



**NEWTON
CONSERVATORS**

SPRING ISSUE

NEWSLETTER

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

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How We Eat: Climate Change and Our Diet

Greg Maslowe, Newton Community Farm

When the Newton Conservators asked me to write an article on climate change and agriculture, I thought, “Sure, I can do that.” I’m a farmer; my academic training is in agricultural ethics; and I’m a father. All three lead to a vested interest in how changes to our environment effect food production. As I began formulating my thoughts, however, I realized just what a monumental task I’d signed myself up for. While you might not know it from a casual trip to the grocery store (or even to the farmers’ market), agriculture is facing staggering challenges across a number of fronts. To give you a sense of just how pressing the situation is, here’s a quick outline some of the challenges.

The world population now tops a whopping **7 billion** people and rising. And they all need to eat. Every day, hopefully. That’s a lot of mouths to feed. At the same time, the amount of arable land is shrinking worldwide due to desertification, salination, erosion, rising sea levels, and development. So, we’re faced with a situation in which we’re trying to feed more and more people on less and less land. Green Revolution technologies—chemical

fertilizers and high yielding hybrid plant varieties—were able to keep us ahead of the game for a while, but cracks are starting to appear. Production per acre has leveled off and even begun dropping in the major grain-growing regions of the world.¹

If this situation isn’t alarming enough, economic development tends to lead to a desire for more calories. Not only is the world population increasing, but the daily caloric intake that that population wants is increasing.

The need to grow more food on less land is complicated, at least in the United States, by an aging population of farmers (the average US farmer is now 55) and a drastic reduction in the number of farms.² You could mention, in passing, that this is true in NZ as well—did we see it in OZ as well?

Add to all of this the debates over genetic engineering, growing fuel versus food, outbreaks of food-borne illnesses, and increasing competition between farms and cities for water, and the picture grows increasingly bleak.

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And then there's climate change: warmer average global temperatures, rising sea levels, changes in precipitation patterns and amounts, more frequent and severe storms. I have to say, as an ethicist, I'm concerned; as a farmer, I'm worried; and as a father, I'm downright terrified.

So how does climate change affect agriculture specifically? I think the easiest place to start is with the warming part of global warming: the world is getting hotter. Whether you think this is a result of human activity or "just" natural fluctuation, the evidence is pretty compelling that the average temperature of our world is increasing. As my family and I drove across the Midwest last August, we saw first hand the results. The blistering heat wave of 2012 left withered and stunted corn stretching literally for miles upon miles. Skeptics might say this was a freak heat wave and that we oughtn't conclude anything about the future prospects

of agriculture based on it. Okay. But then the empirical data show increasing average temperatures since at least the 1970s.³ As temperatures rise, plant productivity falls. A 1 degree Celsius rise in temperature leads to a 10%

reduction in yield.⁴ This is made even more significant by the fact that when we talk about climate change, we usually talk about average global temperature changes, but these changes are not the same everywhere. Temperatures are likely to increase more in continental interiors than on the coasts and more at temperate latitudes than at equatorial latitudes. That means that regions like the American Midwest, which produces food not only for all of us but for people around the world, are likely to have temperature increases above the average.⁵ Not only are we trying to feed more people on less land, we're doing it in places where climate change is likely to have some of its greatest impacts on agriculture.

Increasing average temperatures have at least two other impacts on agriculture. First, rising temperatures increase the need to irrigate. As I've already noted, irrigation water is becoming scarce in many parts of the world as competition for water increases between towns and farms and water supplies dwindle. What will happen as competition for water becomes more intense? A couple of years ago, my mom (I'm from Colorado) told me that entire farming communities in northeastern Colorado disappeared virtually overnight. Twenty years prior, prescient town planners had bought future water rights from local farmers. For the farmers, it had seemed too good a deal to pass up, until the day they turned on their irrigation systems and nothing came out. They lost their crops, their farms, and their communities.

Rising temperatures also will effectively shift growing regions north (or south, in the southern hemisphere). We're already seeing that here as sugar maples in southern New England go into decline. These trees need reliably cold

winters and, so, are disappearing from our landscape. But it's not simply a matter of having to move northward in order to keep growing crops. These new regions may not have the environmental resources (e.g., high quality agricultural soils) to match the yields we have come to rely on.

Agriculture is not an innocent victim of climate change. It is directly responsible for 8% of the entire greenhouse gas emissions of the United States.⁶ This number rises to as high as 25-30% when agriculture is construed broadly as the entire food system from production to consumption.⁷ If climate change poses problems for agriculture, they're problems that we (farmers) are making for ourselves. The good news is that this means we can also help solve them.

One promising lead is sequestering carbon in the soil. According to the Food and Agriculture Organization, the



What will happen as competition for water becomes more intense?

potential exists to sequester enough carbon in soil to balance 50-75% of the historic loss of carbon into the atmosphere.⁸ How do we do this? By building up the organic matter in the soil rather than depleting it. Every time a farmer plows, the resulting injection of oxygen spurs a

population boom of microbes that "eat" soil organic matter, eventually releasing it into the atmosphere. Conventional agriculture has reduced the organic content of the once-rich soils of the Great Plains, creating, in effect, a huge potential sink into which to "dump" carbon. The Rodale Institute's Farm Systems Trials have shown that both no-till and organic approaches result in net gains to soil organic matter. By changing the way we farm, we not only improve our soils: we also help mitigate climate change.⁹

