



NEWTON
CONSERVATORS

SUMMER ISSUE

NEWSLETTER

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

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Walking Newton's Aqueducts

By Andreae Downs



PHOTO: DAN BRODY

Sudbury Aqueduct

For several decades, Newton residents have enjoyed an off-road trail system, recently expanded by the extension of the river trails along the Charles. Most of the trails through the center of Newton are along the tops of aqueducts.

As Doug Dickson (former Conservators president) noted in his 2006 commentary about the aqueduct trails in the Newton Conservators April/May newsletter:

“For passive recreation, the trails along the aqueducts are rich with ever-changing views, the tranquility of nature and mostly level trails. Birds and other wildlife, shade trees, wildflowers, vines and other plant-life abound along the paths. The hustle and bustle of life quickly fades as the warmth of the spring sun or the cool of dappled shade or the rustle of drying leaves washes over the senses.”

Two aqueducts cross Newton and serve as both foot paths and sheltered wildlife trails — deer, coyote, wild turkeys and other fauna use them to navigate safely from greenspace to greenspace. The oldest, the Cochituate aqueduct, was constructed in 1845 after a growing Boston realized that Jamaica Pond could no longer meet its clean water needs.

The aqueduct brought water from a tributary of the Sudbury River, which was dammed to create Lake Cochituate, through Natick, Wellesley and Newton to the Brookline Reservoir (open for walking just off Route 9).

But, as Boston continued to grow, in part because of the influx of Irish fleeing the potato famine, so did its need for water. By 1870 a new source was necessary, and the Sudbury was dammed and tapped again, and the Sudbury Aqueduct, flowing from Framingham to the Chestnut Hill Reservoir, was built between 1875–78.

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Echo Bridge

The Sudbury's western parts in Newton — beginning with the lovely and iconic Echo Bridge over the Charles River at Hemlock Gorge — are mostly above ground and run on property owned by the Massachusetts Water Resources Authority (MWRA), behind (and in Upper Falls in front of) residential property. The eastern parts (east of Lyman St.) were tunneled (4,635 feet!) under privately-owned property. The MWRA does not own the land over the aqueduct there.

As Boston and its suburbs continued to grow, additional sources were built, including eventually the Quabbin Reservoir, 1926–1946. This excellent water — which last year won a national taste test — is transported to our taps using deep tunnels or pipes. Some run under Washington Street, for instance. Their addition made the Cochituate redundant, and by 1952 it was taken off line.

In 1955 a state law gave Newton control of all the surface except right-of-way needed for access to the Weston Aqueduct. Over time, the surface became a walking path, except for parts sold off by the city to private entities. The Cochituate aqueduct is currently used to convey sewage from Wellesley (about 25% of their flow), pumped in from the middle of the town, and some from Newton's Quinobequin pump station. At the top of Varick Hill Road, there is a buried headworks, and from there the sewage flows by gravity across Newton to the Commonwealth Golf Course, eventually connecting to the MWRA sewer main at Tremont St. in Brighton.

By contrast, the Sudbury was most recently used as backup water supply in May 2010, when a catastrophic break in the MetroWest Water Supply Tunnel at the Charles River meant that the metro-Boston area's water supply was interrupted. Since then, the Sudbury Aqueduct has been cleaned and repaired and remains an emergency water supply while the MWRA constructs additional water mains to ensure redundancy — mostly to our west.

In the meantime, the Authority has started granting permits to open the surface of the Sudbury and other aqueducts to municipalities who wish to use them as many of Newton's residents do — as linear parks.

Every other municipality on the Sudbury has started the permit process (see links below for those which have already completed it). Newton's sections have a few “no trespassing” signs and gates partially blocking access and will until Newton applies for a permit formally “opening” the Sudbury trails.

It is clear, however, that the Conservators' tradition of taking tours of the water supply system has encouraged walking even on short segments of the aqueduct.

As far as I could establish using current members' memories, the Conservators started offering tours of the aqueduct trails under Nick Yannoni, Conservators president (1986–



Cochituate Aqueduct

88) and an amateur water system history buff. Yannoni mapped the aqueducts in 1984–85, which may also have been when he started the tours. By the early 1990s, Peter Kastner was leading these tours, followed by Doug Dickson. Tours have been led by Henry Finch on both foot and bicycle since the mid-1990s. Check the walks section of future newsletters for listings of Henry's tours.

