



Flowering Dogwood, *Cornus florida*

April 22 – May 26: Wild Oats, *Uvularia sessilifolia*, can be found along the Charles River Path near Quinobequin Road and in Cold Spring Park, East Parish Burying Ground, Edmands Park, Hahn Brook CA, Kennard Park CA, Ordway Park, Staniford Flowed Meadow CA and Webster CA. Wild oats spread into colonies.

April 22 – June 16: Canada Mayflower, *Maianthemum canadense*, is found in too many locations to list, including my front yard. This is a delightful miniature flowering plant. Canada Mayflower is sometimes called false lily-of-the-valley, but Canada mayflower is much smaller and doesn't have lily-of-the-valley's invasive habit. I don't know if you can buy Canada mayflower in nurseries. I've tried transplanting it to other parts of my property, and it caught on nicely.

April 22 – June 16: Hairy Solomon's seal, *Polygonatum pubescens*, is another common plant found in fourteen of our conservation areas and parks. Hairy Solomon's seal got its name because of its leaves' fuzzy underside. One to three pale greenish-yellow flowers hang daintily in a row under each leaf.

April 29 – May 19: Common Elderberry, *Sambucus racemosa*, is common in Newton and found in Baldpate Meadow CA, Dolan Pond, Kennard Park CA, Nahanton Park, Newton Cemetery, Staniford Flowed Meadow CA and Webster CA. Common elderberry blooms emerge as a large flat cluster of creamy white flowers.

April 29 – June 2: Lowbush Blueberry, *Vaccinium angustifolium*, is found in seventeen parks and conservation areas. Lowbush blueberry's small, pink, bell-shaped flowers are visited by many varieties of native bees including bumble bees and digger bees. Did you know there are more than 900 species of digger bees in the United States and Canada? They are called digger bees because they nest in the ground. You can see them at work in YouTube videos.

April 29 – June 16: Wild columbine, *Aquilegia canadensis*, has only been found in Ordway Park. If you find wild columbine, be sure not to disturb it. Hopefully, it will continue to reseed and spread. Ruby-throated hummingbirds are attracted to columbine's bright red flowers.

May 6 – June 9: Jack-in-the-pulpit, *Arisaema triphyllum*, is very common in Newton's open spaces. You can find Jack-in-the-pulpit in fifteen different parks and conservation areas in Newton. There are an impressive number of Jack-in-the-pulpits in Goddard Christina CA. Jack-in-the-pulpit flowers are topped by pretty green and purple striped hoods, called spathes.

May 13 – June 16: Find Pagoda Dogwood, *Cornus alternifolia*, in Cold Spring Park and Wilson CA. The pagoda dogwood in Wilson CA may have been planted by homeowners in the past. Pagoda dogwood should be growing wild in our conservation areas, but I haven't found many there. Let me know if you see one. Their leaves alternate on their stems, unlike other dogwoods.



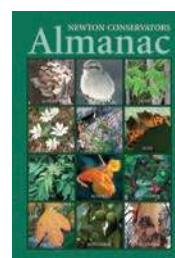
Yellow Trout Lily, *Erythronium americanum*

You can see more illustrations and descriptions of these plants and others in our Newton Conservators Almanac. A master list of species found in Newton's parks and conservation areas can be found on www.newtonconservators.org. If you find these native plants blooming in other locations, be sure to let us know. ■

✍️ Beth Schroeder

Prepare for spring...

Shop online at www.newtonconservators.org/books.htm to purchase Newton Conservators publications. Discounts for members: Almanac is \$15.95 + shipping, and the Trail Guide is \$6.95 + shipping. Buy today!



Invasion of Predators from the Tundra

During the fall and winter of 2013, there has been an invasion of large, white owls into New England. These are the Snowy Owls that have received a lot of press across the whole country. A local artist who began painting large canvases depicting these beautiful creatures has had demand for her paintings from even as far as Los Angeles!