As with many things, one of the greatest dangers in trying to address climate change and agriculture is looking for a silver bullet. Both climate change and agriculture are complex. There isn't an easy answer. Agriculture is going to have to change and to adapt in myriad ways. So, too, will our food culture. We've been lucky so far not to have noticed much of an impact on the way we eat because of climate change. But that will change. Soon, we are going to have to face the fact that our food supply is at serious risk from climate change. As an ethicist, a farmer, and a father, I hope we realize just what a precarious position we're putting ourselves in before it's too late. ■

1. Brown, Lester. *Outgrowing the Earth: the food security challenge in an age of falling water tables and rising temperatures* (New York: WW Norton, 2004), 4-7.
2. <http://www.epa.gov/agriculture/ag101/demographics.html>
3. Brown, 122.
4. *Ibid.*, 118-119.
5. *Ibid.*, 123-124.
6. <http://www.extension.iastate.edu/agdm/articles/others/TakApr08.html>
7. <http://ccafs.cgiar.org/bigfacts/food-system-emissions/>
8. Food and Agriculture Organization. *Carbon Sequestration in Dryland Soil: world soil resources reports*, 102 (Rome: Food and Agriculture Organization of the United Nations, 2004), 6.
9. Rodale Institute, *The Farm Systems Trial: celebrating 30 years* (<http://rodaleinstitute.org/our-work/farming-systems-trial/farming-systems-trial-30-year-report/>).

Using a Rain Garden to Help the Environment

Spring will soon be here! A fine time to create a rain garden for your home or business, which can help keep brooks and lakes healthy.

What is a rain garden?

A rain garden has a bowl shape to collect the rain that runs off from a roof, driveway, parking area or yard. This 6 - 9-inch deep basin fills with runoff and allows it to seep into the ground in a few hours.

The rain garden plants and soils cleanse pollutants that would harm the quality of the rivers and lakes that would receive the water that otherwise would run off your property. Letting rain soak in, rather than go into the street, replaces groundwater that keeps streams flowing during dry times. A constant supply of clean groundwater is essential to stream and pond life.



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Benefits of Rain Gardens

Storm runoff is the leading source of water pollution that harms aquatic life and spoils recreational uses of lakes and brooks. Creating rain gardens has many water quality benefits:

- Gardens remove dirt, oil and metals in storm water.
- Plants recycle phosphorus and other nutrients that would be harmful if they reached local lakes and rivers.
- Microbes in soils reduce bacteria levels in runoff.

Rain gardens also attract birds and beneficial insects like butterflies and bees that pollinate plants, as well as dragonflies that eat mosquitoes. Your family and friends will enjoy watching these wildlife habitats that enrich your yard and neighborhood.

Where to build your rain garden

First, walk your yard in the rain to see where runoff from your roof, driveway and patio flows. Choose a spot where runoff naturally goes; the rain garden should be placed between the source of runoff and where it flows out of your yard. If the runoff stays in your yard and already soaks into the ground, a rain garden may not be worthwhile.

When choosing the location, your rain garden should be:

- at least 10 feet from the house foundation and 25 feet from a septic leach field or a well
- away from underground utilities (Call Dig Safe at 811 before digging your garden.)
- away from wet/soggy places where ponding persists after a storm
- away from tree roots that can be injured when digging the garden.

How to size your rain garden

The rain garden can be almost any size, but time and cost are important in deciding how big to make your rain garden. Home rain gardens typically range between 100 and 300 square feet.

For sandy soil, the rain garden should be 20-30% of the area that supplies the runoff. If 1,000 square feet of roof

and driveway will supply runoff, your rain garden should be 200-300 square feet. For slower draining soils, a larger rain garden will be needed.

Designing and selecting plants for your rain garden

There are almost endless designs for rain gardens. Select plants that have varied heights and foliage, with flowers that bloom at different times during the spring, summer and fall seasons.

Native species are recommended and, when established, do not need extra water or fertilizer. Native plants can provide habitat and food for the birds, insects and wildlife of the region.

As you choose plants, keep in mind a rain garden has moisture zones. The bottom of the garden is for plants that thrive in wetter conditions. The side slopes are for plants that do well in drier conditions, and the rim is for plants that tolerate droughty conditions. After adding plants, put three inches of mulch on top of the soil.

Sunny Rain Garden Plants

Places in your yard that get full sun for six or more hours a day or partial sun for four to six hours per day are good for flowering plants. Examples of native species that do well in sunny gardens are listed below.

Perennial flowers:

- **Butterfly Milkweed** (*Asclepias tuberosa*) – orange flowers that attract Monarch butterflies
- **Bee Balm** (*Monarda didyma*) – pink or red flowers that attract hummingbirds
- **New England Aster** (*Aster novae-angliae*) – bright purple flowers in early fall
- **Turtlehead** (*Chelone glabra*) – interesting lavender or pink flower spikes in early fall
- **Black-Eyed Susan** (*Rudbeckia hirta*) – golden flowers that bloom in summer and fall

Rain Garden continued from page 3

- **Coneflower** (*Echinacea purpurea*) – striking pink or white flowers that attract butterflies
- **Blue Wild Indigo** (*Baptisia australis*) – blue flowers and interesting seed pods

Shrubs:

- **Sweet Pepperbush** (*Clethra alnifolia*) – fragrant flowers attract butterflies
- **Red Twig Dogwood** (*Cornus Sericea*) – red stems that make a winter highlight

Shady Rain Gardens

Places in your yard that have less than four hours of sun a day are spots for shade tolerant plants. Ask your garden center or home improvement store about the shade and soil conditions for plants you intend to put in your garden. Examples of natives that do well in shady gardens are noted below.