To walk the aqueduct:

An interactive map is on the Conservator's website: <http://www.gmap-pedometer.com/?r=6486453>, and turn-by-turn instructions for two walking loops, including photographs also: <http://www.newtonconservators.org/longwalkaqueducts.htm#eastfromeliot>

To explore further:

- www.mwra.state.ma.us/04water/html/hist1.htm
- en.wikipedia.org/wiki/Sudbury_Aqueduct
- April/May 2006 Newton Conservators Newsletter
- www.mwra.com/projects/access/aqueducts/aqueducts.html
- news coverage from 2013: www.bostonglobe.com/metro/regionals/west/2013/07/13/trespassing-signs-fall-towns-start-opening-mwra-aqueducts-public/WAmqyJbrqejAiV7RagKzll/story.html#comments

- news from 2014: www.metrowestdailynews.com/article/20140420/News/140429711
- and framinghammatters.blogspot.com/2014/09/the-sudbury-aqueduct-continues-from.html Wellesley trails using the Sudbury Aqueduct: www.charlesriverlink.org/
- More on how the water supply also preserves wilderness:

voices.nationalgeographic.com/2015/05/15/where-public-tap-water-begets-wilderness/

Andreae Downs is executive director of the Wastewater Advisory Committee to the MWRA and a Waban Area Councilor. She walks the aqueducts regularly. ■

What's On Our Website

Do you go to our website to learn about upcoming events? Do you turn to NewtonConservators.org to read about recent developments in preserving open space or the city's plan to purchase Waban Hill Reservoir? Do you check out our website when you're trying to decide which city park to visit?

Our website, NewtonConservators.org, is a good source for all of that information—and much more. Webmaster Dan Brody keeps the information on the site up to date and also has added a wide array of related features and sources.

First, a reminder about the organization of the website: when you go to the website, you'll notice that the list of contents on the left side is divided into two sections. The top green section contains all the information about Newton's parklands; the yellow section lists information about the Newton Conservators and related resources.

Our focus this month is on the fourth item in the yellow section: Guides and Books

Summer is the perfect time for taking walks—and for reading at the beach, and this section of our website can help you with both activities.

The first two items on the list are our own books. The first is our beloved Trail Guide, which describes 34 conservation areas in Newton, featuring parks, ponds, gardens, trails, canoe launches, nature guides, rock climbing, scenic views, handicapped access, geological features, and bird watching areas. The guide also contains photos, driving directions, interesting historical details, and an overall map of showing the locations of the 34 natural areas. The second is our Almanac, a month-by-month presentation of the trees, shrubs, wildflowers, ferns, butterflies, birds, and animals that can be found in our open spaces.

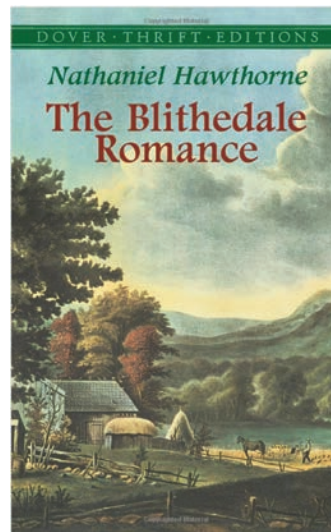
Next, you'll find a listing of guides for walks throughout Massachusetts and then a variety of books related to conservation that members have enjoyed. Many of the

listings include links for buying the books from the publisher or a bookseller.

Do you know of other guides or books that should be added to this collection? If so, please notify Dan at websitemgr@newtonconservators.org.

FEATURED BOOK

The Blithedale Romance by Nathaniel Hawthorne



Early in June, the Conservators received a request from a writer interested in information and a tour of Brook Farm. Have you ever visited Brook Farm in West Roxbury just over the VFW Highway from Newton's Saw Mill Brook Conservation Area (and less than 4 miles from the center of Newton)? It is the site of the 1840s Brook Farm experimental commune of Transcendentalists including Hawthorne, Dana, Greeley, Margaret Fuller, and others.

The Blithedale Romance is set at Brook Farm, and the novel is partially grounded in Hawthorne's own experiences there and the people who lived there.

Meet the memorable characters Zenobia, the beautiful feminist reformer; Miles Coverdale, the poet and not-entirely-trustworthy narrator; Hollingsworth, the philanthropist without a heart; and the frail Priscilla. You probably never have thought of a Hawthorne book as a beach read, but this dark romance just might change your mind. ■

President's Message

For years, Newton Conservators have been working to remove invasive plants from Newton. For our Newton Serves projects in recent years, we've coordinated pulls of garlic mustard and other invasives in Cold Spring Park, Nahanton Park, and Dolan Park and worked in other parks throughout the season.



PHOTO: BETH WILKINSON
Black Swallow-wort

At our annual meeting in 2012, noted entomologist Doug Tallamy came up from Delaware to explain that having native plants is essential to provide food for the native insects that are involved with them, and who, in turn, provide food for native birds.

Over the past four years, Brandeis ecologist Eric Olson and I have written several articles about the dangers of invasive plants. Frogs begin to starve when caged in knotweed patches for 36 hours. Common buckthorn gives off a chemical that is toxic to amphibians. Monarch butterflies sometimes mistake black swallow-wort for their favorite milkweed and lay their eggs on it. When the larvae hatch, they are unable to eat the invasive plant and, thus, die.

In spite of our good efforts, invasive plants have continued to multiply in Newton. Suddenly, there is black swallow-wort growing all over the city. On her way home the other week, a board member noticed a huge patch of it in the carefully tended garden of a Waban church.

Oriental Bittersweet can be seen climbing up the trees in many of our larger parks and conservation lands. Thickets of Japanese knotweed, which used to appear in isolated clumps, are becoming more prevalent. Garlic mustard is everywhere.