These owls breed in the far northern tundra regions of the Arctic and are the largest owls that breed in North America. Last year seems to have been a banner year for rodents in the Arctic, and as a result the young Snowy Owls survived in their harsh environment in greater numbers than is usual. As winter sets in, the larger females take over the available turf, and the smaller, or less experienced owls, must move south. Many of the Snowy Owls seen in New England's marshes and along our shores have some dark flecks in the plumage on the tops of their heads and on their backs and wings, marks that reveal that they are first year birds, the youngsters who belong to this year's population surge.

When you see them fly, the experience of a huge, white moth is dazzling. The above photo is of such a bird, on a Massachusetts beach in January. The landscape on our beaches resembles that of the treeless, flat tundra, with similar rodent inhabitants.

Logan Airport also is a tundra-like setting. Large owls, however, do not mix well with jet aircraft. Luckily, the director of the Trillick Museum in the Blue Hills, Norman Smith, has agreed to trap and relocate large raptors from Logan Airport. In the early winter when the owls are migrating southwards, he takes Snowy Owls south to Duxbury Beach. He relocates them to Plum Island in the Spring, when the owls are migrating back to the tundra. He has relocated more owls this year than in any previous year.

When the huge irruption began last fall and Snowy Owls were turning up at JFK Airport in New York City, the authorities there began shooting them. Birders of all stripes



Snowy Owl

signed petitions by the thousands and pleaded with the authorities to take a page from Boston's playbook and relocate the owls. The authorities listened and learned.

You can follow the migration of a Snowy Owl (Owl #99906) for a year of its life at the following address: <http://greatblue.com/blog/201312/20131227a.php>. This site follows an owl with an electronic tracking device until its return to Logan Airport the next fall.

Another, more recent tagged owl can be followed at www.projectsnowstorm.org/maps/duxbury. This site only tracks the owl around Duxbury Beach for a few days, but you can see it flying out over the ocean, presumably to catch a duck.

Finally, a web site with a short video of a Snowy Owl eating a mouse is Phil Brown's website at www.flickr.com/photos/nebirdsplus/.

Snowy Owls are beautiful predators that can cause a lot of harm to other birds. A pair of Barn Owls were at Sachuest Point in Rhode Island this winter. Observers watched two Snowy Owls knock one of the Barn Owls to the ground, kill and eat it. Several friends were there later on February 7, and the second Barn Owl had been knocked down by a Snowy Owl that morning but had managed to escape. We saw that owl during the afternoon of the 7th.

An owl-loving birder has asked for reports of Snowy Owl prey this winter. Among the reports he's received are Herring and Great Black-backed Gulls, a Norway Rat, an American Black Duck, a Common Eider, a Horned Grebe and Meadow Voles. The Barn Owl attacks are probably to eliminate competition for food. In the arctic, Snowy Owls have been known to keep an eye on hunters and to swoop in when a ptarmigan has been shot and steal it away before the hunters can get to it. They have also preyed upon snowshoe hares and arctic foxes caught in hunters' snares. Their powerful talons eventually get to the mammal's brain, after repeated attacks on the animal caught in the trap.



Eurasian Teal

Bird Count in the small brook behind the marsh by the Beacon Street parking lot in Cold Spring Park. There was a female Green-winged Teal with him as well as an ordinary American Green-winged Teal. The latter bird is also a male, but it has not yet completed its molt, so it has less white on its shoulder than usual and has mottled brown feathers on its back and under its wing. These remain from the bird's non-breeding plumage, which is more drab and brown than the very colorful breeding feathering. This threesome has been in Cold Spring Creek between the marsh and the spot behind the Zervas School where the creek goes underground through a grate.