Perennial flowers:

- **Cardinal Flower** (*Lobelia cardinalis*) – vibrant red spiky flowers that are short-lived
- **Blue Flag Iris** (*Iris versicolor*) – eye-catching blue-violet flowers
- **Goatsbeard** (*Aruncus dioicus*) – grows to five feet tall with white flowers
- **Wild Bleeding Heart** (*Dicentra eximia*) – pink flowers in early spring
- **Sensitive Fern** (*Onoclea sensibilis*)

Shrubs:

- **Spicebush** (*Lindera benzoin*) – food source for swallowtail butterfly larvae
- **Rosebud Azalea** (*Rhododendron periclymenoides*) – purple flowers
- **Highbush Blueberry** (*Vaccinium corymbosum*) – small white flowers

Cost for Building Rain Garden

The cost of your garden will vary depending on what you want and are able to do. If you design, dig and collect seeds or plants from other gardens, the cost is minimal. Alternatively, you can hire a contractor to install your garden. Costs for a do-it-yourself garden are about \$2 – \$5 per square foot, depending on the plants and accessories that you want. Many landscapers are expert in building rain gardens, and costs are likely to range from \$8 – \$12 per square foot, again depending on what plants you want.

More Information

It's easy to create a rain garden. Start small, and enlarge the garden as you learn about plants you'd like to grow. For the details about building a rain garden, visit EPA's "Soak up the Rain" website (www.epa.gov/region1/soakuptherain), which has links to free guides like *The Vermont Rain Garden Manual*. This user-friendly website also has other tips on keeping local brooks and lakes healthy. ■

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President's Message

After four terrific years as President, I am moving back to the board as a member at our May 1st annual meeting. I have totally enjoyed being your President and am grateful for the opportunity and for your hard work, creativity and commitment. Here are some thoughts on our accomplishments, the important issues facing us, and what this role has meant to me.

We upgraded our operations, establishing an online membership database, improving our beautiful and incredibly informative newsletter and other printed and online materials, and carefully monitoring our properties and conservation restrictions. We finalized a conservation restriction in the works for years, participated in the new Open Space plan, and did a strategic plan. We advocated on issues ranging from storm-water problems plaguing our river, lakes and ponds to maintaining open space in new commercial developments. We worked closely with the Parks & Recreation Department on issues ranging from a temporary fire station and other non-park related building use to snow and brush dumping to creating management plans. We removed tons of invasives.



Jane Sender

Many important issues face us as open space advocates. One is the relationship between preservation of open space and public access. Many Massachusetts public officials and policymakers believe that preservation of open space goes hand-in-hand with public access. Whether approving a conservation restriction or proposing paths and boardwalks, the thinking is that there should be as much public access as possible. When pressed about the effect of humans (and dogs) on wildlife and plants, the rationale is that public awareness offsets any harm, that people will protect areas they use. My experience doesn't bear that out. Of course, there should be lots of public access in our parks and conservation areas, but the research is clear that the presence of humans and dogs has a very significant adverse impact on wildlife and plants. The protection of wildlife habitat is as important a concern as the need for humans and dogs to enjoy our open space, and these interests need to be carefully balanced.

Another very important issue is City spending on conservation area maintenance. Although there has been an increase this year, much more is needed to properly maintain

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these areas. Invasives management, trail maintenance, trash pick up, signage and flood control are a few of the unmet needs. The most important issue is the effect of climate change as we go forward. Protection of open space is vitally important in the face of increasing intense storms, warmer temperatures and rising sea levels. Under new Conservator leadership, these issues will be met with new energy, and our efforts will grow and adapt to new situations.

On a personal note, it was great to get to know our amazingly

talented and hard-working board. Each of us participates for different reasons. Mine is that I am fascinated by the natural world, finding my deepest happiness engaging in my favorite activity—birding. Each bird species we see in Newton tells us a story about our natural world—each needs either breeding or migratory habitat to be protected, or it will not survive. This simple fact raises very difficult issues about how we treat our environment. I am glad to have this time as President to try to lessen our impact on the natural world and maybe to protect some of the magic of our human lives. ■

✎ Jane Sender, President

Editor's Note



As this issue of the newsletter goes to print, eastern Massachusetts is preparing for its third weekend storm in a row, and the area has had almost twice the snowfall of an average winter season.

According to climate scientist Michael Mann from Penn State University, "These storms didn't just occur in a vacuum. They are fueled by record amounts of moisture in the atmosphere. What is happening is that these storms are feeding on unusually warm oceans."

The impact of global warming on our local environment is the direct focus of two articles in this issue: Newton Community Farmer Greg Maslowe's article on challenges to our food supply and Pete Gilmore's observations about the unusual birds seen in and around Newton this winter. It is the opinion of some experts that rising temperatures are affecting the level of pollutants in our lakes and rivers, and Ed Himlan's article on rain gardens presents one

strategy for improving that situation. In her farewell message, President Jane Sender also asks us to consider how climate change will affect the preservation of open space.

We hope that you will bring to our attention ways that people in our community are helping to combat climate change and also other evidence of its effect in Newton.

President Jane Sender is completing her years as President of the Conservators at our annual meeting on May 1. The amount that she has led us to accomplish in her terms is amazing: the status of open space and the environment of the city has been improved greatly under her guidance and with her vision. Some of those achievements are listed in her President's Message in this issue. Thanks to Jane's simultaneous role on the Conservation Commission, she has brought additional knowledge and experience to make our efforts more productive. We will miss her in the role of President but look forward to her continued work with us on the board. **Thank you, Jane!**

✎ Beth Wilkinson

Newton Conservators Create Internships for Environmental Science Program

At their November 2012 meeting, the Conservators Board created two internships for leaders in the Environmental Science Program of Newton. These internships will provide opportunities for the college-age Director and the high-school-age Student Director to work on projects that benefit the environment with the Conservators' guidance and support.