Do you want to know what the plants look like? See the sheet listing the most common invasive plants—later in this newsletter.

Has anything changed for the better? YES!

As people become more aware of the problem, more people join in the fight. Two anti-invasive activists have joined our invasive-fighting team, pulling the harmful plants at spots throughout the city and staffing educational tables at events.

The Environmental Committee at the First Unitarian Society in Newton has started a city-wide campaign to educate residents, and we will be working together.

Now, more than ever, your efforts will count. With each new person added to the numbers watching for invasive plants in our environment (and removing them), we have a greater chance to stop the explosion of native plants in our open space and on our blocks.

How can you help?

Look for invasive plants—first in your own yard (where most people do find them) and then in your neighborhood, and pull them when you see them. If you see them in a neighbor's yard and are reluctant to remove them yourself, copy the invasives sheet from this issue and leave it with a note explaining what invasive you saw and where and how they can remove it.

Join with us to pull invasives in our open space. If you let us know of a project on which you'd like to work as partners, let us know, and we'll try to make it happen.

The Conservators' annual meeting on June 6 was a great gathering of supporters. We were delighted to present the annual awards described later in this issue, and Rob Warren presented an interesting history of The Trustees of Reservations.

At the meeting, we distributed a brief questionnaire created by Chris Hepburn. Chris compiled the results and came up with an interesting analysis, which he will present in the fall issue. First, however, we would like to get answers from more members. A copy of the questionnaire is included in this issue.

Please complete it, and return it to Chris Hepburn, 132 Stanley Road, Waban, MA 02468.

Thank you!

Beth Wilkinson

Conservators Awards

“If you think you’re too small to have an impact,” the late environmental activist Dame Anita Roddick once observed, “try going to sleep with a mosquito.”

The room was frankly buzzing when awards were handed out at the Newton Conservators annual dinner meeting on May 6. The three honorees — Alderwoman Alison Leary, Boston University professor and climate change expert Richard Primack, and Newton Community Farm manager Greg Maslowe — more than made up for what they lacked in numbers by their persistent entreaties in support of citizen education, advocacy and activism.

The Conservators recognized Alderwoman Leary for her years as a dedicated educator and advocate for environmental issues and for her successful leadership of the 2015 campaign to ban thin plastic bags in Newton by naming her the 33rd Environmentalist of the Year. As Board member Bill Hagar noted in presenting the award, Leary “is an environmental



Alison Leary, Environmentalist of the Year Award with Bill Hagar

educator... who has helped young and old people learn about biology and important conservation concepts.”

Leary was the driving force behind the Newton Board

of Aldermen’s unanimous decision to ban the single-use plastic bags. Through the long and oft-contentious fight, Leary kept her sense of humor. When *Village 14* made her the target of an April Fools Day joke, claiming the City Inspectional Services had been called to her Nonantum home to investigate reports of plastic bag hoarding, Leary good-naturedly responded that “I wish I could corner the market on them” — although not necessarily, as *Village 14* suggested, to finance her children’s college educations by selling the bags to dog walkers. Leary often used calm and reason as an alternative to the less eco-friendly technique of pouring oil on troubled waters. “Plastic bags have only been around since 1977,” she is fond of reminding people. “So we have managed without them before, and the sky did not fall.”

Prof. Richard Primack was presented with the Charles Johnson Maynard Award for “his innovative work on the real and current effects of climate change (and conservation biology in general) and his tireless efforts to educate the

public and to encourage them to become involved in citizen science.” Conservators President Beth Wilkinson recalled how back in 2001 Primack learned that, unbeknownst to most biologists, Thoreau kept detailed records of the plants he found, including their bloom times, during his walks in the Concord Woods in the mid 1800s. Primack discovered that a quarter of the same plants still grow near Walden Pond. He decided to observe them to compare the bloom dates noted by Thoreau to those growing today. “The results led him — and then his readers — to the inescapable conclusion that climate change is here and is having a strongly negative impact on our local environment,” Wilkinson explained.

“As if his academic teaching and writing were not enough,” Wilkinson continued, “Professor Primack also seems to be willing to go almost anywhere and talk to anyone to help people understand the extent of current global warming and the dangers that are in store if we don’t find a way to stop it. Over the past ten years, he has given more than 100 lectures on the impact of climate change. In spite of his busy schedule, he was willing to take the time to write a great article for our newsletter — about the local effects of climate change.”