American Green-winged Teal

A nice spot to look for waterfowl in the Charles River is along the Blue Heron Footpath, which goes from Watertown Square on the Newton side of the river to Auburndale. One area that often has ducks is behind the McKenna Playground located behind the Embassy Theater

on Pine Street in Waltham. The parking for the McKenna Playground is on Whitcomb Street. This winter there have been nice Common Mergansers there. The accompanying photos show the green-headed male and his red-headed mate. These are fresh water ducks that nest in trees or in



Common Merganser Male

holes under banks of waterways. They eat fish and are not dabbling ducks, which eat vegetation. "Merganser" means "Goose (ganser) of the sea (mer)." The male in the photo is a little nervous, as his shaggy crest is flattened down. You can see the crest better on his mate, who was cooler with my presence.

All of these birds are still with us through the month of March, perhaps longer depending on the weather. In addition, the influx of spring migrants will soon be upon us with the first arrivals usually starting in April. Brilliant orange orioles, vivid Scarlet Tanagers, varicolored wood warblers and passing sandpipers will all be in our open spaces soon.



Common Merganser Female

Create time for your soul. Walk in Newton's open spaces this spring: www.newtonconservators.org/conservation_areas.htm. ■

✿ Pete Gilmore

MISSION Newton Conservators, Inc.

The Newton Conservators promotes the protection and preservation of natural areas, including parks, playgrounds, forests and streams, which are open or may be converted to open space for the enjoyment and benefit of the people of Newton. It further aims to disseminate information about these and other environmental matters.

A primary goal is to foster the acquisition of land, buildings and other facilities to be used for the encouragement of scientific, educational, recreational, literary and other public pursuits that will promote good citizenship and the general welfare of the people of our community.

The Newton Conservators was formed as a not-for-profit organization 53 years ago in June 1961.

The Newton Conservators Newsletter® is published four times each year by the Newton Conservators, Inc., in June, September, December, and March. Deadlines for these issues are the first Friday of each month in which an issue is scheduled to be published.

We welcome material related to our mission from any source. Send proposed articles or letters by email in MS Word or rich text format to bethwilkinson@mac.com. Digitized photographs, maps and diagrams are also welcome.

Editor:	Beth Wilkinson	617-969-4443
Design/Layout:	Suzette Barbier	617-244-0266
Production:	Bonnie Carter	617-969-0686

Thanks to the following contributors to this edition of the Newsletter: Kevin Dutt, Pete Gilmore, Katherine Howard, Beth Schroeder, and Beth Wilkinson. As always, thanks to Doug Leith for his excellent proofreading.

WALKS SCHEDULE



Rescheduled to April 6

Sunday, March 30, 1:00 pm – 3:00 pm

THE HIDDEN LIFE OF VERNAL POOLS; FOREST AND VERNAL POOL EXPLORATION AT WEBSTER WOODS.

Join us in Webster Woods, Newton's largest conservation area, as we walk the woods and explore the large vernal pool found there. Vernal pools, because of periods of drying, do not support breeding populations of fish. Many organisms have evolved to use a temporary wetland, which will dry, but where they are not eaten by fish. These organisms are the "obligate" vernal pool species, so called because they must use a vernal pool for various parts of their life cycle. Join us as we investigate the obligate vernal pool species, including fairy shrimp, mole salamanders and the wood frog. Herps are the stars of the show, but we will also botanize. Sampling equipment will be provided; bring hand lenses if you have them. We will walk even in the rain; dress accordingly. Meet at the end of Warren Street on the western edge of Webster Conservation Area, or (for those not up to a 1 mile hike round-trip) meet up with the group at 2 pm in the back parking lot (far back) of Congregation Mishkan Tefila; the vernal pool is right there.

Trip leader is Eric Olson; cell phone on day of outing is 617-872-9928.

Sunday, April 6, 2:00 pm

NAHANTON PARK: WHAT WAS HERE BEFORE?

We will explore evidence of several unique facilities that were located in Nahanton Park. We'll find the foundation of the city poor farm and look at photos and maps, then consider the history of the adjacent parcel of the Charles River Country Club. Next, we'll walk through the Hemlock Grove (conservation restriction land) over to the working boy's home (now the JCC), where we'll read an account by a boy who grew up there in the 1940s. Next, we'll find the site of a 1950s antiaircraft artillery gun site and find out about its cold war function. Meet at the paved circle just off Winchester Street. Rain or shine.