This year, the Director and Student Director are exploring a variety of project ideas, which include invasive species activities and watershed issues. The two internships will be supervised by Beth Wilkinson of the Conservators and David Backer, the Executive Director of the Envi Sci program. Work on the internships will take place during the summer, and each intern will produce a summary report describing the project and results.



Water Chestnut Day

The Environmental Science Program, part of the Newton Conservation Commission, is in its 46th year of operation, and there have been some changes that reflect the developments in environmental science and technology since the 1960s. However, it still runs on the same core principles that have been there since the beginning: the program encourages students to enjoy the wilderness while they are learning about the science of the environment. The program helps them develop improved confidence in their physical



Invasives removal

abilities and, in many cases, a sense of responsibility for preserving nature. Many students come back year after year.

Most importantly, its young leaders run the program. That happens because from January through June, the high-school-age leaders attend meetings led by the Student Director. At these meetings, the leaders plan and develop the science workshops that they will teach the students during July. They also develop their leadership skills and learn about guiding groups of students.

The program accepts about 35 to 40 students who will be entering grades 7 through 10 in September. Every day of the program is different, and groups of about eight students and two leaders go out on outdoor activities such as hikes, bicycle rides, or trips to locations such as museums, Boston harbor islands, or Audubon preserves.

There is always a canoe trip on the Charles River as well as service projects for the City of Newton such as trail improvements or environmental cleanup work. There is often an “invasive species removal day” in which students learn about plant species that can severely damage an ecosystem and then work to remove unwanted plants such as water chestnuts in the Charles River or Japanese Knotweed near Hammond Pond.

The focus in the last two weeks is on mountain hiking. Students climb Blue Hills and reach the summit of Mt.



Summit of Mt. Washington

Monadnock. The final trip is a three-day backpacking trip to Mt. Washington, where they stay two nights at the “Lakes of the Clouds” AMC hut and, weather permitting, reach the summit at 6,288 feet. Students take educational tours of the Mt. Washington Weather Observatory and can participate in nature workshops taught by AMC naturalists at the hut.

The Newton Conservators have generously provided scholarship funds every year that allow families with limited resources to enroll their students in the Envi Sci program. These new internships will expand the Conservators’ relationship with the program, and will help attract and develop better-qualified leaders. These internships also will improve the Envi Sci program’s ability to attract and keep good leaders as they go through high school and college. Leaders who are in the later years of high school or early years of college are expected to get experience that builds an impressive résumé that might include summer jobs, service projects, or internships.

Read more about the program, and see many photos of field trips at the Envi Sci website: <http://www.newtonenvisci.org/>

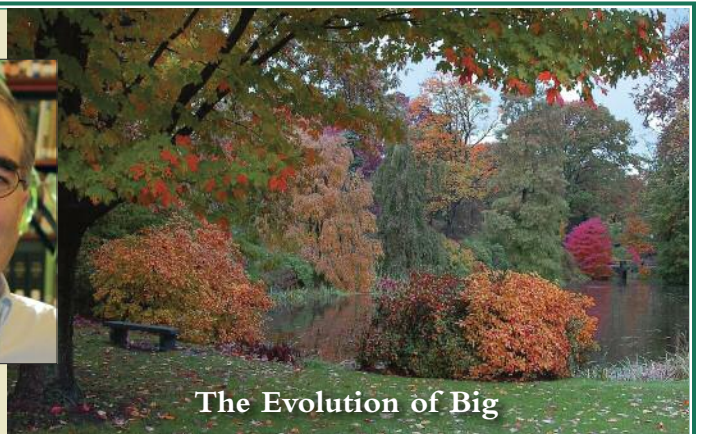
Contact the program at contact@newtonenvisci.org or by phone at 617-447-9317. ■

✍ David Backer

Newton Conservators 52nd Annual Meeting & Dinner May 1, 2013, 7:00 PM

At the American Legion Post 440
295 California Street, Nonantum, MA

Join The Newton Conservators to hear **Dr. William Friedman**, Director, Arnold Arboretum, & Arnold Professor of Organismic & Evolutionary Biology, Harvard University, talk about the evolution of trees.



The Evolution of Big

Many Exciting Stray Birds This Winter of 2013

Bird watchers in Massachusetts have seen many exciting stray birds during the winter of 2013. There are various causes for the numerous vagrant bird species appearing in New England this winter. Superstorm Sandy is part of it. That storm, together with the very large blocking high pressure system over the North Atlantic Ocean causing Sandy to hook left into New Jersey, brought us many unusual visitors.



Northern Lapwing

Sandy brought rare **Northern Lapwings** to New England in unheard-of numbers, and there still are Lapwings in Nantucket and Rhode Island as I write in February 2013. This is a Eurasian species of shorebird related to our Killdeer and Plovers. They have a curved crest on their head and a glossy purple-green hue to

their back feathers. Like Killdeer, they feed in open fields. They are not long-distance migrants and need open fields to survive. They were migrating south along the coast of Europe and flew downwind around the bottom of the clockwise circulation of the high pressure system out over the Atlantic Ocean. Luckily they did not die in the ocean, but got picked up by the top, counterclockwise flow around the top of Superstorm Sandy and blown into New England.