Newton Community Farm manager Greg Maslowe admitted that after his appearance as featured speaker at the Conservators 2007 dinner (www.youtube.com/watch?v=dxfsKstevVs) where he urged Garden City



Greg Maslowe, Directors’ Award with Margaret Doris



Professor Primack, Charles Johnson Maynard Award with Beth Wilkinson

residents to plant fewer trees and more vegetables, he thought he would never be invited back. But the Conservators chose instead to honor him with this year’s Directors’ Award for “expanding our view of what it

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means to be a suburban farmer, and sharing his knowledge of the sustainable use of a small plot of land (and the farm's delicious crops) with the Newton community"

"In conveying this Directors' Award," Director Margaret Doris explained, "the Conservators wish to recognize Greg as Newton's farmer/scholar. Carrying on in the fine tradition first established by farmer/scholar/environmentalist Liberty Hyde Bailey more than a century ago, Greg not only applies his scholarship to the work of farming but teaches and even evangelizes. Maslowe expands his vision beyond the farm's two-plus acres of field and greenhouses to involve and inspire others locally and, increasingly, on the state and national scene. 'I am convinced,' Liberty Hyde Bailey wrote

in 1911, "that the size of an acre of land varies directly with the size of the man who manages it. The larger the man, the larger the acre. I once asked an old gardener how much land he had, and he said with pride that he owned one acre; and he added, 'it is a wonderful acre: it reaches to the center of the earth in one direction, and it takes in the stars in the other'."

"It is with deep appreciation then," Doris continued, "that we recognize Greg Maslowe: a man possessed of such vision that he has enlarged a few small acres to take in not only the earth and the stars, but also the future." ■

— Margaret Doris



PHOTO: TROOP 205

Boy Scouts, Parents & Volunteers Ready for Clearing

Thank you, Richard Gallo and Troop 205, Boy Scouts of Newton, MA, and their parents

On May 2, a huge turnout of Boy Scouts, parents and volunteers turned out for Richard Gallo's Eagle Scout Project to restore more than a quarter mile of long-overgrown and impassable trail, on the north side of the lower gardens. Armed with their own tools and wheelbarrows as well as woodchips provided by the City of Newton (thanks to Judy Dore!), they did the impossible and cleared the trail in one power-packed day. The Friends of Nahanton Park and all interested groups are very thankful for their efforts.

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



NEWTON CONSERVATORS
PO Box 590011
NEWTON CENTRE
MA 02459

2015 MEMBERSHIP RENEWAL

YES! Please renew my tax-deductible membership at the level checked below:

- | | |
|---|---|
| <input type="checkbox"/> \$100 Patron | <input type="checkbox"/> \$35 Family Member |
| <input type="checkbox"/> \$75 Donor | <input type="checkbox"/> \$25 Individual Member |
| <input type="checkbox"/> \$50 Sustaining Member | <input type="checkbox"/> Additional contribution_____ |

NAME _____

ADDRESS _____ ZIP _____

EMAIL _____

Please make checks payable to Newton Conservators, Inc.

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



Cedar Waxwing

Photo by Pete Gilmore

Fern Dimorphism

Ferns pass genes to their children through tiny invisible spores, rather than seeds. The spores grow in cases called sporangia. Groups of sporangia, called sori or fruitdots, may be clustered on the underside of a fertile frond.



PHOTO: DON LUBIN

Fertile Bracken

Fertile fronds are usually taller, to reach into the breeze and scatter the spores when they are released. That's their main job. Sterile fronds make the food and sometimes grow facing up to the sky.

Dimorphism means having two forms; the sterile

and fertile fronds look different. All ferns are dimorphic to at least a small degree, but in some species the sterile and fertile fronds look remarkably unlike.

Fertile fronds can be very useful in identifying the species, but sometimes the plant doesn't produce any. So when you're out looking at ferns this summer, see if you can find their spores (or at least their sori.)

Monomorphic Ferns

Fertile fronds are all about genetic propagation. But actually, most individual fern plants did not reproduce genetically. There are various vegetative ways that ferns propagate, often just by the horizontal growth of underground rhizomes. A few have bits that break off and start new plants, clones of the parent. Bracken (*Pteridium aquilinum*) is so good at vegetative reproduction that it seldom produces a fertile frond at all.

🌿 **Lady ferns** (*Athyrium filix-femina*) are common lacy plants that reproduce easily by spores. The curved sori form a characteristic herringbone pattern.

🌿 **Polypody ferns** (*Polypodium virginianum*) grow mostly on rocks and have a simple once-cut shape. Their sori are large and round.

Dimorphic Ferns

🌿 **Thelypteris ferns** (*Thelypteris palustris*) have narrowed pinnae on their fertile fronds.

🌿 **Christmas ferns** (*Polystichum acrostichoides*) have narrowed pinnae at the ends of the fertile fronds, with sori blanketing the underside.



PHOTO: CHERYL LOWE

Thelypteris palustris

🌿 **Cinnamon fern** (*Osmunda cinnamomea*) is named for the cinnamon-colored sporangia on its fertile fronds, which have no green leaves at all. They form a beautiful display around Memorial Day each year.

🌿 **Sensitive** (*Onoclea sensibilis*) and **Ostrich ferns** (*Matteuccia struthiopteris*) have their own strategy. They do not even produce fertile fronds until mid-summer, and their spores are produced late in the season. They do not scatter the spores in the fall though but hold them until the following spring and release them when the snow melts. They get a head start on the following season. Since they release spores after winter when competing undergrowth has been flattened by snow, they do not need to reach above it. The fertile fronds are shorter than the sterile fronds that will grow later in the spring. Sensitive fern is probably the easiest species to identify in the winter, with stiff fertile fronds sticking up through the snow.