Trip leader is Lucy Caldwell-Stair, 617-928-3375.

Sunday, May 11, 8:00 am

MOTHERS DAY BIRD WALK

Nahanton Park offers a mix of woodlands, wetlands, edge habitat and meadows along the Charles River, making it one of the best birding spots in Newton for both migratory and resident songbirds. Likely finds include brightly colored warblers, vireos, and orioles with bluebirds, scarlet tanagers, and swallows also expected. Enter the park at the Nahanton Street entrance next to the river. Parking is available inside the park. Bring binoculars if you have them. Beginners as well as experienced birders are welcome. Boots are recommended. Walk will be cancelled in steady rain. Co-sponsored with Friends of Nahanton Park.

Trip leaders are Alison Leary, 617-821-5619 and Haynes Miller.

Sunday, May 11, 2:00 pm

TAKE A REAL HIKE IN NEWTON: DISCOVER THE NEWTON AQUEDUCTS

We will start from the Newton Centre Playground at the intersection of Centre Street and Tyler Terrace.

This popular 5.7 mile hike follows Newton sections of the Cochituate and Sudbury aqueducts. It is a mostly flat route on trails through woods and parks with about 1 mile of connecting roads. It passes through Waban at about 2.4 miles and through Eliot MBTA at 3.9 miles for those who want to shorten the route with a streetcar ride back to Newton Centre. This is a steady but not fast hike.

Participants should be in sufficiently good shape to keep up with the group. Rain does not cancel; lightning does cancel.

Trip leader is Henry Finch, 617-964-4488.

SPRING 2014



Saturday, May 17, 8:00 am.
Rain date: Sunday, May 18.

COLD SPRING BIRD WALK

This 67 acre parcel has ample wooded areas, open fields, a brook and wetlands. It is one of the places in Newton where you may hear the call of the great horned owl and observe spectacular songbirds like the rose-breasted grosbeak and the indigo bunting. Also frequently found at the park are many favorite migrants like the red eyed vireo, the wood thrush, and a variety of wood warblers. Bring binoculars if you have them. Beginners as well as experienced birders are welcome. Enter the park at the Beacon Street entrance. Turn left, and go to the far end of the parking lot to meet group.

Trip leader is Pete Gilmore, 617-969-1513.

Saturday, May 24, 10:00 am

UPPER FALLS GREENWAY: TOUR NEWTON'S NEWEST PARK LAND, THE UPPER FALLS GREENWAY.

The 3-mile walk will include the Greenway trail itself, as well as some possible future extensions and connections to existing parklands, including the spur line to Christina Street and the Charles River Pathway. More info at: www.UpperFallsGreenway.org.

Trip leader is Jerry Reilly, 617-999-5300

Sunday, May 25, 1:00 pm

RIVERSIDE PATHWAY TOUR

Tour this proposed walking trail that could link Lower Falls to the Lasell Boat House in Auburndale. This mile and a half walk is mostly along the banks of the Charles River and will include crossing an unused railroad bridge that spans Rt. 128 into Lower Falls. The existing trail is a bit rough in places so wear suitable footwear. More info at www.village14.com/newton-ma/2014/01/riverside-path-open-up-34-mile-of-newton-waterfront

Trip leader is Jerry Reilly, 617-999-5300.

Saturday, June 7, 12:00 pm – 2 pm. Rain date: Sunday, June 8.

FERN WALK AT COLD SPRING PARK

This large green space south of Beacon St. is a good compromise between an accessible park with developed trails and a wild conservation area with interesting native plants. We will see nearly a dozen different ferns and one horsetail and discuss how to identify each one. Wear long pants, and bring a hand lens if you have one. And bring a frond of any fern you would like to have identified. The walk will be led by Don Lubin, who leads field trips for the New England Wild Flower Society. Visit his website at: www.nefern.info. Meet at Plymouth Rd. near the aqueduct, between Kingston Rd. and Endicott St., at the south end of the park.