There have been at least two previous irruptions of this species into New England, one in December of 1927 and one in January of 1966. Our second mild winter in a row is allowing these birds to survive. There was one in Middleboro and one in Bridgewater. The Bridgewater bird was still there on January 1, 2013, but the cold snap on the 2nd made it disappear, possibly to Rhode Island.



Cape May Warbler

— Pete Gilmore

In addition to these unusual field birds, we have four North American species that should be far away from us now but are surviving our winter at local bird feeders here in Massachusetts.

There has been a female **Cape May Warbler** in North Andover. This bird should have migrated to Florida or the West Indies for the winter and be feeding in the tops of palm trees. It is not in breeding plumage, but it still is a beautiful bird. These birds breed in spruce forests north of Massachusetts. They eat insects but can survive on berries, suet and peanut butter. The latter two are being provided in North Andover.

A second warbler out of its usual place this winter has been seen in southern Massachusetts in a private backyard in Taunton. This bird is a western species, the **Black-throated Gray Warbler**. They breed in the west—in western Colorado and New Mexico—and out to the Pacific Coast. They are found in dry oak forest and in chaparral scrub areas in canyons. They winter in Mexico. Finding one in a wintry New England backyard was surreal. Their culinary preferences are similar to the Cape May Warbler's, and the feeders in Taunton provided similar choices.

The third winter vagrant from North America is a female **Blue Grosbeak**. This is a Robin-sized finch with a large, seed-cracking beak. Blue Grosbeaks do breed in Massachusetts in small numbers, but they are primarily a more southern bird. They spend the winter from central Mexico south throughout Central America. This large finch is clothed in subtle brown plumage with two buffy wing bars and a beak that catches your eye. The folks in Merrimac who are hosting this bird have lots of black-oil sunflower seed and heated running water for the comfort of her and all the other birds that they attract.

A fourth vagrant has turned up just west of Newton, in Concord, along Shadyside Avenue near the Kaveski Farm Conservation Area. This is a **LeConte's Sparrow**, which should be in Louisiana, Arkansas or along the Gulf Coast



Black-throated Gray Warbler

— Tom Murray



Blue Grosbeak

— Lanny McDowell, Avian Art



LeConte's Sparrow

— Christine Sheridan

right now. These sparrows breed in the upper Midwest—in Minnesota, North Dakota and up into Canada. They then migrate south to the areas mentioned above. We are not on their migration routes, at all. LeConte's Sparrows are smaller than our usual sparrows. A House Sparrow, for instance averages 6.25 inches long. The LeConte's Sparrow is only 5 inches long. It has a lot of ochre-orange on its face and a bold white stripe down the middle of the crown or its head.

This winter has been a great time to be in New England with an interest in birds although perhaps it has not been so fun for the birds themselves. Folks have been flying in here from other states to see the Northern Lapwings. The unusual weather is shifting around bird populations and, even more, the butterflies, so that it is an exciting time to be out and about.

This spring, join us for one of our Newton Conservators' walks (which are listed in the newsletter and always can be found at www.newtonconservators.org/walks.htm), join another group for a sponsored walk, or go out on your own, and let us know what you find. If you sight interesting birds that you'd like to share with us and others, please send the information (and photos) to nature_reports@newtonconservators.org.

For sure the birds will not be less interesting during the coming spring migration than they were in the depths of the blizzard of 2013. ■

— Pete Gilmore

Newton's Newest Park Land

The Upper Falls Greenway

Newton will soon add a mile of new parkland in the city. There is a unique opportunity for the Conservators to be involved with the creation of this new park. Here's the story:

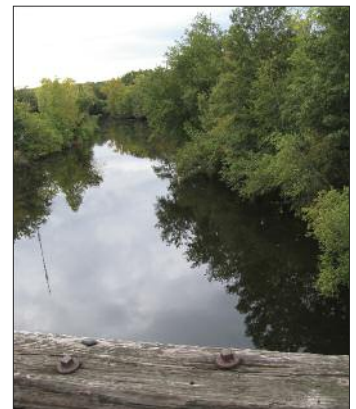
For the last 150 years or so, a railroad line has run through the heart of Upper Falls. Originally, this track connected to what is now the Riverside line. It forked off at Newton Highlands, ran behind Needham Street, through Upper Falls, across the river into Needham, and continued through Dover, Medfield, and Medway. Up until about five years ago, there was still an occasional freight train on the line. Since then, the tracks have lain dormant and become overgrown and trash-filled and have become a general eyesore and irritant for the neighborhood.

A few years back, a volunteer group called the Bay Colony Rail Trail (BCRT) formed to explore the idea of converting the entire Newton-Needham-Dover-Medfield portion of track into a multi-use trail. Much progress has been made since then, but it's still an inherently and complicated long-term project since it involves four town governments and many political and economic obstacles.

About two years ago, Newton's Bicycle/Pedestrian Task Force, a volunteer group that advocates for bicycle and pedestrian issues in the City, developed a local approach called the Upper Falls Greenway. Rather than tying re-use of this neglected strip of land to the much more ambitious long-term BCRT plan, the city of Newton could build a one-mile-long linear park and bike/pedestrian trail today with no external funding. The MBTA, which owns the property, would lease the right-of-way for 99 years to the City of Newton for \$1. The city would then engage Iron Horse Preservation, a non-profit that has built trails around Mass, to remove the old out-of-spec rails and creosote-soaked ties and construct a simple trail. Iron Horse would sell the steel rails for recycling, and the scrap value of the steel would pay for construction. The construction could be done quickly, simply and without expenditure of tax revenue, and the City would gain a mile of new parkland.