🌿 A few uncommon ferns – **Grape ferns**, **Moonworts** (*Botrychium lanceolatum*), and **Adder's Tongue** (*Ophioglossum vulgatum*) do not have separate sterile and fertile fronds. They grow a spore-bearing structure from the same stem as the sterile part of the frond. ■

🌿 Don Lubin



The Newton Conservators was saddened to learn of the death of Melvin Darack, former president of the Board of Directors (1971-1972). We send our condolences to his wife, Hooky, who now lives in Canton.

It all happened at Nahanton Park . . .

At 5:30 am, when preparations for the June Doin' got under way, it was raining—quite heavily.

By 7:00, the skies were clearing, and the first families showed up to fish. Board members Bill Hagar and Mat Calabro, experienced fishermen Rolly Johnson, Judy Dore—the Parks and Rec staff member who oversees the park—and her assistant, Dave Foley, taught the kids how to fish. Within half an hour, young angler Brennan Fankhauser caught the first fish—a yellow perch!

Then, the youngest participant, Penelope DeMedeiros caught the smallest fish of the day, a little sunfish. The kids caught several more sunnies—and two turtles came to explore the worm bait and narrowly escaped. (All fish were returned to the river.)

A small intrepid group of adults left the Nature Center for a bird walk at 7:30. Experienced birder (and regular columnist for this newsletter) Pete Gilmore was the leader.

Noted fern expert Don Lubin, who spent one day earlier in the week identifying the ferns in the park and another long day clearing the trails around the ferns, led a fern walk through trails on both sides of Nahanton Road.

As people started to arrive to take out canoes and kayaks on the Charles River, Brandeis ecologist and master storyteller Eric Olson arrived with a pair of cecropia moths. The children were entranced even before they started their Bug and Small Critter Safari.

The Invasive-Plant team of Katherine Howard, Ann Dorfman, and Agnes Olshanksy showed families what plants we're trying to remove from our environment: garlic mustard, the increasingly prevalent black swallow-wort, Oriental bittersweet, and Japanese knotweed.

Agnes even delivered one talk in Russian to a group of seniors spending a relaxing afternoon in the park. As they looked at the examples of invasive plants, visitors could see Oriental bittersweet twining up the tall trees throughout

the park. The trio ended the day by spending time removing garlic mustard in the woods behind the community gardens—with the help of the intrepid Portia Chenevert and her mother.



First Fish!

Children who arrived while the safari was under way enjoyed learning how to tie fishing flies with Rolly Johnson and Bill Hagar. Alison Scorer from the Newton Community Farm showed them how to plant green bean seeds in recycled newspaper pots.

As soon as the critter safari returned, Eric Olson donned his climbing harness and explained how tree workers can get a rope over a tree limb in order to climb the tree. First he threw the

rope; then he showed how a slingshot

could help get the rope over a higher branch. There were “oohs” and “ahhs” from the children as he pulled out his bow and arrow to show how a scientist surveying the tree canopy can get the rope to even a very high branch. After securing his rope, Eric climbed up to the branch and showed how to descend safely, too. Remind your kids (and grandkids) of the classic disclaimer: “Do not try this at home!”

Late in the morning, the second bird walk left: this one led by birder Ted Kuklinski. Those of us staying behind by the Nature Center could hear their exclamations and laughs as they disappeared into the woods.

The last event of the day was Eric Olson's Nature and Plant walk. He, too, disappeared into the woods, like the Pied Piper, but leading the adults as well as the children—and then returned them after they'd had a magical learning adventure.

The Board of the Newton Conservators has decided that the second annual June Doin' will take place next year. If you missed the adventure this year, don't miss the fun next June! ■

—Beth Wilkinson



ILLUSTRATION:
SUZETTE BARBIER ©2015



Critter Safari

PHOTO: HENRY FINCH



Tree-Climbing Demo

PHOTO: HENRY FINCH



PHOTO: HENRY FINCH

Live Cecropia Moth

Fern Walk



PHOTO: DAN BRODY

Bird Walks



PHOTO: BETH WILKINSON

Fishing



PHOTO: HENRY FINCH

Bugs



PHOTO: HUGH WILKINSON

Invasive ID's & Pull



PHOTO: HUGH WILKINSON

Info/T-Shirts



PHOTO: MAT CALABRO

Fly Tying



PHOTO: HENRY FINCH

And more...

The Tree Swallows of Nahanton Park

If you enter Nahanton Park from the Winchester Street entrance on any day from the spring through the summer, they will be there. “They” are the quietly present Tree Swallows. Their graceful flight and iridescent blue-green plumage may be the first impression they make on you. The plumage of all adults is the same striking white and blue.

They use the nesting boxes that are scattered around the areas behind the lower gardens and between the upper and lower gardens. Before we began putting up nest boxes, Tree Swallows used old Black-capped Chickadee and Downy Woodpecker holes in trees. I have found Tree Swallows in a Downy’s hole in Cutler Park, across the Charles River from Nahanton Park.