Trip leader is Don Lubin, 617-254-8464.

PHOTOS FROM LEFT TO RIGHT: DAN BRODY (1, 2, 4, 7), SUZETTE BARBIER (3, 6), PETE GILMORE (5), DON LUBIN (8)

2014 MEMBERSHIP RENEWAL

If you haven't renewed your membership already, now is the time. And consider a gift for a conservation-minded friend.

Visit our website at www.newtonconservators.org if you wish to renew your membership online.



PHOTOS, LEFT TO RIGHT: PETE GILMORE, SUZETTE BARBIER

Newton Conservators Invasive-Plant Pulls Spring 2014

Newton Conservators, Newton's land trust and open space organization, fights invasive plant species to preserve and to improve the native habitat at our parks and conservation areas. Sessions may be weather dependent: call the leader if in doubt. Check our website (newtonconservators.org) for updates to this schedule.

About the Plant Invaders

Garlic Mustard, native to Europe, was brought here in the 1800s as a medicinal and garden herb and is now an invader of our backyards, parks, forests, and conservation areas. It quickly covers vast areas, including low light forested areas, shades out other plants, chemically alters the soil to inhibit germination of competitor seeds, and alters habitat for native insects such as butterflies. In areas where it is just starting, it takes only a small effort to eliminate: it is a biennial easily identified and pulled when the second year plants are flowering in April/May. If not, each plant will scatter hundreds to thousands of seeds that will become first year plants the next year or will remain as viable seeds for several more years. Because the seeds stay so viable, the plants must be disposed of as trash, not as yard waste. Our efforts are effective: Garlic Mustard can be controlled with easy hand pulling, vigilance, and determination. The areas worked are much improved and require only periodic visits to catch stragglers to avoid re-infestation. The areas NOT worked are worse. **We need more help to get them under control.**

Japanese Knotweed is a bamboo-like invader from Asia that can create dense 8' tall single-species stands. It is a tough adversary, not because it's spiny or strong or even particularly hard to pull, but because any small root fragments left behind spring back to life the following year. Scientists seek biological control agents, but until then we must control by hand. Persistence pays with this species, and eradication is possible, but it takes several years to truly finish the job.

Our sessions also tackle black swallowwort, multi-flora rose, tree of heaven, and black locust.

Saturday, April 19, 8:00 am – 12:00 pm Nahanton Park Invasives Pull

Near 507 Winchester Street, Newton, MA 02461
www.newtonconservators.org/30nahanton.htm



Many native habitats, including grassland and open woodland habitats, are threatened by invasive plants. They out-compete native plants, reduce biodiversity and negatively impact birdlife. Nahanton Park is one of our open spaces suffering from infestations of invasive plant species, including Black Swallowwort, Multi-flora Rose, Tree of Heaven, Garlic

Mustard, and Black Locust. Join us to improve the beauty and diversity of this special park by spending a few hours cutting back/removing these invasive species. Sturdy shoes, long pants, long sleeves and work gloves are recommended. Meet in the large parking lot off Winchester Street. **Leaders are Jackie Daoust and Duane Hillis.**

Sunday, Apr 27, 9:00 am – 12:00 pm Cold Spring Park Garlic Mustard Pull (NewtonSERVES Project). 1200 Beacon Street Newton, MA 02461 www.newtonconservators.org/14coldspring.htm

Cold Spring Park is being invaded by garlic mustard (see notes below). We will spend a few hours checking the Cochituate Aqueduct walk, to keep it under control after previous years' pulls, and work on the meadow and parking lot areas. In case of poison ivy, wear long pants and garden gloves. Trash bags will be provided; the plants must be disposed of as trash, not as yard waste. Enter the park at the Beacon Street entrance. Turn left and go to the far end of the parking lot (circle) to meet group. **Leader is Katherine Howard, 617-527-1796 (home) or 617-721-2571 (cell).**