Abandoned rails



View from Needham Rail Bridge over the Charles

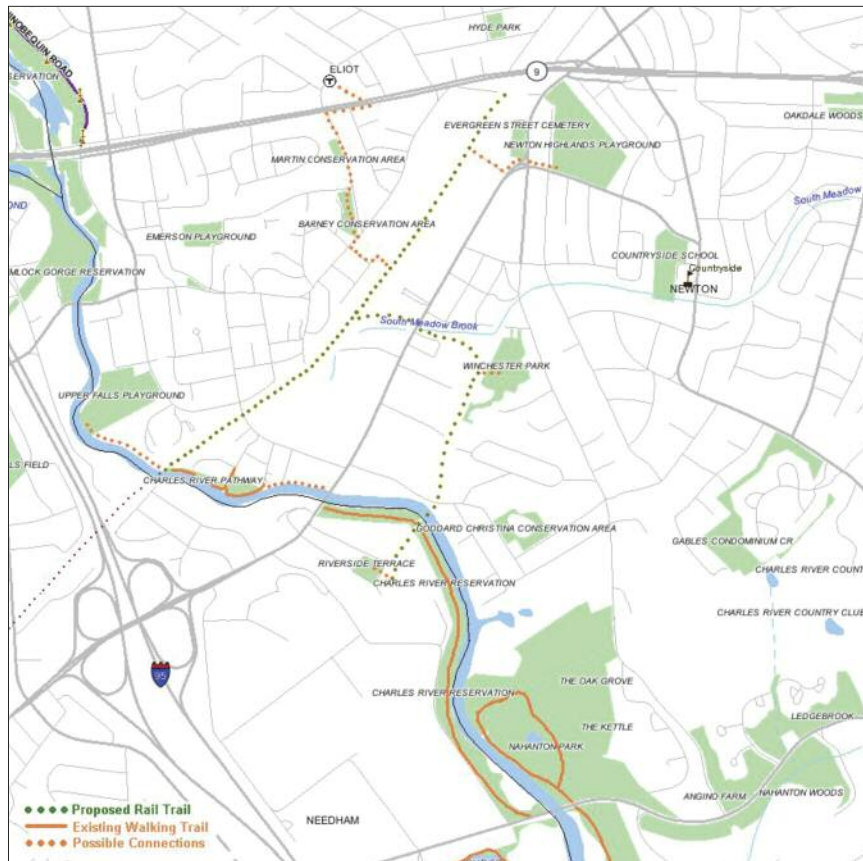
Meanwhile, should the rest of the BCRT plan one day come to fruition, the Upper Falls Greenway would be waiting at the Charles River to complete the trail.

Since it was first floated, the plan has become immensely popular in the Upper Falls community. The only substantial concern raised was a concern that the Greenway plan might preclude the use of this corridor in the future for light rail—i.e., a Green Line extension. Nearly everyone agrees that given the current economic state of the MBTA, that's not likely to happen for many years to come. In the meantime, however, the Greenway would preserve the corridor for any future use. In recent years, the MBTA has sold off other unused rights-of-way, resulting in the permanent loss of the corridors for transportation use. Developing the Greenway would prevent that from happening in Newton. The 99-year lease that the City will sign with the MBTA has a specific clause allowing them to reclaim the property with two-year notice should the MBTA wish to use it as a transportation corridor in the future. Since the right-of-way is quite wide (approx 50'), any future transit use could also easily accommodate a trail alongside.

During November and December 2012, the Board of Aldermen approved the project. The City's Greenway Working Group is now focusing on the technical, regulatory, and contractual details with a plan for construction to commence this coming October.

The Greenway will be a mile-long park stretching from the Charles River to just behind National Lumber at the end of Needham St. (See map above & at www.upperfallsgreenway.org) The initial construction will consist of removing the rails and ties, re-grading, and then adding a stone dust surface suitable for a walking/bicycle trail. The trail also will include benches, interpretive signs, parking, and ADA access.

What's still lacking from the planning is a clear vision for managing/designing the eventual vegetation for this new parkland. One portion of the trail currently has a deep infestation of very mature Asian Bittersweet, an invasive vine that encircles nearby trees and eventually pulls them down.



Upper Falls Greenway

What should be done to manage or eradicate these invasives?

Other portions of the trail are in close proximity to parking lots in the back of Needham St. What sort of plantings could be planned for those areas to help insulate the trail visually from nearby development or provide privacy screening to neighbors?

At one spot the trail widens significantly, near where it exits to Tower Road. Aldermen (and Conservator) Deb Crossley has suggested that perhaps we could build some kind of raised garden, filled with native plants and flowers. How big

should it be? What sort of plantings would be appropriate?

These and many other issues could benefit with further input from concerned Conservators and support from the Conservators on an organizational level. We invite one or more members to get involved and contribute your expertise. Let out your inner-Olmstead and join us to help design Newton's newest park!

Contact ParkDesign@UpperFallsGreenway.org or call Jerry Reilly (617-999-5300) for more information. ■

Jerry Reilly

Spring Pruning

There are many spring tasks to do, but pruning is one of the most rewarding. If your shrubs were planted many years ago, they may now look overgrown and unruly. There are several solutions: removal and replacement with more appropriate shrubs; re-locating shrubs to a different part of the garden; or pruning.

In late winter and early spring, you can see the form of the stems without the cover of leaves. In spring before buds become active is the best time of the year to prune because new growth will start soon. Pruning spring flowering shrubs before they bloom will lessen their flower output this year, but you can bring stems into your house and enjoy their blooms in a vase near a sunny window.