If you wander more closely to their boxes, without overtly predatory behavior, you will hear their quiet, liquid warblings. I find the sounds of Tree Swallows to be among the most peaceful and calming of the noises that nature brings to us.

This year, they arrived back north in Newton by April 3rd. The males may pre-date the females by a few days but not by many days. They become owners of particular nest boxes in short order.

Once they have paired up, they work at constructing nests that consist mostly of grasses in the boxes. Later, they add feathers to the lining of the nest, with the sharp quill end buried in the grasses. Usually the female does the yeoman’s work in nest-building. Males then help by bringing the feathers as egg-laying proceeds. The added feathers seem to help keep the eggs and early nestlings warm.

This process of pairing up and nest building takes them into May before eggs are laid. We have all experienced raw, cold weather in May in Massachusetts. This determines the timing of their egg-laying. They may delay if it is too cold. Two years ago, it was cold and rainy in May and into June. I found a nest of Tree Swallows with young who did not make it.

The incubation period for Tree Swallow eggs is around two weeks. The female does most of this, with the male hanging out close to the nest site whenever the female goes to feed and drink.



ALL PHOTOS THIS SPREAD: PETE GILMORE

Tree Swallow

Both parents are active and obsessive feeders of the young, once they hatch. This takes about three weeks of constant work and must involve less food for the parents themselves. Though the parents can eat berries, the young depend on a steady supply of insects, caught on the wing. Cold and rain keep the bugs down.

When the young first fly out of the nest box, they are quickly very good at flight. The parents may help feed them for a few days, as catching insects on the wing has to be an acquired skill, harder than riding a bicycle is for humans. There is one report of a youngster disappearing over the horizon on its fledgling flight!

The adolescent birds are colored brown above and white below, and some have a dull brown ring across their breast. This distinguishes them from their parents and also can make it difficult for humans to tell them apart from the brown Bank Swallows.

The adolescent birds usually stay with their parents and other Tree Swallows during the rest of the summer, honing their feeding and flying skills. As August approaches they all begin to form larger and larger flocks, in preparation for the big migration

south. At this time, in the late summer and early fall, one can see huge flocks of Tree Swallows swirling around, usually near large marshes and water. There are spectacular sights to be seen at dusk, when a huge vortex of tree Swallows prepares to descend into a roosting place.

They often feed on bayberry berries at this time of year. Their ability to eat vegetative berries stands them in good stead when they arrive in early April during a cold snap with no insects. Other swallow species usually arrive later than the hardy Tree Swallows in the spring



Pairing Up and Nest Building



Young, Brown Tree Swallow in Box

In the fall, you can notice that these birds are becoming ever more restless as the urge to migrate rises in them. The Germans have coined a word for this migratory restlessness, *zugunruhe*, “Zug” means journey and “unruhe” is restlessness, from “ruh”, peace or rest.

By September, they have left

us for points south. They travel in large flocks along the Atlantic Coast. Our Tree Swallows spend the winter in the Gulf Coast states, Cuba or Central America.

When they are in the air migrating, they are vulnerable to predation by small hawks and falcons that follow the migration routes of these smaller birds. There is safety in numbers since many alert eyes can make it difficult for the



Feeding Hungry Young

predators to get close. More birds and more eyes also help in finding food sources.

They take several

weeks to migrate south. The older birds know where the large marshes are on their way south. Thus, there are usually adult birds in a migrating flock of Tree Swallows. The big marshy areas have more insects and bayberries around them, and it is crucial for a flock of tens of thousands of birds to know and find these places. The long journey south involves stopovers for rest and fattening up before the next long-distance flight.

So give yourself a relaxing treat, and get out with the swallows this summer. You can enjoy their seemingly effortless and graceful flight, warbles and colors while you also sample the many other sights, sounds and smells of our open spaces in Newton. ■

— 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 54 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

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Yankee Gardening

“**Use it up. Wear it out. Make it do, or do without,**” was a conservation motto during the great depression and World War II. “Eat it up. Wear it out. Make it do. Go without,” is another old saying, called “the four threads” of the New England character. I think of these sayings as Yankee thrift. This year I’m striving to do Yankee gardening.

I’ve spent many years searching for new, unique garden perennials, taking them home and trying to grow them on my property. It’s time for me to go in a different direction. This year I decided to “make it do, or do without”.



Bloodroot

There are two reasons I’ve decided to do Yankee gardening this year. I don’t have a grudge against garden nurseries and buying plants. There is nothing I enjoy more than wandering through plant aisles recognizing

plants I have, plants I used to have that didn’t succeed and plants I’ve always wanted but know won’t survive in my garden. It’s silly to keep buying plants I had no success with in the past. Many plants I’ve brought home look okay during the first season, but they don’t survive a second year.

There is another reason I’ve decided to “make it do, or do without” this year. We’ve had an explosion in the number of rabbits in our area. We actually had a nest of tiny critters in the middle of my flower bed this spring. Our dog found one tiny baby and carried it into the upper garden. The baby’s shrill squeals alerted me something was amiss. The little pink critter with a triangular face and little round ears was still in good condition, so I looked for its nest and gently tucked it back in. I was wondering what it was. After a search on Google I realized they are **MORE RABBITS!** Since then I’ve been checking on their progress. Sure enough, they are now beautifully formed tiny little bunnies. Well, there is no getting rid of them...