Sunday, April 27, 9:00 am – 12:00 pm Garlic Mustard Pull at Dolan Pond (NewtonSERVES Project). 76 Webster Park Newton, MA 02465 www.newtonconservators.org/5dolan.htm

Meet at the Webster Park (a street off Webster Street) entrance of the Dolan Pond Conservation Area in West Newton. (Street parking is available there and at the other entrances at Stratford Road and Cumberland Road.) We will tackle Garlic Mustard stands in off-trail corners of the property and a few patches of rosettes in previously worked areas. Come help us eradicate this soil-damaging invasive from this gem of a pocket park. Crews also removed nearly every Knotweed stem from one area, but Knotweed removal takes years to complete, and each time it gets easier. We will mix in some general nature study, so bring binoculars for observing birds and other creatures that make this vernal pool area home. In case of poison ivy, wear long pants and garden gloves. **Leader is Ted Kuklinski, 617-332-7753.**

Sunday, April 27, 9:00 am – 12:00 pm Garlic Mustard Pull at Blue Heron Bridge (NewtonSERVES Project). Near Super Stop & Shop, 700 Pleasant St, Watertown, MA 02472 www.newtonconservators.org/4charlesmoody.htm



We continue to work along the Charles River Greenway at this bridge site, helping the Trustees of the Reservations with their stewardship of the floodplain forest, mixing in nature study, so bring binoculars and an insect net and hand lens if you have them. Park at the Watertown Super Stop & Shop (700 Pleasant St) at the corner furthest from the store. There is a path entrance: turn left, and follow path to the Blue Heron Bridge. Or park at Albemarle Rd or Nevada St, a block away from the river. **Trip leader is Eric Olson, 617-872-9928.**

Sunday, May 4, 8:00 am – 12:00 pm

Nahanton Park Invasives Pull #2 (repeat visit)

Near 507 Winchester Street, Newton, MA 02461

www.newtonconservators.org/30nahanton.htm



Many native habitats, including grassland and open woodland habitats, are threatened by invasive plants. They out-compete native plants, reduce biodiversity and negatively impact birdlife. Nahanton Park

is one of our open spaces suffering from infestations of invasive plant species, including Black Swallowwort, Multi-flora Rose, Tree of Heaven, Garlic Mustard, and Black Locust seedlings. Join us to preserve the beauty and diversity of this special park by spending a few hours cutting back/removing these invasive species. Sturdy shoes, long pants, long sleeves and work gloves are recommended. Meet in the large parking lot off Winchester Street. **Leaders are Jackie Daoust and Duane Hillis.**

Sunday, May 4, 2:00 pm – 5:00 pm

Garlic Mustard Pull at Sawmill Brook Park

Opposite 120 Vine Street, Newton, MA 02467

www.newtonconservators.org/26sawmill.htm

Sawmill Brook Park is a lovely long natural trail that connects Newton to West Roxbury. It is starting to have garlic mustard infestations at its entrances and along Lagrange St and Wayne Road borders. We will spend a few hours pulling at each entrance and along Lagrange and Wayne, and patrolling previously worked areas. In case of poison ivy, wear long pants and garden gloves. Trash bags will be provided; the plants must be disposed of as trash, not as yard waste. Meet at the Vine Street entrance.

Leaders are Katherine Howard, 617-527-1796 (home) or 617-721-2571 (cell), and Eric Olson, 617-872-9928.