Weigela

→ Beth Schroeder



Smooth Hydrangea

→ Beth Schroeder

We may label shrubs as “overgrown,” but they are just doing what comes naturally. Shrubs have a mature size. Some may reach an even larger “ultimate” size if they are old enough and grown under their preferred conditions. Their natural shape and mature size can be predicted. You may want to look up your shrubs online or in a book such as *Dirr’s Hardy Trees and Shrubs* to learn their natural growth habit and mature size.

Shrubs have three different natural growth habits: cane-growers; mounds; and tree-like. There is some overlapping in these categories, but their growth habits will guide your pruning decisions.

Cane-growing shrubs are multi-stemmed and grow in waterfall shapes. Cane-growers include red-twig dogwood, hydrangea, winterberry, forsythia, mock orange, deutzia, spirea, weigela, potentilla, bridal wreath and quince. They should not be sheared into round balls or large rectangles. Shearing removes stem tips, destroying the natural shape of the shrub. Shearing also removes flower buds, reducing flowering. With cane-growing shrubs, start pruning by removing dead wood. Next, cut out stems at ground level to allow sunlight to reach the base of the shrub. Remove the oldest, most woody stems and wayward stems trailing across the ground, leaving the younger stems for shrub renewal. You may remove one-third of the stems each year. Be sure to step back and look at your work as you proceed, to make sure you are keeping a balanced structure. Don’t get carried away and over-prune. Next year you may take out more stems if necessary. If your cane-grower is too large for your space even with pruning, relocate it to another part of your garden.

Mounding shrubs include holly, azaleas, inkberry, barberry and burning bush. Start by removing the dead wood. Next, select individual unruly stems for removal. Do not snip off stem tops to make shrubs into round balls. Instead, reach into the shrub and follow the branch you would like to prune down to where it meets a larger stem, and then make the cut. Cutting smaller stems just above the larger stem, and roughly parallel to the larger stem, will

keep unwanted shoots from growing out of the cut area. Step back after each cut to see how the shrub form has changed. You may remove up to one-third of existing stems if necessary. If you have barberry or burning bush in your garden, consider removing them. They are invasive plants listed on Invasive Plant Atlas of New England (IPANE).

Tree-like shrubs include serviceberry, pagoda dogwood, witch hazel, rhododendrons, cranberry bush mountain laurel, pieris, lilac, enkianthus, and nannyberry. They have one main stem and tree-like branching stems. Pruning tree-like shrubs will not reduce their overall size but will open the shrub up to air and make it look less crowded. Your goal is to allow the shrub to maintain its natural shape, not to shorten it or to mold it into a giant round ball. Tree-like shrubs cannot be reduced in size enough to keep them in the wrong location. Many homes have their first floor exteriors buried under rhododendrons. These rhododendrons should be removed or relocated to an area where they have space to grow to their full size. If you must have rhododendrons in front of your house, replant using dwarf varieties such as “Olga Mezitt” or “PJM”. Large conifers blocking the view of your home should also be removed.

As with all shrubs, if you decide to prune your tree-like shrub, remove dead wood first. Sometimes this is enough to renew the look of your shrub. If not, study your shrub, and look for wayward stems that could be removed. Reach



Flame Azalea



Mountain Laurel → Beth Schroeder

into the shrub and follow the wayward stem until it meets a larger stem and cut. Next, remove suckers and water sprouts, which are skinny stems shooting straight up through the shrub. Step back, inspect your work and decide if more needs to go. Take your time and don't over prune. You don't want skeletal remains! At most, remove no more than one-fourth of the stems. You can always do a little more next year. Beware! If you cut off the tips of the stems, you may encourage water sprouts and ruin the look of your shrub.

A few tree-like shrubs including boxwood, privet and yews are often sheared into rounded or rectangular hedges. Shearing cuts off the outer ends of all the stems. Boxwood can be sheared because the leaves are small and boxwood has many lateral buds close together. These buds will produce new growth. With yews, the interior of the shrub becomes starved for light and filled with dead, over-mature stems. Once you start shearing hedges you must trim them on a regular basis.

Privet is an invasive shrub listed in IPANE. Remove privet if you want to be kind to the New England landscape. I've often heard people say "my shrub isn't invasive, it stays right here." Individual shrubs do not move; the shrub's berries are eaten by birds and deposited throughout the area to create new unwanted plants. Invasive plants are aggressive and push out native plants, diminishing diversity in our natural environments.

With all types of shrubs, remove stems that are touching the ground. Leave about four inches of open space under the shrub to allow air movement and easier clean-up under your shrubs.



Shadbush Serviceberry

— Beth Schroeder

Using the right tools for pruning will make your job much easier. Pruning shears should be used for stems up to one-half inch diameter, loppers for stems up to one inch diameter and pruning saws for larger stems. Have your tools sharpened once a year.

So, in conclusion, remember: remove, relocate or prune. Take out dead wood first. Then follow the directions for the growth habit of your shrub. Don't overdo it. Do a certain percentage each year if necessary. Only hedges should be sheared. ■

— Beth Schroeder

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 52 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.

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NEWSLETTER

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

SPRING ISSUE

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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



**Whoooo's outside my window?
...a Barred Owl in Waban!**

Photo by Henry Finch

**Please note walks meet at different times. Some trips are weather dependent.
Please call trip leader if in doubt.**

Saturday, March 23 (1-3 pm)

The Hidden Life of Vernal Pools: Forest and Vernal Pool Exploration at Webster Woods

Trip Leader: Eric Olson (Cell phone on day of outing: 617-872-9928.)