I’ve looked at my plant list to see which plants are favorite rabbit foods, eaten in past years, and which ones they didn’t touch. Some plants are toxic to rabbits. I’m going to emphasize plants they don’t like. Live and let live. I spread Deer Scram around a few of my favorites that are also loved by bunnies – Japanese painted fern, *Athyrium goenringianum*,

and white epimedium, *Epimedium x youngianum* ‘Niveum’. For some reason they haven’t touched red epimedium, *Epimedium x rubrum*. I’ve given up on lance-leaved hosta, *Hosta lancifolia*. This is as close to lettuce in a rabbit’s mind as you can get. The rabbits can have them. As the rabbits eat them to the ground, I dig up their roots and replace them with less palatable plants. Larger, tougher-leaved hostas are not as favored by the rabbits.

I’ve lost plants in past years to rabbits and lost even more plants to unsatisfactory growing conditions. If the right plant is planted in the right place, it will thrive. This year I’ll rearrange and divide plants I already have. Plants that love my garden are the plants I should rely on, not a cute new plant from the garden nursery, tempting as it may be.

My property has typical New England gardening conditions with acid soil, dappled light and plenty of shade. I find I have the most success with shade loving plants.

Twin-leaf, *Jeffersonia diphylla*, seemed very exotic when I bought my first plant. I was afraid to divide twin-leaf and share it with friends. But now I realize it is very hardy. Twin-leaf spreads throughout the garden and is very easy to transplant. My single original plant has spread to number in the hundreds. I love its floaty, butterfly-shaped leaves.



Twin-leaf

Bloodroot, *Sanguinaria canadensis*, and bunchberry, *Cornus canadensis*, are at home here. Bloodroot has spread near and far throughout the garden. All the small transplants I’ve planted have thrived. Bunchberry has caught on along the hot dry edge of the upper garden. Bunchberry does so well that I need to mow the tiny plants when they spread beyond the garden bed into the grass.

All forms of bleeding heart, pink *Dicentra spectabilis*, white ‘Alba’, smaller native bleeding heart Dutchman’s breeches, *Dicentra cucullaria*, and fringed bleeding heart *Dicentra eximia*, are happy to grow and spread in my garden under dappled shade. Fringed bleeding heart blooms for 17 weeks. All of



May Apple

europaeum, are easy to divide. Ginger also spreads by underground rhizomes and seed. Ginger's flowers lie close to the ground, hidden under their leaves. Ants carry the seeds away from the mature plant, and tiny scatterings of new ginger plants will appear nearby. I'm sure I started out with no more than one or two ginger plants and now I have hundreds.

False Solomon's seal, *Smilacina racemosa*, spreads from bed to bed and is easy to transplant. It offers lovely white flowers at the end of its stem and bright red berries later in the season.

My husband and I are transplanting mayapples, *Podophyllum peltatum*, into the back reaches of my garden. I am hoping mayapples will shade out the weedy neglected areas behind the perennial beds, and I especially hope they will shade out most of the garlic mustard we need to pull up every year.

The arching stems of both giant Solomon's seal, *Polygonatum biflorum*, and shorter hairy Solomon's seal, *Polygonatum pubescens*, do not spread quickly or far, but they are perfectly happy when transplanted in my garden.

these bleeding hearts except for 'Alba' have spread on their own.

Ginger is a terrific low plant for front edges of flower beds. Both native, *Asarum canadensis*, and European, *Asarum*

Wild geranium, *Geranium maculatum*, came with this 90-year-old house and is still thriving. Wild geranium seeds itself throughout the garden. I used to pull out wild geranium when it strayed, but I've learned just to let it be and enjoy its rose-purple blossoms.

Christmas fern, *Polystichum acrostichoides*, lady fern, *Arthyrium filix-femina*, and sensitive fern, *Onoclea sensibilis* were moved and divided many times, and I haven't had a failure yet. Sensitive fern does dry out and disappear in the summer heat, but it reappears each spring. Hayscented fern, *Dennstaedtia punctilobula*, has been transplanting itself in dry sunnier spots. A bit needs to be pulled out each year to keep hayscented fern contained, but I enjoy its frothy delicate leaves mixed with the perennials.

I dig up big patches of healthy perennials and divide them into several new plants. I usually put one division back into its original location and plant the extra divisions in other spots in the garden. This past fall, I divided most of my giant and mid-sized hostas and spread them throughout the garden. It's been fun this spring watching them reappear in their new locations.

Maybe next year I will get the fever and go out to buy new species for my garden. We'll see. ■

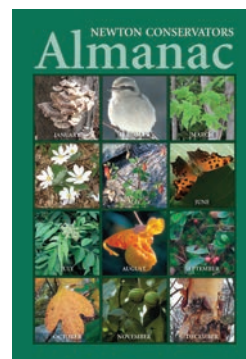
— Beth Schroeder



Wild Geranium

Prepare for Summer Adventures...