Sunday, May 11, 9:00 am – 12:00 pm

Cold Spring Park Invasives Pull #2 (repeat visit)

1200 Beacon Street, Newton, MA 02461

www.newtonconservators.org/14coldspring.htm



Cold Spring Park is being invaded by Garlic Mustard. We will spend a few hours checking the Cochituate Aqueduct walk to keep it under control after previous years' pulls and working on the meadow and parking lot areas. In case of

poison ivy, wear long pants and garden gloves. Trash bags will be provided; the plants must be disposed of as trash, not as yard waste. Enter the park at the Beacon Street entrance. Turn left, and go to the far end of the parking lot (circle) to meet group. **Leader is Katherine Howard, 617-527-1796 (home) or 617-721-2571 (cell).**

Sunday, May 18, 9:00 am – 12:00 pm

Houghton Garden/Webster Garlic Mustard Pull

Opposite 210 Suffolk Rd, Newton, MA 02467

www.newtonconservators.org/19houghton.htm

Last year, we began to tackle a new infestation near the entrance of Houghton Garden where it borders the T Track crossing to Webster Woods and near the deer park. Help us keep garlic mustard out of Houghton Garden! In case of poison ivy, wear long pants and garden gloves. Trash bags will be provided; the

plants must be disposed of as trash, not as yard waste. Meet opposite 162-210 Suffolk Rd (off of Hammond Street) at the entrance to Houghton Garden. **Leader is Katherine Howard, 617-527-1796 (home) or 617-721-2571 (cell).**

Saturday, June 7, 9:00 am – 12:00 pm

Japanese Knotweed Pull at Hammond Pond

Near 309 Hammond Pond Parkway, Newton, MA 02467

www.newtonconservators.org/18webster.htm



Japanese Knotweed is a bamboo-like invader from Asia that can create dense 8' tall single-species stands. It is a tough adversary, not because it's spiny or strong or even particularly hard to pull, but any small root fragments left behind spring back to life the following year.

Scientists seek biological control agents, but until they find some, we are stuck controlling the plant by hand. Persistence pays with this species, and eradication is possible, but it takes several years to truly finish the job. Bring pitchforks, garden spades, and hand pruners if you have them. Meet at small parking lot off Hammond Pond Parkway at Route 9 adjacent to pond at "the Street" mall. **Leader is Eric Olson, 617-872-9928.**

Sunday, June 8, 9:00 am – 12:00 pm

Cold Spring Park Invasives Pull #3 (repeat visit)

1200 Beacon Street, Newton, MA 02461

www.newtonconservators.org/14coldspring.htm



Cold Spring Park is being invaded by Garlic Mustard (see notes above). We will spend a few hours checking the Cochituate Aqueduct walk to keep it under control after previous years' pulls and working on the meadow and parking lot areas. In case of poison ivy, wear

long pants and garden gloves. Trash bags will be provided; the plants must be disposed of as trash, not as yard waste. Enter the park at the Beacon Street entrance. Turn left, and go to the far end of the parking lot (circle) to meet group. **Leader is Katherine Howard, 617-527-1796 (home) or 617-721-2571 (cell).**

Sunday, June 15, 9:00 am – 12:00

Charles River Quinobequin/Hemlock Gorge Garlic Mustard Pull

Near 2 Ellis Street, Newton, MA 02464

www.newtonconservators.org/21hemlock.htm

We have expanded our efforts to control beginnings of infestations inside beautiful Hemlock Gorge Park and also in the adjoining lovely walking trail along the Charles River at Quinobequin Rd. Help us keep the Garlic Mustard out of these beautiful parks! In case of poison ivy, wear long pants and garden gloves. Trash bags will be provided; the plants must be disposed of as trash, not as yard waste. Meet at the parking lot at corner of Quinobequin Rd and Ellis St at Rte 9 intersection.

Leaders are Jerry Reilly and Katherine Howard, 617-527-1796 (home) or 617-721-2571 (cell).

PHOTOS: GARLIC MUSTARD, JAPANESE KNOTWEED, TREE OF HEAVEN AND MULTI-FLORA ROSE: WIKIPEDIA.COM, NAHANTON PARK PULL: NEWTON CONSERVATORS WEBSITE



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Ready for spring!

Photo by Pete Gilmore

Go Green! ...and all the other colors of the rainbow. You can view this newsletter at www.newtonconservators.org/newsletter.htm. To elect not to receive a paper copy of the newsletter, update your membership profile at www.newtonconservators.org