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 that 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, so 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.



PHOTO: DAN BRODY

Sunday, April 21 (2-3:30 pm) (Walk will happen rain or shine)

Finding Newton's Old Waterworks at Cutler Pond

Walk Leader: Lucy Caldwell Stair

Few people walking through the woods in Cutler Pond realize that the park is the site of a waterworks constructed by Newton in the 1870s to supply the City with clean water. Guided by old diagrams and photos, we will locate the old pumps and wells along the 1-mile trail and visualize how this elaborate engineering system worked. Extra option: a 1/2-mile walk along the site of the old filter basins and the pumping station at Needham Street. Meet at the Cutler Pond DCR parking lot on Kendrick Street just across the Charles River in Needham. Walk will happen rain or shine. Please dress for weather and walking.



PHOTO: DAN BRODY

Saturday, April 27 (8:00 am) (Rain date: April 28)

Bird Walk along the Blue Heron walk on the Charles River

Trip Leader: Pete Gilmore (617-969-1513)

Join us for birding along the Charles River path, a little stretch of green-space in an otherwise urban landscape. We will be looking for migrating warblers, vireos and thrushes. Yellow warblers, catbirds and northern orioles are found in abundance here. Other possible finds are hawks, kingfishers, herons, and spotted sandpipers. Interests in plants and insects are welcome. Park at the Pleasant Street Super Stop & Shop parking lot in Watertown at the corner furthest from the store. This spot is directly in front of you as you enter the parking lot from Pleasant Street. There is a path entrance there. Meet at path entrance. Bring binoculars if you have them. Beginners as well as experienced birders are welcome. Boots/walking shoes are recommended.



PHOTO: RICHARD DANCA

Saturday, May 4 (8:00 am) (Rain date: May 5)

Bird Walk at Cold Spring Park

Trip Leader: Pete Gilmore (617-969-1513)

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, 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.



PHOTO: DAN BRODY

Sunday, May 12 (8:00 am) (Walk will be cancelled in steady rain)

Nahanton Park Mother's Day Bird Walk

Trip Leaders: Alison Leary (617-821-5619) & Haynes Miller (Co-sponsored with Friends of Nahanton Park)

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. Also expect bluebirds, scarlet tanagers, swallows and brown thrashers. 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.



PHOTO: DAN BRODY



PHOTO: DAN BRODY



PHOTO: DAN BRODY



PHOTO: DAN BRODY

Saturday, May 18 (1 pm)

Canoe/Kayak Trip at Nahanton Park

Trip Leader: Bill Hagar (617-964-2644) (Co-sponsored with the Friends of Nahanton Park)

This canoe/kayak trip will start at the Nahanton Park area. This is a beautiful section of the Charles River from which you can go upstream to the far reaches of Needham, Dedham and Wellesley. Interested nature lovers can bring their own canoe or kayak to use or can rent one of them at the new canoe/kayak/water stand rental that is now located at Nahanton Park. The area upstream is a region of significant beauty with almost pristine conditions of local marshes and tree lines. Cutler Marsh is particularly impressive in depth with different patterns of wildlife overlapping the background tree line and marsh views. Dress appropriately. A hat, sunscreen, snacks and drinks are recommended supplies. Thunderstorms will cancel the trip. Newton Conservator members get a 10% discount on canoe & kayak rentals. Meet at the Nahanton Street entrance next to the river. Parking is available inside the park.

Sunday, May 19 (2 pm)

Webster Woods Walk

Trip Leader: Octo Burnett (617-969-6988)

Join us for a leisurely walk through the largest conservation area in Newton. Explore miles of trails through second-growth woods with noted rock outcroppings of Roxbury Puddingstone, brooks, ponds, wetlands, overgrown farmland, and an historic woodland garden. Trip highlights include Webster Brook and Webster Vale, one of the few brooks that go to the Charles, where the headwaters can be seen; a great area for marsh marigolds and salamanders; Gooch's Caves, a large rock formation with numerous small caves (climbing in and through the caves is optional); and Bare Pond, one of the few remaining vernal pools in Newton.

Saturday, June 8 (1-3 pm) (Rain date is Sunday, June 9)

Fern Walk at Houghton Garden

Trip Leader: Don Lubin (617-254-8464 or <http://nefern.info>)

Although Houghton Garden is not as wild as some other places in Newton, we can see more than a dozen ferns and maybe a club-moss and horsetail. These account for most of the ferns you are likely to see in any woods. Wear long pants just in case. No climbing necessary. We expect the event to take about two hours. Park on Suffolk Road near Woodman Road. Bring fern questions from the woods or from your garden and any fern fronds you would like to have identified.

Sunday, June 2 (2 pm)

Aqueduct Trails Bicycle Ride

Trip Leader: Henry Finch (617-964-4488)

This very popular bike tour follows the 12- to 15-mile Aqueduct Trail through Newton, Needham and Wellesley. While mostly leisurely, it is sometimes strenuous. The tour is for ages 12 and up. Children must be accompanied by an adult, and all riders must wear helmets and use bikes that are able to travel off road. The tour runs through established paths, pinewoods, meadows and hills. You will travel near backyards, and riders should be respectful of the privacy of homeowners. Meet in front of the Starbucks near the Waban MBTA Station.

Newton Conservators' activities for Newton Serves on Sunday, April 28, and other invasive pulls will be listed separately on our website: newtonconservators.org/trips.htm

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



NEWTON CONSERVATORS

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



Ready for Spring!

Photo by Dan Brody