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!



Please Help Get Rid Of These Invasives That Are Destroying Our Landscape!

Below are our Top Four Invaders. By Agnes Olshansky



PHOTO: WIKIPEDIA.COM

1. Garlic Mustard is an aggressive nonnative plant and is difficult to control once established. On average, each plant will produce thousands of seeds, and the seeds remain viable in the ground for five years or more. Known for its characteristic smell of garlic when crushed, the plant emits toxic chemicals, causing native plants near it gradually to die out. People and animals pick up the seeds on their feet and carry them from their yards to other areas, where garlic mustard quickly is established and becomes dominant. Pull and dispose in plastic bags; do not put in yard waste; garlic mustard will survive the composting process!

Read more: www.invasivespeciesinfo.gov/plants/garlicmustard.shtml National Invasive Species Information Center
www.nps.gov/plants/alien/pubs/midatlantic/alpe.htm Plant Invaders of MidAtlantic Natural Areas



PHOTO: WIKIPEDIA.COM

2. Oriental Bittersweet, originally from Asia, is an invasive vine that can take over natural areas. The vine can smother and break off large tree branches. If you are riding on the D line, you will see many trees that had been destroyed by this vine between Beaconsfield and Brookline Village. The best way to control bittersweet vine is to carefully pull up the entire root system of young vines, and if the vines are difficult to pull, cut established vines, which you might need to do more than once, until the root system is weakened and can be pulled easily.

Read more: www.ecolandscaping.org/02/invasiveplants/asiaticbittersweetvineanexoticinvasiveplantfactsheet/www.ecolandscaping.org, by Bruce Wenning. www.ci.burnsville.mn.us/index.aspx?NID=1597. City of Burnsville, Minnesota, www.nps.gov/plants/alien/pubs/midatlantic/alpe.htm. Plant Invaders of MidAtlantic Natural Areas



PHOTO: BETH WILKINSON

3. Black Swallow-wort is a perennial vine with purple star-shaped flowers and thin pods. It is extremely invasive and has spread throughout Newton's open spaces and gardens. It can spread by wind-dispersed seed or underground rhizomes. Investigations into its effect on the monarch butterfly, which requires milkweed for reproduction, indicate that the butterflies will lay eggs on the swallowwort plants, but the larvae do not survive. Because it is not a good food source for native birds, they, too, decline when black swallow-wort becomes dominant.

Read more: www.eddmaps.org/ipane/ipanespecies/herbs/Cynanchum_louiseae.htm.



PHOTO: WIKIPEDIA.COM

4. Japanese knotweed is one of the most invasive nonnative plants and the most difficult to remove. It was introduced to the United States from Japan as an ornamental, and now you can see it everywhere. It spreads by rhizomes and seeds. Japanese knotweed can grow to a height of 13 feet and has stems that resemble bamboo when mature. It spreads like wildfire, forms dense thickets and pushes out native plants very quickly. This plant is flourishing in Newton along Hammond Pond Parkway between Route 9 and the rotary, in some front yards on Winchester Street, and at hundreds of other sites. It causes damage to roads, buildings, concrete, drains, etc., and damages the environment by destroying biodiversity. Cut large stems; pull the roots, and put roots in black trash bag; do not put in yard waste! Watch the video from the BBC to get a sense about the danger of this plant.

Read more: www.bbc.com/news/ukenglandlondon24426190. Two London homeowners were told it would be cheaper to demolish their £300,000 house and rebuild it than try to treat Japanese knotweed.
www.invasivespeciesinfo.gov/plants/knotweed.shtml National Invasive Species Information Center.
www.nps.gov/plants/alien/pubs/midatlantic/faja.htm Plant Invaders of MidAtlantic Areas



Newton Conservators Questionnaire

Please assist the Board of Directors of the Newton Conservators by filling out the short questionnaire below and mailing it to Chris Hepburn at 132 Stanley Road, Newton, MA 02468. Thank you!

1. How do you follow the activities of the Conservators? (Please indicate all that apply.)

- Printed newsletter sent by mail ☐
- Conservators' Facebook page ☐
- Website (www.newtonconservators.org) ☐
- Other _____

2. Conservators' activities that are of most interest or you are likely to attend?

- Walks ☐
- Invasive pulls/open space maintenance/cleanup ☐
- Talks sponsored by the Newton Conservators ☐
- (Usually at the library)*
- "June Doin' Celebration" at Nahanton Park in 2016 ☐
- Other _____

3. The Newton Conservators needs volunteers to help with activities and projects. Are there any that you would be willing to help with? Please indicate below and leave your name at the bottom, or contact the president at President@Newtonconservators.org.

- Newsletter preparation/mailing ☐
- Monitoring our property Conservation Restrictions ☐
- Leading walks ☐
- Reviewing city land-use proposals and decisions ☐
- Managing membership records and renewals ☐
- Other _____

4. Suggestions.

This questionnaire is from 1 person or 2 people. (Please circle)



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Hummingbird

Photo by Haynes Miller

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